

TRANSACTIONS

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33rd NATIONAL SAFETY CONGRESS

Volume II



**Traffic, Commercial Vehicle, Transit, School and College,
Home, and Farm Safety**

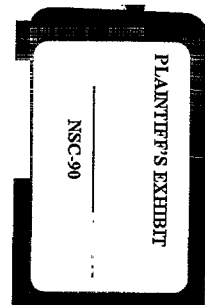
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The Transactions of the 33rd National Safety Congress and Exposition of the National Safety Council are published in two volumes. Volume I contains the General Subject and Industrial Section sessions, Volume II the Public Safety, School and College Safety, Home Safety, and Farm Safety sessions.

The Transactions are a record of the proceedings of the Congress, condensed and edited here for reference purposes. They are therefore an abridged version of the papers and discussions. The original manuscripts, some of which have drawings and charts not reproduced here, are available in the files of the National Safety Council.

The National Safety Council, at its Congresses, seeks to eliminate from discussion matters which are not pertinent to the aims of the Congress, or which are contrary to the Council's policies. However, it cannot accept responsibility for views expressed, either in the papers presented or in this record of them.

Extra copies of Volume I may be obtained by Council members at \$2.50 each. The price to non-members is \$5.00 each. Extra copies of Volume II are \$1.25 each.

THE NATIONAL SAFETY COUNCIL, Inc.
20 N. Wacker Drive, Chicago 6, Ill.

Using the Transactions

The two volumes of Transactions published each year are a source of supply for safety ideas, for safety methods, and for safety material. Used effectively, the Transactions volumes can become the safety man's "Five-Foot Shelf"—an encyclopedia of established methods as well as of the most successful experiment.

The safety engineer, the progressive industrialist, and students of safety will find these volumes valuable for reference. They contain the best knowledge and the long experience of the men and women who appeared before the 33rd Annual Safety Congress.

For easy use the material has been arranged and identified; first, by the major headings of the *Table of Contents* on page ii, and by the comprehensive *Index* at the back of the book. In the body of the book each group of meetings is printed in the same order in which they appeared in the daily time schedule of the original program.

The detailed alphabetical *Index* quickly locates specific safety material. It lists items in three ways: (a) by subjects discussed, i. e., cyclists, household appliances, military convoys, traffic "dam outs"; (b) by speakers, in the case of formal papers. Speakers' names are printed in italics; (c) by the division or group, as School and College Safety, Home Safety, Farm Safety.

Solve accident problems. Traffic officers, judges, highway construction men are faced with unprecedented problems caused by the mushrooming of war plants and the attendant traffic congestion. Not the least of their troubles is the control and discipline of war worker-drivers and drivers in service uniform.

Arousing interest in safety in the schools and in homes and farms becomes easier after reading the experiences of the speakers at the School and College Safety, Farm Safety and Home Safety sessions. Several meetings concern curriculum problems; others farm machinery hazards; and still others household equipment, civilian defense, and off-the-job accidents.

Speech-making materials are abundant for the traffic engineer or the school or city official who is scheduled to talk on accident prevention, either in his own community or at conventions of his own profession. The Transactions contain excellent examples of safety talks as well as authorities and quotations for local press releases, poster and bulletin boards.

Safety promotion plans always profit by new and novel ideas. Speakers at the Congresses offer rich source material for the promotion of safety on highways, in homes and in schools.

Outstanding safety leaders are powerful influences in the promotion of the national safety movement. As officers or members of the Council's sections or as public officials they can be helpful in organizing individual safety programs.

National Safety Council services and the national safety program will be better understood through frequent use of the Transactions. A survey of the material contained in this volume will give a better comprehension of the growing power of the safety movement and a better understanding of the ways in which this power is made effective.

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TUESDAY AFTERNOON SESSION

October 3, 1944

Presiding: W. F. BROWN, General Chairman, Safety Eng., Consolidated Edison Co. of N. Y., Inc., New York City.

How Can National Safety Council Program Materials Be Used to Better Advantage

A. How Accident Facts and Drivers Letter Can Be Used to More Advantage

By JAMES P. McLAUGHLIN

Personnel Mgr., United Parcel Service, Chicago

We have assembled here to discuss ways in which we can lower the occurrences of accidents to our employees on the job, and that's a serious matter—deadly serious. In 1943—23,400 persons—almost 10% of the population of the city of Denver—were killed in motor vehicle accidents alone. Our mission here is no joking matter.

The National Safety Council should be praised highly for calling conferences such as this and for its outstanding leadership in the field of accident prevention. It is estimated that the lives of 300,000 Americans have been saved since the beginning of the Safety Movement in 1913. The Council has paved the way for even bigger and better safety work and supplies us with excellent advice as well as materials and equipment. In a word, doing its utmost for our employee safety. Now it is our responsibility—the responsibility of every employer, plant manager, personnel and safety man to carry to his employees the work the National Safety Council has begun, and to use the materials and data available to the best possible advantage.

The accident statistics compiled each year are invaluable if they are used properly as a basis for a thorough accident record inspection to determine and properly correct the unsafe conditions and practices of the driver's job. Information on the circumstances under which accidents occur, is indispensable in planning a sound safety campaign. Furthermore, accident facts are startling and should be passed on to the worker so that he may realize the serious-

nese of the accident problem in general and, what is more important, to himself personally.

Every man is interested in his own personal safety. Joe Brown may not follow the rules of the program for safety that his employer is trying to enforce—simply because he does not understand that his safety is vitally tied up to that program—but he is interested in returning home in one piece at the end of the day to his wife and family. How to get him interested in the fleet safety rules and make him realize that fleet safety and his safety are one and the same thing is the big problem of the safety man. At the same time then the problem in the effective use of accident facts is that of getting the attention of the employee to the facts, arousing his interests in the safety program founded on those facts and molding that interest into good safety attitudes. Of the three, attention, interest, and attitude formation, the gaining of the employee attention is of prime importance. Without his attention safety cannot gain a foothold.

Men pay attention to things that have attention gaining value greater than other things about them at a given moment. One of the best methods of gaining the worker's attention is to present a safety idea in a novel or different manner. The painted warning, "Watch Your Step," on street cars and buses goes practically unnoticed I would say. It has been there so long that most travelers consider it as part of the car decoration, seldom realizing that they

should watch their step and go carefully; something different and startling with frequent changes is needed to gain attention.

Continually trying new stunts and ideas helps to keep interest in safety at a high pitch. Our latest move at United Parcel Service in Chicago has been to send a goat to the station having the greatest number of accidents for the month. No one wants the goat—the station manager and personnel that receive it get razed eternally by men from other units. This has helped our accident record and has given the boys a lot of fun at the same time.

"Different" methods approaching your safety problem are especially necessary if you have a large group with which to deal. You will find that some respond well to one method—others to another.

Campaign Connected

In order to achieve novelty the safety man should never run the risk of trying to "put across" accident data by means of a campaign or contest which has no meaning to the worker. The theme of the campaign should have some connection to his wants or his needs.

Constant personal contact with your employees will reveal the men's real interests and will give the safety director valuable ideas for his next safety move. Many companies use employee suggestion boxes for this purpose also. Acceptable suggestions are usually forthcoming when they are rewarded by payment in war bonds or some other prize.

Continued personal contact also allows the safety man much opportunity to emphasize his written safety directions. One of the best ways of getting safety across is a personal talk occasionally with each driver, telling him just exactly where he stands in the group.

Let us proceed with our means of gaining the worker's attention—anything moving catches the eye. One of the recent developments in billboard advertising is the use of moving objects.

Any graphic means of presentation such as posters, diagrams and films have been effective safety training tools in the past and will continue to be effective in the future. Again, we must be certain that the picture or diagram is in symbols that the worker easily understands.

A safety demonstration or a driver's safety conference is a helpful means in directing the worker's attention along proper safety lines—providing they are well planned and carried out. A safety conference should be short, peppy and to the point. Incidentally, this provides another excellent opportunity for learning employee interest. Often letting drivers and supervisors in a given location get together and talk over the hazards in their unit does much good both in interesting the driver and in forming good safety attitudes.

Intense stimulation is successful as a means of attracting attention—as bright and contrasting colors in a poster. If the stimulation is varied and frequent it should do much for developing safety interest.

To transform attention (once it has been gained) into a healthy interest and good safety attitude, the director usually must stress a given point in many different ways. Presenting startling statistical evidence on accidents of a certain type can be done in poster form one week, in pay envelope messages another week, and in safe driving signs for the dash board another week.

The safety message or information must be stressed in many different ways and must be made an integral part of the worker's job. No man can develop a safety attitude without practicing it. If a certain safety message is tied up with his job and practicing it is stressed, the safety attitude will follow as a natural development.

We have found driver's letters, written so cleverly by Paul Coburn, of the National Safety Council, especially effective in the formation of safety attitudes. They appeal to the drivers because they are written in "driver's language"—in easy, modern style. In the past I think this is where we made our biggest mistake. We dumped accident facts and data into the laps of our drivers and expected them to interpret figures, charts, diagrams and dry material when we should have made some effort to make it more interesting and tie it up with their own safety problems.

To summarize—the best use we can make of accident statistics is to translate them into positive safety moves and make them the basis of an active safety program. Contact with the employee and knowledge of his interests is the most important factor in putting across those statistics.

B. How National Safety Council Awards and Dash Cards Can Be Used to Better Advantage

By H. O. TILNER

Safety Director, United Pacific Insurance Company, Tacoma, Washington

Have you considered that you can't *make* men drive safely, that they must *want* to avoid accidents if accidents are to be prevented? Of course you have, but often we Safety Directors forget this basic law of human nature. There are many ways of creating a desire on the part of drivers to avoid accidents. The two fundamentals are:

1. Make the job seem interesting.
2. Make the job seem important.

Driver meetings, contests, bonuses, awards are all helpful because they stimulate interest and impress the men that management considers the matter important enough to devote its time to these extra activities.

The average employee will do the things in which his employer appears to be most interested.

In our own Fleet Safety Program we use National Safety Council awards because:

1. They are recognized nationally.
2. They are issued by a disinterested body of which we are a member.
3. They are issued under uniform rules which are well known throughout the United States and Canada.

We have yet to find a safe driver award, regardless of its intrinsic value, which has created more desire in the minds of drivers to want to avoid accidents than our own National Safety Council awards.

After the drivers' interest in accident prevention has been aroused it is essential to keep that interest burning. This can be very successfully accomplished by use of the National Council dash card service.

In planning the dash cards, the Council staff covers the unsafe acts which cause accidents in proportion to their occurrence. In other words, if 50 per cent of the accidents are caused by backing—50 per cent of the dash cards will cover that subject. If 25 per cent of the accidents reported are

intersection collision—25 per cent of the cards are planned to point out the dangers of intersections.

Eighty-five per cent of what we learn comes through our eyes. Our living habits are controlled to a great extent by what we see. Why do we ask for Chesterfields, Camels, Lucky Strikes or Old Gold cigarettes? Obviously because we see these products advertised in the street cars, in the magazines, on billboards dozens of times each day. Do you realize that every product that is sold nationally is extensively advertised on a national basis? Why shouldn't we copy these successful merchandising methods in selling safety?

How many hours of talking will it take in order to get the same amount of safe driver training across to a driver as we accomplish in a few seconds by properly placing a dash card up near the rear view mirror in the cabs of our vehicles?

How many times each day does a driver look into his rear view mirror? Are you capitalizing on these glances to drive home your message on how accidents can be avoided? How much of your accident prevention program is designed to show your drivers how to avoid accidents?

It takes only a few moments each week to change a dash card, yet hundreds of times each day you are reminding your driver to stay on his side of the yellow line, keep a safe distance from a car ahead, not to pass on hills, to watch the blind intersection, to take it easy on slippery roads, to look before backing, et cetera, simply by placing a dash card where the driver can't help but see it. It shouldn't be necessary to mention to this group that if you are to get the most out of the use of dash cards they must be changed regularly and they must be appropriate to your particular operation. Obviously, the Council designs the cards for all types of operation. There may be cards printed which do not apply to your operation. In such cases, do not use them. If the holder is left blank for

a week, it will do less harm than to display an inappropriate card.

A few bus operators have suggested that the use of dash cards in buses might tend to make the passengers accident conscious. Our experience on hundreds of bus lines during the past five years has proven be-

yond a doubt that this argument is entirely without foundation. Human beings, if left to their own inclinations, will not act safely. Safety must be sold, so let's learn from the merchant. He and his forefathers have studied and improved their methods since man was created.

C. The Safe Driver Magazine and Posters

By EARL D. PORTER

Safety Director, Aero-Mayflower Transit Co., Indianapolis, Ind.

As an integral part of the Fleet Safety Program the Safe Driver Magazine and appropriate posters are indispensable to the complete Accident Prevention Program. Their primary function is that they reach individually every driver—the man charged with the responsibility of operating safely over the highways and streets. These services are especially valuable to him under the conditions of wartime hazards in driving. He needs all the information and support that he can get to keep him abreast of times, conditions and experiences in order that he may do his job of driving safely.

The Safe Driver Magazine stimulates thought on the part of the driver by calling to his attention the hazards of the seasons, prevailing current conditions and trends of accidents. It is kept attuned to things that are currently interfering with safe driving by pointing out the hazards that prevail at that particular season. For instance, the October issue calls attention to the hazards of night driving, fires, drinking while driving, brakes, lights and railroad crossing accidents. The night driving is seasonal at this time of year. The proper use of rear view mirrors, the necessity of not drinking while driving and taking care of the brakes and following too closely are with us all the time and are a repetition of other articles. They are arranged in form of wording and cartoons to attract the driver's attention. All this material, together with experiences of others, some statistics, bad practice examples and jokes for amusement, make it an interesting magazine which the drivers look forward to each month. Its main function is to keep the drivers

thinking in the line of accident prevention and safe driving and if you can keep them thinking about it, they will drive safely.

Great care should be given to see that each driver receives his magazine and that his attention is called to it either through direct contact or by the repetition of some of the material in talks or written bulletins.

The Safe Driver Magazine has its uses in discussion of accident causes with drivers since you can call their attention to parts which discuss hazards common to all drivers and particularly when they have been involved in accidents of the type mentioned. For instance, on the highway it has become a more or less common practice among truck drivers to double up on trips where two or more drivers of the same company or other drivers with whom they are friendly will proceed over the same route. This is done thoughtlessly in most cases, not thinking what they would quickly be forced to do in case a car pulled in front of the lead truck or made a sudden stop for another reason. As they get into practices of driving without thinking of consequences, they may follow any particular bad practice. By keeping this magazine handy and talking to drivers about individual accidents or in meetings, you can then refer to a particular subject that has been prepared and they have read about in the magazine. The repetition of familiar matter to drivers is helpful inasmuch as they already have some of the thought in their minds, and they don't have to follow too closely to digest it thoroughly. This again points out the

advantage of having material in the driver's hands that he can be familiar with and which cannot be brought to his attention effectively in any other way.

The posters are particularly essential as they attract the eye, and we are told the average individual acquires 82% of his knowledge through the medium of the eye. These posters are also kept tuned to prevailing current conditions or in anticipation of seasonal hazards. They should be posted in a conveniently visible location where they will attract the eye of the driver, preferably on a separate bulletin board, in a well lighted place and under glass, if possible.

Changed at Intervals

They should be changed at regular intervals, preferably each week in order that the drivers may be looking for the new posters thus retaining their interest and not becoming stale on this part of the program. Those things that fit your personnel more particularly would be more effective on a separate board. If posters are tacked on the wall or put on a bulletin board with various other materials, such a notice of changes in routes, letters

from drivers in service, newspaper clippings, etc. they will lose much of their effectiveness.

The posters have the particular advantage of attracting the eye of the drivers to the point of promoting discussions among themselves of the hazards which the posters point out. By these discussions they will educate those who have not had the particular hazard brought to their attention. As an educational feature, they are in a class of their own. Drivers will begin to watch for the change of posters and be reminded of situations in which they have had near accidents. In many cases the discussion which this involves will bring out points to which they have not given thought as safe driving is the accumulation of our experiences or those of others.

To sum up what you really want is to have these posters placed in a location well lighted, placed by themselves where they will hit the driver right in the eye the minute he walks in the room or other congregating place. If they are handled in this manner they will be successful in helping with your Accident Prevention Training Program.

D. Visual Safety Education

By ROY ALEXANDER

Asst. Mgr., Safety and Personnel, Pennsylvania Greyhound Lines, Cleveland

How does visual education compare with other educational methods would be a good question, particularly in view of expense involved. A very early philosopher and teacher is reported to have said that one picture is worth ten thousand words. This probably is as good a way as any in summing up the value of visual education. There is no question as to whether visual education is desirable and our thought should be given towards determining the most effective methods of using films.

There are, of course, certain limitations of visual aids. The picture must be appropriate with enough description to focus attention on the desired point you want to get across to your men. The National Safety Council films are considered by us as being complete in this respect. However, we do

favor the slide films over sound films because of the opportunity to ad-lib and to bring out certain experiences which we have had.

When using the silent slide films, it is almost essential that the inscriptions be read as the picture progresses so that no one is hurried. It is important that the leader be entirely familiar with the picture and prepared to make proper comments at the right moment. Any hesitation or unfamiliarity of the subject on the part of the leader will cause a break in interest and the whole value of the picture may be lost.

The next important requirement to assure success of visual education is to secure the right kind of film and center your meeting around the film chosen. Seasonal pictures,

such as winter hazards, would be appropriate at the approach of the winter season. However, this should be the only picture shown. Other types of films, such as news reels, have no place at safety meetings and will only distract and defeat the entire purpose of your program.

We, in the Commercial Vehicle Section could be of great help to the National Safety Council in making up future pictures by offering suggestions on how certain problems confronting us might be overcome through visual aids. We are supplementing the Council films with a series of our own and these are based on actual experience. Our highest accident frequency types are side-swipes, rear-end, and intersection accidents, and films have been centered around these, using actual accident scenes as illustrations.

Safety Practice Pamphlets

We have found these pamphlets very helpful with an abundance of varied material. The effectiveness of this material is, of course, determined by the use made of it. The ideas must be gotten across to the men

and this brings up the question of the method of presentation.

To get out and talk to the men or write them personal letters is good, but not enough. It is necessary that you have the whole-hearted support of the entire supervisory force and get them thinking and talking safety. You must eliminate the supervisors' idea that safety is your job and not theirs by impressing upon them that the existence of your company is dependent upon safety with the result that safety is everybody's job and more so the supervisor. It is your supervisor who has the greatest influence over your men.

Fleet Safety Memos

These papers are also of considerable benefit because they are the mediums of changing ideas. This helps one from becoming isolated from safety progress elsewhere. Here, again we in the operating field can further aid the National Safety Council by keeping them supplied with information as to what we are doing to further safety. These memos also contain timely material that can be used as a nucleus for bulletins and personal letters to employees.

WEDNESDAY MORNING SESSION

October 4, 1944

Vehicular Safety for Industry

Presiding: W. ROBERT SMITH, Mgr., Personnel & Insurance, Scott Bros., Inc., Philadelphia, Pa.

The Detroit Cooperative Driver-Training Project

By WILLIAM C. MERRITT

Safety and Personnel Dir., Trucking Inc., Detroit

Early in 1943 truck operators in and around Detroit, Michigan were looking for assistance in manning their trucks with competent drivers. This situation was brought to the attention of the apprentice-training service, War Manpower Commission.

The Detroit cooperative driver-training project was a result of the training plan developed by the apprentice-training service of the War Manpower Commission at the request of the trucking industry.

My use of the term "trucking industry"

means all of the cooperating companies which include the Michigan Trucking Association, the Greater Detroit Local Cartage Association, and the Common Carriers of Michigan, together with the Joint Council No. 43, Teamsters, Chauffeurs, Warehousemen, & Helpers of America, and the further cooperation of the governmental agencies such as the War Manpower Commission, United States Employment Service, Office of Defense Transportation, Transportation Corps of U. S. Army, and the Detroit Board of Education, acting as

agent of the United States Office of Education-Defense Training, who financed the actual operation of the training center.

The training period for drivers consisted of a two week period of 96 hours, of which about 70% of the time was spent in actual practical experience.

The outdoor practical instruction was supplemented by indoor classroom work to provide variety and to maintain the interest of the trainee. The outdoor instruction includes a complete equipment check of tires, gasoline, oil, water, lights, and safety items. Driving a tractor minus trailer, double clutching and gear shifting. The trainees are given this instruction gradually, especially if they have had no previous truck driving experience, so that they will gain confidence. This was followed with coupling and uncoupling of the trailer, driving a tractor with trailer attached, right and left turns, proper braking and backing up to loading docks.

The training of backing to a loading dock was covered by having about a dozen examples of loading docks, which were outlined on the training lot, representing about every conceivable tact in backing satisfactorily to the dock. Backing up for U turns, S turns, L turns, and representing all types of places the instructors could imagine. These were replicas of actual docks, experienced by the instructors.

Trainees also were shown the elementary principles of air, booster and mechanical brakes, steering equipment, tire care, engine idling, and electrical equipment. Emergency breakdown procedure and proper distribution of loads were also demonstrated.

The practical training with the equipment also included proper procedure for the utmost safety in all emergencies, that is: In case of a breakdown, day or night, to immediately put out his flares or flags whichever the occasion required, for them to be properly spaced to insure the utmost safety to the driving public, in checking and use of fire extinguishers and equipment, such as extinguishing fires on drivers equipment, or any emergency, such as a fire on any motor vehicle the driver may come in contact with. This practical training was amplified by impressing the trainee with the fact that prompt action in emergencies definitely held casualties to a minimum.

The practical driving experiences and

safety precautions taught the trainees, were coordinated with class room instruction with visual education through motion pictures, blackboard demonstrations, instructions, instruction on city, state, and national driving ordinances and laws, together with the rules of the Inter-State Commerce Commission, and familiarity with company manuals, the proper filling out of driver logs and mileage books, care and conservation of equipment, the proper knowledge of invoices, bills of lading, etc., first aid courses, stressing road-side treatment of injuries, and artificial respiration. Classroom reviews or oral tests were given on all of the subjects taught, to insure a better understanding of the subjects covered.

Two representatives of insurance companies alternated once a week in giving thirty minute talks on the importance of highway safety. They also demonstrated how to fill out an accident report properly.

John Cross of the Commercial Drivers Relations Bureau, of the Department of Public Safety, Detroit Police Department, spent three 4 hour classroom sessions a week with the trainees, and in various phases of this instruction he was assisted by Driver Instructor Edson Smith, two time national driving champion and myself.

On the driving lot Mr. Smith and myself were ably assisted by Dan Wall, veteran driver, who was loaned to the project by Mr. McGowan, general manager of the Michigan Cartage and Storage Company of Detroit.

Mr. Wall spent time equal to six half days each week. You may wonder at this abundance of instruction, but please be advised that practically all instruction outside of the classroom was individual instruction.

Companies Sign Agreement

There were sixty-four companies who signed agreements to participate in this driver training project, but due to the war manpower situation only nineteen companies sent trainees through the training center. There were 186 trainees enrolled, of which 68 completed their training and were graduated, and are now employed by the cooperating companies. The balance were screened out for various reasons at the training center, and I would like to point out the value of this screen-

ing process, which saved much grief for the participating companies.

One of the outstanding results of this screening was that those who could not qualify eliminated themselves one way or another in the first four days at the training center.

Please bear in mind that without proper training opportunities and screening tests these men might have eliminated themselves from the industry by having a major or fatal accident driving your truck.

I would like it to be noted that no trainees were eliminated except by the unanimous decision of all the instructors, on instructions of the training committee.

The driving equipment used was loaned to the training project, and included the following equipment loaned by these companies:

One Chevrolet and one G.M.C. tractor loaned by the Fisher Body Company
Three 22 to 26 foot trailers loaned by the Fruehauf Trailer Company
One Ford tractor loaned by Detroit Trucking Company

This equipment was at the driving center at all times, and was supplemented by occasional loans of equipment from the following companies:

Caldwell Motor Freight, Inc.
Inner-City Trucking Service
Red Star Transit Company
George F. Alger Company
Trans-American Freight Lines
Ford Motor Company
J. E. Begin Cartage Company
U. S. Truck Company, Inc.

I emphasize this to show that even in these times of acute shortage of equipment complete cooperation was given by some companies to the training project. The variety of equipment loaned made it possible to give the trainees diversified training.

One of the highlights of this training project was the use made of the training center by "The United Lines of the North," headquarters, Mexico City, Mexico, who had just purchased equipment through the Mexican government priorities, tractors from Federal Motor Truck Company and trailers from Fruehauf trailer company, which delivery was accepted at Detroit and driven to Mexico City. This company sent six drivers to Detroit to take this equip-

ment to Mexico. They had had previous experience on straight trucks only and as these were heavy duty truck and trailer equipment, arrangements were made for these drivers to take the full 96 hours of training.

These arrangements were made through the Federal Motor Truck Company and Fruehauf Trailer Company acting as agent for the United Lines of the North.

Training instructions were transmitted through two of the boys who could speak English and all passed through the training period, final tests and exams with flying colors.

This company wrote to me expressing the greatest satisfaction on the results of the training these drivers received, stating that they were amply repaid for their cash outlay, because of the ability and knowledge the drivers had gained. They were to be used to train the balance of the drivers working for the company on their return to Mexico.

Given Thorough Test

At the completion of the training period, all of the trainees were given a thorough driving test in all manipulative problems at the center and were given oral and written exams on every subject covered during the training period. If they failed on any subject or manipulative driving problem, they continued with that activity until they had passed the entire examination 100%.

We who were intimately connected with this training project, and those representatives of the companies who had received the most benefit from it, together with the representatives of the insurance companies are unanimous in our opinion that these training projects should be universally established and continued on a national scale, wherever conditions will permit, not only to train new inductees as drivers, but to retrain many of their present tens of thousands of truck drivers.

Our thinking on this subject at this time convinces us that the enormous saving on equipment alone will warrant this training activity.

The saving in accidents and the increased safety to the general public should very definitely reduce accidents enough that the difference in insurance rates based on accident frequency should more than main-

tain these projects. Please be advised that in establishing these training projects, there are agencies available to develop training programs, and to establish training center projects, and they will furnish the instructors. The only obligation of the industry is to provide equipment and the trainees.

As time goes on, definite standards of driver efficiency should be established, which standards are badly needed.

For many years the railroads have spent considerable time and money training engineers and crews. Trains are confined to rails and they also have electrically controlled block signals to keep them out of danger.

Steamship companies spend considerable time and money in training men to control ships at sea.

Airplane companies spend considerable time and money in training airplane pilots. Airplanes today have every known safety device and the sky is their ceiling.

Truck operators for years have done very

little training of truck drivers before putting them in a cab and sending them on long trips with expensive loads and equipment, praying to God they come back in one piece.

The industry owes to itself and to the general public at large to investigate these trends of thought from a constructive angle, that will bring about an increase in safe driving conditions, which will result in the preservation of equipment, curtailment of property damage and loss of life.

In conclusion, I would request that the industries take such steps as is necessary to:

- I. Establish training center projects and driver qualification standards and issue qualifying certificates. These projects to be under the consulting supervision of the industry.
- II. All new drivers hired by any company shall be sent to the training center for practical examination as to qualifications, and receive a qualifying certificate before being permitted to actually go to work on a truck.

How to Get Better Accident Reports

By E. J. EMOND

Dir., Automotive Safety, Armour & Co., Chicago

A unified system of accident and complaint reporting is an important part of the work in accident prevention, and in the handling of the accident cases themselves.

Obtaining complete reports of accidents is one of the most difficult undertakings in our work. This is particularly true today, when most of the sections of our country are experiencing a critical man-power shortage.

The reasons for the apparent lack of cooperation on the part of drivers and supervisors in filing reports are varied. The press of other work is frequently offered by both drivers and supervisors as the reason for their not making the proper reports. Many of them seem to feel that the completing of reports of accidents is relatively unimportant, while the other matters entrusted to their care are the ones that are really making money for the Company. Occasionally there are complaints that the reports

themselves are too complicated and too time consuming. Drivers sometimes neglect to make any report of accidents because of the fear of adverse criticism or the application of a penalty.

Our efforts, therefore, must be directed toward the removal of all of these objections. These men must be shown the actual cost of their own accidents—in money, in suffering, and in time lost, not only by the injured parties, but by all who must care for them, their families and their work.

The using of prepared forms rather than trusting to story-telling abilities insures our having complete, uniform reports on all accidents without a great deal of correspondence. Even though, at some future time, the driver is not available, we still have all of the information in such shape that anyone can use it. Another advantage of the prepared forms is that of having all of the facts listed in a given order, so that in

preparing general surveys any item or items may be extracted with ease.

It must be made clear to the drivers and supervisors how these reports are used to prevent the successful prosecution of fraudulent claims on the part of other parties involved in the accidents, or claiming to be involved, and, what is even more important, how these reports are used as the basis around which the company accident prevention program is built. This is not only for the benefit of the company, but is a protection for the individual worker and for his job. While the loss to the driver and his family in the case of injury is fairly obvious, it must be recognized that especially in these days of war time shortages, every vehicle that is put out of running order means at least one idle worker, and the work that the vehicle involved could have done remains undone.

The drivers and supervisors should have pointed out to them the dollars-and-cents cost of the vehicular accidents of their own company, and this sum should be compared to the amount of work that must be done by all the members of the company to give a profit approximating that sum. The amount of this great loss of time and effort will probably come as a shock to most of them, and will give them the incentive necessary to get them to cooperate in any efforts to prevent accidents or to prevent any third party from taking undue advantage of the company.

The drivers should be brought to the realization that their best protection against any unjust complaints of outsiders lies in filing complete reports before the complaints are received from the outside. Reports may also have to be filed with local or state police within a given time, or a penalty assessed. Many companies have a system of penalties which, in some respects, provides an even more powerful motive to making prompt reports. A lay-off or a discharge may seem to be rather drastic, but it is effective.

As far as the accident report forms are concerned, they are for us to consider and, perhaps, revamp. The first things to be decided are how many and what kinds of reports are absolutely necessary. This will depend, to some extent on the size and distribution of the fleet. If the vehicles are all in one place, under one management, the

reporting and the investigation of accidents will probably be somewhat simpler than in companies whose units are distributed over a large area under many supervisors.

Determine what use is to be made of the information gathered from the various reports to be completed. Then the type and number of reports can easily be decided upon. Some of the larger fleet operators will find they need many and more complicated reports, while some of the smaller operators will need only a few, simple records.

Forms Kept Simple

No matter how many forms are required, they must be kept simple and clear. There should be no ambiguity in the questions, or the individual filling out the report will be confused and we will not gain a true picture of the circumstances. There must be ample space provided for the answers. In this connection, it must be remembered that many of these reports will not be typed, and that printing or handwriting takes up much more space. Incidentally, it has been found that printing rather than writing on these forms greatly simplifies the handling of the claims. Where the person filling out the form is unable to answer a question, he should insert "not known." It has been our experience that the average driver does not make out a good written report as he is neither a journalist nor an author. Wherever it is possible, therefore, it will be found that if check marks are requested, rather than answers, clarity will be insured. This difficulty may be surmounted in another fashion as well—through the use of diagrams, where possible, instead of the narrative form.

Each driver should be given complete instructions on what to do in case of an accident. This knowledge will help prevent his getting rattled, and will enable him to take care of persons, vehicles, and product promptly. He will know exactly what forms are to be completed at the scene of the accident, how, and by whom they are to be completed. These instructions may be given in the form of a bulletin issued to each driver at the time he is hired, and at intervals thereafter, or may be printed on the envelope containing forms to be used at the scene of the accident. A combination of the two methods would probably prove most satisfactory.

Among the forms and methods used

our Company in the reporting of accidents are the following:

Each vehicle in our fleet is equipped with an "accident kit" which contains all of the forms to be used at the time of an accident—accident report, witness cards, claim representative directory and exoneration cards.

Our driver uses a condensed, pocket-size report which contains about two-thirds the information provided for on our regular company accident report form. The advantage of this small accident report is that it is handy to use at the scene of the accident as it is only 4 x 7 inches in size and is printed on light cardboard stock.

The driver makes out a regular accident report, in detail, upon his return to the garage. The supervisor observes its completeness by comparing the primary report with the regular report, and he requires the driver to make any necessary corrections. This policy has considerable psychological effect because it impresses the driver with the importance of his statements.

To make sure that we get the best possible picture of the accident, we have introduced a supplementary report, which is an enlarged collision diagram on which the driver places all of the vehicles, persons or objects involved in the accident, and calls for the following information:

Direction from which vehicles were approaching before the accident; same for pedestrians; point of collision; and where vehicles and/or persons came to rest after collision; landmarks from which to measure distances. In cities, houses and business places are used to identify location as well as street numbers. In rural areas, numbered electric power or telephone poles are used. If there are no numbered poles, we use culvert headwalls (numbers are recorded), if any, and miles to nearest town or city; a full description of what took place before, during and after the collision; complete information regarding injured persons, including those who claim to be injured and anyone whom the driver believes to be injured, even though they may state that they have not been hurt; an estimate and description of the damage to each of the vehicles involved in the accident; names and addresses of witnesses, and descriptions of their vehicles.

Number Vehicles

Any characteristics of the highway and

adjoining property which help in giving a clear understanding of just how the accident occurred should be shown. In completing the diagram, have the driver number the vehicles, and use those numbers whenever reference is made to any of such vehicles.

The collision diagrams mentioned above are not a substitute for the first accident report form but are a supplement thereto, and are used for statistical study in accident prevention and claim analysis.

When these facts, incidents and circumstances are recorded while still fresh in the minds of our drivers, we are provided with all of the information necessary for the handling of these cases, and are in a position to refresh the memories of the driver and any witnesses, because of legal actions being instituted.

Another report that has been found to be of great value to us is the record that is kept of the individual drivers. Each man's personal history and accident record is kept on a separate sheet. This is valuable if a system of awards for safe driving has been instituted. If this record is complete, it will also show the type of accidents that any driver has had and it is readily noted if the driver has more than one accident of a given type, or caused by similar conditions. One effective way of showing this is to have a diagram of a section of roadway with various types of street crossings, curves, railroads, and so forth. All accidents are shown on the same diagram. Overlapping of any of the conditions of the accident will be unquestionably displayed.

This personal record is also important in that it gives some of the information required by the I. C. C. on accidents occurring within its jurisdiction, and which information is not ordinarily contained on accident reports.

An individual vehicle record is of great assistance in several ways. It, like the individual driver's record, gives information required by the I. C. C. on accidents occurring within its jurisdiction. When an accident occurs, there is often a claim that there was a mechanical failure of some type. The vehicle record will indicate what repairs or replacements have been made on the vehicle in question, and when. Even though there is no accident involving a given vehicle, the individual record will, if

periodically checked, serve to raise the level of preventive maintenance.

It is also advisable to have regular reports submitted by the drivers on the condition of the vehicles entrusted to their care so that the proper repairs may be made before any accident has occurred.

After the accidents have been properly reported and investigated, the files should not always be retired. Some of these accident diagrams—minus identifying names, of course—may profitably be posted on the drivers' bulletin boards, or the cases may be discussed at the drivers' meetings as object lessons.

Where the system requires several reports to be filed at stated intervals, there should be a regular follow up system instituted so that there will be no long lapses of time between the receiving of the various reports. The persons responsible for the filing of these reports must be aware of the importance of this part of their work as delays greatly increase the possibility of unnecessary losses in case of fraudulent claims. These losses may, of course, come about directly, through the payment of the claims, or indirectly, through increased insurance rates.

Courteous Treatment Important

Drivers should be assured that courteous treatment will be their lot when they come

in to report an accident. None of us is at ease when faced with stern, critical eyes, and a driver who has to face the "Boss" with a tale of a wrecked truck, injuries, or property damage to others has a task difficult enough without being censured at that time. When the report of the accident is being made, there should be no discussion of "blame." All the supervisor or investigator should attempt then is the gathering of the facts surrounding the occurrence. The driver should have impressed upon him that what is wanted is a complete, unbiased statement of the facts of the case.

Occasionally a driver will omit reporting an accident because of fear of adverse criticism or the application of a penalty, if the company has a system of penalties. It must be pointed out to the drivers that the harm that may be done by their omitting the reporting of accidents may be greater than any gain they could possibly have through such omission. After all, the company will probably find out about the accident anyway, and irreparable harm may have been done because the company has had no opportunity to investigate the circumstances of the accident.

One thing we must guard against and that is making the drivers too accident conscious. We are primarily interested in the prevention of accidents, and should therefore stress safety rather than accidents.

The Use of Visual Aids in Fleet Accident Prevention

By C. D. CALKINS

Director of Safety, Pacific Motor Trucking Company, San Francisco, Calif.

By raising your hands, will you answer a question? How many of you saw me remove my coat and put it back on and wondered why I did it?

Now will you also, by raising your hands, tell me if you remember the seven words I said while I was removing my coat and replacing it?

That proves an important point in visual education. We are told that 4/5 of our knowledge comes to us through vision—and only 1/5 through the other senses.

The reason I tried to mislead you was to illustrate that visual impressions dominate and are retained longer than impres-

sions made merely by the spoken word. That is why really good speakers have a large repertoire of gestures—they act out their story so as to coordinate the audience's sense of both hearing and sight.

What does this mean to us in the accident prevention field insofar as reaching our problems—the drivers, dock hands, loaders, mechanics, and same supervisors who must be engineered into safety consciousness, and taught the proper performance of a given duty? The fleet man is confronted with the problem of reaching and teaching individuals who are by necessity away from direct supervision over ¾ of their work day. By comparison, the

industrial safety man has almost constant control over his people through departmental supervisors during their entire on-the-job period.

Nothing takes the place of direct contacts as an educational and enforcement aid, but our topic here is what to do when we have to reach our personnel largely through the use of the written word, which is a form of visual education.

We at Pacific Motor Trucking have the problem of reaching personnel because we operate over 7 western states from nearly 100 unconnected terminals—five units there, one here, or fifteen there, and 250 here, so on to the tune of almost a thousand. Reaching an organization as loosely knit, geographically as ours, requires more than the usual amount of the written word, and more complete coverage of many subjects than usual when it is possible to get employee groups together. This may be as seldom as once in four months. When it is possible to do so, groups rarely exceed 25 or 30, so we dig in pretty hard. We use, as a result of this condition, a heavier mail campaign than most organizations. Our bulletins on accident prevention go out regularly on the first and 15th of the month, and on special occasions when necessary. They cover almost everything in the field of transportation safety—firm policy, public relations, and many other topics. We try to make them readable so as to induce driver interest in them. Some of them are strictly on the goofy side, purposely made as funny as possible with wise cracks, truck driver jargon, and humorous accident situations. By so doing, the drivers read them all—including the ones which are strictly informative. We attempt to avoid stereotyping any subject, regardless of nature or importance. We avoid statistics, fancy or stilted language. Neither do we mince words when necessary to tell our men what "hog ate the cabbage." We feel we are not dealing with children, but intelligent individuals who do not have to be talked down to. We merely attempt to pass necessary information on to them in a palatable manner.

In writing bulletins, we have a definite pattern which we try to follow. It involves several things:—

Selling Safety

We are selling safety on paper and along with the rules of good salesmanship and

advertising, we keep our bulletins short and snappy. We are sure of our facts. We are positive but not arbitrary. We write in a manner which indicates we understand the driver's problem. We leave no doubt as to the interpretation of our subject. We cover many of the subjects a second time to Supervisors so they may follow up.

We have another way of appraising our personnel, too, through the means of a Driver's Manual, recently reissued for the third time, and in which is the accumulated background of 60,000,000 miles of truck operation and fifteen years of experience in doing things the way we want them done.

We have the problem of operating under many state laws and the ICC Regulations—as well as in many cases where operating on railroad property or performing duties coincidental to rail movement of freight, we must observe railroad rules. This means that we require a considerable amount of operating knowledge on the part of every driver.

We list nearly 200 operating procedures which cover most everything, including basic company policies, the ICC rules, safety, equipment operation, maintenance, and even a list of forms used in transacting company business. We are firmly convinced of the importance of having all operating rules under one cover as it eliminates many questions and errors on our wide spread operations, and is an aid to good supervision as well as efficient and standardized operation.

We use every possible means of reaching our personnel in addition to direct supervisorial effort. Among the aids used are such material as posters, bulletins, models, charts, blackboards, maps, film strips, motion pictures, and slides.

All of these articles have a definite place in driver training programs, of which accident prevention is only part. They are more or less common educational aids, still I cannot help but feel the industry as a whole is not making full use of them, and is prone to use those easiest to obtain such as cab cards, booklets, and posters furnished as a part of Council memberships and let it go at that. The Council has a good bulletin on the handling of this material, which is required reading.

I've been one of those who has, on occasion, complained about some of the mate-

rial as being too general in application; nevertheless, most of it is excellent if used properly. I'm sure we in the field can help this condition if we will only advise the Council of our problems. If enough of us give out with ideas, a better cross-section of fleet problems may be ascertained, thus helping the Council help us.

So much for commercially prepared printed material. Our real problem is to use to the best advantage the excellent material to be found right on our own operations, and adapt the general information to local situations and in terms familiar to our own personnel.

We may be wrong in our point of view, but the PMT Co. feels that our personnel is far more interested in situations they know about and are familiar with, particularly when the subject is educational in nature and certainly in accident prevention. Our efforts are most definitely in this direction, regardless of the means we use to convey our message.

An example of working out your own problem is our Los Angeles operation, where, admittedly, we have had real difficulties—(exceedingly high turnover, 253% in the 1942-43 period, and a peak traffic area). War time troubles, each of you have in various degrees.

Accident Rates High

By national standard, our accident ratio was and still is high. The N.S.C. National Fleet Contest didn't turn a hair on our personnel at L.A.—left 'em cold—but after we laid the ground work, our older employees asked to have a contest of our own which, by the way, was what we were waiting for. By open lottery we broke our own operation into 12 teams, each with a driver captain and a supervisor as advisor, competing with each other on a quarterly basis. Our accident ratio took a decided drop within a month. A great deal of interest was generated and after many months, is still going strong—mainly through much publicity coupled with a suitable training program for both supervisors and drivers. The team captains, incidentally, when assigned a new driver, are responsible for his education during the student driver period.

A six by six foot bulletin board on which the teams are listed was put up and each

individual's and team record is kept quarterly by use of colored gummed stars. Gold for no accidents, green for an accident of a non-chargeable type, and red for a chargeable accident. Here was a place where we made our own rules to suit a local problem. We had to sell it, and the short duration of each contest starts everyone off even every three months, thus we are able to keep things hot. At the conclusion of a recent quarter, Los Angeles newspaper reporters and photographers covered our award meeting at which the winning team received new uniforms. Always take every opportunity to give individuals public credit.

This sounds elementary, almost first grade stuff, but it has really worked in our case. Most important is that it worked after trying a great many things commonly used to obtain employee cooperation under normal labor conditions which certainly do not exist in Southern California now.

The most gratifying thing about our attack on this problem is that in 1942-43, when our labor turnover was 253%, we reduced our frequency nearly 15% under the 1941-42 figure. The 1943-44 figure up to date is far lower as the labor turnover since the labor freeze has permitted us to do more driver training and give some attention to selection, which we threw by the boards in late 1942 until late 1943. The only requirements we did not relax on was our physical examination, which every employee receives.

Every safety man has a safety meeting problem. We call them accident prevention meetings, because "safety" is a too general term, every employee can prevent accidents, but safety is something the other guy needs. I'm a fanatic on the subject of transmitting accident prevention practice into company terms and situations, and I do not like most commercially prepared safety slide films and motion picture films. We have a camera and a slide projector, and make our own slides in color. We use 2" x 2" slides. We stage most of the various safe practice procedures and accident situations so they may be discussed at meetings. Candid shots are hard to get unless you are lucky, and are seldom used. We are able to show our own equipment being operated in the manner we want it operated, which—in many cases—is different than as shown in a commercial slide or motion pic-

ture films. We prefer the positive approach at all times.

Color brings a great deal to safety slides, we feel our Company colors are photogenic, and have taken advantage of the fact. Composition is important too. Distracting backgrounds are to be avoided when taking pictures of an educational nature, and above all, technical correctness is extremely important because a driver is the first one to spot a situation he knows isn't right. In fact, I have had them spot items I never considered as being wrong. Equipment, even now, may be obtained to do this work. Our outfit cost less than \$200, camera and projector complete, and it's worth its weight in gold. We have both a slide and sound motion picture projector. For real training, the slides are best, because they permit discussion of every point, which a motion picture does not.

Make Color Pictures

We are fortunate as we have access to the parent company's photography department and its technicians. We are just now starting to make our own motion pictures in color on safety and driver training—not because these isn't good material available, but because experience indicates our own promotes greater interest and enables us to put our point over just as we want it. You know, seeing fellow driver Bill Jones and your own truck and maybe yourself in a motion picture does something for morale, too. Don't think it doesn't. However, if you use commercial motion pictures, here's a word on selection of films for training purposes.

Be sure you have previewed the film and are familiar with its entire text, then introduce the film to your group, describe what the film is about, the source of information, and its factual basis, how you want the data applied in the event the film differs from your own methods. Never turn a training or safety film loose on your drivers unless they have been prepared to receive it—particularly in its adaptation and use for correction of some local problem. This is important, as too often we may feel the film in itself is self-explanatory. Make sure the group knows what you want to accomplish in showing the film.

Speaking of visual aids in connection with accident investigations, we have found small toy automobiles and trucks on a flat blackboard marked with various street plans comes in handy when discussing and analyzing accident situations. Many drivers cannot do justice to themselves in an accident investigation when they try to stand up and explain the accident factors. Use of the toys gives them a chance to think out and explain a situation easier and more clearly.

I believe all the subjects just covered have practical application in fleet accident prevention. Our job is first one of salesmanship—an invitation to learning—call it human engineering if you wish because no one will accept education, particularly an adult, unless he is sold individually on his own need for what is being taught. I hate the word "education," but nevertheless our job is just that and the more methods we use as an aid to learning, the more we will accomplish in our chosen field.

Safe Driver Awards and Methods of Presentation

By SLOAN CHILDERS

Safety Eng., Southwest Ice and Dairy Products Co., Oklahoma City

There is a great deal of difference in the method of presenting awards now and before the war. I am going to tell you how we presented awards before Pearl Harbor.

In the good old days, we presented National Safety awards—these are the only awards we give—to all employees who earned them, both drivers and plant employees, once each year. By giving the awards yearly, instead of presenting them individually as they are earned each twelve

months, we can present them in large groups and make the affair more impressive and beneficial to all.

We figure our safety record from January first to January first of each year, which may be unfair to some employees who might have worked a full twelve months without an accident between presentations, without receiving an award. I mean by that, while we figure our year from January first to January first, we do not present the awards

until well up in the spring. The reason for this is our business is seasonal—ice manufacturing and distribution, ice cream and beverages, dairy, and dairy products, commercial cold storage and locker systems. Consequently, we employ as many again employees in the spring and summer as we do in the fall and winter. In order to impress the necessity and benefits of safety upon the employees, we wait until all the new employees have been put on for the season before we present awards for the previous year.

We insist on all employees attending these meetings, regardless of whether they are to receive awards or not, or how long they have worked for the Company. We believe that new employees will be impressed and want to become permanent employees and drive safely enough to receive awards, and the old employees are more anxious to receive awards and help the new men use caution in their operations.

We have 28 plants scattered over Oklahoma and a part of Kansas, so in the spring after we have put on a full crew for the season, we make an itinerary for our presentation of awards. We mail a copy of the itinerary to the State Chief of Safety Patrol of Oklahoma and of Kansas and invite them to attend as many of our meetings as possible; also have as many of their patrolmen, who are located near the towns where we are to have our presentations, attend. We invite the Governors of the two states, the City Mayors, Chiefs of Police, Chiefs of the Fire Departments and all newspaper men and reporters to attend. There is a big dinner, either in the leading hotel or country club.

We have had two Governors attend our presentations and we always ask the State or City Officials to participate in presenting the awards. If the newspapers do not have their own photographers, we make arrangements for a commercial photographer to make pictures of the entire crowd, the employees who receive the awards and the officials making the presentation. All of the Officers of the Companies attend as many of these meetings as possible.

We get as many as possible of the pictures published in the local paper, along with a nice write-up about the employees who received the awards. All people like to see

their names and pictures in the paper. We feel these presentations of awards and the method we use to present them is worth more to our safety program than any other thing we do. The employees enjoy and talk about the banquet and presentation ceremonies for months afterwards.

In cities like Oklahoma City, and other places where we have more than one plant, we have the presentation for both plants together. In that way our employees have an opportunity to meet each other and learn more about the Companies' business.

Since the war, everything has changed—even the method of presenting awards. Before the war we made a great ceremony of presenting the awards; now we are lucky if we can get the employees together long enough to hand them their awards and thank them for their cooperation in safety. Of course, the majority of the employees are new, not eligible to receive awards, and would not care to attend a presentation in which they had no part. The people we formerly depended upon to make our presentations as impressive as possible are also too busy to give us or anyone else the time necessary to attend the meetings. I know you will say if you are too busy to be safe, you are too damn busy.

Just to show you what the war has done to our employees and safety record, I will give you this comparison. In 1940 we had 156 driver employees who received awards. In 1943 we had 74 employees who received driver awards. And to show you why there were only 74 receiving awards, I will give you the following: 21 men received 14 year awards; 3 received 9 year awards; 3 received 4 year awards; 8 received 3 year awards; 6 received 2 year awards; and 18 received 1 year awards. You can see we have more men in the 14 year classification than men receiving the 1 year awards.

Our turnover has been terrific; we have had 216 men go to the armed service. The men we have been able to keep are older men and men with physical handicaps. We can't use women, old men, boys, or cripples in our ice deliveries. It is a man's job and it takes a good man to deliver 8,000 to 15,000 lbs. of ice a day in 25 to 100 lb. pieces. It takes lots of steps and lots of climbing of stairways. In making so many stops, there are many chances for an accident. An ice

truck draws children like sugar draws flies, which makes for accidents.

We have tried to keep down our severity by putting older employees, who have good safety records, on the most hazardous and

longer runs. But in spite of this, our frequency has increased. After the war we will be able to employ all the good men we will need and most of them will have been well trained in safety by the army.

WEDNESDAY AFTERNOON SESSION

October 4, 1944

Presiding: H. H. Goss, Safety Dir., Mistletoe Express Co., Oklahoma City, Okla.

How We Won First Place in the National Safety Fleet Contest

(A) How We Select Our Drivers

By LIEUT. E. S. HUTMACHER, U.S.N.R.

Asst. Safety Officer, Naval Powder Factory, Indian Head, Md.

The Naval Powder Factory at Indian Head has about 110 drivers. All of them are civilian employees. Some have worked at the station for several years. Six have been there for more than 20 years.

All our drivers are over 20 years of age. Most of them are under 40. We have ten women drivers who drive station wagons, jeeps and light trucks. One woman drives a school bus on the reservation. All other drivers are men.

Ten to fifteen new drivers are employed each month and the problem of securing dependable drivers who will operate Navy vehicles without an accident is an important responsibility.

Our safety record of only one reportable accident in 12 months—and none for the truck drivers—has caused some to ask "How do we select our drivers?"

The selection of drivers is probably the most important phase of building and maintaining an efficient and safe motor vehicle operational department. Men and women who want to become Navy drivers are required by civil service regulations to have a physical examination. This is usually given at the station's dispensary or by a medical doctor in the town where they are recruited. Applicants then go to the Labor Board and next to the Safety and Personnel Office for a lecture on general safety.

Nearly all the applicants are personally interviewed by the Foremen of Labor, Mr. H. T. Ward, who is also serving as Super-

intendent of the Garage, Grounds and Transportation. Mr. Ward has worked for the Naval Powder Factory for 35 years. He and his very able staff of assistants are responsible for the success of our Motor Vehicle Safety Program.

Even though he's an extremely busy man, Mr. Ward has a feeling of personal responsibility for the way each vehicle is operated and cared for. He has a personal interest, too, in each driver. He learns a lot about each applicant by asking questions, regarding his driving experience, names of communities where he's driven, types of vehicles driven, by whom previously employed, whether he's driven much at night, whether he likes to drive and whether he's had any accidents while driving. He also inquires about his family status.

If the applicant is needed and the interviews are satisfactory, he is sent to the Station Doctor for vision tests, blood pressure and other physical characteristics essential for safe driving.

Returns for Decision

He then returns to the office of Superintendent Ward for a decision as to employment. If employed he is introduced to the supervisors, given a safety talk and a copy of the station rules for drivers which he reads, signs and returns for filing. One of the supervisors explains the station policies. The supervisor encourages the new employee to ask questions. They talk about safe driver awards, the safety record of

the station and the participation of the drivers in the National Fleet Safety Contest.

The first assignment for the new driver is in the garage where he works for about a week under very close supervision. He does no repair work but becomes acquainted with the vehicles by moving them around the garage and parking lots when it's necessary for them to be moved.

If he's an experienced driver he might go on a few errands around the station, alone in a vehicle, after a couple of days around the garage.

After a week's work around the garage and parking lot, the supervisors have a good idea of his driving ability but he's not sent out on the highway or assigned to a bus until he has been under supervision for several days. He's likely to be assigned next to a truck hauling powder from the extru-

sion plant. He is required to work with a regular driver until the regular driver is satisfied that the new man is qualified to work alone. The new man does most of the driving after the first day.

If there is any doubt whatever as to the ability of a driver to operate safely if alone on the highway, he is not permitted to operate outside the station. He is assigned to work under almost constant supervision.

The safety program at the Naval Powder Factory does not end with careful selection of drivers. This is only the beginning but is an extremely important item. It makes the rest of the work much easier.

Without careful selection and constant supervision during the first few weeks of employment we could not expect to maintain our present safety record.

(B) How We Train Our Drivers

By B. A. RENNOLDS

Safety Dir., Virginia Stage Lines, Charlottesville, Va.

I would like to take this opportunity to brag a little on the Safety record of our company. In 1936 we joined the National Safety Council and in 1938 we entered the National Safety Contest sponsored by the Council. For the contest year ending 1938-39 we won the award, having finished in first place. For the contest years '39-'40, '40-'41 we finished second. We again won the award for '42-'43 and for the year just ended '43-'44. We are very proud of this record. I sincerely hope that we will win this award for the coming year as we have not been involved in an accident of any kind since February 2, 1944.

I represent a very small company. We have only ten buses and eighteen operators operating about 35,000 miles per month. You can easily see that the principles of operation which would accomplish results for a company of this size could not be used for larger companies such as most of you represent. We operate a long distance bus company employing one hundred fifty drivers, using about one hundred pieces of equipment, operating in the states of Virginia and North Carolina and into the District of Columbia. We certainly have not, as yet, been able to set a record with the

larger company that will compare with the record I just referred to, even though the two companies are owned by the same men, are under the same management and use the same supervisory personnel.

We do not feel that our good record just happened nor can we conscientiously say that it was the result of a definite training program in the true sense of the word. We do not believe that the methods we used ten years ago would be adequate for the present time. Our program was based entirely on driver attitude or morale and on this we focused all our efforts. In order to present to you a clear picture of what we had to do it will be necessary to go back several years and tell you something of the history of our company.

The City of Charlottesville, in which we operate, is a college town of 20,000 inhabitants. Its street transportation until 1935 consisted of electric street cars operated by the local power company. In 1935, after having operated "in the red" for a number of years, the street car company decided to call it quits. There was organized a street bus company to take over this operation and a deal was made by the street car company whereby the bus company would have to use

the street car operators as bus drivers. The management of the newly formed bus company was advised by traffic engineers that the bus operation would be unprofitable and being unwilling to make large capital investment until justified they purchased for this operation seven 23 passenger worn out Corbitt buses. With the street car operators and the worn out Corbitts we began operation on June 1, 1935, with a straight 5c fare.

The drivers ranged in age from 30 to 49 years and some of them had been operating street cars for 27 years. We pulled from our long distance operation several of our best drivers and put them on the city breaking in the older men. You can understand that these men did not appreciate their new assignment, but in a few weeks they obeyed the drivers they were breaking in, and they returned to their former runs. While working with the city operators these long distance men really felt that each man was perfectly safe to drive a bus and for about a month we got along fine. Then we started clipping fenders and knocking over a few light poles on the busy streets. Even though we were having accidents our General Manager felt that these men must have a lot of good in them or they would not have made good street car operators. We had been writing them letters about safe operating and the insurance company safety engineer had been working with these men and he felt that they could drive bus that they were just careless. Our General Manager felt that we should get to know each of them better through personal contact and see if we could get them to have a little more pride in their work and a desire to operate their buses safely.

While working with the power company the men were putting their money and reports in a chute and therefore the only contact they had with their company was through the car barn supervisor. In order to get closer to them we asked them to bring their money and reports into our main office and wait while it was being counted. We were having trouble with their reports checking over and short so we kept a record from day to day and complimented each driver who turned in a perfect report. Within a month we would have been willing to accept their reports for deposit without counting same. In other words, without

speaking a cross word or asking anyone to do better we had overcome our troubles with the reports; therefore, why would it not apply to their accidents? Since the men had to come to the main office each day to check in they gradually got to know our President, General Manager, and the entire office force well for all of us would go out of our way to stop and talk a few minutes with each man. We spent a lot of time with each driver discussing the accidents which had occurred, how they could have been avoided, how they were affecting our insurance cost and maintenance cost. We purchased several nice new buses and announced to the men that the new buses would go to the men with the best safety records. We impressed upon them at every opportunity that we were interested in their welfare and encouraged them to bring their problems to us. We rendered financial assistance in a limited amount to one man to help him send his son away to college; we helped another to buy a home; and, we fired a third for drinking while off the job. The men gradually got the idea that we were all for them whenever they were right and they began to want to get right.

In 1936 we joined the National Safety Council and announced to each driver the rules the Council followed in issuing awards. We promised them that for each pin they won from the Council we would give them one complete uniform or the equivalent thereof in cash. We were amazed when the year rolled around and several of these men had not had an accident and they were the proudest men you have ever seen. We threw a party for those who had won these pins and were sure to have at this party those men who had not won a pin. We also had their wives and sweethearts. We could see that we were really getting somewhere as all of the men were interested in their work and their accident records had improved to the point where they were good.

Talks to Each Man

At this time we talked to each man and told him that if they thought they were good enough we would enter the National Safety Council Contest beginning with the 1938-39 contest year, but, that we would not want to enter this contest unless they would assure us that they would make a good showing. As I have previously stated we won the

award for this contest year. When this award was received from the Council we arranged a banquet for all of the drivers going to considerable trouble and expense to relieve them from their schedules in order that each of them could be present. The Mayor of Charlottesville presented the award to the drivers in the presence of the members of the City Council, the Chief of Police, and the leaders of the different civic clubs. The following day there appeared in the local paper pictures of the award, the banquet, and of each individual driver. You have no idea what a boost these men got from this.

During 1939 we expanded our service which made it necessary for us to employ several new men as operators. We spent a great deal of time before employing these men impressing upon them what a good record we had and made them understand that we intended to keep it good. When we had definitely decided that we were going to employ a man, our first step was to introduce him to each of the older drivers. We then selected two of the best of the older drivers and in their presence explained to the new man what a good record these men had, what they had accomplished for our company, and how much their efforts were appreciated. The new man was then turned over to these two men with the distinct understanding that he had to convince them that he would make us a good operator before we would promise him a permanent job. The new man started drawing pay the day that he began work with the two older men and in some instances as much time as a month elapsed before he would be okayed to pull a run by himself. We have followed this same procedure up until the present time and that it is one of the reasons we keep our accident record as good as it is. We have

also held safety meetings, at which times we always had the drivers, their wives and sweethearts. Rather than have too frequent meetings we have confined them to once or twice a year at which time we spend quite a bit of money preparing and arranging dinners and entertainment.

During the last nine years we have had one man voluntarily quit our organization; two who have been drafted; and we found it necessary to discharge only three. We feel that our men are well satisfied with their jobs; are proud of the good work which they are doing; and our company has made money each year after the first year of operation.

We feel confident that we render the City of Charlottesville as good a service as any city of its size in the United States as we now have frequent schedules, modern up-to-date equipment, and we still maintain a 5c fare.

For our long distance operation we are now training driver instructors. When these instructors have received three months training and we are convinced that they are qualified to get the job done each of them will be assigned approximately forty drivers and their only responsibility will be to work with these men and help them become better operators. These men will be direct representatives of the management and in this way we will know that each man will have direct personal contact and individual attention when needed.

In conclusion, I would like to say that we of the Charlottesville & Albemarle Bus Company and Virginia Trailways expect to continue to expand both our operations but we intend to have at all times personal contact with each of our operators for we believe that it is essential to a successful operation.

(C) How We Supervised Our Drivers

By E. Z. BANKA
Safety Engr., National Biscuit Co., New York City

The subject of "How We Supervised Our Drivers" necessarily deals with all features of the Motor Vehicle Safety Program. To permit a better understanding of the nature of our supervision it must first be pointed out that the National Bis-

cuit Company has more than 270 Agencies and Depots delivering biscuits, crackers, cones, shredded wheat and similar food products. The number of trucks at each location range from one to a fleet of thirty-five. Also, we have seventeen

Bread Bakeries, with fleets ranging from 20 trucks to 85 trucks.

The Safety Program we have adopted applies to all of these Branches and includes the Rochester Bread Bakery which won the Group III award. Our Rochester Plant has 31 trucks, and during the period of the contest drove 356,454 miles. However, I feel it is entirely in order to give just a little more information on the driving performance at this branch. The last chargeable accident incurred by the Rochester Bread Bakery was on June 18, 1941, more than three years ago. Since that time the drivers have covered more than 1,300,000 miles—without a chargeable accident—and they're still going strong!

Our Safety Program was begun many years ago, and we developed an effective system based on the use of posters, dash cards, safety certificates, pledges, score boards, interbranch and inter-company contests, payroll inserts, safety meetings, monthly safety letters, also banners, pins and plaques are presented as Safety awards. These are our means of maintaining safety interest among drivers.

Selection and training of drivers is based on a combination of sales ability and previous driving record. Our Bread Bakery drivers are salesmen-drivers, and we do not hire an individual who might be considered an excellent salesman but a poor driver.

Training covers a thorough road test, a knowledge of driving rules and regulations, and safe practices. Physical qualifications are given strong consideration.

To get to the point on Supervision—I believe much the same principles are practiced in our Company as in most other organizations having a great number of Branches scattered throughout the country . . . with, perhaps, some variations.

The general supervision for the Safety of all employees, not only our drivers but also the employees inside the industrial plants, rests on our Insurance Department Manager. It is this fact which serves to eliminate the confusion which would otherwise arise if the right of final jurisdiction on Safety were split up among a number of Department Heads. All matters pertaining to Safety clear through

one recognized authority. Therefore, there is never any question as to where any recommendations, suggestions or criticisms for furthering Safety should be directed.

Of course, a complete record of all accidents is kept within the Insurance Department. Our vehicle accident tabulation is broken down into 21 classifications, which we have found rather thoroughly cover our requirements for purposes of analysis. You are all familiar with the nature of these categories, such as accident occurring at an intersection, skidding, backing, right or left turn, sudden stop of auto ahead, rolled back, side-swiped auto, etc. Detailed information is available from the reports submitted on the comprehensive forms required by law.

It is my responsibility as the chief Safety Engineer of the Company to check the trend of accidents, to make analyses of individual Branch performances, to see that all items used to maintain driver interest are regularly forwarded to the Branches, and to make personal visits throughout the country to the Branches. We believe that personal contact on Safety is one of the strongest means of emphasizing the importance of Safety. Getting into the field, and observing conditions at first hand has been of far more value than a dozen circular letters forwarded to Branch Managers with the request "Please comply with these instructions as promptly as possible." Furthermore, personal contact brings out many criticisms which might otherwise never be voiced through the medium of correspondence, and it is these criticisms that greatly determine whether or not some particular phase of the Safety Program has outgrown its usefulness.

We also avail ourselves of the services of a nationally known casualty company which periodically has its engineers visit our Branches to check equipment for faulty brakes, lights, windshield wipers and similar accident hazards. These engineers also stimulate interest among the drivers and managers at our Branches by speaking on seasonal subjects, or on a subject which may serve to decrease the trend of accidents occurring at the particular branch they visit.

These engineers submit their reports to

our Insurance Department and it is my job to check the recommendations made, follow through to see that the necessary items are complied with, and to give constructive criticism to the Manager of the Branch should it appear that an attitude of indifference, toward Safety is beginning to take hold.

Safety Through Supervision

We also avail ourselves of other forms of personal contact in stimulating and maintaining Safety through supervision. Occasionally we find that frequent visits to certain Branches is a physical impossibility. We then have no direct means of knowing just how conscientiously our Safety instructions are being observed. And, of course, we do not wish to wait until accidents happen before being convinced that something should have been done about it. Consequently, we have found it expedient to have our District Sales Managers write to the Branch Managers under their supervision. The text of the letters sent by the District Sales Managers stresses the need for a complete, determined effort to overcome accidents. This serves a two-fold purpose. It is an acknowledged fact that Branch Managers many times become so enthused about their first love—getting out production—that they become lax in following through on what they feel are secondary considerations: safety, for example. However, the fact that their District Sales Manager (who himself is primarily and vitally interested in getting out the goods) prompts them on Safety and instructs them to comply with the instructions issued, gives the Branch Manager a further appreciation of his responsibilities toward Safety. The second point is that the District Sales Manager himself frequently visits the Branches under his jurisdiction, and since he has shown a decided interest in Safety by writing to his Branches on the subject, these Branches recognize that they must be on their toes because they can expect a personal check-up visit from the District Sales Manager at any time.

Although these, in general, are the elements of our supervision on Motor Vehicle Safety, it appears to me that what we are more interested in is "How we supervised our drivers—and made it pos-

sible for Rochester to win the Group III award." In other words, our Safety Program, of which supervision is a vital part, contributed toward establishing this record. Of that we have no doubt! Yet the fact remains that, although many of our Branches have a good driving record, some of them do not! And all of them are subject to the same Safety Program, and the same supervision.

It appears that the real value contributed by supervision—which greatly aided in establishing the Rochester record—lies in that supervision which took place after Rochester had already begun to have a good safe driving record.

Let me put it this way. Proper supervision takes into account the fact that a comprehensive program must be established which covers all the necessary elements of selection and training of drivers, and continuation of safety interest among drivers. Our Company has done this, as I have explained. But the fact must also be explained why Rochester could so far outstrip our other plants even though it received no greater consideration than the others. Conversely, the problem presents itself also as to why other Branches have not been able to establish the same record as Rochester—since these other Branches received the same consideration.

The answer lies in the fact that Rochester got a "toe-hold" on Safety. By that I mean they went through a period of one month without a chargeable accident, then two months, then three—until it stretched into the half-way mark of six months. It is at this time that supervision has its strongest opportunity to maintain a "no-accident" record during the next six months—and thereafter. If the safety engineer, or the executive head of safety, fails to acknowledge this six-month performance with an appropriate written tribute, or a personal appearance, then much of the value of the Safety effort is lost. Proper supervision will make it a point to contact the drivers of this Branch again four months later so that the drivers will be spurred on to further effort during the following two months in order that they may accomplish their objective of a one-year "no-accident" record.

At the end of the year, congratulations alone are inadequate as a means toward

continuing the record. A get-together, preferably in the nature of a dinner, should be held, at which formal presentation of the award is made, attended by speakers from the home office and from local police or other safety organizations. Finally, full publicity must be given in the Company publication.

No organization can afford to hang a "Do Not Disturb" sign on a good safe-driving record, and sit back with fingers crossed and a prayer that it will continue forevermore.

It is a natural function of the safety supervisor or safety engineer to devote strong effort toward overcoming accidents at those Branches where accidents continue to occur, but if the Branches that are doing a fine job are ignored it is very probable that the safety supervisor will very soon have these Branches included in his list of offenders.

Supervision Pointers

Therefore, the real job of supervision lies:

1st—in having one individual at the head of the Safety Program, to eliminate confusion and duplication, and to establish a single source of jurisdiction to which all suggestions, recommendations and criticisms can be directed for prompt, final action.

2nd—it is the responsibility of this executive to formulate and establish (in conference with others, if he so desires) a comprehensive program for safety which embraces selection and training of drivers, and continuance of driver interest in safety.

3rd—a centralized system of tabulating and analyzing accidents must be put into effect, which will permit month by month reviews of the accident performance, and a thorough check of the distribution and use of all safety literature, dash cards, posters, etc.

4th—a responsible individual or individuals must be chosen to fulfill the task of analyzing accidents, contacting Branch Management and personally visiting these locations to check equipment and personnel interest in Safety.

5th—supervision must be aware that it is often necessary to have others in responsible positions sell safety for it. This is brought out by our policy of having the District Sales Managers take an active part in furthering safety consciousness among the Branches under their jurisdiction.

6th—(but not the least important by any means) supervision must take full advantage of the "toe-hold" that is provided when a Branch has a five or six-month "no-accident" record. Keeping that record alive is no less important than eliminating accidents anywhere else.

One last point, however. I mentioned before that our Rochester Bread Bakery has a mark of more than 1,300,000 miles to their credit, or more than 3 years and 3 months without a chargeable accident. During a recent visit I made there I learned that the men are now shooting at a 1,500,000 mile mark. They have set their next goal at 2,000,000 miles! Their confidence, and their safe driving practices, will be a hard combination for "Old Man Accident" to beat.

(D) How We Keep Up Driver Interest

By CARL SCHWEITZER

Sales Mgr., Slick's Family Washing Co., Fort Wayne, Ind.

Let us liken the National Safety Council to a correspondence course. It has everything in way of material we need to guide us, but it takes the Extension Division, or in other words, our local fleet safety council, where we can rub elbows with our drivers, to keep up interest in THE NATIONAL PROGRAM.

I shall endeavor to cover, step by step,

the various phases of our local contest, to show just how this interest was maintained.

First we had to get the interest and cooperation of our business men. Our next step was to select a live-wire chairman and an up-to-the-minute committee of supervisors or as we call them contact men, through whom we enlisted the whole-hearted cooperation of the drivers themselves.

First we get cooperation of the management or in plain words "the Boss." It is very essential to have him back of the program one hundred per cent, because we need the boss to pay the bills. All good business men are interested in conserving equipment, especially during this war time period. Fort Wayne has always been highly regarded for its fine Community Spirit. The co-operativeness among business men, through the Chamber of Commerce makes for success in any worthwhile program, so it wasn't at all difficult for the Chamber of Commerce to get the management to go along wholeheartedly.

Selecting a live-wire chairman was the next thing to be done. The officers of the Chamber of Commerce chose Mr. C. E. McBride of the Northern Indiana Public Service Company to head the Fleet Safety committee, and believe me, he knows how to "dish out" the jobs and get them done.

They then chose fourteen men from various companies to form the executive committee whose job it was to set up the rules and regulations to govern the contest. This committee meets monthly—ideas are exchanged and methods discussed for improving the program.

This Executive Committee in turn asked each company in the contest to furnish an up-to-the-minute contact man who is directly affiliated with the drivers, so that all information of this program can be forwarded to him to be passed on to the men in his field, the drivers who are setting the Fleet Safety records so many of our companies are enjoying today. These contact men meet quarterly where they become acquainted with the ideas and improvements presented by the executive committee. Here much interest is aroused and carried back to each individual fleet of drivers.

Last, but by no means least, we enlisted the whole-hearted co-operation of the drivers. At the end of the first six months of our contest an award dinner for all drivers was arranged. At this time six-month awards were presented to all drivers without a chargeable accident. After seeing the fine fellowship and interest displayed at this dinner among the drivers of some seventy firms, the Chairman and Executive Committee launched forth on an extensive drive to solicit more firms to join in this worthwhile program. A sizable increase was

gained during the following half-year period, when again a buffet supper and fine program was arranged and the year awards presented to all successful participants.

Cites Old Proverb

The old proverb still holds true "the way to a man's heart is through his stomach" for these fleets of drivers "licked their platters clean." This, by the way, is where the bosses come in again, for they were asked to pay for the "feed."

The attendance at this second dinner was so far above expectation and the interest by the drivers so keenly shown, by the end of this first year the committee, working through its Chairman and the secretary of the Fleet Safety Committee, Mr. Gordon S. Griffin, of the Chamber of Commerce, formulated plans to enter the drivers in the National Council. This has added tremendously to the contest. We have found the drivers are proud to be a part of the National Program. The literature furnished by the National Council, in the form of dash cards and letters on safety, has helped to instill an interest heretofore not felt by the individual drivers. They not only receive recognition from the local Fleet Safety Council, but the National as well. Mr. Griffin mails to the contact-men a printed report monthly, showing the standing of each company, together with the National literature which keeps the drivers well informed at all times of their progress.

To date, we have 120 fleets numbering some one thousand drivers, who are driving the streets of Fort Wayne and the state highways, all safety-conscious. Here too, we have another department interested in our program, which has praised very highly the fine driving records shown in the past two years. That is the Police Department, both our local Traffic Bureau and the State Highway division. It has helped them hold down accidents and deaths, in and near our city, to a minimum. At our last award dinner, the captain of Traffic Bureau of the local Police Department, Custar A. Dumifon said "I am proud of the record that has been set by you drivers and want you to know that we feel your program has helped this department hold down accidents." He also stated that years ago all that a blind man standing on a corner needed to do was feel the fenders and could tell whether or not a taxicab was waiting at the curb, but since

the taxicab drivers have entered the Fleet Safety Contest that saying no more holds true, for their fenders are as smooth as other cars.

Shortly before an award dinner which is held semi-annually, our chairman sends a personal letter of invitation to the home of every driver. This gives him a valid excuse to spend an evening "out"—this may be one of the reasons for our heavy attendance.

I only wish all of you could have gone with us to the award dinner held at the Chamber of Commerce on August 10th of this year. Our program, as always, was snappy and just what the driver wants. We give them safety but wrapped up in such a nice bundle, they take it for entertainment instead of a lecture. Then too, Mr. Wilbur Shaw was there and talked about his racing experiences and Mr. Burt Shertleff, the professional wrestler, gave a demonstration. Our chairman insists that each meeting end by 9:30 o'clock—no drawn out affair, but something chuck-full of interest and do they come back for more—631 were at this August dinner on one of the hottest days of the summer.

Let me tell you, these drivers are really proud of their records—listen to these statistics:

327 drivers were awarded for having driven two years without a chargeable accident.

81 drivers were given one year awards.

252 drivers given six month awards—a number of these are some of the recent entries.

Certificates were presented to:

10 firms without an accident charged against their fleet for two years.

13 firms without an accident for eighteen months.

10 firms without one for one year.

44 firms without an accident for six months.

What a record—660 total drivers awards and 77 company awards. No wonder the drivers are proud.

The committee is already launching forth

on a program to double the membership for the year 1945. Our biggest worry at the present time seems to be to find an auditorium big enough to hold all the drivers at the next award dinner. We may have to come to Chicago to one of your big Stadiums.

To show how keenly interest can be felt, let me point out some of the things we experienced among the drivers of the company I represent.

On the bulletin board in our Sales Room we have posted the local standings of each company and our drivers are right there watching for the new reports even before we receive them. There too, the National Bulletin is displayed.

The monthly letter and small booklet "The Safe Driver" from the National Council is mailed to the home of each driver to create a safety-conscious family. We know how the wife likes to read hubby's mail after he finishes, yes, and even sometimes before.

In a sales meeting after Pearl Harbor, our drivers were frankly told the truck they were driving had to last for the duration. One of them was then appointed to inspect all trucks each week for mechanical defects, proper inflation of tires, removal of smooth tires for recapping, etc. This has kept our fleet of trucks in A-1 condition.

When our fleet had gone six months without an accident, the drivers began threatening each other—it would be too bad for the first one who spoiled the record. This type of rivalry created a fine spirit among them. Each did not want to be the one to spoil the record. With but two months left of our year, our Boss created still more enthusiasm when he "stuck his neck out" with a wager of \$10.00 to \$1.00 to each driver, that the Fleet couldn't finish the remaining months without an accident. Why, it got so that one driver couldn't get his truck near another one for fear they would get a bumped fender. The boys came through with flying colors. This was one bet the Boss was glad to pay. He even ordered lapel buttons with NATIONAL CHAMPION printed on them to give to each driver.

Don't tell me the bosses aren't proud when their fleets come through.

Farm Safety Sessions

TUESDAY AFTERNOON SESSION

October 3, 1944

Presiding: T. A. ERICKSON, Consultant, Rural Service, General Mills, Inc., Minneapolis, Minn., and Chairman, Farm Safety Committee, National Safety Council.

The National Safety Council's Interest in Farm Safety

By H. L. MINER

Mgr., Safety & Fire Prevention, E. I. du Pont de Nemours & Co., Inc., Wilmington, Del., and Vice-President for Homes and Farms, National Safety Council

The motto of the National Safety Council is Universal Safety . . . Universal Safety has been the Council's motto since the beginning. However, having an objective and attaining it are two different things. . . . It has been necessary for the Council to develop its program in various fields of safety in accordance with the interest and support which could be developed.

It was natural, when the Council was formed in 1913, to concentrate on safety services for the industries which supported the organization. Back in those days, it was an achievement even to sell management a program for combatting accidents right in the plant — accidents that cost money right out of management's pocket. Obviously, it would have been extremely difficult to sell an extensive public service program at that time.

(You know, in those days, most people had the idea in the back of their minds that accidents were an act of God. They didn't really believe that accidents could be prevented. You can see what a long way we have come since then. Nowadays, almost everyone thinks of accidents as resulting from definite causes.)

Well, as I said a moment ago, the Safety Movement in America began in the factories. There it was *proved* that accidents don't just happen — they are caused. There it was proved that safety is good business. By the early 1920's

safety had been sold well enough so that a Public Safety Division could be set up in the National Safety Council. The function of this division was to apply the techniques learned in industry to accident problems in other places. Inevitably the program was concentrated upon the serious and growing problem of automobile traffic mishaps. Traffic accidents aroused public concern and therefore traffic safety measures received public support.

As the years went by techniques, and indeed entire new professions, were set up to deal with traffic safety problems. There came into being a type of engineer who could design roadways so that traffic conflicts would be minimized. . . . Traffic laws were written. . . . Elaborate traffic accident reporting systems were set up. . . . Traffic police methods were systematized to an almost unbelievable degree.

But what about other phases of public safety? What about home safety? And farm safety?

Well, there *were* people who were extremely interested in these other phases of the safety job, but they were few. There were men like "Jake" Mohler, Lew Palmer, Art Rohweder, and T. A. Erickson here (and I am proud that I was among them) who were trying to do something about these forgotten phases of safety. They ran programs in their own localities, and they kept bringing up the matter of home safety and farm safety

at various affairs of the National Safety Council. . . . As a matter of fact, everyone agreed with them that more ought to be done in these fields. But, after all, it was impossible to carry on a national program of farm safety without finding some way to finance it. While it was possible to do a few things through the volunteer committees, it was necessary to have a staff, and some money for publications, in order to make any dent in the situation.

Our break came a couple of years ago when the Council conducted a nationwide solicitation of funds for public service activities. With some of the money a Farm Division staff was set up in the Council headquarters. That staff has been able to provide the follow-through that has been needed for so long. Now an ever-widening circle of agricultural leaders is becoming interested in the reduction of the farmer's enormous accident loss. Definite farm safety organizations are functioning in 19 states. One state, Wisconsin, has a full-time farm safety specialist who is conducting an excellent all-around program. So, you see, farm safety is blooming—late perhaps, but nevertheless, beautifully.

What are the prospects for the continued growth of the farm safety movement? That is up to you. Personally, I think they are excellent. The importance of the work is unquestionable. The effectiveness and value of the work is being proved by the activities going on at the

present time. Therefore, I believe that increased interest and support is inevitable.

Predicts Support

Now, I would like to mention something in particular about support. The Council's expanded activities in farm safety have been financed so far by money contributed, for the most part, by heavy industry in the flush of wartime prosperity. Obviously that support should become less necessary in the future. This program must prove itself to be of such value to the industries, organizations and individuals most concerned about the welfare of agricultural America that those interests will insure its continuance.

You remember that the title of my talk is: The National Safety Council's Interest in Farm Safety. Each of you has the answer, for the Council is an association. . . . It is nothing more than you and I joined together to try to do something about a problem that affects our health, wealth and happiness. . . . What is the National Safety Council's interest in farm safety? You know the answer, because you are the National Safety Council.

And so as we participate in these farm sessions here at the National Safety Congress, let us hope that each of us will feel his responsibility in this important field to the end that much progress will result from these deliberations and that the future of effective farm safety programs may be permanently assured.

The Mission of a Farm Safety Program

By J. C. MOHLER

Secy., Kansas Board of Agriculture, Topeka, Kan.

The mission of a farm safety program can only be to help farmers and farm people prevent accidents and thus save life, suffering and property. I wish to put emphasis on one word in the foregoing. That word is "help."

We must always bear in mind that accidents can be prevented only by the people who cause them. Therefore, a farm safety program must concern itself with the accidents which farmers themselves cause. So, it becomes our first task to gain the interest

and support of farm folks if we are to expect them to do an effective job of prevention. Once we have obtained this first objective, our job is at least 90% completed, in my opinion.

Farmers are ingenious people. They must be, to remain farmers. Every year they must cope with the forces of nature in order to wrest a living from the soil for themselves and for the city dwellers. Every successful farmer must be an executive and a laborer, a mechanic and a bookkeeper,

and must have knowledge of many other skills. He is an agronomist, an entomologist, an economist, a meteorologist, a zoologist, a biologist, and, above all, an optimist. We need not wonder, then, that the farmer may overlook some matter of extreme importance that has not appeared in his curriculum; as, for example, safety. It is only within the past very few years that it was discovered too many farmers had no realization of the significance of accident prevention as applied to the business of agriculture.

The farmer is not a difficult man to convince of the merit of any proposition if one has the facts, but these facts must be unassailable. Owing to the nature of their work, farmers are by themselves a great deal, alone with their thoughts. They have much time for uninterrupted thinking, and, more to the point, they think with a clarity that has gained for them an enviable reputation for sound judgment. Therefore, in the particular problem of farm safety, it is necessary only to reach the farmer with the facts to convince him that accident prevention in his field of endeavor is worthy of his attention.

In order to forcefully show a farmer the magnitude of the accident problem in agriculture, we must first present to him the accident experience of his industry. This is nothing more or less than farm accident statistics. I find that many states do not at this time have a system whereby such information is collected and compiled. So, it becomes the first mission of a farm safety program to obtain these data. I will not concern myself in this talk with the methods whereby such information can be obtained. Several states already have successful systems and the National Safety Council is well posted on the subject. My point is that if such information is not now available in your state, it must be obtained.

At one time it was my belief that rather dependable data gathered and compiled by a state here and there were not only adequate to convince that farming nationally was a hazardous calling but that these data provided a sufficiently good cross-section on which to base a farm safety program anywhere. This was a rather provincial idea that was early dissipated by attending the meetings of the National Safety Council,

where I learned that the pattern of a farm safety program had to be cut to fit the problem, and that the problems were not all alike, although the results sought were. Conditions are by no means the same in all states. Methods and types of agriculture differ; even the temperament and characteristics of a people vary, and the range in environment is wide. A state where dairying predominates presents quite a different type of agriculture from the commonwealth where grain farming prevails, and a safety program adapted to each type is required for maximum results. Even within a state there may be quite a diversity in agriculture, varying from general farming to the more highly specialized intensive types, as truck growing, small fruit production and orcharding. These are matters that have a bearing on the formulation of the most effective safety program, and unless the facts fit the situation of the people it is proposed to aid, their cooperation is not likely to be so spontaneous or whole-hearted. Hence, I would reiterate that the first mission of a state farm safety program is to get the farm accident facts of the state. Previously I asserted that farmers would have to do the actual job of farm accident prevention. Before they can do that they must know what they are endeavoring to prevent. A study of the farm accident experience will readily furnish the answer.

Perhaps it would not be amiss at this point to invite attention to one circumstance peculiar to the business of agriculture that gives special emphasis to safety precautions on the farm. That is, in crop production there is a turnover of but once a year, and if, for any reason, there is neglect in attention at critical times, there may be substantial if not ruinous losses. When a mechanic or an office worker has an accident which incapacitates for a few days, the financial loss would be limited only to such property as might be involved and to loss of time, without seriously jeopardizing, perhaps, the industry or institution served. Even these losses might be covered by insurance and by workmen's compensation. But, if a farmer has a minor accident at harvest time or when crops demand attention in order to insure their growth or development, he can lose the results of all of the work and investment which have been put in during that particular season. A broken arm at seeding time might mean

far more than the loss of several weeks in the field. It could easily mean the loss of an opportunity to grow a particular crop. The same accident at harvest time could mean the complete loss of production from those fields for that season. We all know that a farmer has many opportunities to lose the results of his labor. Too many times, these losses are staggering.

Approached on Same Basis

There is every reason to assume that the farmer can be approached and asked to give his aid and support to a farm safety program on the same basis as is used in approaching the manufacturer. That basis is, that it will be profitable for him to adopt such a program. The farmer must be concerned with income. Our accident experience or setup of facts with which we will attempt to persuade the farmer that farm safety is important to him must include special emphasis on the economic loss involved in farming mishaps.

In states where adequate accident information is now available, it then becomes the mission of the farm safety program to bring it to the attention of the farmer.

The methods are many and they must all be used. The newspapers and magazines, moving pictures, radio, special literature, public speakings are among the mediums for imparting information to farm people in the same manner as in imparting information to city people. So, it becomes the mission of a farm safety program to carry farm accident information to every available medium and enlist their cooperation in presenting it to the rural public.

Of course, it is not enough to invite attention to the accident problem without specific suggestions for prevention. This means that safe practices for specific farm tasks must be developed and presented at the same time that we sound the alarm on the accident menace. It must be the mission of a farm safety program to see that such safe practices are developed and publicized.

While the possibilities of engineering, as applied to farm machinery and design of

homes and installation of equipment, are great for making both the farm and farm home safer places, it is, I believe, quite generally agreed that the forwarding of a farm safety program is almost solely an educational matter. With that in mind, the schools loom as important mediums. Their value can scarcely be overestimated. Of course, one's education continues after quitting the class rooms, but capacity for learning quickly is great during the days of youth. It is during that period of plastic molding when many lifetime habits are formed, and that they be helpful habits is a matter of prime concern. Safe habits learned during this formative period will stay with one. It is then clearly a mission of a farm safety program to enlist the interest and active support of the schools in teaching safe habits to the youngsters. I have seen some of the results of such teaching and so have you. If you drive in the country at the hour when rural schools are being dismissed and see a group of small children walking down the left-hand side of the road, facing traffic, you are witnessing the formation of a safe habit that means protection to pedestrians on rural highways. A lad thus trained grows up, becomes the head of a family, and, let us say, moves to the city, no longer identified with farming; but if sometime, while on the way to Aunt Maude's for Thanksgiving Day, the car runs out of gasoline and papa must get out and walk to the nearest farm house for aid, he will walk on the left-hand side of the road. Habits of safety must be instilled so thoroughly that they will stay with one at home, at play, on the farm, the highway and, in fact, everywhere.

A farm safety program has many missions. In summing up, they include, first, the determination of the problem, which involves the determination of many intermediate problems; second, the determination of the answers; third, the bringing of this information to the attention of farm people as graphically as possible; and fourth, the repetition of the whole process again and again. The mission of a farm safety program has no end.

Why Should Farm Organizations Be Interested in Safety?

By J. S. JONES

Minnesota Farm Bureau, St. Paul, Minn.

Every farm organization should and must be interested in safety, but I can speak officially for only one—the Minnesota Farm Bureau Federation—an organization of 46,000 farm families. In the insurance division, alone, there are 82,000 automobiles insured, and of course each of them has a driver. The organization has a total of 325 employees. Naturally, among so many people there is going to be loss of time from accidents—yes, even loss of life occasionally, and an economic loss worthy of serious consideration.

A few years ago, we came to the conclusion that if it pays industrial groups to employ a safety director to work among their people, it certainly should be profitable to us to have a safety director. I admit that we had a selfish motive when we started a safety program. It was started as a side issue to our insurance department. There we had thousands of claims each year, and being a mutual company where losses are averaged over all the policyholders, we found ourselves confronted with this situation—and losses are paid from premiums—our losses showed us to be in the red for the state at one time to the amount of \$500,000.

Two or three courses could have been taken. One was that the rates could be increased—the easy way out. Another way was to reduce losses. We took the latter course, and at the time we stated that if one major liability loss could be prevented that it would maintain the cost of the department, besides preventing suffering and misery.

From that point on, a definite safety program was developed. We don't say that the director alone was responsible. It was our hope that if by his activities there would be one less major loss, then the department would be a good investment. We sincerely believe that as a result of the activities of the safety director, many, many such major losses were prevented in the first year. That was an economic advantage, without taking into consideration the suffering that may have been occasioned or the lives that may have been lost.

Safety Progresses

In the beginning of our safety program

the work was confined largely to traffic—automobile accidents. We have progressed and the safety program has developed in its perspective. Safety today on the farm is an economic, agricultural problem.

We receive at our office the weekly papers from over the state. One day I made a survey of the papers that came into our office, checking on accidents that occurred in rural neighborhoods in Minnesota. That was on July 20, and this is what I found:

South St. Paul Reporter: 58-year old farmer drowned; *Worthington Globe*: a boy in serious condition from falling in a grain elevator; *Mahnomen Pioneer*: young mother killed and husband injured when automobile upset; *Carlton Vidette*: 45-year old man killed when pinned between two trucks; *Winnebago Enterprise*: 52-year old farmer falling through a shaft in the hay loft, striking a steel stanchion and being killed; *Hector Mirror*: young boy having tractor tip over and breaking his leg; *Glencoe Enterprise*: 45-year old man killed in automobile accident; *Fairfax paper*: 50-year old Winona County farmer killed when his team of horses backed him over steep bank; *St. Paul Pioneer Press*: three people seriously injured in one day in three different accidents; *Fairfax Standard*: 17-year old boy suffocated in the cab of his truck; *Harmony News*: 11-year old boy loses his eye playing with a BB gun; *Jeffers Review*: two brothers in two different accidents on country roads have arms broken; *Wells Mirror*: two men in the community killed by dynamite explosion and another drowned; *Minneapolis Journal*: 26th traffic fatality in that city on that date.

Why are we having so many more accidents now than formerly on the farm?

Is it because farm operations are much more mechanized?

Is it because successful farm operation revolves around livestock production?

Is it because older people during wartime are doing more farm work?

Is it because of the immense amount of work that has fallen on farm operators that they are in a hurry, and hurry makes waste?

Is it because they do not know the seriousness of the situation? Or is it because of the lack of thinking?

Do we need to have emblazoned on the entrance to every farm the old slogan that railroads made so much of years ago: "Stop, Look, and Listen!"

I would be derelict did I not tell you of some of the work done by our safety director, Mr. W. A. Dickinson. In a five-year period Mr. Dickinson has talked to 310 schools with an attendance of 78,578. He has talked to 671 local Farm Bureau meetings, with an attendance of 73,404.

This work has reacted favorably on our membership. Our safety director has inspired others to action by means of poster contests. By surveys in some counties where he was able to enlist the aid of the rural school teachers and the rural pupils in making a complete survey of all the accidents over a period of a year. Based on his research material, he was able to put forward a definite, specific safety program.

How often it has been said, "There is no need for such a project in our county—we do not have any accidents here." This survey was the answer, with the facts.

Director Popular

The director of this department is one of the most popular of all the people in the whole organization—he is in great demand. Right now he is scheduled for three months in advance. These meetings are held out in rural areas. The attendance figures speak for themselves.

In our state, farm employment does not come under the workman's compensation law. However, it does not prevent court action on farm accidents. Insurance companies are forced to require a high rate on farm accidents for protection. Therefore it behooves farmers to employ every manner of means in reducing farm accidents for the purpose of betterment of insurance rates.

The recent farm safety week in Minnesota emphasized the following points; advanced by the farm safety section, Minnesota Safety Council:

"Every community knows the tragedy of adults and children maimed or killed, of farm work left undone when safety precautions are relaxed and trouble strikes. Farm deaths from accidents alone have ap-

proached 20,000 in this country in a single year, and the loss of health and time has been enormous. The community as well as the individual family feels each accident loss, and the community can be of greatest help in rallying the interest which alone can crowd out carelessness and replace it with understanding and caution.

"The following courses of action are suggested by the farm safety committee to make safety week effective in reducing accidents on the farm and extending its effectiveness into the future:

"1. Emphasize the necessity for special safety precautions at meetings of farmers' clubs, women's groups, service clubs, and youth groups.

"2. Encourage young people to take the lead in teaching and practicing safety on the farm. Schools, 4-H clubs and other agencies in the community already have programs but these should be renewed and extended by encouragement from adults.

"3. Encourage all the people on the farm to understand the true nature of accidents, that they result from hurry and thoughtlessness, that they strike down experienced farm help as well as those young and inexperienced.

"4. Throw the spotlight on the danger points known from experience and records to be the sources of the most and worst accidents—the gentle bull that suddenly goes wild, the careless approach to slashing teeth of power machinery, the hay chute that invites a fall with pitchfork in hand, the gasoline can in the barn driveway, or the open water tank beckoning to small children.

"5. Make safety instruction part of the process of learning any farm job by the inexperienced worker."

We have properly pioneered this work with rural people. However, we feel this, that the ground has merely been scratched. The problem is still there. It is intense, it is severe, and the more people that recognize the problem, the sooner are we going to get some place and going to do something about it. Safety is like insurance. Most insurance agents resent competition. However, the more competition and the more agents there are, the more insurance that is sold with the greater success to the insurance business. The same is true of safety.

Safety Demonstration

By ROGER SCHLUTER and HELEN KOWALKE
Sank Co. 4-H Club, Baraboo, Wisconsin

Roger Schluter:

The 4-H Clubs of the country have welcomed the opportunity to promote the Farm Safety Program. We feel it a great responsibility, but, as you know, our Clubs all over the country have responded. Results have been obtained through:

1. Public speaking contests which brought to the attention of farm people the importance of safety.
2. Surveys taken on the farms of members and their neighbors in order to find the hazards.
3. Correction of many of these hazards through the suggestions offered by the 4-H members.

While it is difficult to measure the accomplishments of this campaign, many rural communities have reported fewer accidents among farm people.

Many millions of manpower hours have been lost to our American farms by careless accidents. And now what are some of these accidents and how can they be prevented?

The number one cause of fatalities on the farm is farm machinery. One reason why we American farmers have a higher standard of living than the farmers of some other nations is because we have more and finer tools to work with. But many accidents occur in the operation of these machines, and most often through the carelessness of the operator. For example, in the operation of the tractor, you will notice by the chart that of the 99 killed in agriculture during the eight month period many deaths were caused by farm machinery of which the tractor is the worst offender. Some of the most common accidents with the tractor are caused by trying to repair or move about a machine while it is in motion rather than stopping to make adjustments.

Many farmers allow their children to ride on the tractor or other machine being pulled and from this practice many fatal accidents result. A startling number of farmers are killed or injured by the tractor or other machine tipping over on them. Often times

farmers fail, too, to realize that a tractor's center of gravity is so much higher than that of a car that it tips more readily. Consequently, care should be taken in plowing on steep sidehills or in turning at too high a speed, or in operating a tractor up hill under too heavy a load.

Another common mistake made by farmers is to remove the guard from shafts or gears, or other moving parts of machinery to clean or oil the machine and then fail to put the guard back. This failure to put guards in place is responsible for many deaths and non-fatal accidents each year.

Torn, loose, or worn clothing might also be responsible for pulling the operator into the moving parts of a machine.

We are all familiar with the usual way by which a tractor is hitched to a farm implement. In other words, by means of a pin or bolt being dropped through the hole of the drawbar and the hitch of the implement being pulled. This involves three things being done at the same time, namely, holding up the hitch of the implement, backing up the tractor to this hitch, and dropping in the pin. Many times the operator gets off of the tractor, stands between the two machines and operates the tractor with the hand clutch while holding up the hitch of the implement. Then something goes wrong, the tractor gets out of control and the operator gets pinned or crushed between the tractor and the machine.

All this could be prevented by the use of a safety hitch. Not only will this safety hitch protect the machine by automatically releasing if a stone or some other stationary object is run into, but it would entirely remove the possibility of accidents caused by the operator standing between the two machines. It likewise would be a great time-saver. Some implements now on the market come equipped with these safety hitches, but unless time is taken to change the hitch from one implement to another it would be necessary to have a hitch for every implement on the farm. As this would involve considerable expense it probably would not be done on many farms. A simple solution

would be to turn this hitch around, put it on the tractor. Then it would be necessary to buy only a ring such as this for each of the implements on the farm to be drawn by the tractor. Then by fastening a short chain or rod to the hitch of the implement this "U" bolt could be held opposite the hitch on the tractor. The connection is thus made as the tractor is backed, making it unnecessary for the operator to get off of the seat of the tractor at any time.

Not only are our farm machines dangerous, but many man hours are lost yearly by non-fatal accidents caused by the careless use of hand tools such as a hammer, saw, screw driver or chisel. One of our most common farm tools, the hammer, can be dangerous when the handles are split, making it possible to get splinters in the hand or when the head is poorly fastened on, making it possible for it to fly off and injure the user or a bystander. Such accidents can be prevented by seeing to it that hammers have good handles, and also the axe, chisel, etc., and as handles cost but a few cents and can be put into a hammer head in a few minutes, this is a good investment in safety. In putting a new handle into a hammer, first it is necessary to work the handle down to the size of the opening in the hammer with a rasp or other tool; next the handle is driven firmly into the opening; and third, wedges are placed to spread the wood of the handle into the hammer handle (1) to spread the wood sideways and (2) other small wedges to spread the end pieces to make the handle fit firmly into the head of the hammer. This handle will stay put. In using the hammer it should be held at the end of the handle using a free, easy swing with the eye kept on the nail or object to be struck. In driving a nail, it should always be held at the top, rather than at the bottom. If held at the bottom and we miss the nail head, our fingers are caught between the hammer and the board being nailed. If held at the top and the nail is missed, the fingers are pushed to one side and no damage is done.

Another little stunt that will help save injury in the handling of the hammer is in the use of a chisel. If the chisel is held with the back side of the hand up a serious injury can result to the knuckles and fingers if the head is missed. If the chisel is held with the palm of the hand up, little injury

is done to the hand if the head of the chisel is missed.

Speaking of chisels, the burrs that sometimes are formed on the head of the chisel by continued pounding can be dangerous to an operator's hands and eyes. If they are allowed to get too long, continued striking may cause them to break loose and cause injury to some part of the body. What to do about it? Simply grind off the burrs on an emery wheel, keeping the head of the chisel as small as or smaller than the body.

In using the emery wheel for any purpose, keep your eyes on your work. By that I mean "keep your eyes" by wearing goggles. Industry demands that workers use goggles. There is no reason why farmers shouldn't be as careful of their eyes. Inexpensive and convenient goggles are now on sale. For example, these goggles can be put on over regular eye glasses, thus saving the time of the operator.

Injuries sometimes are caused by using tools improperly. For example, a screw driver should not be used as a chisel or as a punch, and when allowed to get into poor condition are inefficient for the use for which they were intended, as they will not take hold of the head of the screw properly. The working end of the screw driver should be square, not too big for the screw and not sharpened, but left broad at the point so that it will engage the head of the screw. This also, can be done quickly on an emery wheel.

But not all farm accidents occur out of doors. We are told that more accidents occur in the home than anywhere else. Helen can tell us about some of these home accidents.

Knives

Helen Kowalko:

While knives are the most common implement used in the kitchen, their mis-use can cause many minor as well as some serious accidents. Many fingers have been cut by using a knife to open a can. Either the hand slips from the handle of the knife onto the blade, or the hand may slip and be cut by the can itself. Or the person using the knife might also be in danger of stabbing the hand used to hold the can. We even hear occasionally of people trying to open cans with jack knives, the jack knife closes on the fingers causing an injury. The remedy for this, of course, is to use a can opener. This

can opener, by which a can can be opened easily and conveniently and with complete safety, costs only fifteen cents.

Often times injuries are caused when groping around in a drawer for the proper knife. These injuries could be prevented by having a piece of slotted wood in the drawer so that each knife is held in place, is easily found when wanted as well as having its cutting edge protected from rubbing on the other knives in the drawer. A few simple rules on the use of knives include: (1) keep them out of the hands of small children; (2) in passing a knife to another person, the dull side should be toward your hand; (3) when carving meat, use a fork with a knife guard and be sure the guard is in the position to protect the fork hand if the knife slips; (4) when peeling apples, potatoes or vegetables, the knife is drawn toward the operator so short, controlled strokes are taken; (5) when slicing bread, free, long strokes are taken, so it is important that the edge of the knife be directed away from the hand or the body; (6) when washing dishes, wash and dry sharp knives separately.

Roger Schuter:

And now we are going to turn to the Number 2 offender in causing farm accidents, namely farm animals. You will notice that of the 99 fatalities and 446 injuries, some were killed and others injured by farm animals. The herd sire, of course, heads the list. It is nearly always the so-called gentle bull that kills. Don't trust them! What to do about it? Handle them with care. Put a ring in the bull's nose while he is still young. When he becomes older, use a staff to lead him. Bull paddocks are being built on many farms, providing a place for feeding and watering and exercising the sire without the necessity of handling him. Many livestock injuries are caused by failure to speak to animals—horses or cows—as the farmer approaches. We get so used to our livestock that we sometimes take them for granted. Many times the horse or cow is not kicking at the farmer but at flies or some other irritating cause. Fly spray on both horses and cows would go a long way to prevent injuries caused by kicking. We are looking forward with anticipation to the time when the new DDT powder or spray will be available. This very effective insecticide should

be of value in helping to cut down this kind of injury. Farming as a business is so closely associated with livestock that it becomes very important that we take steps to prevent the heavy toll of lives and lost manpower hours through this type of accident.

The next in importance as a cause of accidents is falls. Helen, will you discuss this cause of accidents on the farm and in the home?

Helen Kowalko:

One of the chief causes of injury from falls is the failure to put small tools away after using them. Tripping over these tools or other objects left about the yard, or toys, baskets, etc., left on stairways, make this public enemy number one in this field. The very nature of farming makes it somewhat dangerous. The danger of falling off of a load of hay, of being caught in the ropes or pulleys at haying time, falling from the hay mow or falling from buildings. In fact we should give some attention to this matter of climbing, because a farmer does so much of it. First of all, ladders should be kept in good condition. They should be strong and sound, and we are cautioned not to paint them. If there are any knots in the wood or if the wood rots or becomes weak, the weakness can be seen, while paint might cover up any knots or weakness in the wood. The wood may be stained or varnished to preserve it.

Another suggestion for safety: when climbing a ladder, grasp the sides of the ladder rather than the rungs, as usually the rung will give way first and thus if the hand is on the side rail of the ladder there is something secure to hang onto. Ladders should never be left leaning against buildings because they might be a temptation to young children. Rather, they should be hung up out of the way, which would protect them from decaying through exposure.

Ladders on windmills offer a real danger spot for children, especially when the ladder comes all the way to the ground. It is advisable to have the windmill ladder start ten or fifteen feet from the ground to remove this temptation.

Don't use old ladders that have been patched and re-patched. The danger in loss of time through broken limbs and other

injuries is not worth the saving of the price of material.

When ladders are used make sure that the footing is good and the angle is not too steep, thus helping to eliminate the danger of falling backwards. In carrying a ladder remember the other fellow. If you are carrying a long ladder, carry it so that the front end is high so that it will not strike anyone who might be coming around the corner of a building. If two persons are carrying a ladder they should be at the ends so that the ends do not protrude.

In the home the most frequent cause of accidents is through falls in the bath tub, on the properly named "throw rugs," too heavily waxed floors, using chairs and boxes—even rocking chairs—instead of step ladders. If every home were equipped with a step ladder, many of our home accidents would never occur. Non-slip strips should be sewed to small rugs about the house. A great help on the dark cellar steps is to have the top and bottom steps painted white.

Roger, will you continue the discussion on the fourth important cause of farm accidents, fires?

Roger Schluter:

Most important among the causes of farm fires are careless use of gasoline and kerosene when starting fires, faulty chimneys, carelessness with matches, and smoking around buildings. An important precaution is to paint or label all containers holding inflammable materials such as gasoline and kerosene. Gasoline cans should be painted red; kerosene cans should be labeled. In spite of this caution's having been repeated many times during the past few years, we still have many accidents from this cause.

Poor chimneys rank as one of the chief causes of farm fires. They should be cleaned and examined regularly to see that they are in good repair. Every year many farm buildings burn down due to carelessness with matches and smoking. Matches must be kept away from small children and farmers and farm help must be asked not to smoke in the barn and other buildings. Many fires, too, are caused by spontaneous combustion in the hay mows. The hay should be properly dried before placed in the mow. Lightning, too, is taking a heavy toll of our farm buildings. What to do about farm fires? Electricity is one of the

greatest conveniences and labor savers ever brought to the farm, but improper wiring and careless use of this service lead to many fires each year.

What to do about farm fires? Let's use common sense in lighting and controlling fires in the home. Matches should be kept out of reach of children and in a convenient place so that mice and other rodents will not get at them. Do not use gasoline or kerosene in lighting fires. Stop the tractor when pouring gasoline into the tank because the gas tank in a tractor is directly over the engine. See that chimneys are properly constructed so that the flues are sealed. Yearly examination of the chimney is important. "No smoking" signs should be placed on the buildings if for no other reason than as a reminder to offenders. Lightning rods should be placed on the buildings to reduce the danger from electric storms. Metal covered buildings do not need lightning rods but should be grounded by connecting the metal of the roof with a rod driven into the ground at least deep enough to contact moisture at all times. This should be done on both sides of the building. Spontaneous combustion may be controlled by drying the hay thoroughly before placing it in the barn. Oily rags used around tractors, cars and machinery, as well as those used in the house, should be disposed of properly by burning or put into metal containers away from the buildings. The electric iron is forgotten when the telephone rings or a caller comes, but will do no damage if a metal rest is used.

Of course there are other causes of accidents about the farm and home that we have not mentioned in our chart, such as the danger from taking the wrong medicine, or the danger to children and adults through allowing the farm premises to become cluttered up with broken bottles, leaving sharp tools about, as well as failure to remove many other common hazards that might be about the farm.

What to do about these things? It is important that all poisons in the house and out be properly labeled and locked up, or placed up high enough to be out of reach of children. Glass trash, etc., should be kept picked up, thus removing this hazard to both young and old. Pins and buttons may well be kept in a glass container which cannot be opened by babies. There are many ways by which accidents may be re-

duced not mentioned by us this afternoon. In fact, it has been said that the most important task for all of us in helping to reduce farm accidents is not necessarily that of telling how but even more important is the job of creating in all farm folks the realization that accidents will happen if we are not alert. In other words, it is our responsibility as farm people to develop a safety consciousness. We can do this only by talking about it and by making a campaign of it just as it has been done in industry. So it is up to each one of us to

do our part. The job will not be done at the close of this year 1944. It is a perpetual job. It is a story which must be told many, many times every year, and it is the responsibility of us 4-H Club members, farmers, farmers' wives, in fact, everyone to help reduce the sorrow and loss of time caused by needless farm accidents.

NOTE: Wherever possible each point developed in talk was demonstrated with actual object mentioned or with picture, chart, or model when it was impossible to have object itself at hand.

WEDNESDAY LUNCHEON

October 4, 1944

Presiding: AMY KELLY, State Home Demonstration Leader, College of Agriculture, Columbia, Mo.

The Farm Woman's Interest in Safety

By VERA MCCREA SEARLES

Director Home Department, Dairywomen's League Cooperative Association, Inc., New York City

When I began to think of the daily duties of the farm woman, the list became so long that I felt it must be abbreviated, so I turned to the alphabet, this being a day of alliteration. Will you bear with me for a moment while I present a nomenclature of the hazards with which a farm woman is actively associated every day of her life:

- A—Axtos, acids, axes, air guns.
- B—Bottles, boots, balls and bats, bones and beaters, balls and brooms.
- C—Children, clotheslines, cats, cans, cribs with rockers, cleaners, carpets, curtains, cords and cabinet doors.
- D—Drugs and dogs and dairy traps.
- E—Electric engines, sweepers and stoves.
- F—Fans and freezers, foods and fires, fish hooks, firearms, furniture, fats.
- G—Glass and gadgets, grease and guns.
- H—Hammers, hinges and posts.
- I—Ironers, ink spots, ice and picks.
- J—Jars and jacks and jams at doors.
- K—Knives, knobs, knockers, kiddy coops and kitchen doors.
- L—Lamps and lighters, latches, ladders.
- M—Matches, mops and milking tools.
- N—Nails and needles.

O—Openers.

P—Pots and pans, pails and paints, pills and pins and all playthings.

Q—Quills and quarrels and quibbling stunts.

R—Ranges, racks and rocking chairs, rugs and runners, rips and runs, rags and rattles, ropes, roasters, refrigerators.

S—Stoves, straps, steps, screens, stairs, shredders, steam pipes, sterilizers, safety pins.

T—Tools, toasters, toys and trash.

U—Umbrellas, utensils.

V—Vacuum cleaners, valves and vents.

W—Wagons, washers, windows, wine, wire on fences, and wire on vines.

Y—Yards and young ones, yipping dogs.

Z—Zipper, which closes them all.

I know this list is not complete; however, it is long enough to indicate the need for great knowledge, wisdom and information on the part of the farm woman for handling them.

If any of you here today are considering marrying a farmer, I trust you won't be discouraged by all of these implements of warfare of which I have spoken. All of

them may be used to build the stepping stones and, of course, that is just what the well-ordered, intelligent woman is doing. On the contrary, the thoughtless, hurried, harassed, overworked, confused souls are contributing to their own and their family's stumbling blocks. They may cause accidents, burns, breaks and sprains, cries and screams and ragged nerves, falls and cuts, loss of arms and legs, and sometimes heads. In addition to the sorrow and suffering to the individuals and their families, it is quite obviously an economic loss as well. Under present wartime conditions with the acute manpower shortage, such accidents add appreciably to our problems for they tax the hospitals, ambulances and undertaking firms, florists, travel and widows weeds.

In any farm safety program it is the farm woman who must be reached, not only for her own protection but because she is the most powerful influence in the farming operation. At the same time she is attending to her job of homemaking, she is either sharing in the farm work and (I am sorry to say all too frequently) or she has her eyes and ears on the outside farm activities, as well as mentally carrying the children to their play or work, to their schools, yes even to the battlefields of Europe and Asia. If she is to be a potential force in solving the serious, accident problem in America she needs help to organize her thinking and her work in a better fashion and to make her cognizant of some of the hazards that come from lack of knowledge. This is borne out by the fact that the largest percentage of accidents occurring on the farm are in the home.

I am happy that the National Safety Council is setting up an able woman's division. By its assistance and cooperation women everywhere in the United States will be mobilized for safety work.

The New York State Health Department initiated and has developed the safety program in our States. The first effort was to form an advisory committee of varying representative organized interests. All over New York State farm folks are being aroused individually and collectively to their responsibility in this great national safety program. Granges, farm and Home Bureaus, 4-H, Co-Operatives, Parent Teachers' Organizations and other organized groups are being supplied with

speakers and movies, carrying the message of the need for greater care and thoughtfulness in order to solve this accident problem. A State leadership school for radio and publicity has provided ways and means of supplying safety information over the air and through the press.

At Cornell University the supervising district nurses were brought together for a two-day conference. Here they were given information on the great need for safety education and shown ways and means of passing on this information to others. This fall these supervising nurses are calling together in district and county meetings their home visiting nurses so that this information may go directly to the individual farm homes. College extension specialists are demonstrating safety devices to district and county groups of farm women. Through them and the home demonstration agents educational information is given farm homemakers on how to use and care for electrical equipment, how to arrange the kitchen that time and energy will be saved and extreme weariness may be avoided, and many more programs contributing to the health and well being of the safe and sane family. Information is being disseminated through county councils of rural women.

The State Council of which these county councils are a part represents 100,000 organized farm women in New York State. They are chosen from the Grange, the Home Bureau and the Dairymen's League. A training school to prepare farm women for speaking on safety subjects was held at the State College during the summer. These farm women (24 in number) are now engaged in speaking before all kinds of farm and village groups and are in turn training other local leaders to be responsible for reporting farm and home accidents, keeping newspaper clippings and for putting on programs through small local groups.

The Dairymen's League Cooperative Association has a keen appreciation of this program especially as a result of the severe accidental injury of several of our own members. One of our leaders lost an arm in a hay baler. Another was seriously injured by a bull, and the third was a young woman who had blood poisoning from a pitch fork being stuck in her foot while she was assisting in farm work. Through our house organ, our monthly program let-

ters, as well as through talks at local and county meetings we are carrying on the safety educational program.

I know that throughout the length and breadth of these United States, through the Grange, the Farm Bureau, the Extension Service, the Co-Operatives, farm women are uniting in an effort to protect their loved ones from the hazards of carelessness, indifference, ignorance and ire.

Our New York State program is still in its infancy, but I feel under its present able leadership it will extend in growth. Plans are already under way for reaching schools and many more organized groups. Miss Olmsted, our state farm safety worker, aptly says, "We want a safety home calendar in every farm home kitchen and a barn

poster on every barn door. We also want good safety reading materials on every farm home reading table." I feel we have the green light to go ahead as fast and as far as the farm gates and the kitchen doors will swing open to us. Someone has said that cooperation requires the everlasting teamwork of every living soul. It is obvious that farm women and farm folks generally are cooperating in an admirable way in this safety program. I believe we are on our way in New York State to make every member of the farm family a social and potential worker in this cause. When we are thoroughly united everywhere to the cause, we will be on our way to the solution of a great social and economic farm program.

WEDNESDAY AFTERNOON SESSION

October 4, 1944

Presiding: JOHN H. WATZEL, Head, Safety & Health Section, Soil Conservation Service, U. S. Dept. of Agriculture, Washington, D. C.

Industry's Stake in Farm Safety

By HOWARD J. GRAMLICH

General Agricultural Agent, Chicago and North Western Railway System, Chicago

Farming today is a highly mechanized industry. The farm operator must be a specialist in a number of lines. He operates the tractor, the combine, the baler and the corn picker. All of these are portable machines. Even the ensilage cutter is rapidly evolving into a portable type of field cutting unit.

Practically all farm operations involving moving machinery with parts which are revolving at rapid speed possess danger for the careless operator. It takes years for a farmer to become proficient in handling these tools of modern agriculture efficiently. An accident occurring to the operator of a farm implement not infrequently seriously impairs the food production of a given unit of land. This is one reason why industry should be definitely interested in farm safety.

From Oxen to Portable Harvesters

Our grandfathers performed most of their farming operations with pitchforks,

scoop shovels and slow moving oxen. Their chances of injury were relatively remote compared to those of the farmer of today who rides over comparatively rough ground on complicated, portable machines equipped with many swiftly moving parts.

Most of these modern machines possess chances for accident to the careless operator. Manufacturers have made much effort to incorporate safety devices. Most farm implements today have the slogan "Safety First" stamped over their frames in several places. This proves that industry is definitely interested in the well-being of the farmer.

With the simple agriculture of Civil War days, it required 500 minutes of a man's time to produce a bushel of corn. With modern, mass production methods of 1943 it required only 42 minutes to produce a bushel. This is indicative of the progress which has been made. With the decrease in man-labor per unit of production has come a tremendous increase in efficiency. The

farmer of today produces two and one-half times as much as did his grandfather one-half century ago.

Worker in Industry Uses One Machine

Industry appreciates that the farmer, during the course of a year, is called upon to become highly proficient at quite a number of tasks. In the factory, the man who performs a certain highly skilled task does so continuously day in and day out for many years. He eventually gets to a point where he can literally perform the job with his eyes shut. His chances of injury are relatively slight because he has learned from practice and experience just what moves to make. Furthermore, this machine operator has been warned to be careful and is not usually confronted with the urge to speed up production.

Farmer Operates Many Machines

The farmer, on the other hand, uses one type of machine today and another tomorrow. Not infrequently, within one day, he operates several different machines, starting with his milking machine and cream separator, then the pump; from this he proceeds to the field. By the time the day is over he will have performed a good many tasks, the majority of which require a considerable degree of skill.

Farmer Works Under Pressure

The farmer is short of help. Usually he is working against time. Under such conditions naturally chances may be taken which the man in the slower-moving type of work might not risk.

As indicative of this, a press notice from Des Moines, Iowa, under date of August 16th states that farmers head the list of drivers of automobiles involved in fatal accidents. Of 166 cases 42 were farmers.

Industry can put "Safety First" signs at conspicuous spots in front of workers. The very nature of the farmers' work eliminates the chance of keeping before him at all times "Safety First" slogans.

Risks Around Livestock

There is also an element of danger involved in working around live stock. A comparatively quiet cow with a new-born calf at her side may charge her caretaker when he approaches. The bull which has

proven to be of a nice disposition may, without a moment's notice, turn on the farmer. These are but a few of the potentialities.

Farming involves working in the elements. Slippery ice, rusty nails, mud, rain, and cold present hazards. Ascending the windmill, the silo or to the hay track in the barn, all require a cool head and a degree of carefulness.

Our Mutual Interest in Safety

Agriculture and industry are definitely tied together. The production of the farm, to a large extent, determines the profits of industry. Generally speaking, our total national income is seven times that of agriculture; however, the farmer's dollar is the basic one. It comes out of the soil as a result of the skilled work of the farmer combined with the blessings of a kind-hearted Mother Nature.

The farmer's dollars is turned over seven times before it goes back into hiding. Each of these transactions involves employment for labor, profit for industry and a degree of satisfaction and happiness for every person along the line.

Industry is interested in minimizing farm accidents. It appreciates that the farmer operates under a handicap.

Farm Accidents

The August issue of a farm magazine tells of two accidents: The description of one is as follows: "He fell backwards from an extra-large load of hay as he was climbing down to unhook the loader" and the second reads: "The accident occurred when the team he was handling ran away and threw him about 20 feet." These are the type of accidents which can happen even under the best of controlled conditions.

Farmers, as a class, are careful. They must, of necessity, take some chances. They cannot turn out a good day's work on a farm without being in quite a few risky spots between sunup and down. But accidents have been classified as arithmetical in that they "subtract from one's pleasure, add to one's discomfort, divide your income and multiply your worries." Why shouldn't all of us think of accidents in this light and definitely endeavor to minimize them both in our own field and in the fields of others with whom we work?

Wisconsin Farm Safety Program

By RANDALL C. SWANSON

Farm Safety Specialist, College of Agriculture, University of Wisconsin, Madison, Wis.

A simple law passed by the 1943 Wisconsin Legislature created a farm safety fund of \$10,000 to be used for the promotion of farm safety.

CHAPTER 538, LAWS OF 1943

AN ACT

To create 20-41 (3) (c) of the statutes, relating to a farm safety program in the university college of agriculture, and making an appropriation.

The people of the State of Wisconsin, represented in senate and assembly, do enact as follows:

20-41 (3) (c) of the statutes is created to read:

20-41 (3) (c) FARM SAFETY PROGRAM. Annually, beginning July 1, 1943, \$10,000 for the development of a comprehensive statewide program on farm safety in cooperation with farm organizations, cooperative associations, 4-H clubs, departments of vocational agriculture, federal agricultural agencies, the agricultural press, newspapers, and other agencies, groups and individuals interested in the promotion of farm safety and the reduction of farm accidents.

A well-presented picture of the farm accident situation in Wisconsin accomplished this simple, yet effective, piece of legislation. The appropriation is self-renewing and is a start in the direction of an effective program. Those promoting the legislation recognized the job of farm safety as one of education. For that reason, the money so appropriated was allocated to the University of Wisconsin.

It is, however, the philosophy of the folks promoting farm safety legislation and those administering the program in the College of Agriculture that the job of farm safety is not only a program of education, but also one of promotion and that the office should be a coordinating agency for all of the individuals and organizations in Wisconsin that are in a position to carry on a farm safety program. In our opinion, the success of a safety program in Wis-

consin will depend largely on the ability of this office to get many groups and thousands of individuals interested in doing something about safety. A library of information, reliable statistics, a clearing house for contests, news releases, and other types of publicity should be a part of the work of such an office.

The general program carried on by the Farm Safety office is under the guidance of an advisory committee made up of men sincerely interested in farm safety and in a position to know what is practical. These men meet with the Farm Safety Specialist and advise with him from time to time. They are able to promote such legislation as is deemed advisable, and to collect such monies as are necessary to carry on an effective and efficient program. This advisory committee also determines when and where state-wide meetings of farm leaders are advisable.

Statistics Necessary

In our opinion, statistics are necessary to any effective farm safety program. In Wisconsin, we have set up a file on statistics of all farm accidents and fires. To get this information, we have employed a clipping service and from them we had hoped to get all of the clippings on farm fires and other farm accidents. However present indications are that we get only 62% of the articles appearing and that a relatively small percentage of the minor accidents reach the newspapers.

Taking these two facts into consideration, it means that we need some kind of a coefficient of expansion to actually give us an accurate picture of minor farm accidents. At any rate our figures are far short of the number of accidents actually happening. Our picture is a little bit better when we speak about fatal accidents, because we miss very few of those in our clipping service and in our opinion very few of the fatal accidents fail to appear in at least one newspaper and most of these fatal accidents appear in several, and for that reason the clipping service finds at least one of them. With that in mind, we make more use of fatal farm accidents figures because

we feel that we have some degree of accuracy there.

In using these statistics, we give considerable publicity to them through the news releases and the bulletins that go to county agents, agricultural teachers, and other farm leaders. Publicity is certainly an important part of the job of farm safety. In cooperation with our Journalism Department in the College of Agriculture, we have given many releases to the weekly and daily papers, covering various phases of farm accident causes and prevention.

Farm magazines have given us similar cooperation and one of the papers has furnished the bonds and other prizes for our 4-H speaking contest. The daily papers have given some publicity, and our largest paper has carried a feature story in the Sunday edition. This article concentrated on one county where a very intensive program was carried on by 4-H youngsters.

Publicity over the radio has been very good. For several months we have presented a weekly broadcast bringing in safety information along with farm philosophy. We are attempting to build Sam Safety as a character through which we can publicize certain farm accident hazards, and to use some of that information on recordings to be distributed to schools and county agents.

Other articles in the trade papers and advertising sheets have helped us to call attention to the seriousness of farm accidents. A bulletin that goes out to county agents, agricultural teachers, and other leaders in that field carries considerable information that helps these leaders to promote local programs of their own. Many of the county fairs this year had safety booths to help call attention to the seriousness of farm accidents. One booth at the state fair, put on by one of the 4-H clubs, attracted much attention.

The radios throughout the state, the Wisconsin network and WHA, our University station, have devoted considerable time to the 4-H speaking contest. Thousands of people listened in on safety talks during the period of a month when the district and state finals were being held.

Cites Organizations

Now, as to the organizations, we feel that young people are in a wonderful posi-

tion to do something about safety, and we have done a great deal of work in Wisconsin trying to build up and promote a program among the 4-H clubs. We have had some fine cooperation from the 4-H club office.

The Homemakers groups of Wisconsin, of which there are many, carry on most of their work in leader training. We have had requests for leader-training work in many counties for the coming fall and winter. We are preparing material for farm women, as leaders, on the basis that farm women are able to do a great deal about safety practices—not only in the home—but out on the farm. In other words, we believe that the woman on the farm can make certain that the hay chutes are guarded, that the bull is in a safe pen, that the water tanks are guarded, and that other hazards around the farm are corrected. We believe that farm women can do as much around the farmstead as in the farm home in making it a safer place to live, and our leader training is on that basis.

We are also offering that service to the Farm Bureau and to the Grange since they do considerable work along this line in their local township groups. The Farm Bureau paper carries reprints of the Sam Safety talks.

The vocational agricultural teacher is another important agency in the community. Each teacher works closely with some 30 to 100 boys and influences the activities of those families and the families closely related to them. We have in Wisconsin about 10,000 boys and girls who are taking vocational agriculture or vocational home economics in the high schools and we are hoping to gather accident information from their home farms. If we can get 10,000 such surveys, we hope to project this onto the total number of farms in Wisconsin thus giving us a fairly accurate picture of the cost and the number of farm accidents.

Surveys Started

This survey was run in four departments of agriculture last spring and the results were summarized. It was confined to the four departments in order to make corrections and changes before putting it on a state-wide basis. We think the results will be very usable. These boys are to fill out these questionnaires—not as accident reports—but as safety surveys, so that those

having no accidents will be filled out as well as those who have had accidents on their home farms. We desire the non-accident farms as well as the others in order to make our statistics accurate. Plans are being made to build a film strip using the vocational agricultural boys in their survey as a basis, bringing in a number of pictures of farm hazards and the correction of these hazards.

There are also a number of other groups that can do a great deal about farm safety. The veterinarian, for instance, visits hundreds of farms each year. Surprising as it may seem, there are few accidents among veterinarians, even though they are continually handling dangerous animals. In one of the Sam Safety talks, the veterinarian was one of the characters brought into the picture. At the completion of the broadcast, we mimeographed copies of the talk and sent them to all veterinarians in the state, asking them to help make rural Wisconsin a safer place to live. They have a part in the program just like the dairy plant inspectors, the dairy plant field men, and all of those fellows who deal with farmers and go from farm to farm as part of their work.

This year the extension service handled all recruitment and placement of farm labor. Among this recruitment and placement were included many thousands of boys and girls from the city and many thousands of business men who did part-time work on the farm. Much work was done with the farm labor assistants who work with the county agents. We sent safety material to them and asked them to contact every farmer who took out a hired man and to contact every boy they placed through their office. For them we prepared cards which listed a few of the hazards on the farm. To the farmer we addressed another message asking him to be careful of the farm labor that the extension service was placing with him, asking him to take some of the responsibility for seeing to it that there were no accidents. We appealed to the labor assistants to see what they could do in having a clear record this year of no accidents among the recruitments by the extension service. The season is still on. We don't know how many accidents we will have, but we believe that this program with farm labor will do some good.

Much fine material is available from

sources other than our own that we have taken advantage of rather than trying to prepare duplicate materials. However, for our 4-H work, we prepared special bulletins—one on the speaking contest and one on the subject of LET'S DO SOMETHING ABOUT SAFETY. The speaking contest bulletin calls attention to the necessity for safety and gives the rules and regulations for the state-wide contest. Fifty-five counties in Wisconsin took part in this contest and many of them had local contests in the counties with from 40 to 50 contestants. County winners were eligible to participate at a district contest. The district contests were held in connection with the 4-H club camps and judges were selected to listen over a loud-speaking system in another room. In other words, the judges didn't see the contestants but judged on what they heard only. The two winners in each district were put on the local radio in that area. This gave us a state-wide coverage through the use of all these local radio stations. The district winners were brought into Madison for a general program on Saturday, July 1st, and all of them took part in broadcasts over the Wisconsin network. These folks were entertained in Madison by the Wisconsin Agriculturist and Farmer and the two winners were presented with war bonds. Here again in the judging, the judges listened in via radio, rather than seeing the contestants.

The champion in the speaking contest presented his talk over the Columbia Broadcasting system. This added to the prestige of the contest and will help next year to secure 2,000 contestants rather than 1,200.

Bulletin Published

Another bulletin which we published is called LET'S DO SOMETHING ABOUT SAFETY. This bulletin tells what can be done by individuals, by clubs, and by counties, and announces the very substantial prizes that are offered for both individuals and clubs. For instance, the club with the most outstanding farm safety program will receive a trip to Milwaukee, all expenses paid, to see a safe city, a safe industry, and some other things of special interest outside of the safety program. This contest is still in operation and will not close for another month or two. A large number of clubs are competing. Club booths, win-

dow displays, parents' programs, county fair activities, demonstrations, talks, charts, posters, essays are a few of the efforts being made by the clubs completing for the state-wide award. They will also be given credit for surveys on fires and other accidents. These farm surveys will be on a community basis and the club will get credit for the area in which this survey is made.

Another of our publications is the farm check sheet called **YOUR FARM IS A WAR PLANT**, set up for use by 4-H club members, farm bureaus, P.T.A.'s, vocational agricultural teachers, and others who would like to check in the community or check for themselves their individual farm hazards. Over 200,000 of these have been printed, and a large proportion of them have already been distributed. In order to encourage their use, we set up a form letter for county agents to use in sending them out. We know that several counties made a county-wide canvass in this way but we know, too, that a letter to each farmer is less effective than a personal call. It is interesting to know that some counties made an almost complete accident survey this winter through their 4-H club members.

It might be logical to ask whether we have attempted to set up in any county an organization or a council through which we might work. Counties vary in the methods by which they like to handle these problems, therefore, we have not set up a council unless there was a demand for the same which indicated that such a group would do something about the promotion of safety. Memberships of such councils usually include vocational agricultural teachers, county superintendent of schools, county nurses, field men for dairy plants, veterinarians, officers of farm organizations, and many others. A great deal of our work has been done through county agents, and in most cases we accept their recommendations on whether or not to set up a county council. We offer our services in helping to set up this organization, but we do not promote it unless the request comes from the county. Furthermore we make our services available to any group interested in the promotion of a safety program, and we hope through publicity to develop a greater desire on the part of all farm groups to do something about this problem which, to us, is very vital.

Spreading The Gospel of Rural Safety

By EVERETT MITCHELL

Agricultural Dir., Central Div., N.B.C., Chicago

Today, as chairman of the radio section of the National Safety Council's Farm Committee I would like to talk to you for a few moments about the work of the committee in the past year. Knowing full well the need for information relative to safe farming practices, your radio division of the Farm Safety Committee, with the assistance of the safety council boys, moved rapidly into the farm field. Leading farm editors were asked to serve on this committee and to give us from time to time suggestions that would enable the National Committee to send our programs to their local stations. At a get-together luncheon this committee was formed and to them goes much of the credit for the success of the farm radio program. These men, who are serving as radio farm directors from coast to coast across the country, have taken a keen in-

terest in the problem of farm safety . . . and at the present time are using more farm safety releases than ever before.

During the National Farm Safety Week, through contacts made by our radio farm directors, we were able to supply 175 stations with three five-minute records, which were cut right out on the farm. The cutting of these records was made possible through the cooperation of the National Safety Council and other members of the Farm Safety Committee. In other words, all departments of the Farm Safety Committee cooperated with the radio division. Twenty-five other stations requested copies of these records, but we were unable to supply them because their requests came in too late. Many letters have been received from farmers, who heard these records, telling us how they enjoyed the natural farm sounds. For in-

stance, one recording was made on the safe handling of a bull. At the opening of the record the enraged bull was really "giving out" . . . And some of our farm friends wrote and said that they hoped the old boy was in a good strong pen because he sounded as if he were very unhappy, and just about to go on a rampage.

Right here may I deviate a little to tell you that we hoped that our farm friend took his own advice and repaired the bull pen, because he was not practicing very well what he preached . . . and our crew who made the transcriptions told me they were happy to get off the place because the enclosure was in a pretty bad state of disrepair. Here, then, was the first place to start our safety lesson. This Farm Radio Safety Committee also wants to take this opportunity of thanking the state extension service and the United States Department of Agriculture for their help. All of our farm safety announcements for the last two weeks in July, which go to some 250 farm program editors, were devoted to Farm Safety Week . . . and I am happy to say that according to reports, nine-tenths of those announcements were put on the air.

You all know the tremendous success that marked the first efforts of the National Farm Safety Week. During that week one of the "Rhythm and Reason" shows, which is prepared for use with musical libraries, was devoted to farm safety . . . and this was mailed to our regular list of 145 stations that had requested the show. Also during that week, many members of the Farm Safety Committee, such as Larry Haeg of WTCM; Ed Mason of WLW; Joe Bier of WOR; Merten Emmert of WEA; Sam Schneider of KVOO; and numerous other farm directors besides myself, arranged special programs in connection with the observance of this week. During the past six months, I have been doing a series of programs for the Standard Oil Company of Indiana. This program has been heard daily over 180 stations . . . and during National Farm Safety Week, one day's program was devoted to Farm Safety and Safety Week. In this connection, I might mention that we have found everyone we have contacted more than willing to de-

vote radio time to Farm Safety. Our only trouble has been the servicing of these outlets. But this year we expect to be better organized so that we can do a better job.

We find that if we make the proper approach through the channels that we have opened up to our phase of safety work, endless outlets will aid the dissemination of Farm Safety information. The United States Department of Agriculture cooperated and through their good offices they got Farm Safety Week on three network shows. Many safetygrams which were mailed regularly to all stations in the United States were devoted to Farm Safety Week . . . and such sponsors of radio programs as Firestone Tire and Rubber Company and Allis Chalmers Company devoted one of their commercials during July to Farm Safety. Now, that just about sums up the highlights of the radio coverage of Farm Safety Week, but these are not the only achievements of this Farm Safety Radio Committee. . . . We never lose an opportunity to preach Farm Safety.

This past year in the hundreds of visits that I have personally made to the various farm fairs, farm homes and farm meetings, I have been able to interest many radio people in the cause of Farm Safety. Out in Omaha I appeared on a radio program as chairman of the committee during which time I had the opportunity to present the Farm Safety story in the hundreds of transcriptions that have been made direct from the farm fairs and the farms of the mid-west. I have been able to drop in a little note into these transcriptions with regard to the work of this committee. Just recently I made a series of transcriptions at the future farmers fair in Oregon, Illinois . . . and an amusing incident took place, which I hope to relate to you in the spirit in which it is meant. I was interviewing a group of future farmer boys when I came to the little lad who had charge of the safety work in his chapter. After quite a discussion of what he was doing in his chapter along the lines of safety, I asked him whether he thought that maybe farm boys and girls or farmers take offense at the various reminders that came over the air relative to safety farm practices, and with a twinkle in his eye, he said, "No,

Mr. Mitchell, I don't believe so, because too many times farmers put their hands where they don't belong." And as we were near the end of the recording and I would have to retrace all of my steps, I continued cutting and used this record on the

air. One of my farm friends wrote, "Thanks for the interview, Everett, I have never had Farm Safety brought home to me just that way." But there's plenty of truth in what the little lad said. Keep practicing safety.

The Preparation of Visual Aid Material

By PROF. M. HENDERSON

College of Agriculture, University of Illinois, Urbana, Ill.

While I do not pose as a visual aid expert, we in "Vocational Agriculture Service" at the University of Illinois, have learned certain practical facts regarding the preparation of slidefilms for vocational agriculture teachers. Most of these facts are the result of a policy of close cooperation with those using slidefilms. In fact, some four years ago the Illinois Association of Vocational Agriculture Teachers appointed a visual aid committee. Last year this committee prepared some suggestions on the preparation of visual aids.

In order to make certain that they were in agreement with the thoughts of other teachers using slidefilms, these suggestions were mimeographed and sent to some 103 teachers. The teachers were asked to indicate whether they agreed or disagreed with each statement and to return such information to us, *unsigned*. Eighty-nine teachers replied. Out of a possibility of over 2,000 disagreements, less than 3 per cent disagreed and the one statement most frequently disagreed with was still agreed to by over 85 per cent of those replying. A copy of the suggestions, as prepared by the committee, will be given to you at the end of this period but I would like to use the time remaining to mention some of those and to show you some frames illustrating various points.

One of the suggestions was that "Slidefilms should be both educational and good teaching devices and as entertaining and interesting as possible without sacrificing their educational value and teachability."

Another suggestion was "Only one main idea should be included on a given frame, and the content of the frame and the quality and make-up of the material included should be such as to leave no doubt as to

the idea intended to be conveyed. Pictures alone will seldom do this."

A third suggestion was "The content of each frame should be such as to eliminate the necessity of 'lecture notes.'"

Another suggestion was "The wording used on every frame should be as simple and direct as possible. Complicated charts and statistics should be held to a minimum if not eliminated entirely."

Still another was "Technical terms should be limited to those absolutely necessary, and when used should be illustrated or explained in such a way as to leave no doubt in the mind of the observer as to their meaning."

Another suggestion was "The number of words on a frame should be limited to those necessary to convey the desired idea, but sufficient words (regardless of the number) should be used to convey the idea. Brevity, at the expense of presenting the idea, is no more to be desired than is unnecessary wordiness."

And another was "Be certain that the statement on any given frame conveys the desired idea. Such statements as holding the sheep, feeding the poultry flock, pruning the tree, and the like are of no value unless the purpose is to teach those observing what is being done. Certainly such statements have little place on frames intended for farm persons."

There was another suggestion to the effect that "As far as possible, avoid using material on a frame that will 'date' the slidefilm—example, old model cars, trucks, tractors, etc., attire of 15 to 20 years ago, and the like. If impracticable to avoid using such material, then revise the slidefilm often enough to keep it reasonably well up to date, even though the statements and the

frames are as valid as when the slidefilm was first produced."

Another suggestion was made to "Recognize that the criterion for judging the value of a slidefilm is how well it fulfills its purpose in actual use. Plan for an early revision of every slidefilm put out for the first time, regardless of how much care and attention went into the original preparation or of the ability of those assisting in the original preparation. 'The proof of the pudding is in the eating,' not in who the cook was, how good the recipe, or how well it was followed."

Another suggestion was "Where specific data, information, and the like are used, give the source. Other things being equal, use as recent material as possible."

Still another stated "Do not overlook nor minimize the importance of repetition in teaching, but use care in making up a slidefilm and the various frames in it, so that the repetition is neither too obvious nor too boring."

Another suggestion was "Test frames of various types can be inserted in the slidefilm and may serve as excellent means of repetition, review, or summary, especially if the correct answers follow the test frames."

"Test frames should vary in type. Furthermore, such frames should be inserted where they are most apt to be used. In some cases this might be at the end of a certain phase of the subject matter covered; in other cases it might be at the end of the slidefilm," was another suggestion made.

Another one was "Test frames should be followed by frames upon which correct answers are given."

Still another was "A frame may be inserted which tells of additional sources of information on the unit or subject matter presented in the slidefilm."

Another suggestion was "Beware of attempting to make a slidefilm that has such a wide application that it loses much of its value for any specific area or situation."

"Use local facts, data, and the like whenever these are as convincing and can be as satisfactorily used as those from other sources," was another suggestion made.

Another suggestion was "In preparing the slidefilm and the content of the frames, keep in mind the importance of motivation or of securing and maintaining the observer's interest in the fact or facts that are to be taught. Simply securing and maintaining interest is not enough."

In preparing visual aid material on farm safety, I hope you will keep in mind the fact that there are in Illinois approximately 350 departments of vocational agriculture, each with a vocational agriculture teacher in charge of the program offered through a local high school. Although these teachers are employed by local boards of education, their program is not confined to students of high school age. To illustrate, information which I have from the State Board for Vocational Education indicates that approximately 11,400 high school students were enrolled in vocational agriculture courses during the school year 1943-44, but during this year, more than 32,000 adults were registered in courses organized by these same teachers. In other words, the adult program carried on in Illinois as part of vocational agriculture work was about three times as large as that for high school boys. Another important fact is that the courses for adults are not one-session courses. It is common practice for a course to have a minimum of ten sessions. Often the sessions are held on the same night of the week for at least ten weeks, although some courses for adults are organized on the basis of a minimum of 120 clock hours.

If those of you present are interested in furthering a program of safety on the farm and will lend your assistance in reaching additional people through agriculture teachers and in preparing suitable teaching material for their use, I am sure that another step will be taken in making the farm and the farm home safer places in which to live and work.

Home Safety Sessions

WEDNESDAY MORNING SESSION

October 4, 1944

Joint Session—Home and Farm Safety

Presiding: H. L. Munn, Dir., Safety & Fire Prevention, E. I. du Pont de Nemours & Co., Inc., Wilmington, Del., and Vice-President, National Safety Council.

Demonstrations of Safe Practices Within the Home

A Morning in the Kitchen

By MARYE DAHNKE

Director, Home Economics Department, Kraft Cheese Co., Chicago

As every Safety Council member knows—but too few home-makers—the kitchen is actually the most dangerous area in the whole house—one of the most hazardous spots on earth. Convincing women generally of this fact—and showing them what to do about it—is not only an important program for your educational facilities, but for every teacher and school of home economics in the country—and for every individual concerned with making the American home a better, a happier and a safer place in which to live.

The routine of a kitchen becomes such a familiar everyday thing that very few women who preside over this most important part of a house realize what a source of real danger the kitchen may be—or how menacing its equipment and its practices can become. I've known kitchens so cluttered and confused and menacing that they might as well have been equipped with machine guns and barbed wire entanglements.

Seldom a day goes by that we don't read of some fatal or crippling accident which has taken place in a kitchen. We shudder at the stories of the gasoline stove that explodes—the boiling water that has been left within reach of children—the fall from a rickety ladder—but rare indeed is the kitchen in which none of these things is possible, because of the

thorough and intelligent precautions which are taken against their happening.

Statistics on the home safety record tell a truly frightening story. It's a record which is inexcusable considering the fact that the American home-maker is probably the most intelligent on earth. For the most part, she's a perfect paragon, who not only knows how to cook and feed her family with scientific care and excellence, but how to manage that family with the efficiency of a field general. But in the kitchen, this model of efficiency has developed so many blind spots that she never even sees the dangers that menace her and her family at almost every step.

By six o'clock of an evening—or whenever Papa gets home—most kitchens do, or should, exude an atmosphere of shining and fragrant efficiency. But if in the process of achieving that peace and calm, Mama can say that throughout the day not a single casualty has been incurred—no burns, cuts, or falls, she ought to receive some kind of medal—a good conduct medal at the very least. Generally, if peace and order are restored to a kitchen by dinner-time, it has taken some eight or nine hours of frantic effort to get it that way.

Consider the kitchen in most any typical American family of an early morning. Whether the alarm clock went off on

time or not, by 7:30—or whatever the gathering time is—a state of the wildest confusion exists and the troops are ready to break lines and retreat in confusion. It all looks like a Rube Goldberg cartoon. Everything is wrong with this picture. Mother is flying off in all directions at once, distracted, bustling, busier than a feather merchant on a windy day. Willie, the 2½ year old, stands in the middle of the floor vigorously tying knots in his shoe laces and clamoring to be fed. He isn't dressed yet, because Mama had to come down first to put the coffee on. Father is late and he calls down from the bathroom where's his last clean shirt and his blue tie. (Willie has the tie and is attempting, rather successfully, to attach it to one shoe lace.) Junior is still in bed—and the only reply Mother gets from him is a grunt. He's going to be late for school—and he won't have time for his orange juice. He'll probably walk off without his lunch box too.

This picture of disorder—and potential dynamite—may be slightly exaggerated. But with varying degrees of confusion, distraction and general nervous tension, it is repeated in homes all over America every morning. It is small wonder that accidents of all types both large and small, go straight into the kitchen to happen. Accident, in that kind of atmosphere, is almost unavoidable. If an industrialist—or shopkeeper—started his day with such a clamor of peril and inefficiency, he might just as well dismiss his force for the day—or go out of business. It would be the only safe thing to do.

It's a curious thing that even women who have been in business long enough to realize the importance of industrial safety precautions and practices—once they become home-makers—are often the worst offenders against order and safe practice in the kitchen. They assume, quite wrongly, that homes, and especially kitchens, are run by intuition and an in-born knack. Nothing could be farther from the truth. Whatever her native talent for homemaking, any successful home-maker has to work very hard at the job. She can only make that home and kitchen seem to run themselves if she gives the business the same kind of intelligent planning and attention to detail which she

once devoted to her boss' industry or office. Safety in the kitchen—like safety in the factory—is sound business, the cornerstone upon which all efficiency rests. What is even more important than mere efficiency, the very serenity and happiness of home are actively promoted by a safety program that really works.

There is almost everything wrong with the kitchen plan of the family I described for you a few moments ago. The first thing wrong is that there isn't a plan at all. The harassed mother has substituted frantic effort for intelligent planning. All of the confusion and disorder of that breakfast scene could have been avoided—or most of it anyway—if the mother of the family had planned her kitchen around a sound and safety promoting three point program. First, she should have planned her kitchen with a view to good arrangement of materials; second, to the soundness and safety of her kitchen equipment; and third, she should have developed a list of safe kitchen practices to be followed as scrupulously as the law of the Medes and the Persians.

To achieve good—and safe—arrangement in a kitchen, she need not be an interior decorator but she must be able to use her head and her imagination—picturing in advance what the special needs of her family are and what will work best for them.

To avoid the most serious breakfast traffic jams, kitchen tables where the family will be eating some meals should be placed near the door. If that matter is arranged, then Junior and Papa and Willie won't have to gum up the breakfast getting procedure by stepping in front of Mother every time one of them comes into the room. Good kitchen planning requires that kitchen tables be placed well apart from the stove. It is too easy for hot foods to be overturned onto the table—and the diners—for grease to spatter into someone's eye—if the table and the stove are too close together. Mother should have enough working space at the stove so that she can turn the flapjacks without poking the handle of the pancake turner into someone's eye.

Even in relatively small kitchens, things can generally be planned so that the table is near the door and away from the

stove. If space is too limited to make this possible, then the breakfast table—one that can be folded up—should be kept in the adjacent room—or on an adjoining porch.

Electric outlets in a well and safely planned kitchen should be numerous, near to the appliances with which they are to be used. The electric toaster, iron, heater, percolator, waffle iron or what-not—should have regular places of their own—out of sight and hearer's way. A special cabinet or drawer should be used to hold the various electric cords, all tagged for their proper use. No electrical cord should ever be left attached to the wall outlet. Electrical equipment is so familiar these days that you would suppose safe methods of handling it would be second nature. That is very far from being true, however, as countless serious accidents every day attest. The exploring fingers of children and electrical gadgets are a bad combination. To see that all of the electrical equipment in a home is conveniently and safely arranged—and that the children are early taught to stay away from it is a very essential program for any home-maker.

Good arrangement of everything you use in a kitchen—the foods, the cooking utensils, the pots and pans, the soaps and washing powders, the brooms and dust pans, the garbage disposal—even the kitchen curtain arrangement is of utmost importance in building and keeping a safe kitchen. Where curtains must be near a stove, the primary rules of safety demand that they be fastened up securely to prevent flowing over the flames.

A formidable number of terrible kitchen accidents could be avoided if women only treated such ferocious weapons as lye, kerosene, naphtha, abrasive powders, bleaches, and the like with the respect they deserve. Not only is it paramount to see that these items are always kept well up and out of reach of the young, but they should be locked safely away when not in use.

Matches, the cause of so many terrible accidents involving not only children but their elders who ought to know better, need to be kept in a safe spot—in a metal container—high up away from flames and reach of children. Learning to strike

matches away from you, to close safety match flaps before igniting the match, learning to treat fire in all its forms with proper respect, is a part of the education of both the young and their elders which is too frequently neglected in most households.

Foods which are to be used every day ought to be stored in places where they are most easily reached by the chief cook—with a minimum of climbing and poking about. Reaching above someone's head for a glass of jelly seems harmless. But not if you accidentally bring down a gallon of Vermont maple syrup on Willie's unofficer's head.

The most efficient kind of cabinet for the storage of staple foods is the cabinet or series of shelves with graduated layers, so that every item stored is visible and reachable. Almost any amateur can effect this time-saving and accident saving device if he takes the time to do it. But in any case, any home-maker can arrange her commodity shelves so that the tall items are at the back, the short ones at the front, and the ones used most often closest to hand.

The service closet where brooms and dust cloths and the like are kept should be arranged with the same scrupulous care. Being hit on the head with a dust pan when you're groping for the carpet sweeper is no inspiration for a busy day.

The good arrangement of everything you use in a kitchen, aside from promoting safety directly, also helps to cut down fatigue for the home-maker. And fatigue in the home, as in the factory, is an important cause of accidents.

Change Unsafe Practices

We get so used to inconveniences—to awkward equipment, to sinks and stoves that are backbreakingly low—to holes in linoleum—that we don't stop to realize we have it in our power to change the whole picture. If any woman would spend twenty minutes examining her own kitchen objectively and critically, she could and would alter a hundred unsafe practices and contribute to her own efficiency and peace of mind as well.

The second cardinal rule for safety in the kitchen, no less vital than intelligent arrangement of all equipment is the

proper care of that equipment. For some reason, this sounds easier than it is. It's astonishing how much tolerance, and even downright affection, a home-maker can develop for an old skillet with a wobbly, half-burned off handle, or for a burned-out pan that should have gone to the scrap heap months ago. While the cook is actually in the process of getting a meal, she has no time to fix broken or dangerous kitchen equipment. The skillet whose wooden handle turns in your hand and which may therefore spill grease all over your arm some morning, is a menace. The cook will say, if you speak to her sharply about it, that she knows the skillet has its own idiosyncrasies but she knows all about them and can handle them. Maybe so! But some fine morning, somebody else will be getting breakfast and get a bad burn.

Not only do most home-makers keep a few skillets and pans around that ought to have been condemned by a kitchen jury years ago, but they have a strange sentimental attachment for broken, cracked, or nicked dishes and glassware. They hang around the kitchen until someone gets a bad cut, or has a plateful of hot food unceremoniously spilled into his lap. There is an additional danger in cracked or broken china or glass too, for cracks are ideal havens for germs of many kinds. On every count, broken dishes should be outlawed in every home.

Perhaps the best way to accomplish this end would be to take an inventory every month, discarding all equipment that is beyond use, and seeing that everything that needs repairing actually is repaired. Right now, when it's difficult to get professional repairs of many kinds, equipment which cannot be safely and perfectly repaired at home should probably be stored away until the happy day when an expert can do the job. Meantime, first class care of everything you own has become doubly important these days.

Ironing equipment in a really safe kitchen must always be kept in first class condition. Not only the iron and its connecting cord but the board, the stand on which the iron is to be set, the ironing cloth itself. A metal or asbestos stand for an iron is a positive essential for

every home kitchen—but it's surprising to find out how many women will use a half-burnt up pot-holder under a hot iron, while they go blissfully off to answer the phone and chat for half an hour about the doings of the neighborhood. Chances are that any woman who does such a stunt will be sponsoring a little neighborhood news herself—in the form of a roaring fire in the kitchen when she returns to the ironing.

In addition to setting up a safety-wise arrangement of kitchen equipment and a safety-wise plan of keeping it all in good working condition, there is a third ingredient which must go into all kitchen planning for safety. That ingredient is a list of safe kitchen practices. These begin with the orderly and unvarying technique of the cook herself, a formidable but learnable list of correct safety practices—and they must be extended to every member of the family—including Grandpa who is apt to leave the puppy's bowl out in the middle of the floor where Papa is sure to stumble into it on his way home from the night-shift.

Safe practice in the kitchen actually begins with the very clothes which the home-maker wears in that department. Trim, uncluttered, spotless dresses with short sleeves, and no danglers or jewelry to catch on things should be the regular uniform of the kitchen. If you've ever seen a glamour girl in the kitchen, trailing flowing sleeves over the gas flames—or otherwise endangering her life—you'll know what I mean. And by trim uncluttered clothes, I don't mean something on the Mother Hubbard style. Clothes for kitchen and other house work these days are as attractively and carefully designed as the most fashionable evening clothes. They should be purchased with special attention to the ease with which they can be clean, crisp and neat.

Memorize Rules

Every home-maker ought to list, memorize, and habitually practice a whole set of rules for safety around the stove. She should make sure that the kitchen is properly ventilated when the oven and cookstove are in use. When she's lighting the oven or broiler, she must see that the oven and broiler doors are open and that

she stands to one side when lighting the oven or broiler gas burners. I don't know anything more unattractive than singed eyebrows, and that's the very least that can happen to you if you ignore this primary rule.

A lot of bad burns could be avoided if the cook saw to it that a number of adequate, thick pot holders were on hand, in their regular spot, before ever she puts a kettle of water on to boil. Grabbing a hot handle with the bare hands or a thin pot holder not only results in teaching the children a lot of words they never ought to hear but frequently results in something even more serious.

One of the best rules for cooking safely is to see that, as far as possible, young children are kept out of the kitchen when any cooking operation is going on—especially an extended and potentially dangerous one—like canning. If the children must be in the same room with Mama while dinner is in the process of cooking, they must be taught to stay away from stove and sink—or any area where cuts or burns are likely to be incurred. Since boiling pots and sharp knives have an irresistible appeal for the young, don't ask me how to teach them to stay away from them. That's a problem I'll turn over to the pediatricians—and every individual mother. I know it helps if you can turn Willie over to someone in the living room for a spell—but if that's impossible—and he can't be chained to a play-pen—or doesn't like to read—then at least you can see to it that the handles of all pans are turned away from the outside edge of the stove. This is good practice even if there are no children in the family. For it's easy to brush against a stove—and brush a kettle of boiling food off with you.

By constant vigilance, too, you can see that knives are kept regularly up and away from children's hands. Even when you're using a sharp knife—if you're called to the door—you can put it safely back at the rear of the sink. For your own sake, too, wash knives separately from other cutlery. A meat grinder is an infernal machine if there ever was one—when young children are around. If a practice is made of washing it, taking it apart and putting it away as soon as it

has been used, you'll avoid a lot of trouble.

Not every good cook realizes that there is a simple and right way even for raising the lids of kettles to avoid burns. Lids should be lifted always in such a way that the steam escapes away from you, not directly in your face. In handling pressure cookers, it's a simple and very necessary matter to open the pet-cock before loosening the clamps.

Every home-maker ought to know what to do when a grease-fire starts on a stove. It's easy to start one—and relatively easy to stop one—for a handful of salt will cover and stifle it. In addition, every kitchen should have a pail of sand near the stove to put out fires. Most kitchen fires could be prevented if good safety practices were invariable. But the incidence of failure to follow the rules is high—and since no one of us always remembers to do the right thing, every kitchen should be equipped with some kind of fire fighting equipment.

Since women are rugged individualists at heart—and entitled to run their kitchens in their own way, the procedure of every kitchen will have to be suited to the special pattern of that household. This is as true of the safety program as of any other. Yet there are certain basic rules that ought to be observed by all of them. I know one household in which there is a steep and highly dangerous flight of cellar stairs. Down cellar the jam and jelly is stored—a constant temptation to the youngsters of the family. Mother—unable to make the stairs any safer—or store the jam someplace else—has placed a large sign at the head of the stairs. It says, "Is your trip necessary?"

Kitchen Procedure

There is one kitchen procedure which, I believe, would save innumerable kitchen accidents and preserve peace and equanimity in the kitchen. That procedure is simple. It means simply taking the time to sit down at some time of the day—to plan the activities for the next 24 hours. Right after breakfast is a good time in most households—and then, the day's program is freshest in mind. It's good kitchen management to make out a schedule of activities for the day, the tasks that must be done, and when

they'd best be done. Referring frequently to that list is an unbelievable aid toward getting the chores done and an active promoter of peace and happiness. The distraction and wild flurry of trying to do too many things at one time, and keep too many things in mind must be a principal cause of accident in the kitchen. No woman in her right mind would teeter perilously on a rickety chair, leaning over a hot stove, to get a package down from the top shelf. But when she's rushed—and dinner shows signs of being late, and the children are clamoring for soup, it's easy to forget. Often the lapse of good sense and safe kitchen practice has very sad results.

One of the most successful homes I know is run by a young woman who used to work in one of our Kraft plants. While she worked for us, she was tremendously impressed by the dramatic and effective safety campaigns which are a part of regular procedure in the factory. She was proud of the safety record of her department—and she decided that when she had a home of her own, she'd profit by following the system of dramatizing safety and building up safety records. She had an excellent opportunity to do so—for she married a widower with three half-grown children. Getting the children's cooperation in a program of home solidarity and home safety was one of her problems. She solved it neatly, efficiently and dramatically by typing up a list of

kitchen practices and appointing the children wardens over various phases of kitchen care.

The children created ideas for home safety posters and painted them with crayon and water colors and varying degrees of talent. They submitted kitchen safety ideas, which were judged by the family and suitably rewarded with extra helpings of dessert.

In addition, this kitchen boasted a poster showing total man-hours each week without an accident. If the week's record was perfect—without a single fall, scratch, cut, or burn—the whole family celebrated by taking dinner out on Friday night and forgetting the kitchen and all its works. Various awards were made—ice cream sodas—and candy bars—for various kitchen safety duties, performed over and above the call of duty. The method was unusual and maybe it wouldn't work in every family. But it paid dividends, important dividends, not only in safety but also in the development of character and initiative and a sense of oneness among the family members.

If every family could develop a similar plan for home safety—and home efficiency—and home happiness—it could go a long way towards disproving George Bernard Shaw's definition of people: "There are only three kinds of people—men, women, and children—and they don't get along!"

Making a Safe Sport Safer

By C. S. BEDELL

Director, Sportmen's Service Bureau of the
Sporting Arms and Ammunition Manufacturers' Institute, New York City

Having a vital interest in the subject of firearms safety, The Sporting Arms and Ammunition Manufacturers' Institute was very happy to accept the National Safety Council's invitation to participate in this demonstration. It presented an opportunity to accomplish four things: first, to throw some light on the sporting firearms safety record—a record that may prove surprising to many whose ideas on the subject may be based on the number of firearms users and the lethal potentialities of the gun; second, to outline the Institute's approach to the accident problem; third, to present a series of concrete safety suggestions; and

fourth, to outline specific ways in which the Institute is prepared to cooperate with you and all other organizations and groups interested in accident prevention.

Shooting a Safe Sport

According to figures issued by the Fish and Wildlife Service of the United States Department of the Interior, more than eight million Americans purchased hunting licenses in the fiscal year ending June 30, 1943. This total is swelled by participants in trap, skeet and target shooting, sports for which no license is necessary. It is further increased by handowners and members of their fam-

ilies not required to purchase licenses in some states for hunting on their own lands, and by other gun users whose numbers are not reflected in the Fish and Wildlife Service's figures.

While this total is impressive, it does not tell the full story by any means. A survey made by *Fortune Magazine* a few years ago, in which 5,000 representatives of various economic groups from all parts of the country were asked to specify their favorite forms of recreation, revealed that hunting and fishing (two activities jointly followed by many sportsmen) stood first among all sports, both participating and non-participating. The only pastimes more popular than hunting and fishing were given as 1—"Listening to the Radio," 2—"Going to the Movies," and 3—"Reading Books and Magazines." According to this survey, more people expressed preference for hunting or fishing than sporting events of all kinds combined—more than selected newspaper reading—more than those outdoor games—more than named card playing—more than specified visiting the legitimate theatre.

To those not familiar with the facts, such a widely patronized sport as hunting, in which an implement capable of inflicting serious accident or death is employed, may appear to constitute a serious safety hazard. What then are the actual facts?

The gun, like fire, the automobile and numerous other elements and devices useful to man, can be misused, and, like them, can cause injury or death when misused. As it can be a lethal weapon, the popular mind is likely to exaggerate the danger inherent in its use. But the danger of careless use of the gun is so obvious, and the user has had this danger impressed upon him so constantly, that shooting has become one of the safest of all sports, despite its wide popularity.

Recently the Travelers Insurance Company published several analytical tables covering claims made on the company in 1943 as the result of accidents. One table divided the causes into the broad general groups shown in this table:

TABLE "A"

Travelers Insurance Company Accident Claims

Accidents resulting from causes to which all men are exposed without regard to their

employment for which the Travelers paid claims in 1943.

1. At Home (Inside)	25.79%
2. At Home (Outside)	18.56%
3. Pedestrians	17.32%
4. SPORTS AND RECREATION	17.05%
5. Automobiles	12.28%
6. Travel	3.52%
Miscellaneous	5.48%
	100.00%

It will be noted that among the Travelers 1943 accident claims, sports and recreation stood fourth in this group of seven with an accident percentage of 17.05%. Now let us examine information from the same source, which shows the position of hunting in comparison with other forms of recreation within the group:

TABLE "B"

Travelers Insurance Company Accident Claims

Sports and Recreation Accidents 1943

Activity	Claims
1. In Country or Woods	361
2. Horseback Riding	270
3. Baseball	256
4. Football	248
5. Bicycle	246
6. Winter Sports	219
7. Bathing and Swimming	202
8. Golf	178
9. Basketball	157
10. Athletic Games	156
11. HUNTING	140
Other Classifications*	1,103

TOTAL 3,536

You will note that accidents in country or woods (exclusive of hunting) were responsible for 361 accidents; Horseback riding was second with 270 accidents. Baseball was third with 256; football was fourth with 248; bicycling was fifth with 246; winter sports sixth with 219; bathing and swimming seventh with 202; golf eighth with 178; basketball ninth with 157; athletic games tenth with 156 and hunting eleventh with 140, or only 4% of the 3,536 accident

*Boating and Canoeing; Bowling; Tennis and Squash; Skating; Sculling and Wrestling; Gymnastics; Fishing; at Theaters, Churches and Concerts; at Parks, Picnics and Outings; Dancing; Billiards and Pool; Boxing; Miscellaneous.

claims in the sports and recreational group.

Carrying this analysis a step further, we find that hunting was responsible in 1943 for less than 0.68% of the total number of Travelers' 1943 accident claims, as against 16.37% for other forms of sport and recreation.

The Institute's Safety Activities

The enviable safety record achieved by the users of firearms has not been accidental. It has been the result of careful planning, persistent education and intelligent cooperation by the National Safety Council, the Boy Scouts, State Game Departments and numerous others, with whom the Sporting Arms and Ammunition Manufacturers' Institute has collaborated since it was organized in 1926.

The Institute's first step in this direction was to inaugurate, through the instrumentality of its Technical Committee, certain standard safety measures within the industry itself. These included:

- Marking of chamber lengths on shotgun barrels.
- Marking of corresponding shot shell lengths on cartons, and in some cases on the tubs, of shot shells.
- Warning notices on shot shell cartons containing special purpose ammunition developing higher pressures.
- Warning notices against insertion of smaller-gauge shot shells in chambers of larger-gauge guns.
- Warning notices on appropriate shot shell cartons against use of ammunition in obsolete arms.
- Warning notices on cartons of .22 caliber cartridges against possible danger to others at extreme ranges.
- Establishment of proof-load standards for testing of shotgun chambers at pressures greatly in excess of normal.
- Warning against use of smokeless powder in Damascus or twist steel barrels.
- Special alloy steels and other metals were also developed and utilized in the designing of modern weapons to accommodate extra-high-velocity rifle cartridges with safety. These cartridges are designed specifically to fit only in rifle chambers built to handle them.

Another Committee of the Institute, one dealing with Simplified Practice, cooperates

with the Technical Committee to discontinue cartridges whose ballistic performance is unsatisfactory from the standpoint of safety or otherwise.

An important function of a third committee, the Committee on Promotional Activities, is to conduct, through member company organizations, such activities as may be necessary to insure proper instruction of member company field personnel.

The foregoing, however, were merely steps to put the industry's own house in order. Obviously, it was not possible to reduce hunting accidents to a minimum without educating and instructing the shooting public, especially children and youths, in the prevention of firearms accidents. The value of such instruction had already been made increasingly clear by the marvelous safety records of such supervised shooting sports as skeet, trapshooting and rifle target shooting, which had continued to increase in popularity with a negligible number of accidents.

To handle this task of safety education, the Institute created a Committee for the Prevention of Accidents with Firearms. The activities of this committee were outlined briefly before this same group last year, but I would like to take a few minutes to bring you up-to-date on what has been and is being done.

(1) Ten Commandments of Safety

The first material released was a terse set of rules entitled "The Ten Commandments of Safety" which covered rules considered basic in the safe handling and use of sporting firearms. Copies of the "Ten Commandments" have been included in every carton shipped by any gun manufacturer, irrespective of whether it contained a new or a repaired gun. Since 1939, over 3,500,000 have been distributed by Member gun manufacturers.

Over 6,700,000 copies have also been distributed by State Game Departments, bringing total leaflet distribution to over 10,000,000, while at least 18 States have printed the "Ten Commandments" on their licenses or in their various publications released at or about the opening of the hunting season. The 4-H Clubs also have distributed over a quarter of a million copies in leaflet form.

(2) Poster Program

Supplementing distribution of the small

leaflet, over 15,000 copies of a large cardboard poster containing these same "Ten Commandments" have been supplied by the Institute and distributed among gun clubs and at various places where hunters congregate, by agencies such as the Boy Scouts of America, the National Rifle Association and member companies of the Institute.

With the active cooperation of the Milwaukee Chapter of the Isaac Walton League, 5,600 cloth posters, size 17x22, were used in a test campaign in Wisconsin in 1940. The Conservation Department, various sportsmen's clubs, hardware stores and others helped erect these posters, and 50,000 of the "Ten Commandments" in leaflet form were distributed throughout the deer hunting sections of the State. Both fatal and non-fatal accidents were materially reduced that year and the Milwaukee Chapter of the Isaac Walton League expressed its belief that this decrease was due at least in part to the test campaign.

In view of this success, special art posters, printed in three colors on waterproof material, were used in 1941 and 1942 in extending this safety poster program to include six leading big game states—Maine, Michigan, Minnesota, New York, Pennsylvania and Wisconsin.

In 1943, the poster program was again expanded to include distribution of new three-colored posters aimed at the hunter of small game. These were distributed in Illinois, Indiana, Michigan, Minnesota, Oklahoma and Pennsylvania. In all a total of 92,000 posters were distributed last fall.

In the three years during which these art posters have been in use (and in which a total of 166,000 have been distributed) reported non-fatal accidents from the six states named have dropped 31.25% despite much stricter laws requiring the reporting of shooting accidents. Fatal accidents have dropped 32.9%. This year a total of more than 75,000 of these posters are again being distributed.

(3) Safety Motion Pictures

In 1942, the Institute released a motion picture to promote safety in the use of sporting firearms. This film "The Making of a Shooter" was photographed in full color and produced in both sound and silent versions. To avoid all semblance of lecturing, the subject was approached from an inspirational angle. The lessons in safety

were incorporated in an interesting plot, narrating the experiences of a typical teenage American boy who attended the various national trap, skeet and rifle shoots, and who hunted in the field, absorbing instruction bit by bit.

The film has been distributed through the various state game departments and many organizations and groups interested in sport and safety. As a result, despite gas rationing, which has materially reduced meetings in suburban and rural areas, distributors' reports show that the picture was exhibited to over three quarters of a million people in the first two years.

(4) Institute Radio Program

During the 1940 hunting season the Institute sponsored a radio program over ten midwestern and southern radio stations, called "Shooting Adventures of Famous People," designed to increase shooting and game restoration. Safe handling of guns came in for direct attention in several of the broadcasts. Throughout the series, listeners were urged to join sportsmen's clubs, through which they could avail themselves of expert supervision and instruction in the safe handling of sporting firearms. This program, interrupted by war was very well received and undoubtedly was helpful to the cause of safety.

(5) Handbooks on Rifle and Shotgun Shooting

Two Institute booklets "Handbook on Small Bore Rifle Shooting" and "Handbook on Shotgun Shooting," while primarily designed as aids to improved shooting, have heavily stressed safe gun handling. More than 335,000 of these books have been distributed. We are convinced that they have contributed materially to the cause of safety.

(6) Publicity

In connection with the various activities listed, an intensive publicity campaign has been carried on by the Institute's Sportsmen's Service Bureau through outdoor and general magazines, newspapers and other publications. The Institute's regular S.S.B. *Outdoor News Bulletin*, published bi-weekly, and various special timely releases have stressed safety measures and revealed the availability of safety material for distribution.

How to Prevent Firearms Accidents
A few minutes ago I mentioned the Ten

Commandments of Safety that have proved so effective in combatting the causes of accidents with sporting firearms. These commandments appear so simple as to be obvious to anyone, and yet we all know that many accidents in all pursuits result from neglect of the obvious, and that it is only by constant repetition that the most simple precautions become habit. For instance, take Commandment Number One:

"Treat every gun with the respect due a loaded gun. This is the cardinal rule of gun safety."

Rigid observance of this commandment is probably the greatest of all insurance against gun accidents. There is no excuse so invalid as "I didn't know it was loaded." The hunter must always assume his gun is loaded, and must handle it accordingly.

Now let us take Commandment No. 2:

"Carry only empty guns, taken down or with the action open into your automobile, camp and home."

This commandment offers a safeguard against discharge in the car due to jolting or to accidental trigger pressure, either while riding, or while removing the gun or material placed with the gun from the car. It prevents discharge in camp or home as a result of falling, accidental trigger contact, or possible handling by children. Incidentally, care must be taken at all times to keep even unloaded guns out of the reach of young children.

Commandment Number 3 is equally simple:

"Always be sure that the barrel and action are clear of obstructions."

The careful gun-user will avoid having his gun muzzle come in contact with the ground or with snow. If such contact is made accidentally, he will immediately investigate to make sure that the muzzle has not become plugged, and when doing so he should never look into the muzzle. Any looking through the barrel should be done from the breech end. If necessary to take a gun apart to follow this advice, this should be done. It's time well spent. The barrel should always be inspected before loading to see that no cartridge of a smaller gauge or calibre than the gun calls for has been placed in the chamber by error, or that no foreign object has worked its way into the barrel from the chamber. These precautions will prevent any possibility of a barrel

bursting as a result of obstruction, when the gun is fired.

Commandment Number 4:

"Always carry your gun so that you can control the direction of the muzzle even if you stumble."

This commandment is of special importance where two or more hunters work together. It is easy to stumble in the woods and brush, and guns are sometimes discharged in this manner. Another good habit to develop while carrying a gun is to keep the safety on until ready to shoot.

Illustrating the proper manner of carrying guns, I have two photographs. These are both stills taken from the Institute Safety film "The Making of a Shooter."

You will note that these hunters have removed shells from their guns, and that all muzzles are pointed in safe directions.

Note that in this illustration, both guns are lying in the boat with muzzles pointing over the stern. Guns are empty, and will not be loaded until the decoys are out and both hunters fully in position and ready for the incoming birds.

The Institute has furnished pictures such as these to sporting and other publications. They have been given wide circulation and have done a great deal to impress hunters with the importance of safe gun handling.

"Be sure of your target before you pull the trigger."

The responsible hunter will never assume that the object he sees through the woods or brush is legal game. He will make sure! And he will also make certain that his quarry is not in such position that his shot will endanger others.

This commandment has been stressed in two of the Institute's Safety Posters—one designed to appeal to big game hunters—and one designed to catch the eye of the man after small game.

These posters clearly illustrate the importance of this Commandment.

"Never point a gun at anything you do not want to shoot."

The man who violates this commandment is inviting trouble. The safe hunter will never choose him for a shooting companion, but will avoid him like a plague.

"Never leave your gun unattended unless you unload it first."

You are just as responsible for your gun

when it is out of your hands as when it is in them. The man who leaves a gun loaded is every bit as guilty as our friend who didn't know it was loaded.

"Never climb a tree or a fence with a loaded gun."

It is an invitation to trouble to violate this commandment. How much better to take the few necessary extra seconds to make sure of safety when crossing a fence.

You have already seen one illustration of three hunters crossing a fence. This man is alone, but he is taking no chances. He has removed the cartridges and opened the action of his rifle. If he slips or falls, the piece cannot be accidentally discharged.

"Never shoot at a flat, hard surface or the surface of water."

Shots often "ricochet" that is, glance off rocks, trees or water surfaces, and may cause injury to persons apparently out of the line of fire. As rifle bullets have a much longer range than shotgun pellets, a greater amount of care is necessary when a rifle is being fired.

"Do not mix gunpowder with alcohol."

A gun, like an automobile, should be manipulated only by a person in full control of his faculties. The careful shooter never takes a drink until after his day's shooting is over, nor does he resume his shooting after he has been drinking.

The foregoing commandments, as I have explained, have been distributed to more than ten million American hunters, and more than a million of them are being distributed to hunters and prospective hunters each year. They have also been printed and are being reprinted each year in numerous publications read by hunters. So are the pictures you have seen, and others, designed to impress hunters with the right, not the wrong way, of handling firearms. In addition, radio and other safety talks elaborating upon the commandments have been distributed upon request to various organizations and groups concerned with firearms safety.

Proffer of Cooperation

Throughout its Safety Program, the Institute has solicited the advice and the cooperation of such organizations as the National Safety Council, the Boy Scouts of

America, the various State Game Departments, the National Rifle Association, numerous sportsmen's organizations, hunting and fishing and other outdoor publications, the newspapers and many others. Such cooperation has been given freely and enthusiastically, and has been utilized in the fullest possible measure.

In addition there has been considerable independent effort on the part of these groups and organizations, all of which have contributed substantially to the cause of safety in the use of sporting firearms.

Copies of the Ten Commandments of Safety will be furnished without cost to organizations or groups that are in a position to distribute them to users or prospective users of sporting firearms.

Copies of safety radio broadcasts, other talks and newspaper or magazine articles are also available without charge upon request. The same holds good for photographs illustrating the safe use of firearms.

The motion picture THE MAKING OF A SHOOTER, in either sound or silent film, may be obtained for showing by any responsible organization or group. The only cost to the user is that of shipping charges. Descriptive folders are also available.

The Institute will always be glad to consult with any person, organization or group interested in the prevention of accidents with sporting firearms, either to obtain the benefit of their suggestions or to determine whether it may be of assistance in connection with special problems or campaigns which may embrace the subject of firearms safety. Inquiries in this connection should be addressed to the Sportsmen's Service Bureau, 103 Park Avenue, Room 506, New York 17, N. Y.

The Sporting Arms and Ammunition Manufacturers' Institute plans to continue its safety efforts, and wishes to assure all groups here represented of its desire to cooperate fully with the 33rd Safety Congress toward the achievement of its objectives. Furthermore the Institute wishes to assure all who have an interest in the matter of safety in the use of sporting firearms, that it will continue to cooperate with them to the end that the safe sport of hunting may become even safer in the future.

The Most Important Cause of Serious Home Accidents: Falls

By HAROLD DANFORD

Director, Education Division, National Conservation Bureau, New York

Accident statistics for homes, industry and schools show that no other single type of accident causes more disabling injuries and deaths than falls. Home accidents take a total of approximately 30,000 lives every year. Falls account for over one-half (15,500) of these fatalities. At present, statistics on home accidents show only death rates. There are no accurate figures available on disabling injuries. However, it is a recognized fact that 25,000 people are killed each year in the United States due to falls in all places—that is: in homes, in industry and in public places. Two-thirds of these occur in homes, which makes falls the most important cause of serious home accidents. This presents a problem which needs urgent attention as well as the active cooperation and participation of every person in a position to contribute to public education.

What is the reason for the extremely large number of falls compared to any other type of accident? "He just fell" is an excuse so often used as a reason for an injury. But falls do not "just happen." They are caused like all other accidents. Most of these causes resulting in falls, are of a very simple nature. A wet floor, a torn rug, a toy on the stairs, etc. That sounds insignificant in comparison to problems in industry such as machine guarding or chemical hazards. The fact, however, is that these seemingly simple causes encountered in homes represent such a tremendous hazard just because they are so simple. Whether a broken hip or arm resulted from a fall at home, or from an accident in industry, the suffering, loss of time and money are the same, and only too often there is no compensation for the expenses involved in home accidents.

Another reason for the large number of falls is the difficulty to organize the educational programs that reach the homes. What has been done in industry, and transportation and other public or commercial organizations through the more centralized executive sponsorship, can and

must be done for the homes as well. The need for safety education on "off the job accidents" is also urgent.

In order to successfully plan an educational program, it is necessary to analyze accidents in form of cause, type, frequency and type of people involved. In this connection it is interesting to know that five out of six persons killed by falls are 65 years and over, which is 84% of the total. One reason is that people of advanced age fall due to such physical impairments as: defective eyesight, prolonged reaction time, lack of agility and the tendency to be forgetful or to become confused. Another reason is the increasing brittleness of the bony structure which will lead to more serious results when a fall occurs. In summarizing these facts, the need for special consideration of older people in the prevention of falls becomes obvious.

In delving into the reasons for falls, a multitude of causes develop and present themselves, many interlocking and contributory, but all having their share in the final picture. In the causation of most accidents there is both a physical and a personal factor present. Unsafe physical conditions, such as defective ladders, poor lighting on stairs or obstructions, once recognized, can be corrected or repaired. This is not the entire answer in stopping accidents. Poor judgment, hurry, carelessness, lack of knowledge are personal attitudes that can only be changed through education and constant personal efforts.

The following grouping presents a complete picture of all falls and their causes:

Falls occur either on
Same Level or
Different Level (fall from—fall to)

CAUSES

Physical

Unsafe Condition:
Faulty Design
Neglect of Maintenance
Improper Equipment
Poor Housekeeping

Personal

Unsafe Practices:
Unsafe Attitudes (Inattention, Haste, Etc.)
Poor Habits
Lack of Skill
Lack of Training and Knowledge
Body Defects (Old Age, Invalids)

TYPES OF FALLS

Slip—Trip—Sudden Change of Balance—Misstep

Prevention and Control

For the purpose of prevention and control, the problem may be broken down into two divisions:

A. Important factors surrounding physical conditions.

B. Basic Personal Practices and habits.

Physical Conditions

Common practice among safety engineers divides falls which are due largely to physical conditions into two groups:

1. Falls on the same level.

2. Falls from different levels.

Falls on the same level constitute about 65% of all fall accidents and under this category are included floors, sidewalks, and grided or latticed walkways such as on open porches or fire escapes. Of major importance, of course, is the principal visible spot of walking surfaces in the home. Here the principal items of prevention include:

1. Clean Walking Surfaces

(a) Obstructions in walking areas. A chair or a table which protrudes into normal walking path constitutes a tripping or bumping hazard.

(b) Loose objects. Toys, magazines, newspapers, may very likely cause a misstep, slip, or insecure footing. Of particular importance are small objects that tend to roll, such as cylindrical objects, like pencils or toy blocks.

(c) Electric lamp cords. Many floor and table lamps are so placed that excess cord, which is initially placed out of the way, eventually drags loosely on the walking surface. The safest practice, particularly where the lamps are fairly permanently placed is to have cord

lengths approximately equal to the distance to the electric outlet. Where this change is impractical for special reasons, at least cord should be so fastened or covered so that it will not be moved by oil mop or vacuum cleaner, etc.

(d) Defects in the floor. Most common trouble in this connection arises from protruding nails that work out of the flooring from their flush position causing a tripping hazard.

(e) Water or grease. Fats and grease in the kitchen should be promptly wiped up after spilling. Water spilled on waxed hardwood floors, also substantially increases the possibility of slipping.

2. Condition of Walking Surfaces

(a) Highly polished floors. All floor wax is slippery—some more so than others. Floor wax will vary in slipperiness between the various types of surfaces to which it is applied. Good judgment is necessary in selecting floor wax and in applying it to minimize possibility of excess slipperiness. In the walking surfaces particularly, waxed floors should be covered with carpeting, securely fastened small rugs or other relatively non-slippery floor coverings.

(b) Scatter rugs. Small scatter rugs, orientals, and the ordinary "rag" rug create very little friction between the underside of the rug and hardwood floor. For safety, it is essential that such rugs be either tacked down or that some of the non-slip materials which are available on the market as under rugs be placed between the rug and the floor. There are many very efficient products on the market which will absolutely prevent any small rug from slipping.

An inexpensive way by which reducing the slipping of scatter rugs can be accomplished through the use of the ordinary mason jar rubber rings. These may be sewed to the underside of the rug. The important point here is to have the thread pass through the thickness of

the jar ring rather than be wound around it. This insures better suction effect. A minimum of four rings is generally required and more may be necessary to control accidental movement of the rugs.

- (c) Linoleum: Curled edges or torn sections need tacking or cementing down.

- (d) Floor unevenness: A common hazard in the long halls of older type homes is a hump in the floor caused by a buckling of the floor boards. Best remedy, of course, is to tear up the buckled section and have the proper repair made by a carpenter. Where such expense may be of critical importance, falls may be avoided through the use of an "attention arrester" such as a warning sign or use of contrasting paint.

Other principal physical conditions causing falls on level include:

3. Overhead Obstructions

Pipes, beams, etc., which cross over an indoor pathway can rarely be removed without excessive expense, but again here, the use of a contrasting color may be used to call attention to the obstacle. An even better improvement is to pad such obstructions in a vivid colored cloth to further minimize bumps or bruises.

4. Floor or Walk Defects

- (a) Porches with latticed type wood floors are often found with broken sections. Sometimes this is due to normal wear or weather conditions and in other cases, a small section of planking may break loose, where the carpenter used a short piece to finish out the strip and the pieced section did not bear on the floor's joists. Permanent correction usually involves a shortening of the longer length so that the butt end of the two pieces of planking can be joined at the center of the joist.
- (b) Concrete sidewalk and porch floors crack and buckle due to moisture getting underneath and freezing in the cold weather months. Often the correction of these jobs is postponed

due to alleged expense. Actually almost anyone can inexpensively repair the condition to a satisfactory extent by cleaning out the broken sections and then filling the entire hole or crack with mortar mixed as follows: half cement, half fine sand, and water.

5. Icy Walks

Use cinders and salt where ice or snow has become too hard to remove with shovel.

Falls from Different Levels

The most important item under this category as respects frequency of home accidents is stairs and steps. Ladders, open windows, elevator shaftway openings (in apartment or tenement buildings) and use of chairs or boxes as stepladders are also responsible for a sizeable number of accidents each year and produce a high severity of injuries.

Stairs and Steps

1. Recognized practices in safe construction

- (a) best angle of incline from the horizontal—30-38°.
(b) constant tread depth and riser height for each flight.
(c) handrail placed 30-34 inches above tread line.

2. Good Housekeeping—no materials stored or left on stairs.

3. Decent Lighting!

Electric light outlets in the average home are available at the upper end of the stairs and the proper size bulb can easily be determined by allowing a minimum of one-half watt per square foot using the overall dimensions of the staircase. (Example—a stairway 3 feet wide and 20 feet long has 60 square feet, thus use minimum of a 30 watt bulb.)

On basement stairs which are usually dark, visibility can often be enhanced by painting top and bottom steps in a light contrasting color. This particularly aids a person approaching the steps to see where they begin and end.

4. Mats or carpeting are one of the best "fall preventers" especially where steps are of hardwood construction. In homes where there are very

young children or elderly people, this should be considered a "must" even in families with a limited income. Rubber mats can be purchased for the home for \$1 to \$1.50 for the entire staircase (usually 10c a step).

It is important, however, to have mats or carpeting installed rigidly. Carpets should fit snugly especially at the nosing, while mats should have no raised edges which may cause tripping. Many stair mats use a brass or metal covering over the nosing and these need checking from time to time to be sure that they have not worn slippery. Slight grooves filed on the diagonal will do much to curb this cause of slipping.

5. Use of collapsible gate at top of stair flight to protect babies and "toddling" children.

Other Rained Levels Ladders

While design and construction details of reputable manufacturers follow recognized standards for the safety practice, accidents are often the result of abuse in the care of equipment or use of makeshift or homemade equipment. Among the more important points are:

- (a) Ladders should never be painted as this makes it difficult to detect weaknesses caused by cracks or checks.
(b) Rungs require regular inspection and at the first sign of noticeable wear or cracks, they need to be replaced.
(c) Storage of ladders when not in use should provide protection from weather and freedom from collision or falling objects.
(d) To avoid undue strain and also instability of a straight ladder, when placed against a wall, good practice calls for having the base of the ladder at a distance from the wall approximately one-fourth the length of the ladder. (Example—a sixteen foot ladder needs to have its base four feet from the wall against which it is placed.)

Open Windows and Wall Openings

- (a) In homes—especially apartment

buildings—with young children, avoid having chairs or sofas placed near open windows unless the windows have well anchored screens or barriers.

- (b) Wall openings such as laundry chutes, dumbwaiters, etc., should always be protected with a full enclosure, preferably installed with a hook or lock not readily opened by children.

- (c) Doors at elevator entrances need to be installed so that they cannot be—

1. opened unless elevator car is at the landing.
2. left open and yet permit car to move away from landing.

- (d) Where clothes lines operating on a pulley are loaded and unloaded from windows, pulley should be attached to the wall as near the window as possible and at a convenient height so as to avoid undue reaching or stretching. Safer practice is also to provide a barrier bar which can serve as a railing in case of a slip.

Makerepairs Used as Substitutes for Step-Ladders

Accidents from this condition are very often attributable to haste or laziness in not wishing to take the time to get the step-ladder when it is necessary to obtain objects out of reach. (Changing overhead light bulbs, putting up curtains, storing material on closet shelves, etc.) The purchase of a step-ladder for the home is often neglected, however. If obtained and used, its cost is saved many times over in just one doctor bill.

Falls from Bed

There are, of course, a number of bad accidents each year due to people actually falling out of bed. Undoubtedly, many accidents cataloged under this heading are actually cases where the person had to arise during the night in the dark and due to stupor or lack of equilibrium, fell near the bed. In homes where mothers have to arise to take care of children, the idea of an automatic light which turns on and shines on the floor when the person arises from the bed, has distinct merit in preventing accidents. Units embodying

this principle are a reality and are quite inexpensive.

Chairs

Two notable accident hazards are prevalent under this item:

- (a) Chairs where the rungs have become loose through heat drying out the glue. An inexpensive, yet effective remedy is metal shims or collars available in many hardware or 10c stores which fit over the dowel end of the rung and when inserted into the dowel hole, restore the original rigidity of the chair supporting members.
- (b) Folding chairs: Due to their portability, this type of equipment is never entirely safe. Best means of prevention here lies in setting them up where they are least liable to slip, such as on a rug, and also the use of full care in erecting them so that they are set up in a fully opened position.

11. Balcony, Porches

These facilities represent a sizeable hazard to children. While most porches are originally equipped with barrier and porchrail, they are usually designed only to prevent accidental stepping off the raised level. Due to the inherent tendency of children to climb, the average porchrail is an ideal ladder for their antics. Primarily, the solution is a matter of training the children themselves although a frequent step employed by safety-conscious mothers or fathers is to either—

- (a) Install an additional railing to raise the overall height.
- (b) Place wire screening on the inside of the railing supports which not only closes the openings between bars but also makes climbing ineffective by blocking the "rung" effect of the railing and intermediate support.

Also, of course, consideration is necessary to keep the barriers in good sound condition (no rotted posts, broken sections or loose supporting brackets).

Before discussing the *Personal Factors* (unsafe practices) and their control, an understanding of the fundamental rules on *Body Stability* is essential. Many falls can be avoided, even in spite of unsafe

conditions, if people know how to "handle themselves."

A fall is a loss of balance. Equilibrium is maintained through constant muscular control. From early childhood on, practically every person develops certain habits that lead to awkward positions and movements while performing their daily tasks. These habits are gradually forming patterns of muscle-actions which are reflected in people's posture, way of walking, turning, lifting, and whatever body action may be concerned. The human being in his upright position is supported by a very small base. His feet as a base, compared to his height, form such a small support that constant muscle action is necessary to maintain this balance. Muscle control varies with the state of physical fitness. Fatigue—poor diet—lack of sleep, nervous tension will increase fall-proneness. Therefore every effort made to improve public health will act as an aid in fall prevention. However, regardless of the type of person involved, there are three basic rules on *Body Mechanics*, which, if properly applied, will provide better muscular control and thus aid in the prevention of falls.

1. A broad and level base for support. Examples:

Use legs to increase base when pushing, pulling, lifting. Proper ladders or chairs for climbing—High vs. low heels. Condition of footwear (worn-down heels).

2. Weight centered and near base. Example:

Proper placement of person or ladders towards object to be reached—weight of person in center of platform.

3. Step in direction of action. Examples:

Advance one foot when getting up from chair. Step backwards when sitting down. Place one foot behind when pulling—step forward when reaching forward, etc.

(These practices should be demonstrated and associated with the "unsafe practices," leading to falls.)

Control Through Personal Factors

1. Personal Equipment:

- (a) Fall-proneness arising from in-

complete or defective vision. If a person, particularly of advanced age, seems to be fall-prone, and no actual cause can be detected, defective eyesight might be the reason and an optical examination suggested. Vision can change so gradually that a person might not be aware of the need for glasses for a long time.

- (b) Condition of footwear: Worn-down heels cause some footstrain and affect balanced walking. Loose soles and dangling shoelaces are tripping hazards. Soles of rubbers and galoshes when worn to a smooth surface often lead to falls (slip). Some shoemakers can put on a new "tread."
- (c) Clothing: Long housecoats, robes and dangling belts are a tripping hazard, particularly on stairs. These should be lifted up when traversing steps. The combination of slack cuffs and high heels are "trouble makers" and "care" is the only solution if they are worn.
- (d) Bathtub: Falls in and around the bathtub are very common, particularly with elderly people and children. Handholds should be placed on the wall above the tub. Any support of this kind must be attached firmly. To prevent slips in the bathtub, soap should be kept in the soap holder. A rubber mat or bath towel at the bottom of the tub will prevent slipping. There are products available which can be sprayed or brushed on the tub surface to minimize slipperiness. These may be especially warranted for use by people having orthopedic difficulties.

2. Habits:

It is much harder to change a person's habits (mental or physical), than to correct an unsafe physical condition. A habit cannot merely be dropped. It must be combated by substituting for it an opposite habit, properly defined as a clean aim. Wil-

liam James has given us the following useful formulae for changing a bad habit into a good one:

1. Define the desirable habit to be acquired.
2. Practice the desirable habit at every opportunity.
3. Create opportunities for practicing the desirable habit.
4. Allow no exceptions or omissions to occur.
5. Never permit a return to the old undesirable habit.

Some of the habits that result in falls:

- (a) Non-use of handrails.
- (b) Carrying objects. When carrying objects, it is important that they do not obscure the vision.
- (c) Tilting chairs. Tilting chairs not only weakens them, but often causes nasty falls.
- (d) Walking habits. When walking, a person's weight should be balanced evenly on both feet. Diagonal approaches should be avoided, since they disturb the balance.

It is safer to walk, than to run.

Look in the direction you are going.

Avoid sudden turns or any quick change in direction.

3. Non-Routine Activities:

- (a) Refrain from changing too rapidly from inactivity to activity, such as jumping up from chair or out of bed to answer telephone or bell.
- (b) Pulling and pushing objects: While pushing or pulling drawers, furniture, windows, etc., feet should be well braced and placed apart in direction of action.
- (c) Objects out of reach: To reach high places (shelves, ceiling to change bulbs, hanging curtains, etc.) a strong stepladder or step stool correctly placed (See *Physical Conditions* 5) is the proper thing to use. If not available a sturdy chair will serve as a good base to stand on. A firm level base is essential. Leather, cloth, or straw seats are not made to carry weight. It is

dangerous to use rocking or folding chairs, or to increase height by placing boxes, telephone books or other devices not intended for this purpose on top of chairs or tables. Remember: Center your weight for proper balance, which means in this case: Step on the middle of chair, place ladder or chair close enough to object to be reached to avoid leaning over. Avoid standing on the top of a step-ladder. Use one sufficiently high to let you stand at least two steps from its top.

- (d) Traversing dark areas: To avoid falls in dark areas when no light is available, walk as though blindfolded. Inquiries at institutes for the blind revealed the surprising fact that falls

hardly ever occur amongst their inmates. They know their limitations and act accordingly to avoid hazards.

The best way to prevent a fall is to remove the hazard, and if the hazard is not obvious enough to be easily remedied, then the most effective accident prevention is "Watch your Step"!

In conclusion it may be said that no matter how simple the subject of falls prevention may seem, the fact that almost 16,000 people are killed each year in the United States by falls is reason enough to DO something about this most serious of all home accidents. The remedies are as simple as the causes. In general, little money or effort is necessary to remove a hazard. "Watch your step," a phrase as simple as that—if observed and practiced can save thousands of lives every year.

Don't Get Burned—Preventing Burns, Explosions, Fires Within the Home

By THEODORE GUNN

Engineer, New Hampshire Board of Underwriters, Concord, N. H.

Mr. Gunn's presentation was in the form of a demonstration. He demonstrated a dust explosion, using corn starch as his explosive agent. He showed clearly how gasoline vapor is heavier than air and tends to flow to lower levels. A fire from gasoline vapor used as cleaning fluid in the home may be started at some distance from the source of the vapor and "flash back" to the source. Some cleaning fluids are safe, however, Mr. Gunn explained, and the vapor from these cleaners actually extinguishes a flame.

What happens when a householder replaces a fuse by the well-known penny was beautifully demonstrated by Mr. Gunn. The little doll-house in which the over-loaded wires were strung began to pour forth

smoke and flame. Another electrical hazard caused by defective insulation was presented. This was a floor lamp which had actually been responsible for the death of a child. Mr. Gunn showed that the metal stand and holder were electrically "alive" by running a grounded wire along the metallic parts. From top to bottom the lamp stand sparked and crackled against the grounded wire.

Christmas tree lights, tinsel decorations, oily mops, even certain dry chemicals in cracks in the floor—all are potential fire hazards. The wise householder takes precautions to prevent fires and has a fire extinguisher handy in case a fire does get started.

WEDNESDAY AFTERNOON SESSION

October 4, 1944

Joint Session—Home Safety and Women's Programs

Presiding: DONALD B. ARMSTRONG, M.D., Second Vice-President, Metropolitan Life Insurance Co., New York City, and Chairman, Home Safety Advisory Committee, National Safety Council.

Safe Homes—A Community Responsibility

Finding a Program That Will Work

Digest of talk given

By MRS. NORMA F. WULFF

Vice-President, Cleveland Safety Council, Cleveland, O.

When we of the Greater Cleveland Safety Council met to discuss ways and means of bringing safety to the public, we decided that the message had to be carried *directly* to the people and that it had to reach people in all walks of life. For this reason we decided to develop a course to train homemakers in home safety.

We started with a panel of four making talks to local organizations such as the Parent Teacher Association, the American Red Cross, literary guilds, etc. This panel course was a proving ground for the one that followed.

The panel of four grew to one of seven in which the following subjects were discussed in ten sessions:

"Safeguarding the American Home—Our Second Line of National Defense," by Judge Lee E. Skeel, President of the Greater Cleveland and Ohio State Safety Councils.

"Food Protection and Protective Foods," by Dr. Enos B. Buchanan, Chief, Food and Drug Administration, Division of Health, City of Cleveland.

"Rodent Control," by myself. Let me explain that this session was felt to be particularly necessary in Cleveland as we have had an unusual problem in this respect.

"Safe Use of Electrical Equipment," by Jack North, President, Electrical League of Cleveland.

"Eye Conservation" by Mr. M. M. Bowman, Regional Safety Consultant, National Committee for the Conservation of Manpower in War Industries, Division of Labor Standards, U. S. Department of Labor.

"Falls—the Greatest Home Hazard," by

Director Frank D. Celebrezze, Department of Public Safety, City of Cleveland.

"Fire Prevention in the Home," by Captain W. T. Fergus, in charge of Public Relations, Cleveland Fire Department.

"Burns, Shock, Infections, and Asphyxiation—Prevention and Treatment," by Dr. A. J. Pearse, Health Commissioner, Cuyahoga County.

"The Homemaker and the Law," by Mr. Harold H. Gorman, Vice-President of the Greater Cleveland Safety Council and General Counsel of the Ohio State Safety Council.

"Poisons, Firearms, and Other Causes of Home Accidents," by Captain Arthur Roth, Juvenile Bureau, Cleveland Police Department.

"Review of the Course."

As I am also Vice President of the Cleveland Board of Education we have had an advantage that others may not have had. This made the giving of a course in the Cleveland schools possible, and it gave us the use of the Board of Education's own radio station, WBOE.

Judge Skeel opened the course with a speech that was actually broadcast to 3000 people in 76 public schools. Afterwards the speech was transcribed. Each member of the panel had his or her speech transcribed so that it was possible in one instance for me to attend the start of the broadcast at the station of my own speech and to hear the finish of it in the classroom. It was extremely valuable and interesting to get firsthand reactions.

The course was given in ten sections. The radio program was given three times a

week so that those who could not come on one day might be able to come another. Anyone who attended eight or more sessions got a certificate.

Again we were fortunate in having my connections with the school board which made it possible to get the cooperation of the teachers who conducted the meetings in each school. The homemaker listened to

the broadcast in the schoolroom and afterwards a discussion was held led by the teacher.

In the future we are going to have uniforms and the course is to be copyrighted. Any other communities or organizations who care to may then make use of it. This year the course is to be a regular part of the home economics course in Cleveland.

Women's Place in a Community Safety Program

By MRS. MARGARET L. STUTE

Executive Secretary, Fort Worth Safety Council, Fort Worth, Tex.

Women to the right of us—women to the left of us—Women, Women, Women. In every community today, be it large or small, we are asking ourselves certain vital questions. What can I do to hasten the end of the war? What of tomorrow? How shall I use the knowledge and skill I have acquired to the best advantage—for myself and for mankind? Will the safety movement be alert to this storehouse of human motivation, and use the wealth of woman power for safety power?

For a complete picture let us take a glance back into history. Recognize the place of women which has been established and accepted by the world. Recognize some of the outstanding achievements of women. Admit that which has been lacking in our efforts and in the failure of society to fully utilize this wealth of Woman Power.

"In the beginning the earth was without form and void, and darkness was upon the face of the deep. And the spirit of God moved upon the face of the water and God said let there be light and there was light."

This was the first Safety act. But how was it accomplished? It grew from an urgent need, the spirit of willingness, and the power of action.

"And of the tree in the midst of the Garden, the Serpent said: 'For God doth know that in the day that ye shall eat, your eyes shall be opened, and ye shall be as Gods, knowing good and evil.'"

"And when the woman saw the tree was good for food, pleasant to the eye and a tree to be desired to make us wise, she took of the fruit of the tree and did eat and gave also unto her husband. . . . And God said behold the man is become as one of us, to know good and evil."

Here Eve, the first woman spirit, set the example for the centuries to follow. Women point the way, create the pattern.

Since the beginning of time women have

been the true pioneers, the spirit of adventure; while men have carried out the deeds. Review your Bible history. Study the women of that time. Study profane history. Study the women of each age and period. What is the one predominate characteristic of women in each cycle? By being the so called "weaker sex" woman has always been the one to guide and inspire the mighty male. Women have pointed the way, have created the pattern.

The Spartan mother of old placed the testing garments on her son and urged that he take his place among men. She created within him the awareness of life itself by developing a strong and rugged body.

Men sailing the seven seas in ancient times protected themselves by charms and ornaments made of women's hair, teeth and other personal items. That belief, instilled at their mothers' knee, kept them strong and unafraid.

So as we thumb through the pages of history we find women acting as the safe guard. We see them urging forward, yet holding firmly to that thing called life.

I challenge anyone to successfully prove that women were not the first safety directors, the first safety engineers, and the first safety inspectors. I say they were and they still are.

Woman First Safety Director

Who was it that first guided your tottering baby steps? A woman, the safety director. Who was it that placed all the lovely shiny objects that could so easily have caused you pain, out of your reach, when those faltering steps became strong

enough to carry you where ever you wished to go? It was the safety engineer, your mother. Who cleaned the closets, trimmed the wicks of the lamps to make them as safe as possible? It was the first safety inspector, a woman, your mother and mine.

Grant Shay has said, "Safety is the difference between a smile and a tear, that certain something that comes through just before a sure accident happens." What is that "certain something"? Some people have called it intuition. Some have called it wisdom. Some have called it awareness. We as safety people know that it is the ability of one person to listen intelligently and the refusal of another to listen at all.

World War I took women from the kitchen and into the business offices of America and they stayed. World War II has put women in almost every conceivable job. The fond hope expressed by some dreamers, that when the war is closed women will return to the kitchen, is purely wishful thinking. Millions of women have become an integral and permanent part of all the working world—in industry, in public life as well as in the home. This is evidenced by our presence here today.

The world was alarmed when the first women began to leave the home for the industrial plants and we were warned that the health of the nations would suffer. Last year at the Safety Congress the Rt. Honorable Margaret G. Bondfield said, "... A nation" "... battered by war for three years" (speaking of England) "has reason to be proud" "... when medical authorities assure us the nation's health need cause us no alarm." So women did prove they could carry on their share of the industrial burden and that the nation's children need not suffer in health.

In America, in 1940, women laid down their bridge cards, put aside their jewelry, donned overalls and safety hats and proved they could do a job, a big job, very well. Miss and Mrs. America have qualified themselves through intensive training by millions of hours of study. The American woman has acquired a thirst for knowledge and achievement. She has discovered she has skills of which she little dreamed. Then too, it will fall the lot of hundreds of thousands of these women to become the permanent bread winners for the children of their men who sleep in Flanders

Fields, at Bataan, Africa and the far away places of the earth. Other women will be forced to assume the care of aging parents, smaller brothers and sisters as never before. Reluctantly, industrial leaders will part with certain of their women employees, because they have proven to be excellent and dependable workers.

Think for a moment of the thousands of women in our military forces. These women have learned something women of no other age have learned; that they can work and live together and find a comradeship in each other's company, just as men have always done since the beginning of time. Will they give all this up and return to the same life as before the war? John D. Durand, in the December *International Labor Review*, estimates that by 1950 there will be a labor force of 59,000,000 persons with women numbering 16½ to 17 million. Mary Anderson, Director of the Women's Bureau, has said, "We know from our 25 years of study" "... that the vast majority of women workers seek employment from economic need." I think, too, that women's health has greatly improved in the past few generations. Thousands now find themselves at middle life, with their children educated and gone from home; while they, themselves, have the energy, education and desire to go into business with at least an expectancy of 20 to 30 years of active public life. Not all women desire to be mothers and many of them cannot bear children. These women, after the war, will be living in the ultra modern homes of that time. Because of the many new housekeeping aids, much of their time will be unoccupied unless they have some outside activity.

Considers Industry

Let us consider industry first. The type, the number and the severity of accidents among women employees will be discussed in other talks of the Congress. The problems of industry to change machines so they could be operated by women is for another topic. Yet we all know that the cause of accidents is 95 per cent the human element as against 5 per cent mechanical and "acts of God." In industry, then, who would be better prepared to instruct the new woman employee than another woman? This instruction, if given in the right way, is the safe way. And safety is a definite

part of the plan. Who better than a woman can supervise women and girls and understand their physical handicaps? Women are the natural housekeepers. A woman in an industrial safety department will help care for that problem. Many women like and have a knack for minute detail. They have long been the natural teachers of our young. This attribute can be capitalized on by our industries, if they are alert. In industry as supervisor, inspector, assistant safety director, women will find their place and bring credit to their company when given an opportunity in the safety field.

When we survey where our accidents are happening we find a large number in the home itself. Here trained leaders are needed. Through the National Safety Council and other service organizations classes are being taught in home accident prevention. This is a field where trained women can be of great service to humanity at all times.

In many of our larger cities war conditions have placed women in our traffic squads where their excellent work has brought honor to the police department and to their sex.

Few women have mechanical ability. Those who do are, as a rule, very proficient. In teaching a beginner to drive a car, classroom instruction in motor parts, rules, regulations, etc., can be taught more effectively by women. Men, as a rule, are better at actual driving instruction.

All of our engineering, all our enforcement can bear little fruit, if we fail to create an awareness of the value of human life in our offspring. Safety-First is a false slogan for youth. Without adventure, without daring the world would have no prog-

ress. But it is the ability to have adventure and daring, safely, that we as mothers, safety directors, must create within our children. The teacher in the school must be made aware that the pattern of life is woven with the golden thread of the ability to listen.

Let us sum the total of our job.

In industry, we shall be the safety instructor of other women—the safety counselor and guide. Here we will take our place by the side of our men—the helpmeet in building a better and a stronger world.

In public life we shall teach home safety, correct driving and fully inform ourselves in all safe manner of living. We shall point the way, create the pattern.

If we are wise we will be willing to assume our share of the responsibility if we wish to share also in the rewards.

In the Women's Clubs, the PTA's and all the groups where women gather we will plan to spread the gospel of safety.

As professional and business women we will take an active part in the national and local safety movement.

The woman-citizen will observe all safety rules and regulations and urge those about her to do the same.

Some women with leadership ability will find a place in organizing for safety in the community.

They will be in industry—some in teaching—some in organizing—some in training—women have a large place in a community safety program. But wherever they are they will still hold fast to that immortal place of women—as they call the world to listen. They will point the way—they will set the pattern.

Coordinating Various Community Interests

By B. L. CORBETT, M.D.

Executive Secretary, Milwaukee Safety Commission, Milwaukee, Wis.

We started our expanded home safety program in the City of Milwaukee in March of this year. One of the first things we did in order to bring city-wide attention to the movement was to have the Common Council pass a resolution which called upon all residents of the city, and every branch

of municipal government, to cooperate in a home safety movement to combat the heavy toll of life and injury in this field.

The National Safety Council assigned Mr. Bernard Lundy to us for approximately six weeks at the start of the program. With his aid we developed our Home Safety

Board, which is composed of thirty outstanding civic and public agencies.

Spot maps were made showing locations of home fatalities over a period of the past eight years. All of the home fatalities were analyzed as to type and nature. This material was then presented to the Home Safety Board with the request that this matter be taken up with their respective organizations and an educational campaign inaugurated to acquaint their membership with the causes of home accidents—also to focus attention on the locations.

A home safety portfolio was devised, copies of which were distributed to the representative of each organization. The portfolio contained a large assortment of safety material and members of the Board were instructed that they could obtain same in quantities so that their respective organizations could see to its distribution where it would do the most good.

Each of the thirty representatives on the Home Safety Board was given a specific territory to cover, after being told of its particular problem, and each was urged to work this out in whatever manner best suited his organization.

Various women's organizations are represented on the Home Safety Board and their cooperation has been wholehearted. In fact we have learned that once you get the women started on a project, it's pretty tough to stop them! They do a splendid job. . . . This doesn't mean that the men do not do an equally fine job.

Labor Cooperation

We were indeed surprised at the cooperation we received from the Unions, particularly the A.F. of L. and the C.I.O. Let me recommend to you not to overlook these unions in any home safety project you undertake in your community.

To show you the type of cooperation we received, I have a full-page ad which appeared in our daily papers. This advertisement was placed through our local transit company and, at current advertising rates, cost approximately \$4,000. Naturally it cost the Home Safety Board nothing, but it carried our message into practically every home in Milwaukee. Other firms will place similar ads in the press later in the year, calling attention to other home hazards.

The Veterans of Foreign Wars and the

American Legion, and their auxiliaries, have been most cooperative. And, of course, the City Health Department through its visiting nurses is a splendid medium for promoting home safety. So also are the other social agencies. Our public health nurses alone average a thousand home calls per day.

Another activity which the Home Safety Board has sponsored, and which we believe will be far-reaching, is the Accident Prevention course of the American Red Cross. All 8th grade pupils in the parochial schools of Milwaukee during the 1944-45 term will receive the standard home accident prevention course of the American Red Cross. This is a requisite to graduation. This means that several hundred boys and girls will be fully qualified home safety instructors when they have completed the 8th grade. We are watching this course very closely and hope it will be extended to the public schools at an early date.

Distributed Leaflet

The leaflet CONGRATULATIONS, which calls attention to infant safety, is being distributed to every new mother in Milwaukee. This comes directly from the office of the Safety Commission with a congratulatory letter attached.

We carried on a very successful radio campaign during the height of the canning season. This was sponsored by one of the agencies represented on our Home Safety Board, namely, the Home Economics in Business Group, who were themselves, amazed at the success of their venture. Home canning accidents in Milwaukee this year took a considerable drop and we feel that a large share of this improvement is due to the educational program carried on by the Home Safety Board.

We in Milwaukee are proud of the work of our newly formed Home Safety Board, as this is one of the first years in which home fatalities (up to October 1st) have shown a decrease. We believe this is particularly significant in view of home conditions at the present time. Our record is thus—

First 9 months of 1943—84 Home Fatalities
First 9 months of 1944—73 Home Fatalities

We have found in our home safety activities so far in Milwaukee that the matter

of budget is negligible. In any message to the entire community, you need cooperation. Let me emphasize that: COOPERATION! You must enlist the help of every agency in your community and you must

see to it that each agency obtains the proper materials and is given some idea of the methods to pursue in order to effectively fight the biggest accident problem of our age—the home injuries and fatalities.

THURSDAY MORNING SESSION

October 5, 1944

Presiding: KATHERINE FISHER, Dir., Good Housekeeping Institute, New York City.

Hazard House or Happy Home?

Home Design and Arrangement

By KENNETH SARGENT

Associate Professor of Architecture, Syracuse University, Syracuse, N. Y.

To the architect, home design and arrangement is the fusion of utility, aesthetics, safety and physical features of site into what we call plan. To discuss the subject from each of these basic premises would require far more time than allotted. Each of these particular phases perhaps might be dull to certain individuals. As it is our purpose to become more informed concerning home safety, let us consider home design and arrangement as it is specifically influenced by safety requirements, remembering that utility, site, and aesthetics will always modify this subject.

With the group attending such a meeting as this, it would seem somewhat needless to point out the necessity of "Safety in Design" of the modern home. However, it would seem desirable that two problems be accepted and considered, namely: first, making new homes and housing construction safe, and second, making existing housing safer.

The latter problem seems in itself worthy of great consideration, since approximately thirty-seven million units of housing exist in the United States, a large percentage of which will continue to be used. It has been estimated that about eight million units of new housing will be required in the next ten years. With this ratio of existing dwellings to anticipated new homes in mind, it would seem that most of the causes of accidental death and injury exist in homes now in use, while the new construction

could not be the controlling factor in the reduction of the home accident rate.

However, for two reasons which I now enumerate, I am focusing my discussion on new housing. First, the faults of new housing are similar to those of existing housing. The problem of correcting these faults in both new and existing houses seems somewhat similar.

Second, even though the elimination of hazards in these new homes would not greatly change the graphic picture of the home accident rate, are we to allow the careless construction of some eight million units of housing and thus add to the already enormous problem of home hazards now causing yearly more deaths than have been inflicted yearly by our national enemies?

The quality of the design, the arrangement, and the safety of housing to be constructed after this war is definitely a local problem, as I believe it properly should be.

To propose a national building code would be folly: yes, to suggest a state code which would eliminate and stop the construction of hazardous homes would also prove most impractical. The success of a building code depends entirely upon its intelligent enforcement by those skilled in the construction industry. Such skilled enforcement officers are not available in the rural areas and in the villages which surround our large cities. I have been in personal contact with such building inspectors in the smaller communities, who, even

though they were most able in their respective field such as carpentry or masonry, as builders, had little knowledge of electrical, sanitary, or heating equipment and installations. With the expected complication of equipment demanded in the house of tomorrow, it is self-evident that the enforcement of any such building code is impossible.

Assuming, then, that the quality of housing is a local problem, upon whom will the responsibility of providing new safe housing fall? No one group can be held responsible because of the nature and ramification of the building industry as organized in this country. The responsibility of safe design and arrangement of housing must, therefore, be placed upon the following groups:

First, manufacturers who prefabricate most of the material and equipment which is used in the construction of housing.

Second, architects or designers who plan and design the structures and dictate the use of these materials.

Third, the builder who actually assembles the materials according to the design and plan, and

Last, but not least, the banker, the insurance company, or any other mortgagee who may finance the construction.

Fixes Responsibility

The fact that the responsibility lies with each of these groups can be demonstrated. It is certain that the architect cannot be held responsible for the hazards of falls in the bathtub if the manufacturers do not provide him with tubs that have flat bottoms, glazes which are not slippery, and suitable unbreakable grab bars for the person taking a shower. In these cases, the manufacturer would be responsible for the marketing of hazardous materials, and may I add that the catalogues have been filled with such equipment. It would be to the financial advantage of these manufacturers if they designed safe materials and equipment, and so advertised, as the various campaigns by such agencies as the National Safety Council and the many state and local safety councils are fast creating a demand for safe equipment and homes.

Likewise, if the architect or designer places a prefabricated stairway too close

to the door so as to become a hazard, it is certainly not the manufacturer's fault. Similarly, if the builder places the smoke-pipe of the heating unit too close to the floor framing without protection to this wood member, he alone is responsible for the resulting fire which annually destroys a vast amount of life and property. This illustration is typical of the causes of fire about which no one save the fire insurance companies expresses very much concern.

I must add to the group of those responsible, the banker and mortgagee, for who else is more responsible for the limiting of budgets of housing than this group? The extent of the budget, unfortunately, often controls the freedom of hazard of the housing. For instance, there is available today a very fine prefabricated window which also offers the safety features of inside application of storm sash and screen. Both sides of the glass of this sash may be safely washed from the interior of the house. Unfortunately, this window costs more than the common hazardous vertical sliding sash known to the trade as the double hung window. This latter unsafe window offers none of the features above mentioned, but is the cheaper. The use of the cheaper window has been almost universal in this country. The housing built on too limited a budget cannot afford such safety features of design.

Definitely, hazard-free housing depends upon budget. Allow me to paraphrase the letterhead slogan of the New York State Department of Health, "Public Health is Purchasable. Within natural limitations, any community can determine its Own Death Rate." I would restate similarly "Freedom from Home Hazards is purchasable. Any community can determine its own Home Accident Rate."

Again I wish to demonstrate the responsibility of the bankers and mortgagees in liberating the future householders from the home accident hazard. If this group would formulate certain minimum requirements similar to the minimum Construction Standards of the F.H.A., adherence to which would be required of all structures financed, they could by such action, largely eliminate all the more common hazards found in new housing, for little new housing is constructed on a cash basis. It might be financially advantageous to this group to eliminate haz-

ards, for in my opinion, a dead mortgagor is definitely a poor risk.

I have referred constantly to details of hazard-free design and arrangement of housing. To design for safety, all possible hazards which might be the direct or indirect cause of an accident should be eliminated. To play upon that familiar word of today "FREEDOM" as four times repeated in the Atlantic Charter, twisted to suit my purpose—we should so construct these new homes that we would insure for our homes: Freedom from hazards causing falls, Freedom from hazards which cause burns, Freedom from electrical hazards and Freedom from poison gas and mechanical injuries.

The numerous details that require the designer's attention in order to insure this Freedom from Accident hazard are so numerous that it would be impossible to discuss them intelligently in a short time. In order to illustrate a typical hazard from each of these classes of accident causes, allow me to describe an example of each.

Freedom from falls is a major problem of all home hazards. True, that homes planned without a second floor offer many advantages to the homemaker, since such houses eliminate windows above the ground, stairs, and resulting fatigue caused by the additional effort required to maintain two floors. To plan all new housing on one floor only would not entirely eliminate the causes of falls because of the many other causes, such as slippery floor finishes, maintenance of exterior approach, house arrangement, etc. Again the budget offers an obstacle, since the single floor house will always cost more per room because of the added roof area and foundation. In the northern states, I would point out another barrier to elimination of stairs, namely, traditional living. Up to the present time, most prospective home owners demand a cellar because they have not been educated to the benefits of the cellarless house now possible because of modern improvements in heating equipment.

Stair Hazards

Since stairs are demanded in most houses, what are typical hazards of stairs? The lack of hand rails are a common defect. Many builders still believe that stairs enclosed between partitions need no hand rails. It

seems common practice to omit rails on cellar stairs. Too small a space for stairs also frequently demands the introduction of winders to secure the proper number of steps for the vertical distance traversed from floor to floor. Naturally, the danger of this device is the unequal width of treads. Elimination of details such as this and the construction of adequate rails would safeguard most stairs. These simple common defects thus illustrated are by no means the only stair hazards.

To illustrate freedom from burns, I present these common errors of design and arrangement. The kitchen planned by the unskilled designer, who, in order to place the necessary appliances in the space allotted, locates the kitchen range near the window. The curtains which every homemaker demands are frequently the cause of fire when blown into the open gas flames.

Or again, the improperly planned home or house constructed with a limited budget is so arranged that the cellar stairs are not cut off from the furnace room. The fire that so often starts in this area is immediately spread to the only exit available from the second floor, since the usual practice is to stack the basement stair below the stair to the upper floor. You open your morning paper to see that John Jones' children were burned to death because a fire blocked the only means of escape.

Freedom from electric hazard is very closely related to other accidental causes but its identity is so marked that it merits individual attention.

The equipment used in past years often invited accident. The very device used to safeguard your appliances and your personal safety, frequently was the indirect cause of a fire. When the last fuse was blown, how many of you have inserted a penny in place of the fuse in the fuse box? Mr. Gunn illustrated this hazard yesterday. You did not think that the very cause of the fuse blowing was overheating of the circuit, which you permitted to continue and which might have resulted in a fire in the system. He did not tell you how this hazard was eliminated in modern construction.

Perhaps you have not been guilty of this infraction of safety but have you placed a 30 ampere fuse in place of the 15 ampere fuse which you removed? This allowed the

overheating of some appliance which perhaps ultimately will cause a breakdown of the insulation and ultimately fire. New equipment such as the automatic circuit breaker, an improvement of the fuse box, eliminates these hazards, as it eliminates the personal element in its operation. I might add that this safety device does not affect the budget greatly.

My final classification of housing hazards is that of freedom from the hazard of poison gas and mechanical injuries, perhaps a rather miscellaneous classification. During the heating season, your daily paper regularly shows the toll of life taken by furnace gas. The usual furnace blower installed by the householder to burn small sized coal and thus reduce his fuel budget, is a source of fatality. It is true, that with care and caution, this equipment may be reasonably safe, but my experience leads me to believe that this means of forcing combustion is frequently the cause of fatal accidents. Coal, when improperly burned, is a common source of carbon-monoxide gas. Modern stokers are safe, in that this carbon monoxide from the coal is burned as it passes through the fire since the coal is properly fed into the fire from below, a system not now possible with hand stoking.

If the designer fails to study the circulation of the house, the arrangement may result in considerable traffic through such rooms as the living room. These arrangements may influence furniture placement that involve safety. This hazard may be further increased if light control is not installed to allow advance lighting of your passage. This is especially true if your homemaker is what I term a "furniture mover" or perhaps you never have stum-

bled in the dark over the coffee table that wasn't there this morning.

From the examples cited, it is evident that planning, arrangement, and design of the safe home is by no means simple and lacking in complications. The common illustrations selected demonstrate that home safety is dependent upon the collaboration, ability, and training of all involved in the construction of housing, the architect or designer, the builder, the manufacturer, and the financier. As I have demonstrated the importance of each group, I have also attempted to show a few examples of hazard through poor design and arrangement.

The building code will never insure the four Freedoms from Hazard in all new housing. What then is the means of elimination of accidents from these new homes? I believe that educational programs should be fostered and continued among these groups. The program of teaching those whose responsibility it is to provide new housing, will not only result in safer new homes but will also improve existing dwellings which are subject to maintenance and improvement by these same groups in the building industry.

Lastly, I emphasize the desirability of enlisting every organization in a program to inform the householder and tomorrow's homemaker of these built-in hazards and inferior planning so that they will recognize the most common hazards incorporated in their existing homes, and so that they would avoid the purchase of the unsafe, poorly planned and "Jerry-built" home, and so that they would not allow unsafe details to be incorporated in the home being planned for them. Safety in the home cannot be and should not be a matter of legislation.

Let the Seller Beware!

By H. D. VALENTINE

Sales Promotion Mgr., The Peoples Gas Light and Coke Company, Chicago

I believe we are in agreement that rigid safety measures and rules of conduct to preserve safety, are a resultant of modern technological civilization. Primitive man did not need to worry about his personal safety beyond an alertness to attack by wild animals, enemy forces or natural acts of God.

With modern invention however, living has become more complex until at the present time, we are surrounded with mechanical gadgets that inherently carry the possibility of hazards to life, limb, or property. That this is true is evidenced by the need for and the splendid accomplishments of this great institution, the National Safety Council.

With the advent of the automobile, the relatively high speed obtainable coupled with very impersonal mechanical linkages, produced, and continues to produce, an alarming number of accidents. Fortunately there is a more comforting side to this picture since from the consciousness of possible danger from the use of the automobile have come better automobiles, better roads and more stringent regulations as to who may drive, and how, and where.

Similar conditions obtain in most mechanical equipment that people use in and about their homes. It is this appreciation of hidden dangers that spurs engineers, technicians and legislators to investigate means whereby these hazards can be eliminated or minimized and thereby help to promote the general safety.

In this category of mechanical equipment can be grouped domestic gas appliances—the gas range, the gas automatic water heater, the gas refrigerator, and the gas heating or winter air-conditioning system.

We need spend only a moment in covering the first three of these since continued research over many years has developed a highly recognized element of efficiency and safety which undoubtedly has contributed to their increasing popularity. The development of burners that prevent the possibility of any carbon monoxide in the flue products and the invention of positive burner ignition and thermostatic controls are samples of the features which have added to the

safety and general usefulness of these appliances.

A more recent and more inclusive approach to the subject of safety in modern home appliances can be illustrated in the more or less recent complete acceptance of gas for home heating and winter air conditioning.

The popularity of gas for home heating dates from 1931 when natural gas was brought to the Chicago area. This coupled with an effective promotion of conversion burners which could be installed in existing boilers and furnaces, provided the impetus towards a mass acceptance of gas for heating homes. In recent years, as the conversion burner proved the value of gas for heating, gas designed boilers and furnaces have become more popular.

This increasing popular demand for gas home heating equipment introduced a series of conditions, which if not properly controlled could have influenced, adversely, the high standards of efficiency and safety of heating installations which was, and continues to be, the hallmark of Peoples Gas service.

These conditions are of two types, the first engineering in character and the second related to business and public relations. Let us review the engineering phase first.

Gas conversion burners and gas burning central heating boilers and furnaces are in themselves unit mechanisms designed and constructed to include maximum operating efficiencies and the highest factors of safety.

However, in the case of conversion burners, installations generally are made in older boilers and furnaces designed for solid fuel. These may be faulty in one respect or another. Consequently the assembly of burner and furnace unless thoroughly examined and supervised, would be as inefficient and hazardous as the least perfect part—which in this case would be the old boiler or furnace.

Again a gas designed boiler and furnace or an ideal conversion burner installation cannot provide heating service until it is

tied to a heat distributing system which includes piping and radiation for steam or hot water or duct systems and register openings in warm air systems. Here again if the heat distribution systems were faulty in one way or another the complete installation could not be expected to give fully satisfactory results.

Installation a Specific Problem

Consequently every installation must be regarded as a specific engineering problem. Each part of the system must be as near perfect as possible so as to insure maximum customer service.

It is understandable that in the promotional period of home heating with gas it was possible for Peoples Gas to carefully supervise each job from beginning to end. First a heat loss was calculated together with a careful engineering survey of all conditions which could in one way or another affect the final results obtained. In addition ideas for obtaining additional economy and safety were suggested—insulation, changes in the heating system, chimney linings, etc., etc.

All such engineering data together with an estimate of the normal heating season cost and recommended equipment comprised the "proposal." After the sale was made Peoples Gas supervised the installation and checked its operation. Each installation was "custom built."

However, as acceptance grew and the market for gas home heating expanded the second, the business and public relations phase, became imminent.

Certainly Peoples Gas, even had they wished to, could no longer, as a single organization, square each house heating equipment sale and installation.

At the same time, however, Peoples Gas believes that when a certain acceptance of a use for its product has been reached through Company promotion, any expansion should flow into a free market through the normal channels of trade. This means as the demand for gas home heating grew, more and more of the business fell to the heating contractor.

Such a change in distribution actually occurred. In 1935 most of the sales of home heating equipment were made by Peoples Gas. In 1944 over 90 per cent of the

business was on the books of heating contractors.

Such cooperative effort, commendable as it is, could present a problem which could depreciate the already acquired high acceptance of gas for home heating.

It must be remembered that when a free market grows in response to demand, then competition enters. Under such a condition a customer is likely to shop for price. This price consciousness would naturally be reflected in the business programs of manufacturers and contractors. It is evident, however, where price is dominant, quality may easily deteriorate. If this occurs in the purchase and installation of gas home heating equipment, customers could never be certain that they would enjoy a heating service of maximum efficiency and safety.

In order to retard the growth of such a condition, Peoples Gas announced its Certified Quality program in January 1940.

What the Certified Quality program is and how it functions can be most easily explained in a series of questions and answers.

1. What is the meaning of "Certified Quality?"

(a) Certified Quality aims to protect the ultimate user of gas as a fuel by giving recognition to such factors of equipment selection and installation practice which make gas service for heating satisfactory and economical.

(b) It means that boilers and furnaces which are made to use gas as a fuel have certain quality features of construction and performance which will give a user greater assurance of satisfactory and economical operation. These quality features are over and above those now required under minimum national standards and apply to the serviceability, durability, added safety and efficiency and capacity factors of the equipment.

(c) It means that the selection of equipment, design and construction of the heating system and the installation of the unit will take into consideration such installation factors which also give greater assurance of satisfactory and economical operation and which are, in many instances, above the minimum standards now recognized by

architects, contractors' associations and national organizations.

2. Whom does the Certified Quality plan benefit?

The benefits that can be derived from this plan will primarily accrue to the purchaser of gas heating equipment because it is designed to protect his interests. Manufacturers and dealers who follow this program will also indirectly benefit through continued acceptance of their products and workmanship.

3. What are the steps that a customer should take to obtain Certified Quality heating?

The Peoples Gas Light and Coke Company has provided a certification form which can be offered by the contractor or demanded by the customer. This form serves in a sense as a guarantee bond to the customer that the contractor will furnish and install equipment that meets Certified Quality standards.

4. What are the steps that a contractor should take to obtain Certified Quality equipment?

The Peoples Gas Light and Coke Company has provided a certification form which can be offered by the manufacturer or demanded by the contractor. This form serves in a sense as a guarantee bond to the contractor that the manufacturer will furnish equipment that meets Certified Quality standards.

5. Who has Certified Quality equipment?

Any manufacturer who reasonably complies with the various factors listed in "Information on Certified Quality Requirements for Gas Fired Winter Air Conditioning Equipment Installations," a pamphlet which has to do with the selection of the equipment, can be assumed to have Certified Quality equipment.

6. Who makes Certified Quality installations?

Any contractor who agrees to sell Certified Quality equipment, as mentioned

before and to reasonably comply with the installation considerations covered in a pamphlet entitled "Information on Certified Quality Requirements for Gas Fired Winter Air Conditioning Equipment Installations" can be considered as providing Certified Quality installation.

7. Will the Peoples Gas Light and Coke Company verify a contractor's proposal to see if it meets Certified Quality standards?

No. Peoples Gas Light and Coke Company has published the standards for Certified Quality and any proposal which complies with those standards constitutes Certified Quality.

8. Will the Peoples Gas Light and Coke Company check the completed installations to see if it meets Certified Quality standards?

Yes. Field engineers make an inspection of each installation and, in addition to determining necessary information which makes it possible to approve or disapprove of it as satisfactory gas heating installation, will also obtain the facts which enable the Company to interpret whether or not such an installation can be classified as meeting Certified Quality standards.

9. How does The Peoples Gas Light and Coke Company enforce this Certified Quality program?

It is important to bear in mind that The Peoples Gas Light and Coke Company does not enter into any dictatorial attitude nor does it propose to act in any way as a police power in the enforcement of these standards. Our purpose is primarily to put into the hands of the manufacturer, architect, builder, contractor and customer the essential information which makes it possible for them to sell or buy in terms of Certified Quality.

The Certified Quality program has been most successful in its so far short life. It has added considerably to the consumer's knowledge of home heating, has supplied manufacturers of equipment and heating contractors with an instrument to enhance

their prestige, and Peoples Gas feels reassured that in the sale of gas for home heating their customers will continue to enjoy the best of service.

It should be remembered that the plan in no way suppresses progressive competition. It identifies no private name, brand, or system. It prescribes fundamental engineering and operating minima all keyed to the use-needs and expectations of the ultimate customer.

Its greatest value, however, lies in its

schematic adaptability. Such a plan can have usefulness in any industry that is more or less a product monopoly and consequently has a tendency towards strong internal competition. It tends to increase the total market without danger to any vendor, except he who attempts to secure business at the expense of service. If properly operated, the slogan, "Let the Buyer Beware" will soon be amended to "Let the Seller Beware," truly a more progressive approach to successful postwar marketing.

Planning for Present and Future Electrical Needs

By FRANCES ARMIN

Director, Consumer Education, National Adequate Wiring Bureau, New York City

There is an old saying that "hind-sight is always better than foresight." Unfortunately, never was this more true than when it is applied to home planning! If the home-builders of 15 or 20 years ago could have foreseen the increasing dependence of every family upon electricity, I am sure we would not be faced with the unfortunate conditions that are present today in thousands of homes.

Many of us come face to face with annoying evidence of these conditions, daily, in our own homes. Homes that are serene and safe, by day, often become fearsome caverns by night where unseen dangers lurk. If we safely negotiate the "do-man's-land" between the door and the light switch, we congratulate ourselves at having reached our goal without tripping over the extension cord entanglements!

But inadequate lighting and inadequate numbers of convenience outlets are only part of the story. We would probably all be shocked if we could know the numbers of 25 and 30 ampere fuses being used on wiring circuits that are intended to carry only 15 amperes of electricity. The entire situation is typified in a survey made just before the war, in Wichita, Kansas, by a graduate home economics student from Syracuse University. These results were recently published in *Electric Light and Power* magazine. Here is what this student found:

Table I

Size of Fuses in Use in 59 Homes Using No. 14 Wire, in Wichita, Kansas, 1941

Per Cent of Homes	Fuse Sizes in Amperes
33.8	15
15.3	20
15.3	25
35.6	30

Table II

Number of Circuits in Homes in Wichita, Kansas, 1941

Number of Circuits	61 Older Homes	50 Newer Homes
	Per Cent	Per Cent
1	42.6	—
2	41.0	56.0
3	9.8	22.0
4	5.0	14.0
5 or more	1.6	8.0

Perhaps this looks to be a gloomy picture. I assure you it is not an exaggerated one. But remember, I have been indulging in "hind-sight." Merely to eliminate from the homes of tomorrow the possibility of such conditions as those I have mentioned would be a great public service. It so happens, however, that adequate electrical planning has very interesting advantages today for those who plan and build homes for sale,

in addition to the improvements it makes in the home's safety factor.

There are several reasons for this:

1. The public has learned its "ABC's" of home wiring. During the war, consumer groups everywhere, in the course of learning how to get along without the power company's service men, have learned also that overloaded circuits cause fires to blow. They have learned to count the number of fuses or circuit breakers in the box near the meter, and thereby find out how many circuits there are in the home. And in many cases they have learned that there are not enough, to permit convenient, safe, and efficient use of electric service. To these people, the new home with enough circuits will have extra appeal.

2. The home buying public has recently been exposed to vast amounts of publicity about the "glamour-gadgets" with which every postwar home will be fully equipped. Much of this publicity has been unfortunate, and steps are being taken by responsible members of the building industry, and by the better manufacturers, to correct false impressions. But the fact still remains that much emphasis is being given to the automatic features of tomorrow's homes.

Regardless of whether the equipment itself is immediately available or not, when home construction is resumed, the home which has provision for that equipment in its electrical system will be much more acceptable to the buyer and to the financing agencies than the one which does not have such provision.

All over the country today groups of people are gathering regularly under the auspices of civic and business organizations, for courses which will help them in wise planning and selection of the homes which they will build or buy tomorrow. All such courses include sessions on "Planning for Present and Future Electrical Needs." A large number are using a series of charts, developed for the purpose by the National Adequate Wiring Bureau, and based on the National Minimum Standards of Residential Wiring Adequacy. I should like to run through several of them, quickly, to give you an idea of the contributions which adequately planned electrical facilities make toward a home that will be safe—and a home that will sell.

Every day, nearly all the important func-

tions of a home depend wholly or partially upon electricity. We depend upon it—

FOR HEATING, VENTILATING AND AIR CONDITIONING

Room Coolers
Air Filter
Automatic Heat Control
Complete Air Conditioning
Humidifiers
Portable Fans
Kitchen Ventilator
Attic Fan
Space Heater

FOR LIGHTING— FOR BEAUTY AND DUTY

Decorative Lamps
Nite Lighting
Window Valance Lighting
Panel Lighting
Outdoor Lighting
General Lighting
Lighted Work Spaces
Night Lights for Safety
Christmas and Garden Lighting

FOR MEAL PREPARATION AND FOOD STORAGE

Electric Cooking
Refrigeration
Mixing and Beating
Toasting
Waffle-Making
Coffee-Making
Roaster-Meals
Home Freezing

FOR ENTERTAINING AND HOSPITALITY

Lighted House Number
Door Chimes
Table Appliances
Radio-Phonograph
Entrance Lighting
Bridge Lamps
Motion Picture Projector

FOR HOUSECLEANING, LAUNDRY AND SANITATION

Vacuum Cleaners
Floor Polishes
Washer
Drier

Ironer
Hand Iron
Dishwasher Sink
Garbage Disposal

FOR EDUCATION, RECREATION HOBBIES

Study and Reading Lamps
Radio
Television
Photographic Equipment
Electric Tools
Sewing Machine
Electric Toys

FOR HEALTH PROTECTION AND GOOD GROOMING

Sunlamps
Germinating Lamps
Ultra-Violet Lamps
Humid Pads
Vibrators
Electric Massagers
Shavers
Electric Blankets

FOR UTILITY AND PROTECTION

Pump
Electric Water Heating
Extension Telephones
Signalling Bells
Fire Alarms
Door Openers
Lawn Mowers
Insect Exterminators

Is there any doubt that we should plan home electric operating facilities that will be adequate to the family's needs of today and tomorrow?

Most of us consider electric wiring a very mysterious technical matter upon which we cannot check unless we are trained engineers; but there are certain fundamentals that will help us to plan Adequate Wiring systems for tomorrow's homes. Here are the ABC's of Adequate Wiring—

- A An adequate entrance for electric service
- B An adequate number of circuits, of large-enough wire
- C Adequate locations for use and control of electric service

Now let us see what constitutes each of these three elements.

Most of us think of a "service entrance" as a place where packages are delivered. Sometimes it is the back door; sometimes the back porch. The "Electrical Service Entrance" is the place through which electric service is delivered. If it does not have great enough capacity, we can bring in only a limited amount of electricity.

If you see to it, however, that your home's electrical service entrance is adequate—you will be able to operate any piece of electric home equipment you want—today or tomorrow.

The capacity of the electrical service entrance varies with the size of the home. For the smallest home, three wires of No. 6 gauge will provide sufficient capacity for most needs (3-wire, 60 ampere). If you have a larger home, a service entrance of greater capacity would naturally become necessary (No. 4 or No. 2 gauge wire).

An electrical service entrance of at least three No. 6 wires will be your home's symbol that it is electrically modern, and it will enhance its value as long as the house stands.

Annoyances such as fuse-blowing and the hazards of overloaded wiring can be shut out forever from the home which has enough circuits of large-enough wire. There should be four kinds of circuits.

(1) Circuits for Lighting, Radio and Small Appliances.

There should be at least one of these general purpose circuits for every 500 square feet of floor area. These are the wires that carry electricity to lighting fixtures and to convenience outlets which serve portable lamps, radios, vacuum cleaners, and other small "plug-in" appliances that are used once in a while. These circuits are generally No. 14 gauge wire. If, however, such a circuit must travel more than 35 feet or so from the fuse or circuit breaker, it should be No. 12 gauge wire. This will permit the electricity to reach its destination without losing part of its power along the way.

(2) Circuits for Kitchen, Laundry and Dining Table Appliances.

In order to do their best work, and to prevent frequent fuse blowing or opening of circuit breakers, appliances

such as roasters, refrigerators, waffle irons, toasters, irons and washing machines, must have circuits of their own, which are not used for lights.

To provide for this equipment, every home should have one or more circuits of No. 12 gauge wire which carries electricity *only to convenience outlets* in the kitchen, pantry and dining spaces. There should be *another* such circuit serving laundry equipment.

These circuits will be more important than ever in the years to come, as new and improved electrical devices become available for our homes. For example, we would connect a home food freezer to such a circuit.

(3) *Circuits for Built-in and Individual Equipment.*

There are certain pieces of electric equipment which must have individual circuits, to which no other equipment or lighting is connected. A home that is well planned electrically will have one special circuit, probably of three No. 6 gauge wires, which serves a special receptacle outlet in the kitchen at the range location. An electric water heater, a built-in space heater (perhaps, in the bathroom) or other built-in heating devices each requires a circuit of its own, using No. 10 gauge wire. The automatic control for the house heating system would also have its own circuit, probably of No. 12 gauge wire.

(4) *For Future Additions to Home Electrical Equipment.*

You may feel some of the electrical operations we have mentioned might not be possible immediately in the home you are planning.

But remember what has happened to home wiring systems in the past ten years!

It is considered good practice to make sure that the main fuse box or circuit breaker panel contains at least two spare terminals for future circuits. If this is done, future additions to home electrical equipment will not make it necessary to install a new distribution panel.

In most homes (and in *all new homes*) there is one circuit for each fuse or circuit breaker. The rating on the fuse or circuit breaker should tell the capacity of

the circuit. It should be 15 amperes for the general purpose circuits, and 20 amperes for the kitchen, laundry and dining table appliance circuits. The special circuit, of course, would vary according to the piece of equipment each one served.

Having provided an adequate entrance for electric service and enough circuits of large-enough wire to carry electricity through the home at full power, the next step is to provide for safe and convenient use and control of electric service. Remember that location is just as important as *quantity*, in planning lights, outlets and switches.

Outside of House

First, let us go outside. Here we see one of the first requirements for a well planned and well lighted home—a light at the entrance. We are told that a very high percentage of home accidents occur on the front steps. How many of them could have been avoided if the entrance had been well lighted—to say nothing of the cheerful glow of hospitality a lighted entrance provides for guests!

There are many uses for electric service out-of-doors as well as inside. Outdoor weatherproof outlets, located on the outside of the house will provide for such things as outdoor dining, outdoor lighting, the electric lawn mower—and even the electric insect killer.

Hall and Stairway

Another safety measure is the inclusion of lights at the head and foot of every stairway, with switches to control them from above and below. Notice on the chart the little switch symbols marked "3". This means that they are so arranged that you can turn downstairs lights on and off from above, and upstairs lights on and off from below.

A switch controls the outdoor entrance light from inside the hall, and there should be another to control the same light from the garage.

Closets need light, too, for convenience, as well as to help us avoid peeling down unseen boxes on our heads!

We often forget all about the telephone until after we move into the house. But why not think about it in time to provide concealed runways for the telephone wire,

and designate the most logical place for its location? A light and a special outlet near the 'phone, will help to save time in emergencies.

Extension telephones can be provided for in a similar manner; so can communication systems within the house or between the house and the garage or other outside buildings. On farms, particularly, such installations are helpful—and safe.

Living Room

Here, in the living room where family and friends gather, it is most essential to provide adequate outlets, properly located. First let us consider lighting. Ceiling units are generally needed for adequate illumination in a room as large as this one. This unit can be controlled from either entrance. No groping through the dark here! In this house, provision has been made for concealed trough lighting over the windows. The little triangular symbols signify provision for such special uses.

Notice the convenience outlets, including one in the top of the mantle shelf! The homemaker who lives here will be able to re-arrange her furniture at will, without having to worry about connections for her lamps, and never need she resort to 3 or 4 plugs! The rule is: at least one duplex convenience outlet for every twelve feet of wall that is unbroken at the floor line (baseboard), and one such outlet in any wall space which measures three feet or more.

The square symbol, marked "T" on the chart, indicates provision for a special outlet for ground and antenna connections for radio—or television. The adjacent convenience outlet, connected to a general purpose circuit, will provide electric power for its operation. Meanwhile, regular outlets can be used for the radio.

Bedroom and Bath

In the bedroom, too, provision has been made for concealed cove lighting at one window, controlled by a switch at the door.

A central ceiling unit controlled by another switch at the door, provides plenty of light for dressing, and for finding things in the bureau drawers. Convenience outlets, placed according to the 12-foot rule, will assure ease in locating an electric clock, radio, bedside lamps, and the like.

Some day, these same outlets may serve

germicidal lamps to help protect the family's health; or they will make it possible to use a sun lamp, or, perhaps, a little spot heater to help take off the chill on cold mornings.

In the bathroom, lights on either side of the mirror give illumination for shaving, while the outlet is handy for the electric razor. Although the bathroom in the chart is small enough so that adequate illumination can be provided by the mirror lights, it might be well to provide an overhead unit.

It not only gives general light, but also provides for installation of an ultra-violet lamp which will make a sun room of the bath. If switch controlled, it could be used for long or short periods.

Kitchen

And here is the workshop of the home where electric service is constantly needed.

The central ceiling unit which floods the kitchen with light can be controlled from either doorway, providing safe passage by night. Here is a single convenience outlet provided, in advance, for the refrigerator. Do you think it strange that there is an outlet under the window? Remember in the kitchen, we have continuous counter space. This outlet will be located at counter height, to serve the mixer, or any other appliance which is to be used here.

There is a light over the sink controlled by a nearby switch. No danger here of knicked fingers when vegetables are being peeled. So many such little accidents occur simply because we cannot see clearly.

Another of those "special" outlets is provided for the electric sink. We find an outlet for the range, with another outlet in the wall above for an electric clock. Next, we find another duplex convenience outlet. Homemakers all have recipes which say "simmer over slow heat, stirring or beating constantly." But what good is the electric mixer for this purpose, if there is no outlet handy? This same outlet is also convenient for preparing toast and coffee while keeping an eye on the eggs, and when used that way would prevent the tip-overs of scalding coffee which sometimes occur on crowded range-tops.

In the dining space, a ceiling light assures us of a cheerful eating atmosphere, and convenience outlets at table height make it possible to use the waffle iron, coffee-maker,

toaster, and the like, at the table, or on the buffet.

Basement

This is quite an elaborate basement. Most postwar utility rooms will occupy only a fraction of this space. But this serves as an illustration of how to provide for all possible electrical needs in this area.

Note the light at the foot of the stairs, which can be controlled from above and below. I hardly need to stress, for this audience, the essential need for this kind of control.

The central light in the laundry space can also be controlled from two points; as can the light in the recreation room. With control so convenient, there will be far less inclination to forget, and leave basement lights on, when no one is there, and certainly it will help to eliminate nasty falls.

In the heater room, we have, of course, another overhead light, and one in the storage room. In the heater room we find two pieces of equipment which require individual circuits—the one marked "A" is

the automatic furnace control and the one marked "B" is for the water heater.

The laundry section has been planned to make good use of available space. An outlet for the washer is located to the left of the laundry trays, and one for the ironer is at the right. There is a special outlet for the drier, because this is another piece of equipment that requires an individual circuit.

The convenience outlet on the wall opposite the washer will serve a small hotplate, for heating starch, bleaching, dying, and so on. An electric sewing machine could be used in this corner, too, since there is a convenience outlet available.

Convenience outlets for portable lamps and for small cooking appliances make the recreation room a hospitable spot instead of just an unused basement space. And provision is made in the storage closet for a home food-freezing unit.

Planning the home's electrical life is a fascinating game, and one which will pay big dividends in future satisfaction.

Safety Features of Modern Plumbing

By RUSSELL G. CREVISTON

Director, Public Relations, Crane Co., Chicago
Presented by H. A. Bergdahl, of the Crane Company

We can assume that the house of tomorrow will be essentially the house of today with improvements that have a real justification. Certainly anything that contributes to safer construction and to greater safety in mechanical equipment is a real contribution to housing progress, and will find a general acceptance among builders and the public.

Let us check over the household plumbing, therefore, to see where improvements can be made that will contribute to greater safety.

I think we should start with materials, because these, after all, are the basis of all product design and engineering.

In this respect, public preference is a sound criterion. Enamelled cast iron and ceramic materials, because of their eminently satisfactory record of service in the past, will continue to be the preferred ma-

terials for the manufacture of plumbing fixtures in the foreseeable future. As for fixture trim, that is, faucets, valves, drain controls, etc., there is no question that chromium plated brass is the ideal material.

What? No plastic plumbing fixtures, you may ask.

No. I don't think so. Neither, as far as I know, does anyone else in the industry who has given the matter careful study.

Nor are we likely to see aluminum fixtures or glass fixtures in the near future. Manufacturers of aluminum have said that varying water conditions make aluminum unsuitable for use on a large scale in the plumbing industry.

As for plastics, there are, of course, many kinds. At the present time none of them present any outstanding advantages either in cost or in durability over traditional piping materials such as galvanized

iron, wrought iron, cast iron, copper, brass, or lead.

Piping is, of course, the basis of all plumbing. I think we should begin this discussion of greater safety in the house of tomorrow by consideration of the fundamental importance of good piping.

Piping has been termed the veins and arteries of the house. It should be exactly that. Unfortunately, however, for many existing houses the piping is more like capillaries than veins and arteries.

I have reference, of course, to inadequate sizing of the supply piping in many houses, schools, institutions, commercial, and industrial buildings. Much present day piping is woefully inadequate, according to good piping standards.

Excellent research work on the fundamentals of good piping has been done by various agencies in the plumbing industry, notably the Institute of Hydraulic Research at the University of Iowa under the direction of Dean F. M. Dawson. The work at Iowa is sponsored by the National Association of Master Plumbers.

Compares Piping

Piping may be compared to a bridge. Just as a good engineer would not design a bridge without an adequate safety factor, so a good master plumber will not design a plumbing system without an adequate safety factor—but safety costs a little more—and your support is needed to aid the cause of adequate piping for postwar housing.

What are the disadvantages of inadequate piping?

First of all, an inconvenience. Many of you have used faucets that delivered only a dribble of water because fixtures in other parts of the system were in use.

Second, a health hazard. Inadequate piping sizing is one of the causes for vacuum formations in supply lines. A vacuum is dangerous because, under certain conditions, back-siphonage from certain types of fixtures may occur.

Third, potentially injurious. All of you, I suppose, have heard and some of you may have experienced sudden changes in the volume of hot or cold water while taking a shower. Perhaps you unknowingly blamed the shower when actually the fault lies with

the piping behind the walls—pipe sizes so small that the water for either line might be starved by a sudden demand for water somewhere else along the line, usually on the floor below or at adjoining fixtures.

Thus I think you will agree with me when I say that the first step in building greater safety into postwar plumbing is to provide adequate sized piping. This is particularly true because the water demand curve goes up with every advance in living standards.

The demand for water will be greater because we will have more plumbing facilities, showers will be more evident, both the type over a tub and in a separate compartment, and water requirements will be greater because of new equipment such as air conditioning, lawn sprinkling systems, disposal units, and electric dishwashers.

Let us turn now to a detailed consideration of the fixtures. If we begin with the bathroom, we are first of all confronted with the fact that the bathroom, in the past, has been unjustly blamed for too great a percentage of accidents in the home.

Bathroom Safest

As a matter of fact, the records of the National Safety Council justify the statement that the bathroom is the safest room in the house. I hesitate to make this statement, however, lest I seem complacent. This is not the case. I merely wish to place the matter in its proper perspective.

According to an annual report issued by the Kansas State Department of Health, approximately 3 or 4 per cent of the fatal falls that occur in the home take place in the bathroom.

As for non-fatal accidents, we know little about them statistically. It is safe to say that a large number of falls occur in bathrooms which do not get into the headlines or are not serious enough to be referred to hospitals. Slipping in the tub is, of course, unfortunately one of the most common. Others are scalding from uncontrolled and unregulated hot water, electrical shocks from the use of electrical appliances in the bathroom, and cuts on the hands resulting from broken or cracked handles on faucets or valves.

The plumbing industry is fully aware of what the hazards in the bathroom are, and we are doing our utmost to correct those

which come within the scope of our activities. The design of the fixtures naturally is our responsibility. We can not assume responsibility for incorrect or careless use of fixtures.

Postwar plumbing fixtures, like the best of prewar models, will be designed with rounded corners instead of sharp corners to reduce the danger from cuts and bruises in the case of accidental falls in the bathrooms. The rounded corners are more pleasing and thus this trend in design combines aesthetic as well as utilitarian advantages.

The modern tub is low—the trend in bath heights has been downward for years. The present day built-in bath stands about 16 inches from floor to rim as compared with about 22 inches for the tub on legs. The modern bath has a flat bottom and straight sides to provide greater safety. The trend toward seats, either of the integral rim type or end seats, is all to the good because the bather who sits on the rim before attempting to get in, is unlikely to slip.

Besides these factors of design, there are other precautions to which I should like to invite your attention. The plumbing industry believes that every bathroom should be equipped with one or more firmly anchored grab bars or hand rails. We also advocate the use of vacuum grip rubber mats in bath tubs. Unfortunately, this item is a war casualty and is unobtainable at present.

Tubs equipped with a shower—and I believe every tub should be—should have a grab bar long enough to serve the shower bather. There was available before the war an L-shaped bar which was most attractive as well as practical for both the user of the bath and the shower.

Shower cabinet manufacturers before the war had developed a very satisfactory type of non-slip receptor.

Reference has already been made to the importance of piping of adequate size as a safety factor. There are, of course, three ways in which the volume and temperature of water for the bath and shower may be regulated. The simple way is by the conventional two-valve system. When the spout of the tub is equipped with a diverter valve, the flow of water may be switched to the tub or shower. The flow of water is automatically diverted to the tub when the valves are turned off after the shower has

been used. This is a safety feature in that it prevents unexpected showers. The bather should always take the precaution of first adjusting the water temperature by letting the water run into the tub and testing it with his hand or toe before stepping under the shower.

Regulates Water

Another way to regulate the water for a shower either over the tub or in a separate compartment is by use of a mixing valve. This unit offers the advantage of convenience inasmuch as the turn of one handle will produce the proper water temperature.

The utmost in safety is provided by the thermostatically-controlled mixing valve which automatically cuts off the flow of water if a safety temperature is exceeded.

In connection with the question of water temperatures, reference should also be made to the desirability of equipping the main water line with a water mixer or water blender to prevent excessive temperatures. A temperature of 140 degrees for hot water heaters is adequate for general use.

This, of course, brings up the entire question of controls for the safe-guarding of the equipment for heating the domestic hot water. Every water heating unit should be equipped with a pressure and temperature relief valve of approved make. Furthermore, the owner should be instructed how to operate the valve so that he will at intervals of two or three months lift the valve off its seat so as to prevent corrosion of the operating parts of the valve. Unless the valve operates freely there is no assurance, of course, that it will perform its function when most needed.

Porcelain handles are a definite hazard. They should be replaced as soon as metal or satisfactory plastic handles are available. The plumbing industry of the United States has not made porcelain handles for a number of years because we recognize the danger from broken handles. Those handles which were on the market just before the war and which unfortunately were purchased by some owners instead of changing to metal handles, came mostly, I understand, from Japan. Presumably, after the war this source of bathroom hazards will be eliminated.

Attention is called to the importance of firm anchoring of shower curtain rods.

Often a bather who feels himself slipping will grab for the nearest object which is likely to be the curtain or the rod. Rods should be securely fastened with long screws into the studding and not merely into the lath and plaster. House blueprints should specify studding where the curtain rod is to be fastened.

Electrical equipment in the bathroom calls for every precaution. The basic law is: electricity and water do not mix. A shock which might be only unpleasant to a thoroughly dry skin may prove instantly fatal when the hands or feet are wet. Electric heaters, hair dryers, therapy machines, and yes, even electric razors, have all taken their toll in the bathroom.

Probably the most common source of trouble is the foolhardy business of attempting to handle a light chain or switch while part of the body is in water or some of it is wet. You are flirting with suicide when you stand in a tub of water and pull the unforgivable metal chain on a lamp.

What to do about it? How can we make the postwar bathroom safe electrically? Obviously, there are several precautions that should be taken:

All switches should be more than arm's length away from the tub and wash-basin so that the bather can not reach them.

All lights should be controlled by wall switches rather than by metal pull chains.

Only the finest grade extension cords should be used in the bathroom. Excess humidity can convert an inferior cord into a live wire.

The bathroom is the health center of the home. Quite naturally people go to the bathroom when they feel ill. The bathroom, therefore, often is blamed for falls and other accidents which occur because people went there when they probably should have gone to bed.

All of this is by way of introduction to the question: Shall we do away with the lock on the door of the postwar bathroom?

Questions Lock

I am asking this question in all seriousness. Is it necessary in a house occupied by one family to have a lock on the bathroom door? Why not some kind of a signal

system or even a "Do not disturb" sign on the bathroom door? All of which is another reason for making generous provision in the house of the future for a sufficient number of bathrooms to accommodate all the traffic, so that doors will not have to be locked to insure privacy.

If the builder feels that the bathroom must be provided with a lock, he should specify the type that can be unlocked from the outside. There were, before the war, special locks for bathroom doors which could be unlocked from the outside with a small square key provided the lock was properly adjusted when installed. It would help if locks on bathroom doors were above the reach of small children.

In conclusion, let me summarize briefly some of the *do's* and *don't's* for greater safety in the bathroom. I am not now speaking primarily of the postwar bathroom but of the ordinary routine day-to-day precautions:

Safeguard your tub or shower stall with a vacuum grip rubber mat to prevent falls.

Have a substantial grab bar or hand-holder on the wall beside the tub or inside the shower.

Use porcelain rather than metal electric light fixtures to reduce the shock hazard.

If you can't do away with the metal chains on bathroom lights, insert an insulator in each one. Or tie a pull string at the end.

See that no electric switch comes within arm's length of the bath tub or wash basin.

Use only the finest grade extension cords.

Use a fairly rigid soap container.

Never get in the tub while a cake of soap is loose at the bottom.

Never leave a small child in the tub—or even in the bathroom—by himself.

And last but not least, find out how hot the water is before you get into the tub or shower, not after.

Simple precautions, surely. But with them your bathroom will continue to be the safest room in the house.

School and College Sessions

TUESDAY AFTERNOON SESSION

October 3, 1944

Presiding: FRANK E. BAKER, Pres., State Teachers College, Milwaukee, Wis.

Securing Community Support for Safety Education

By WILLARD W. BEATTY

Director of Education, Office of Indian Affairs, U. S. Department of the Interior, Chicago, Ill.

Accidents are such casual occurrences that the average individual seldom identifies himself with danger. In a population of 130,000,000 the 97,500 persons who met death last year from accidental causes actually were spread quite thin. Most of us don't know anybody who was killed or seriously injured. It is therefore a little difficult to dramatize danger of accidents because we don't feel that the dramatization really affects us.

Even when the Army began its training program before the Pearl Harbor attack, one of the most difficult jobs that it had to undertake was that of persuading the men in training that they were engaged in a dangerous business. Finally, in order to save lives at the front, they resorted to the use of "live" ammunition during the training periods. Not until the doughboy heard the swish of bullets above his head as he crawled through realistic battle lines did he finally conclude that to save his own hide he should obey instructions and keep himself close to the ground.

Because war is a destructive business and an army's objectives are achieved only in proportion as representatives of the other side are put out of action, we expect warfare to produce heavy casualties in dead and wounded. Despite the fact that these casualty lists represent men from every state in the union and from hamlets scattered through those states,

we have an intimate feeling of tragedy when we see the lists.

Unpredictable Attitude

During the same period of time that our armies have been in the field civilian casualties in war industries among the men behind the men behind the guns have exceeded those suffered in the field, yet we have no such well organized means of making these tragic losses equally poignant to the community at large. The wasteful and unnecessary deaths and injuries sustained in war have been sufficiently dramatized that the American people by an overwhelming majority have come to the conclusion that war must be abolished. Republican and Democrat, New Dealer and conservative alike, are agreed that steps must be taken to outlaw war. If we are going to stop the more continuous and more ultimately deadly drain on the manpower of the nations, people at large must be equally convinced of the need to take steps which will decrease the hazards of daily life.

Let us not make the mistake of assuming that our present attitude toward army casualties is the common one. As a matter of fact those of us who remember the Spanish-American war remember the callousness with which the nation greeted the loss of thousands of lives because of carelessness in the training camps and the tainted food sold the army by exploiting contractors. A consistent edu-

cation program over the last 40 years has transformed our attitude to one of great concern.

When the safety movement was first started there were plenty who argued that the job was too big and the victims of accidents so widely scattered and the necessary publicity to dramatize the tragedies of accidental death or injury in such bad taste that nothing could be done about it. Even today despite the amazing progress which has been made by the National Safety Council and its associates in arousing increased consciousness of safety needs, the public is far from dependable. It is still difficult to predict where the public's sympathy will lie in the case of an accident caused by carelessness or disregard of public rights. During the summer just past, for example, two people were killed by stunting airplanes. In one instance the pilot zoomed repeatedly over an automobile on a desert highway, each time dropping lower and lower until finally the driver's head was cut off by the wing of the plane. The pilot was court-martialed and sentenced to prison for life. It so happened that I spent the summer in an area close to the scene of that accident and I found that sympathy on the part of the greater number of nearby residents to whom I talked was with the pilot, whom they believed had been unduly punished for a thoughtless act. Had a homeless tramp killed the same autoist with a piece of lead pipe, these same people would have gladly joined in a posse to track down the murderer.

Community Program Needed

It is with such attitudes that we must contend in an endeavor to build a community program of safety education. Another instance will serve to point out a further problem with which we frequently come in contact. The Army has spent years of research in attempting to develop a metal helmet which will protect the head and neck of the average soldier from injury by bomb fragments and shrapnel. It is required that these helmets be worn in combat and soldiers are actually required to wear them in maneuvers and training camps to accustom them to the slight discomfort which they occasion.

Yet within the last year a magazine of national circulation has on three occasions commented favorably upon military leaders who in battle "can't be bothered" with helmets and go bareheaded or with some soft and non-protective head gear, leaving the implication in their story that only sissies protect themselves from possible head wounds.

That kind of exaltation of a man who is criminally careless of his own life is another factor with which we must contend in building a safety program. In the average community the helmet finds parallel in goggles for workmen in factories where steel splinters may injure eyes, helmets in work where falling objects may injure an individual, safety belts and safety nets for workers on high structures and same operating speeds for automotive vehicles.

A society is often tempted to approve the reckless individual who endangers his own life and that of others just because of his recklessness. There are many similar examples which could be cited but I believe these should be enough to indicate that any program of safety education must be a community program—one in which not only the school and the safety council, but athletic clubs, newspapers, women's clubs, labor unions, and a variety of other organizations and individuals are enlisted. A careless or thoughtless cartoonist of a popular comic strip can undo the hard work of a safety organization in a few brief moments. The headline writer of a newspaper or a columnist or editorial writer, by implying that the man who takes care is a sissy or not quite as brave and courageous as he might be, can easily build an admiration for needless recklessness.

Presentation Should Be Dramatic

Statistics are useful because when carefully gathered they give us the facts with which to support any campaign for safety which may be undertaken and the National Safety Council's pamphlet "Accident Facts" which sets forth in a variety of ways the losses of life and the injuries which have resulted through accidents is a goldmine of information around which a safety campaign can be developed, but as a result of personal experience I am

convinced that case histories dramatically presented so as to reach the imaginations and the emotions of many people, are needed in order to carry conviction.

To those who may easily be discouraged by the slowness with which the general public has responded to the safety movement during the last 20 years, may I commend the success which crowned the "Kindness to Animals" campaign inaugurated less than two generations ago at a time when physical cruelty to animals on our city streets was an every day sight. The humane education movement was inaugurated through the efforts of one man until today it would be second nature to most of us to report instantly to the nearest police station or policeman, man or boy, woman or girl whom we encountered maltreating an animal.

Similar success has accompanied much of the work in public health to the point that the general public is today conscious of sanitary practices and quick to report the lunch room with a habitually dirty kitchen, the open cess pool or the decaying body of a dead dog to the nearest sanitary office.

Safety education has not yet reached the point where similar safety hazards are promptly reported, but it is a goal toward which we can strive with some hope of success in the light of the success which has accompanied the earlier campaigns of similar nature.

In the Indian Service, we have had certain experience which confirms us in the conviction that the dramatic presentation helps. Back in 1936, we made the discovery that deaths and injuries from accidents in the Indian Service were rapidly mounting. We began, through our fortnightly field letter, to dramatize the personal suffering which these entailed and at the same time inaugurated a program of training for automobile drivers, for inspection of automotive vehicles, for the inspection of shops, road gangs and enterprises of all kinds where hazards appeared. By 1941, we had the following record to justify the programs we had undertaken:

1935—deaths	203	1937—	"	327
*1936—	" 273	1938—	"	274
	1939—	"		212

*Program inaugurated

In the last two years of the record, 115 lives have been saved.

I shall not devote much time to discussing safety education in our schools for the Council has already put forward an admirable program. It will suffice to say that any program must represent activity for the children in which they may be conscious of doing something to prevent accidents and, second, that they must realize that as much merit accrues to the *preventing* of injuries or death as is gained in life *saving*. With the dramatic fact recently adduced by the Council that one in every three deaths of children is by accident, we should be able to enlist the active service of parents to safety education. In dealing with parents, it is equally important that we persuade mothers that we cannot deprive their child of hazardous experience.

Health, strength and courage are born of hazardous experience—climbing trees, walking fence rails, swimming, running, playing rough games. None of these need be fool-hardy. It is the danger and fool-hardy action which must be avoided, not the hazardous but needful.

The timorousness of many mothers has set back the safety movement for many children. Enlisted parents can carry the program to luncheon clubs, women clubs, labor unions, newspapers, churches and radio stations. Wise parents can organize support for desirable safety ordinances before legislative bodies. All of this activity should ultimately lead to a sensitivity of safety which results in the prompt report of unsafe practices as we would report the abuse of a horse or an open sewer. We should move for a newspaper treatment of accidental death which would appeal to the emotions as strongly as present newspaper reports of violent deaths. We should breed in our young people and their elders, the abhorrence of a careless action which might lead to the death or injury of another person and lastly, we must continue to stress the cost to the city, to industry and to the individual of unsafe practices. Let us never forget that it is through the money that countless industrial enterprises have become conscious of the need for safety. When a factory owner had to pay for the continued support of the widow and or-

phans of a worker carelessly killed, safety devices began to make sense.

The human side is important and will reach the heart of the average man or

woman; the economic fight is equally important and will reach the mind of the businessman. Let us continue to stress both.

Every Child in the Safety Movement

By KIMBALL WILES

Asst. Dir., School & College Div., National Safety Council, Inc., Chicago, Ill.

Every time I talk about safety I am reminded of a friend of mine. Art is a Greek, alert, with a hair-trigger mind, a little black mustache, and snapping black eyes. He was head of the training school of a large eastern war plant. One day while inducting the new employees, former beauty operators, bakers, butchers, he was describing the use and value of safety glasses. To prove his point, he took a pair of glasses in his hand, a hammer in the other, and said, "I am going to show you how strong safety glasses are." He hit one lense. Although the odds against the glass breaking were probably 1 to 100,000, there was a tinkle of glass, and a look of horror spread over the faces of the new workers. Quick as a flash Art came back with "that is what happens when you hit ordinary glass, now I am going to show you what happens when you hit safety glass." Fortunately the second lense did not break.

Because of a flaw the first lense was not strong enough to protect the wearer; neither is the school safety program in all schools strong enough yet to protect all the pupils.

All of you have seen the "one in three" card that the School and College Division mailed last month. I sent one of the first copies to my wife in New York. By return mail I received a note from her which read, "What are you trying to do—lead the public? Those facts just are not true. As I look back I cannot remember many youngsters being killed."

My wife was not alone in her reaction. Half the people to whom I showed the card gave vent to similar feelings. Most of us do not realize that one out of three who die between the ages of five and nineteen is killed in an accident. We know vaguely that approximately 100,000 are killed yearly

in accidents, that somewhere around 35,000 are killed in motor accidents, that some youngsters are drowned and others are electrocuted flying kites too near high tension wires, but most of us do not know that accidents kill more children than the most deadly diseases.

Tuberculosis, heart disease, pneumonia, diphtheria, infantile paralysis are second rate killers compared to accidents. Between the ages of fifteen and nineteen accidents kill twice as many young people as the most dreaded diseases.

97,500 Killed in 1943

If you are like me, you find it hard to visualize the 97,500 men, women and children killed in accidents last year. We say "97,500 out of 130,000,000—not bad" and proceed to forget it.

But let's look at 97,500.

Suppose the 20th Century is wrecked today and 200 people are killed. And tomorrow the Southernner is derailed and 200 more die. And the next day the Chief jumps the track and 200 are killed. Another train and another 200 persons the next day, and the next day, and the next, throughout the year. The total dead for the year would not equal 97,500.

Or, suppose the inhabitants of Savannah Georgia were slowly wiped out during 1944, and we know that Waterbury, Connecticut would be destroyed in 1945, and El Paso in 1946, and Allentown, Pennsylvania in 1947, and one such city every year.

If the 97,500 were killed in train load lots were wiped out as the total population of a single city, we would demand action. But when a baby falls from a fourth story window in Flushing, a man is gored to death by a bull in Ohio, a girl drowns in Lake Michigan, we do not become aroused. Even

200 dying in accidents over the Labor Day holiday week-end does not seem too bad.

The Allied peoples were horrified and nauseated when the Germans wiped out the little Czechoslovakian town of Lidice, yet in the United States last year we lost the equivalent of 65 such communities—and most of our people never gave the accident situation more than a passing thought.

The Hartford circus fire shocked the entire country, yet in accidental deaths we suffer the equivalent of two such fires each working day, or 609 such fires each year.

What do these figures mean in terms of a group of first graders in our schools? Suppose 100 six year olds started to school last month. The chances are that one of them will die in an accident before they graduate from college. By the time the group reaches the age of 66—four will have been killed in accidents. In other words, during a 60 year period the chances are one in 25 that a person will meet an accidental death.

Moreover, 350,000, or a group equal to the population of Cincinnati, Ohio, suffered permanent disability ranging from finger amputation to complete crippling in 1943. In addition to the four who die, twelve of the 100 first graders will be permanently crippled by accidents before they reach 66.

Significantly, for those of us concerned with education, the accidental death rate increased more among children under 15 in 1943 than in any other group.

These figures give us pause to stop and think. Can anything be done about accidents or are they just going to happen?

Prevention Through Participation

We believe the answer is that many accidents can be prevented. Further, we believe increased safety for children can best be brought about by making every boy and girl a part of the safety movement. Participation and building of interest and proper safety attitudes go hand in hand.

How can this be done?

One of the first steps is getting school administrators and teachers concerned. All of us have a deep interest in safety or we would not be here. Such organizations as the American Association of School Administrators and the National Education Association recognize the need for improved

safety education. As you know, the entire 1940 year book of the AASA was devoted to Safety Education and the NEA has established a National Commission on Safety Education. But, if my experience is a true sample, the majority of the American teaching profession feel all this talk about safety education is much ado about nothing, that safety education is one of the new frills, that all there is to safety education is to tell pupils "be safe" and to give them a list of "don't's."

If every child is to be enrolled in the safety movement, this attitude must be changed. All teachers must be convinced that safety education is a necessary part of the curriculum. This task is the responsibility of the groups interested in safety. We must present "97,000 killed annually" and "one in three" so vividly and so frequently that all teachers will become conscious of the menace we all must fight.

I believe that we have reached the point where, if we tell the story effectively, we can break down the apathy toward safety education in the teaching profession. Two weeks ago the National Safety Council sent the "one in three" card to school administrators all over the country. The response has been overwhelming. Replies have come from every state in the union. Already we have had over a 10% return and cards are coming into the office by the hundreds each day. If we don't accomplish anything more at this Congress, each of us should resolve to speak up more forcefully for safety education.

The second step is to get boys and girls to take an active part in the safety movement. It is not enough to teach safety to a passive class. We must get boys and girls to do something about safety. It won't be easy. In some communities we will be starting far behind scratch. In many situations safety is not respectable with boys and girls. It is a sissy attitude. The boy who wants to slow down when the speedometer reaches 60 is a "fraidy cat." So is the uncertain swimmer who will not swim out to the raft, or the boy who will not climb the tallest tree in the neighborhood, or cut across the field in which there is a mean bull. Safety or caution is considered indicative of fear and the one who hangs back is ridiculed. Adolescent leaders are often the ones who take the greatest chances.

One of our biggest jobs is to make

safety seem smart. The Army Air Corps has had a hard time teaching its pilots, particularly pursuit pilots, to be safe. One technique the Air Corps has used is "Dopey Egg," a comic strip character who always takes chances and loses.

We must be even more ingenious in making safety seem smart. One hunch that Dr. Whitney had is that safety must be presented as a way of making life more enjoyable, not as a way of taking the adventure out of life. The emphasis should be placed upon knowing how to enjoy the present situation in such a way that the boy or girl will be ready to enjoy future, and possibly more worthwhile, occasions. Another idea that some of us have found helpful is that safety means controlling one's environment; to the extent that boys and girls control their environment they are learning to live safely.

But back to pupil participation. As long as safety education consists of adults giving boys and girls a long list of "don'ts" it will never be effective. The class room technique is not enough. If in some manner we could determine the safety facts that every American should know, undoubtedly we could teach them so easily that every child could pass a paper and pencil test with flying colors—and then our pupils would go right out and get injured doing the thing that they had written they should not do. Adults do the same thing. For example, all of us know we should not drink then drive, yet in 1943 13% of automobile drivers killed had been drinking.

Safety, like every thing else, is a positive proposition. We must feel that we are part of it, that we are making a direct contribution or we lose interest. Boys and girls are the same way. They are safety conscious and live safety to the extent they feel that safety is their responsibility.

Pupil Activities

Boys and girls can do many things about safety. All of us know of the work of student safety organizations such as School Safety Patrols and Junior Safety Councils. These are fine as far as they have gone but we believe participation in safety activities must extend farther. In some schools of 500 the safety patrol consists of 15 and the Safety Council of about 20. 35 out of 500. More students must take part.

The actual contribution to safety may be

small. For example, it may be nothing more than being a member of a good housekeeping committee. During 1943 more persons died in falls than in traffic accidents and as far as could be determined, the major cause was disorder. Good housekeeping is a small thing but when we realize that it makes a direct contribution to saving lives, then it assumes importance.

Another activity worth promoting is bicycle clubs. When driving returns to normal, with more bicycles than ever on the road, each ride on a bicycle may become a safety activity. Schools should encourage students to organize bicycle clubs which give safety information along with opportunities for enjoyment through bicycle outings.

Providing programs for school assemblies and for community clubs is another function boys and girls can serve. A Speakers Bureau with a list of safety topics is a way to spread information and give opportunity for pupil development. It is also a way of bringing English teachers, speech teachers and the dramatics teachers into the safety movement.

Campaigns, from fire prevention to clean-up, are means of enlisting the whole student body.

When given a real chance to plan and execute the safety program for the school, students are accepting the responsibility.

The School and College Division wants to do its part in getting every child in the safety movement. We are seeking to promote safety through all possible channels. We are publishing Safety Education, safety posters and safety lesson units. This year for the first time, it is possible for schools to become full voting members of the National Safety Council. Members receive a small library of safety education materials, a subscription to *Safety Education*, teaching units and posters for the grade levels desired, materials at membership prices, safety organization manuals describing ways to carry on a safety program, representation on a committee and full membership in the National Safety Council. We are ready to do whatever we can to help any school with its safety program, from supplying a single lesson unit to providing full membership.

In the light of present knowledge the School and College Division plans are the best we have been able to devise. But maybe

we are missing the boat. Maybe despite all the flexibility that we think our plans have, they still don't meet the specific safety needs of your school and your community. If you have suggestions for ways to improve our help to you, please give them to us. The National Safety Council is your organization. People at national headquarters are there only to facilitate the exchange of your safety ideas. Only with your help

in making known your safety needs and in contributing your safety ideas, can we be successful in helping you to get every child in the safety movement.

I have been talking twenty minutes. During that time four persons have been killed by accidents and over 380 have been injured. The task of getting every child in the safety movement is certainly one to challenge our best effort.

The Function of the Committees

By MISS MARY MAY WYMAN

Supervisor, Special Education and Safety, Louisville Public Schools, Louisville, Ky.

There are a few facts about the National Safety Council that we, who are primarily interested in a program of safety education for children, must keep in mind. The National Safety Council was originated by industry to promote programs of safety in industry. It was, and is, primarily supported by industry. As the safety movement grew, it became evident that it was necessary for persons with like interests and problems to have opportunity to get together to discuss their problems. The organization of the National Safety Council was designed with that purpose in mind. At present, there are five main divisions of the Council: Industrial, Traffic and Transportation, Home, Farm, and School and College. Some of these divisions have many sections. For example, the Industrial Division has Petroleum, Mining, Metals, and many other sections.

In the working of the National Safety Council, industry realized the need for child education, and devoted a part of its funds to child safety education. A School and College Division was organized and it has rendered efficient service to all of us through the years on a relatively small budget, two-tenths of one cent per school child in the country, or twenty-five cents per school.

We have held meetings and talked about a Child Education Section. But actually,

there has never been a Child Education Section. We have not paid membership dues; we have not had a voice in any of the affairs of the National Safety Council. In our meetings we have attempted to cover all levels of interest, from the kindergarten through college; from the viewpoint of the teacher who taught many subjects besides safety, to the full-time supervisor who devotes much or all of his time to safety education.

The time has come when education needs more official recognition by the National Safety Council. To attain this end memberships are available to individuals and to school systems. Sections may be established.

No one knows at this stage what the most effective arrangements are to enable groups of persons in safety education to meet together and to discuss and try to find answers to their problems. For this Congress, five tentative groups have been established: Elementary, Secondary, Higher, Vocational and Driver Training. These groups are organized as a point of departure, as a basis for study. They may be disbanded after the Congress. Or, a group may ask for recognition as a section if it wishes. Our concern is that persons of like interests may come together to study safety education problems. As Dr. Long said, "We covet your consideration and criticism of this grouping."

WEDNESDAY MORNING SESSIONS

October 4, 1944

Group I. Elementary School Problems

Presiding: MARY MAY WYMAN, Supvr., Special Education and Safety, Louisville Public Schools, Louisville, Ky., and Chairman, Elementary School Committee.

Safety Education in Tomorrow's Schools

By JAMES W. MANN

Principal, Hubbard Woods School, Winnetka, Ill.

It is most appropriate that we do some post-war planning for safety education. The physical and mechanical aspects of our children's lives will be different in many ways. There will be much new construction of buildings, tools, machines, and apparatus, all of which will involve questions of safety both in its construction and in its use. The concern for safety must, therefore, begin with the designing of equipment and with the planning of buildings to be used by children in their education and in their recreation.

Fortunately, designers and builders are already aware of the need and of the demand for safety features in all construction. Safety is now one of the selling points of school equipment. Credit for this is certainly due in substantial measure to the work of the National Safety Council. School officials will continue to welcome the work of this organization in co-ordinating efforts and giving voice to the best thinking along these lines.

We have, of course, no very clear view of what the mechanical and structural patterns of the future will be. It is only as the post-war patterns of living unfold that we can see and measure our problems. Safety education and safety research must, therefore, be always in the forefront, working with planners and builders, to see and foresee problems of danger to human lives. Each new development of civilization seems to bring new dangers, even as it eliminates the old. The paved highway, for example, may well have made travelling safer as well as easier at the time; yet it made possible a new potential in danger—the development of high-speed travel, and so our accident rate on the highways

mounted in increasing proportions. Thus we may seem to be losing the race even as we think we are about to win it.

There is one element in our favor. That is the disposition in present-day community planning to look forward and to anticipate weaknesses and danger spots in any program of construction. Both educators and safety experts must be ready with ideas and plans which fit in with community developments as they affect the lives and well-being of children. It is most likely that their advice will be welcome and even solicited in all instances.

We may go one step further in suggesting and even insisting that any program of public works necessitated by post-war reconstruction devote a share of its efforts and resources toward the improvement of conditions for the safety of children. More traffic lights where children must go, more underpasses, re-building of fire trap school buildings and other buildings frequented by children, improved playground surfaces and apparatus are surely appropriate subjects for the peace time utilization of man power.

The Human Element

We must not, however, think of stopping short at this point. As educators, we must save the major portion of our energy for what lies beyond the matter of mechanical construction. We must realize that no matter how perfect a physical and mechanical world we have, it will not be really safe except as we can find means to control the human element. Now no one of us in his right mind will drink poison, leap under the wheels of a moving train, or turn a loaded gun against

himself; yet every one of us will take unnecessary chances even when the element of danger to ourselves or others is present. Automobiles can be perfect in design so far as control of danger elements is concerned; yet they are still subject to the whims and reactions of the human at the wheel. In fact, the very perfection of its mechanics may tempt the driver to take chances unthought of with a poorer machine. It is the same with children. It may be no mechanical failure of the traffic light which causes a child to be run down but rather a faith in the light that it will stop even the driver who guesses wrongly as to when it will turn and whether he cannot make it before it turns. So the problem, tomorrow, the same as today, will still be one of educating humans and their reactions, no matter how great the physical improvements may be.

Instructional Materials

What shall be the approach to safety education? What materials of instructions are available? What methods will be most effective? First as to materials. Certainly no instructional material should be used that is not simple, clear-cut and compelling in its appeal. Otherwise we may do more harm than good. Good poster material with pictures, slogans and similar devices will continue to be useful. We are a nation of advertisers, and smart advertising methods, up to certain limits, appeal to children as well as to adults. Course outlines, intelligently used, have value, but should serve more as guides than as materials. Children today are very visual minded, and the field of visual education is to my mind the most fertile one of all for modern safety education. Films, film strips, slides, picture projectors should come into far greater use in schools. They should be good, equal in technique, if possible, to those of the commercial theatre. The modern child is most discriminating in his judgment of movies. A good subject may be ruined educationally by an inferior presentation. Because of the talent and expense involved in making good visual material, it is therefore necessary that we pool our efforts along as wide a front as possible in order to get a maximum of benefit from these materials. Another fertile

source of teaching is the radio, and efforts must be made to harness more of its resources in safety training. I well remember one of the earliest attempts along this line when "Uncle Bob" of Station KYW in Chicago appealed to young children through his "Curb is the Limit" club. No one knows how many young lives he may have saved through his dramatic repetition of one simple rule. This was, of course, a commercial venture and had to pay dividends to its sponsor in order to justify its existence, but it was a most laudable example of what can be done. Who knows what exciting possibilities television may have for teaching safety from the field and from the laboratory.

Method

So much for the materials. As to methods, we must assume, I believe, that safety education, like any kind of teaching, must depend upon the successful application of sound psychological principles. The ultimate aim is intelligent, responsible behavior. We must somehow equip children with sound, sensible reactions to situations both expected and unexpected. And we all know that it is at the latter point that children's reactions and their good sense often fail them with consequent tragic results. In spite of the uncertainties ahead, it seems wise and possible to train in certain rather fundamental procedures. Let us consider a few of them.

I believe that safety can and should be made an *attitude*. The general idea of living safely should be assumed as an integral part of home and school routine, just as eating, playing, and resting are a part. We should *expect* and *intend* to act safely and intelligently. We do not discuss a matter of safety at nine o'clock and then act in an unsafe or unwise manner an hour later. Rather a problem of safety is given consideration at the time and in the place where it arises, just as any other problem of living is considered. It is not ignored; neither is it set aside until some other more convenient time, for by that time all of the emotional elements involved will have been lost and its teaching potentialities greatly deteriorated. It is also important that the atmosphere of the school be such that children as well as

teachers recognize and act upon problems of safety as they occur. Whether it be on the playground, in the shop or laboratory, in the classroom, or on the way home, any threat to safe conduct should become the immediate and automatic concern of the whole school community (children, parents, and teachers) and should be given whatever priority it seems to demand. We want to strive for a quality of living in the school that makes safety a serious business and prevents before it must cure conditions and incidents of danger. Such a program implies a unity of purpose between teachers, children, and parents of which I shall speak later.

Good psychology implies skillful timing and proper emphasis. Every situation of crisis has an optimum moment for teaching, and the opportunity should be seized or it is soon gone. One dramatic lesson pressed home at the proper moment is far more effective than repeated "do's" and "don'ts." I remember having a part in one such lesson as it happened with some five year olds early in the school year, before routines had been established. "Mr. Frank," one of our traffic officers, appeared at my door literally herding these children. In much distress he reported that the children had run across the street without his help, and that when he called to them, they had disregarded his signal. I thanked him very solemnly for bringing them to me and for his help to the school every day. Then the children and I went to see their teacher about the matter. Seated on their classroom rug with all of the children, they had a "meeting about crossing streets." Soon all the requirements were clear in their minds, but the matter did not end there. Toward the end of the morning session the whole group went on what the teacher called a safety walk, going to the crossing in question, contacting Mr. Frank, who by now was qualified in their minds as a "helper," and with his help going through the motions of crossing the street safely. The lesson was clear-cut; the results positive and wholesome. This technique of dramatizing incidents can be repeated with variations and with qualifications at all age levels.

Positive Approach Best

Closely involved with the question of

safety training, is the whole mental, emotional, and physical make-up of the child. I have already implied the necessity of the positive approach at all times. The negative effects of continual warnings can dull a child's reaction toward situations of danger and can even produce the opposite of the effect desired. It is particularly unfortunate when a child's whole attitude toward life and its possible dangers has been colored by negativism and fear. The over-fearful child is in more real danger than is the seemingly over-confident one. His reactions are slow and confused. His bodily co-ordinations imperfect because hindered from developing naturally. He is generally unsure and therefore unprepared to meet emergency situations which demand quick and accurate response for safety. On the other hand the normally active, well-coordinated child is efficient in his movements; his reactions speedy and usually sure; and his chances of safety thereby immeasurably greater. He needs only a few well-chosen lessons in balance of caution; while the over-fearful child must be built up both physically and emotionally before he can become a safe and effective person. It thus becomes the concern of almost every department of the modern school to prepare children to live safely. Yesterday my playground teacher reported as the major successes of her day that two children, one a spastic child and the other extremely immature emotionally and socially had succeeded in reaching the top of the climbing rope apparatus. A few days previous she had introduced the children to this apparatus, giving them the techniques, stressing care and accuracy of movement, but minimizing the dangers. It seemed a good lesson in safety. I feel that not only must schools definitely train children along these lines, but that they must somehow instruct parents in the proper approaches, because it is they who are responsible for the earliest training in bodily movements.

Children, like adults, appreciate lessons based on reason and logic, and are loath to accept mere trivia as motives for action. Too often, in our eagerness to cover the whole situation, we stress so many unimportant details that the important aspects of a situation lack proper emphasis. I think that the bicycle situation fur-

nishes good examples of this. We have feared many things for child riders which never come to pass, and have preached many cautions never illustrated by a real happening. Proportionately few children have been involved in serious accidents in the ordinary course of riding, even though a good many automobile drivers have come near to heart failure or nervous prostration. Children seem exasperatingly fearless of the possible consequences we have preached to them. We have no doubt made them callous through meaningless repetition with no dramatic illustrations furnished as examples. There are real danger spots with real examples to illustrate. It would seem more effective to point out those dangers, and for the rest appeal to a child's intelligence and good judgment.

Children should have a part in the research aspects of safety education. When called upon to act as a result of facts which they themselves have discovered, the results are both positive and permanent. Children can ask and solve such vital questions as how quickly can I stop my bicycle, what happens when I must turn short with the added weight of an extra passenger on my wheel, how difficult is it to see a rider in the dusk or in a storm, and how does something white worn by the rider effect his visibility. If it is thinking that we wish to cultivate in preparation for safe living, then practice must be carried on in the area of the desired behavior. The results must surely be more permanent and effective than when we merely rely on telling and adjuration. The job must be done over and over.

A Community Responsibility

The problems of safety are in many respects community problems. Over and over we discover that the roots of a problem lie in the home or in the community, and that the solution depends first upon some change in home situation, parental attitude, or in community pattern. Again, the bicycle problem furnishes many common examples.

Our village ordinance, for example, prohibits riding double on single seat bicycles. This, obviously, is a safety measure. We can pretty well convince children that it is dangerous and therefore unwise to ride

double, but what to do about fathers and mothers who ride the baby uptown in the basket or take sonny for a jaunt on behind? We can also train children to ride on the right side of the street in keeping with the state law and the definition of a bicycle as a vehicle, but over and over they see adults riding without reference to this regulation. To some extent children can and do teach their elders about these things, but that is certainly not a wholly satisfactory solution. Somehow we must work out techniques for reaching out to the parents of children to get their co-operation. Not only must they be encouraged to constitute good examples for children, but they must exert positive backing in the program of educating the children.

In our school we use the weekly news bulletin to parents as a means of following up problems encountered at school. The parents are thus apprised of the facts of the problem, what the dangers are and the line of action taken or suggested by the school. Quite often they are very grateful, both for the suggestions of help and for the weight of school authority in the matter. This procedure gives a rather complete coverage of the child's welfare at school, at home, and as he goes about the village on his way to and from school. Perhaps you may ask if this is not assuming too much responsibility on the part of the school? In this time of change in home and family set-up, the answer is no. While the school is not liable in matters of safety at or on the way to and from school, it should, if it is a good school, feel responsible for the children in its care.

Community regulations and standards often become outdated and need overhauling to meet changed conditions. Consider again the bicycle situation. Many communities prohibit bicycle riders from using the sidewalks; yet we know how dangerous it is for younger children to ride on the busier streets. Communities should, and some do, allow bicycle riding on sidewalks, particularly for younger children. In our village a recent law, framed and presented to the village council by junior high school pupils, prohibits the riding of bicycles on certain designated heavily travelled streets; here they are expected to ride on the walks. A hindrance

to this type of regulation is the rapid construction of sidewalks with their high curbs at each intersection, which discourage the use of vehicles as a safety measure. Post-war construction should include wherever possible special provision for bicycle riders such as bicycle paths, special traffic lanes, and traffic-way shaping devices.

There are other areas of community planning which must in the future emphasize safety measures more. Location of play areas with reference to vehicle traffic; improvement of traffic signals as they affect bicycle and pedestrian traffic; the location and construction even of all commercial enterprises whose patrons are children merit more serious planning than has heretofore been given them.

There are other agencies in the community who deal with children in matters affecting their safety besides the schools. The police department, for example, has an important educational role to play in dealing with children. Its approach can be negative, authoritative, and punitive; or it can be positive, co-operative, and highly educational, depending upon its outlook. Ideally someone on the police force with a sociological and a psychological outlook should be the safety specialist whose major concern is with the problems of children. Police and schools can then work together with good effect on their mutual problems of safety. The fire department can likewise make its contribution to safe and sensible living. Other departments of local government can work in and with the schools on matters of safety as can also private enterprises operating within a community. I get each year just prior to vacation time a form letter from a railroad company whose line

crosses our village asking that children be warned against playing on the right-of-way during the vacation period. They have a real point in their appeal, but I always wonder how much effect the reading of this letter has. It is a very impersonal letter from the impersonal corporation whose headquarters are not in the community. Even the local station agent, whom a few of the children might know as a person, does not figure in the request. Real teaching values derive only from a direct approach to personalities and problems involved and a consequent understanding of reasons and motives behind them.

There are doubtless many areas untouched by this discussion. I have tried to present what seemed to me some hopeful avenues of approach to the idea of safety education in tomorrow's schools. I have suggested first that we must play a real part in the planning of buildings and equipment to be used by children, and that the outlook there is very hopeful because even the commercially-minded are aware of the values of providing safety features in all construction. I indicated that the whole field of visual education is one to be fully exploited for its values in safety education. And I have hoped to impress each of you with the realization that most important of all in the days to come is the matter of a positive, intelligent approach to the human problems involved. Always social invention has lagged behind technological development, and in that area of maladjustment lie many of the problems of safe living. And it is only as schools, homes, and local governments work together in a unified approach will we realize our goal of prevention rather than cure.

Digest of Panel Discussion

Following Dr. Mann's address on "Safety in Tomorrow's School," the committee turned its attention to "Classroom Problems and Activities in Safety Education." This topic was discussed by a panel composed of:

DEWEY T. BRUSH, East Chicago Public Schools, East Chicago, Indiana.

DONALD M. CARROLL, Acting Supervisor, Traffic and Safety Activities, Pittsburgh Public Schools, Pittsburgh, Pa.

SALEN HENKE, Safety Director, Peoria Public Schools, Peoria, Illinois.

C. W. HITTLE, Director, Child Welfare and Safety Education, Pasadena Public Schools, Pasadena, California.

School and College Sessions

ROSE L. DEAN, Director, Education Division, Massachusetts Safety Council, Boston, Massachusetts.

Suggestions brought out by the panel and the audience were:

1. The best materials for teachers to use in teaching safety are the everyday problems and activities of children, using situations as they arise. Materials such as texts, visual aids and radio, may be used, but the real opportunity for safety education lies in helping children to solve effectively safety problems which confront them in their daily lives.

2. Need for visual aids which stress a positive approach to safety education was emphasized. Too large a percentage of present safety visual aids teach through the fear motive. Some agency should evaluate visual aids which are at present available for classroom use and make this evaluation available to classroom teachers.

3. Fire drills are still an important part of a safety education program. The success of the fire drill will depend to a large extent upon the attitude of the teacher, which sets the pattern for pupil attitude.

4. We should continue to have school patrols in the elementary school. However, the patrol should be considered but one part of the total safety program for the school. Educators should assume their responsibility in organizing and supervising the patrol, but should regard the patrol as

educational in nature and operate it in accordance with the Standard Rules worked out a few years ago by the National Safety Council, The National Education Association and other interested agencies. The patrol should not assume police functions. If traffic is too heavy, a policeman should be assigned to an intersection. The patrol should not direct traffic nor work in the street.

5. Safety education courses should be required for all students preparing to teach. Since safety education is a part of all living, it is undesirable to segregate it in the school curriculum. All teachers should be able to teach safety when the opportunity arises in their particular classes or in any school situation. Courses should also be made available as in-service training for teachers who are already in the profession.

6. An attempt should be made to have talks on safety education included in the programs of educational association meetings, both state and national.

7. Wider and more intensive use should be made of *Accident Facts* and of *Safety Education* magazine in classroom teaching.

8. More community agencies should be encouraged to exercise their influence for safety. If these agencies can be reached, the school program in safety education will be greatly strengthened.

9. All teachers should be interested in safety education to the end that all children may have the advantage of safety teaching.

Group II. Secondary School Problems

Presiding: SANFORD SELLERS, JR., Headmaster, The Elgin Academy, Elgin, Ill., and Chairman, Secondary School Committee.

The Lag of Safety Education in the Secondary Schools

By DAVID M. TROUT

Dean of Students, Central Michigan College of Education, Mt. Pleasant, Michigan

This subject suggests that there is a lag in the secondary schools. Out of fairness to those who are responsible for secondary education and in the interests of truth, it is necessary at the outset to inquire whether this is so and to determine, if possible, the extent to which the condition exists.

Is There Such a Lag?

Lag is a highly relative term. It suggests a comparison of the respective speeds of

two or more processes which are directed toward a common goal or objective. In order, therefore, to determine whether the secondary schools are lagging behind the procession in the teaching of safety education, it will be necessary to compare them in this respect with other institutions and processes. Three have been chosen for this purpose.

Health Education and safety education

are approximately the same age culturally. Only after World War I did either of them receive much attention from teachers and educational leaders. The one has, however, far outstripped the other in achieving an established position in the curricula of the secondary schools. The school nurse, who gives much time to adolescent health, the courses in hygiene, the sanitary provisions architects are building into modern school plants, the health specialists who are beginning to appear on the staffs of state departments of education, the large sums of money being expended by individuals and foundations to safeguard and improve the health of children and youth, college curricula which provide prospective teachers opportunities to major or minor in health education, the employment of teachers to give full time to the teaching of this subject in the high schools, and many other trends, indicate how rapidly the importance of health education is being appreciated. When we compare the progress made by health education with that made by safety education in the secondary schools during the last quarter century, we find that the latter has lagged far behind its cultural twin.

The Elementary Schools have been largely influenced in their emphasis upon safety education by the greater dependence of the young child upon adult concern for his welfare, by the persistent efforts of automobile clubs to protect small pedestrians on their way to and from school and by the attractive literature on the subject of safety which is now available for young children. The safety patrols with the uniforms and insignia keep the young aware of the importance of being careful while the motherly interest of women teachers, their effective instruction and application of safety principles and the general docility of the young child, all contribute to the excellent record of few accidents and fewer fatalities in the early grades.

In contrast, the secondary schools are found to be lacking in any organization which stimulates the imagination as does the safety patrol system of the elementary grades. Concern for the safety of pupils is also much less evident and the opportunities to demonstrate safety procedures except in a few instances, are much rarer. Literature concerned with safety seldom reaches the eye of the adolescent because the academic

program of the high school makes the introduction of such reading material exceedingly difficult. As a result, safety education appears to be lagging in the secondary schools, if we compare its place there with its dramatic position in the grades.

The National Safety Council, in operation less than a third of a century, has accomplished magnificent results in the field of adult education. Through it the importance of safety, the tragic losses from accidents and the method of preventing them have been continuously and effectively dramatized. The public has been widely informed at appropriate intervals regarding the outcomes of safety campaigns. Noteworthy success in preventing losses due to accidents have been publicly rewarded and praised. These achievements have resulted in inventions, engineering insights, widespread care and thoughtfulness, pride in preventing accidents both to oneself and to others. The accomplishments of this organization constitute one of the most noteworthy examples of adult education anywhere in the nation.

This convention attended by thousands of engineers, executives, administrators, inventors, educators and other national leaders, demonstrates the remarkably deep and widespread interest in safety which has developed almost entirely within the last quarter century. The exhibits show how inventive ingenuity, engineering foresight and capital investments have been stimulated, enlisted and directed during this period. Even the printed program shows the great extent to which this relatively young educational movement has elicited the thoughtful support of outstanding persons from nearly all fields of human endeavor.

Even when full credit is given for those brilliant safety programs which one finds here and there in the high schools of the nation, the progress of safety education among adolescents seems, nevertheless, feeble, sporadic and unorganized when compared with the vigorous, well integrated, socially inclusive accomplishments of the National Safety Council.

Safety education has made much more progress both in the elementary schools and among adults than in the secondary schools. Although health education and safety education came into the high schools at approxi-

mately the same time, the one has far outstripped the other in becoming an integral part of the curricula and so we conclude that safety education is lagging in the secondary schools.

Why the Lag?

Many conditions contribute to this situation. I shall discuss four of them which seem to me to demand the best efforts of educational leaders.

The Traditional Conception of the Accident.—Preliterate peoples such as the North American Indians and the African Bushmen who persisted for centuries without developing written communication between the past and the present had what may seem to us vague and strange ideas regarding causation. Whenever an event occurred the causes of which they did not understand, they attributed it in accordance with the mood of the moment and the circumstances, to a mysterious, an awesome, or a wonderful potency, which in one tribe might be called *wawa*, in another *wakwa*, and in a third *summiton*. Before preliterate peoples became aware of the spirits and gods believed in by literates, this causal potency was usually regarded as non-personal, probably, also, as non-physical. The technical term now most used by anthropologists to describe this primitive concept is *waka*.

Current notions expressed by such words as chance, luck, fate, are the modern cultural descendants of *wawa*. Persons among us who are not disciplined in scientific thinking are apt to assume that all events which they do not understand are caused by chance, accident, fate, luck, or some spiritistic being. This attitude is obviously a survival from our preliterate forebearers. It is manifest in the thinking of those ministers who, when speaking at a funeral, say "The Heavenly Father has seen fit to take this dear child from us," when nearly all of their listeners may know that an influenza germ or virus killed the child. The gambler who attributes his success to fate or luck and the soldier who believes a certain bullet from the enemy has his number on it also exemplify it. Just as the ancient believed that things which he did not understand or for which he did not want to take responsibility were due to *wawa*, so his successors came to believe that

they were the results of chance, luck, fate, or a spirit.

In modern times we call many of these happenings accidents and thus relieve ourselves of the obligation either to understand or to control them. Our behavior is a kind of rationalistic projection which serves to excuse us from the development and use of the required foresight, which under our present educational system is seldom emphasized sufficiently even though the need for it grows greater with each new invention and each scientific discovery.

To teach the character and significance of this cultural survival is an obligation which our secondary schools should undertake if we wish to supplant the common attitude toward accidents by one of circumspection, foresight, and social responsibility for the control of events. This educational task, if well performed, would become one of the most significant contributions which the secondary schools can make to safety education.

The Adolescent's Admiration for Daring and Independence.—In his autobiographical writings Tolstoi has related how when he was a boy of 13 to 15, his companions went away from home to attend the gymnasium. Each Sunday when these boys returned to their home community, they would have a meeting in his father's barn to learn what new discoveries had been made. They were most impressed by the finding that there is no god. Tolstoi went to church each Sunday as his orthodox parents required him to do, but he secretly harbored the feeling that he was brave and sophisticated when he watched the older people begging God to protect them as if they were His little children. Because most adolescents struggle to escape from what they regard as that parental protectiveness which marks its recipient as children and because they want to regard themselves as free, self-confident adults, they are peculiarly apt to admire what ever is dangerous and daring and to try to undertake it just to show that they can take care of themselves. Too often they associate safety with the cautious restraint which adults impose upon them and which they frequently resent. As a result they project upon safe behavior the hatred they feel for the inhibition they are consequently forced to endure. This emotional misplacement not only makes the

teaching of safety in the secondary school a difficult task, but it also forms a causal background for the large increase of accidents which occur during the normal pubertal years.

The data from *Accident Facts* support the foregoing analysis. If the number of accidents per year is plotted, it becomes evident that the accident rate per 200,000 school days increases rather rapidly from the third through the seventh grades and then begins to decrease until it reaches the eleventh grade. Such a curve shows that the increase follows closely the releasing of teacher supervision over the play activities of boys and girls. It is also known that the greatest number of accidents results from undirected play during these years.

If the secondary schools are to teach safety with any considerable degree of effectiveness, it will be necessary for them to democratize teacher-pupil relations to a far greater degree than is now being done, to devise recreational activities in which teachers and adolescents can participate on a more nearly equal basis, to emphasize the stupidity of accidents rather than the cautiousness and timidity usually associated by the adolescent with safety and to give particular attention, in this respect, to the junior high school curriculum.

The Collegiate Curriculum of the Secondary Schools has been a distinct hindrance to the teaching of accident prevention. As all of us know, the old Latin Grammar School and the academies which undertook to prepare students for college, were the predecessors of the modern high school. Due to cultural lag, the latter still carries in its curricula the teaching methods, and to a large extent, the subject matter content prescribed for admission to college in the days when our colleges were entirely academic and devoted to what they called mental discipline. It was believed by those who advocated this position that one who had mastered such difficult subjects as mathematics, Greek, and Latin had achieved that insight and perseverance which are necessary for the solving of any problems the person may encounter throughout his life. The college preparatory schools, accordingly, devoted most of their time to the teaching of difficult subjects in order that the students might be properly prepared to enter college. Today probably not more

than fifteen per cent of the students who attend our American high schools ever plan to go to college, and certainly not more than thirteen per cent ever succeed in being admitted to institutions of higher learning. Even though eighty-five per cent of those in high school are not preparing to go to college, they are, nevertheless, required to study to a large extent the college preparatory courses which were developed under the influence of those who sponsored the doctrine of mental discipline.

When a curriculum is academically organized, it is both logically and psychologically difficult to introduce into it a subject as human and practical as accident prevention. The same barriers hinder the teacher from enriching an academic course with materials on such a subject as safety education. These conditions, therefore, prevent the teaching of this subject to any large extent as a part of a program of study for the high school student.

The Narrow Social Responsibilities of the Secondary Schools.—Even though the high school of today is essentially a folk school, a place where the children of all the people may go and learn those things which they need to enrich their daily living and to prepare them for the years ahead, it is still hindered in the performance of its rightful functions by the survival of the academic traditions of other years. We now know that the study of Latin, Greek, higher mathematics, and the other so-called "difficult disciplines" are in no sense the most appropriate experiences needed to prepare one for the duties of citizenship in a democracy, for the difficult problems which confront young married couples, for the developmental issues which arise in the rearing of a family or for the many community obligations which characterize our daily living. We know, too, that the study of such subjects contributes little to ordinary living in a mechanical age, performing the functions of a breadwinner in a world such as ours is, and adapting to the many and varying circumstances created by modern inventions.

This statement should not, however, be interpreted as a denial of their value to persons who plan to enter certain professions. It is no wonder that a high school which has carried the academic tradition through the years, can find little enthusiasm

among either its students or its faculty for such a human and practical subject as accident prevention, and yet it is quite evident that if the high school is to become an institution guided in its curriculum-making by broad social responsibility instead of a college preparatory school, it must concern itself with matters of this sort as well as the other varied demands which society today imposes upon its graduates. Not many years ago, the success of a high school was measured by the extent to which its students earned high grades in college. In the days ahead its efficiency will be measured by the degree to which its graduates can live effectively in a world such as ours is. If the modern high school assumes the broad social responsibilities which its place in modern life demands, accident prevention will become a highly respectable study in its curriculum.

What Is Being Done

Even though the secondary school suffers from academic handicaps which do not particularly retard the teaching of safety in the elementary grades, and even though it lacks the legal support and the financial rewards which motivate safety education among adults; it is, nevertheless, undertaking to do a number of commendable things in this field. Here and there among the high schools of the nation one finds notable efforts to revise and modernize the high school curriculum in three respects. I shall discuss each of these briefly.

Enrichment.—Many specialists advocate the enrichment of courses with materials from the field of safety education. This is being done in a number of schools. English teachers are using assigned readings which cover the subject of safety. They are in some instances requiring themes and essays. Instructional materials in home economics, shop, physics, and other fields closely related to industry are beginning to show the effect of this emphasis. We can hardly assume, however, that enrichment is the final solution. An illustration will, perhaps, make this point clear. Last year a specialist in health education was exhorting a group of seniors to include materials from her field in their courses. After she had been talking for approximately 45 minutes one of the seniors rose abruptly and stomped out of the room. Later she said the woman was talking nonsense, that it was foolish to

think of trying to drag her health education materials into an English course. Her antagonism to the procedure which we have called enrichment suggests the logical and psychological barriers which are apt to be encountered when we undertake to teach accident prevention in this way. While there are a few teachers who can make this approach, it is probable that most of them are too subject-matter minded to be skilful in this sort of practice.

Integration.—In certain fields, it is a simple matter to teach safety as an integral part of the course. Precautions in the use of laboratory materials and equipment in the fields of chemistry, physics, biology and psychology; regulations and practices in school shops with regard to the use of tools and equipment; precautions taken in the field of home economics, all illustrate the integration of accident prevention principles as basic instructional practices. Wherever safety can be taught by this practice it is apt to be done effectively, but it needs to be recognized that not all kinds of instructional materials lend themselves so easily to such an integration of the principles of accident prevention.

Courses in Safety.—We have been told during this conference that in Indiana students are required to take two semesters of work in the study of safety. It is noteworthy that they are placed in the curriculum so that at least one of them should directly affect the thinking of junior high school students. This is commendable. While there is much opposition to the adding of new courses to the high school curriculum, it seems to me that much can be said for this method of introducing accident prevention at the secondary level. Teachers are course minded. If we include materials which represent the gradual growth of the safety movement in our civilization and show the cultural survivals which hinder its development, a course in safety can be made both academically valuable and practically significant.

In summary, then; wherever teachers are competent to do it, courses should be enriched with instruction which bears directly upon the problems of accident prevention. We should not, however, put so much stress upon this practice that we develop opposition among teachers and students who do not possess the necessary attitudes or the

logical flexibility to see the relationships of such materials to the rest of the course. Wherever the nature of the subject being taught is such that sound and natural integration of safety instruction can be introduced, it is certainly commendable to make it a part of the course, but it should be recognized that there are many courses into which we cannot easily integrate the literature and methods of safety education without giving the appearance of dragging them in and treating them as more or less irrelevant to the general content being considered. There is a traditional attitude which makes it difficult to introduce new courses into the high school, but if this school is to become largely responsible for the broad social adaptation of its students to living, then I can see no objection to a sound, broadly conceived course in the nature and prevention of accidents. We should enrich courses wherever possible, integrate safety instruction as far as we can and introduce courses at appropriate points in the curriculum which will deal with the important problems and the scientific data related to the prevention of accidents.

Extra-curricular Activities.—Up to this point in our consideration of the things which are being done to promote safety at the secondary level, we have been dealing largely with courses and curriculum procedures. Many other activities contribute directly to safety for secondary school pupils. I shall mention only a few of these.

Code making is an important function in designating socially approved and disapproved safety conduct. In a democracy a code is much more valuable if it is a creation of those who are to obey it. It is of much less significance if imposed by some superior authority who is not subject to its requirements. For this reason, the making of safety codes can teach both accident-preventing behavior and the democratic social processes involved in making and obeying laws and regulations. To a large extent the making of safety codes has contributed to the democratization of the groups for which those codes are intended. Much more needs to be done along this line.

Accident Facts shows what a fine piece of work is being done by many of our schools in reporting accidents. If this process can be localized so that the reporting is done to school groups as well as to the National Safety Council, it may become an

important method of teaching safety. It is probable that all of the students in the school as well as the teachers can be enlisted in gathering and tabulating the data regarding accidents. When data are gathered by the whole school, they should be organized to give direction in the formulation of future codes and in the taking of necessary precautions. Cumulative records should be kept so that progress can be measured from year to year in a grade or school system.

Industry has long recognized certain individuals who are classified as accident-prone. While our cumulative records of accidents at the adolescent level are not sufficiently complete to show whether or not these accident-prone persons can be identified while in high school, it probably would be possible to find them if we kept proper individual records of accidents. In case this is true, there is little doubt that counseling and guidance would prove effective in reducing the accidents which these persons normally have. It is my opinion that most of them are persons of somewhat lower than average intelligence who do not easily respond adequately to the stimuli in the accident situation. If they are given proper guidance, it is probable they will learn to respond more completely and will thus reduce the accidents to which they are subject. There are, of course, many other reasons for stressing the importance of counseling and guidance in the prevention of accidents through face to face discussions between counselor and counselee. Many of the peculiar individual characteristics which lead to accidents can in this way be identified and precautions can be worked out to prevent the undesirable consequences to which they might otherwise lead.

The National Safety Council has undertaken to publicize widely the number of accidents which occur, the financial losses suffered from them, the hindrances to social progress which they represent, and other information designed to introduce more care and foresight on the part of all our people. It seems appropriate for the secondary schools to follow the lead of the Council in this respect. We have not yet worked out methods of doing this in most of our schools, but certainly the challenge to do so is worthy of our attention.

Next Steps

The suggestions which grow out of this

discussion point to certain policies, programs and procedures which if adopted will, no doubt, reduce the lag in safety education in the secondary schools. By way of summary I shall list several of them.

1. Wherever teachers and students welcome it, enrichment of courses as here discussed, should be encouraged.

2. Safety instruction should be made an integral part of all courses into which it can be introduced appropriately.

3. Psychological considerations and the data from "Accident Facts" strongly suggest the great need for instruction, supervision and guidance not later than the beginning of the seventh grade in order to reduce the unusual accident rate in junior high school. The social and scientific significance of accidents might constitute a highly stimulating and valuable course if placed in the latter half of the twelfth grade, provided, of course, it was well taught.

4. The enlistment of students in extra-curricular safety activities, which has been done with such effectiveness in the Evanston Township High School and in other communities also, should be given a larger place in secondary education.

5. Democratized safety code making together with motivation to obey the regulations so established will contribute not only to accident-prevention but also to a basic understanding and appreciation of the democratic way of life.

6. The enlistment of all students and teachers in the reporting and recording of

accidents will fix school attention upon them and stimulate interest in their prevention.

7. If accident data are kept from semester to semester and used to create knowledge of progress or lack of it and if evaluations of the safety program of the school are definitely scheduled so that all teachers, students and other personnel are involved in making them, these procedures will stimulate enthusiasm for alertness to prevent accidents.

8. Publication of favorable records of the school as a whole, classes, social groups and individuals in preventing accidents will also be of great service in educating for safety.

9. Because the social organization of American society produces in adolescents an aversion to anything which suggests that they lack courage, are trying to "play safe" or need protection, and an attraction for whatever is daring, they are apt to be repelled by the usual terminology which is attractive to adult students of safety education. It is important, therefore, to give careful consideration to the semantic aspects of the subject especially when it is the concern of younger adolescents.

10. The law is particularly lenient with persons who are causally involved in accidents. The homes and schools reflect a similar attitude. Social and individual responsibility for such events is not well established. This condition is a survival from the days when preliterary men believed in the *mana* concept. Only proper teaching can correct it. The secondary school should provide instruction appropriate to this end.

Digest of Panel Discussion on Improving Safety Education in the Secondary Schools

"Improving Safety in the Secondary Schools" was discussed by a panel composed of:

THOMAS E. BENNER, Dean, College of Education, University of Illinois, Urbana, Ill.

WM. H. HOLLIS, Sperry Gyroscope Co., Great Neck, New York.

F. LESLIE SPER, Supervisor, Safety Education, Board of Education, Cleveland, Ohio.

A. N. ZECHER, Educational Coordinator, Traffic Safety Assn., Detroit.

Dean Benner pointed out that one weakness in education has been a tendency to think that we could solve each new problem by legislating a new course of study. He suggested that safety education requires a long-time program, as well as a program of immediate action, and to that end asserted that all teachers should have "citizen understanding" as well as some general training in safety. However, some teachers

will need specialized training in safety in order to provide supervisory talent.

Mr. Speir made a plea for the idea that safety education has its own content and should not be integrated into the regular school curriculum. One of the big problems in his experience has been interesting secondary school teachers in safety education. In Cleveland their policy is to try out a safety idea in one school before using it in others. Success in one place helps to sell it to another. One junior high school of over 1,000 pupils has been selected as a demonstration center in safety education, and is conducting safety education through committees of students and faculty members.

Mr. Hollis asked for greater practicality and advanced the following recommendations: 1. Every teacher should have a basic philosophy of safety. 2. Every teacher should understand causes for accidents, unsafe acts and unsafe conditions. 3. Safety habits should be stressed. Attitudes and knowledges are important but, in the end safety habits determine the success or failure of the program in safety. 4. We need a complete revision of our idea of safety training. We must use democratic processes; ask, not tell; respect individual judgment and give students a feeling of being a part of establishing the safety procedures.

Mr. Zechel emphasized a need for a general program in safety training that everyone gets. All children should be taught that accidents are a result of breaking a natural law.

The following suggestions came from the audience:

1. A supervisor or coordinator is needed to unify the complete safety education program in a school or school system:

2. There is a need for a brief and informative statement of existing safety agencies, their program and their accomplishments; also a summary of the successful safety programs now in operation in schools throughout the country should be made. This report should be available to groups of teachers who are working with the problem of a safety curriculum.

4. The important problem is getting teachers interested in safety. Administrators must become conscious of the need for safety education and seek ways of providing in-service training in safety education for teachers.

The meeting closed with a motion that a small steering committee be appointed to draw up the program for the coming year. It was seconded and passed unanimously. The committee is to be announced later.

Group III. Driver-Training Problems

Presiding: GORDON C. GRAHAM, Supvr., Safety Education Dept., Detroit Public Schools, Detroit, Mich., and Chairman, Driver-Training Committee.

Digest of Panel Discussion on Problems of Driver Training in the School

The two purposes for the meeting stated by the chairman were: 1. To evaluate driver training problems to determine whether which were of sufficient importance for the committee to study. 2. To determine whether it was the will of the group to become a recognized section of the Schools and College Division of the National Safety Council.

"Problems of Driver Training in the School" were considered by a panel composed of the following participants:

LIEUT. J. K. ADAMS, Sixth Service Command, Chicago, Ill.

ROYAL S. BROWNE, Instructor in Safe Driving, Lane Technical High School, Chicago.

MILTON D. KRAMER, Administrative Asst., Center for Safety Education, New York University, New York City.

A. R. LAUER, Prof. of Psychology, Iowa State College, Ames, Iowa.

E. J. NEARY, Safety Director, Waukegan Township High School, Waukegan, Ill.

CHARLES D. VIBERTS, Dir. of Safety and Education, Ohio State Automobile Association, Columbus, O.

Five problems were recommended for further study. They are:

1. Should model legislation for driver education be prepared by this group?

2. How can we get around the low pupil-teacher ratio and the high cost resistance on the part of administrators?

3. What can be done to encourage college accrediting for teacher training in driver education and its recognition in relation to other subjects?

Dr. Lauer brought out the point that the North Central Association of Colleges and Secondary Schools does accept this credit. There are two problems involved here. (1) acceptable credit for college entrance, (2) credit for teachers taking training in this field. The point was brought out that for the course to receive recognition the committee should recommend that courses be available for teacher training in all states.

4. How should the personnel for driver training teachers be selected?

5. How should the terms "Driver Education" and "Driver Training" be defined?

In addition to the questions on which it was decided further study was needed, definite opinions were expressed on three other problems. They are as follows:

Schools should not attempt to certify students for drivers' license. Mr. Browne and Dr. Lauer expressed against the school's certifications being accepted in lieu of

driver's license examinations by proper authorities because neither the teacher nor the school should be asked to assume that responsibility. However, it was suggested that the written portion of the driver's examination could be prepared by state officials and administered by teachers.

Driver training should be placed in the school curriculum just prior to the legal driving age of the local community. If learner's license restrictions prevent placing it before the legal driving age, driver training should be given at the beginning of legal driving age.

One of the difficulties in driver training has been securing cars for school use. Several methods were suggested for obtaining cars: 1. Approaching automobile manufacturers. 2. Obtaining surplus or released Army equipment. 3. The use of some trucks in the driver training course. It was suggested that a questionnaire be developed for securing further information as to how schools had secured or were procuring cars at this time.

The motion was made and passed that the Driver Training Committee make formal application for recognition as a section of the National Safety Council. This motion will be referred to the other members of the Driver Training Committee.

Group IV. Vocational Education Problems

Presiding: Co-Chairmen, Vocational Education Committee (Home Economics Education and Industrial Education), RENA HOSCEW, Supervisor, Home Economics Education, Board of Vocational Education, Springfield, Ill., and CLYDE A. BOWMAN, Dean, Industrial Education, The Stout Institute, Menominee, Wis.

Digest of a Panel Discussion on Post-War Needs

A panel composed of the members listed below opened the discussion of "Post-War Needs."

JOHN J. HARRIS, Chairman, State Coordinator of Apprentice Training, State Board of Control for Vocational Education, Lansing, Michigan.

DEWITT HUNT, Professor of Industrial Arts, Oklahoma Agricultural and Mechanical College, Stillwater, Oklahoma.

HELEN R. LEBARON, State Supervisor, Homemaking Education, Burlington, Vt.

DR. RUSSELL H. LAWRENCE, Special Agent,

U. S. Office of Education, Washington, D. C.

FRANCES L. SWAIN, Director, Household Arts Department, Public Schools, Chicago, Ill.

LETTIE WALSH, Head, Home Economics Education, Stout Institute, Menominee, Wisconsin.

Dr. Hunt stated that "Shop teachers have an interest in safety as a matter of self preservation and have one of the best opportunities to teach safety." We ought to ask teachers to pledge to teach safety in the

shop, to have two yearly inspections by a local committee from outside the school, and to report accidents on a standard accident reporting form. Moreover, all teachers' journals should have a page on safety. State departments should have a supervisor, and safety materials, such as films, should be available free to the state and city visual aid libraries. Dissemination of information concerning materials is one of the important problems in safety education.

Miss Swain pointed out that the home economics teacher needs to learn functional techniques of safety instruction. She must create a desire for safety information. The home economics laboratory presents as nearly as possible the home situation, and classes should be given to work out their own safety rules to be followed in handling equipment.

The need in teacher-training is to develop a belief in safety, in Miss Walsh's opinion. We must dramatize safety so that teachers feel the need for it and believe in it. Surveys show that there is a lack of carry-over of safety into the home, due to the lack of interest on the part of the teacher.

Miss LeBaron recommended the setting up of a family living shop, where families or individuals could come to learn how to use home equipment. The consultants in this work shop should include instructors from the various fields of vocational education. "There needs to be cooperation between the various fields of vocational education in their safety work."

Other problems that were raised by the group included:

1. Accident reporting and the use of figures after they are compiled.
2. The relation of fatigue and nutrition to accident occurrence.
3. Putting people into slum clearance houses without teaching them how to use their new equipment.

4. Cooperation between the management of federal housing and instructional agencies.

It was agreed by the committee that accident reporting is needed in the various vocational educational services. However, the accident reporting to be really valuable needs to be done in a way that records the causes of accidents.

The group voted to go on record of being in favor of encouraging provision for a vocational education meeting at the Congress next year and that the action be regarded as looking toward the formation of a section in the National Safety Council.

It was recommended that a field committee be appointed to collect material, problems, solutions, procedures now being used. The recommendation was approved and the following committee appointed:

Mr. Ammon Swepe, Associate Professor of Industrial Education, Purdue University, Lafayette, Indiana.

Mr. Roy Van Dusen, Director, Vocational and Adult Education, Public Schools, West Allis, Wis.

Miss Hazel Schultz, Home Study Department, Chicago, Illinois.

Mr. Ralph Howard, State Supervisor of Agriculture, Ohio State Board of Education, Columbus, Ohio.

DeWitt Hines, Professor of Industrial Arts, Oklahoma A. & M. College, Stillwater, Oklahoma.

The material is to be pooled, channeled through the American Vocational Association vice presidents and through the National Safety Council (Gladys T. Olson and Dr. Wayne Hughes) to the Joint Committee, which serves as a functioning clearing house to bring all of the safety problems to the attention of all concerned.

Group V. Higher Education Problems

Presiding: PAUL V. SANGREN, Pres., Western Michigan College of Education, Kalamazoo, Mich., and Chairman, Higher Education Committee.

Teacher Education in Safety

By FRANK A. BEU

President, Western Ill. State Teachers College, Macomb, Ill.

In January, 1944, the American Association of Teachers Colleges through the Standards and Survey Committee sent out a detailed questionnaire to its members relative to safety education in teacher-education institutions. At the time the questionnaire was sent out, President Sangren said, "The war has highlighted the importance of safety education and, in general, found teacher-education institutions unprepared to assume their responsibilities in this field. As almost one-third of all school age children and one-fourth of college students who die, die in accidents, we cannot afford to neglect this problem. Further, safety constitutes an important area in which the techniques of democratic action can be taught through living democratically. It is hoped that through the prevalating of the questionnaire and the careful techniques made possible by a grant from the National Safety Council, this study will be one of the most significant the Association has ever undertaken."

The results of that questionnaire have not been published, but I shall merely indicate one or two trends or facts from the study. First, the division or department most frequently giving a safety education course or doing something definitely about it was the physical education department with 21; the department in second place was industrial arts or manual arts with seven. This again indicates that teacher-education institutions are not doing their part in teaching safety education.

Safety education today has reached the stage where it demands recognition on the part of educational institutions on all levels. My discussion will deal with safety education on the college level. The general purpose and aim of college education is to provide learning experiences which will make young people self-dependent and more effective members of society as

citizens, to provide them with the cultural background to live more wholesome and longer lives. Today during a period of war, we are more in need of safety education than at any time in the history of college education. Faculties in teacher-education institutions should definitely do something about teaching safety education to the students in their respective institutions as part of the entire education of the student. Safety education must be functional and meaningful to a child, to a student, to an adult in order to have it put into practice. How many of you have seen persons of all ages after taking a drink of water at a park, or golf course, place the drinking cup or glass used upside down and keep all the germs inside rather than leaving it tipped up for the sunshine to help make it more sanitary? All of us who attend athletic games see an entire team of players use one towel. What a nice way to spread boils, skin diseases, etc. What good are safety education courses when people who teach them do not carry them out in practice?

Why should we do more about safety education? If we were interested in only one phase, namely, accidental deaths, we find that 97,500 persons were killed accidentally in 1943 according to this booklet put out by the National Safety Council. I dislike bringing up such an unpleasant subject, but sometimes it takes facts like that to make us realize what the real situation is relative to accidental deaths.

Separate Courses?

There are two possibilities on the college level in teaching safety education. One possibility is to have a separate course labeled "Safety Education." The second possibility is to definitely assign certain phases of safety education to required courses already being taught in the college. Without any statistical analysis to confirm my statement, I will venture to

say that the majority of colleges and universities will agree that we will be more likely to obtain functional results if we take the second procedure. My reason for this is that there are so many new and important subjects being added to the curriculum almost daily due to World War II that there is a limit to the number of courses or the hours in a day to which a college student can devote his time and energy. Furthermore, I believe that safety education is most effective when taught at the time and the place where it is needed. It does not make very effective learning procedure to spend hours of time telling the student about the safety precautions to take in flying an airplane when his daily interest is in driving an automobile. For example, I would teach safety education in Physical Education on the various grade levels in grade school, high school, and college relative to the type of safety measures, accidents, etc., which should be guarded against in physical education.

No doubt, immediately, someone is going to say, "But there are certain general principles which should be taught to everyone and most of all to the people who are going out as teachers." I think that is true, but again I would say we could teach these general principles in the senior year in the course that goes by various names, such as a methods course, an integration course, a seminar course, or whatever name may be assigned to it in the various colleges and universities. In this course you would point out such things as teaching children to observe traffic rules in crossing the street.

Traffic Violations

I made a special note last evening and this morning as to how few adults in the city of Chicago take any cognizance of the red and green lights. Pedestrians, not only in Chicago and other large cities that have stop and go lights, believe that those lights are a special device to harass the automobile driver when according to all standards of safety education they are put there, as we understand it, for the benefit of the pedestrians. But the average pedestrian thinks it is some kind of a game, like football, and that each individual is a "broken field runner" trying to cross the street against the red light

because they believe they are in a hurry. Sixty per cent of all pedestrians killed by automobiles in 1943 were over 45 years of age.

What is the reason for such action? First, the lack of safety consciousness. Grade school, high school, and college teachers, parents—all along the line, and not just one agency or educational department—are responsible. We must make students safety conscious. The second reason for these people skipping across the street at the risk of being hit by an automobile, which has the right of way, is that they are in a hurry. All of us should be conscious of a popular song, which most of you are familiar with, which is entitled "Relax, Take It Easy." No one who starts in time is likely to be late for an appointment, for a job, or to accomplish a certain task. That seems so simple some of you will even think it is trite for me to mention it, but I am sure all of you agree that as an administrator that idea must be repeated to the students and faculty hundreds of times during a year, directly and indirectly, to make any impression.

My opinion is that safety education would be more successful if colleges and universities would incorporate the different phases of safety education in required courses already being offered on the college level and eliminate "padding" or non-essential material in said college courses, rather than set up definite required courses in safety education. (Safety behavior applies to the entire living of each individual in nearly all his daily activities and not merely to industrial arts, to health, to athletics, etc.; it can be taught more readily in some subjects than in others.)

Safety Education Laws

Along this same line I wish to compliment the people who are in charge of safety education relative to the laws which have been passed to date in many states in that they are making the teaching of safety education on all educational levels permissive rather than mandatory. I am afraid that if you as an organization exert too much pressure and try to make these laws in the respective states mandatory there may be a reaction toward your program, and also it would mean that the

courses given would all too frequently be highly theoretical rather than functional and practical.

Safety education to me is part of general education. Therefore, it seems that we should take up the phases of general education which are in part responsible for accidents and for types of behavior which are not conducive to sane and safe living.

Before going into the second phase of what I think is an important part of safety education, I wish to point out what the members of the National Safety Council set up as a definition of safety education:

"Safety education," as used in this study, is defined as that area of experience through which boys and girls learn to make wise choices when the possibility of injury to self or others is one of the factors involved.

"Implicit in this definition is the concept that among the school's important responsibilities are the following: (1) to guide each pupil in developing the skills and abilities and in acquiring the knowledge necessary for living a full life in his environment; (2) to guide each pupil's development of the capacity to evaluate his own ability for a specific task; and (3) to guide each pupil's development of a desire to make wise choices when the possibility of physical injury is one of the factors involved."

Emotional Maturity

In view of the above definition and the implication of the definition, it seems to me there is another important phase of the cause, reason, or whatever you wish to call it for most activities which are unsafe procedures. This element, which is seldom stressed in any literature dealing with safety education, is emotional control. I think that all of you will agree that many accidents, many unsafe activities, many unwise decisions which came suddenly and unsafe procedure, are in many cases due to lack of emotional maturity.

Emotional maturity cannot be defined accurately, as what is mature or immature depends upon the age of the child.

For example, if a child of six years has an outburst of temper because he cannot attend the movies or has lost a dime, it is tolerated due to his age; if on the other hand, a young man of fifteen or twenty displays when confronted with either of the foregoing situations, he loses the respect of his colleagues. Helping a child to achieve emotional maturity does not mean that the emotions of the child must be neglected or vigorously curbed; it means that they must be controlled or directed into more useful channels. Teachers need to be alert every hour of the day to help children to better emotional control.

Human beings and their reactions are very complicated. Emotional behavior is not explained simply by saying that different conditions bring about different reactions.

Emotions may be both of a pleasurable or unpleasant type. The variation between these two states of feeling constitutes much of an individual's existence. The proper education of the emotions is one of the important tasks for the parents and teachers of young children. From our point of view as teachers, the significance of better emotional control is that it contributes toward the general happiness of the individual.

We do not claim that better emotional control will guarantee a perfect individual, but we do believe that it will bring about a great deal of improvement relative to the number of accidents or a more safe and sane mode of living. People take absurd chances due to emotional disturbances in driving a car, in athletics, in work pursuits, in pleasure.

Avoid Fear Motive

The relation of fear and safety is controversial in the minds of some people, but it is not so as far as I am concerned. Knowledge should replace fear in all situations I can think of for safety education. Would you people as teachers frighten a child not to touch a "live wire" broken down in a storm or would you explain to him why he should not touch it? Country children are afraid of policemen because their parents have caused them to be afraid. City children in the main go to a policeman for protection.

Respect or caution relative to danger should not be confused with fear. Someone will say, "But fear gives you more energy in case of danger." It might, or it might cause a person "to freeze on the spot" in the slang expression.

You naturally will ask what we can do to improve the pupils' emotional control in order to directly and indirectly improve safety education:

1. Improve the individual's health.
2. Remove the cause for the emotional disturbance.
3. Teach the child skills or techniques which will aid him in overcoming his dread of a situation. For example, fear of water may be overcome by learning how to swim.
4. Interest the child in something other than the occasion for the anger.
5. Bring the child into contact with the fear object, or situation gradually. The association of a reward or a pleasing stimulus with the fear stimulus may improve the situation.
6. Appeal to the individual's intelligence.
7. Direct emotions into useful channels.
8. Set a personal example of better emotional control.
9. Remove privileges in response to outbursts of fear or anger.

Wartime Attitudes

A third phase of safety education which colleges have neglected is the correction of the unsafe or reckless attitude developing on all age levels due to World War II. It seems to me that teacher-education institutions must present subject matter and a philosophy to their graduates to help overcome this attitude on all levels.

I shall start with the grade children and see what type of unsafe and inappropriate impinging extra-curricular education they are confronted with which is not good. How many of you in this room ever listen to a radio program for children between five and six o'clock in the evening? You would obtain a liberal education in what a program should not be if you do. I shall not attempt to describe them for you, but will merely state that those of

you who have listened will agree that those programs are over exciting, full of fear situations, killings, revenge, crime of all sorts. What effect does such programs have upon children? It seems so obvious that they are bad from a health standpoint, a cultural standpoint, and a safe mode of living. The same thing can be said about certain motion pictures such as "The Lost Salt Mine, Episode No. 23." Again I urge you, for your own education, to visit one of these double feature special Saturday afternoon movies in the average small city. It is the same as the radio program, and possibly a little more harmful as in addition to hearing the undesirable actions they likewise see them on the screen.

You say, "What can we do about it?" A great deal, as radio programs are portrayed according to what the public wants. The same thing is true of motion pictures. If you start a campaign in your respective communities discouraging parents from having their children listen to such radio programs or attending such movies, those agencies will change to the type of radio programs and motion pictures which children will listen to or attend. We as educators are lax in not educating parents, teachers, and children as to what type of programs they might listen to or what movies to attend.

Here is an example of the past week. Several children, ages five to nine, attended a movie entitled "Lady of the Flame" in which the main actress jumped through a flaming circle and many other daring acts. The children came home, built a bonfire in the basement to imitate her, and nearly burned the house down.

Going now to the college level and adults in society, we are all aware of the letting down of standards relative to morality, thoughtfulness, sympathy, kindness, etc. Do any of you think the post-war period will be different? We had men at our national conference at Jackson's Mill in August of this year who are in charge of teacher-education institutions who were frankly worried about the attitude of the returning soldier. One said, "What are we going to do when a soldier does not like what is being taught and tells the professor to go to hell?" We are going to have a million men

back on college campuses who are used to death, destruction, pain, suffering, and being reckless or hard-boiled. Here is an example of recklessness reported by the National Safety Council as quoted in the October Readers Digest, 1944, page 98. A man in California bet that he could fill his mouth with gasoline and insert a lighted match into it without getting hurt. He nearly lost his life. I am not arguing that he learned this trick from Hitler, but cite it as the type of recklessness which is brought on by the war.

Colleges should plan now to do something definite about setting up plans for

orienting returning veterans and civilian students to peace time attitudes, activities, and thinking when World War II is over. A quick survey of 1,149 colleges and universities by Ohio State University as to post-war plans of all types relative to buildings, curriculums, and techniques for post-war changes revealed that only 363 replied to the questionnaire. Out of this number only 35 indicated that any plans had actually started. The prize answer came from a junior college official who said "We believe the junior college should follow and not lead in educational planning."

Digest of Panel Discussion on What Is Being Done Now

"What Is Being Done Now" was discussed by a panel composed of:

DONALD R. ALTER, Professor of Social Sciences, Eastern Illinois State Teachers College, Charleston, Ill.

GERTRUDE BYRNE, Department of Physical Education, Chicago Teachers College, Chicago, Ill.

WALDO E. LESSINGER, Dean, College of Education, Wayne University, Detroit, Mich.

CECELIA WERNER, Dean of Women, State Teachers College, Milwaukee, Wis.

The panel agreed that lack of time can no longer be used as an alibi for failure to include safety education in the higher education curriculum. At the same time, the panel concurred with Dr. Ben that very little was being done in safety education on the higher education level. Little material for in-service training of teachers is now available.

Dean Lessinger outlined safety courses now being taught at Wayne University. They include materials and methods in safety education and instructional aids in the field of visual and auditory devices. In

addition, safety materials are integrated in several other courses at Wayne.

Miss Byrne stated that first-aid safety education was practically the only course in safety education at Chicago Teachers College.

In Dr. Alter's opinion, it is desirable to appoint a coordinator of safety education for each institution if it is possible to obtain trained leadership in safety at the present time.

Dr. Sangren closed the meeting by summarizing the problems presented in the panel as follows:

1. How can we interest administrators in teaching safe living?
2. Is it desirable to have a special course in safety education or have the concept of safe living integrated throughout the general program of education?
3. What responsibility should teachers colleges assume in giving in-service training for safety education?
4. Should there be a clearing house for what is already being done?
5. Is it desirable to have a coordinator of safety activities in each member school?

WEDNESDAY AFTERNOON SESSION

October 4, 1944

Presiding: H. T. HEALD, Pres., Illinois Institute of Technology, Chicago, Ill., and Vice-Pres. for Schools and Education, National Safety Council.

Psychological Aspects of Accident Prevention

By ERNEST R. WOOD
Consultant, Administrative Committee,
Center for Safety Education,
New York University

The purpose of this paper is to answer, in part, three questions:

1. What are the chances that a person will be accidentally killed, or permanently injured, or non-fatally injured before he reaches a given age?

2. What are some of the human factors which contribute to accidents?

3. What psychological principles may be utilized to help individuals to make adequate adjustments to life situations so that they may live courageously and dangerously, yet with a greater margin of safety?

The Chances to the Individual of Accidental Death, of Permanent Injury, and of Non-Fatal Injury

The following estimates are based upon data presented in *Accident Facts, 1941 Edition*. The year 1941 was selected because it was the latest year before the factor of war influenced the data.

On the basis of the 1941 accident reports, a child born today has one chance in 82 of being accidentally killed before he reaches the age of 25; one chance in 21 of being permanently disabled; and better than a one to one chance of being injured. He is certain to have many narrow escapes.

TABLE I

The Number and Percentage of Deaths for Each Classification of Each Age Group for 1941 (Table is based on data presented in 1943 edition, *Accident Facts*, page 56)

Age Group	Motor	Falls	Burns	Drown-	Rail-	Poison	Fire-	Mechani-	All	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
0-4	No 1,378	420	1,510	650	98	530	82	1,340	1,044	7,052
	% 20	6	21	9	1	8	1	19	15	100
5-14	No 2,838	500	750	1,320	256	110	436	492	6,702	
	% 42	8	11	20	4	2	7	7	101	
15-24	No 8,414	990	690	1,650	886	300	710	706	14,346	
	% 59	7	5	12	6	2	5	5	101	
25-44	No 11,069	2,580	1,630	1,700	1,878	1,000	706	2,420	22,963	
	% 48	11	7	7	8	4	3	11	99	
45-64	No 9,829	4,700	1,540	1,160	1,627	880	383	2,390	22,509	
	% 44	21	7	5	7	4	2	11	101	
65 and above	No 6,367	16,260	1,680	420	612	550	92	1,720	27,701	
	% 23	59	6	2	2	2	—	6	100	
Age not given	74	20	20	30	33		5		38	220
Total	No 39,969	25,470	7,820	6,930	5,390	3,370	2,414	1,340	8,810	101,513
	% 39	25	8	7	5	3	2	1	9	99

Let us examine the record with reference to various age groups. Table I presents the number and percentage of accidental deaths for each accident classification for various age groups in 1941. One can see the frequency of different kinds of accidental death within a given age group. Thus, (2)* 20 per cent of the total number of accidental deaths of children less than 5 years of age resulted from motor accidents; (4) 21 per cent were caused by burns; and (9) 19 per

cent resulted from mechanical suffocation. By reading down a column one may also see the relative frequency of a given type of accident at the different age levels. Thus, (2) motor accidents accounted for 20 per cent of all accidental deaths in the 0-4 age group; 42 per cent of the 5-14 age group; 59 per cent of the 15-24 age group.

*The numbers in parenthesis refer to the columns of the table.

TABLE II
Relation Between the Number of Accidental Deaths and the Population for Each Age Group for 1941

Age Group	Approximate Population*	Accidental Deaths	Number of Accidental Deaths per 100,000	Ratio of Deaths to Population
(1)	(2)	(3)	(4)	(5)
0-4	11,040,000	7,052	63.9	1:1565
5-14	22,010,000	6,702	30.4	1:3284
15-24	24,030,000	14,346	59.7	1:1675
25-44	40,250,000	22,963	57.1	1:1751
45-64	26,670,000	22,509	84.4	1:1185
65 and above	9,220,000	27,701	300.5	1:333
Age not stated		220		
Total	133,220,000	101,513		

*Approximate population of each age group was determined on the basis of the total number of deaths (3) and the number of deaths per 100,000 (4).

In Table II attention is directed to the relation between the number of accidental deaths and the population of each age group in 1941. (5) One child to every 1565 children in the 0-4 age group was accidentally

killed; 1 to 3284 of the 5-14 age group; 1 to 1675 of the 15-24 age group; 1 to 1751 of the 25-44 age group; 1 to 1185 in the 45-64 age group; and 1 to 333 in the group of 65 years and over.

TABLE III

The Chances That an Individual of a Particular Age Group Will Live or Be Killed During One Year and During the Years of the Age Group. (It is assumed that all factors would remain constant as of 1941)

Age Group	Number of Years in Age Group	Chances During a Given Year of Death	Chances During a Given Year of Living	Chances During a Given Year of Death	Ratio of Death to Pop. of Age Group
(1)	(2)	(3)	(4)	(5)	(6)
0-4	5	1/1565	1564/1565	.99681	.00319
5-14	10	1/3284	3283/3284	.99696	.00304
15-24	10	1/1675	1674/1675	.99405	.00595
25-44	20	1/1751	1750/1751	.98864	.01136
45-64	20	1/1185	1184/1185	.98098	.01902
65-75	10	1/333	332/333	.97038	.02962

Table III shows the chance that a person will be accidentally killed during the time interval corresponding to each age group. (7) There is one chance to 314 that he will

be killed before he is 5 years old; one chance to 329 that he will be killed during the 5-14 year period; 1 to 168 during the 15-24 year period.

TABLE IV

The Chances That an Individual Will Live or Be Killed Between Birth and the End of a Particular Age Group. (It is assumed that all factors remain constant as of 1941)

Age Group	Number of Years in Age Group*	During Age Group, Chances of		Ratio of Deaths to Population of Age Group	Approximate Population
(1)	(2)	Living (3)	Death (4)	(5)	(6)
0-4	5	.99681	.00319	1:314	11,040,000
0-14	15	.99378	.00622	1:161	33,050,000
0-24	25	.98787	.01213	1:82	57,080,000
0-44	45	.97664	.02336	1:43	97,330,000
0-64	65	.95808	.04192	1:24	124,000,000
0-75	75	.92969	.07031	1:14	133,220,000

Table IV indicates the chances that a child will be killed before he reaches a given age. (5) There is one chance to 314 that a child will be killed before he reaches the age of 5; 1 to 161 that he will be killed before the age of 15; 1 to 82 before the age of 25; 1 to 43 before the age of 45; 1 to 24 before the age of 65; 1 to 14 before the age of 75.

TABLE V
Deaths, Non-fatal and Permanent Accidents by Location (1941)
(Based on *Accident Facts* 1943, page 52)

(1)	Motor Vehicles (2)	Public (not Motor Vehicles) (3)	Home (4)	Occupation (5)	Total (6)
Deaths	40,000	15,000	31,500	18,000	102,500
Non-Fatal Injuries	1,400,000	1,800,000	4,650,000	1,600,000	9,300,000
Permanent Injuries	110,000	50,000	130,000	70,000	350,000
Ratio of Deaths to Permanent Injuries	1:3	1:3	1:3	1:4	1:4
Ratio of Deaths to Non-Fatal Injuries	1:35	1:120	1:148	1:89	1:92
Ratio of Permanent to Non-Fatal Injuries	1:13	1:36	1:33	1:23	1:27

Table V presents pertinent facts concerning deaths, non-fatal injuries and permanent injuries; also ratios with respect to the place where the accident occurred. For each death there were four permanent injuries. For each death there were ninety-two non-fatal injuries. There was one permanent injury to every twenty-seven non-fatal injuries.

By using this set of ratios in connection with the data presented in Tables I, II, III, and IV one may determine approximately

the frequency of permanent injuries and non-fatal accidents. We may illustrate by column (5) of Table IV. Since the frequency of death in relation to permanent injuries is 1:4, the ratio of permanent injuries to the population of the respective age groups would be 4:314; 4:161; 4:82; 4:43; 4:24; and 4:14. The ratio of non-fatal injuries to the population within the respective age groups would be: 92 to 314; 92 to 161; 92 to 82; 92 to 43; 92 to 24; and 92 to 14.

TABLE VI
Percentage of Accidental Deaths According to Place of Death for Each Age Group

Age Group	All Causes of Deaths	Motor Vehicle	Public (not Motor Vehicle)	Home	Occupational
(1)	(2)	(3)	(4)	(5)	(6)
0-4	100	17	8	75	0
5-14	100	40	29	29	2
15-24	100	54	23	11	12
25-44	100	44	17	14	25
45-64	100	41	16	18	25
65 and over	100	20	13	62	5
All Ages	100	36	16	34	14

The above percentages will be found on page 63 of *Accident Facts*, 1942 edition.

The percentage of accidental deaths for a given age group with respect to the place where the accidents occurred will be found in Table VI.

Human Factors in Relation to Accident Prevention

The rate of increase in accidental deaths is such as to be a matter of deep concern. Any attempt to understand the cause of accidents reveals the need for more complete reporting of accident facts. We need to know all we can about the physical environmental factors and about the human factors that have contributed to each accident. Only by such complete reporting of the circumstances under which each accident occurs can we approach a scientific evaluation of the part that human factors play in accidents.

Much has been done to decrease the hazards where machinery is used in industry. Much remains to be done in reducing the number of physical hazards in the home, on the farm, on streets and highways, and elsewhere. So far as I can see, greater progress has been made in controlling the physical factors in certain situations than has been made in controlling the human factors.

It is my belief that the next important advance must be made at this point. The inadequate data we have concerning accidents suggest some of the ways in which we may work toward better control of the human factors.

Obviously the new-born babe can assume no responsibility for its own safety. Today our sons reaching the age of 18 are considered old enough to face the strenuous situations of war. They are not completely

equipped to take care of themselves under all circumstances. To what extent they should be is not known. Some of them are better prepared than others.

As an individual's age increases, there is a gradual and continuous decrease in the amount of supervision and direction given him by others. The amount of supervision approaches zero, but does not reach zero. There must be continuous adjustment to life situations.

The new-born babe starts at zero. He has no understanding of the world about him. He does not possess skills, knowledge, attitudes, appreciations, techniques, ideals. He does not have insight of the world, neither can he control himself. He is not integrated. However, he possesses potentialities. If he is to have a long, useful life, he must change. By the time he attains the age of 18 he should possess the skills, knowledge, attitudes, appreciations, techniques, ideals and insights that will help him meet life situations courageously and successfully. He should be so integrated that he can control himself in the major life situations.

If he is to gain self-control, many educational forces must play a part. Parents, older brothers and sisters, neighbors and neighbors' children, teachers, policemen, doctors, nurses, lawyers, Red Cross workers, Y.M.C.A. workers, playground directors, automobile drivers and passengers, employers and employees, et cetera, must have a better understanding of the accident problem. They must understand better the characteristics of the child and how he adjusts. They must understand the goals to be reached and the methods of procedure. Their efforts must

be coordinated. It must be an "all for one and one for all" program of education. It is a difficult task, but not an impossible one. There are sufficient leadership, intelligence, insight and financial means to accomplish it, provided there is enough unity of purpose.

The limits of this paper will permit us to study but briefly the problems of the respective age groups. In each group we shall consider (1) part of the accident data, (2) some of the human factors involved, and (3) some suggestions for prevention.

0-4 Age Group

AccidentsTable III(7):
Death 1:314. (Permanent disabilities 4:314; non-fatal accidents 92:314.)
WhereTable VI:
Home 75%; Motor 17%; Public 8%.
ClassificationTable I:
Burns 21%; Suffocation 19%; Motor 20%; Drownings 9%.

These facts direct our attention to burns received in the home. Fire is essential in the home. The child's senses are hungry for stimulating situations. He is attracted by fire. His normal response is to move toward fire. If it is an open fire his clothing may ignite. This is especially disastrous if other members of the family are not present.

The responsibility of the adult members of the family is clear. If they understand the dangers, they will take adequate steps to prevent such an accident. There is another obligation that falls upon the parents. They must train, condition, and educate their baby so that he will stay a safe distance from fire. They can not reason with him before he has sufficient experience. But these early situations are the beginnings of later meaningful experience. At least they should be.

It is important that the child be given the right start. A successful trainer of dogs once said that when he began teaching a dog a new trick he never permitted an exception to occur. It is just as important in the training of a child not to permit an exception to occur. During this age period, especially the early part of it, it may be necessary to provide a direct immediate punishment for the overt act. If punishment is used, care must be exercised so that the child will associate the punishment with the fire situation. In one instance, parents tried

to talk with their first child about running into the street. It did not accomplish the purpose. When their second child came along, they used immediate punishment for the first overt act. After two such punishment situations, they had no further trouble.

5-14 Age Group

AccidentsTable III (7):
Deaths 1:329. (Permanent disabilities 4:329; non-fatal accidents 92:329.)
AccidentsTable IV (5):
0-14 age group: Deaths 1:161 (4:161, 92:161.)
WhereTable VI:
Motor 40%; Public 29%; Home 29%.
ClassificationTable I:
Motor 42%; Drowning 20%; Burns 11%; Falls 8%; Fire arms 7%.

During this age boys and girls gain confidence in exploring the world about them. The radii of their explorations increase very rapidly. They are continually meeting new situations, many of them possessing potentialities for disaster. It is in these situations that the young person must be able to utilize his experience. If he does not have adequate experience and utilize it, he may lose his life.

Children should not be denied the privilege of exploring the world about their homes. The experiences gained are essential to their general development. Responsibility rests upon adults for knowing where the dangerous situations are that children must face. Adults must seek adequate safeguards. In certain instances it means the removal of the element of danger, or a warning of it. In all cases it means so training the young person that he will have a better opportunity to meet the problem and solve it. It would be desirable for the adults and the young of the community to face together these points of danger and to provide all possible means of protection. It should be a cooperative affair.

When we face the tragedies which occur, we begin to raise questions about the effectiveness of the use of learnings in situations other than those in which they were first learned. It is the problem of transfer of training. A large volume of experimental work has been done. Sufficient is known about transfer to be of assistance if the facts were used. In too many instances in learning situations, parents, teachers, and

others talk about transfer while practicing formal discipline techniques.

I am afraid that part of the activities of our school safety programs are open to this charge. I have been interested as an observer in the school safety traffic patrol. The members of the patrol do an excellent job when on duty. Certain of these patrol members become very conscious of the meaning of what they do. Others do not. Most of the other children meet the patrol and obey the signals at the guarded points about the school. I have watched these same children away from school. Many of them do not hesitate to violate all of the rules they have obeyed around the school. They dash out into the street for a ball. Younger and older children play in the street. There is little carry-over to the home community.

There could be a greater carry-over if the essential principles and conditions of transfer were utilized. There is need for a closer cooperation of the home, the school, and other community agencies. So long as there is little coordinated, cooperative effort among these agencies, so long as the specific goals are not known nor understood, so long as parents and others do not know the significance of desirable steps of procedure by means of which the goals may be attained, the effectiveness of the school safety program will fall short.

Let us go back to the school safety patrol stationed at the important corner where the main highways cross. There is little gained by mere repetition. If the members of the patrol and other pupils go through this cross-road procedure each day merely as a matter of form, they will use little of this experience in other traffic situations.

The experience would be more effective if the pupils were conscious of the relationship of the problems of this intersection to the problems of other intersections. It would be more significant if they realized that no two situations are the same in all particulars. The green and red lights may be constant at this point but not at other points. The human beings involved are always different. Even though major elements of the total situation may indicate safe passage, the pupil must detect quickly the significant element that is different. It means that every pupil, even at the patrolled corner,

should be alert and on his own in detecting the nature of all the essential elements in the situation, even though the patrol member has indicated safe passage. A better job of teaching can be done.

To what extent are the lessons on safety being put into practice in the home community? This is one of the acid tests of the effectiveness of teaching. The job of teaching is not completed until there is evidence of continual progress of the pupil in putting into practice in whatever life situation he faces the essentials presented in the school environment. There must be a closer relationship among the various agencies (school, home, police, et cetera) in determining the effectiveness of the teaching.

In a community where the teachers are said to be doing a fine job of teaching safety there is little evidence of its carry-over to the community. Parents are not conscious of the great hazards their children face each day in playing in a busy street near the intersection of a main thoroughfare. Near the school the children are protected and are careful. They are neither protected nor careful in the neighborhood of their homes. One mother said she did not want her children in the street but that they would play in the street, and she thought they would in time get it out of their system if she let them do so. They continue to play in the street. The parents must be reached and their cooperation secured in teaching functional safety procedures if their children are to develop attitudes and habits of safety.

We do not fully realize the influence of proper motivation in the lives of children. What results could be accomplished in a community where all understood motivation and the means of securing it. Recognition of desirable, positive behavior of a child is very important. When he knows that he can utilize his learnings in real life situations and that they are recognized by others, he becomes a different person. There is nothing that is quite so important as success in life situations. We have not appreciated the full value of appropriate awards for high levels of functioning in the places where the acid tests are met. Why should not the boys and girls in our communities who have achieved a high level of performance receive high recognition?

15-24 Age Group

Accidents Table III (7):
Deaths 1:168 (4:168; 92:168).

Accidents Table IV (5):
Age group 0-24, deaths 1:82 (4:82;
92:82).

Where Table VI:
Motor 54%; Public 23%; Occupational
12%; Home 11%.

Classification Table I:
Motor 59%; Driving 12%; Railroad
6%; Burns 5%; Firearms 5%.

This is the age group where accidental deaths caused by the automobile reach high tide. The child reaches the age at which the state grants him the privilege of sitting in the driver's seat of one of the powerful mechanical miracles of this age, even though he does not understand its potentialities nor his own responsibility to other members of society.

Because of his appearance in the driver's seat, he believes that he has attained a very high position. Young people who may have paid little attention to him up to this time begin to cultivate him. Young ladies indicate a greater interest than formerly. He and his social group can reach places they could not before. The radius of his world has suddenly been increased.

When another group blow their horn and pass him, he and his group are apt to show them a thing or two. He may become emotionally stirred. If he and his party have been drinking, and if it is dark or visibility is poor, and if the road conditions are not the best, the hazards are great. Is it any wonder that the accident rate by automobile is so high during this period? Excellent progress is being made through driver training school programs. The need is great.

Analysis of the elements in automobile accidents directs attention to such factors as the following:

1. Drivers are violators in 2 out of 3 accidents.
2. In the cities, 3 of 5 victims are pedestrians.
3. 11% of the drivers and pedestrians have serious bodily defects.
4. 9% of the vehicles are unsafe.
5. Pedestrians are hit at intersections, between intersections, in coming from

behind parked cars, when walking in the road and when playing in the road.

This list reveals the importance of meanings in the lives of drivers and pedestrians. The rapidity of the development of the automobile together with the ease with which the privilege of driving can be secured has given little time for the development of the essential meanings that should function in the every-day lives of drivers and pedestrians. The development of the meaning is the most important task to be done. At the same time it is one of the most difficult tasks.

The development of the meaning of the automobile should be accomplished before the potential driver reaches the age when he can occupy the driver's seat. Not only every driver but every pedestrian should receive this training. If the development of the full meaning of the automobile could be accomplished during the first 15 or 16 years of the child's life, he would understand the necessity for keeping at all times complete control of the automobile, control of the outside physical factors, and control of himself.

This cannot be done within a few weeks when he arrives at the lawful age for driving. It must be started during the pre-school period and continued through the school years. It can not be done by the school alone. It can be accomplished through the intelligent cooperation of the school, the home, and other agencies.

25-44 Age Group

Accidents Table III (7):
Deaths 1:88 (4:88; 92:88).

Accidents Table IV (5):
Age group 0-44, 1:43 (4:43; 92:43 or
2:1).

Where Table VI:
Motor 44%; Occupational 25%; Public
17%; Home 14%.

Classification Table I:
Motor 48%; Falls 11%; Railroad 8%;
Burns 7%; Drowning 7%.

Let us consider a few facts in relation to occupational accidents. An analysis (*Accident Facts, 1943 Edition*, p. 17) shows the relationship between two sets of factors: (1) hazardous arrangement, improper guarding, defective agencies, unsafe dress, no mechanical cause; and (2) improper attitude, lack of knowledge or skill, no per-

sonal cause. This is helpful so far as it goes. There is need for a better understanding of just what human factors are involved. However, the importance of developing in workers adequate meanings of the total situations is evident.

If adequate meanings can be developed so that each person understands what he is doing and its relation to himself and all of his co-workers, his attitudes are apt to be in keeping. If he has or can develop a sensitivity toward potential dangers to himself and to others and will take steps to eliminate the hazards, accidents will be reduced. Appropriate goals can be set up which he understands and approves. He can be trained to take the necessary steps to attain these goals. Provision can be made to detect his lack of insight, low intelligence, incorrect skills or lack of skills, and physical inadequacies. This calls for the expert. Many large industrial organizations have experts. The fruits of their labor are noteworthy.

45-64 Age Group

Accidents Table III (7):
Deaths 1:53 (4:53; 92:53).

Accidents Table IV (5):
Age group 0-64, deaths 1:24 (4:24;
92:24 or 4:1).

Where Table VI:
Motor 41%; Occupational 25%; Home
18%; Public 16%.

Classification Table I:
Motor 44%; Falls 21%; Burns 7%;
Railroad 7%; Drowning 5%.

These facts direct attention to the high percentage of deaths (21%) resulting from falls.

Age Group 65 and above

Accidents Table III (7):
Deaths 1:34 (4:34; 92:34).

Accidents Table IV (5):
Age group 0-75, deaths 1:14 (4:14;
92:14 or 6½:1).

Where Table VI:
Home 62%; Motor 20%; Public 13%;
Occupational 5%.

Classification Table I:

Home 62%; Motor 20%; Public 13%;
Occupational 5%.

Classification Table I:
Falls 59%; Motor 23%; Burns 6%.

Sixty-two per cent of the fatal accidents occur in the home, 59% of the fatal accidents are falls.

Important changes take place as a person attains the ages of 50 and above. The changes over the years are so gradual that the person is not fully aware of them, their nature or their significance. The older person is apt to think that he is as capable as he ever was. No younger person need give him a hand or tell him that he is too old to do this or that. He knows better, because he has in previous years demonstrated again and again his ability.

It is important to get ready to meet the oncoming years by gaining a fuller meaning of bodily and mental changes in order that we may gradually modify our activities so that they will more nearly harmonize with our abilities. During these years our eyes and ears may not be so efficient, our bones are more brittle, our coordination not so certain. One should understand all these factors in relation to his behavior.

Advances have been made by the pioneers in the field of accident prevention. However, much remains to be done. We are on the threshold of great advances. As a larger number of persons become aware of the significance of the accident problem, the situations in which accidents occur, the human factors that contribute to accidents, the principles that can be used to assist every individual to make adequate adjustments to life situations, advances will be made.

In making these advances our objective will not be to fill our children with fear. They must be so taught (1) that they have the full meaning of the dangerous life situations, (2) that they can detect the dangerous elements, and (3) that they possess essential skills, knowledges, attitudes, appreciations, techniques, ideals. They can then face life situations courageously and dangerously, yet with a greater margin of safety.

Winding Up This Mechanism

By P. B. JACOBSON

Superintendent, Public Schools, Davenport, Iowa

Nothing is so comforting about an accident as the thought that the percentage of accidents will decrease if you do something about them—if you pay some attention to them.

For example, an advertisement in Cleveland stated there had been a reduction of 82 per cent in deaths by commercial vehicles; 69 per cent in fatal accidents in industry; 69 per cent decrease in home accidents; 68 per cent decrease in other deaths; and 33 per cent decrease in traffic deaths. You can get results, particularly if you put on a program which people consider sensible. In this process of accident prevention, the National Safety Council has been a factor, probably doing more than any other organization to prevent accidental deaths.

The school has a reason to be particularly concerned about the mortality rate among young people, because accidental death is the greatest single cause of death in the school year. Schools have accepted the responsibility of doing something about teaching safety and practicing it. During the past quarter of a century there has been a great dramatic development in safety education, particularly as it has been manifested in the school patrol, which numbers over three hundred thousand members.

The school patrol is probably the most common single element of school safety programs, and the most readily visible one in every community.

A brief study was made of the youngsters in one city. Fifty-eight per cent had had experience on school patrols and 90 per cent who had participated said it had been of value to them.

But I should like to make two points about a safety patrol clear. One, the safety patrol is only a portion of the total safety program. Two, no clear decision has been given by the court concerning a school administrator's responsibility for liability from accidents resulting from

traffic direction by a minor appointed by the school administrator.

Content and Method

The content of safety education comes from textbooks, workbooks, slides, films and from "Accident Facts," published by the National Safety Council. Content in the lower grades consists of sensitizing children to the hazards of scooters, bicycles, and pedestrian dangers as well as dangerous toys. I should like to emphasize the fact that I think we have used too little restraint. We might be more drastic in the way we restrain children in the schools from doing some of the dangerous things they are inclined to do.

In the intermediate grades, emphasis is placed on fire prevention, water safety and first-aid, and safe places to play.

In the junior and senior high schools, safety instruction deals with bicycling, safety in the shop, gymnasium, and corridors—the places where accidents frequently happen. Safe driving and safe playing locations are also given some emphasis.

It has come to my attention that at Grant's Pass, Ore., bicycles are licensed and when the bicyclist has accumulated sufficient demerits, the bicycle is put in jail so the youngster cannot jeopardize his safety in the immediate future. Such a procedure would be an impossibility in a large city because of administrative difficulties, but it works well in small communities.

In Indianapolis a five-day pre-school meeting is held to train school safety patrols and safety officers, so they can better carry out their function of protecting children.

Methods in safety education revolve largely around the study and report of text material with discussion by the youngsters, safety films, discussion of school accidents, fire prevention surveys, charts, graphs, and poster construction, pupil skits on safety. There are some tests of knowledge. By and large, safety in-

struction is not so well organized as the more formal part of the school program. Generally, the director of health and safety education has only part time, or no special time, set aside to promote safety education. Because such a large proportion of the accidents in the school occur in the gymnasium and on the playing field, it seems to me there is good reason for attaching health and safety to physical education departments.

Accounting

It is also heartening to know that forty-one states are paying some attention to health and safety through state departments of education. Because no place is set aside for safety education in the budget, it is ordinarily assumed to cost very little. Administrators have thought, "We have teachers who can teach safety education in the regular periods, so it costs nothing." That is incorrect. It costs as much as anything else, for you teach it in place of another subject when you take the time to teach safety. Our accounting method should be arranged so that we can say that safety education is a vital part of the total program and that we have allocated this part of the total cost of the schools to it.

I think we may make the generalization that there is too much overlapping between the material provided in the primary and the intermediate grades. A weakness in many of the programs, although I rather favor this procedure, is the fact that it is taught in connection with other subjects, and so may become incidental or accidental.

Minneapolis, Philadelphia, Cleveland, and Kansas City have programs in which safety is taught. Cleveland's plan centers around the months: October—fire prevention; November—street safety; December—home safety, including the Christmas tree; January—winter driving, coasting, hitching, snowballing; February and March—first aid; and during the late months of the school year, swimming and boating, going barefooted, and identifying poisonous plants.

Some schools have made use of safety councils, and their programs have been most effective. The council is another means by which safety can be promoted,

but it is not nearly as common yet as school safety patrols.

Secondary School Program

Safety programs in the secondary school are described best as chaotic. They are not as well developed as at the elementary school level. Where it is taught, safety is frequently a separate subject, a unit in another subject, or correlated with some other subject in the curriculum. The best work in safety training is in the shop courses with reference to hazards in the shop.

Many schools have allocated safety to the social science department. Oyster Bay, N. Y., for instance, has it in the ninth grade social science course. Indianapolis teaches safety in the ninth grade and also provides driver training in the tenth, eleventh and twelfth grades.

Greatest attention to driver training has been given at the senior high school level, although since the war the emphasis there has fallen off markedly due to the inability to obtain the necessary vehicles. The driver training program was not originally operated by school men, but we expect it will be a vital part of the safety program in the post-war secondary schools.

It seems to me that if we are going to have adequate programs of safety education, we must strengthen the teacher, one of the weakest links in the safety program. We must have an in-service training program to teach teachers to be cognizant of safety, just as in the past we have had to have programs to teach the importance of extra curricular activities when we brought them into the program.

One other point. The other day a junior high school principal in my community had a reckless driver arrested because he had jeopardized the life of a child in the school. No accident—nothing happened, but we were able to have the driver's license taken up by the judge and put into cold storage for a considerable period of time. I believe we have done that young man a service, and I am certain we have done the community a service, and we have practiced safety. I think all too frequently we, as school people,

have not insisted on safety regulations in the vicinity of the school. We must do so. In conclusion, let me say that accidents can be reduced. Schools cannot ignore

their responsibility. Sufficient material can be articulated with the other subjects. We must have someone to direct the program in a school system.

PARTICIPATION VS. REGULATION

A Panel Discussion

Discussion Leader: FRANCIS L. BACON, Principal, Evanston Township High School, Evanston, Ill.

Panel Members:

LESTER BALL, Supt., Board of Education, District No. 108, Highland Park, Ill.

HAROLD K. JACK, Supervisor, Health & Physical Education, Department of Education, St. Paul, Minnesota.

R. H. McKAY, Principal, W. E. Greiner Junior High School, Dallas, Texas.

SISTER MARY CARMOLYN, B.V.M., Mundelein College, Chicago, Illinois.

SANDFORD SELLERS, Jr., Headmaster, Elgin Academy, Elgin, Illinois.

DR. NEIL H. GRASSICK, Chief, Police Department, Kingsville, Ontario, Canada.

DR. BACON: Each member of the panel will be asked to give a brief statement of his opinion of the problem, "Participation vs. Regulation."

MR. BALL: First of all, I should like to make an observation in regard to the elementary school. I often wonder, after I hear about possible sources of accidental deaths, how our youngsters escape. I should like to point with pride to our elementary schools. By and large, I think they do an increasingly better job of making your children conscious of the needs for safety and, as a matter of fact, I think our youngsters, by and large, outstrip their parents by 50 per cent on the matter of public safety.

In the matter of participation vs. regulation, I am speaking of elementary school people. It is not a question of having a child participate in a safety program or regulating him. We do both. However, my concern is with getting parents to participate. We cannot have a safety program in a community for children and not have safety regulations lived up to by the parents. My suggestion would be, let's not quarrel over regulation or participation, but let's get our

safety programs over to dads and mothers.

MR. McKAY: With the coming of the 20th century, many changes developed in educational fields. The teaching of reading, writing, and arithmetic in the little red school house has grown to an enriched curriculum in large consolidated schools. One of the most timely, the most modern, and the most necessary of these new subjects is SAFETY. If American children are to reach adulthood unmaimed and enjoy life to its fullest, they must be trained in live safety. How is this to be accomplished? The answer is of course by making safety an attitude from the first grade through the twelfth. The organization of the junior high school lends itself peculiarly to the teaching of safety. Numerous opportunities are presented daily, yes, almost hourly for effective lessons in practical safety. In my own school, safety education may be considered under six salient divisions: the HOME ROOM; the CLUB; the STUDENT COUNCIL; the BULLETIN BOARD; the CLASSROOM; and the ASSEMBLY.

In the home-room a great variety of safety handbooks and traffic pamphlets are available to the students. Among those most frequently used are: Avoid Arrest and Punishment; Contribution to Traffic; Drive and Live; Facts About Traffic Accidents; Vehicular and Pedestrian Traffic; Handbook for Drivers; How Is Your Driving?; Signal Your Intention; Smash Hits of the Year; the Travelers Quiz; and more recently the materials from the National Safety Council. With this information at hand the pupils carry on round table discussions, quiz programs, contests and campaigns.

Several of the clubs make safety their

main theme. Examples of clubs of this type are: the Bicycle Club whose purpose is to teach its members of the rules of safe bicycle riding and how to care for the bicycle in order to avoid having accidents; and the Red Cross Club which instructs its members in the need for and the use of First Aid. Certain other clubs make safety a secondary aim. These include: The Press Club whose members write editorials and articles featuring some phase of safety for every issue of the school newspaper; the Sports Club which gives very definite instructions on how to play school games in such a way that no one will get hurt; the Girl Home-Makers Club which studies home safety; the Library Club which exhibits books and magazines pertaining to safety. Every club some time or other during the year has occasion to explain safe ways of doing whatever the members undertake.

The Student Council is one of the most important places for teaching safety in the junior high school. It is made up of two representatives from each homeroom. At its weekly meeting safety practices are discussed thoroughly among the council members and they in turn present the topics for discussion to the homerooms. In the council, the pattern is developed for behavior in the halls, on the stairways, on the playground, in the lunchroom, during fire drills and on busses and street cars. The students have agreed to keep to the right in the halls and observe the directions "Up Stairs and Down Stairs" to avoid congestion on the stairs. On the playground they try to follow the instructions previously given them by the physical education teachers. In the lunchroom, they try to remember not to run in line, not to push, not to spill water and food, and they try to remember to sit with their chairs flat on the floor. During fire drills the students close their windows, transoms and doors, fall in line quickly and march out of the building. When riding busses and street cars, the students are taught to board the conveyance cautiously, to be seated at once, to keep hands and heads inside of the window, and exit carefully, going to the curb nearest them before crossing the street. Two council members are appointed by the

president to represent the school at the Juvenile Traffic Court.

The Bulletin Board in the main hall proves to be a popular meeting place. Students gather there before school, between periods and after school to read the notices. Almost every week attractive safety posters appropriate to the season are displayed on the bulletin as a quiet but very effective way of getting across safety ideas to a large number of students.

In the classroom every child takes during his first year a six weeks' course in safety. This course is primarily on traffic safety but all phases are considered briefly. Safety is also taught in dozens of other classes daily. In the art classes the pupils are taught the proper use of the paper cutter, scissors and tools used in the crafts. In English classes themes are assigned on Fire Prevention and Safety in general. In the foods classes, special lessons are given in the use of gas and electricity. The physical education classes are cautioned to use the gym equipment in the right way and to obey the dressing room regulations for their own protection. In social studies, transportation and communication are used as a basis for lessons in safety. In mathematics, graphs and tables are used to show the facts of traffic conditions. In the metal and wood shops, detailed instructions are given in the use of machinery and tools. First aid is given all injuries, boys are cautioned not to lift heavy objects unassisted, and to always protect their eyes with goggles when grinding tools or materials.

Safety reaches its culmination in the Assembly. The various activities on Safety, formal and informal, direct and indirect find expression on some type of safety program. During the ensuing year the assembly schedule includes: a play titled *The Traffic Court*; a quiz program on Safety; a moving picture on fire titled *A Stitch in Time*; a fire prevention program demonstrating *Dangers in the Home*; a series of class instruction periods conducted by the State Department of Public Safety; and a talk by the Chief of Police followed by a round table discussion in which the students are privileged to ask questions on traffic laws and observances.

Participation in the afore described

safety activities has resulted in the organization of a Juvenile Traffic Court which was made possible through the Traffic Commission. The Traffic Commission of Dallas is composed of the presidents, or officially appointed representatives from the major civic and business groups such as the Chamber of Commerce, Retail Merchants, The Bar Association, The Parent-Teacher Association plus those public officials having a degree of responsibility in the movement such as the District Attorney, the Sheriff, the City Police Chief, Traffic Engineers, City Manager, Corporation Court Judge, and the like. Funds for the continuance of the commission are donated by Insurance Companies, Motor Fleet Companies, and Industrial Plants who realize that the work of the commission not only reduces traffic deaths but is an economic measure as well. This group has succeeded in getting the appointment of a Director of Traffic Education and is assisting the Public School System in introducing Driver Training Courses into the secondary schools.

(Taken from the Manual of the Juvenile Traffic Court of the City of Dallas.)

The Juvenile Traffic Court of the City of Dallas is in session every Saturday morning, beginning at 9 o'clock, the Corporation Court Building, 2012 Main Street.

Negro sections of the Court are in session at 7:30 p.m. every Wednesday, alternating each week between Booker T. Washington and Lincoln High Schools.

Juvenile Traffic Court functions for persons between the ages of 10 and 17 years who have been charged with traffic violations. A child who has not reached his 10th birthday or who has passed his 17th birthday cannot be tried in the Court; therefore, if such a juvenile should be charged, the Judge must dismiss the case without penalty to the defendant.

Jurisdiction of the Court: Juvenile Traffic Court has no jurisdiction whatsoever over juveniles of any age, and whatever authority it has over juveniles between the ages of 10 and 17 it derives by reason of the fact that such juveniles, if they should fail to comply with the orders of this court, can have their cases referred to, or charges

filed in, County Juvenile Court, which does have legal authority.

Officials of the Court are representatives of the senior and junior high schools of Dallas and of the Dallas organization of the Boy Scouts of America. During the school year, boys and girls who are chosen by their student councils serve as officials of the Court, while during the summer Boy Scouts conduct the sessions. Each of the ten senior and junior high schools is represented by two students. Membership of the Court is divided into two sections, with one representative serving with Section A, and the other representative serving with Section B. The two sections alternate, from Saturday to Saturday, in holding court.

Because confusion invariably results in operation of the Court when new officials assume their duties, every officer of the Court is urged to continue serving until his successor has been named and inducted.

Certificates for Officials: Every official of the Court who has conscientiously performed his duties is awarded, at the close of his term, a handsome certificate, signed by the City Manager, the Judge of Corporation Court, the Chief of Police, the Chairman of the Citizens' Traffic Commission, and the Chairman of the Juvenile Education Committee of the Citizens' Traffic Commission.

There are eight offices of Juvenile Traffic Court, as follows: Presiding Judge, Associate Judge, Public Attorney, Assistant Public Attorney, Clerk, Assistant Clerk, Bailiff, and Assistant Bailiff.

At any session of Juvenile Traffic Court when there is an insufficient number of officials to fill all places, offices shall be filled in this order: Presiding Judge, Public Attorney, Clerk, Bailiff, Associate Judge, Assistant Clerk, Assistant Public Attorney, and Assistant Bailiff.

Penalties:

Each child starts with 300 points. He retains these points intact as long as he follows the safety regulations listed in a little pamphlet given him at the beginning of the school year.

On the first and second convictions, the Judge may deduct one hundred merits, but no other penalty is permissible. On the third and subsequent convictions, the Judge

may, in addition, deduct assessments as follows:

1. In the case of an automobile driving offense, he may suspend the driver's license for a period not to exceed six months. It has been suggested that the driver's license be suspended only one or two months except in extremely serious cases.

2. In the case of a bicycle riding offense, the Judge may intern the bicycle for a six months' period. It is suggested that bicycle be interned for only one or two weeks, seldom more than one month.

3. In the case where the offender is a pedestrian or an automobile operator who does not have a driver's license, or a bicycle rider who does not own a bicycle, it is referred to the County Juvenile Officer.

4. Any third violation, regardless of whether the preceding two were automobile, bicycle, or pedestrian, will be subject to the penalties of the third violation of a single field.

In case of driving without a license, the offender is asked to secure a license and report back to the court in a month. He is given a suspended sentence of one hundred demerits until he reports back. If the offender fails to report back to the court, the penalty is assessed and the conviction counts against the offender's record.

MR. JACK: In developing any program of education, all educators seem to be agreed that participation is one very effective method by which the student obtains definite concepts which are meaningful and practical to him and thereby benefits from such learning experiences. It has long been recognized in the teaching of science that a certain amount of participation in laboratory experience is essential. We know in physical education that participation is necessary in order to acquire basic skills—merely watching the skills or reading about them will not inculcate the desired skills in the mental-motor makeup of the individual. Some of our most effective teaching in the school has taken place in the science laboratory, in the industrial arts shop, in the home economics and commercial departments, where participation has been the rule, coupled with an explanation of the reasons and theories behind such acts.

In Minnesota we think of Safety Edu-

cation as one phase of Health Education. We have just recently developed a new health education course of study which places certain very definite emphasis upon Safety Education and which provides some specific instruction in Safety. One of the principles of our curriculum in health is to provide a learning experience which is satisfying to the pupil. Suggested problems involving actual practical situations are given for classroom discussion or for individual reports or themes, and a list of suggested activities for each unit is provided which gives the teacher a chance to present to the pupils material which has a practical application and gives the pupils a chance to experiment and work in the practical situation. These problems and activities in themselves give rise to other problems and activities which any wide-awake and alert teacher can use. We, in our course of study, are suggesting the following activities in the participation program in Safety for our pupils:

How Can I Help Remove Accident Hazards In My Home?

Suggested Activities

1. Make a survey of the accidents occurring in your home the past year. To whom did they happen—adults? children? aged? How and why did they occur? How could they have been avoided? What has been done about them?
2. Collect newspaper articles dealing with home accidents.
3. Diagram heating system used at home. Suggest ways fire hazards may be eliminated.
4. Invite a member of the fire department to speak to class. Visit fire departments. Have fireman demonstrate the correct use of the fire extinguisher.
5. Make a small fire extinguisher.
6. Draw safety cartoons.
7. Plan a radio program.
8. Use home inspection blank.
9. As a class project, construct a map of your city or community showing the location of fire stations, fire alarm boxes.

How Can We Make Our School a Safe Place In Which to Work and Play?

Suggested Activities

1. Find out the number of days of absence due to accidents in your school last

year and also the cost per year of educating a pupil in your school. Determine the cost per day of educating a pupil and calculate the amount of money wasted by accidents.

2. Prepare an accident barometer showing decrease or increase of accidents in your school.

3. Keep a record of accidents in your school. Make graphs showing the results of the records.

4. Draw safety cartoons.

5. Prepare safety slogans.

6. Write safety news items and editorials for the newspaper.

How Can Lives Be Saved and Injuries Avoided During Our Vacations?

Suggested Activities

1. Prepare a sportsman's code.

2. Set up standards for boating or canoeing.

3. Draw safety cartoons relating to vacation activities.

4. Write articles for the paper, publicizing the precautions to be taken for various activities relating to the time of year many persons participate in the activity.

5. Demonstrate artificial respiration.

How Can We Reduce the Accident Toll As Future Drivers?

Suggested Activities

1. Visit a court in which a traffic case is being tried.

2. Visit a garage or auto show and examine a motor.

3. Draw up an ideal inspection schedule for your family car.

4. Secure state maps; locate state forests, parks, other places of interest and plan your route for a trip.

5. List the common signs of car trouble. (Allow time to inquire out of school.)

6. Diagram the shifting of gears.

7. Diagram proper passing.

8. Have talk by highway patrol on hazards of driving too fast.

9. Conduct hearing test and eye test.

10. Look up tests for carbon monoxide in cars.

11. Investigate highway cost.

12. Have each student chart his course to school. Mark crossing and list all precautions at each.

13. Make scrap book of newspaper clippings regarding pedestrian or auto accidents.

14. Poster, cartoons or slogans contest.

15. Make spot maps of accidents occurring in community. Discuss them, listing ways in which they could have been avoided.

I think a lot of things we have had our children doing in the past have been, so far as high school boys and girls are concerned, more or less busy work. That is, many of these activities would probably be more suited to junior high school pupils, and upper elementary school pupils. I think that teachers have an opportunity to improve the quality of participation by thinking up more purposeful activities for these upper secondary school boys and girls to engage in.

SISTER MARY CARMELYN: Our safety interest at Mundelein began soon after Pearl Harbor when the American Red Cross introduced first aid into the school. In stressing the first law of first aid, we had to look accident prevention in the face. Following that, one staff member requested a course in accident prevention. In 1943 a small group of eight students and two faculty members took this course. It was a small crowd, but the results were worthwhile.

Administrators and a few of the faculty members with whom I talked were in favor of organizing a safety council. In the summer of 1943 we sent questionnaires to a group of students whose names were selected by the dean. The questionnaires were returned with more than ten per cent answered in favor of the council. They were willing, if necessary, to work on the council.

While the returns were satisfactory, we made our first mistake by appointing members of the council. Quite probably we would have progressed further if we waited until classes began and at that time let the students appoint representatives.

We made a few regulations. They were given to students the first week of classes. In our tea room, trays and books were left on the floor; students were sitting on chairs

at an angle so that the two back legs were protruding in such a way that someone coming along would possibly knock them over. We had had one accident of that kind. We asked the students to put the trays and books where they belonged.

Traffic on the stairways presented another problem. We had signs up at the foot of each stairway "Be quiet," "Keep to the right," and "Use handrail." The elevators in our building, which is a sixteen-story building, presented difficulty. We have just a ten-minute interval between classes so that we have to have an organized system in order to get students from the basement bookstore to the eighth floor.

The regulations were very much resented by the students. That may be why we were not successful. We had, during the year, a suggestion box placed in the bookstore lounge with the request that safety suggestions be dropped in. They trickled in slowly. Most did not know what to suggest.

The first suggestion related to the drinking fountain. One student called attention to the fact that the pressure was too low, and the student had to put her mouth on the fountains in order to get some water. Once we had attention called to it, it was remedied. The pressure was increased and now a Safety Council member inspects the fountains and reports decrease in pressure to the engineer.

Lights worn out in the locker rooms or on the stairways were checked by Council members. Resident hall representatives were appointed to study the safety situation in the two resident halls: one is a three-story, ordinary house, and the other resident hall is on the thirteenth and fourteenth floor of our big building.

The organization of our Council was tentative. A constitution was written by the students and faculty together. Two committees were organized: the Central Committee, and the Auxiliary Committee.

On the Central Committee we had the President and the Dean of the college as members ex officio, and the President of the Student Activities Council, acting ex officio. We had a Faculty Director of the Council, a Student Director of Council, Secretary, and student representatives from the following: resident halls, library, home

economics, science, athletics, and four general faculty representatives.

Among the students we had one representative from each class, and one representative from each resident hall. We also had chairmen of committees, campus organization, program, art director, and athletic director.

On the Auxiliary Committee were the class presidents, ex officio; class representatives—one for every twenty-five students; club representatives from those organizations choosing to be represented.

Last year our organization consisted of some eighty-five members which was much too large a group to deal with satisfactorily. According to the constitution, the faculty representatives were appointed by the President, and the class representatives were elected by the class. The clubs elected or appointed representatives.

Our chairman of the Safety Council, or Student Director, was supposed to have attended a certain number of meetings in first aid and accident prevention. The secretary and other officers are required to have had accident prevention with first aid. It is recommended that the athletic chairman as well as having first aid, etc., must have a senior lifesaving certificate.

At the end of last year, two amendments were necessary. One was that the class president as a member ex officio be dropped. She could not come to meetings because of too many other things to do. The other amendment had to do with attendance. If any member is absent from three consecutive meetings she is considered not interested and dropped from the council.

In February, Mundelein was authorized as a Red Cross college unit. In this unit we had a committee on first aid and accident prevention. It seemed impossible to run two organizations at the same time in the school the size of ours, so the Safety Council was taken over by the Red Cross unit as the accident prevention section. This meant some changes in the council organization. We did not need to have such an elaborate set-up, so the Public Relations Chairman of the Unit was unanimously elected as Public Relations Chairman of the Council. The secretary of the Unit acts as secretary of the Council. The Art Director of the Council is a member of the public

relations committee. We have retained the Campus Organization Representative who is responsible for all activities on the campus. She reports to the Council any hazards, and if the Council is unable to take care of these reports they are sent to the Dean. We do not have student government.

A part of the Red Cross unit has strengthened the Safety Council because we have the cooperation of the chairmen of the various departments of the college. The college paper is very cooperative in giving space in every issue, and bringing safety measures to the attention of the students.

This year we have given no regulations to the students. We are going to see if participation will be more effective than regulation. The students remember last year's regulations, however. With the increased number in the cafeteria, I have found only three or four trays left on the floor. They are put back where they belong. "Look out! you will have to make out an accident report" sometimes is said in fun, but just the same the students are careful.

There are twenty-four hours a day accident reports. We try to get these reports, but it is hard. As time goes on, we get more.

We have first aid stations throughout the building. All of these are reminders. They are in the resident halls, natatorium, library, gymnasium, Red Cross Office, fourth, sixth, eighth, and tenth floors. These things are reminders to the student that they can omit first aid if they pay attention to what they are doing. We have stretchers, splints, and first aid kits at each location.

This year I have been promised some time by the instructor in charge of the practice teachers in order to bring some safety education measures to their classes. We all realize some faculty members are practicing safety whether it is in science, or the athletic department. The athletic department has committees which made regulations and rules for activities. First aid material has been sent to the Christiansen Riding Stables because we did have a very bad accident out there.

I think that aside from the items listed above we need something definite to crystallize safety ideas, and while each department can cooperate in teaching the safety rules

peculiar to its work, I think that a class in accident prevention is necessary.

I think the need for a safety council must come from the students. They must realize it is not something imposed upon them. Suggestions of activities should come from the students as well. Now faculty and students are working together from the same side of the desk, and I think our results will be much greater.

MR. SELLERS: Safety plays a part in practically everything that we do, and I think that teachers of all subjects and all types and all grades, whether they know it or not, are giving some safety instructions. On the other hand, I would like to submit a very simple program that I think might be used for a good many schools where there is no direct attention given to the subject of safety.

In the first place, I think that in introducing the subject we have to make people aware of the fact that there is a problem there. I spent one year with the National Safety Council. In that time I visited four different universities where I talked with deans, especially, of agricultural departments. Sometimes I was very much surprised to find that they felt that safety was a very simple matter. They did not see how there was to be any particular content given to a course in the subject. But when these same people engaged were confronted with some of the facts stated by the National Safety Council, with summaries driving home the volume of accidents, their attitude changed, and changed to such an extent that three of those states had meetings, and one had more than forty different state-wide organizations represented in the meeting.

So, it shows that you can illustrate to people the fact that there is a problem. Safety is a problem and I think the first thing we have to do is to introduce the subject in every one of our schools, and communities.

And the next task is to show that there is a local application, and I think that the appointment in the schools of a committee to study safety is a most advantageous thing. We have committees on social affairs and committees on extra curricular affairs, athletics, and every other known subject, but I wonder how many of us have committees on safety? I think it is very prac-

tical to have a committee on safety in every school and I would like to see the National Safety Council adopt, as one of its projects for the coming year, the promotion of a safety committee in every school in the United States. I think they would be astonished to find what a very high percentage of schools have no safety committees while a high percentage is giving no direct attention to safety.

After we get the local committee to work and they study the situation with which they are confronted in regard to local safety problems, they can then very easily lead people into safety education in a general way so that the people may get a much wider training in the subject.

I think it is important that some general meetings be held. We need to have meetings in which the entire school is brought face to face with some of the important facts about safety and some of the important rules of observing it. That might be done as the industrialists do it: by meetings where a big part of it is entertainment and a "red-hot" speaker is brought in who burns away for awhile on safety. That is the kind of safety meetings they conduct and some are surely astonishing meetings. We can learn something from them.

That simple outline I should like to leave with you as something to shoot at for the coming year.

DR. GRASSICK: Mr. Chairman and friends: The relationship of the police anywhere to the problem of safety, is first of all, one of law enforcement. The police officer is usually called in after the damage has been done. If an accident has taken place in the home, in a public place, or on our streets and highways, it is the officer's job to see that the victim or victims receive medical care; then he must find all of the particulars relating to the accident. He must find out if any law has been violated, and then take such action as the circumstances warrant.

However, this does not tell the whole story. The police officer is something more than merely an instrument of law enforcement. He is also a source of information and education. Every police officer should be familiar with the rules and regulations which have been adopted by the law-making bodies of the community in which

he functions, for the protection of human life and property.

If in the course of his daily travels, an officer is confronted with conditions which may prove a hazard to the men, women and children under his jurisdiction, he should take whatever steps may be necessary to have such hazards removed, or at all events—bring them to the attention of whatever authority may be competent to deal with them.

Every intelligent police officer knows that many laws are violated unintentionally, and he should be anxious and willing to give helpful information to any and everybody who, in his opinion, is deserving of such assistance and advice.

Those of us to whom the prevention of accidents, is a primary objective, realize that safety education is a local problem. It begins in the home, and then gradually expands into the school, then into the mill, mine, factory or workshop, or such other public activity as circumstances may dictate. It only becomes a state-wide or national problem when the sum total of accidents becomes sufficiently great, to infringe upon the state or national welfare. Take it either way if you like—the fact remains that you must train the individual to form habits of safe living. That surely is a local problem, which calls for local treatment. There may be state or federal assistance, but in the final analysis, the actual doing of the job must be local.

I am the Chief of Police in the small town of Kingsville, in the Province of Ontario, in Canada. It is a small municipality of some 3000 souls; so being the Chief of Police, doesn't mean much, as for all practical purposes, I am the only policeman there. However, the town agreed with me that safety was a local problem. So we appointed a Safety and Welfare Commission, made up of the Mayor, Medical Health Officer, the Fire Chief and a number of influential public-spirited citizens, including three ladies, active in public life. I am the Chairman. Through our contacts with the Ontario Safety League, we received advice, guidance and literature. Today, we have an active program of safety education for every walk of life in our community.

We have sub-divided our Commission into sub-committees. One committee deals with accident prevention in the home; a

second deals with accident prevention in industry; a third deals with safety education in schools and recreational pursuits; a fourth deals with traffic safety. We have established a traffic training school, in which we teach the fundamentals of safe motor vehicle operation, including an essential knowledge of the highway traffic act, and the rules of the road. Our Superintendent of schools is responsible for the teaching of pedestrian safety, and he has established school safety patrols. We have formed a safe cyclist's club. It has approximately 150 members. The members of this club are systematically taught the principles underlying the safe operation of a bicycle.

Frankly, we don't profess to know all the answers to any of these problems, and we are open for criticisms and suggestions from any source that is sufficiently interested to make a study of what we are trying to do.

In conclusion, may I point out to you that we have been operating for just one year. Prior to that time we had an average of about one hundred traffic accidents of one kind and another annually. This year we had less than half a dozen all told, whether that means anything, or whether it is just another "accident"—I don't know.

I can tell you this much: The Ontario Safety League agrees with us, that safety education is a local problem, and it has submitted the substance of our program to every municipality of 1000 population and over in the province of Ontario, and has urged its adoption. I am rather anxiously awaiting the outcome of this appeal.

Another point that may be of some interest to you is—that this entire program has cost us considerably less than fifty dollars to date.

I don't believe that it is necessary to spend a lot of money to put over an effective safety program in a small community, but I can tell you what is necessary. It is—for a few people to take off their coats, and go to work, and keep working. I thank you!

General Discussion

DELEGATE: I represent the elementary school. There has been some question by panel members concerning the work of the school patrols. In most communities where there are school boy patrols, they have been

a source of good feeling, and it is considered that they have lowered the accident record. Therefore, I question the various censors who feel that the school boy patrol is failing in the work for which it was organized.

DR. WOOD: We mentioned the fact that perhaps some of the school boy patrol activities are not carried over into other fields. In other words, the school boy patrol performs the duty on the corner and children obey, but when they get four or five blocks away, the story is different.

FROM THE PANEL: The problem is probably the same as that of a fellow who goes through a light if the cop is not watching. I think I can understand that children after school hours, when the patrols are gone, will forget some of the things they have learned. I do not think they generally forget, however.

If you have leadership in your school, a good safety patrol, or safety council, you will get good conduct later on. The school boy patrol caused our child accident record to be much better than that of the adults. Figures are what count.

MR. BACON: I should like to suggest one thing. Our safety patrols in communities will not get very far. We need participation, but the Chief of Police here has the answer. We want community safety cooperation, complete participation with whole community working on safety. We all agree that is what we want. Not participation of a few adults, or safety directors, and committees, but everybody in the program in some way.

MR. FESTER (Safety League, Ontario, Canada): Dr. Wood, in the introductory statement, made some remark about living dangerously and courageously with the maximum of safety. That pleased me tremendously.

It is being done now and being done everywhere. Every day your army is being trained to live dangerously and as safely as possible. The competent military officer will tell you that a 10% trained soldier has 90% chance of being killed in battle; a 50% trained soldier has, perhaps, a 40% chance of being killed, or injured in battle, but a 100% trained soldier only stands a 10% chance of being killed or injured in battle.

If it is practicable to train soldiers in the

principles of safety and self protection, surely we can incorporate those principles in the training of our individual lives in our respective communities whether it be in the United States of America, or the Dominion of Canada.

MR. McKAY: I should like to ask another question. We are at the point in our program where we are working with the Department of Public Safety and we, as educators, feel that if the children participate in the study of safety education, when they apply for their drivers' license they should be given recognition and not have to pass a test issued by the Department of Public Safety.

The Department of Public Safety does not agree with us yet because they issue drivers' licenses and they are responsible for the accidents. I should like to hear it discussed both ways.

MR. PAUL BERND (Detroit Public School): The police offered us the privilege of licensing drivers after their completing training courses, but we would not assume that job. It meant we would stick our necks

out and it would be ridiculous for us to do that. We are only educators. They are paid to test and license these people. We would not do it in any other field, so why should we do it in this one?

The advantage of just doing the training part is that the boys and girls, after completing their training, go down there and see how these other people go through the test. These trained ones do a better job than the general public. They get a feeling of confidence and do better driving because their training is superior. They also come out better on the test because of their superior driving training.

MR. McKAY: We are trying to interest people in safety education. We feel if you pass a law that the child has to have safety education in elementary school, drivers' training in high school and then has to turn right around and take a test from the State Department, there will not be any incentive for the child to want to study safety education.

FROM THE AUDIENCE: If the program is vital, they will gladly take it.

THURSDAY MORNING SESSION

October 4, 1944

Presiding: HERBERT J. STACK, Dir., Center for Safety Education, New York University, New York City.

What to Expect from E.S.M.W.T.

By J. I. YELLOTT

Chairman, War Training Committee, Illinois Institute of Technology
Chicago, Illinois

and E. C. WOODWARD

Dir., War Safety Training, Illinois Institute of Technology, Chicago, Ill.

1. E.S.M.W.T. and Industrial Safety Engineering

The first nation-wide program of industrial safety training in the United States was a product of the war. Before training on a large scale was undertaken by the engineering colleges with the financial support of the Federal Treasury, there were literally no formal courses in industrial safety engineering in America.

Long before Pearl Harbor, certain far-sighted leaders in American engineering ed-

ucation foresaw a shortage of technically trained men. Late in 1940 a unique program was established under the auspices of the United States Office of Education, by which the recognized engineering colleges were empowered to undertake, at Federal expense, the training of men and women in fields for which there was a shortage of adequately trained personnel. Originally designated as Engineering Defense Training, this program from its inception was recognized as the answer to the rapidly growing need for specialized technicians. The

scope of the program was widened in its second year, as its changed name indicated, to cover Engineering, Science, and Management Defense Training. This program has been retained almost without change, other than the replacement of "Defense" with "War" in its name, since 1941, and well over a million trainees have been enrolled in its thousands of courses by the hundreds of participating colleges.

The courses offered in this college level program have ranged literally throughout the entire gamut of conceivable subjects. Their effectiveness and value to the nation have been demonstrated beyond question, since they enabled the colleges to train most of the key men in some of the most critically needed war time specialties. In Radar, for example, virtually all of the present experts received their fundamental training in E.S.M.W.T. courses, since the subject was so new that only a few colleges possessed either faculty or equipment to teach this vitally important material.

In an entirely different field, E.S.M.D.T. pioneered in the development of Safety Engineering Training. Prior to the establishment of the first E.D.T. course in this field under Professor Karabasz at the University of Pennsylvania, Industrial Safety Engineering was entirely neglected by our engineering colleges both in curriculum and in administration. Illinois Institute of Technology was an early entrant in this field, for a course was established in March, 1941, under Dean Keefer of the Lumbermen's Mutual Casualty Co., after conferences with Harry Guilbert of Pullman, and Joseph Stennett of the National Safety Council.

The tremendous impetus which spread Industrial Safety Engineering over the entire nation was afforded by the Committee for the Conservation of Manpower in War Industry, which was established under the auspices of the Division of Labor Standards, U. S. Department of Labor. For the record, it should be pointed out that the support of Miss Perkins, the leadership of Mr. Verne Zimmer, and the energetic guidance of Lt. Col. Laurence Tipton, made possible the nation-wide coverage which was eventually established. Regional and State Chairmen of the Committee extended cooperation to colleges of engineering, enabling them to obtain the services of competent and experi-

enced safety men as instructors, and aiding in the recruiting of classes.

The experience of Illinois Tech in Chicago was typical of other metropolitan institutions. In order to serve adequately the nation's second city, a very large program was established, in which prospective instructors were first recruited, and then trained in the art of teaching the safety course. Once more for the record, the services of John Roche and Joseph Stennett of the Council were invaluable in the first instructors' institutes, while the J. I. T. demonstrations staged by Dr. Jack Hazlehurst were no less than an inspiration to the prospective instructors. Without burdening this discussion with the endless details of recruiting, class organization, and other minutiae of extension course administration, we may summarize this program by saying that it has led to the training in industrial safety fundamentals of more than three thousand key men and women from Chicago's war industries. Continuation courses have been organized by Clark Woodward and supervised by Clark Bridges, while several sections of Industrial Hygiene Engineering have topped off the program.

Concurrently with these evening programs, Illinois Tech was also able to help the war effort directly by establishing a unique six-weeks full time course in Explosives Safety Engineering for the Safety and Security Branch of the Office of the Chief of Ordnance. Shorter courses of somewhat similar nature were also operated for the Internal Security Branch of the Army Service Forces, the Air Force, the Corps of Engineers and the Sixth Service Command. Thus, thanks to the facilities and personnel made available through the E.S.M.W.T. program, with the backing of the Department of Labor and the Federal Treasury, a typical metropolitan engineering college was enabled to make a direct and real contribution to the war effort—a contribution which, without E.S.M.W.T., would have been entirely impossible.

In summary, the nation's engineering colleges, under the impetus of the armament program and with the powerful aid of the Federal Treasury, have been able, as a war-time measure, to unite with industry, insurance companies, and government agencies in the establishment of a nation-wide safety training service. With the approach of the

end of the European phase of the war, it is timely to re-examine the status of the program, for the Federal subsidy which has made the work possible will almost certainly end within sixty days after the final termination of hostilities.

On the credit side, we must list some concrete and definite accomplishments:

- a. The accident toll in war industry has been kept lower than most authorities expected.
- b. Thousands of key men and women have received a fundamental training which will remain with them throughout their industrial and domestic careers.
- c. Special courses in vital subjects have kept casualties in hazardous war occupations to a minimum.
- d. Many industrial plants have set up safety programs of adequate extent, because they could either obtain trained personnel, or could get training for their own people.
- e. Insurance companies and government agencies have greatly increased the safety knowledge of their personnel in this field.
- f. The colleges have become aware of the safety movement. Many have participated, and a few have had their administrations made safety-conscious.
- g. A body of scientific and teachable instructional material has been made available for post-war use.

The end of the war will bring the current activities to an abrupt halt, but the need for safety will not end with the cessation of hostilities. Let us see what can be done to employ the E.S.M.W.T. experience in setting up an adequate peacetime safety training program.

2. Post-War Planning for Industrial Safety Engineering

Post-war planning is a full-time job for thousands of industrial executives today, and safety men might well do some thinking about the shape of things to come. Again under the auspices of the Division of Labor Standards of the U. S. Department of Labor, another National Committee has been established, the Committee on Safety Engineering Education in Colleges. This Committee has representatives of most of the

agencies interested in the problem of post-war safety engineering education. A pamphlet issued by the Committee rehearses briefly the accomplishments of E.S.M.W.T., and goes on to present the conclusions of those who are experts in engineering education. In brief, they recommend that the engineering colleges prepare to render three services in the post-war period.

In the undergraduate curriculum of the engineering colleges, it is the unanimous conclusion of the Committee that specialized undergraduate programs in safety will be undesirable. Instead, "it is suggested that safety be made an integral part of each engineering course in every college of engineering."

The arguments against premature specialization in the undergraduate program are good, for few young college men can possibly have enough knowledge of the industrial world to justify them in making such an early decision concerning their life work. The trend in engineering education prior to World War II was definitely away from excessive specialization and towards the broadest possible undergraduate training. The uncertainties of industrial life, the breadth of opportunity lying before properly trained engineers, and, above all, the special demands of safety work upon the personalities of those who undertake it—these are all potent factors to dissuade a conscientious college administrator from an undergraduate curriculum in safety engineering.

This does not mean a withdrawal of the engineering colleges from the responsibility of providing post-war industrial safety training. Instead, it gives more appropriate fields of service.

Most valuable service to the industrial safety movement can be rendered by three separate activities, not all of which are appropriate to all engineering colleges.

Of first importance is the integration of safety in the undergraduate program of all engineers. This will be no easy task, because college faculties can be as adamant in their resistance to safety as the most misguided industrial supervisor—they can both say "It can't happen here." How many machine design courses include any discussion of guarding? For that matter, do any text book on machine design even mention the subject of guards? The term "factor of

safety" is the only mention of the word in most undergraduate courses.

By integrating safety into the training of all young engineers, by writing safety into the text-books of the future, the engineering colleges can render a real service to the safety movement. Incidentally, we would like to suggest seriously to the American Society of Safety Engineers and to the Society for the Promotion of Engineering Education that the cooperation of the text-book publishers be enlisted to make sure that their next books will have safety written into them. Their illustrations should be reviewed to make sure that safe practices are pictured in every case.

If E.S.W.M.T. does not lead to undergraduate specialized curricula in Safety, where, then does it lead? The best answer to this question can only be made after we try to analyze the post-war needs for safety men. One lesson which we in the colleges learned from our war training experience was the utter folly of continuing to train men and women without regard for the demands of industry upon the trainees. Education cannot be conducted in vacuum.

We can be sure of a continuing demand for well-trained safety men in all of the following fields: casualty insurance companies; industrial plants with a thousand or more employees; state inspection agencies; federal government bureaus; labor unions; air lines, railroads, bus lines and steamship companies; public utilities; merchandising and other service enterprises.

The number of men who will be needed by these and other agencies can hardly be estimated. The extent of employment in industry, a matter of debate among far better qualified estimators than the writer, will of course determine the number of men and women who can find employment in this field. The annual need will not be very great, as compared to the entire normal output of our engineering schools, but we can anticipate a steady demand, as those engaged in this field move on to other and usually greater responsibilities.

In endeavoring to plan for the needs, let us examine the profession of Safety Engineering. The Bureau of Placement of the War Manpower Commission has prepared the following description of safety engineering, taken from the February, 1944, issue of

"Engineering for Safety," the monthly publication of the A.S.S.E.

"Areas of specialization: The safety engineer achieves the control of unsafe work conditions and practices through any of the following activities. He may specialize in any one of these, but more often concerns himself with many of them in connection with his duties as a safety engineer:

- (a) Investigation of accidents and analysis of accident records.
- (b) Inspection of buildings, machinery, equipment and property.
- (c) Checking plans, specifications, contracts, and purchase orders.
- (d) Controlling hazards to safety through design, plant layout and other changes in environment.
- (e) Installing safeguards, providing personal protective equipment and improving operating processes.
- (f) Job training and analysis from standpoint of safety.
- (g) General safety promotion and education of employees, and the public.
- (h) Organizing and maintaining interest in safety programs.
- (i) Securing plant management and labor cooperation.

"Other special activities:

- (a) Fire protection and prevention (general).
- (b) Public safety—traffic, elevators, boilers, theaters.
- (c) Industrial hygiene (fumes, gases, dust, poisons, heat, bacteria, noise).
- (d) Safety equipment design, manufacture and distribution (masks, goggles, lamps, chemical safeguards, etc.).

"Educational Background:

"The minimum of a bachelor's degree in safety engineering, or less often in some related branch, as industrial, management or mechanical engineering. A degree in some related field and subsequent courses or experience in safety engineering. In many cases in which normal professional training is more limited, there must be evidence of years of varied and progressive professional experience which can be considered as the equivalent of the formal education which is lacking.

"Standard for employing safety engineers:

"A War Department standard required of its contractors is the employment of a safety engineer in all plants with 1500 or more workers, and a part-time safety engineer in smaller plants. The United States Army Air Force sets a standard of a full-time safety engineer for all air depots having 500 or more civilian employees."

Let us analyze this description. First of all, virtually none of the thousands of men and women now employed as safety engineers can comply exactly with the educational background, since there is not at present, and has never been, a recognized bachelor's degree in safety engineering. Usually, on the contrary, the successful safety engineer has obtained his training in the school of experience, and has gained his knowledge by daily contact with practical problems.

In order to be able to cope with the manifold weaknesses of men and machines which are outlined in the foregoing list, the safety engineer must possess certain personal qualities, however, which are vastly more important than those more formal requirements which the job analyst of the War Manpower Commission has listed. He must unquestionably have an irrepressible and sincere interest in the welfare of his fellow human beings. He cannot well be an inveterate mathematical genius, as many a successful electrical engineer has been. He must have a familiarity with industrial processes, both chemical and mechanical, which will enable him to spot a hazard and to recommend a sensible solution to it. He must be able to speak before a group, to sell not only labor but management as well on the utility, economy, and good common sense of his recommendations. In short, he must not only know the science of accident prevention, but he must also have the personality which will enable him to apply this knowledge in the face of discouragements which will often seem insurmountable. In view of the unusual requirements for success in the field of safety engineering, the wisdom of avoiding undergraduate specialization becomes apparent.

Can the colleges make a constructive suggestion in answer to the problem of providing post-war safety leaders? The answer, in the affirmative, will be forthcoming when industry, insurance companies, and govern-

ment present an equally affirmative answer to our question—where is the money?

To quote again from the bulletin prepared by the National Committee on Safety Engineering Education in Colleges, the answer lies in carefully planned, highly specialized graduate courses of at least a year's duration in Industrial Safety Engineering. Only a few colleges are qualified by the combination of fortunate location and administrative interest to enter this field. Because of the breadth of instruction which must be given in such a program, it is highly unlikely that any college can afford to keep specialists in such diverse fields on its full-time staff. Instead, one or two full-time faculty members would direct and coordinate the program, and the specialties such as industrial hygiene would be taught by experts from local industries.

Since the plan for a graduate program in safety meets with the approval of those who, like the members of the National Committee on Safety Engineering Education, are acquainted both with education and with the need for safety engineers, let us examine in more detail their recommendations, and the philosophy behind them.

A one year specialized graduate course in safety engineering—the students to have had at least a year's experience in practical industrial safety work—these are the two paramount factors. The program must be carefully outlined and competently taught. The students must have adequate engineering backgrounds, enough industrial experience to understand the problems involved and to motivate the entire process. The student must also have the personal characteristics which success in his chosen profession requires.

More specifically, as soon as adequate financing is available, Illinois Institute of Technology, as an example, will be ready to set up a program by which the safety momentum established under E.S.W.M.T. can be imparted to a post-war graduate safety training institute. The plan would include the recruiting of a new class of cadet safety engineers each year, whose tuition and living expenses would be paid on a fellowship basis by their current or prospective employers. Two full semester of on-campus study plus a thesis presenting the results of an original project would qualify the successful candidates for a master's degree in

industrial safety engineering. The course content would include all of the material now given in the basic and continuation E.S.M.W.T. courses, for which excellent instructional material is already available. Applied psychology, safety legislation, industrial management, conference leading, fire protection—these would certainly be among the subjects in the curriculum.

Laboratory work in industrial hygiene would play an important part in the program. Experience in conference leading would certainly be given, with actual practice in maintaining a safety program on the campus.

The existence of such a program in a few metropolitan engineering schools would enable those schools to carry out the other recommendations of the National Committee. Four functions would certainly be in order for the Safety Training Institute:

- a. Operation of the graduate program.
- b. Integration of safety into the undergraduate curricula.
- c. Operation of a model safety program on the campus.
- d. Maintenance of extension courses similar to present E.S.M.W.T. work.

Financing

The program briefly presented above is entirely feasible. Only the financing is a matter of uncertainty. To operate such a program, a basic endowment must be pro-

vided to meet the fixed costs of laboratory and office facilities, visual aids, secretarial staff, and similar costs.

Costs of instruction should be met from tuition fees. At least two full time staff members of professional rank should be available, competent to teach at least a part of the program and to operate its industrial contact aspects.

In order to attract qualified applicants for such a course, the fellowship stipend should be large enough to pay reasonable living costs for a single young man in a metropolitan environment.

The financing of such a program would be a matter of enlightened self interest for insurance companies particularly, since their pre-war methods of breaking in new men were expensive in both time and money. Utilities and larger industries could also hardly afford not to support a good graduate program of this nature.

Conclusion

E.S.M.W.T. has taught the engineering colleges that they have a real responsibility in the continuing war against accidents. E.S.M.W.T. has brought industry and engineering education together in a hundred widely different cooperative programs of which safety can potentially endure long after the rest of E.S.M.W.T. has been relegated to the archives. The colleges are willing. How about industry?

Enlivening the Safety Program

By MISS ETHEL SHAFER
Roosevelt School, River Forest, Ill.

A safety program must be built upon the psychology of "It's smart to be safe." Children and young people are naturally daring and unafraid. The old slogan, "Safety First," did not appeal to them. But we can appeal to them by presenting accidents as the act of a stupid and uninformed individual.

The armed forces have had to use the same psychology. When they first began talking about safety first, it failed to impress men who were going into hazardous fighting. But when they began to present

safety as the way of insuring that more men get to the front and costly equipment is saved, it began to make more sense to the man in service.

At Roosevelt, we have operated on the principle that safety can best be taught by giving students a chance to do something about it. When asked what their problems were, the students listed crossing the street, fire, bicycle riding, playground, sports such as swimming and climbing.

In efforts to get help on these problems, the students, through the student council,

wrote or interviewed and made arrangements for the following activities:

1. A bicycle testing lane, on the school grounds, conducted by the police department during school hours. Brakes, lights, and signal devices were checked and licenses issued.
2. Lessons in group bicycle riding provided by the police.
3. Movies on Hosting Clubs, showing how they make safety a part of their bicycle trips.
4. Organization of a Safety Patrol, one pupil from each grade, with responsibility for school building, playground and traffic safety problems.
5. The fire department brought a large

engine onto the school grounds for the children to observe.

6. A Hallowe'en committee, composed of pupils, a policeman, a fireman, a mother, and the superintendent of the buildings and grounds, held panel discussions at assemblies. Later they planned community parties for Hallowe'en night.

7. Pupils planned snow-time recreation. A portion of the park was set aside for forts and snowballing. In other sections of the park snow modeling contests were held.

The emphasis upon pupil participation has been highly successful. Junior Red Cross first-aid classes have been requested by pupils and most of our 7th and 8th grade students received certificates. We feel that the greater the amount of pupil participation injected into a safety program, the more interest will be developed.

The California Workshop on Education for Safety

By MARIAN TELFORD
National Safety Council, Inc., Chicago

The California Workshop on Education for Safety was a cooperative project. Specifically it was a joint undertaking of the California Curriculum Commission and the National Safety Council, with Claremont Colleges providing working facilities. The workshop was an outgrowth of an invitation of Dr. Walter F. Dexter, State Superintendent of Public Instruction to the National Safety Council to aid in determining the place of education for safety in the basic educational program for California.

Before discussing the program in detail, it might be well to explain the use of the term "workshop" and the general organization and function of the California Curriculum Commission.

In all frankness it must be admitted that our use of the term "workshop" was accidental. When the program was under consideration a member of the Commission said, "We're really talking about the workshop type of thing aren't we?" The word continued in use and perhaps quite properly so in view of the way in which the activity was developed.

The California Curriculum Commission is an agency of the state government. It

consists of the state superintendent of public instruction and ten additional members appointed by the superintendent with the approval of the State Board of Education. The law requires that among the appointed members there shall be at least one county superintendent of schools, one city superintendent of schools, one person employed in a junior college in a position requiring certification qualifications, one high school principal, one elementary school principal, one college teacher of education and one classroom teacher. The Education Code defines the major functions of the Commission as follows:

"The Curriculum Commission shall study problems of courses of study in the schools of the state and may recommend to the State Board of Education the adoption of minimum standards for courses of study in the kindergarten, elementary and secondary schools.

"Courses of study in the public schools shall conform to such minimum standards when adopted.

"The State Curriculum Commission shall recommend to the State Board of Education specifications for textbooks for

uniform use in the schools of the State so that the textbooks adopted shall conform to the minimum standards for courses of study."

The Commission, earlier in 1944, had made clear its philosophy in, "A Preliminary Statement of the Point of View, or Basic Considerations, Through Which the California Curriculum Commission Is Approaching the Development of a State Framework of Education." The investigation of the safety implications of this statement was the primary purpose of the intensive work done at Claremont Colleges during the summer.

In order to attain this general objective many specific investigations were made. Prominent among them were the following:

- 1 How serious is the accident problem in America? In California?
- 2 What is being done about this problem by the schools? By other agencies?
- 3 What resources are available to schools desiring to up-grade their safety programs?
- 4 What safety materials are contained in state adopted texts in current use?
- 5 What are the basic concepts of safety?
- 6 Are these concepts an integral part of the principles of education?
- 7 What behaviors, attitudes, knowledges and skills is it reasonable to expect to develop at the various growth levels?
- 8 Where should education for safety be placed in the school program?

A small group of elementary and secondary school teachers primarily were responsible for these investigations. All of them devoted six weeks to the workshop, some an additional two weeks. For limited periods they had the cooperation of nearly twenty educators holding positions as administrators, curriculum coordinators, professors of education and teachers. They had the help of twenty safety specialists, interested in the school's contribution to accident prevention and safety's contribution to an educational program assigned to meet the needs of children.

This cooperative aspect of the program merits special emphasis. The summer's work would have been immeasurably handi-

capped without the active help of many people who were not full-time participants in the workshop. In addition to the National Safety Council, other cooperating national organizations were the American National Red Cross, American Automobile Association, Center for Safety Education at New York University, National Education Association and the National Conservation Bureau. Helpful state agencies included the State Department of Motor Vehicles—both the California State Highway Patrol and the Division of Drivers Licenses; Accident Prevention Bureau of the Industrial Accident Commission; California Congress of Parents and Teachers; Automobile Club of Southern California and the California State Automobile Association. These agencies contributed assistance of expert personnel and/or published materials of many types.

As the investigations progressed certain conclusions were reached. Education for safety was tentatively defined as follows:

"Safety education involves those experiences through which the individual learns to make discriminative choices with regard for living in his total environment.

"The concept of safety is inherent in the concept of democracy since both recognize and respect the individual. Courtesy, cooperation and good sportsmanship are fundamentals of both concepts. In the public schools emphasis is placed upon the individual living with others to his greatest capacity. In training boys and girls to live with one another, experiences are planned in these fundamentals. The individual is given opportunity to accept his responsibilities and privileges and act accordingly.

"Training in critical thinking, the basis of wise choice, is developed by the teacher who recognizes the challenge and presents problem solving situations with regard for safe procedures. Such a teacher utilizes the situations inherent in daily life in school, at home, and in the community and activates attitudes and behaviors for safe living. When experiences are analyzed and used by teacher and pupil, steady growth results in acceptance of individual and group responsibility."

Safety elements were identified and sug-

gestions made for their placement in the curriculum. The safety content of the primary grades was related to the emotional, social, intellectual and physical needs of the children. Eight broad objectives were agreed upon for the intermediate grades. These were:

- 1 "To further develop concepts presented at the primary level.
- 2 "To develop attitudes, habits and skills necessary for safe traveling with special regard for traffic.
- 3 "To develop the idea that there is a cause for every accident. That many accidents are caused by carelessness and therefore could have been prevented.
- 4 "To develop the idea that boys and girls are in some degree responsible for the safety of others.
- 5 "To provide opportunities for acceptance of such responsibilities.
- 6 "To aid boys and girls to discover

their powers and limitations without embarrassment.

- 7 "To develop the concept that man must adapt his living to the laws of nature.
- 8 "To develop habits of orderliness."

At the growth level of the secondary school, education for safety objectives were felt to be as follows:

- 1 "To discover and evaluate the pupil's achievements in knowledge, attitudes, skills and behavior in relation to safety education.
- 2 "To focus attention on the significance of accident prevention, and every individual's responsibility in the prevention of accidents in a democracy.
- 3 "To encourage a working philosophy of safety in its relation to living.
- 4 "To continue the development of desirable attitudes and skills in safety education which are indispensable for the pupil's present and future behavior in a democratic society."

THURSDAY MORNING SESSION

October 4, 1944

Safety in School and Industrial Athletics

Presiding: FLOYD R. EASTWOOD, Prof. of Industrial Recreation, Purdue Univ., Lafayette, Ind.

Problems of Safety in Industrial Athletics and Recreation

By ED B. DeGROOTE

President, Industrial Recreation Association and Director, Employee Services, Serval, Inc., Evansville, Indiana

Enlightened managements in the majority of industries are definitely sold on industrial recreation but technical problems are developing daily and not the least of these problems have to do with Safety.

Difficulty in Obtaining Insurance

The problem of safety in industrial athletics is growing in stature because of the increased impetus the war has given to recreational and athletic programs. Proper insurance and hospitalization plans are important. Yet, insurance companies, usually far seeing and ready to knock on any door, have steered clear of offering much needed

protection in this field. Inability to secure insurance makes the safety problem more acute and necessitates careful planning and supervision of recreational programs. However, there are insurance companies who, out of the goodness of their hearts and because the industry carries several hundred thousand dollars worth of insurance with them annually, will cover the entire recreational program for a flat and modest fee.

Equipment Problems

The inadequacy of insurance coverage for industrial recreational activities has had a

few advantages along with its disadvantages. It has made us strive to do a good safety job. We are continually conscious of the hazards involved and strive to use only equipment that is in good condition. We want our baseball fields well lighted and the infield and outfield in good shape; our gymnasiums well lighted and protective props in back of the goals so that players don't dive headlong into a wall or goal support.

We use every conceivable precaution to prevent accidents and protect spectators and participants from injury.

Lack of adequate facilities is a major problem with most program directors. Most factories are dependent upon city recreational facilities, grade and high school gymnasiums, etc., for the conduct of their programs. In many of these play areas the safety factor has been completely ignored.

Participants Present Safety Problems

After an individual leaves school in spite of years of participation and training, he lets down. An untrained athlete is a constant hazard to himself, his teammates and the opposition. As a result there are sprains, strains, bruises and broken bones that would not have occurred in the case of a well conditioned participant. In all of our activities the individual does not train properly to get into the condition necessary to safely participate. There is little or no practice before the season starts. This is particularly true with our intra-plant sports activities.

The ratio of injuries in our plant among our intra-plant activities over our representative teams is better than three to one. The explanation is simple. Those participating in representative teams usually are more skilled and have a realization of the need to be in shape to protect themselves and to compete on an equal footing with their opponents. The urge to get in condition manifests itself with the realization that spectators in large numbers will be present at the contests and this adds impetus to their desire to condition themselves. In our intra-plant activities it is mainly a game of participants without the large spectator pressure and consequently results in less incentive to train properly.

Another participant problem hinges on the fact that unlike big time college and

professional sports, there is seldom adequate medical service in case of injuries. This situation results in needless infection and aggravated injuries. X-rays are neglected in many cases which causes complications.

Another reason the accident ratio is higher in the intra-plant activities, strange as it may seem, is because of the less frequent participation of these individuals. The higher the frequency of participation, the less danger of accidents. This is due to the fact that, in spite of themselves, the more participants compete the better they condition themselves and better skilled they become. Also their reactions to situations as they develop are a lot keener and quicker.

In all sports there crops up the gambling and liquor problem—both with the participants and the fans. In organized baseball a player caught betting on the contest he is involved in can expect immediate expulsion from organized baseball forever. A suspension and heavy fine is involved for drinking. Situations have developed in many industrial athletic setups that have hurt the cause and aims of the program. It has been my experience to witness small riots and near riots on and off the playing field both by players and spectators alike because the outcome of the game made it necessary for money to change hands. I have seen players so under the influence of intoxicants they were a hazard to themselves, the opposition and the fans. Fortunately for all industrial recreational activities, because of the advent of the trained leaders and organizations like the National Safety Council, the Industrial Recreation Association and college associations, the trend for many years in industrial recreation has been in the right direction. And the trend has made safety an unplanned by-product.

Leadership Problems

Intra-plant activities in particular usually lack the proper leadership. The captains or coaches of intra-plant teams are usually individuals who have more interest than knowledge of the sport in which their teams are participating. They are slow to recognize hazards and lack the knowledge to properly instruct those under their wing. They are not prepared to cope with accidents when they do occur. The team captains in intra-plant activities do not have

the hold over their men that those supervising representative teams have.

Preventive Aids

Somewhere along the line our physical education programs are still not adequate. The carry over values that should train an individual in some form of sport or recreational activity are lacking. Too many people (especially women) have no background of participation experience that will enable them to take part in activities after they leave the school environment. Others have participated in the strenuous sports to the exclusion of activities that they could enjoy in later years. Football, for example, a fine sport and builder, should not be the entire program of physical education for a high school or college boy. There are too many ex football, basketball and other strenuous sports participants that are completely lost after their school careers terminate. *Over emphasis* in one sport too often spoils the participants for activities that might be of benefit to them in later years. It still remains for industry to develop athletic and recreational interest in employees on a safe and sane basis regardless of what the individual's background has been.

The National Safety Council, by its interest and emphasis, can do much to help further safe and sane industrial and school recreational programs. The time allotted to this subject at this Congress is well advised not only because it can stimulate thinking of program leaders but because it can contribute to the advancement of the factory safety program through our athletic and recreational activities. I believe that if we can stimulate a participant to play games safely we can definitely contribute to the safety habits of the individual on the job. Since the entire recreational program is designed to build morale and aid the individual mentally and physically, we can assume that these individuals will work safely. Proper mental attitudes and alertness go hand in hand with safety on the job.

The number one preventative, of course, is an adequate health department in the factory. Close cooperation with the hospital staff is necessary in our athletic and recreation program. Cooperation can take the form of physical examinations and checkups on individuals in our more strenuous sports and the training of recreational leaders in first aid.

Safety in School and Industrial Athletics

By P. F. NEVERMAN

Executive Secretary, Wisconsin Intercollegiate Athletic Association, Marinette, Wis.

The value of athletic experience in the lives of young men is being tested today as never before in the history of our country. The verdict is favorable. Young men with such experience have a better chance of standing high in quality of service, endurance, even in sheer survival. The wish of those who have come into control of the lives and services of our youth is that all of them might have had vigorous athletic experience with its resultant development of endurance and coordination. And right here is our problem for the future. Our rallying cry must be, not less athletics, but more and better athletics for more and more of our youth. Can we meet the challenge?

A sound athletic program must have a four-fold objective: First, it must contribute positively to the physical well-being of the

participant. It must not allow those physically unfit to participate, but must make physical fitness the first essential for participation. Second, it must inculcate in the participant a desire for health and physical fitness. It must teach worthwhile health habits, including interest in activities which have a definite carry-over value for life. Third, the program must train, as no other activity can, in good citizenship. Where can respect for law and order—rules and regulations—respect for authority—officials' decisions—be better taught and developed than in competitive athletics?

Fourth, the athletic program must teach good sportsmanship. Life is a great contest. To succeed, we should be taught the necessity for physical fitness and health; we should be inculcated with the essentials of

good citizenship, respect for authority, law and regulations; we should be in condition to give our very best and we should learn how to win without gloating and to lose without blaming the officials, etc.

Competitive athletics have a positive place in our educational program as well as in the industrial picture. Athletic activity satisfies the desire for competition and without question helps to build loyalties and develop a cooperative spirit. *The athletic program if it is to be worthwhile must, however, give first consideration to the well-being, both present and future, of the participant.*

Playing to Win

Play as originally conceived was for the purpose of entertaining the participant and to give physical and mental relaxation. As play developed, skill was emphasized. With skill came contests. Soon many games originally created for the purpose of providing recreation for participants became contest between individuals and groups. Physical and mental benefits were forgotten and the desire to win substituted. Some games required but few participants, with the result that the more proficient and at the same time those least likely to need the exercise were selected to play together against another group. Those who did not take part became spectators. Games developed and really became exciting and this, together with the rivalries developed between groups, schools and communities, led to the present situation. Our games of play were gradually transformed into contests of skill, of endurance, of uncertainty, and attracted more and more spectators. It is significant to note that our present outstanding professional sports were developed as amateur activity. When the point of development was reached where the public was educated to the game and indicated a real interest in the resulting contests our "play" games became big business and the entertainment of the many by the physical exertions of a skilled few took over.

With the taking over by the professionals, less attention was given to the individual who, after all, was a mere prop in the program. More and more thought was directed to the spectator. The winning of games became paramount. Increased attendance required more seating capacity and better physical plants. A larger in-

vestment demanded more specialized coaching and better raw material—players. Recruiting became a necessity if the interest and funds were to be met on the sky rocketed investment in plant and overhead.

Through it all, but little thought was given to the welfare of the "actors" in the show. We passed over our responsibility to the individual participant and emphasized attendance, "names" and feature attractions. Much was made of special devices which permitted an injured player to perform. Equipment was designed not alone to protect the wearer but to actually aid him in making progress through the opposing line. Few of us realized the tremendous percentage of injury in some of our so-called recreational and body building activities. Insurance companies which had in the past studied everything from weather to ratio of males to females born in a certain area had no information on athletic injuries.

Safety Research

The first recorded study of athletic accidents was made in Wisconsin between 1928-30. The study covered 466 high schools. The results were a real shock to all. It was found that 92 boys out of every 1000 out for football were injured during the season. Thirty-five per cent of the total suffered broken bones, while other serious injuries such as concussions, twisted knees, ruptured kidneys were numerous. Broken teeth were not included in the more than 90 per thousand. Other sports also showed an unusually high injury ratio, although football produced substantially more than the other sports combined.

When the first study figures were released, Wisconsin contacted several of the larger casualty companies in an effort to secure some coverage for athletic participation. Without exception, they replied that they had no information on which to base rates and further they doubted the field as one offering opportunity for profit. The Wisconsin High School Association in cooperation with the State Insurance Commission initiated the Athletic Accident Benefit Plan. This plan began operation on September 1, 1930, on a modest basis. It has developed during the fourteen years to the point where it now gives practically complete coverage. The growth and development of the plan was possible only through the very fine cooperation of the Insurance Com-

mission, and the Medical and Dental Associations of the State, and, of course, the principals and coaches of Wisconsin High Schools. Since the inception of the plan in Wisconsin, 27 other state associations have adopted some form of a benefit plan for athletic injuries. Professor Floyd Eastwood, now of Purdue, undertook the study of football injuries in 1932 for the N.C.A.A. He has done a most commendable piece of work.

The total paid to care for boys injured in athletics in Wisconsin is substantial. This, however, is only a small part of the actual benefit derived from the program. The Benefit Plan has been entirely financed and administered by the State High School Association in Wisconsin. A total of 315,000 boys have been covered during the fourteen years the plan has been in operation. In spite of the low cost ranging from 50c to a maximum of \$2.00 per boy per year and including transportation and hospitalization, the finances are sound, showing a surplus of more than \$30,000 at the present time.

The first really comprehensive Wisconsin study covered a six year period, 1930-36, and included 125,000 boys participating in football, basketball or track. The records from year to year varied in that they clearly reflected rules changes and corrections made on the basis of information developed. The study has continued from year to year, always with greater safety for all as the chief objective.

The first study was made from three very definite angles. The first was to secure statistical information on injuries. This angle covered the where, when, why and how of all injuries. Different types of play or activity were studied and accident frequency determined. The time of injury as to game and season was analyzed. A study of comparative age injury frequency was developed. Player action was studied as was preliminary training in relation to later injury. A careful analysis was also made of so-called second or repeat injuries to boys who were returned to participation after being removed from practice or competition after being hurt. A study was made of physical examinations in order to determine if possible whether or not there was a relationship between the examination and the reported injury.

Results

A careful study was also made of equip-

ment in order to determine if protection was being afforded to the points of most frequent or serious injury. These studies showed the following:

1. The forward pass was found to be the most dangerous single play in football.
2. The first two minutes of the second half produced the most numerous as well as more serious injuries.
3. The line plays produced the fewest injuries.
4. The tackler was more often injured than the tackled.
5. Pre-season injuries were unusually heavy.
6. In the age range of 14 to 19, the 14 year old was twelve times as susceptible to injury as was the 19 year old. The 16 year old 8 times that of the 19 year old.
7. Side line injuries were high and severe.
8. While only 30% of all play occurred within the 20 yard line, 65% of all game injuries came in that area.
9. Injuries became more frequent toward the end of the season.
10. Second or repeat injuries occurred with a frequency of about 3 to 1 on the basis of equal exposure.
11. A number of "hernias" were reported as were "hearts." These indicated the necessity for more thorough physical examinations.
12. It was found that the spine, groin, knees and hips were most frequently injured. Concussions were also of quite frequent occurrence.
13. An unusual number of foot injuries, especially heel blisters leading to infection, were found.

Definite regulations were immediately approved to correct as far as possible the defects uncovered.

Changes to Decrease Accidents

A forward pass was permitted from anywhere back of the line of scrimmage. A two-minute warming up period was required at the beginning of the second half. A five-yard safety zone was established around the field of play. Games were not permitted until after 16 full days of practice. While no

rule was made, schools were urged to return the goal posts to the goal line. The football season was definitely limited to eight games. Repeat injuries were practically eliminated by a "time for return" requirement for certain injuries. Any injury requiring attention kept the boy out for five days. The non-return time is found in items 6-7-8-9-10-11 of the Medical Regulations of the Wisconsin Interscholastic Athletic Ass'n. Athletic Accident Benefit Plan.

The requirements for a more thorough examination were set up with the result that a substantial number of all boys examined were not certified by the physician. Emphasis was also placed upon examination by the family doctor. We are now planning to require two examinations, one before permitting the boy to report for the sport, and the second before accepting him for inter-school competition.

Equipment was carefully studied and the cooperation of manufacturers solicited and secured. The facts developed were used and equipment construction directed accordingly. The wearing of headguards was made mandatory.

An effort is now being made to reduce the age range for athletic competition. The schools are now voting on an amendment placing the maximum age for competition at 18. A substantial portion of Wisconsin schools are already playing under this restriction by self-imposed regulation.

Foot injuries were found to be due to the use of shoes by more than one boy. The individuality of shoes was stressed, and while no regulation could be made, a substantial reduction of this type of injury has been recorded. The mere discovery of the cause and calling of attention to the facts developed produced a reduction in injury.

The total result has been a reduction from 92 per 1000 to a low of 28 and a high of 38 per 1000 in football injuries. This total includes teeth.

A tabulation of basketball injuries indicated an unusual number of broken fingers. A study showed that the ball, of college size, was too large for the average high school boy. The ball was reduced in size from 32" to 29½" with the result that broken fingers have been reduced 85%. Another frequent cause of injury came from the fight for the out-of-bounds ball. The rule was changed

giving possession to the one touching last in the field of play.

It was felt that the elimination of the center jump speeded up the game beyond the ability to endure and benefit of the average high school boy. Wisconsin adopted a regulation requiring the official to hold the ball three seconds after a field goal, thereby reducing the speed of the game and providing a safety margin.

These corrections have reduced the total of injuries in basketball approximately 50%. Broken teeth are still a problem. In track, the high hurdles, javelin and discus were the chief offenders. Experimentation showed that the college height was greater than the high school boy should attempt. Wisconsin reduced the height from 42" to 36" with the result that the number of boys taking part in this event has increased six times and the injuries have been practically eliminated. A broken leg is now most unusual, while before it occurred frequently.

The javelin has been entirely eliminated. No remedial measure could be determined, and the hazard was such that elimination was considered the best solution. It was found that the high school boy could not hold properly or handle safely the college discus. A somewhat smaller discus has been developed for high school use. Result—more participants and fewer injuries.

We are studying, analyzing and trying to make our program still safer. It is our job to bring all into the program, but our duty to make the program sound and safe.

In spite of proven facts, some groups have, to date, failed to change regulations to improve the existing conditions. Tradition must be replaced by common sense, and facts instead of opinion must be used in the making of rules and construction of equipment if athletics, especially football, are to be made safer for the competitor.

Suggestions for Industry

Industrial athletic supervisors face certain very definite problems not found in the high school or college. At the present time the Wisconsin Recreation Association is working on a program of benefits for participants in their programs which includes practically all of the industrial athletic activity in the state. This program, if finally determined upon, will be administered by the State High School Association office

and a committee of the Recreation Association.

Safety in the Industrial Athletic program offers many problems not present in the other athletic fields. This program is one of two types. The team is made up of skilled players employed primarily for their athletic skill and whose main job on the payroll is to win games. This is the type of industrial athletics about which there need be no great concern. This type, however, is very much in the minority and, therefore, the real problem is offered by the substantial majority who take part for the pleasure they get and the appeal they are able to make to their fellow employees. This group is made up of varying ages and physical abilities. The group has limited practice opportunities and while the place of play and the equipment is usually high class, the coaching or instruction and the preliminary training is hardly ample to fully and properly prepare the individuals for the contest. This type of Industrial Athletics offers a problem which should receive thoughtful consideration and careful study. Not alone will time from work be lost, but certain injuries may have far reaching and serious results. I shall venture a few suggestions which might provide a basis for study.

1. Only those found physically fit should be permitted to enroll for the athletic program.
2. No individual should be permitted to compete until he has been through a preliminary training season, especially in football, basketball or baseball, and pronounced fit after a second examination.
3. Every possible safeguard should be placed around competition. This includes condition of field or floor, and character of the equipment.
4. Only trained and competent officials should be placed in charge of these contests. This might mean a school for training officials.
5. Playing rules should be modified for

certain groups. For all except the young and especially fit, football periods should be shortened, rest periods lengthened. In basketball, the game should be slowed. Quarters could be slightly reduced in length. Under no conditions should more than one game per day be permitted.

We must assume the professional attitude toward this program if it is to be effective and worthwhile. A professional athlete has a certain price tag—a certain value. A man in industry has a certain value in his job as well as to his family. He cannot be sacrificed for glory or victory. The industrial program will be of value only in so far as it provides a healthful activity for the participant and a rallying point for group interest and support.

It can be made all of this if we but study the question from the standpoint of a program which will help keep the competitor physically fit, encourage those less fit to improve, and, at the same time, hold the interest of all in the group and make of them a coherent whole.

We need a competitive viewpoint if we are to retain our American way of life. We must improve our program to make the children of today physically fit and ready for life. Then we must carry on programs which will enable them to keep fit. Competition is the only incentive which can attain this objective.

But for the grace of God, and the protecting breadth of our oceans, we might have been another France, another Poland, or another Greece.

With this fearful lesson on the value of preparedness still fresh in mind, let us here and now resolve, as a nation, that *never again shall America be caught physically unprepared and untrained.*

Our national purpose in this war is to help establish worldwide peace and freedom.

But—let us resolve that *from this war on, Americans shall be a physically fit, ever-ready people.*

THURSDAY AFTERNOON SESSION

October 5, 1944

Special Session Sponsored by the Commission on Safety Education
of the National Education Association

Presiding: NORMAN DAMON, Vice-President, Automotive Safety Foundation, Washington, D. C.

Organization and Purposes of the
National Commission on Safety Education

By ROBERT W. EAVES

Executive Secretary, National Commission on Safety Education,
National Education Assn., Washington, D. C.

The National Commission on Safety Education appreciates the opportunity to discuss its organization and interest in safety education at this meeting of the National Safety Congress.

At this time it seems appropriate for me to present the background which gave rise to the organization of the National Commission on Safety Education by the National Education Association. For several years a certain amount of interest in safety education has been demonstrated by the National Education Association and its various departments, but it was not until 1937 that a systematic program was developed. From 1937 to 1942 the Research Division of the National Education Association carried on a safety education project, made possible by a grant from the Automotive Safety Foundation, during which time a number of publications dealing with pertinent problems in this field were issued.

The highlight of the NEA activities in safety was the 1940 Yearbook of the American Association of School Administrators, entitled *Safety Education*. This is considered a milestone in safety education in the public schools. The research project of the NEA was hard hit by the war, and due to the loss in personnel it became inactive in 1942.

In 1943 the NEA gave consideration to the organization of a safety education program. It was considered an appropriate move to initiate a program on a Commission basis, which would bring together outstanding educators representing all levels of education—elementary, secondary, teacher training, and university—interested in safety education. The Executive Committee of the

National Education Association approved this plan of operation in July, 1943, and the Commission members were appointed in October of the same year. However, due to delay in organizing the office set-up with a full-time secretary, the Commission did not become active until May, 1944. Again this set-up was made possible by a grant from the Automotive Safety Foundation. The National Education Association supplies housing, equipment, and consultation service necessary for its successful operation. It is hoped that other sources of income will be forthcoming. The twelve members of the Commission are appointed for terms of one, two, and three years, which provision makes it possible to replace one-third of the group each year. This draws together over a period of years the experiences of a greater number of educators who may contribute to its program. Since there was several months' delay from the time the appointments were made until the Commission became active, each of the present ones has been extended one year.

To date there has been one meeting of the entire Commission, at which time consideration was given to problems in the field, organization into subcommittees, and plans for the first year of its operation. It is expected that most of its activities will be worked out through meetings of the various subcommittees. At present the staff is composed of a full-time secretary, a part-time professional assistant, and a secretarial research assistant. Additions to this group will be made as projects undertaken by the Commission demand.

The National Commission on Safety Education is organized in keeping with the

policies of the National Education Association and its various Commissions. I wish to state further desirable features of a Commission set-up. It has one distinct advantage, that of drawing together the experience and ideas of educators and experts in the field who have contributions to make to safety education planning. Since these members are active people in strategic educational positions, their thoughts and ideas bring to the surface the basic problems and ideas for their solution.

The Commission is in a position to have direct contact with the schools and their programs. The National Education Association has nearly 300,000 members from the teaching profession. Through the NEA and the affiliated groups in the states and local communities, it is possible for the Commission to have contact with nearly 1,000,000 teachers. Some of its activities to be undertaken will be worked out jointly with the various departments of the NEA. The Department of Elementary School Principals, the American Association of School Administrators, the National Council for the Social Studies, have all expressed a cooperative attitude in offering their assistance to the program. Two of our present activities are now being planned with these departments.

The Commission is divided into four standing subcommittees representing elementary, secondary, teacher training, and college and university education. Each member may be asked to work on a temporary

committee for a specific project. Also provision is made to appoint non-Commission members to work with a subcommittee for the duration of a project.

I wish to call your attention to the objectives of the Commission. They are to:

- Stimulate teachers and parents to thoughtful consideration of the safety education problem.

- Critically examine safety practices in the light of failures in accident prevention.

- Make the best materials, practices, and procedures known for instructional purposes.

- Stimulate school use of worthwhile materials and practices in safety education produced by nonschool groups.

- Assist school officials in organizing safety education curriculums.

- Cooperate with other safety groups in promoting projects aimed at accident prevention.

These points were developed and tentatively agreed upon by the Commission at its May meeting.

The action toward meeting these objectives will result in appropriate publications or other media as specific projects will require.

I wish to add that the Commission has expressed special interest in institutes of government and their place in accident reduction. It is strongly hoped that we can see a further expansion of this idea.

Problems in Safety Education

By ROSCOE L. WEST

President, New Jersey State Teachers College at Trenton; Member of the National
Commission on Safety Education of the National Education Association

The average administrator is usually annoyed by the efforts of special groups to require schools to teach the materials in which they are interested. He has probably arrived at this attitude because in many states these groups have secured acts from the legislature requiring the teaching of these special subjects without regard to their connection to regular work. In some states, for example, the law says nothing about requirements of teaching in what we

usually think of as fundamental subjects of education—the 3 R's, geography, history, and so on. In these same states provisions exist in the law for a certain number of minutes per week to be devoted to fire prevention, a certain number of other minutes to teaching the effects of alcohol and narcotics and various other such special topics. The administrator believes that a curriculum should not be made by legislation fiat, but by careful analysis of the needs of

society and of children and a proper combination of these factors as they relate to maturity, environment, and other such items.

Perhaps the administrator himself is somewhat to blame for this situation because, like many other people in our society, he has not realized the necessity of keeping schools abreast of the rapid changes of modern society. As a matter of fact, we shall have to admit that the whole world is out of joint because social thinking has lagged behind the scientific and technological advances that have been made during the past century. From science has come technology; from technology has come the inventions with which we are so familiar and all the gadgets of the modern world. The war itself has probably sprung from a failure to understand the needs of this modern technological world. Mass production, which is one of the results of technology, is a new phenomenon and as yet has not been matched by the social and economic arrangements necessary to provide for mass distribution. One might go on multiplying the examples to back up the argument that most of the troubles in the present world are due to a lack of understanding of what science and technology have produced.

Several years ago Samuel Butler wrote a very fascinating book, entitled "Erewhon." In this book he has the hero wander over the mountains in his native land to a strange country where he finds that the people have cast aside all machines because they found that they were being destroyed by the machine. He finds himself in immediate difficulty because he carries a watch. Many customs of this land are opposite to those which he has known before. For example, a man is put in jail if he becomes physically ill, but a doctor is called if he steals or commits some other such crime. It is a fascinating idea, but obviously impossible of achievement in our present world. We would not throw away the machine if we could. We must adapt ourselves to it and learn to make it enrich our lives or it will destroy us.

All of this is to say that safety education is in a real sense not a separate topic which must be incorporated into school procedure by means of special laws or against the wishes of teachers and administrators. Fundamentally, safety education should be

considered as a phase of the whole general problem of teaching children to understand the modern scientific, technological civilization in which they live and to adapt themselves to this civilization in ways which will be beneficial to them and to their fellow man. If people cannot learn to use the automobile safely, it becomes a means of destruction and every man who drives carelessly becomes a menace to his fellow man. When we look into the future and think of the possibility of the helicopter and all of the other many inventions which are coming, we realize even more what responsibilities rest on individuals for proper operation of these gadgets in order that other people as well as they themselves may live safely and happily. From this point of view, therefore, the problem of safety education cannot be isolated from any other pertinent problems facing our schools.

The accident problem is distressing because we see tangibly in loss of life, injuries, pain, sorrow, inconvenience, and damage to property the extent to which this problem actually exists. It is hardly necessary to remind this group of accident facts, but to recall that we have a loss of approximately 100,000 lives, 9,000,000 injuries, and \$5,000,000 damage to property annually in this country is really appalling. Educators are challenged to examine this unwarranted condition more closely, to determine the extent to which schools are responsible and how they may prevent this too-often-accepted condition as a part of our normal life.

On May 29, 30, and 31 of this year, the newly organized National Commission on Safety Education, of which I am a member and which I represent on this program, held its initial session in Washington at the National Education Association headquarters. This group, composed of educators representing all levels of educational effort (the elementary school, secondary school, teachers college, and university) utilized a great part of these three days in an attempt to define safety education problems and to suggest possible solutions.

I shall attempt to review these problems and comments about them as discussed by the Commission at this meeting as follows:

1. Establishing Sound Financial Assistance for Safety Education programs

At present there is little more than \$2,000,000,000 being spent on public education in this country. The recent Research Bulletin of the National Education Association for April, 1944, entitled "Problems for Public Education in Postwar America," calls for an expenditure of \$4,592,700,000 yearly, to finance an adequate program of public education in this country for the immediate postwar need. Therefore, it is realized on the part of educational authorities that we are spending just about one-half as much or less on public education as is actually needed to meet the responsibilities of our age. This condition in education has a definite bearing on what the school can and will do about safety education.

We know, too, that more care and must be done in safety education without increased expenditures. However, we also know that an over-all comprehensive program of safety education, including driver training in our high schools, means added personnel, supervision, and materials, which require additional funds. Most educators agree that safety education must have priority over other forms of learning. Consequently, some type of safety education program, even though it may be of a hit-or-miss variety, does exist in the majority of our schools. We must admit that most of these are inadequate. Unfortunately, we know that the same is true of many other important programs which are the responsibility of the schools. This is a matter which the community must recognize.

2. Changing the Attitude of the Public Toward Accidents in a Way That Will Influence More Systematic Program Planning for Safety Education

To what extent are the schools responsible for changing the attitude of the community toward accidents? How can the schools influence community support and action? Here again we see the implications of safety education as closely related to all other services provided. We have not effectively utilized accident statistics. There is a special need for influencing the most important people in local and state governments to become interested in safety. In making a demand on the school to increase its efforts in safety education, the community must by example increase its efforts for safer living by every means possible,

through engineering education, and enforcement. Unless this is done, the community is making a mockery of what it requires of the school.

There is the problem of community coordination for the promotion of safety. In this area the schools may assume important leadership, as has been done in organizing other programs involving community effort. An excellent example of over-all community leadership exercised by schools has been the extended school services programs or the day care centers established during wartime to care for children of working mothers. In thousands of communities throughout the country, over-all committees were organized to work on this problem on a local basis. In doing this, school administrators and other personnel have played important parts.

3. Finding the Appropriate Place for Safety Education in the School Curriculum

With our advanced curriculum planning activities, this should not be a problem in safety education, but it is one which is not solved. Probably the problem is not so much one of finding a place for safety education as it is finding time, in view of the numerous demands made on the schools. When a high school principal is asked about driver training, usually his first question is, "How can I get it into the program?" The problem is less pertinent in the elementary school classroom, where children are cutting and preparing pictures for scrapbooks. How to use the scissors properly involves little time and effort. Failure to teach safety in many practical school situations is no doubt due to the fact that teachers are not aware of the possibilities. Here again, we see the need of supervisory services to work with teachers and faculties to fit safety education into the program and help teachers see opportunities to create an interest and develop habits in safer living. More involved, this problem is related to administration and supervision. Unless supervisory services are well planned, the teacher becomes confused with assignments presented through supervisory channels.

4. Determining the Scope of Education's Responsibility in the Field of Safety

So far, education's responsibility in creating a safe community, state, or nation has

not been well defined. Probably the best statement as to its job is outlined in the 1940 Yearbook of the American Association of School Administrators. Deciding this issue on a community basis is still in a very pioneer stage. Again we see the need for community coordination in safety planning. We do find local municipal traffic bureaus, state highway departments, and other enforcement and executive branches using public funds for educational purposes without the proper tieup with the local or state departments of education. On the other hand, education misses the mark in some instances by trying to do a job which belongs to engineer and enforcement groups. This is a problem which needs discussion before planning groups on a local, state, and national level.

Difficulties in getting this problem straightened out often arise over appropriations. In some instances special taxes are advocated to get specific programs started, with non-school groups in charge. Situations of this kind probably arise because education groups are less influential in securing appropriations. That is a big problem in itself—why can't education groups influence appropriations as is done by other organized professional groups? Efforts have been made for years to get across a modest appropriation for federal aid for education, to help equalize educational opportunity, a modest sum of \$300,000,000 annually. Along comes a bill, now pending before Congress, to appropriate $1\frac{1}{2}$ billion dollars for a three-year period, to be matched by an equal sum from the states for highways. This bill meets little opposition. I am in favor of it. But I am also in favor of educational opportunity for all children, far beyond that which we have been able to give. This, too, has its implications for safety education. Many teachers are still working for the small sum of three, four, five, and six hundred dollars per year. In fact, 22 per cent of the public school teachers of America are receiving less than \$600 per year. As in other areas of American economic and social life, we get returns in education in proportion to the money we spend.

5. How to Get Safety Education into Rural Areas

Learning good safety practices looms as one of the most important educational prob-

lems in rural areas following the close of World War II. For the first time in American life, industry will be geared to producing products adapted to rural areas on a large scale. For example, in the seven-year period between 1935 and 1942, the percentage of American farms electrified increased from 10 to 35. Present plans submitted by the 48 states call for an expenditure of $3\frac{1}{2}$ billion dollars to expand rural electrification still further, and electrical services should very shortly reach over three-fourths of the farms in the United States. This brings to the farm all the hazards of electrification which are found in cities, plus the additional hazards due to the fact that men, women, and children are working directly with and operating electrical equipment.

Another important development is the small tractor which furnishes the necessary power for a family-sized farm. This and the consequent mechanization of agriculture in the years just ahead will require a tremendous amount of education, not only to use the equipment properly, but to operate it in a safe manner.

In the small community and on the farm the individual must exercise a great deal more responsibility in handling modern equipment. The individual must operate the equipment himself, rather than having a specialist operate it for him. In addition, proper regulations governing the installation and use of modern machinery have not been developed for rural areas. An example of the impact of modern technology in a rural area is seen in the destruction of the school building at New London, Texas, several years ago because it was not properly built to use gas heating and because raw gas was used through equipment which was not properly protected. It will be necessary very soon to develop codes and regulations for building modern buildings and using the products of modern industry in rural areas, just as we now have codes for cities. The Texas Consolidated School was presumably built according to the code of a nearby city, but there was no means by which the code could be enforced.

It is quite clear that the code for installation and use of electrical equipment, farm equipment, and automobiles must be different than the codes which have developed in metropolitan areas. The code governing

fireproof construction, for example, would be very different in rural areas where buildings are more isolated and usually not more than one or two stories in height.

Agriculture is one of the most dangerous occupations. The danger comes from the use of machinery and the handling of animals on the farm.

It seems to me that safety education for rural areas should take into consideration particularly the following facts: (1) much of modern equipment must be handled by individuals using it for their own use, rather than by experts who serve a large group, (2) the very rapid mechanization of agriculture in the next few years, with small children driving tractors, operating feed grinders, and the like, (3) the expansion of school transportation which is already under way, (4) increased traffic on main highways which must be crossed by pedestrians, particularly small children, and (5) the possibility of a considerable use of air transportation in the near future. It seems to me that safety education must begin with the smallest children learning how to protect themselves and prepare for added responsibilities as they become older, that there should be a great deal of attention to operating all sorts of mechanical equipment, and that the schools should begin to lay the groundwork for sound codes in rural areas, either county- or statewide, and the understanding necessary in order to have them carried out and obeyed.

As the nationwide school situation now exists, we are able to do the least in meeting these needs in rural life because of the limited facilities.

6. Training of Personnel for the Administration of Safety in Education—Enforcement—and Engineering Programs

We have not yet developed educational facilities for the training of safety personnel on a nationwide basis. A number of colleges and institutions are offering courses in safety education, but the failure of local school systems and other groups to employ some of the people who have been trained in safety education has discouraged further developments. In order for the institutions to go ahead with a specialized program of training qualified persons to do safety education programs, greater demand will have

to come from those sources. Generally speaking, institutions will offer training to those requiring a special type whenever there is such a demand. This does not, however, eliminate the responsibility of higher institutions of learning from being aware of needs and new developments in education. Teacher institutions and universities should give teachers more help in carrying on a safety education program and in working it out along with general classroom instruction. For example, all teachers should know something about first aid and be qualified to render first aid. Is that too strong? If first aid courses create safety consciousness, it seems sensible. Teachers do miss many opportunities to teach safety in an integrated way with the usual subject matter because they are not safety-conscious.

The Future of Motor Transportation

Full public realization that the social and economic life of our nation was directly and indispensably geared to rubber-borne transportation—the automobile, the motor truck, and the bus—came shortly after the outbreak of World War II, when the enemy seized our sources of crude rubber and interfered with our shipments of gasoline. This revolutionary change in our way of living took place during the quarter century following World War I. What will happen to motor transportation after the present shooting stops is reflected by postwar plans, many of which are already in the blueprint state. Automobile manufacturers have indicated their intention to expand prewar output by as much as fifty per cent as soon as they switch to peacetime production.

Roads and streets are deficient and much of the system outmoded, particularly in and near urban areas, but efforts are under way to prepare for postwar improvements that will meet the needs. A bill now is pending before Congress, authorizing an appropriation of $1\frac{1}{2}$ billion dollars for highway construction to be apportioned among states during the first three postwar years. The National Interregional Highway Committee submitted a master plan for future development of main arteries to the President the first of this year. This plan, based on the facts assembled through state highway planning surveys, recommends joint federal-state designation of a limited system of

interstate highways to be improved to new high standards which will greatly reduce such prewar nightmares as congestion, delays, and accidents.

The automotive postwar program will provide large direct and indirect employment benefits. But this is a secondary aim of highway development. The object is not simply to build roads so that men will have jobs immediately after the war, but to have adequate roads so that transportation can help build America. For the orderly redevelopment of our cities, the production and use of our natural resources, the promotion of rural education and health, the support of agricultural development, the desirable location of industry, the provision of adequate airport connections—all these are dependent to an important degree on the availability of safe and efficient highway transportation.

The traffic safety problem is far more involved than teaching skillful driving and crossing the streets safely. There must be a keener sense of responsibility on the part of the individual who handles the automobile. A study made in recent years by a group of Pennsylvania educators showed that, in terms of miles driven, the fatality rate of 16-year-olds was nine times greater than that of drivers 45 to 50 years old. This was not because of lack of skill, but because of lack of social responsibility. The high schools are challenged to do more about this situation. A plan to give them a fuller understanding of what the motor vehicle means to our national life and how it

may be properly utilized in the development of our natural resources and raising the standard of living may help to influence this appreciation. Many high schools have already equipped students with knowledge, skill, and proper attitudes regarding the motor vehicle and its safe use. They are making competent citizens for our motor age. Measured in terms of saving life, the money and effort expended in training drivers will repay society many times over.

Engineering and enforcement have definite contributions to make in preventing the rise of traffic accidents in the postwar period to the 1939 peak of approximately 40,000, but the human element is still the major factor in accident causes. The Pennsylvania Turnpike did not eliminate accidents. Accidents still happen there because drivers fail in their responsibility.

Summary Comments

It is the opinion of the Commission that the educational resources of this country are not being fully utilized to solve the accident problem, and that without additional funds we can do a much better job. It must be admitted that education has not fully accepted its responsibility in meeting the situation. It is hoped that the Commission will contribute to the awakening of the need for more effective safety education and provide guidance in such action. There is a definite need for all groups interested in safety education to work more closely together to solve this problem.

Traffic Section

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General Chairman—W. GRAHAM COLL, Asst. Secy., Metropolitan Life Insurance Co., 1 Madison Ave., New York 10, N. Y.

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Third Vice-Chairman—JOSEPH M. WYATT, Chief Judge, Baltimore Traffic Court, Baltimore, Md.

Chairman, Committee on Traffic Accident Records—WILLIAM M. GREENE, Dir., Highway Safety Commission, Room 37, State Office Bldg., Hartford, Conn.

Chairman, Annual Congress Program Committee—D. GRANT MICKLE, Traffic Eng., Automotive Safety Foundation, 726 Jackson Place, N.W., Washington 6, D. C.

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DR. B. L. CORBETT, Executive Secy., Milwaukee Safety Commission, City Hall, Milwaukee, Wis.

H. S. FAIRBANK, Deputy Commissioner, Public Roads Administration, Washington 25, D. C.

EARL E. GROVER, Dir. of Safety, Columbus & Southern Ohio Electric Co., Columbus, Ohio.

L. S. HARRIS, Executive Secy., American Association of Motor Vehicle Administrators, 839-41 Woodward Bldg., Washington 5, D. C.

BURTON W. MARSH, Dir., Traffic Engineering & Safety Dept., American Automobile Assn., Pennsylvania Ave. at 17th St., Washington 6, D. C.

THEODORE M. MATSON, Dir., Bureau for Street Traffic Research, Yale University, 311 Strathmore Hall, New Haven 11, Conn.

JAMES A. PRYME, Chief, Washington State Patrol, P. O. Box 1166, Olympia, Wash.

ROBERT E. RALEIGH, Acting Dir., Safety Div., International Assn. of Chiefs of Police, 1827 Orrington Ave., Evanston, Ill.

DONALD SLUTZ, Managing Dir., Traffic Safety Assn., 1902 Buhl Bldg., Detroit 26, Mich.

C. G. STONEBURNER, Traffic Eng., Arlington County Highway Dept., Court House, Arlington, Va.

W. F. ROSENWALD, Traffic Eng., Minnesota Dept. of Highways, St. Paul 4, Minn.

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ROY A. MILLS, Judge, Nashville Traffic Court, 706 Nashville Trust Bldg., Nashville, Tenn.

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Secretary—HARVEY D. BOUTH, National Safety Council, Inc., 20 N. Wacker Drive, Chicago 6, Ill.

TUESDAY AFTERNOON SESSION

October 3, 1944

Presiding: GENERAL CHAIRMAN W. GRAHAM COLE, Asst. Secy., Metropolitan Life Insurance Co., New York City.

Highlights of Street and Traffic Section Activities

By W. GRAHAM COLE

Asst. Secy., Metropolitan Life Insurance Co., New York City, and
General Chairman, Traffic Section, N. S. C.

At the request of many members of the Section, and with the approval of the Executive Committee, a Committee on By-Laws, headed by First Vice-Chairman Don F. Stiver, was appointed a year ago to suggest revision in the By-Laws of the Section.

- (1) To conform to provisions in the new Constitution and By-Laws of the Council; and
- (2) To provide for divisions or sub-section organizations within the Section.

The proposed revisions suggested by the committee have been approved by the Executive Committee of the Section and published in TODAY'S TRAFFIC. They will be submitted to the membership for approval or rejection at the present business session.

The Executive Committee offered a number of recommendations in connection with the review of the Uniform Vehicle Code.

The work of the Special Committee on Post-War Traffic Safety Planning developed into a comprehensive program in which 42 national organizations have joined in sponsorship. The report of this project "Danger—Traffic Jam Ahead" was published in the name of the sponsoring organizations.

The Group Committee on Traffic Courts with the cooperation of the Junior Bar Conference of the American Bar Association has made rapid progress in the program for improving traffic courts. Forty local and regional conferences and meetings have been held—28 since the last Congress, and many more will be held in the months to come. A questionnaire study of the participation of prosecutors in traffic cases is nearing completion.

The Group Committee on City and State Police made a study of police journals and

effective contacts for better publication of articles dealing with traffic enforcement. They have arranged a luncheon for editors of police journals during this Congress. A survey was made of police methods for traffic control on "VE-Day." An effective program for the police sessions of this Congress has been developed.

The Group Committee on Traffic Safety Engineering has had as its main activity this year the development, in cooperation with the Institute of Traffic Engineers, of the traffic safety engineering phases of the Congress program.

The Committee on Traffic Accident Records has been busy on several important projects. One was the preparation of an alternate tabulating plan for state accident record bureaus. Experimental work has been carried on in three states in the matter of accident record forms. Considerable information regarding the use of records has been collected, and referred to the Committee on Uses of Developed Information of the National Conference on Uniform Traffic Accident Statistics.

The Committee on Winter Driving Hazards during the past year has conducted the most complete and comprehensive educational and publicity program in its history. This program was well balanced, in fact, it covered all phases of the winter traffic problem—including road and street maintenance; inventory of available regular and special vehicle equipment and parts and their maintenance; and safe practices for winter driving.

The Committee on Pedestrian and Bicycle Safety undertook several special projects, including a study of child pedestrian accidents and procedures for solving the problem; a study of changes needed

in pedestrian ordinances and legislation and the preparation of recommended changes in the Uniform Vehicle Code; and a study of the promotion of pedestrian safety through educational media. Several special reports on pedestrian accidents have been prepared and furnished members of the Section.

The Committee on Tests for Intoxication developed suggestions for legislation dealing with chemical tests for intoxication for submission to state legislatures during 1945, and submitted recommendations to the Committee on Uniform Traffic Laws and Ordinances of the National Conference on Street and Highway Safety for consideration in revising the Uniform Vehicle Code. Two Public Safety Memos on the subject have been prepared and others are in progress. A special study and recommendations were made of the Army method of tests for de-

termining alcoholic content of blood, and several articles on the subject were published. Interest in these tests has been steadily increasing throughout the year, and during 1943 they were used in 26 different states.

Although not a part of the Committee work, a valuable training manual on Chemical Tests for Intoxication has been prepared by the Indiana State Police under the direction of Superintendent Don F. Stiver, Vice Chairman of the Section and Chairman of the Committee.

All of these committees and groups cooperated in preparing package program outlines for community safety councils. Generally, as well as specifically, the committees of the Section were quite busy during the year, though limited in some respects to the staff time available.

Highways for the Future America

By THOMAS H. MacDONALD

Commissioner, Public Roads Admin., Washington, D. C.

A quarter of a century has elapsed since the end of the first world war. Modern highway techniques have been the product of this period. Research which has been an integral part of the operations, has not been confined to the perfecting of engineering and technical elements, but has extended into the economic and social areas. When the Committees of the Congress, particularly the Roads Committee of the House of Representatives, undertook a long series of hearings to determine the current status of highway improvement as a basis for future legislation, there was a wealth of material presented on which to base the conclusions.

The highway planning surveys conducted by the state highway departments in cooperation with the Public Roads Administration supply data which not only define the current status accurately but indicate the major objectives for the future. The hearings before the Roads Committee of the House and also the hearings and studies by the Senate Committees on Post Offices and Post Roads and on Post-war Planning, have brought together adequate information on which the recommendations of the Commit-

tees have been based. The hearings as a whole brought together recommendations of highway administration and highway engineering officials and also of the highway user groups covering a complete range.

The war experiences have accelerated conclusions that might not have been reached in many years of peace-time highway use. Not since the motor vehicle became such a factor in our national economy, has it been possible to reach such a clear conception of the over-all pattern of future highway development fitted to the varying types and degrees of use in all parts of the nation. The Senate has now passed a measure which incorporates the conception of an administrative plan fashioned to meet the requirements of highways for the future.

Increased Federal authorizations are included to provide Federal aid funds to enlarge the previous road improvement programs, to cover deferred construction and to overcome the accelerated depreciation and obsolescence during the war years. An important consideration is the need to provide employment at the war's end indicating the need for a substantial public works

program in sustaining the national income at a high level.

The Research Committee of the Committee for Economic Development in a recent report states:

"Reliable studies agree that from 7,000,000 to 10,000,000 more jobs must be found in private production enterprise than existed in 1940, and this great volume of new peacetime jobs must be created quickly."

This refers to jobs in private industry rather than employment on public works, but the need for markets for materials and equipment afforded by public works must be recognized. On public works on durable improvements, the employment afforded is in the ratio of one and one-half to two men in private industry for each one man employed on the job. A substantial public works program is clearly indicated.

The war years have provided a forced interlude in highway development between two periods which in the future will become more apparent. The first period, now closed, was one of rapid expansion of highway mileage. This mileage has been improved with reasonably usable roadways, but the construction has been held to minimum standards to stretch the available funds over more mileage. It has been a period of road improvement by steps or stages to obtain many miles of roadways to keep the public out of the mud. It has included road surfaces usable throughout the year to connect town with town, to connect more farms with markets, and within the cities, to extend some type of surfaced streets to serve home and business developments which have grown in concentric waves from the old urban centers to far-flung suburbs. The motor vehicle brought with it an irresistible pressure from the user for mileages irrespective of quality. Considerations of long-time durability, built-in safety, and economy of operation were sacrificed for maximum mileage.

This is not a criticism of either the highway officials or the public. The highway officials correctly interpreted the laws under which they operated. They devised minimum standards to gain maximum mileage. The legislator who made the laws correctly interpreted the demands of his constituents, and the public was not wrong. Suddenly released from horse-drawn travel to the

freedom of movement inherent in the motor vehicle, individuals demanded nation-wide highway facilities sufficient to free the bonds of mud. This was the spirit of the period.

Industry Expanded

The highway officials and highway industry have done a remarkable job. New techniques, new machinery, new materials and old materials used in new ways, expanded usable mileages rapidly. The road system has stood up under the heavy-duty war transport far exceeding the normal peacetime uses, with minimum repairs and with necessary replacements denied. More has been demanded of our transportation system with less consideration for the day-by-day needs than for any other essential of the war economy. The proof of the fact that these minimum standards for road construction have been executed with integrity and reasonable adequacy lies in the results to date. The condition of 186,000 miles of Federal aid road examined and reported on as of January last, shows 22,000 miles is now beyond repair and must be re-built. This is under 12 per cent. But this does not mean that the balance are safe roads.

The experiences of the past quarter century, and particularly of these war years, has defined the principles and sharply etched the pattern of road development for the next period. There is now more nearly agreement upon the highway needs of the period of re-habilitation and reconstruction after the war, than upon any other major element of the nation's internal economy.

The highway planning surveys have taught new research techniques. Moreover, they have delimited the manner and measure of road use by the individual. Although not yet existing in any large number, highways have been built and are in use which point the way to efficient and safe service. One example will suffice to indicate the possibilities of built-in safety. The lack of housing and office accommodations in Washington resulted in providing new office buildings on the Virginia side of the Potomac River for the Army, Navy, Marine Corps and Army Air Forces. Upwards of 50,000 people go in and out of this area each day. This is very largely new traffic. All movements are either by private automobile or bus. The existing highways had long been inadequate for the pre-war traffic.

The only solution was a new system of roads to care for the new local traffic and for more efficient service to the large existing through traffic.

A system of roads was designed and built by the Public Roads Administration in co-operation with the War Department and the other agencies, with one-way traffic, separated grades at intersections for both vehicles and pedestrians, adequate sight distances, bus turnouts, loading platforms, easy curves and grades, and flat side slopes. Parking was taken entirely away from the main arteries by parking lots connected with the main system of service roads which feed in and out of the parking areas on decelerating and accelerating lanes. Other safety factors were incorporated.

Upwards of 50,000 vehicles cross the three Potomac River bridges per day, of which 300 to 500 are buses. Much additional traffic comes into the area from Virginia points. One road from a new residential district opened last February 2 now carries 10,000 vehicles per day. Since substantial completion of the system in July 1943 there have been no fatalities and only three personal injury accidents. Yet every person who comes in and out of the area was new to the system of roads. It has been said that the system of roads is unnecessarily expensive. Reduced to the principle, vehicle-per-day use, the cost is less than for many miles of quite ordinary roads.

The real question in this discussion is the reduction of fatalities and non-fatal casualties in every walk of life. Can a nation afford the toll of lives, of incapacitated individuals and property losses which have been exacted by street and highway traffic? It unfortunately has taken the war to give us any comprehension of the magnitude of destruction of human life by street and highway traffic. Are we to continue to pay this price? The emphatic answer of the National Safety Council is "no."

The real question is what price safety—safety that can be built into our streets and highways over the next quarter century? The engineering requirements for safety in highway design are quite generally understood by highway officials. Relatively, more attention has been paid to engineering techniques to reach this end than to the administrative policies which permit their utilization. Not enough attention is centered upon

the ways and means to secure administrative policies that permit and encourage the best techniques.

Administrative policies reflect public attitudes. The first and perhaps most important function of the National Safety Council is public education in safety matters. Before this audience it seems appropriate to emphasize the need for the support of and encouragement of administrative policies which incorporate safety as a major element of highway improvement. Safe highways have to come through administrative policies first, not engineering techniques.

In the Senate measure and the approved bill which has been placed before the House there are new principles which will have a very important bearing upon the safety of the highways which are proposed. Both measures include the long-time feature of cooperative action between the Federal Government and the States. This basic policy requires wide public knowledge and support, since the state highway departments become the agencies to include safety in the designs for new highways. For the first time, there is incorporated the principle that there are three general classes of highways to be selected as integrated systems.

First System Federal

The first is the Federal aid system of main roads—urban and rural. This conception continues a policy incorporated in the first Federal highway legislation of 1921. The first system selected, limited to 7 per cent of the public road mileage, is not static. Year by year changes are made. The planning surveys have indicated the need for a more general overhauling. The improvements made, the travel habits of the public, shifts in population during the war years, and the gradual development of new territory and changes in the use of the older areas, have combined to throw heavier volumes of traffic on some sections of the system and to lessen the service of others. For example, in one state the planning surveys indicated the greater importance of some county roads than of parts of Federal aid system roads selected on opinion rather than accurate data. Obviously there should be a shift if the Federal and state funds are to be used where the traffic is heaviest. This is indicative of the situation in other states, and is not surprising con-

sidering the time that has elapsed since the selection of the original system. This system is conceived to carry the main traffic flows in the rural areas and to continue over the principal roads and streets in urban areas. The long-time improvement of the Federal aid system has resulted in dumping at the city boundaries volumes of traffic that were inconceivable only a few years ago, and these volumes have been imposed upon already inadequate city streets.

The second class, incorporated first in the regular Federal legislation in 1936, is a more adequate provision for secondary or feeder roads. Erroneously these are frequently called farm-to-market roads. Actually the Federal aid system itself carries the principal farm-to-market traffic. The requirement is for a system of secondary roads that will provide service to the rural areas not contiguous to Federal aid routes. There is introduced in the selection of the system the element of cooperative effort between the local officials, the state highway departments and the Public Roads Administration. The pressures for greater Federal recognition and financial provision for this class have been intense, including some attempts to minimize the necessity for provision for the far greater traffic carried on the other classes. This calls for a study of the relative importance of the individual roads to be included to serve the maximum farm units with the minimum mileage. Because of the general necessity for lesser expenditures per mile in the improvement of this class, the standards adopted must be in keeping with the traffic use. Here alone mileage remains a ruling consideration, but safety must be incorporated by adequate sight distances, the elimination of blind turns and dangerous grade crossings, proper designs for intersections, and particularly, well planned ingress and egress, where these feeder roads join main traffic arteries.

The third class are the extensions of the Federal aid system in urban areas. In general, urban street improvements have been lagging behind the growth in their use. The concentration of traffic at city boundaries by the improvement of the Federal aid system has been touched upon. Entering the city, this traffic, much of it destined for the city itself, or bound through the city to suburban developments or to other urban centers, mixes with all types of local traffic

and finds its way slowly through the city streets.

The traffic problems of cities have been developed at length in the two reports of the Public Roads Administration—"Toll Roads and Free Roads" and "Interregional Highways." The conclusions, based upon the nation-wide highway planning surveys, are in agreement with the innumerable special and general studies of city planning organizations. Many years ago the urban streets were the best improvements to be found. The attention of the Federal Government and the states were then fixed upon the rural problem. The condition is now reversed. The Committees of the Congress, after long study, have recognized and made provision for assisting the cities to overcome this condition. Here again the administrative element calls for the cooperation between the states, the city administration and the Federal Government. It places at the disposal of the cities the techniques and experience developed through the years by these other organizations. It is not an easy task to bring these two entities, each of major importance, into completely cooperative relationships on a long-time program to meet the traffic problems.

Another major objective in the proposed Federal legislation is the creation of the urban area. This contemplates an entity composed of the city as a nucleus, and the surrounding area delineated by the state highway departments and with the approval of the Public Roads Administration. The influence of the city extends far beyond its corporate limits. Roughly, this distance varies with the size of the cities, from about 35 miles for the larger cities to around six miles for cities of 10,000. Within these areas traffic disregards the dividing lines. There has always been a hiatus between the city streets proper and their extensions into the suburban districts. The multiple jurisdictions have been the most serious deterrent to consistent planning for these areas, and particularly integrated improvement programs. True, there have been some regional planning commissions, but these have been without authority to enforce their findings.

Another form of administration has been the creation of an additional administration super-imposed upon existing entities to carry into effect certain objectives. Al-

though good work has been accomplished, there is too much separation of authority to plan and execute on the one hand, and too much overlapping and conflicting authority on the other. The Federal recognition of the existence of urban areas as distinct from the city entity, is a step toward utilizing existing authorities through coordinated effort, to achieve desirable objectives. It can be one of the most necessary and useful steps in our administrative pattern. But it must suppress traditional isolation and requires a broad-minded, tolerant attitude for the common good. It may not achieve the same day-by-day headlines for the individuals, but a more adequate service to the public is the end product.

Interregional Highways

Another principle is the provision for an interregional highway system. In this discussion, this proposed system has not been separated from the three general classes of highways, since it is conceived as a part of the primary Federal aid system, using elements from both the urban and rural primary systems and following the general lines of already established highways. Many of the older roads, particularly in more densely populated states, which were first improved, have long since become inadequate. The planning surveys show that in the rural sections, 16.79 per cent of the total daily pre-war traffic reaching in excess of 465,000,000 vehicle miles, was served by the roads that would conform closely to the rural sections of the interregional system, totaling approximately 29,450 miles. When the city traffic for the city extensions is added, about 20 per cent of the total daily vehicle miles in normal times would be served by about one per cent of the total mileage of rural roads and streets.

Our population has tended to concentrate in regions surrounding our major urban areas. The term "region" as used here refers to these population regions, and the importance of their inter-connection is indicated by the fact that nearly 90 per cent of the traffic moving on main highways has either its origin or destination, or both, in cities, and that traffic steadily increases as the cities are approached. That direct inter-city traffic is far greater in volume than the general level on the rural sections of other primary routes.

Finally, the most heavily traveled sec-

tions of the proposed interregional system are close to cities of 10,000 and above. The selection and development of such a system to adequate standards must be undertaken with a background of intensive studies, and with the agreement of the responsible administrative officials. The implications of this task are so serious that the actual selection of the system must extend over a considerable period.

It is not proposed to discuss here the influence that will be exerted by the interregional system upon the city patterns, or the social economic implications, save as to one element. The recommended standards are based upon safety and efficiency for the mass of traffic which will use them. Included in these considerations are controlled access, the separation of intersecting traffic lanes, provision for pedestrian safety, alignment providing adequate sight distance, easy curvature and grades, traffic lanes not less than 12 feet in width, the separation of opposing traffic flow lines by median strips, the complete elimination of parking on the highways and stopping in the traffic lanes.

Because of the limitations on built up roadside properties, much of the development to such standards can be secured economically only by new locations. The width of right of way is the most important consideration. A perpetual nightmare of the highway engineer is the reluctance of the public generally to recognize the impossibility of building such highways on an inadequate width of right of way. There is no place within such highways for billboards, which distract the attention of the driver, for filling stations or roadside markets which present continuous hazards, or for access except at controlled points which are rendered safe by deceleration and acceleration lanes.

Each one of these requirements is an essential of safety, and contrary to uninformed opinion, the objective of such highways is not to encourage excessive or unsafe speeds. It is the experience of those who are familiar with highways designed to these standards that the tendency of drivers is to conform to reasonable speeds. The loss of time and perhaps more influential, the irritation caused by delay piled upon delay, by traffic interferences on normal roads, is perhaps the greatest cause of dangerous speed. The experience in using the

Autobahnen developed to similar standards by Germany prior to the war, sustains this observation.

The development of the proposed inter-regional system in the United States must necessarily be slow. It is not advanced as an emergency program. The selection should be based upon painstaking studies. There must be new thinking concerning the financing for such a system. An annual income for road improvement is assured, because of the established road-user revenues. It is not necessary in any one year to provide at any level the funds for the system as a whole, or for any large part. This is a continuing program for at least a quarter of a century in the future. Funds can be made available for sections, each one of which will be useful as soon as completed, within the current annual budget. It is a good place to show faith in the future of the United States—the cause is a worthy one.

Standard Code Proposed

Another principle incorporated in the proposed legislation is the requirement of a standard code for signs, signals and traffic regulating devices. This recognizes the fact that the traveler who perhaps most needs these direction and control devices is the stranger to the particular highway. One such hesitant individual can greatly impede the utility of a highway and endanger the safety of others. Perhaps nothing would make him feel more at home and thus make him a safer driver than to be assured that he will encounter no new, and in some cases fantastic traffic control devices which are the result of good salesmanship rather than good engineering.

Another provision that is all important is that which sets aside 154% of the authorized funds for research. This is unquestionably the most productive expenditure that can be made, and with the new principles incorporated in the proposed legislation, there can be no question as to its importance. This permits studies into all fields—physical, social, economic—upon which highways have an important bearing.

This is an inadequate review of the advanced principles which have been incorporated in the proposed Federal legislation.

They give confidence that the legal authority is sufficiently comprehensive to meet the next quarter of a century's development. At present it is difficult to foresee any additional major principles that will be required to cover the Federal operations for a long time in the future.

As previously stated, public information, particularly as it relates to the safety of the individual, is the function of the National Safety Council. Industrial safety can be reached directly. Public safety is more difficult. One of the greatest fields for improvement is street and highway safety. This requires general public education and an intensive support of public officials.

The administrative functions to promote safety need more stimulation, more support, than do engineering techniques. In the proposed Federal legislation the keystone of the arch of highway administration is the state highway department. The success of the principles proposed now for incorporation in Federal legislation will rest largely in the administrative policies adopted by these departments. The planning of the highway work for the new period extending into the years, requires state highway department broad scale planning at ground level, with the full cooperation from both rural and urban units of government.

If we are to decrease the toll of human lives, the casualties and property losses, it will be through the success of the administrative policies adopted by the state highway departments in coordinated effort with Federal and local highway officials, plus the cooperation of the public in their use of the streets and highways. The active and intelligent support of the highway departments in their efforts to coordinate action between the states and the urban and rural officials, and educational activities to secure a wholly responsible attitude on the part of the public in their use of streets and highways, certainly present a charter sufficiently broad to engage the best efforts of the Council and its constituent elements. In this field the Public Roads Administration wholeheartedly endorses every effort of the National Safety Council and its constituent elements to support the public officials in this great work dedicated to the safety of the citizens of our country.

Targets for Tomorrow

By NORMAN DAMON

Vice-Pres., Automotive Safety Foundation, Washington, D. C.

We face decisions on future policies and procedures in enforcement which are the most important in our generation. The crucial character of this period results, of course, from the impact of three years of war. During the emergency we have seen the number of motor vehicles on the road steadily reduced. Mileage of travel has been drastically curtailed, accident fatalities in 1943 reached their lowest level in nearly 20 years, and the personnel of enforcement agencies has been radically reduced. Mileage of travel has been radically depleted by manpower shortages.

Today, with much of the momentum gone from the traffic control program, we stand on the threshold of change. Wartime restrictions soon will be relaxed. The number of vehicles will begin to increase. More gasoline and tires will be available for the operation of vehicles, many of which are running already on borrowed time. We can anticipate an upsurge of travel mileage and a corresponding increase in accident exposure. The ingredients are all there for a disastrous skyrocketing of traffic fatalities.

Not for a moment do I suggest that traffic law enforcement alone must bear the full responsibility for success or failure in meeting that grim challenge. That burden is also shared by two other fundamental factors in an effective control program—engineering and education.

But the enactment of good traffic laws, and their proper enforcement, constitute a basic and indispensable element of safe highway use. Violation of the rules of the road by a minority of citizens is involved in an overwhelming percentage of fatal traffic accidents.

The growth of traffic both in volume and complexity had imposed this responsibility upon enforcement agencies long before Pearl Harbor. With the war came diminishing emphasis upon the program.

Now, in the face of imminent changes in traffic conditions, the responsibility

once more stands clearly outlined. It is unpleasant to think what might happen in this country if traffic is not controlled effectively during the post-war period. But we can fervently hope that the decisions which are made at this turning point will be the right ones, and that so far as law enforcement is concerned, our streets and highways shall not, in Shakespeare's language, be "bound in shallows and in miseries."

It seems to me that the gains and losses which have accrued to the enforcement program during the war period must first be taken into account as a basis for estimating future needs and supplying the answers to some of these questions.

To simplify the discussion, I have divided the subject into four general classifications:

First, traffic laws and ordinances, which are necessarily the foundation of the enforcement program.

Second, police enforcement and driver license administration.

Third, the traffic courts. It is literally true that the joint efforts of law-makers, police, motor vehicle administrators and other agencies stand or fall at the bar of justice.

Fourth, and finally, the public itself. It is true that enforcement activities are aimed particularly at a minority of citizens, yet in the final analysis the effectiveness of the entire program rests squarely upon public understanding, acceptance and support for it.

Traffic Laws and Ordinances

We still suffer as a nation from the habit of "let's have a law." We forget that there is no law without a sheriff. The war has neither caused nor cured this weakness.

Any law, to be effective in this country, must carry the clear sanction of a majority of citizens. Beyond that, traffic laws must also meet the test of uniformity. Conflicting rules of the road among

local, county, and state jurisdictions are impracticable in modern traffic.

Despite marked progress toward uniformity of traffic laws in the past two decades with the Uniform Code as a guide, we still have a long distance to go. Even during the war period we have made some significant gains, notably:

- (a) Enactment of progressive financial responsibility laws.
- (b) Legalizing of chemical tests for intoxication in 4 states and recognition by courts in others.
- (c) Relaxation of state trade barriers.

Another development of great potential importance is the provision in the pending Federal Aid Highway Bill, already passed by the Senate, which would materially encourage uniformity of signs, signals and markings on roads constructed under Federal Aid grants to the states.

The need for a more vigorous and widespread job of interpreting state traffic laws to the public likewise is an inheritance of pre-war years, and goes with us into the future. Too often state and city officials are inclined to rest on the legal support that "ignorance of the law is no excuse," and expect the public to know as they do the contents of lengthy and complicated motor vehicle laws.

Other legislative objectives which remain with us include the stiffening of driver license requirements, upgraded to uniform levels, and in the case of three states, enactment of driver license laws. There is much to be done in defining the legal relationship of pedestrians and vehicles, and in giving legislative support to the program for improvement of traffic courts.

While the war period has had less immediate effect on municipal traffic regulations, progress there is much less satisfactory than it is in the state field. You know as well as I the confusing differences in city ordinances in the same state and even in adjoining communities—let alone in different states.

A few exceptions should be noted. Detroit, for example, has contributed materially toward simplification and uniformity of signs, signals and markers. Where six shapes and twelve color combinations formerly provided 406 different parking

messages there has been substituted one shape, two colors and a combined total of 76 messages.

The pedestrian problem is acute in urban areas and requires much greater attention. Traffic consists of vehicles and of persons walking; under prevailing legal concepts inherited from the last century, it is "half-slave and half-free."

Here again in Detroit and in a limited number of other communities forward steps have been taken during the last three years in the enactment of modernized pedestrian control ordinances and in gaining for them the necessary public support.

Police Enforcement

Many real gains in the police field during this emergency pay tribute to the abilities and vision of the men who are operating our state and city enforcement agencies.

The police have developed a substantially increased interest in training programs from which we can anticipate large returns in the post-war era, despite forced curtailment of such training during the war period. How drastic that curtailment has been is revealed by the fact that in 1941 a majority of all state departments provided some kind of training, yet by 1943 less than a half dozen departments were continuing those programs.

Meanwhile, however, the development of training materials and plans together with support for the Northwestern University Traffic Institute, the N.P.A. and the limited number of state or local training activities is building a constantly wider acceptance in the profession and with the public for efforts to raise police standards by adequate training.

Large gains have been made also in the matter of coordination of police efforts with those of other agencies having jurisdiction over traffic operations. Through the facilities of the Highway Traffic Advisory Committee to the War Department, enforcement agencies of the states have worked closely in cooperation with other state agencies and with the federal government in facilitating highway transportation essential to the war effort.

Important gains were made in the development and adoption of scientific techniques for traffic control. Among these

were the extension of the "directed" or "selective" enforcement program, based on record analysis; use of speed zoning; use of coordinated special emphasis programs, such as the use of road blocks in California; uniform enforcement policy in Washington; the "selected route" enforcement program in Connecticut; expanded use of special accident investigation procedures and techniques; and a tendency toward greater centralization of responsibility for traffic law enforcement functions.

On the minus side of the enforcement picture, we note at once the sharp curtailment in manpower which has taken place, ranging from 20 to 40 per cent in city and state agencies. This depletion of forces, together with the inability to train properly the replacement personnel, represents what is probably the greatest single negative factor in the police situation.

Reductions in budget and in equipment also have been felt in many instances, aggravated by the necessary diversion of men, equipment and attention from traffic control to wartime emergency duties.

The most urgent need in police enforcement during the period ahead obviously will be the recruitment and training of personnel. The problem will be complicated by the necessity for prompt action in order to maintain effective controls. The obstacles can be overcome to some extent by careful advance planning.

What should be the size of post-war forces? The answer will depend, of course, upon local circumstances and upon the changing conditions of traffic. But it appears certain that pre-war strength will have to be the minimum requirement, in view of the accident fatality record of the years immediately before Pearl Harbor.

But the planning job obviously can't stop there. Some kind of reasonable relationship must be worked out between the size of the accident prevention forces and the size of the problem to be met. At this point a comparison with other public safety agencies may be helpful. What are the community and state losses from crime and fire, in terms of lives,

property and money? What is expended to prevent crime and fire? A proportionate expenditure to build up police forces to adequate size and standards would, in the vast majority of cases, mean goals far higher than anything contemplated before.

Nor is size alone the measure of future needs. Policies and procedures need revision and invigoration all up and down the line to bring about maximum effectiveness. I asked a leading state police executive the other day for his comments and this is what he said:

"In spite of the improvements which have been made, I believe that most departments have only scratched the surface in attaining those standards which quite generally have been recognized to be good in the enforcement of traffic laws."

This statement sets forth a strong challenge to increased efficiency and effectiveness in traffic police work.

Another phase of enforcement is driver license control. Here public officials have tried hard to hold their own against serious odds. Virginia developed an efficient corps of women examiners; Colorado, Texas, Mississippi, South Carolina and other states held training courses for replacement personnel. In state after state these officials are still in there swinging, despite loss of previous gains.

The need for restoring these functions promptly and on a high level of efficiency will be urgent in the demobilization period. Ten million or more men and women of driving age will be released from the armed services, where they have experienced discipline and training. They cannot be expected to have much patience with civilian authorities carrying out administrative and disciplinary jobs without adequate training. Standards will be pushed upwards.

We will need examining procedures for new drivers which will screen out the unfit and give constructive assistance to those needing special instructions or the development of driving skills. Better re-examination techniques will be needed, with improved use of suspension and revocation powers, to deal with the habitual violator. These improvements will depend

upon better-trained personnel, more adequate records and a general step-up in administrative efficiency.

Good traffic law enforcement demands teamwork; it is the product of coordinated activities by many agencies.

Traffic Courts

During the last three war years many developments have taken place which lay the groundwork for improvement of traffic court administration. And if these events have not yet been translated into widespread accomplishment, at least they give ground for encouragement as to the outlook.

The first major step forward was acceptance by the National Committee on Traffic Law Enforcement of the Warren report on traffic court conditions. This report has been recently digested and printed in a volume entitled "Traffic Courts on Trial" and copies are available through the American Bar Association and the National Safety Council. Completion of this report was followed by general recognition of the bench and bar of administrative reforms which will make the judicial system more responsive to the needs of modern traffic. This recognition specifically took the form of endorsements by the American Bar Association and other groups in the legal profession, and the beginning of an active program by the bar association, through its Junior Bar Conference, and by the Traffic Courts Committee of the National Safety Council and related groups to put into practice the 57 specific recommendations of the national committee.

During the past two years more than 35 state-wide court conferences were held, bringing together the judges, prosecutors, lawyers and others who have jurisdiction in the program. Initiated originally by the National Safety Council and subsequently sponsored jointly by the Council and the Junior Bar Conference of the American Bar Association, these meetings were successful, without exception, in stimulating greater cooperative effort within the states and in some instances resulting in immediately beneficial improvements in traffic court conditions and procedures.

In two states—Colorado and Nebraska

—the state conferences already have been followed by a series of regional institutes which have carried the program into the communities and given impetus to the movement in those states. Similar follow-up activities in other states can be expected to accomplish equally gratifying results.

One of the problems peculiar to the traffic court arises from the fact that violators of traffic laws are not criminals in the usual sense of that word, and resent being classed with criminals in the classification of charges. This makes desirable a segregation of cases and where feasible the creation of full-time traffic courts. Another complicating factor in many jurisdictions is the revenue-raising aspect of traffic cases. The simple truth is that impartial justice—the blindfolded lady with the torch and scales—never is compatible with a system in which somebody's budget depends upon keeping up a minimum volume of fines.

Strict and continuous enforcement of traffic laws is essential to the public safety. On this basis, the public accepts and supports measures necessary to good enforcement. But here again troubles crop up because not all of the traffic laws are matters of safety. Many of them are only matters of convenience.

Thus we have a driver hailed into court for parking illegally in a curb space reserved for the convenience of a taxicab or the customers of a department store, who finds himself unable to relate his offense to the deaths and injuries in the community.

I do not suggest that the parking regulations be rescinded or their enforcement overlooked. But I do suggest that enforcement efforts which are carried on in behalf of accident prevention be clearly labeled, and that the public be made to understand the distinction between violations which menace life, equipment and property, and those which interfere with convenience or comfort. This distinction is important especially in terms of support for needed traffic court improvements.

As an organized program, the subject is new. I would not want my enthusiasm about it to minimize in your minds the

enormous job which lies ahead or the difficulties which must be overcome.

The purpose of the courts should not be primarily punitive but preventive. The object is not to levy fines and put people in jail, but to provide a certain and impartial penalty for violators to the end that traffic may be orderly and free from accidents. The performance of the traffic courts, in teamwork with other enforcement agencies, will determine to a large degree the standard of public observance of fair rules of the road.

Public Attitude

It is common these days to hear it said that the war has resulted in public indifference to the traffic accident problem.

There doubtless has been a slackening of interest in accident news. A certain amount of apathy toward domestic problems is inevitable because of the distractions of global conflict. Perhaps a large part of the blame for the general increase in traffic fatalities during the last year can be attributed to this condition.

But I do not believe that public indifference, however much of a factor it may have been, should be allowed to weigh heavily in our appraisal of future problems. It is only a temporary situation, and when the accident toll begins to climb upwards after travel is resumed, public inattention will vanish like the morning mist.

No, it is not a lack of public interest we should be concerned about. It is a lack of public information. The great need will be for getting all the facts of the problem before the people, so that the sound and essential programs we have been talking about can be given intelligent support.

This phase of the job should occupy a prominent place in the post-war planning of every agency concerned with the control of traffic. Public understanding and support must be the cornerstone of progress on every sector; in pedestrian control, driver examination, uniform laws and ordinances, court improvements.

Since the traffic fatality curve started upwards 12 months ago, a good many effective educational campaigns have given

evidence of the possibilities for constructive effort. The outstanding brake-inspection program in Michigan, sponsored jointly by state, county and municipal enforcement agencies, comes to mind. The results in decreased fatalities are almost too good to be true. Many other community programs throughout the country have been carried out with equal success.

Recently a dozen or more agencies of the Federal government joined in requesting the Office of War Information to undertake a nation-wide information campaign on accident prevention, which will get under way this fall in all media. It will be a general public appeal for carefulness and for support of sound safety programs, with special emphasis on the rising wartime toll of traffic accidents.

Undertakings of this type offer opportunity for many non-official groups to support actively the work of enforcement agencies, through encouragement of a sound public attitude. The operations of enforcement authorities themselves, competently exercised in the public interest, do much to mould public opinion. A part of this official responsibility should be to interpret laws, administrative activities and policies to the public, so that the attitude of citizens can be founded upon full information and through understanding of the objectives of enforcement.

Over the long pull, an extremely important factor in public attitude toward traffic law enforcement will be the education and training of boys and girls of high school age. Good courses, properly organized and manned, will equip them first of all to take their places as responsible citizens in our modern society. Nearly two million children reach driving age every year, which indicates how important their training could be in cutting down the size of the enforcement job.

Beyond this, adequate driver education and training for our youth would establish the foundation of public attitude toward enforcement in the future. What is needed is a better knowledge of the problems of traffic, and a clearer grasp by the individual of his or her own responsibilities as a driver or pedestrian.

This kind of an informed public will make possible eventually an enforcement

program that will realize all of the humanitarian objectives of traffic laws and ordinances.

Conclusions

Out of these observations a few conclusions seem to loom ahead as important:

1. All forces of traffic law enforcement must be cooperatively united to attain results.

2. Laws, ordinances and enforcement policies must be simplified, made uniform and thoroughly interpreted to street and highway users.

3. Enforcement personnel must be adequate, qualified and trained to high professional standards.

4. Traffic courts, which represent for millions their only contact with the judiciary, must function impartially, consistently and in accordance with the high-

est ideals of justice. Their goal must be the public safety.

5. The efforts of all agencies must be directed to encouragement of strong national self-discipline—to voluntary acceptance of individual responsibility for observance of the rules of the road.

6. The outlook for the immediate post-war period in accident prevention is serious because of the setback which enforcement agencies have suffered during the emergency. All essential enforcement and administrative agencies must be rebuilt immediately.

During the year before this war—1941—a total of 40,000 deaths in American traffic accidents was a startling measure of man's "Irresponsibility to Man."

Can we—will we—tolerate again that price for needless carelessness? You know and I know that we will not.

TUESDAY AFTERNOON SESSION

October 3, 1944

Group Session for City and State Police

Presiding: INSPECTOR RULON BENNION, Utah State Highway Patrol, Salt Lake City, Utah and Chairman, Committee of City and State Police, N.S.C.

Digest of the Chairman's Opening Remarks

By INSPECTOR RULON BENNION

Utah State Highway Patrol, Salt Lake City, Utah, and Chairman, Committee of City and State Police, N. S. C.

The Committee of City and State Police, composed of police officers who are members of the National Safety Council, has been active over the years in developing police sessions for the annual Safety Congress and promoting attendance by other police officers. They have, in addition, been active in securing and furnishing enforcement information for Council activities and have assisted in developing and checking materials such as Public Safety Memos.

Early in the past year, following a number of inquiries from police journals around the country, a questionnaire study was undertaken. Forms were addressed to the editors of 104 police journals and the information secured was used as a basis for revising the mailing list to furnish such pub-

lications with the type and quantity of materials which could be used most effectively.

Included in the year's work was preparation of material dealing with the cooperative efforts between police and local safety organizations. This is included in the text book for safety council managers under the title, "How the Safety Council Can Help Police Traffic Activities."

Public Safety Memo No. 62, "Building Support for Police Traffic Programs," was completely rewritten as a result of many suggestions obtained from members of the Committee. This revised edition has had a wide distribution including copies to all students at Northwestern University Traffic Institute.

At the mid-year meeting of the Com-

mittee in Chicago, initial plans were laid for police sessions of the National Safety Congress. Types of meetings, subjects, and speakers were selected and submitted for the approval of the Executive Committee of the Street and Highway Traffic Section.

At the same meeting, the proposed revision of the By-laws of the Street and Highway Section were discussed and a number of suggestions made.

Plans were made for a luncheon for editors of police journals to be held in connection with the Congress. Approval for these plans was secured, necessary arrangements made and a successful luncheon meeting was held.

In cooperation with other Council divisions, a survey was undertaken requesting information concerning accident prevention in traffic control plans for "V-Day," the end of the European War. The immediate response by police officials to this request added greatly to the effectiveness of the informational bulletin on "V-Day" plans which has had a nation-wide distribution.

Chairman Bennion explained that a considerable expansion in membership of the police group and broadening of interests and activities over the years had indicated the need for a change in the organizational setup. This need was brought to the attention of the Executive Committee of the Street and Highway Traffic Section a year ago and resulted in proposals for revising the By-Laws of the Section. At the mid-year meeting of the Committee of City and State Police a tentative revision of this instrument was presented.

This tentative revision incorporated provisions resulting from the work of the committee appointed a year ago to study the problem. Members comprising this group were Chief John F. Gleason, Greenwich, Conn., Inspector Joseph B. Kennedy, Cleveland, Ohio, Lieutenant C. L. Lycan, Decatur, Illinois, Chief James A. Pryde, Washington State Patrol, Colonel Charles L. Sheridan, Montana Highway Patrol, and Superintendent Don F. Stiver, Indiana State Police.

Following the mid-year meeting of the Committee, this tentative draft was further revised to incorporate several suggestions from members and was approved in final

form by the Executive Committee of the Section on October 3, 1944.

Under the revised By-Laws the name is changed to Traffic Section. Provisions are made for forming a Police Division which will operate under its own officers and an Executive Committee elected by the group.

To initiate the forming of the division, it was necessary to present to the Executive Committee of the Section a petition signed by 25 or more members. The Secretary reported that such a petition had been circulated, the necessary number of signatures obtained, and that the petition was submitted to the Executive Committee of the Traffic Section who had approved the formation of a Police Division.

The Chairman reported that in line with the above a Nominating Committee had been appointed to select candidates to serve as officers and members of the Executive Committee of the Division. The report of Captain C. J. Sanders, Chairman of the Nominating Committee suggested the following:

Executive Committee—Police Division

Chairman—Captain Paul Price, Dayton Ohio

1st Vice-Chairman—Captain William L. Groth, Virginia State Police

2nd Vice-Chairman—Chief Neal F. Anderson, Pasadena, California

Secretary—George E. Miller, National Safety Council

Immediate Past Chairman and Member of Executive Committee of the Traffic Section—Inspector Rulon Bennion, Utah State Highway Patrol

Captain Herman Crites, Flint, Mich.

Captain Custer A. Dunifon, Fort Wayne, Indiana

Chief John M. Gleason, Greenwich, Conn.

Lieut. Lionel Harvin, South Carolina Highway Patrol

Captain Victor R. Jones, Washington State Patrol

Captain M. L. Mittler, Louisville, Ky.

Captain John F. O'Neill, Philadelphia, Pa.

Colonel Charles H. Schoeffel, Superintendent, New Jersey State Police

Captain L. C. Upton, Acting Chief, Maine State Police

Colonel Will Zurbucken, Superintendent,
Kansas Highway Patrol

These officers were elected unanimously.

A program for expanding the membership in the Police Division was offered by the Secretary. All division members must be members of the National Safety Council in accordance with the Council's Con-

stitution and By-Laws. To meet this requirement, a special four-dollar individual membership has been created. This provides, in addition to membership in the Police Division and the Traffic Section, a one year subscription to Public Safety magazine, Accident Facts, copies of pertinent reports, memos, and news letters, and a membership card.

Old and New Approaches to Traffic Law Enforcement

By BRUCE SMITH
Acting Director, Institute of Public Administration, New York

Our post-war traffic problems do not promise to be materially different from those of pre-war vintage. We shall continue to have the same difficulties with traffic congestion, with control of excessive speed on the highway, the regulation of the incompetent or reckless driver, and the never-ending toll of traffic accidents. But these problems will not reach their former intensity for some time after the war's end. Hence we have the opportunity, beginning right now, to reappraise the entire situation and to consider calmly and deliberately the changes that should be made in our methods of regulation and enforcement.

Although our pre-war accident rates, when measured in terms of population, were the highest in the world, they were among the very lowest when computed in relation to the number of motor vehicles. This American achievement is all the more remarkable when it is considered that the congestion of high-powered motor cars, which is greater here than in any other nation, would in itself produce an exceptionally high ratio of accidents per 100,000 cars. The fact that so much has been accomplished under favorable conditions should give us confidence in the basic controls and techniques that have been developed thus far. Those that have proved their value in the past should serve us as well in the future.

But note well this fact: in our efforts to make the general public accident-conscious, we have deprived the traffic officer and traffic engineer of all credit for their extraordinary accomplishment; and by the same token we have obscured the values that are

inherent in many of the techniques thus far employed. The results are incalculable when measured in terms of bad public relations and uncertainty as to future program.

From such broad observations three conclusions may be drawn: (1) the post-war traffic problem will be as big as it ever was before the war, and will continue as a challenge to our ingenuity and determinations; (2) the techniques of regulation and enforcement developed by traffic engineers and traffic police should provide the basis for any future program of traffic safety; (3) the average American motorist is not the homicidal maniac that he is sometimes represented to be—if he were, our excellent safety record would never have been achieved.

With the old, well tested patterns before us, and with full confidence in their usefulness under the new conditions, we can now afford to speculate on possible improvements in the established techniques without the necessity for scrapping all of our knowledge and all of our implements for traffic control. In seeking to produce these refinements we should be quite sure that the need for them is well-established and that they are readily adapted for use by the existing regulatory mechanisms.

The problem thus posed is not a new one. It has been the abiding concern of many able minds, and the task of many talented hands, ever since we came to recognize the special complexities that surround the regulation of highway traffic. Much intelligently directed effort and huge sums of money have been expended in trying to bring the law-abiding motorist and the law-

enforcing officer to a common plane of understanding. If these recourses have not fully achieved their ends, we need not seek far for the reasons. For we have not yet succeeded in producing any great body of motorists that is consistently law-abiding nor any standard of traffic law enforcement to which all policemen consistently adhere.

Even the best-intentioned motorist cannot be expected to master all of the intricate codes of conduct with which he is surrounded, nor to comply with them under all circumstances. Through the medium of our traffic laws and ordinances we do our best to make a traffic violator out of the average motorist, and thus far we have succeeded far too well. We have cluttered up our highway intersections with prohibitory signs and signals; some of them unduly restrictive to the flow of traffic, some of them downright superfluous and at various times and places we have restricted operating speeds to such low limits as to threaten the utility of the motor car as a rapid means of transport. We have done these things without providing adequate means of enforcement. Under most circumstances we have left it to the motorist to observe these laws and these regulations without regard to the need for them as safety measures. I submit that this is asking too much of human nature.

While we were busy committing errors with respect to the motorist we were also progressively narrowing our enforcement base. Starting with a police establishment of modest numbers, we have set up specialized traffic-law enforcement bodies representing less than one-fifth of the total number available for general-purpose patrol. Such extreme specialization may sometimes be justified as a temporary or limited expedient in developing new techniques and testing new methods, but no such process of dispersion can meet indefinitely the wide-ranging of traffic law enforcement.

Strenuous Efforts Made

Strenuous efforts have been made, to convince general patrol officers and specialized traffic officers that each should play the other's game. Such efforts have failed in large measure because the generalist tends to be distrustful of the pre-occupations of the specialist, while the specialist tends to

narrow down, rather than to widen, the scope of his interests.

Have we not now reached the point where we can re-integrate our law-enforcement organizations? Should not the traffic officer and the general patrolman be merged and combined so that all will be skilled in the entire range of penal law enforcement? Can we afford to split our patrol forces in twain, with one fragment largely ignoring felonies and misdemeanors that are not connected with the operation of a vehicle, and another fragment—a very large fragment—concerning itself with a wide-range of offenses, but failing to regulate the one universal means of rapid transportation, which is, used by thieves and assassins as readily as by others?

Unless we can now provide traffic law enforcement all along the line and by all uniformed branches of police, our motor vehicle laws and our host of petty regulations of the motorist can scarcely be made more effective than they have been in the past. The laws and the regulations must themselves be simplified and liberalized if voluntary compliance by the driving public is to be increased. Their present complexities and unreasonable restrictions are in part due to our own solemn warnings of the threatening rise in the number of traffic accidents. State legislatures and city councils have taken heed of such warnings and have multiplied the prohibitions. The common sense of the average motorist has somehow grasped that the increase in traffic accidents was due, not to less care in driving, but to a vastly increased number of motor cars, and he has accordingly ignored or cast aside the host of regulations with which he has been surrounded. When occasionally penalized for disobeying them his resentment has been visited upon the enforcing agency. Weakening law observance thereby combines with weakening law enforcement to offset the influence that might have been exerted by the whole great and burdensome expensive mechanism consisting of carefully designed highways, ingenious signal systems and highly trained enforcement officers.

In these post-war years that are almost upon us, both observance and enforcement can be strengthened by unifying the enforcement front, and by simplifying and moderating the terms of the motorist's code.

The value of the motor-car to society consists in its flexibility and speed. These features will be exploited regardless of anything that police or legislators may say or do. Statutes, ordinances and enforce-

ment policies must all be revised to fit this basic set of facts. Once recognized and accepted, new and more realistic approaches to traffic safety, which all can use in common, will be opened to us.

TUESDAY AFTERNOON SESSION

October 3, 1944

Group Session for Traffic Court Judges and Prosecutors

Presiding: JUDGE PERRY A. FREY, Municipal Court, Cleveland, O., and Chairman, Committee on Traffic Courts, National Safety Council.

Report of the Committee on Traffic Courts

By HARVEY D. BOOTH

Secretary, Committee on Traffic Courts, National Safety Council

The Program for the Improvement of Traffic Courts

The report of the Committee on Traffic Courts, covering a broad program for the improvement of all courts in which traffic cases are tried, includes the following activities:

- a. Development by the Committee of a Courts Division of the Traffic Section, which will make possible a greatly expanded service to the traffic judges of the nation. The Division was organized October 3, and will supersede the Committee on Traffic Courts.
- b. Development of sessions for judges and prosecutors at the Annual Congress, with many members of the Committee active in promoting attendance. The attendance at Congress sessions for judges and prosecutors has shown steady growth during the past four years.
- c. Study of the participation of prosecutors in the trial of traffic cases, for which the data have been compiled, and which will be published shortly.
- d. The cooperative project with the American Bar Association, including a grant of funds for employment by the Bar of a staff man (James F. Economos) to work full time on development of interest in traffic courts and their problems among members of the legal profession.
- e. The Traffic Courts Conference ac-

tivity, initiated by the Committee on Traffic Courts through a resolution at the 1941 Congress, and which during the past year and a half has been carried on as a joint project between the National Safety Council and the American Bar Association—with the Junior Bar Conference of the latter affording the active participation for the Bar. The Automotive Safety Foundation, through furnishing speakers for conferences and other assistance, has participated in all conferences as one of the national sponsors.

- f. Preparation of materials for guidance of those interested in improving traffic courts, including articles in various publications by Council and American Bar Association staff, printing of speeches and articles for distribution, and cooperation with the Automotive Safety Foundation and the National Committee on Traffic Law Enforcement in publication and distribution of a digest of the 280-page book, "Traffic Courts" by George Warren, for popular distribution. These materials are especially valuable in connection with the follow-up program of traffic courts conferences.

The Courts Conference Activity

Since the inception three years ago of the traffic courts conference activity—which has assumed the position of the main ele-

ment of the court improvement program—interest and cooperation on a nation-wide scale have been generated, finding expression in 40 conferences and meetings touching 28 states. The rapid growth and broad acceptance of the activity during the fiscal year now ending is attested by the fact that 28 of the 40 conferences have been held since October 1, 1943.

The active cooperation of the American Bar Association's Junior Bar Conference and of other leaders of the Bar and bench, and the establishment of four regional offices by the National Safety Council have been factors materially adding to the rapid development of the program.

These 40 meetings have consisted of two regional conferences (in which more than one state participated); 33 state conferences—more than one conference has been held in six states as follows: (California (3), Nebraska (2), New York (3), Ohio (3), Oregon (2), and Washington (3); and five other meetings—including participation in state bar convention programs, judges associations, joint meetings with peace officer groups and association, etc. Distribution of the conferences by states, and the states in which plans are now being developed for additional conferences are indicated on the attached map.

The smallest registered attendance at any of the state conferences was 50; the largest, 275. Approximately 4,600 judges, prosecutors, enforcement officers, state and local officials and members of the Bar have been reached directly through these 40 meetings.

The courts conference program calls for follow-up conferences in each state as rapidly as the first series can be completed and arrangements effected for the next ones; and for local institutes, usually on the basis of the judicial districts of the state. Three of the second series of conferences were held during the past summer—in Northern California, Oregon, and Western Washington. The second annual conference in New Hampshire is tentatively scheduled for November. Second and third series conferences will be held in practically all of the other 27 states during 1945. The program contemplates annual conferences for a number of years in each state.

The district institute program is now considered an integral part of the courts conference activity. District institutes in

two states—Colorado and Nebraska—have been completed with highly gratifying results, while similar meetings on a community basis are now being held in the Oakland, California, area. Approximately 700 persons attended the institutes in Colorado and Nebraska. Details are now being completed for similar local meetings in 12 or 15 other states.

Plans are being pushed for conferences in most of the 20 states in which they have not been held. As of the date of this report (October 6) the following initial state conferences are being planned to the end of this year:

November: South Dakota, North Dakota, Minnesota, Pennsylvania, Illinois, Michigan and Wisconsin. *December:* Kentucky, Florida, Mississippi, Louisiana, and Arkansas in the order named. Some of the foregoing may not materialize until early in 1945, as dates have not been definitely fixed in some states. Vermont is tentative for this fall or spring. Indiana is scheduled for April. West Virginia has indicated interest and a conference should materialize there for spring. This leaves five states in which no plans have been made, but efforts to develop conferences in these five states during 1945 will be continued.

Other Activities to the End of 1944

In addition to continuing the several activities listed in the first part of this report, the Council has employed another staff man (Hubert D. Henry) to give most of his attention to follow-up work in the states which are planning to hold district Traffic Courts Conference Committees and development of definite plans and schedules for the district institutes. In addition, he will assist several states in completing plans for state conferences, will participate in a number of such conferences, and will assist on legislative problems.

Forty-four state legislatures will meet early in 1945, and considerable activity during the time the legislatures are in session will be directed to assisting on legislative problems, in addition to planning the second and third series of courts conferences, and to advancement of the other follow-up work already described.

A Summary of Results

A brief summation of some of the tangible results and benefits of this work in-

cludes: establishment of separate traffic courts in Portland, Oregon, and Seattle, Washington, reorganization of a number of courts for separate handling of traffic cases through special traffic session or segregated dockets; more adequate use of the public attorney or prosecutor; improved physical conditions by re-arranging court rooms, redecorating, providing traffic tables, displaying the American flag, planning for keeping court rooms clean, and plans for new buildings and facilities as a part of post-war construction; uniform handling of members of the armed services in cooperation with military authorities; understanding of the war worker and juvenile traffic violator problems, and development of plans for meeting them; better preparation of cases by enforcement officers and how to present evidence in court; uniform fines and penalties for similar offenses consistent with the circumstances of each case, and including more uniform handling of cases by enforcement and court personnel; discovering needed changes in statutes and ordinances with recommendations for amendments; and generally raising the dignity of the courts through improved procedures in the conduct of such courts.

Of even greater value are the intangible or "hard to measure" results. The whole program is fundamentally educational, aimed at up-grading present judges, justices of the peace and enforcement officials; acquainting members of the legal profession with the condition and needs of the so-called "lower" courts, and creating a better understanding on the part of the public of the over-all job of accident prevention and the specific support which the public must give to their traffic enforcement

officials and to their traffic courts in order to control motor vehicle accidents. Many judges of appellate and supreme courts have been brought to recognize that the trial of traffic cases is in fact a specialized field of jurisprudence.

Probably the greatest value resulting from the entire program to date is the creation of a definite awareness, on the part of the legal, political and business leaders in many states, of the problems and needs of the courts which handle traffic cases, and the relation of this problem to the whole American way of life. In the legal profession this is largely a result of the American Bar Association project, with the staff man employed by the Association carrying on an effective selling job within the organized Bar through contacts with Bar leaders and through bringing such leaders into active participation in the traffic courts conferences.

Continuing the Program

As the number of states brought into the courts conference activity has grown, together with development of other elements of the program, the demands and requirements for assistance and leadership from the national sponsors has grown apace. For the next year, two men working practically full time from the home office plus increased assistance through the regional staff of the Council will be required. The cooperative project with the American Bar Association should be continued for the next twelve months, so that the growing interest of leaders of the legal profession may be crystallized and guided into broader organization, as well as individual support.

Report and Review of American Bar Association Project

By JAMES P. ECONOMOS

Secretary, Traffic Court Committee, Junior Bar Conference of the American Bar Association

Last year the Committee had as its objective:

1. The encouragement of state and local Bar Associations to participate in the program for improving the administration of traffic courts.
2. The encouragement of state and local

Bar Associations to cooperate in co-sponsoring state traffic court conferences.

The Section of Judicial Administration of the American Bar Association appointed two committees, one on "Traffic Courts" and one on "Justices of the Peace Courts." The Section on criminal

law appointed a committee on traffic and magistrate courts composed of prosecutors. Judge Parker, United States Circuit Court Judge and Chairman of the American Bar Association's Committee on Improving the Administration of Justice, originally felt that judges were spending too much time on the subject of traffic courts and that this was beneath the dignity of judges of the higher courts. However, Judge Parker has now changed his mind. He realizes that more people come into traffic courts than into the Circuit Court of Appeals, and traffic courts and Justice of the Peace Courts must be improved if the American people are to retain their respect for the American system of administration of justice. The traffic court improvement program is now on the active agenda of the Judicial Administration Section.

The Traffic Court Committee of the Junior Bar Conference assisted in the preparation of the pamphlet, "Traffic Courts on Trial." The Committee is continuing its program of last year, and will,

in addition, begin to work on state legislation during this year. As a result of the work of this committee Junior Bar leaders in most states took an active part in the organization and conduct of the various state traffic court conferences. The Committee is being enlarged with the idea of having in every state active Junior Bar men interested in the traffic court program.

Judge Earle W. Frost's Committee of the Judicial Administration Section will continue a study of salaries for judges which was started some time ago by the Junior Bar Conference but never completed. This work is being transferred by the Junior Bar Conference to Judge Frost's committee.

There is a great increase in published matter in state Bar journals particularly on the traffic court program. This is effective from the standpoint of educating the Bar to the need for traffic court improvement and as to the actual conduct of the program. It should continue.

TUESDAY AFTERNOON SESSION

October 3, 1944

Joint Session—Public Safety Education and Traffic Education Association
Presiding: R. C. SALISBURY, Dir., Safety Div., State Motor Vehicle Dept., Madison, Wis.

Special Promotional Activities in Traffic Safety

By SIDNEY E. NELSON

Chairman, Racine County Safety Council, Racine, Wis.

For more than six years now the Racine County Safety Council has been functioning successfully in Racine and the surrounding area. The Council is composed of a great variety of members, representing the police department, the sheriff's department, the county highway commission, the coroner's office, manufacturing concerns, merchants' associations, labor unions, city and county school systems and a large number of active civic clubs. Meetings are held in the court house each month, with attendance varying from 20 to 50. The Council is recognized by the Racine County Board

as an official county organization, and recommendations approved by the Safety Council are given full consideration as being authoritative and worthwhile. We also have the cooperation of our mayor, the honorable Francis H. Wendt, and city departments.

There is no doubt in the minds of our Safety Council members that special promotional activities are really necessary occasionally during the year, because to the average person the unusual is more impressive; and he is more apt to discuss these stunts with his fellow associates, thereby spreading safety education among a greater

number of people than the usual day by day routine.

Special Promotion Projects Junior Police

The city of Racine had the first junior police system in Wisconsin. It is supervised by the city police department. Boys belonging to the junior police wear dark blue shirts, bow ties and white-topped caps which clearly distinguish them. Thus, in wearing apparel, they differ from the usual school safety patrols. While most patrol youngsters are instructed merely to hold back children until they see a full in traffic, in Racine the junior police have power to arrest bicycle violators, giving them tickets which are in effect a summons to appear in Saturday morning bicycle court.

Bike Court

At bike court, the arresting junior policeman presents the charge before the judge of the court, a member of the city police department. The offender then is called before the judge to explain his conduct and to receive the penalty of his offense and a short safety lecture. He may be required to write the rules of safety bicycle operation a certain number of times, write an essay on safe riding or be denied the use of his bicycle for a certain period of time. Second offenders, of course, are given more serious penalties. All proceedings of the court were broadcast over WRJN, the RACINE JOURNAL TIMES station. Our Racine juvenile court for bicycle operators has been functioning for over six years, and each year from April to November it has been one of the best received programs broadcast over WRJN and the state network.

Pavement Quiz

Another unique broadcast over our station, up until gas rationing, was a 15-minute program sponsored by a gasoline company. A different service station was picked each Saturday, with the program on at 11:45 A.M. The announcer introduced the local service station manager, gave a commercial "plug" and then started quizzing four or five motorists lined up at the pumps. Each motorist was given two questions to answer on rules of the road. Near the close of the program the motorists who had given the best response would receive free 5 gallons of gasoline, and all others would

receive a quart of the best oil the station had to offer or tickets to a show. The quiz was conducted by an officer from the Racine police department. When gas rationing is lifted against, we expect that this program will again be taken up by the same oil company.

Pedestrian Campaign

During October and November of last year, we went after the pedestrians in a big way. Our local daily newspaper and the radio station gave advance notice that good pedestrians would receive congratulatory cards, while pedestrian violators would receive warning cards. The warning cards were not in the nature of an arrest, but one of two violations on the card was checked before giving it to the violator.

Handing out the cards was the job of the junior police, but the entire activity was supervised by the Safety Council officers. One mechanic, when he received a congratulatory card, remarked, "I feel proud I have done the proper thing. A mail truck driver said, 'I think this idea is fine.' A war worker said, 'I believe your campaign is helping educate the public.' A printer declared, 'This card gives the thinking pedestrian a pat on the back.' An alderman said, 'This is the best thing that's happened in safety promotion in Racine in a long time.'"

During a 2-hour period on a Saturday in October, 692 violations were counted in a downtown area. After the congratulatory campaign, in the same area during a similar period of time violations were reduced to 252. Fourteen other cities in the state took up the idea within a few weeks, with the State Motor Vehicle Department supplying the cards free of charge.

County Fair

We believe at the local county fair, where people take a day off to look leisurely at various booths, also with the Scotch idea of getting their money's worth, we can reach thousands of people, telling them of our safety program and preaching a safety message to them. The present war, however, has curtailed our work at these fairs; but, prior to that, we have carried on a program about as follows:

Our Safety Council works with the uniformed Elks Safety Patrol boys who help to distribute safety literature, put on first-

aid demonstrations, and act as ushers for seating the public in our booth where we show safety moving pictures. They also help to carry on the safety clinic, supervised by one or more men from the Motor Vehicle Department Safety Division of our State, of which our chairman, Mr. R. C. Salisbury, is director. He sends us state equipment which includes reactometers and equipment for making vision tests. A reactometer tests the quickness or alertness in applying foot-brakes. This test is like a game, everybody wants to try it. The vision tests also arouse curiosity of "Let's try it!" Written examinations are given those who desire them. The public seems eager to take these tests. This includes a great number of the youth who have just become automobile drivers. We believe this to be the best method of reaching the youth we have ever found.

We also secure the help of our County Insurance Board. About half a dozen of these insurance men are ready each day to help us in this work in a supervisory way. And, by the way, we have been very successful in getting them to pay practically all of the expenses to conduct the booth, which amounts to about \$100.00 for the three-day showing. In getting a booth ready, we feel that it should be decorated well and not by amateurs. We know a well decorated store front arouses curiosity.

On one occasion we distributed five hundred sets of the First-Aid Reminder Leaflets which were purchased through the National Safety Council. There were six leaflets in each set. We only gave a few leaflets to each person so that thousands could be accommodated. These leaflets are excellent material.

Automobile and Home Shows

At automobile and home shows we carry on our safety work in about the same manner as we do at the county fair. However, we have been able to secure the booth gratis, so far, to carry on our safety work. Here again safety literature by the thousands is given out to the visitors. This literature can easily be received from the average local insurance agency which gets it from the insurance companies. Of course, no individual agency name is allowed to be printed on these circulars, nor do we allow any insurance advertising material.

No Mishaps

Several years ago we ascertained the name of an automobile driver and owner who had been driving his cars for eighteen years without a mishap. We then asked for names of anyone who could beat that record, through the local newspaper.

Courteous Drivers

The past few months we have been looking for courteous drivers, and we were able to secure the cooperation of our local newspaper, the *Racine Journal-Times*, which published the names of these courteous drivers, even going so far as to put their pictures on the front page. The city editor stated that news of this type would be quite a change for their readers. He was enthusiastic about this publicity.

Safety Posters

Of course, we carry on a safety poster contest each year in the schools. Of late we have been doing so with the cooperation of the United Commercial Travelers, who conduct a national campaign. At one time they gave a dinner for the winners, at which time the prizes were awarded. At another time we had the winners taken out to the county fair, where prizes were awarded at the annual Kiwanis dinner.

Fourth of July Float

We also endeavor to have a float in our annual Fourth of July parade. This parade has become known as one of the finest parades in the United States on that day. Miles upon miles of floats handsomely decorated, marching clubs, many bands, military units, etc., are entered yearly. Our most successful float was an open car driven by boys dressed up as road hogs. They wore the old-fashioned automobile dusters or light tan rain coats and a costume mask hog head. On each side of the car was a sign reading "DON'T BE A ROAD HOG!" This attraction was photographed by more persons on the line of march than even the prize winning float. The cost is negligible, from \$7.00 to \$8.00 for the cost of costumes and a hammer.

Radio Recording

We had a recording made by our local radio station, WRJN, of a conversation between myself and Mr. Sherman Blandin of our Safety Council, regarding the rules

and regulations of our highways. This was put on through the local station gratis, and later a squad car, equipped with loud-speaker, carried this conversation on at various intersections in the city.

Safety Speakers

We had various well-known safety speakers, such as Mr. Salisbury, Dr. H. L. Corbett, and our judges at our safety meetings. We have had their speeches published, in part, in our local newspaper in a very conspicuous place.

Letters, Bulletins to Industries

On several occasions we mailed letters to personnel managers of our various local industries. For the Fourth of July week, we mailed a safety bulletin and requested that this be placed on the safety bulletin board in each plant. We know that this went over because one of our larger industries called and requested additional copies. We got the idea of the heading for the bulletin "1,000 AMERICANS WON'T COME BACK" from the National Safety Council's magazine.

Girls' Safety Patrol

We have recently organized a Girl's Safety Patrol. The girls are of junior and senior high school age. They are drilled by the same expert who drilled our Elks Safety Patrol, Officer Joseph A. Marck of our Racine Police Department. He also instructs them in first-aid, and rules of the road. They are given written examinations on these subjects. The girls are chaperoned also by a Mrs. Walter Scheel, and they have lunch after their classes. They are being uniformed with blue skirts and sash, white blouses, blue jacket, arm band and overseas cap. The girls are very enthusiastic in their work, and I am sure will attract unusual attention among the citizens of Racine.

High School Members

Our high schools in Racine of late have been sending about three pupils from each school to attend our safety meetings, representing the student council. They are con-

ducting safety work in each school with material received from our meetings.

Letters to Traffic Violators

I would like to add one type of safety work we carry on regularly. That is, when a car is observed violating a traffic rule, we secure the license number and check on same as to the name and address of the owner of the vehicle with the license records. We mail the owner a printed form advising him of the traffic violation in a friendly way, asking his cooperation in the future. This printed form takes but a few minutes in marking the date, place and manner of violation. We often receive replies denying it was their car which made the violation. But, we have received more letters from persons thanking us for this reminder. As an illustration, a parent wrote to us stating that no doubt either their son or daughter was the one driving their car at the time of the violation, and they have talked to their son and daughter and agreed that there will be no further violations of traffic rules. At another time, a public service group was sent a letter. This letter was posted on the wall with a warning, "When you go to Racine, better drive carefully. . . ."

Industries

Racine is a heavy industrial city of about 70,000. To make sure that the message of off-the-job accident-prevention gets to the worker, full use is made of the bulletin boards. Posters, special holiday messages and clippings of accident stories call attention to the need for obeying traffic laws, not only to prevent accidents but to prevent loss of time from work. Copies of the state's safety magazine, *WISCONSIN TRAFFIC SAFETY*, are kept in a number of places convenient for workers to read during rest periods or lunch hour. Workers all have had experiences in driving that they like to talk about with others, and just seeing some bulletin or poster on traffic safety will serve to bring up a discussion on driving habits, jay-walking or highway hazards that need correction near one's home or on a worker's way to and from his job.

Ways of Developing Special Promotion

By R. C. SALISBURY

Director, Safety Division, State Motor Vehicle Department, Madison, Wis.

Ordinarily, promotion is thought of in terms of public meetings, newspaper articles, talks before luncheon groups, putting up a poster, showing a film or giving a radio talk.

Any of these channels of publicity can be turned into special promotion by emphasis on a new slant or different appeal. Let's consider the newspaper first. We no longer need to sell editors on safety. They are sold. What they want is material presented accurately and interestingly for their readers. The usual story for the press is one which gives a statement on so-many fatal accidents occurred, so-many drivers' licenses revoked or a holiday plea for safe driving and walking. The press, however, can be utilized for special promotion by the following means:

1. *Half-page or full-page ads*, made possible through sponsorship by civic-minded firms and transport companies.
2. *Boxed inserts in advertising*, tying in sales with safety, such as bike booklet at sporting goods counter, safety rules in a folder with roller skates, purchase of bright colors for children's clothes, white lunch boxes, etc.
3. *Fatality score box*, printed once a week, once a month, or each time a death is added to the total for the year thus far.
4. *Score box on drunken drivers*, appearing with each new story of a drunken driving conviction in the local court.
5. *Slogans*, used as one-line or one-paragraph fillers throughout the paper.
6. *Quizzes*, on knowing local and state traffic regulations, safe driving practices, wartime hints on car care and operation.

Radio

Radio has proved an increasingly effective means of public education because it reaches into the home so directly. Besides the ordinary radio talk, this channel of promotion can be used for:

1. *Spot announcements or chain breaks*, getting across a single idea in a few words. It is advisable to make such an-

nouncements factual when possible, not just preachments.

2. *Dramatizations*, but they must be good.

3. *Sidewalk interviews*.

4. *Bicycle court broadcast*.

It is customary to sponsor a speakers' bureau in any worthwhile all-around safety program, thus providing capable persons to lecture before civic groups, luncheon clubs, school assemblies and conventions. Such meetings can arouse interest in accident-prevention, especially if the talks are really constructive and provide ideas and projects that will be acted upon. Special events, however, can be worked up as follows:

1. *A Statewide Congress of School Safety Patrols*. Such an event in Wisconsin has been held two successive years, each time attracting more than 1,000 delegates. Entertainment and instruction is provided. Sponsored by the Motor Vehicle Department in cooperation with safety patrol group sponsors from localities throughout the state.
2. *Encampment of Patrols*. Held annually at a lakeshore in Bayfield County, Wisconsin, for all patrol members of the county. Three or four days. Sponsored by county traffic department.
3. *Safety Patrol Dinners, Theater Programs, Picnics, Parties*, paid for by civic-minded merchants, police protective associations, parent-teacher groups, etc.
4. *A Magic Show*, for adults and/or children, can be built in part around theme of accident-prevention.
5. *Demonstrations*, such as driver clinic tests, brake testing.
6. *Parades*, either entirely or partly devoted to accident-prevention.

Exhibits

Exhibits at fairs, festivals, conventions and in stores, hotels and other public places can be made attractive and appealing. Merely setting aside a booth space with a few posters, a table of literature and some comfortable rest chairs provides a means of

acquainting the public with the department, group or committee working for safety in a community. But a more effective exhibit is one which allows participation of the public, such as testing devices for steering ability and brake reaction. At the conclusion of such tests, people like to compare their scores with the scores of others.

A department store, during September when children return to school, can easily feature school safety patrols and the back-to-school themes in window displays. If an entire window can be devoted to this purpose, fine; but if only a poster or a placard is placed in the window, even that will provide another means of getting across a safety message to people who pass by. An animated display, showing safety activities in pictures which rotate gradually or which are lighted up successively by electric controls, is another effective display method.

Small stickers with safety slogans will be used during the Christmas shopping season in Wisconsin. We expect to issue them to merchants for packages, cafe owners for menus and in our own departments they will be used for letters and envelopes. Postage meter stamps, in scores of appealing messages, have been used by state departments, civic groups and national organizations to promote safe driving, walking and bicycling. In Wisconsin the two most recent stamps used presented the following appeals, "Stop—Look—and Think" and "Do You Really Stop?"

This year in Wisconsin the Motor Vehicle Department, as part of its announced program to reverse the rising trend of accidents, offered without charge sidewalk stencils to any police department willing to accept and use the stencils. We spent about \$200 on this project, paying about one dollar apiece for 200 stencils. Four different messages were made available, "Watch Where You Walk," "Cross Safely," "Watch Your Step," and "Look Both Ways." With the last message the stencil also had two arrows, one pointing to the left and the other to the right. These stencils have been used in many Wisconsin communities and we hope they will help keep the pedestrian death rate down.

Outdoor Advertising

Outdoor advertisers stress the fact that you should advertise where the people are—

outdoors. We have used billboards effectively in Wisconsin, purchasing poster sheets at cost and having them put up through the courtesy of the advertising companies themselves. One of the most effective outdoor displays ever used in Wisconsin was a huge electrically-lighted sign above a waterpower and light company in the Fox River Valley region, a picture of which is shown in the charts on display during this session.

Outdoor advertising in the form of bumper strips on motor vehicles, especially trucks, or in the form of messages painted on the sides of trucks, especially delivery trucks, also may be utilized by enterprising departments or companies. And of course, we all are familiar with the use of safety reminders for commercial operators.

People who ride the buses and street-cars always have time to examine the car card advertising. Through such means, a safety department or council can promote safer walking by pointing out that as soon as a person steps from the vehicle, he is no longer a passenger but a pedestrian. As a pedestrian, it is important that he wait at the curb until the way is clear, then cross the street safely.

Short films on safety for use in theaters and in classrooms or public meetings can be tied in with any program of safety. A picture frequently will do much more to educate people than a great many words. As the Chinese say, "A picture is worth a thousand words."

Contests can be good special promotion, but they must be well planned and well executed. Contests can be held among cities, counties, schools or chapters of an organization. They can cover an over-all safety program or be limited to accident reduction, development of safety slogans or posters or the writing of essays.

To protect workers in industrial plants, in Wisconsin we have inaugurated a program of publicity designed to help safety directors and plant foremen. A checklist of off-the-job delays at home and on the highway has proved very effective. Entitled *Five Troublemakers Can Make You Late*, this booklet has gone out by the thousands all over the state. Our total printing was 100,000. Periodically we issue a poster-size bulletin, *A Report to Industry*, giving latest accident facts and listing fatalities by occu-

pations of the victims. Many companies have made extensive use, on their own accord, of payroll inserts, posters, news bulletins and other ideas to promote plant and off-the-job safety. The best way to reach the worker is through men and means directly associated with his place of work.

To reach the foreign-born population with a special message, we sometimes prepare a special story for foreign-language newspapers published in Wisconsin. These papers also are on our mailing list for all releases issued to weekly newspapers. Farm journals are on our list for this same service, and frequently we will write a story directly concerned with how traffic accidents are affecting the farmer.

In a month or two over 13,000 taverns in the state will be brought into our safety program through use of a series of posters to be displayed in places where people drink beer or liquors. This project is co-sponsored by the Motor Vehicle Department's Safety Division, the State Beverage Tax Division, the Tavern League of Wisconsin, the Distillers' Association and the Brewers' Association.

We have prepared for city police departments this fall a set of 12 public address system warnings to be used at football games—high school, college and professional—similar to those we have used effectively at University of Wisconsin games for several years past. Usually the warnings are broadcast at the end of the first half, urging that as the fans go home, drivers should show good sportsmanship at the wheel and pedestrians should avoid blocking traffic or doing the unexpected.

Discussion on Special Promotion

SGT. HARRY F. BERLIN, ILLINOIS STATE POLICE: The driving habits of people are greatly influenced by their attitude. Their attitude toward driving can be improved if they feel that safe driving is a moral and social obligation. Since the church is vitally concerned with moral and social obligations, it is a logical channel for safety education. Ministerial associations, individual clergymen and church groups are anxious to promote traffic safety in Illinois. Actual pulpit time has been made available to the Illinois State Police.

JOHN R. FADER, MANAGER, DELAWARE SAFETY COUNCIL: Delaware has conducted an extensive pedestrian campaign. In connection with it, auxiliary police were used to make a survey of pedestrian violations. Another program involved painting circles on the pavement to indicate accident locations. It has been found in Delaware that driver training programs which utilize police to give road instructions are not only of benefit to pupils but have much public relations value for the police.

DONALD M. McNEIL, TRAFFIC ENGINEER, PITTSBURGH, PA.: Pictures of vehicles which have been in traffic accidents were displayed in the City-County Buildings. This display met with the approval of the public and so many requests were received from groups wishing to borrow it that two more sets were made up. The use of so-called "gruesome" pictures is an effective means of adult traffic safety education and is actually showing people the "truth" about traffic accidents.

TUESDAY EVENING SESSION

October 3, 1944

Joint Session with Commercial Vehicle and Transit Sections and
School and College Division

Presiding: AMOS E. NEYHART, Administrative Head, Institute of Public Safety, Penn. State College, State College, Pa. and Road Training Consultant, American Automobile Association.

Driver Training
A Panel Discussion

Participants:

Discussion Leader: AMOS E. NEYHART,
Capt. T. N. BOATE, Penn. State Police,
Harrisburg, Pa.

HAROLD R. DANKFORD, Dir., Educational
Div., National Conservation Bureau,
New York City.

GORDON C. GRAMAM, Supvr., Safety Edu-
cation Dept., Detroit Public Schools,
Detroit, Mich.

IRA CATLIN, Safety Div., Wisconsin State
Motor Vehicle Dept., Madison, Wis.

W. ROBERT SMITH, Insurance Mgr., Scott
Brook, Inc., Philadelphia.

T. C. WICKER, Supr. of Transportation,
New Orleans Public Service, Inc., New
Orleans.

MR. GRAHAM: The driver training program in the city of Detroit rather descended upon us as the wolf upon the fold along about 1936 when we began our activities in driver education and did not include behind-the-wheel instruction at that time.

Our original course was given at a tenth grade level about which there may be some question because of age of the youngsters involved, but it seemed to fit into our program best at that time and was set up that way.

This program involved instruction in the customary things such as rules of the road, common causes of accidents, the mechanics of motor cars, and things of that kind. Following that there was an additional course that was placed in our high school civics classes at the twelfth grade level.

A few years later we endeavored to conduct our first experiment in behind-the-wheel instruction and we turned to the Lane Technical High School pattern in Chicago, in order to find something that

we felt would most satisfactorily meet our needs.

Very briefly that program of instruction, which is not as widespread as the AAA method, as far as general use is concerned, consists of having an actual training area or driving area which is laid out on the high school grounds.

We have six cars that are used by these students. The students operate these cars for the first time alone. They are the only person in the car. They have been given, of course, preliminary instruction to a considerable extent. They have at least finished the tenth grade traffic course that I spoke of, and in some cases the twelfth grade course, before entering this actual behind-the-wheel instruction.

Actually this plan is patterned somewhat after the old army procedure of teaching men to ride horses, in which they had a circular area with horses stationed all around the area and they were all directed to do the same thing at the same time. All mount their horses and go around the circle and go through various evolutions, one following the other.

That is about the way we start our drivers out in operating their cars. They operate the cars in low gear. When any one car stops all the cars stop.

The cars were first operated at the state fair grounds, later in one of our city parks, and now they are functioning on one of our school grounds adjacent to the school classroom in the building.

We hope that eventually we may be able to extend this form of instruction to all high schools in the city. That, of course, makes it a pretty expensive sort of thing and I imagine before too long in this pro-

gram there will probably be some discussion along that line as to how this can be financed.

MR. CATLIN: It was about four years ago that we first became interested in the driver education program, due to the very bad driving record of the high school age group.

I am happy to say that at this time we have three hundred and seventeen high schools in the state of Wisconsin out of a total of four hundred and sixty-three that are engaged in the classroom phase of driver instruction.

I might say further that we are more interested in Wisconsin in attitude development than we are in the actual teaching of a person to drive an automobile. It may interest you to know that the program that we have, which is approved by the Department of Public Instruction, calls for a minimum of twenty classroom periods of instruction. However, today the average school in Wisconsin has increased the number of periods of classroom instruction to twenty-six.

We know that more periods would be desirable. However, let me stress this one point. We are more interested in developing the attitude, or helping to develop the attitude, of the present driver age group than we are in the actual teaching of them to drive an automobile.

However, we haven't forgotten that part of the thing either. In Wisconsin, we have what is known as the Home Supervisor Plan of driving instruction where the actual instruction is given by the parent or relative or friend, known as a home supervisor.

The reason we favor that particular plan is because we think there is real merit in it. There is a development of attitude in the school and development of attitude in the home. That is a desirable feature inasmuch as it brings the home and the school together.

We will admit that as far as the home supervision plan of driving instruction is concerned, it is still in an experimental stage. We certainly do not reach the large number of boys and girls of driving age that we would like to reach, but we feel that it is better to have a few well-trained and perhaps to have them as a model for others,

than to have a large number perhaps poorly trained.

CHAIRMAN NEYHART: We have a man here who has done as much, if not more, in training army drivers than anyone I know of. In fact, this man turns out army drivers at the rate of eight hundred per week, and I am going to ask Lieutenant Colonel John Mutte if he will tell us briefly how they are doing this job for the army.

LIEUTENANT COLONEL MUTTE: You might be interested to know something about Camp Lee. So far we have turned out fifty-four thousand drivers. Our sister camp at Fort Francis E. Warren has probably turned out at least a third of that quantity. That is just two of the army camps.

We have an eight weeks' course for our army drivers. Of our eight weeks, we first have two weeks in our shops. The first week is on the chassis where the man goes all over it. He is taught the nomenclature of the whole chassis, including the points that he, as a driver, is permitted to lubricate.

The second week is on engines. There he tears down engines and rebuilds them. He is taught the use of hand tools that come with his vehicle, what they are for and how to use them as well as take care of them.

We do not teach drivers to be mechanics, but those two weeks pay dividends because later on when he is out on the highway alone and has trouble with his vehicle, he at least can identify where the trouble is. Then he can telephone in and the mechanic, unlike the old plumber, may bring the right tools and right parts to fix it without too many trips back to the camp.

The third week includes classroom instruction. He takes up rules of the road and elementary map reading so he can, at least, read a commercial map and interpret the conventional signs and symbols on it and prepare a little simple map. He is taught rope tying.

The fourth week, for the first time he comes in contact with an army vehicle. At the camp we have a driving area one thousand by six hundred yards. That is laid out in twelve circles; each circle has ten two-and-a-half-ton, six by six army trucks.

We put two men on the truck with two men observing and the instructor stands in the middle of the ring. That is our control

driving. Fortunately in beginning we took only men who could drive. They were familiar with a farm vehicle or passenger car and met the psychological and physical tests which we had preceding the training.

In addition to that, they have to take an I. Q. test and if they don't pass it, they don't drive. Some don't pass the test and we have to throw them out. We go along with the controlled driving and eliminate all men who aren't good drivers. If we find a good one, we immediately pick him out and have him act as assistant driver coach.

These men stay there four days, or until it is safe to go on the road in convoy. From there they advance to ordinary highway driving on primary and secondary roads. Then they go cross country. They are taught how to use the front-end drive and winch.

He has one day in the tire shop. The driver has to know how to take off the outside and inside tire, how to patch a tube with a hot patch or a cold patch, and how to install chains.

He must know how to lubricate his vehicle with the hand gun that comes with it. He is limited to things that he as a driver can lubricate. He is taught how to lubricate with a power gun under the supervision of a mechanic.

He has four blackout convoys during his training period of eight weeks. It may start the first night with ten miles; then fifteen; then thirty miles. We do that on blackouts and there is the usual highway traffic to contend with around our camp in Virginia. We don't pick out easy spots for them.

We push it right through and at the end of his eight weeks we feel that he meets all requirements. Now we have injected into our course this new Weasel that you have heard so much about. You have seen pictures of it. It is a full-track vehicle and is amphibious. We give him sixteen hours on that.

Any of you commercial fleet operators looking for good drivers should inquire first if he was trained at Camp Lee or Fort Warren. If he was and passed the eight weeks' course he has had good training.

I am not saying that a lot of other army camps haven't turned out expert drivers. They probably have, but those boys, at least, we can guarantee to be good drivers. Also,

for the benefit of the fleet operators, we take the cream of the crop and give them three weeks' further instructions. During that period they get work on truck and tractor operation. They get a stiff course and can handle any truck, tractor, or van you have on your highway.

CHAIRMAN NEYHART: I wanted to have you hear from Colonel Mutte because he was a practical fleet operator before he ever went into the army. After visiting his setup at Camp Lee, we were certainly satisfied that he is doing a real job down there for the War Department.

We also have in the group Milton D. Kramer, who is assistant director of the Center for Safety Education of New York University. He will tell us briefly what the War Department is doing to try to meet the driver training need. He didn't know anything about this; neither did Colonel Mutte. I am calling on them out of a clear sky.

MR. KRAMER: I would like to tell you something about the pre-induction driver education program of the War Department.

Colonel Mutte has told you of the army's training program and that is very closely related to what is being done today in the high schools for the education of potential inductees.

When the war began, the army soon discovered a shortage of personnel with respect to the possession of specific skills for handling motor vehicles. A study was made and there was set up in the office of the Quartermaster General an advisory committee to explore the possibilities of making recommendations to the public schools for the training of beginning drivers.

This committee included representatives from the National Safety Council, the American Association of Motor Vehicle Administrators, the American Automobile Association, the National Educational Association, the National Conservation Bureau, and many other interested organizations.

Following study by committee members there was prepared a manual for the use of teachers in high schools. This manual was immediately made available to public schools from state educational departments and state motor vehicle departments.

When the manual was available it was turned over to the schools with the follow-

ing statement in mind: First, there existed and exists today this very evident fact, that one out of every four men in the army must handle some kind of motorized or mechanized equipment at one time or other.

Secondly, the army owns one motor vehicle for every seven men.

Thirdly, the inductees in the army were demonstrating a notably bad experience and knowledge with respect to the understanding and attitudes required for handling of motor vehicles; and

Finally, if the public schools of the nation could help the War Department by providing pre-induction fundamentals in motor vehicle operation they would be helping them in several other ways: First, they would be conserving the gains they had made in driver education before the war. Secondly, they would help meet an existing civilian shortage of mature vehicle operators; and, thirdly—and this is the most significant—they would lay the foundation or ground work for important postwar driver education.

In consequence the various state departments set up a series of teacher training institutes and there were held just this last summer some twenty of these institutes in various states from New York to California.

These institutes enrolled teachers and school administrators who spent three days at the state university and one of the three days was spent in a field trip to a nearby army post. We are very happy to say that as a result of this work initiated in the Quartermaster Corps and then carried through by the army at large through its pre-induction branch, there exist today some five thousand high schools in this country that are offering one or another kind of driver training course.

We can see from this work that inductees learn fundamentals that make them more amenable to army training and many of them learn things which they will be able to use as practical drivers in the postwar world to help cut down some of our accidents.

The War Department pre-induction program is broad in scope and I have time only to describe the driver education which grew from the very significant needs in operations today. It gives to the field at large, both the safety field and the field of general

education, a splendid opportunity for the development of good citizen drivers.

MR. WICKER: I am not going to try to tell you how we train our drivers. It is too big a job. I am going to tell you, however, that we have been training bus drivers and street car drivers. We have been in that business since we originally started, and we had to do a pretty fair job to stay in business. And some of us went out of business in spite of the fact we did all we could to train these people.

The way we see it now, the training problem is more important to us at this stage of the game than ever before. Nobody is kidding us about the people that are riding on the street cars and buses; they are not riding in them because they like the traction company. The WPB and all the other folks have something to do with that.

We are hauling people at the rate of twenty-two million a year. That is a lot of passengers. When you get jammed in a street car or bus remember that you are not kidding us when you ride with us. We are going to have to fight for business after the war is over and the only way we will be able to retain this extra riding we are getting now is to have good, competent, safe, efficient, polite—the last word is very essential—drivers.

I don't know much about your business—you truck operators—but I have a sneaking suspicion you are in the same boat. One thing we have found out, ladies and gentlemen, is that lots of people can drive a bus very well and can make more enemies than there are cows in Texas.

We are going to try to get the other kind. The Transit Association has two committees working today. They have been working since April. They have got Professor Clayton, of Carnegie Institute, and Mr. Kraft, of ATA, and a sizable committee of industrial members. They are what we consider to be the best brains in the industry, and, confidentially, I am not on either one of those committees.

They are working on two problems. Number one is selection. Nobody has mentioned selection and I am not going to make a speech on it, but it is one of my main enthusiasms. You can never make a race horse out of a mule, and there is no kidding yourself that you can.

The other committee is working on train-

ing. We believe that we are giving the best training that we know how and I think the training in the transit industry has definitely improved during the war. It had to do that because riding was heavier and the work harder than ever before and we have had to train people longer. In our case we increased the training time of our people at least twenty per cent in order to make a man or woman as capable as we thought he or she should be.

We now have three hundred women in our employ. We are pretty proud of them. A good many of them are driving buses and are doing all right. We used to think that a bus driver had to be a hairy-chested man, but there are some pretty girls pushing them around now.

We hope to be able to make selection of our people. I am going to put out the word in the transit industry about Army drivers. We are really going after some of those men after the war and you truck operators should consider those army drivers. If they are trained that well they should make wonderful bus drivers and truck drivers for us after the war.

I think that we will be stupid if we don't get a sizable group of them, and you truck operators, for your information, we transit people have been taking your drivers for a long time. They are the best ones we get. You must have a pretty good training program yourselves.

CHAIRMAN NEYHART: I believe there certainly must be some questions from those of you who are in the audience. Perhaps some of the things that have been said, or things that have not been said, are of interest to you and you would like to have more information.

MR. CATLIN: Someone has asked about credit for these courses. That depends entirely upon what the individual school wishes to do. We have some schools issuing a quarter credit. Some issue a half credit. There is nothing compulsory about it. It depends upon the individual school as to how much credit they care to give.

MISS MARY WYMAN (Louisville Public Schools, Louisville, Kentucky): What safeguards do you use to keep those people at home who are getting the behind-the-wheel training from getting bad attitudes?

MR. CATLIN: We have issued specific

instructions to the home supervisors, calling their attention to the fact that the youngsters that they are going to teach have had classroom instruction where an attempt has been made to develop the proper attitude and we have asked them to cooperate with them rather than discourage them. It seems that is about the best, and, at the same time, the most that we can do in connection with that.

CAPTAIN DAY (Iowa State Patrol, Des Moines, Iowa): I would like to ask Mr. Catlin who is responsible in the event any of these kids become involved in an accident while they are in the process of operating these cars during the period of training.

MR. CATLIN: It is the parents' responsibility or the home supervisors' responsibility. We have asked them to be sure, if possible, to see that their cars are insured so that there is a way that settlement can be made in case of an accident.

CAPTAIN DAY: If the car belonged to the school, who would be responsible in the event of personal injury or property damage?

MR. CATLIN: In Wisconsin the school has nothing to do with the auto. The auto is owned by whoever does the instruction—the parent or the home supervisor.

All of our driver training programs are known as the home supervision plan, where we furnish a set of ten lessons which are handed out by the school, one at a time, to the student who takes them home to the father or mother, or relative or friend who is going to do the instructing. We refer to that person as the home supervisor and those lessons are taught one at a time. We ask for a report back to the school at the completion of each individual lesson, showing the number of hours of instruction and the number of miles the car has been driven.

When those ten lessons are completed, we act upon the recommendation of the instructor at the school, plus the information that we get back relative to the number of hours driven, or, rather, the number of hours consumed and the number of miles driven. We then issue a certificate which is exchangeable for a driver's license.

Many of you may wonder why we feel that we can take the responsibility upon our shoulders of issuing a driver's license upon that kind of driver training. However, as

you all know, the average youngster who is taught to drive is given very limited instruction, and generally by people who have nothing to follow whatsoever in teaching him to drive.

We feel that any boy or girl who has actually covered these ten successive steps in learning to drive is bound to be a far better driven than the average individual who possibly is taught how to start, steer and stop and from that time on is left on his own.

CHAIRMAN NEYHART: It has been our pleasure to work on the driver training program, using cars all over the nation, for about eight years. We have them fully insured. We recommend twenty-five or thirty or fifty thousand public liability; five thousand property damage; twenty-five dollar deductible collision; as well as fire, theft, tornado and other things to make it a comprehensive policy.

In our experience all over the nation we never had an unfortunate experience with these cars. These cars are all equipped with dual control, extra clutch and brake pedals for the teacher to use.

Another advantage in using the dual-control cars in teaching this way is that you can take them to little used streets, quiet streets off from the heavy traffic area for the first lessons.

I have talked this over with lawyers and they tell me that if an accident would happen, the protection would be good; that is, the insurance would protect the school members, the school board, the teacher and any driver who is back of the wheel operating the car at the time.

CAPT. BOATE: We have in Pennsylvania what we refer to as safe driver clinics. We have had in the city of Philadelphia a driver's clinic for seven or eight years and recently established one in Pittsburgh.

Our plan calls for the creation of a number of driver clinics over the state of Pennsylvania for these specific purposes of examining accident-prone operators (that is, people who have had a long record of accident participation or a long record of convictions for traffic law infractions) for the purpose of determining whether or not they have any physical deficiency that can be compensated for or whether or not they are

physically or mentally in such a condition as to make them socially irresponsible in the operation of a motor vehicle.

Then, if that is the case, we eliminate them. Now through the operation of these clinics, while they haven't achieved all things we have had in mind, we have been able to rehabilitate hundreds and hundreds of motor vehicle operators and place them back on the road as safe drivers where they had been before operating motor vehicles, maybe, with some visual deficiency, for example, which kept them continually being involved in accidents.

Or, possibly, they had the wrong attitude toward the operation of motor vehicles which was the reason for their running afoul of the law and being arrested and convicted for some traffic violation and demonstrated them to be unsafe.

CHAIRMAN NEYHART: We have several specific questions here that we would like to ask Mr. Danford. One is, "Why should the public schools be responsible for teaching traffic education and training courses in the high schools?"

Along with that is the question, "Why is the high school the most advantageous place to train drivers?"

MR. DANFORD: Statistics show us that three out of every five youngsters in a normal year will be driving a motor vehicle of some kind within a period of three years after they graduate from high school. If education is a state function, as it has been defined, and if the purpose of education is to teach these youngsters to live and to be worthwhile, useful citizens, then it certainly is the function of education to teach these youngsters how to live in this motor age.

Casualty statistics have been broken down to the point where the statistics have said that fifteen per cent of these motor vehicle casualties can be blamed upon faulty engineering. The engineer is trying to eliminate these hazards that take their toll of lives among operators and pedestrians. That leaves a total of eighty-five per cent of the casualties due directly to faulty driving; the personal breakdown; the physical breakdown. It is either physical or psychological, of course.

What has been done in the past regarding this eighty-five per cent? Very, very little

in the last few years, and thank goodness for people like Colonel John Mutte and the experience of the War Department, and especially the replacement training of the Quartermaster Branch.

They have taught us that much can be done in the training of safe, competent drivers, and courteous drivers, in a very short period of time. We can profit much by the experiences of these gentlemen.

If, as I said, the primary reason for public education in the United States is to train our youngsters to be worthwhile, competent, efficient, living citizens, then certainly it is the duty of the high schools to teach these youngsters how to live in a motor age.

CAPTAIN ROATE: At the end of the year when the accidents, fatalities, injuries and property losses are tallied up in my particular state and the people of that state begin to think of responsibility, I don't believe they think of school teachers.

I believe they think of police forces and they begin to wonder what the police are doing on the public streets and highways to prevent this terrific loss of life and property. Now that is why police all over the country have advocated for years that we teach the young people how to drive and walk safely.

That is why, as far back as twenty years ago, and I can remember it because I did it myself, we had police calling around to the little red school houses, giving short talks on safety, telling children how to cross the highways adjacent to the school buildings.

That is why police have been active over the years in organizing school patrols, and that is why we appear at schools today during recesses, when schools are being dismissed or taken up, to help to direct traffic and help to guide children, and to help the school boy patrol, so they can carry into school this message of safety.

In Pennsylvania we have gone farther than that. We send out two men in Pennsylvania fully equipped with motion picture equipment to show safety motion pictures and give brief talks or lectures on highway safety.

That is why we have even sent policemen to colleges. We are not trying to take the place of the educator. We are trying

to show the educator that he has a place along with the policeman in the teaching of driver training.

I think the whole idea of driver training is somewhat confused because, by and large, people don't understand what law enforcement means when we speak of law enforcement. When they think of law enforcement they think of arrest, they think of fines, they think of commitment to jail, and all that sort of thing.

Law enforcement, under our democratic form of government isn't that at all. Law enforcement is the voluntary obedience to laws on the part of the public. It is obedience to law as a voluntary achievement on the part of the public and we believe that is the real way, rather than going out and arresting people and subjecting them to fines, although that will always be a part of the picture.

We always have a small percentage of people that must be arrested and fined, but we believe that the main answer to it is through education; that we must get down and educate our people to look at laws and regulations as really the means of preventing the loss of life and property.

We say it is the educators' responsibility, while the policemen surely have a part in the picture and can add greatly to it in helping the educator.

CHAIRMAN NEYHART: We have in the group a practical fleet operator, who is interested in the safe operation and maintenance of motor vehicles.

This man can, perhaps, tell us how he sees this high school training program because he had a daughter graduate from one of the courses. J. W. Lord, Fleet Safety Engineer for the Atlantic Refining Company.

MR. LORD: I think the high school driver training program, where there has been an organized setup to do a training job, not only teaches the child a real skill but it teaches the child many other things.

It is one of the grandest character building things that can be introduced in high school. It teaches the child to meet other people on the road. It is a marvelous thing in that capacity. It is worth as much as learning the skill itself.

I think the actual learning of the skill can't be too carefully taught and I have

been a disciple of those who believe there should be a trained teacher teach the child. I have ridden with too many people who have driven ten, fifteen or twenty years and the character of their driving, which they insist you mustn't criticize in any way, to me is appalling in the errors they make in driving.

I think we have to have organized training in order to get rid of those errors. I am all for high school training and for having the program conducted by trained teachers who have been carefully taught to really teach skill in driving.

There is a tremendous difference between skillful driving and the typical driver on the road today. The proof of that is in our rate of fatalities and accidents that are occurring everywhere. What is the use of people's saying they know how to drive and that we are a nation of skilled drivers in the face of the accidents that are occurring?

The truth of it is they are not skilled drivers, and that a measure of skill by the years as a driver is a very poor measuring stick. I have talked to many groups. We do not kid ourselves about the kind of golf we play, how we bowl, or anything of that sort. There is a very definite score. If you bowl a hundred and twenty you are not kidding yourself about being an expert. If it takes you a hundred and twenty strokes to get around a golf course you are a ddb.

Yet that same guy who considers himself a ddb on the golf course may be just as big a ddb as a driver, even though he has been driving for ten years, and yet you make any comment about his driving he will say, "Listen, buddy, I have been driving for ten years. What can you tell me about driving?" Still, as a driver, he is no better than he is at playing golf.

MR. GRAHAM: I am glad to hear these remarks but, nevertheless, they are remarks that we have heard through the years. All this time people have been coming to us and saying, "You should teach driving education or driver training and you should teach safety education and teach fire prevention and all that sort of thing."

It is true that I am in the specialized field of safety education and I have a very sympathetic ear for these pleas that come to us, but all educators are not people that necessarily have quite a sympathetic atti-

tude toward safety education. In the final analysis you can only put so much water in a bottle and the professional educators are faced with the problem that if these things are going to be future curricula something has to go out and we, in safety education, are confronted with the problem of combatting, as it were, certain vested interests within the system who are teaching other subjects and have been for a good many years. We have a struggle facing us on that score.

I would like to ask some of these people, who tell us very blithely that we should teach this and that, what they are doing in their own communities to bring about a general awakening for community consciousness in doing this sort of thing?

How many truck operators, for example, have talked with boards of education and asked them whether or not they would put in courses of driver training? I wonder if they would assist them in looking over the entire problem and doing what they could to see that the necessary equipment was supplied?

This matter of driver training isn't something that can be paid for with a song. It costs money to give behind-the-wheel instruction. I come from a community which is primarily an industrial city. We teach machine shop in practically all of our high schools and likewise in our junior high schools and intermediate grades.

We have trade schools, we have technical high schools, where many things are taught as a result, largely, I think, of the pressure brought upon our Board of Education by the industries in our community.

I, therefore, think it is only proper that if you people feel that we should be doing a training job for drivers you should be vociferous about it and go to the people in your community and arouse the community to the need for this sort of thing, and see that some sort of demands are made and some sort of results are secured.

After all, boards of education bring these things into being—new courses of study, etc.—on the basis of public demand made within that community. I think there is a responsibility that rests with you people as well as with the schools. I don't think we should shoulder the full load of responsibility for not doing many of the things some of us would like to do.

DR. A. R. LAUER (Iowa State College, Ames, Iowa): I would like to agree with Mr. Wicker that you can't make a race horse out of a mule. In a similar way you can't make a teacher out of a lot of people and the mere fact that there are some people out of school who do an excellent job of teaching, does not mean that all of them are race horses. There are a lot of mules among them, too. I am not trying to reflect upon those many excellent teachers in industry who may not have a degree in education. I have two keys but I am not giving that as an argument.

In any case, I don't believe it is essential to dispense with persons who are offering driver training courses commercially, but I do think it is necessary for the law to control them somewhat in seeing that they are properly trained and that they have an examination just as pharmacists or others have to.

Don't you find in many cases that this is a case of the blind leading the blind when you send youngsters home to the parents to be taught?

I think it is a matter of controlling that by legislative enactment and perhaps having an examination for instructors. I have long advocated that if the schools can furnish those, the least the states and schools can do is provide some kind of standardized training course for instructors who may not have academic degrees, but who would be excellent teachers if they had the proper kind of instruction as to how to instruct others.

CHAIRMAN NEYHART: We have Dr. Vernon G. Shafer, head of training work in my college, with us.

DR. VERNON G. SHAFER: We license barbers but I still cut the hair of my two boys, for several reasons. First I think I can do as well as the barber can. Secondly, I save the money, and those are reasons enough.

We are going to teach youngsters how to drive automobiles because we have automobiles for them to drive and I am not so sure that we can immediately pass legislation to see to it that everybody who teaches anybody how to drive automobiles shall have to qualify by some kind of examination.

In answer to Dr. Lauer's suggestion, I think it would be a very good thing, but I

am afraid it would not be done right away. I rather like the Wisconsin idea in seeing what practical situation does exist and then setting up the sights for those things that we would like to see happen, and make them work insofar as possible.

There ought to be some people who spend all of their time, I suppose, to attain that ultimate goal, but in the meantime let us do the most practical thing that serves here and now while those who are specialists in their jobs are aiming at those far-off goals where we all hope we will arrive some day.

DOCTOR HOWARD DANFORD (Director of Safety Education, Madison Public Schools, Madison, Wisconsin): I would like to point out that all principals and all superintendents of schools are not agreed with us. If they were there would be far more high schools teaching driver education than there are today.

Now if they are not agreed with us, let us recognize that fact and let us find out why they aren't agreed, and find out how to persuade them to our points of view. Here some questions arise and some of them are not too easy to answer in giving evidence that a classroom or academic training can change attitudes and change the behavior of youngsters as drivers.

If you were teaching swimming by academic instruction in the classroom and never took them into the pool, to what extent would your teaching of swimming be successful?

Second, what evidence can you present that will prove beyond a shadow of a doubt that driver education does reduce accidents?

Third, what would you eliminate from the curriculum? Would you eliminate Latin? Tell that to the Latin teacher. What would you eliminate in order to put in driver education?

Fourth, aren't there some responsibilities that parents carry? Should the school take over the entire responsibility for the education of the child? Why shouldn't the parents teach their own kids how to drive?

Finally, this isn't the question they ask, but the question I ask: how can we persuade these principals and superintendents to our point of view?

I would like to say in self defense that those four questions raised are not my questions or my criticisms. They are the

questions and criticisms of principals and superintendents.

MISS WYMAN: I would like to add to that, where are we going to get the money? My good friend, Gordon Graham, says to exert pressure upon the school board. I want to beg you to see that they get the money to do it with.

CHAIRMAN NEYHART: I would like to have Mr. Smith on the panel here tell us something about training truck drivers.

MR. W. ROBERT SMITH: In the trucking field, we are most interested in safe driving, because of the effect upon our earnings. We have, I hasten to say, the same general desire to save the life and property of our fellowmen that all those not in the trucking field have, but we have the additional desire to run at low expense and therefore we are most interested in seeing that our drivers drive and drive well.

I am much concerned about teaching of drivers in the schools to the extent of being certain that we spend a good bit of time on attitudes and, from the standpoint of commercial truck operators, I think we could start that very much earlier in their school life than at the grade level they start now.

I think we all realize how much we can influence very young children in safety and self-preservation because if we start them out with that consciousness they will continue to think of it when they are adults.

In the commercial field very few of our drivers have college degrees. Very few even get into high school, so your high school driver program has very little effect upon our industry. Most of our men have learned to drive vehicles by trial and error methods and have become quite proficient, quite skillful, but we still have a terrific accident problem.

It is almost an axiom that some of the best drivers have the worst accidents. I can cite one example. We have a driver hauling hatch covers for cruisers for us a distance of five hundred miles. These hatch covers are nineteen feet wide and forty feet long.

On one of these stretches he takes these trailers with hatch covers on a highway where he has a one foot clearance. He is a marvelous driver but occasionally where he is not thinking he can have a terrible accident.

I just leave that thought with you edu-

cators. I am thinking of my own children and the children of all of us. I hope we spend more time and more money and more activity on the safety attitudes as we go back to our own problems.

DOCTOR LAUER: I hesitate to leave this issue I raised a moment ago suspended in mid-air, as it was. I think that Doctor Shafer misunderstood my point. It is very serious because we have a number of committees that are working and who would have recognition through the Conservation Bureau, American Automobile Association and others in which we could give certain persons authority as instructors.

I think industry would agree to that a hundred per cent. They certainly have qualified instructors for certain specific jobs such as tool makers and what not. I think it has possibilities if we get into it.

MR. MATTHEWS (Gary, Indiana): If truck driving is such an important vocation, I don't see why you can't, in your locality, utilize the Smith-Hughes educational funds in putting on courses for your local truck drivers.

There are ways of getting around this college degree for teaching in this field. I might say there is a bill that will be considered after the election, I believe, where they are asking for ninety-seven million dollars more to buttress the Smith-Hughes fund.

I am surprised that your organization has not gone after some of that money.

MR. SMITH: I deliberately avoided saying anything about a commercial training program because I didn't want to be put in an awkward position. However, I think the bus operators have led the field in teaching safety. I send that out without fear of being challenged.

Now we have, through the Neyhart service, developed fleet supervisory training courses for the purpose of selecting, testing, training, re-testing and re-training drivers both in the pre-employment period and all during their employment years in motor vehicle operation courses.

Those courses have been offered in Penn State, Northwestern, Georgia Tech, and University of Washington, and I think U. C. L.A. will offer one. Moreover, the safety councils are organizing in various cities. Here in Chicago the operators of the

Greater Chicago Safety Council and other organizations are developing a testing field for the very purpose of testing all commercial drivers for employment, and after an accident they have a re-testing.

I just sensed that you all knew that and knew that we were doing a lot along those lines. I did want to have the opportunity to say to you educators that when you do teach our children, as I trust you will come to do, the skillful operation of vehicles, you won't forget the safety attitude.

We must get away from this idea of teaching the children how to get out of a crisis after they get in. For too many children, all motor vehicle training has meant is that if they go into a skid at fifty miles an hour or take a curve at seventy miles an hour they put one foot on the gas and the other on the brake and they go around the curve without going over.

SERGEANT SAPP (Camp Roberts, California): In order that Mr. Danford won't get away without having his questions defined I would like to attempt to answer one of them; as to whether or not there is room in the curriculum for safety education? My response to that is, why live in the glories of the past if the kids aren't going to be able to use them?

WEDNESDAY MORNING SESSION

October 4, 1944

Group Session for City and State Police

Present Day Traffic Police Problems

A Panel Discussion

Presiding: COLONEL CHARLES H. SCHOFFER, Superintendent, New Jersey State Police, Trenton, N. J.

Participants:

TRAINING—PAUL W. HAVILAND, Supt., Delaware State Police, Wilmington, Del.

PERSONNEL—THOMAS JAYCOX, Chief of Police, Wichita, Kans.

ENFORCEMENT—B. R. CALDWELL, Deputy Chief of Police, Los Angeles, Calif.

PUBLIC EDUCATION—CLIFFORD F. BECKER, Chief of Police, Indianapolis, Ind.

MR. GORDON GRAHAM: How many school boards has he told that to?

MR. CATLIN: In answer to one of the questions that Mr. Danford had, relative to proving the value of driver education, I know that there have been numerous small studies made in various localities throughout the United States to prove whether or not driver education did really produce results.

However, in the state of Wisconsin, we have the record of between fifteen and twenty thousand boys and girls who have completed the classroom work in driver education and that is just waiting there for somebody to tabulate the information to find out whether or not it is a good idea.

We have gone a long way in checking this information. I won't say, because I don't know, definitely, how many hundreds, but to date we have not found one single one of them that have been involved in an accident, so there is an opportunity for somebody, or for some educational institution that cares to make a real study of the situation, to take our records.

I am sure the state will be awfully glad to do it to very definitely prove that classroom instruction in driver education does produce results.

EQUIPMENT—COL. GEORGE MINGLE, Superintendent, Ohio State Highway Patrol, Columbus, Ohio.

SUPT. HAVILAND: Most Police Departments today recognize the need for organized training programs and adequate training facilities. Chiefs of Police as well as rank and file officers are convinced that organized training offers a solution to many of their problems and that such training is

necessary to raise the standards of the police profession and provide the public with more effective police performance.

Had it not been for the current war, police training would have advanced more rapidly during the past three years and more and better facilities would be available to all police departments today. Because of existing conditions many of the more progressive departments which had well organized training programs in operation, have been forced to suspend, curtail or revise them.

In many departments recruit training has been suspended or revised because personnel replacements have been unobtainable or available in such small numbers that it was felt the recruit courses should be shortened. In-service programs too have been revised and curtailed in many departments because existing personnel could not be spared from other duties long enough to complete refresher courses of the same scope and length as those before the war.

A brief outline of the in-service training program of the Delaware State Police and mention of the changes we have been forced to make is, I believe, typical of many departments.

In 1940 we set up a re-training program for the entire personnel which continued in operation until the early part of this year when we were forced to revise it for the reasons already mentioned. Known as the "Incentive" program it proved successful in its original form until it was discontinued.

The first phase of this program consisted of sixty correspondence lessons and questions on various police subjects. All subjects were grouped under four headings: Traffic, Criminal Investigation, Criminal Identification and Firearms. The lessons and questions were sent periodically to the officers in the field who completed them and returned them to Headquarters for grading. When a passing grade had been made in each lesson, more lessons were sent to the officer until all sixty had been completed.

This phase of the program consumed about five months' time and was followed by classroom instruction. Experience with it proved that correspondence lessons appreciably cut down classroom time needed to cover a subject. Students grasped meanings and explanations more quickly than they

would have, had they started "cold" in the classroom. Each student was given three weeks of classroom training in the same subjects grouped under the same general headings in which correspondence lessons had previously been completed. At the end of each course students passing the examination were awarded extra compensation, hence the name "Incentive."

The firearms course deviated from the other courses in that range instruction and practice replaced classroom instructions. The final examination consisted of actual scores made on the hip-shooting and practical pistol courses. Qualifying scores entitled the officer to receive special compensation.

Requalification was required each year in each course for which the officer was receiving compensation. Failure to maintain a high performance standard for each activity through the entire year resulted in compensation being withdrawn for that particular course.

At the end of the first year, with this program a decided improvement was noted in quality of the work of all officers who had qualified under the plan. The following year, with the outbreak of the war, in-service training had to be concentrated on civilian defense and internal security and as a result the regular "incentive" program was shortened to classroom instruction of one week. It continued on this basis until the early part of this year when the manpower situation became so acute, with duties correspondingly increased, that it was deemed no longer feasible to take officers off the road for that length of time. However, it was found practical to continue to re-qualify all officers in firearms training each month during Spring and Summer.

In order to provide the men with some type of in-service training and at the same time not take them away from their duties except for short periods, we have substituted a "Conference" plan until such time as normal conditions return. It is designed to provide the members with brief review materials and acquaint them with new procedures and techniques.

One day quarterly conferences are held for each Troop in the State with all members in the area attending. Headquarters Staff officers present new developments in each line of activity, point out mistakes

being made in the field and explain proper procedures. Lectures are supported by films and other visual aids. At the end of each Conference an examination based on correspondence lessons previously released are given all personnel.

The "Conference" plan of in-service training was not devised or intended to permanently supplant the "Incentive" plan in our organization. Our post-war plans provide for in-service training on the same basis as before the war, with, perhaps some revisions.

Speaking generally, all types of police training should show expansion and improvement during the post-war period. All police officials realize that further professionalizing the police service lies in developing police training. Many departments have taken advantage of the present situation by training instructors and securing information on police training in order to put organized training programs into effect at the close of the war. While training has a long way to go before it functions to the height of its potential efficiency, all departments should take heart in the rapid progress it has made in recent years and lay plans now for the future.

CHIEF JAYCOX: In 1935, a Police Training program was established in the Wichita Police Department in cooperation with the University of Wichita. This program became known more or less throughout the Nation as Wichita's "Police Cadet Training" and provided ready correlation of the principles and theories of Police practices with practical application in the performance of police duties.

Cadets were young men of 21 years of age, who, having completed two years of college work, and having satisfactorily passed the rigid entrance requirements, were appointed to half-time active service, and paid one-half the prevailing wage of patrolmen. Upon appointment, the cadet entered an intensive period of recruit training and following this was assigned to beat duty in the uniform division under the supervision of experienced superior officers.

These officers were required to attend classes at the University of Wichita for not less than 12 hours per semester. Instruction consisted of: Police Practices; Traffic Regulations; Identification Proce-

dures; Criminal Law; Criminal Evidence; Criminal Investigation; Police Organization and Administration. Police Science Certificates were awarded to those students who satisfactorily completed the following:

- (1) Passing the prescribed courses with credit.
- (2) Meeting requirements for an A.B. Degree.
- (3) Performing with merit the duties of cadet officers.

Vacancies in the Department were filled, in the main, by cadets. The quality of men thus recruited was excellent, and with few minor exceptions, this plan worked to the advantage of all concerned. War circumstances, however, necessitated the suspension of this plan and the classes at the University for the duration. Included in the curriculum at the University was the conventional "ROTC" course and most of the officers recruited through the cadet system were commissioned as second lieutenants in the Army Reserve.

At the outbreak of present hostilities, these men were immediately called into the Army. In order to maintain adequate personnel strength in the Department it became necessary to lower requirements on educational and physical qualifications. Age limits were liberalized.

Later the "War-Service" Appointment was introduced. Under this system, appointments to the Police Department are made for the duration of the War and six months thereafter, after which time appointees may be released without cause. This plan enables us to maintain the required number of officers, hold the jobs open for returning veterans who were members of our Department, and protect both, the Police Pension and the Police Benefit programs. Men employed under War-Service Appointments understand the provisions of these appointments and it is functioning quite well.

Certainly, the cessation of hostilities will not automatically re-man our Department. Many men who have been hired on a War-Service basis, and who have made the necessary progress, will be retained. Those who fail to measure up will be released. Thus, all Appointees since the discontinuance of the Cadet Program have a definite incentive to strive for improvement in order

to insure their position in the Post-War Period.

DEPUTY CHIEF CALDWELL: The problem of traffic law enforcement is and has long been complicated by individual antagonism to any form of control. Motor vehicle operators and pedestrians readily agree that regulations are necessary but invariably feel that enforcement of such regulations should be directed at others.

The public is reluctant to recognize traffic violations as immoral acts. For too long a certain percentage of violators have looked upon motor vehicle laws as petty infringements upon the rights of individuals. A few persons have considered it "smart" to ignore efforts to safeguard and facilitate motor vehicle traffic. The public generally fails to recognize the serious consequences possible from motor vehicle violations. There seems to be a general lack of appreciation of the fact that most motor vehicle accidents include violations among the contributing factors. Investigations of many accidents by trained police personnel have disclosed at least one violation in practically every accident.

A lack of uniformity in enforcement policies and procedures has bred resistance to enforcement measures.

The problems of enforcement have always been complicated by indifference, self-interest and laziness on the part of drivers. The war has given drivers an opportunity to capitalize on these items. The driver who is taken to task for operating faulty equipment stresses his importance in the war production program, emphasizes the difficulty of securing parts and repairs and then points out that the paramount issue is winning the war. The importance of getting to work on time is offered as an excuse for speeding or reckless driving.

Despite much talk about tremendous reductions in traffic volumes, most major streets are still carrying a heavy traffic load. There have been pronounced shifts in the distribution of traffic volumes.

Reductions have been made in police ranks also and police equipment has been difficult to secure. Many police officers are serving with the armed forces. Personnel remaining with the department are carrying many additional burdens.

Additional war responsibilities imposed

on police departments have resulted in many places in shifting traffic men to other duties. Traffic has become a step-child with officers assigned to this important duty only when they can be spared from other assignments. Educational efforts for traffic safety have been overshadowed by civilian defense instruction and war news.

New communities have sprung up overnight; old communities had great increases in population. Drivers and pedestrians unfamiliar with the new territories are contributing to the problems of traffic control and accident prevention. Pedestrian injuries and deaths continue to account for a large percentage of the total traffic accidents reported.

War news and reports of war casualties fill the newspaper headlines. With many things vying for public interest, traffic safety has become a neglected topic. Nevertheless, the traffic problem remains a serious one which demands attention. Traffic accidents continue to exact a too heavy toll of injuries and deaths.

The solution to these problems lies in the proper dissemination of accident facts, in the leadership of safety groups, and in a positive enforcement program which is uniform in both policy and execution. The public must be made to appreciate the serious consequences of traffic violations. Drivers and pedestrians must be shown the need for regulation and the reasons for specific enforcement measures. Methods of enforcement must be reasonable and must be based upon needs in order to obtain the necessary public acceptance of enforcement measures and support for the traffic safety program. Two requirements for obtaining this are the use of uniform enforcement policies and the uniform application of enforcement by officers on the street.

CHIEF BEEKER: The public generally is unaware of the seriousness of traffic accidents in their effects upon the lives of individuals. An enormous task in public education is necessary to awaken public consciousness to the potential value of adequate traffic management.

Facts concerning the traffic accident situation in his community must be brought to the attention of the individual resident. Emphasis must be placed upon the tremendous cost in deaths, injuries, and prop-

erty damage to himself, his family, his friends and neighbors.

Monthly summaries of traffic accidents compiled by police departments provide many opportunities for stories, including figures on the number of accidents, types of accidents, ages of persons involved, causes and circumstances contributing to the accidents, and others. Comparisons of traffic losses with crime losses are effective.

Sound traffic law enforcement is an effective educational medium. Reasonable enforcement policies administered uniformly and impartially by officers builds public acceptance and public support for the police traffic program. Each enforcement contact properly handled is effective in deterring other operators from committing violations and in demonstrating to them the seriousness of failing to observe necessary safety regulations.

Excellent cooperation and support for the traffic safety program is available to the police through the press and radio. Additional effective contacts may be made by assigning trained officers to speak to civic groups, clubs, schools, and other meetings.

Posters afford an effective medium of education. Distribution in downtown department stores, barber shops, local neighborhood locations, such as grocery stores, meat markets, etc., brings safety messages to the general public. Posters are particularly suited for seasonal hazards and for use in taverns to warn against driving while under the influence of intoxicants.

Officers assigned to intersection duty can contribute much to the education of pedestrians and motorists. The attitude of the policeman towards his job in such important spots is reflected in the attitude of the persons who observe him at work. The police officer assigned to intersection control who winks at violations instead of correcting them is not doing an effective job.

The same is true of an officer assigned to motorized patrol. He must demonstrate to the public that he is a conscientious public official representing an efficient department which is serious in its intention to carry out the fundamental police duty of preserving life and property. When citizens are convinced of this, they become as anxious to prevent violations and their consequences as is the conscientious policeman.

Education alone will not bring an end to our traffic accident problem. Effective educational measures can contribute measurably to the solving of these problems if carried on constantly as a part of an all-round traffic control and accident prevention program.

COL. MINGLE: Despite all of the stories circulated about the difficulty of securing adequate police equipment, the Ohio Highway Patrol has found that most equipment is available. True, more shopping is required to find the items needed, and in some cases it has become necessary to make substitutions. For example, the limitations on leather goods has apparently affected the output of leather boots, and we have been forced to substitute shoes and puttees for the boots which were normally a part of our uniform. It is true, also, that a longer time, much longer in fact, is required to obtain the needed equipment. Consequently, we have had to ascertain our probable needs more in advance than was necessary before the war.

On the other hand, the conservation of equipment necessitated by war shortages has taught many good lessons. Especially valuable has been the expert advice on obtaining additional miles from rubber tires. The quest for methods of obtaining the best results from new synthetic tires has emphasized attention to maintenance of motor vehicle equipment and has taught all of us ways by which we can make such equipment last longer. Cooperation with OPA and WPB has led to an interchange of information which has been extremely helpful.

In order to derive greatest benefits from the information obtained from these various sources, and to distribute such information to officers in the field, a three-day school was held for the supervisory officers of our department. There they were taught about methods in using and servicing equipment which add to the life of such equipment. This information was passed on to all field officers, and an adequate program of equipment inspection was undertaken by the supervisory officers.

The results of this have been most gratifying. Longer service than was ever before felt possible has been obtained from equipment. For example, 60,000 miles from a patrol vehicle was once considered a fair life for that vehicle. Now we are getting

from 90,000 to 100,000 miles from the same type of vehicle and at reasonable cost.

The same type of program has been carried on to increase the life of uniform equipment. Acquiring the services of a tailor as a member of the department has helped to extend the usefulness of uniforms.

The police manpower shortage created by the war has been partially offset by the installation of some additional equipment. Two-way radio installations have added to the efficiency of the individual officer by providing the rapid communication system to and from patrol vehicles which is so essential in rural police work.

Certainly, I agree that equipment problems have been intensified during this war period, but I am certain that the knowledge gained through our efforts to meet these problems will add to the efficient operation of police departments in the years to come.

Discussion Led by Col. Schoeffel

Q. How many departments send materials regularly to radio stations for broadcast purposes?

A. COL. EDWARD J. HICKEY, Commissioner, Connecticut State Police: "In Connecticut, local departments clear messages through the State Police, who pass them on to commercial radio stations. These are mostly missing persons notices, etc."

COL. SCHOEFFEL: "Large stations will take only news of general public interest—important information."

LT. ROLAND J. SCHUMACHER, St. Louis: "St. Louis radio stations cooperate well with the police in safety education. They broadcast a 15 minute program once each week. The large stations use prepared programs and spot-announcements regularly."

Q. What other means have we of reaching people in addition to the press, radio and posters?

A. CAPT. LAURENCE LYON, Michigan State Police: "Pay envelope inserts and similar inserts in state mailings, prepared by the Michigan State Safety Commission, are used regularly."
CAPT. M. L. MITTLER, Louisville, Ky.: "Safety messages are rubber-

stamped on all utility bills in our city." **CHIEF JAYCOX:** "Movie trailers are effective. We use a series of 35 mm. trailers produced by a commercial company and a 16 mm. sound film on traffic which runs 30 minutes. The trailers shown in the movie houses follow the news film, run for one minute and are used for 2 week in each theater and cover an 18 week circuit. The script and actors for the films are furnished by the Wichita Police Dept. It costs the department from \$5 to \$6 a week. Numerous radio spot-announcements and frequent 15 minute programs are of help in reaching the people in surrounding rural areas."

Q. What use do departments make of accident facts received from other departments?

A. COL. SCHOEFFEL: "Accident facts are compiled in New Jersey by the Traffic Engineer and are available to police for their use in planning enforcement and educational programs."

COL. HICKEY: "Statistics are exchanged between the motor vehicle department and the state police. Local departments and state police cooperate in an enforcement program."

CAPT. MITTLER: "Louisville exchanges data with other cities of about the same size and passes on and receives from them information on workable methods of coping with specific problems."

COL. C. M. WILHELM, Commissioner, Pennsylvania State Police: "Pennsylvania uses the records of other states for comparison. We find the releases from national associations very helpful."

Q. What revisions are contemplated in Delaware's incentive training plan, and what percentage of your members complete these courses?

A. SUPERINTENDENT HAVILAND: "Time devoted to fingerprint identification will be reduced and the extra time used in the course on criminal investigation. Manuals are to be revised. Ninety per cent of the department members completed all four phases of the plan. The 10 per cent who failed to qualify

will be eligible to try again after six months. Personal rating systems and activity reports are used in conjunction with the incentive plan and supplement each other."

Q. What success have departments had with marking the scenes of fatal accidents by signs, crosses, flags, etc.?

A. COL. SCHOEFFEL: "Signs in New Jersey are used only to show the number of deaths in the state, not at accident locations."

COL. MINGLE: "Such signs were used for a while in Ohio, but they were discontinued after an adverse reaction was experienced."

CAPT. PAUL PRICE, Dayton, Ohio: "The experience with using such markers in Dayton indicated an unfavorable reaction by the public."

Q. How frequently do police departments hold press conferences?

A. COL. WILHELM: "We do not have conferences on a regular schedule. Releases are sent to newspapers at regular intervals; conferences are called when circumstances and events justify them."

CAPT. MITTLER: "Louisville department issues a monthly statement of violations causing fatal, personal injury and property damage accidents. These are published regularly by all newspapers."

COL. SCHOEFFEL: "We issue a regular release of accident facts."

Q. How are funds secured for necessary police equipment?

A. COL. MINGLE: "Our additional radio equipment was purchased from the unused portion of money appropriated for salaries. This was available because of the drain upon our personnel to the armed forces. For other equipment the legislature has been very considerate of our requests. We believe this is due to three things: 1) a careful estimate of our needs; 2) a careful explanation of why such equipment is necessary, and 3) a close working relationship with the lawmakers which promoted an understanding of our problems."

Q. What is the amount of extra compen-

sation awarded under the Delaware Incentive Training Plan?

A. SUPT. HAVILAND: "The total amount awarded for completion of the four courses is \$20.00. This is figured on the basis of \$10.00 for the first course, which is restricted to the subject of the officer's primary regular assignment; \$5.00 for the second course, \$3.00 for the third course, and \$2.00 for the last subject. This provides considerably more incentive for improving their work than would a blanket salary increase."

Q. Have departments generally found it desirable to relax discipline during the war period?

A. DEPUTY CHIEF CALDWELL: "A slight temporary relaxation of disciplinary measures because of employment of temporary personnel replacements and less intensive training has been found necessary."

COL. SCHOEFFEL: "We have found that increased burdens imposed by the war and fewer men to do the job have indicated that some relaxation of discipline is desirable."

CHIEF JAYCOX: "Temporary personnel recruited under a less rigid selection system has made it necessary to revise our thinking on this subject."

Q. What has been the experience of departments using personnel evaluation programs?

A. DEPUTY CHIEF CALDWELL: "We have attempted for administrative purposes to evaluate our police employees. Formerly we used an examination and interview by an outside agency, but this proved unsatisfactory. We have substituted a board of five supervisory officers. This is still in the experimental stage, but has been well accepted by the men, and the results to date are promising."

COL. MINGLE: "Ohio uses a similar system. Thirty-one factors are considered, and each man is rated by his two immediate supervisory officers. Low grades call for further study of the individual. The system works, the men like it, and accept the evaluation as fair. It is useful in promotions. Ratings are

made regularly every three months. We have found it necessary to train the supervisory officers in the use of the grading system in order to obtain uniform results."

CAPT. MITTLER: "Louisville uses a

similar system, except that the grading is done by the Captain with assistance from the Sergeant. The plan was developed jointly by the Civil Service Commission and the Department, and a pamphlet is available concerning it."

WEDNESDAY MORNING SESSION

October 4, 1944

Group Session for Traffic Court Judges and Prosecutors

Presiding: CHARLES S. RHYNE, Exec. Dir., National Institute of Municipal Law Officers, Washington, D. C., and National Chairman, Junior Bar Conference of the American Bar Assn.

Improving Traffic Courts

A Panel Discussion

Panel Leader: CHARLES S. RHYNE, Executive Director, National Institute of Municipal Law Officers, Washington, D. C., and National Chairman, Junior Bar Conference of the American Bar Association.

Panel Members: JUDGE LOUIS E. COASH, Municipal Court, Lansing, Michigan.

JUDGE JOHN GUTKNECHT, Municipal Court, Chicago, Illinois.

JUDGE RUVIAN D. HENDRICK, City Court, Shreveport, Louisiana.

JUDGE J. J. QUILLIN, Municipal Court, Portland, Oregon.

COL. WILL ZURBUCKEN, Superintendent, Kansas Highway Patrol, Topeka, Kans.

JUDGE GUTKNECHT: "Public consciousness for the need for improving traffic safety must be aroused. There is laxness towards safety by public officials, by newspapers and by the public. For many years lawyers in their smugness allowed the very great and pressing problems of traffic safety to go unnoticed by them. At last, as a result of this great national program for improving traffic courts, lawyers are now becoming aroused and are beginning to take a little interest in improving traffic courts."

The great masses of people favor the proper administration of traffic laws. A majority of people are not traffic violators and wish to see traffic violators punished and properly punished for infractions of traffic laws as a measure of improving public safety. Because of favoritism in one department or another many traffic vio-

lators never receive punishment. There is little opportunity to do much in this field until the public and the newspapers are aroused and actively take part in a campaign to improve traffic safety.

JUDGE QUILLIN: "The physical appearance of the court rooms should be improved. It is necessary that the public be impressed with the judicial looks of the court room."

A traffic board is very helpful. This generally consists of blocks of linoleum upon which street intersections are drawn and is used with toy cars, buses and street cars of appropriate size, so that these various objects can be used to illustrate the actual conditions at the time of the accident or the violation. Such a traffic board helps persons who are very timid and who might not otherwise be able to tell their full stories or present to the judge a very clear picture of what actually happened.

A question in my city has arisen as to whether an officer must show his qualifications to tell speed before he can testify as an expert as to the speed of a vehicle. This relates primarily to speeding cases. I believe that an officer must clearly show that he knows how to clock speeders before he should be permitted to testify in a speeding violation.

Chemical tests for intoxication are being

used in Portland courts. In Oregon blood tests are permitted by statute, and this goes a long way toward eliminating guess work and opinion evidence in cases of this type.

By reason of the segregation of traffic court cases from other police cases the traffic judge is able to devote considerably more time to the disposition of traffic cases. Traffic cases are not rushed through and the court can devote a sufficient amount of time to come to a judicial conclusion and obtain substantial justice. As a result of this new method and practice, jury trials, which were always requested previously in cases where the judge was rushed and had not adequate time to consider the testimony, have now been virtually eliminated and the judge is always asked to try the case without a jury because he has adequate time to consider the facts.

Discussion

There was some discussion as to whether or not a person had to qualify before giving his opinion with regard to speed. It seemed to be the general feeling that any person, officer or civilian, could qualify himself to judge speed where speed is a factor, but in cases not involving a charge of speeding. In such cases if an officer or civilian properly qualifies himself he is able to testify as to the speed of a car. However, in speeding cases it seems proper to follow the judge's rule and allow no officer to testify unless he can show that he knows how to test speed.

JUDGE COASH: Traffic accidents in Lansing have been reduced. Newspapers and the radio participated in the campaign to reduce deaths from traffic accidents and the campaign was very successful. Accident and death rates have fallen off considerably. The city has a uniform arrest ticket printed in quadruplicate. These tickets are numbered and all are accounted for in a permanent record, so there is no opportunity for a ticket to be lost or destroyed once it is issued. All tickets showing traffic law violations go to the judge. A complaint is made up and signed by the arresting officer and by the judge. There is a written report made on every accident. An ordinance has been done away with the "fix" by imposing severe penalties for anyone fixing or attempting to fix a traffic ticket. Traffic cases

are all set for one day in the week so that they are segregated from other cases.

A permanent record is kept of all cases. If, upon a decision of the judge, the regular fine is reduced, the reason for reducing the fine is noted on the permanent record. The names of convicted law violators are published in the newspaper and everyone's name is published regardless of his rank or station. Even the officers of the newspapers themselves can't have their names suppressed.

JUDGE HENDRICK: All traffic cases should be segregated and assigned to definite times. Qualifications of the judge must be recognized as the main factor in improving courts handling traffic cases. Every judge sitting in judgment on a violation of the law should be a lawyer and should know the traffic law. In addition, traffic judges need a broad specialized knowledge of accident prevention measures and the fundamentals of traffic control. There should be more than a speaking acquaintance with the fundamentals of traffic engineering, various aids to traffic law enforcement, and the principles of traffic safety education.

The court should have an atmosphere to command the respect of persons appearing before it. The justice of the peace in the trial of traffic cases should be eliminated as being a system which has been entirely outgrown in this day and age. The percentage of really competent and qualified justices of the peace who are not lawyers is extremely small. These better qualified justices should of course be absorbed in a better court system.

Adequate penalties are important. If the court is consistent and establishes a reputation for treating everyone alike, even though the penalty or sentence imposed may be severe—he will have the support of the public. For years my court has imposed a minimum fine of \$100 and thirty days in jail in all cases convicted of drunken driving, and the public consistently supports this penalty.

COL. ZURBUCKEN: By and large justices of the peace are not qualified to sit in judgment on traffic cases.

Drinking drivers give the Kansas Highway Patrol the most trouble and anxiety. The modern traffic officer is well qualified to give testimony regarding drunkenness.

He will make an accurate report of his observations at the time of the accident and has no interest in the case other than to see that a violator is punished and that justice is done, but oftentimes the police officer appearing before a justice of the peace becomes the defendant and is required to take a position which should not be required of any person with the dignity and authority of an officer of the law. Before a good police judge the officer's testimony is readily accepted, and it should be as readily accepted by the justice of the peace.

The traffic law enforcement officer must depend on the court for completion of the enforcement job, and the action of the court is the major factor in making or breaking the morale of traffic enforcement officers. For that reason there must be the closest possible cooperation to the end that there may be mutual understanding of the problems to be faced, and a knowledge of the total job of making streets and highways accident-free.

MR. RHYNE: Several states have now established separate traffic courts and have taken the jurisdiction in traffic cases away from the justices of the peace.

Conclusions

Juvenile violators should be handled in the traffic courts rather than in the juvenile court. This is for the reason that in the juvenile court the traffic violator is handled as a juvenile delinquent, but it was generally felt that when a juvenile has the knowledge and capacity to operate a motor vehicle he should have the knowledge and

capacity to be able to understand the administration and sentences of a traffic court.

Pedestrians should be required to obey traffic signals.

A question was raised as to whether or not an arresting officer can read his report of a case—not to refresh his memory but to supplement it or to take the place of such memory. Cleveland police officers make out reports in the presence of the violators and then the officer may read the report and there is never any objection by the violator because he has participated in the making of the report. There seems to be no agreement between the judges as to whether or not a report can be used to take the place of a recollection which does not exist. It is clear that the officer may read the report for the purpose of refreshing his recollection and some of the judges felt that an officer has to make so many traffic arrests that when he has filed his report he should be permitted to read the copy in presenting his testimony at the trial, and not use it merely to refresh his recollection. Others seem to feel that even in spite of all this the officer should be required to recall the event and that the report should be used merely to refresh his recollection.

There was a discussion as to whether a city can by ordinance provide for a violations bureau in the absence of state law authorizing it. Although some states have ordinances which specifically authorize the setting up of violations bureaus, in most instances violations bureaus may be set up by ordinance without a statute if the bureau is set up as a part of the court itself.

WEDNESDAY MORNING SESSION

October 4, 1944

Joint Session—Traffic Safety Engineers Group and Institute of Traffic Engineers
Presiding: MATTHEW C. SULLIVAN, Asst. Dir., Safety and Traffic Engineering Dept., Chicago
Motor Club, Chicago, Ill.

The Impact of Traffic Accidents on War Industry

By HENRY K. EVANS

Traffic Engineer, National Conservation Bureau, New York City

Manhours lost to a war industry following a traffic accident may be considered to come under the following six headings:

1. **TEMPORARY ABSENCE**—The direct time loss of the injured car occupant or pedestrian who is absent following an accident.

2. **PERMANENT ABSENCE**—The manhours of work lost following death of an employee in a traffic accident.

3. **SUPERVISOR'S EXTRA WORK**—Extra supervisory work necessary when a worker is off-the-job temporarily or permanently due to a traffic accident.

4. **INEFFICIENT WORK OF VICTIM**—When a traffic accident victim returns to work before he is completely recovered, his work often suffers through nervousness or physical disability.

5. **OTHER EMPLOYEES**—Distraction from work of employees not involved in traffic accident.

6. **PAST YEAR'S ACCUMULATED LOSS**—The accumulated losses due to death or permanent injury of employees from traffic accidents during years preceding the war.

Accident Time Loss Studies

The National Conservation Bureau has been conducting some research into the amount of "direct losses" caused by temporary absence of employees from their war jobs in Schenectady, New York; Providence, Rhode Island; Omaha, Nebraska; Lansing, Michigan; Delaware and Connecticut. These surveys have been conducted in cooperation with local traffic safety authorities through a questionnaire being sent to traffic accident victims to determine the time lost because of an accident,

as well as other information relating to automobile damage.

Average Time Losses

In the Connecticut study, non-injured drivers lost, on the average, five hours apiece, or $\frac{1}{4}$ day per driver. Injured drivers averaged fourteen days lost, injured passengers averaged 35 days, and injured pedestrians, 55 days.

In all studies it was found that passengers lost more time than drivers, and pedestrians more time than passengers, indicating that the severity of injury must be in this same order.

Corresponding to the usual three severity classifications, i.e., property damage, personal injury and fatal accidents (except that pedestrian accidents are separated by injury and fatal), five categories were used in these studies as follows: Property damage only, car occupant injury, car occupant fatal, pedestrian injury and pedestrian fatal. The purpose for this was to simplify analysis of automobile damage figures and manhour losses.

On the basis of reported losses per person, the average number of persons per accident who are employed, and the total number of accidents, it was found that all Connecticut industries lost approximately 1,200,000 manhours as a result of temporary absences from work of drivers, passengers and pedestrians. In strictly war production industries, the 1943 losses in Connecticut were approximately 690,000—the equivalent of a month's shutdown of one war plant employing about 3,500 workers.

Automobiles Scrapped

With the acute transportation shortage today, and the vital part the automobile

plays in our war effort, it is logical to conclude that the loss of private transportation units through accidents has a tremendous influence on the nation's war effort.

The Connecticut study revealed there were 788 automobiles scrapped—lost to use—as a result of traffic accidents in 1943. It is interesting to note that although there were less than half as many occupant injury accidents as property damage accidents, there were more than twice as many cars scrapped as a result. This indicates an automobile mortality rate per accident of about five times as great for occupant injury accidents as for property damage accidents.

Of 216 fatal accidents, 84 were car occupant fatalities, which resulted in 67 cars being junked. This would indicate a mortality rate for cars about 27 times as great as property damage accidents, or five times as great as car occupant injury accidents.

Average Automobile Repair Cost

On the basis of Connecticut car owner reports, the average cost for repairs reported for occupant injury accidents was \$147. Repair costs for cars involved in fatal accidents were much higher. In car occupant fatal accidents, the average damage reported was \$440 per car—repair figures are unknown but were probably between \$300 and \$400.

Average repair costs in non-injury accidents were \$71 and in pedestrian injury accidents only \$5 apiece.

Average Time Losses—All Studies

Time losses in the six studies followed the same pattern when broken down into driver, passenger and pedestrian losses. There were a few days differences in time losses per person between cities, but they were close enough to warrant developing averages in the four classifications.

Time losses caused by waiting for repairs on damaged automobiles affected non-injured and injured driver accidents. In fact, our surveys revealed that more than half of the car owners seeking repairs following traffic accidents found difficulty in getting required work done. The percentage of car owners experiencing delays varied from 42% in Lansing, Michigan, to 66% in the State of Delaware. These delays were

about equally caused by shortages of parts and mechanics.

Work losses from these shortages reported by injured drivers averaged 13 days, by injured passengers 27 days and by injured pedestrians 52 days. The only reliable sample for non-injured passengers was in Delaware where losses from employment averaged five hours for this group.

Nation-Wide Man-Days Lost

Since reported losses per person per accident were found to be pretty consistent in the six different studies, I felt justified in striking average losses per accidents and then expanding on the basis of total numbers of accidents during 1943, as reported by the National Safety Council.

The direct time loss by non-injured drivers is nearly five million mandays of absenteeism, nearly as great as the total time loss by injured pedestrians, injured passengers, or injured drivers.

In order to compute overall totals, it was necessary to consider the percentage of drivers, passengers and pedestrians who are employed. It was found that 90% of drivers were employed, 75% of passengers, and 50% of pedestrians, in all types of work. In war production alone there were 65% of the drivers, 55% of the passengers and 35% of the pedestrians.

No breakdown into loss to war plants as apart from loss to other industries was made because: (1) most every type of work today contr. to the war effort, and (2) the percentage of people in war plants varies considerably between cities, but the portion employed in all types of jobs is fairly constant among cities, hence more reliable for estimating purposes on a nationwide basis using only these six studies.

The grand total for all motor vehicle traffic accidents is 19-million man days direct loss from all employment. This is based on the National Safety Council totals for 1943 of 21,700 fatal accidents, 550,000 personal injury accidents and 3,800,000 property damage accidents, resulting in injury to 450,000 workers and death to 12,800 workers.

Average Automobile Damage

Averaging the results of our six studies together, rural accidents were more severe

than those in urban areas, probably because of higher speeds.

The percentage of vehicles scrapped ran from 3% in urban property damage accidents to 40% in fatal accidents. Our studies indicate two out of five vehicles in car occupant fatal accidents are scrapped, one out of every six in car occupant injury accidents is scrapped and one out of forty in property damage accidents is scrapped as a result. Altogether, one car out of thirty involved in all accidents was scrapped.

Nation-Wide Automobile Scrappage

Data from these six studies indicate approximately 244,000 automobiles were scrapped in the Nation last year because of traffic accidents. This would mean that one car out of every six which went to the junk yard in 1943 resulted from a traffic accident. This data is based on the O.D.T. figure of 1,500,000 cars scrapped during 1943.

It might seem unimportant to note that only one out of each six cars in the junk yard got there as a result of an accident. However, on the average, the one accidentally destroyed is relatively new, while the other five were old, worn out vehicles. In fact, cars being junked today are older and more decrepit on the average than ever before. To support this statement, I quote again from the O.D.T. which reported that in the three years preceding the war, 1939, 1940 and 1941, scrappage was six million vehicles. In 1942, 1943 and 1944, the total of vehicles scrapped is only 4,250,000. Thus—scrappage is being tightened up. Approximately 1,750,000 vehicles are being driven on our streets and highways when ordinarily

they would have been scrapped if new cars were available for replacement. It is obvious that many of these cars "living on borrowed time" are old vehicles that should be junked and are apt to be unsafe, which can only mean added chances for accidents in the next few years.

Conclusion

Economic losses definitely are not becoming less important. We know that as automobile traffic volumes begin to come back to pre-war levels, accidents probably will rise—which means increased economic loss to industry. Industry cannot afford to overlook monetary losses due to motor vehicle traffic accidents.

It may be three to six years before the average car age drops from the present eight and one-half years to the pre-war level of five and one-half years. In the next couple of years an increasing number of old cars will add to the existing hazard—especially as driving restrictions are eased. Immediately following that period, a more hazardous condition will result from mixing new speedy cars with old jalopies left over from pre-war days. This can result only in more accidents—either from differentials in speed or because owners of old cars will try to keep up with the new fast moving cars.

These factors can only mean one thing to industry—more and more money paid out because of traffic accidents involving employees. The more that those in the traffic safety field can find out about the relations of traffic accidents to industrial losses, the more we can expect the cooperation of industry in helping to reduce traffic accidents to a minimum.

New Techniques in Relating Traffic Accidents to Highway Elements

By C. F. McCORMACK

Field Representative, National Safety Council, Chicago, Ill.

Almost every highway engineer has known for a long time that there are relationships between the physical characteristics of roadways and the occurrence of accidents on such roadways.

Even though convinced that such relationships existed, there also existed many

conditions which prevented their absolute identification, comparison and measurement by the engineer.

First of these deficiencies was a lack of data covering the many varying conditions which affect accident occurrence. No one area had traffic volumes ranging from one

to twenty-thousand vehicles per day traveling on highways constructed according to the hundreds of different standards which have been in effect and influenced by different degrees of roadside interferences and climatic conditions.

Every discussion of combining data from different areas has seemed to die of complications; complications of describing sections of highways, complications of describing accidents, and the complications of correlating the two previous complications.

Early this year the Public Roads Administration and the National Safety Council at the request of the Interregional Highway Committee undertook the development of procedures for relating accidents to highway characteristics. The ultimate goal was the development of accident facts which could be considered by the engineer during the design of a roadway rather than after its construction.

U. S. Route 1 in Virginia was selected for a pioneering study because it offered a wide range of highway characteristics and allowed close liaison between the co-operating agencies. Only rural data were used because the urban data were not readily available.

Strip Maps Prepared

The first step in the study was to accumulate on strip maps, prepared by the Highway Department, all the engineering and traffic data in which we were interested for the year 1941.

These data were taken from construction plans and plotted on standard, highway alignment and profile sheets to the scale of one inch equals one thousand feet along the center line. The alignment data showed deflection, degree and length of horizontal curvature, angle of intersecting roads, railroad crossings and structure types, widths and lengths. The profile showed the per cents of grades and the location of vertical curves, while a straight line diagram, conforming in scale to the profile, showed the types and widths of pavements and shoulders.

Also included were traffic volumes broken down by the percentage of commercial vehicles, the percentage of night travel, and at intersections the percentage of traffic on the intersecting roads. Specialized traffic

controls were noted as well as any improvements or changes in the roadway construction.

The frequency of dwellings, curves, intersections, railroad crossings, restricted sight distances and structures were determined on a per-mile basis for each county. Wherever conditions within a county varied greatly, separate frequencies were determined.

The State Police Department furnished the accident reports and locations. Correctly locating the accidents was one of the most difficult operations encountered. Generally the accident locations were correctly described but referred to local landmarks and could not be identified in the office. Finally a road log was made showing the mileage to these local places with the result that less than 5% of the reports were discarded for lack of data. The accidents were located on the alignment sheets and identified by number.

Two Punch Cards Used

The data thus accumulated were coded for mechanical tabulation. The tabulating theory was based on the use of two punch cards. One card, called the highway card, contained the coded description of each uniform section of highway, the length of such section of roadway and the annual vehicle miles traveled on it. The accident card, too, contained the complete description of the roadway but, in place of the length and vehicle miles, it contained a description of the accident which occurred. Thus each time a roadway characteristic changed a new highway card was coded and for each accident an accident card was coded. Over the entire route there averaged one highway card and one accident card for every one-tenth of a mile.

No length and, therefore, no vehicle miles were assigned to "point" locations, such as intersections and structures. There were two reasons for this: first, it is extremely difficult to determine a length for intersections, bridge abutments, and railroad crossings; and second, even when determined such length would be considerably smaller than one-tenth of a mile which was the minimum increment of length used in the study.

It must be admitted that in this pioneering study the description of various roadway elements was much too detailed. For

instance, gradients were classified by even per cents rather than combined into useful study groups. This one item accounted for a large percentage of the card breaks.

Using the two tabulating cards makes it possible to segregate a particular highway condition, determine the vehicle miles traveled under that condition, and establish the number and type of accidents experienced by that travel. Thus, with a large enough sample, the accident rate can be determined for five degree curves on two-lane pavements, at less than 3% grade, carrying more than 5,000 vehicles per day and with no side road encroachment. The effect of excessive grades can be isolated by studying the accident travel experience on tangents which are alike in all other characteristics.

Method Proved Practical

The preliminary tabulations of the Virginia data provide some interesting rates even though they are not at all conclusive. The sample is so small that many of the variables had to be ignored and, thus, any conclusions are unreliable. The results of these preliminary tabulations are stated only to show what can be done and not to establish any accident facts.

The total accident rate per million vehicle miles on U. S. 1 in Virginia is higher for curves than for tangents on all types of roadways, and the rate for curves on four-lane, undivided roadways is considerably higher above five degrees of curva-

ture than the rate for curves below five degrees.

The accident rate per million vehicle miles for four-lane, undivided tangents on this route shows a tendency to diminish as grades increase up to 6%. At 6% the accident rate increases sharply. The rate for tangents on 7% grades, for example, is only slightly higher than that for tangents on 2% grades.

A tabulation of between-intersection roadways and accidents shows a higher accident rate for sections with less than one curve per mile than the rate for sections with more than one curve per mile. The traffic in the high rate group was all in the lower volume brackets.

Eight thousand vehicles per day seems to be the critical point in intersection safety when the cross traffic is less than 10% of the total. The average number of accidents per intersection carrying between 10,000 and 14,000 vehicles per day is ten times the number of accidents per intersection carrying between 4,000 and 5,000 vehicles per day. On the route studied there were too few intersections with more than 10% cross traffic to provide any comparisons.

In the future it is hoped that the co-operation already existing between the Public Roads Administration and the Council can be extended to include several of the states and in this way obtain a sufficiently large sample to provide stability in all the variable conditions to be encountered.

Traffic Engineering in the Post-War Period

Digest of a Panel Discussion

Panel Leader: HARRY E. NEAL, Chief Engineer, Division of Traffic & Safety, Ohio Department of Highways, Columbus, Ohio.

Panel Members: J. EDWARD JOHNSTON, Traffic Engineer, Nebraska Department of Roads & Irrigation, Lincoln, Nebraska.

D. GRANT MICKLE, Traffic Engineer, Automotive Safety Foundation, Washington, D. C.

LOYD B. REID, City Traffic Engineer, Detroit, Mich.

JAMES T. WHITE, Traffic Engineer, Fort Wayne, Ind.

With reference to post-war aviation, the traffic engineer's interest is still on the ground. Concerned with passengers and commodities only while en route to and from the airport, the consensus was that there were more pressing problems of congestion and transport than providing expressways connecting airports with the central business districts of metropolitan areas.

Airport planning should consider the availability of existing or proposed traffic arteries as well as the use of abutting

property by manufacturers of commodities suitable to air transport.

The traffic engineer can be of assistance in planning the parking areas and entrance connections to established airports and flight-strips adjacent to roadways.

Discussing the need of county governments for traffic engineering employees, it was brought out that there could be no set rule. Generally, the density of population was the primary factor for consideration,

with counties in large metropolitan areas requiring full-time traffic engineers.

The overlapping of authority between state, city and county traffic engineers works to the annoyance of the public. Proper legislation establishing a manual of uniform traffic control devices and requiring state-wide use is the best solution to this problem. The initiative for developing this cooperation lies with the state traffic engineer because of his position and facilities.

WEDNESDAY MORNING SESSION

October 4, 1944

Joint Session—Public Safety Education and Traffic Education Association
Presiding: NORMAN F. GALLMAN, Dir. of Tax Publicity, Dept. of Tax and Finance, Albany, N. Y.

Traffic Safety Copy Acceptable to Daily Newspapers

CARL KESSLER

Asst. City Editor, Chicago Daily News, Chicago

This question of public education and safety through papers is more than a matter of copy. Copy, in the ordinary sense, is the releases that come to our desk by the basketful every day. Somebody runs through them and uses some of them and the rest go on the spike or in the wastebasket.

"What type of copy is acceptable?" Any copy is acceptable to an editor that is likely to make a readable story, a story that is worth printing and is fit to print.

A newspaper is in a rather peculiar situation. We're a public institution, in a way, many ways, exactly as a university or a government agency. We do have a public function and a responsibility. At least, the better newspapers recognize that.

At the same time we're in business. We've got to sell papers to eat. If our papers aren't readable and people won't buy them, we don't stay in business very long. That should be kept in mind on the part of anybody in safety public relations. Safety is important. I think it's as important a cause as anybody can bring to a newspaper. Nevertheless, you have to keep in mind the seemingly heartless editor is trying to think in terms of what people will read

before they turn the page to their favorite comic strip. That applies to all of us.

The National Safety Council's own copy is excellent. I've handled it for years. It's clear. As far as I know, it's accurate, factual, and the statistics are well organized. That's all to its good.

Of course, in turning in statistical copy, and safety copy is likely to be statistical, you've got to remember that statistics don't mean anything to the average reader except as it relates to his experience, and his locality, and all that. You can say that a hundred people are being killed a month in a county in automobile accidents, and that doesn't mean anything to him unless he knows how many people are driving automobiles. You can say that there's an accident a minute or an accident an hour, and unless you really want to get at him, you've got to put it in such language that he'll say, "What are my chances?" "What does it mean to me?"

In the last few years statistics have come to mean little. Since 1930 there's been nothing else but statistics; they're constantly increasing in our national government, and now we've got a global war, and we're getting a lot of statistics about that.

Nobody knows what figures mean any more, and nobody cares very much.

I, personally, think that straight records of number of accidents and that sort of thing are not worth very much as compared to individual cases. There's an old axiom in the newspaper business, a basic one, elementary one, but often overlooked, that almost all newspaper readers are more interested in other people. I once knew a clever newspaper man who also had been a journalism teacher. He had a slight stutter. His definition of news was, "M-m-m-my God, loo-loo-loo-look what hap-hap-happened to the girl next door." I can prove my case there. I don't think it's any accident that most of the world's wisdom that has come down to us, the do's and don'ts that represent a good many thousands of years of experience, have not come down to us in terms of statistics. They've come down to us in terms of people, real people or people who have been created, and I cite you in proof of that, the Bible, and the great fables, fairy stories and all the other things in which the human race has put its wisdom. I think that's something that all newspapermen try to keep in mind. I think the story of the death of one child on its way to school, told properly—I don't mean to slop over, but told properly, with proper restraint and pathos—is worthwhile; it's worth any amount of figures on accidents to children. That brings it home; the story of the death of this child in terms of the child and its family and friends.

The end of a wild ride after some heavy drinking—some of you traffic officials here are familiar enough with that story, the kind of story that ends in the morgue and the hospital, or judges' chambers. That's worth a lot more than all the statistical lectures you can get on drunken driving.

It's difficult, I know, for you who are in traffic education. Generally, you can't send out releases on the individual story; as a matter of fact, we beat you to it.

I think that traffic safety and contact relations men should know newspapermen, should be able to call them up and make suggestions, letting us go on from there. We like to get our own feature stories, our own individual stories. We do welcome the suggestions, the ideas.

You can adjust your flow of ideas to what's going on. If the accident rate is

rising in your neighborhood, people are getting careless, too many things are happening, then it's time to come down to the newspaper and say, "We need help, play these traffic stories, will you?" That's the great advantage of personal contacts, of knowing newspaper men. Jim Bulger will back me up on that.

You can suggest, I think, that papers be more alert; you can suggest trends.

I sometimes think the public thinks we're always looking for the angle. So and so says this. Well, what is his pitch, what's he trying to prove and why? We have to watch that. Here's a state administration; it gets out some very nice looking figures on safety. We immediately start saying, "Well, now, just how does this compare?" We're more than likely to put a good reporter digging on those figures. Sometimes, if you haven't played fair, up will come some stories you won't like.

I can remember sometime back, a division of government came through with some highly favorable traffic statistics. Apparently, just everybody had turned good all at once. It didn't seem right to me, so I put a good man on it. All of a sudden it dawned on us the reason for the good statistics; it was gasoline rationing. So these figures, in relation, just broke down. The story was anything but good. It didn't even make sense.

This all seems elementary, but you better play straight with the newspaper in the first place on any kind of statistics you're giving them. That is particularly true of the bigger ones. We've got our own experts, and we're likely to put them on a story that looks doubtful.

I was a small-town editor some years ago. We were responsible for some twenty counties in three states. I got a call from a county seat over in Missouri, and I took it over the phone. It went on and on. The town's most prominent citizen, president of the bank, had died. I got a nice long obituary. I started to write it, and then it occurred to me, "What the devil did this fellow die of?" So I called back to get her to tell me the cause of death.

She said, "Well, the family didn't want it known, but he did go out and hang himself in the barn."

"What's wrong with copy now?" I think I've answered some of that. One thing I

would stress, and that's what we call the local angle. I don't care how big a newspaper is, it's looking for the local angle. As I remember, most National Safety Council copy lists things by cities and state. It might be better if you could slant the releases for that district right away, the releases for Chicago and Illinois, right off, comparisons there, with their previous record and then their comparisons with the over-all. The national accident rate, let's say, has gone up four per cent, or Chicago's rate has gone up four per cent; then we'd immediately get busy. That's what makes the story, not just the statistics, but how it compares.

"Are we getting worse or better? How do we compare with the guy next door?" I can certainly say that's what the papers want in Chicago, and I think it's true for most cities.

Deadlines on a great metropolitan newspaper are something you don't have to worry about. My paper has seven major editions. I sometimes have to look up the deadlines myself to be quite sure of what I'm doing.

I do think, however, that you, in public relations or publicity should distinguish between morning and afternoon releases. There is a no man's land there than sometimes causes a lot of trouble. Now, we're a P. M. newspaper, so our first edition is on the street about ten o'clock in the morning, and the last one a little before six. And if the story is good enough, we'll use it even if the *Sun* or *Trib* has.

Most papers are fairly decent about observing those releases. You can scatter your ammunition that way; let the morning papers have it one time, and the next time the evening paper. I'll sit at the desk and grab some copy, and it makes a lot of difference to me whether it's marked P. M. or A. M. release. If it's a P. M. release, I know it's our story, and I'm far more likely to give it some space. If it has no mark or has an A. M. release on it, then I know the morning papers will have had all the fun with it before I get to it.

Length. Length of releases is not so important. Newspaper stories are being written shorter and shorter. We have to do that because our present problem on paper is terrific, and we turn what space we have over and over. Of course, today

with our multiple editions, I would say that if a release is so long that it takes a man some time to find out what it's all about, it's no good. But, on the other hand, we don't mind having a lot more background than we use. Any good reporter should know more than he has space to write. A good news story is like an iceberg—two-thirds of it is below the surface. It gives you the feeling that here's a man who knows enough for four or five columns if he wants to write it. He gives you the feeling of authority or knowledge.

Nearly all metropolitan papers re-write the publicity breaks. Sometimes they're so well done, that they really don't need to be rewritten; but as a matter of putting our own individual stamp on a story, we'll re-write it.

Frequency of release. It depends on what you have to say. Public relations people have to make a living, they've got to make a show, so they get in the habit of sending releases out at regular intervals whether they have anything to report or not. That can be overdone. I think in their anxiety to make a showing to their superiors, people who actually get out the public relations copy figure in terms of times at bat and not in terms of runs driven in.

We have a terrific space problem these days in newspapers, and we also have a manpower problem. The big papers in Chicago have kept their staffs up to something like normal, but they're not quite the people we had before the war. We're all pretty hard worked and we're likely to be impatient with a carelessly written release. Nothing makes us madder than to get a release with some glaring error or inconsistency. Our instinct in that case is, "Oh, the hell with it, let it go."

I'd like to add one thing, in closing, the matter of criticism of copy. So many publicity agencies or individuals, on the theory that if you throw enough, some of it will stick somewhere, send releases here, there and everywhere, in duplicate and in triplicate. They should have some consideration for the blood pressure of the news editors who already may have used their release only to find that the city editor has used it on page three, a columnist has given it space, and maybe the financial editor. Then there's hell to pay around the city room, and a city editor or news editor says,

"Wait until the next time that outfit sends something."

Don't send more than one copy of a release to one newspaper, or if you want to take an alternative, send one to the city desk and the financial editor, perhaps, but mark it, "Duplicate sent to so and so." We appreciate that, and we'll say, "Are you going to handle this, or shall we?" It saves a lot of trouble.

Panel Discussion On the Above Subject Participants:

Discussion Leader—NORMAN F. GALLMAN, Dir. of Tax Publicity, Dept. of Tax and Finance, Albany, N. Y.

LT. GEORGE E. HURTEAU, South Carolina State Highway Patrol, Columbia, S. C.
BARNEY J. O'DONNELL, Dir. of Safety, Dept. of Highways, Columbus, O.

EARL D. SPROUL, Pres., Agency Service Corp., Chicago.

JAMES F. BULGER, Vice Pres. in charge of Public Relations, Chicago Motor Club, Chicago.

MR. O'DONNELL: I'd like to ask Mr. Kesler about the idea he mentioned of people engaged in public educational work making contacts and suggestions for stories. I'm engaged in state work, and, naturally, we know the newspaper people in Columbus and can make suggestions there, but we want to get the copy and all the publicity we can throughout the state. Do you think it would be a good idea, instead of releasing so much copy, to send suggestions to newspapers in other cities, stories they could work up themselves?

MR. KESLER: I would welcome it if I were an editor of a newspaper outside.

MR. O'DONNELL: You'd think you'd get a lot more copy that way than you would by sending just these routine releases out?

MR. KESLER: Yes, I think so. I spoke of the personal story; that covers the feature. A feature story is something that's very hard to send out. The very nature of a feature story implies that it will belong to that one paper.

As I say, just scatter your ammunition. You'll get your kicks with that too, because

newspapermen are just as unreasonable as the rest of the human race.

LIEUTENANT HURTEAU: I had a question jotted down here with reference to the personal contact topic. Now, that, to me, is of vital importance. That, I believe, is why we've been successful in our state. It's a matter of establishing personal contact with the reporter or editor or whoever the contact representative of the newspaper might be.

I'd like to just have you touch, if you would, on how those personal contacts could be established between the state law enforcement officer and the papers?

MR. KESLER: Well, most newspapers have their men who are covering police in various ways or another; just get to know them. I can't suggest any specific thing. I know scores of public relations men around Chicago, and I can't tell you where I met them. I meet them at parties, I meet them at conventions, on stories; I picked them up here, there, and everywhere. We'll say a certain railroad has a story, it may be a good story for them, maybe bad; I can say, "Look, Bill, what's it all about?" I know the man; I can depend on him. Anybody prefers that in any dealing. It's the same way you'd rather go into a store, if you're going to buy something, you'd rather go to a salesperson that you know. That's human and perfectly natural. I think, and the same thing applies to news. Newspapermen like to know state and local police authorities. It works to our advantage; they call us up and let us know. That's the ideal way.

LIEUTENANT HURTEAU: What is the object in getting publicity? I think publicity just for the sake of getting publicity is baloney. Our releases are all issued from one central department, not from the individual officer. The releases are distributed to the various patrol districts, and one designated man maintains and develops the contact with the papers in a hand-to-hand distribution of the release. The contact there was the one I meant.

MR. BULGER: What kind of stories: accidents, the number of accidents on a particular highway, for example?

LIEUTENANT HURTEAU: Yes, we try to localize those, of course, in the various patrol districts.

Our features are handled that way, too.

All our releases are handled through the various patrol districts.

MR. BULGER: I'd like to suggest that you might increase your publicity if you work through three organizations: your local safety council, your local automobile club, or the local chamber of commerce. Make contacts there and have them. If you get somebody else to pull your chestnuts out of the fire you'll do better.

MR. SPROUL: There's another angle—on the form of release. Do you send it out in copy, or do you call up, or do you send it out in mats or plates?

MR. KESLER: I'm speaking for metropolitan papers. Most releases come to us written in news form.

MR. SPROUL: I was thinking of the difference between the small daily and the metropolitan daily.

MR. KESLER: I don't think the small daily, maybe a very tiny weekly, would put it on a mat. They'd do their own composition.

MR. SPROUL: I was thinking of the new type of graphs coming out.

MR. KESLER: Well, for graphs and that sort of thing, some papers could use mats. My own paper, and I suspect, some others in Chicago, can't use anybody else's mats; our screen is such the mat is no good. We have to make our own engraving. In fact, we made a change so that even our old morgue was useless to us.

It's better to send your releases out in news form or as nearly in news forms as you can. Whoever handles it will do some editing.

MR. BULGER: Wouldn't you appreciate getting at your desk the name of the organization, plus the telephone number, plus some individual's name?

MR. KESLER: That's a very fine reminder.

MR. BULGER: Then they can call up and say, "Hello, Joe Blow, how about this statement? Can you amplify that?" That happens to us all the time.

MR. KESLER: Or, "Why in blue blazes isn't there an address after this guy's name? Where does he live?" That matter of the phone number is very important. It is ele-

mentary, but it's also amazing how many fairly important organizations overlook it.

MRS. STONE: In preparing copy for news releases for metropolitan papers where you have morning and afternoon papers, where you have a real news story, is there any virtue to rewriting it? Or do you think it's just as well to send out duplicates and mark them duplicates?

MR. KESLER: I'd make it, as I said, a flat P. M. or A. M. release. We get endless releases marked A. M. release and then go on from there. If we think it's a good enough story, the fact that the *Star* or *Tribune* had it isn't going to stop us from using it. On the other hand, we may call up and see if we can get a different angle on it.

MRS. STONE: In our town, if a paper gets material from some other newspaper, they're inclined to use it just the same way it comes in. In that case it's a good idea to rewrite it, if it's a news story.

MR. KESLER: I'd make a release to one or the other paper and send the same release to the other, telling them you sent it to both. They'll go on from there; they appreciate your being honest with them.

MR. O'DONNELL: Don't you think it's a good idea not to overlook the press associations? A lot of newspapers have the idea if it comes in under the press associations, it is worth more attention than if it comes in with the routine releases?

MR. KESLER: If the organization is well known, they won't. Say a National Safety Council story comes to our desk, both the Council release and the association release; it would not make any difference to me.

MR. BULGER: I think you get more publicity if you send to the wires also.

MR. O'DONNELL: I meant by varying your routine releases; by taking a few stories you know are hot stories and just giving them to the press associations and not sending them out to the newspapers.

MR. KESLER: You can do that occasionally; as long as you get to the three major press associations; the A.P., the U.P., and the I.N.S. They aren't competing with newspapers.

MR. KESLER: When you're in state work like Mr. O'Donnell here, if you keep on sending out routine releases, I think,

psychologically, it has an effect. If the editor is used to receiving just so many routine releases, he's not as apt to give them consideration, he's liable to slip through them.

MR. KING: In our own state I have noticed a trend on the part of a good many city editors to let the wire services edit their copy. I've sent out a mail release, and it hasn't appeared in quite a number of papers. But the same release will appear in a number of other papers. The reason is that they use the wire copy. In some cases they have even thrown my stuff away and then used the wire copy of it. Of course, in my state most of the towns are under twenty thousand, and in those papers you'll get a lot of stories in by wire.

MRS. KIRWAN: Mr. Kesler, most of us who have done any publicity work for governmental agencies have been faced with one problem that is not easy to solve. A story will break within the department that is worth not more than two or three paragraphs at the best and consequently you'll write it that way. But the chances are you won't get away with it. To your superior, it's worth a full column. Should you go to your boss and say, "Sorry, this is what the newspapers want."

MR. KESLER: I have talked at times to various public relations groups, and I've always been interested. The whole phenomena of public relations fascinated me for some years because I came, as a kid editor, from a small city. If you got any kind of story, you damned well had to go out and get it. Then when I started working for the big city paper and people kept on sending in news, well, it was shooting fish in a barrel, and in Chicago, even twenty years ago, there wasn't anything like the organized public relations there is now. The war stepped that up enormously. We need at least three city editors just to keep track of government releases alone. But I have maintained for years, and I know this is easier for me on my side to say than for you, that the public relations person has to do a job. He's got to educate his own boss as well as the press to keep that job.

I admit there are bosses you can't educate, but an honest and conscientious public relations worker is going to try to teach his own boss what can be done and what

cannot be done, and why. The smart one, for that reason, gets that amount of freedom and has a free hand to work with and can do a better job of public relations. My favorite character is a grand publicity agent. He doesn't write releases, he's a railroad man. He's quite elderly, and he does know his railroads. I'd like to tell one story about him. His railroad had a very bad wreck here a while back, and there were about thirty killed. Now, that's not common, that's quite a wreck, thirty people killed. Well, what did he do? He flew out there and set up his own news service and was giving names and addresses to the next of kin before the papers could do it. I said, "That's rather unusual. Why did you do it?"

He said, "The quicker I give you lugs the story, the quicker it will get off the front page and you'll forget about it."

SERGEANT BERLIN: Let us assume that we here in Illinois, from a purely educational standpoint, disregarding any political connections there whatsoever, have a specific traffic safety problem. Our Records Bureau tells us here in Illinois and in other states, that the juvenile drivers, on a comparative mileage basis, are possibly responsible for sixty per cent of the accidents. We find, as Mr. Salisbury indicated yesterday in the session, we have an amazing percentage of under-age drivers; here in Illinois it's fifteen, Wisconsin, sixteen, but we know from assemblies with high schools, with our twelve hundred high schools, we know that asking the students from the floor, ten per cent of them will admit that they're driving regularly and are under age.

If we were to come to a newspaperman and say, "Here, do you feel any obligation as a newspaperman on the matter of public education?" Most the thing he a story before you have any interest, or would you prefer that we come in and say, "Here, this is our problem, can you help us out on it by giving this thing publicity?"

MR. KESLER: I think your problem would be to approach the newspaper through publicity, and they'll find what you're worried about is a news peg, a news angle, something we could hang the story on today. A series of stories might do, if you can collect enough figures to make it stick. As to how many, a rough idea,

based on your checks, the traffic police checks and all, under-age kids are driving cars and their percentage of accidents. The stories could be made out of that, and then along comes some particularly notorious case where some fourteen-year old punk wrecks a car and kills two or three kids. There you have something hot and you can go on from there.

As I say, I'd put that problem up to the newspapers. That sort of story is readable. The human race is always very much interested in the misbehavior of its young.

MR. KINK: Wouldn't it be all right for public relations agencies to write a letter explaining their problem and suggesting probable editorial comment? Would an editor object to that?

MR. KESLER: I think that would be quite in order.

MR. HICKERSON: Couldn't you tie up your publicity with an event? I also want to ask you how far you think a publicity man or a public relations man should go in covering spot news? Should it be just a tip through to the papers?

MR. KESLER: Yes, I think I said earlier that you can't do much except help when an actual accident occurs. We'll be on it as quickly as you are, and time is important to us. You can help.

THE CHAIRMAN: Do you consider it good practice to spot exclusive stories occasionally with different sections of the state?

MR. KESLER: I think it is. As I say, if you're careful with it and scatter your ammunition as fairly as you can, it's okay.

Traffic Safety Copy Acceptable to Weekly Newspapers

ELMO S. WATSON

Editor, Publisher's Auxiliary, Western Newspaper Union, Chicago

This subject of Traffic Safety Copy Acceptable to Weekly Newspapers is a difficult one. I wish I knew more about it.

One thing we have learned about syndicated material is that it's a great big gamble and has been for many years.

Now, if that's true of feature material the editor puts in his newspaper, how true is it of publicity that goes in his newspaper?

I think I might tell you something about

That should be confined, however, to the feature story, a factual story. It's not a good policy if you come out, for example, with the information that the accident rate has gone up sharply in Illinois. If you only give that to certain papers, that's a grave error. Everybody is entitled to that information. On the other hand, if it's a feature story that won't make or break anybody, that's another matter. Of course, as I warned you earlier, you might get in trouble because newspaper editors are just as unreasonable as the rest of the public.

THE CHAIRMAN: We have, several times, gotten into jams because it takes us about three days to process a story and get it out, and we have a release date at least that far in advance. About twenty-four hours before we want to break a story, some man from a newspaper calls up and asks the identical question, and you say, "I'm sorry, but we're getting out a release on that for the afternoon papers tomorrow," and then he hits the ceiling. It's always a little difficult situation.

MR. KESLER: That's just one of those things. Generally, we're not inclined to do that. Things will hit my desk, and they'll be for A. M. release, and I don't try to do anything about it, as a rule.

We're inclined to be pretty careful. Occasionally we'll violate a release by carelessness. Somebody will overlook it.

THE CHAIRMAN: Will editors, generally, welcome suggestions and material for editorials?

MR. KESLER: I think they'll welcome suggestions for editorials.

the country editor. In relation to your job as publicity men and women and public relations, there are three general types in regard to publicity. There is one type that has been thoroughly inoculated by the press association, I mean, the state press association; I don't refer to the Associated Press. He won't take any kind of publicity. He's been told that the more publicity he takes, the less advertising he's going to get. Then

there is another extreme type who will take almost anything if it's free. We call him an editor, but, actually, he's not; he's a printer. He prints so many pages of material. He is not an editor in the sense that he edits the copy or exercises much editorial judgment as to what goes in his paper.

In between is the man who does exercise editorial judgment, who will accept a piece of copy, even though it is publicity, if it has news or feature value to him.

Now, as to what the percentage of those three is, I don't know. That's one of the things that makes it so difficult to generalize on this subject of the country editor and on the subject of what kind of copy, traffic copy or any other kind of copy is acceptable to him. You know, the country editor is one of the few remaining individualists in the country today. While Carl Kessler might object to this, I think you'll find more real individualists in the country field than you'll find in the metropolitan field or even in the small daily field.

Knowing that you have these three types of editors to which you advance your copy, what is your principal problem? It is how to fit that copy to these individual's tastes.

One of your speakers on a previous panel raised that question about length of copy. I think I would go along with Mrs. Kirwan on that, that the short story always has the better chance than the long story, because one of the things you're up against is tightness and suspense in the country press.

As to the type of copy, I'm a feature writer, primarily, and I feel that the story that is most often read in a newspaper, and longest remembered, isn't always the big news story of the day; it's the little human interest.

I'm inclined to think the more you can humanize your traffic copy, the more you can featureize it, the better acceptance it's going to have in the country press.

I don't know whether this is practicable, but the localization of copy is important. The localized story, the story that comes nearer to a community or a state or a region is always better than a general story.

As to the form in which your material goes to the country press, your best bet for getting a lot of material into the country press is through this medium of mats

or plates. The Western Newspaper Union is the principal dispenser of the plates, in fact. I'm not trying to sell you something, I'm not here as a salesman; I couldn't even quote you prices on it, but I do know that a lot of country editors, because of the convenience of the thing, will use copy or use stories, features or illustrations, and even some technical stuff, if it's put in his hands in either mat or plate form, when he wouldn't possibly use it if it came in copy because he simply won't take the trouble to set that stuff in type.

Somebody mentioned charts: I think those are very effective because, as you know, the old saying about a picture being worth ten thousand words. One of your most effective types of publicity is illustrative material, and there, certainly, if you want to get that in the country press, you have to get to the country editor through the medium of mats or plates.

We must realize always, in thinking about traffic safety copy for the country press, that we're up against terrific competition for the interest of the editor. I think even more than in the case of the metropolitan paper because the word has gotten around among publicity men that the country press is a pretty soft touch. The country editor's desk is flooded with this material.

Now, granted your cause is a good cause, it's in the public interest, and they're sympathetic to it, there still remains that fact that your copy must compete in interest and availability with all of this other copy that comes to the country editor's desk.

The question of editorials was brought up. I believe that the country editor would welcome editorial suggestions, and very likely he would welcome an editorial already written, if it could be fixed up in some way he could see its local application to the community.

One other point that I want to suggest to you: I think it's smart publicity; I think it's good public relations. It's the reflection of this human element. The country editor likes to get praised for what he's doing. I've noticed in a good many cases that some of the best publicity has been put over in that form in which the country editor has been given a citation for something.

One of the smartest publicity stunts I think I have ever seen happened just about

a month ago. Maybe you saw it. The Pillsbury's Flour Company was celebrating its seventy-fifth anniversary of its organization. The publicity men for that organization went through Ayres' Directory and picked out all of the newspapers in the United States, both dailies and weeklies, particularly weeklies, that were also founded in that same year, seventy-five years ago, and then they sent birthday greetings to those papers. They made up a list of those papers and got up a citation or a certificate of some sort, and then went a little farther than that; they had the local baker present the newspaper with a birthday cake.

Well, looking through some of the country weeklies coming to my desk, I was very interested to see how many country weeklies used that story. Almost without exception, they used that story, and it landed on page one.

We're seeing that same sort of thing, that willingness to be cited for something in the current Treasury War Bond drives. I've been running an honor roll of country weekly publishers who had printed in their papers a large amount of sponsors' advertising, and it's been interesting to see how eager these country editors are to get their names in that honor roll.

Now, I pass that suggestion to you. I don't know whether it's adaptable. I believe, as I recall, you have some sort of citation for work on the aid to traffic safety by newspapers. It seems to me that there's an annual award of that sort.

Panel Discussion

Participants:

Discussion Leader—NORMAN F. GALLMAN, Dir. of Tax Publicity, Dept. of Tax and Finance, Albany, N. Y.
BRUCE CRAWFORD, Dir., Highway Safety Bureau, Dept. of Public Safety, Charleston, W. Va.
ALBERT E. LA ROSA, Dir., Highway Safety Div., Massachusetts Safety Council, Inc., Boston.
MALCOLM L. WILKINS, Dir. of Safety, Motor Vehicle Dept., Concord, N. H.
JAMES F. BULGER, Vice-Pres. in charge of Public Relations, Chicago Motor Club, Chicago, Ill.

MR. CRAWFORD: I have a few notes that I've made upon a questionnaire that I sent out to weekly newspapers of West Vir-

ginia to find out what they wanted in the way of safety copy. I wanted to get the opinions of the editors up to this time, their attitude toward copy. The questionnaire asked, "How often could you use suitable releases such as features, state news stories, news releases with local angle, also what length can you use." Also, "Could you use a short monthly release on traffic accidents in the state with analyses of interpretation of causes."

My analysis isn't complete because they're not all in yet, but I want to tell you what these add up to. All the editors replying to the questionnaire said they could use more of our traffic safety copy if it had a local angle. Many of them wanted stories of statewide interest occasionally. The average maximum length they preferred was about a third of a column. I believe weeklies will give you more column space than the dailies even though the weekly editor pencils and cuts your copy. The dailies have to serve a more varied diet of national and international news. When a weekly does fill up on a lot of material other than local, it's because it does not have enough of good local copy.

"Interest governs the length," said one editor replying. Another replied that, "Releases from various departments are so lengthy that weekly papers do not have space for them." Another answered, "I'm not much for straight statistical releases and figures. Readers don't go for them either."

That brings up the matter of humanizing your stories and dramatizing these figures in terms of human need. One reply was particularly interesting. On the back of the questionnaire the editor typed these comments:

"I am going into detail for the simple reason that every time waste paper is collected I have a truckload of releases that are not even considered."

"Features and state news stories can be used in the State Gazette regularly if they are interesting and not too long. Good pictures of interest are usable any time. Matted copy is not preferred for the reason it appears identical in all papers. Any editor can scratch out a line of unmatted copy, rephrase another, reword the heading, and thus give his readers an apparently different story from that which other papers in the

same territory are using, yet the same information goes across and they read it twice.

"Among the weekly papers there is, under present conditions, a lot of trouble getting up composition because of lack of operators, and in many cases mats would be preferred for that reason, whereas the editor would rather have copy if he could get it set.

"It is a good idea to contact the editors for individual requirements on releases and furnish them with either mats or proofs as they prefer."

That editor, according to my experience, states the case for the average weekly newspaper in present circumstances. As he says, it is sometimes well to query editors on their needs. Still, if you have been sending out releases to a list of papers over a long period of time, you doubtless have found out which editors prefer what kind of material and why.

Mr. Watson mentioned praising the country editor, the weekly editor. I think that's very important. The weekly is, you might say, intimate and folksy. Every item is read by dad, mom, and the children, if they're old enough to read. The paper sticks around the house for a week; sometimes it's borrowed by the neighbor if he happens to be of a different political faith from that of the editor and is too proud to subscribe. So in the end the weekly paper may be said to average a readership of about ten persons for each copy, which is an unexcelled medium for traffic safety education.

The weekly editor is a very busy man. Sometimes he's business manager, shop foreman and machinist. An editor in that position naturally welcomes suggested editorials occasionally.

Because of all these advantages of the weekly newspaper, we should merit the use of its columns by meeting the editor's requirements. We should not only boil our copy down and brighten it up, but make it relate more often to local safety needs, conferences, drives, contests, and improvements.

MR. LA ROSEE: I have one question here that's bothered me for sometime, and that's in relation to recognized books on safety. Do editors like to take citations or excerpts from those books, and do they have a value and are they used generally?

MR. WATSON: I'd say, "Yes." I edit

a paper, and one of the things I'm up against are the little holes down at the bottom of the column. If you can send out some good, snappy quotations from books on traffic safety, even if they're only three or four lines, I think you can get those in hundreds of papers.

MR. LA ROSEE: Very frequently all of us have experienced this particular difficulty in continual stressing of a particular problem. For instance, in Boston we have a pedestrian problem, and getting that problem before the eyes of the people constantly is something that newspapers don't seem to encourage. They frequently tell us, "That's old stuff, why harp on that?" But we know that there is value in harping. How can we get around that?

MR. WATSON: One answer is to get a slogan, and repeat it, or some jingles or something of that sort.

MR. BULGER: I think the answer there is primarily to get a new pitch on it; it's simply taking this old stuff and putting it in a new light. In our publicity work we do that continuously.

Maybe you could send out a story to the effect that the majority of the accidents occurring in Boston happen to men over fifty-five years of age, and maybe you can take a particular example of an accident that happened last week and maybe give one paper a resume of how that accident occurred. The records of your coroner and your police department show these various accidents that occur each week, and maybe you could call it, "The accident of the week."

It's just a question of devoting enough time and a little thought to the matter, but give the thing a different slant.

MR. HICKERSON: I'd like to comment on that. Paul Jones was reading yesterday at a luncheon that safety is a matter of preaching, and after so much preaching, the people you're trying to reach become immune to what you're saying. So the idea there is a new approach, and he suggested a lighter touch, and also tied in with actual records. Color it generally but localize it; as Mr. Kesler mentioned, reach the man next door.

MR. WATSON: You all read these columns in the papers that invite contributions from readers. There are more and more of these personal columns going in country

weeklies. I have seen in a number of papers where somebody will write a little jingle, and that inspires somebody to write a similar jingle on a similar thing. You could supply some of these small-town columnists with a little jingle about the jaywalker, or whatever your particular problem is. That is one of the most effective ways—that little human interest attack.

MR. LA ROSEE: You mean for the reader to give the last line to a given four or five lines?

MR. WATSON: Yes. One of the most popular features I have had in my paper is a "Sweet Ad-a-line," contest. That's a bum pun "Ad-a-line," but I had printed a little verse, and somebody else would add a verse and somebody else would add a verse to that, and the thing goes on indefinitely.

MR. KING: I think one of the factors that has held back the safety interest, is the fact that there is too much preaching in it.

I think the dominant feature in safety should be showmanship. You can take a package of five-cent powder and put it in a five-dollar package and sell it for five dollars. I think the story of safety needs to be dramatized and put in a showy package and sold on that basis rather than preached, and the same applies in handling this gentleman's problem in your presentation of the news. You've got to get your stories and your features in a showmanship style, and maybe you have to meet the situation or maybe you have to create it.

THE CHAIRMAN: I can vouch for the fact that this business of verse and jingles has continuity and feeds itself. One time one of the boys in one of the papers I was on made the mistake of writing a story in verse, and we were plagued with verse for the next six months, most of which we had to print. It seems there is a little of the potential poet in everybody.

On the matter of short items that you mentioned. We have sent out safety fillers off and on for a number of years, three and four-line fillers. Dailies and weeklies both have gone for that in a really big way, both as filler copy, and some run it as a column of shorts.

MR. JONES: On that new slant angle, the weather and seasons are always reliable. Winter always brings added hazards. The weather always makes news, and if you tie

traffic safety up with the weather, that works very well with the papers.

MR. WILKINS: Our state is very small, but we do have thirty-nine weeklies, and it so happens that the commissioner under whom I grew up was a former newspaperman. He had definite ideas in his mind and they've stuck.

We set up a form by which we reported to the newspapers, both the daily and the weekly, and the radio as well. The whole story, the whole dope, if you please, revocations, and the reasons for revocations; suspensions, and the fatalities, comparing them with a year ago, comparing them with last week, and then a brief story about each of the fatalities that occurred during the week previous, giving the number of persons injured fourteen years of age and under, and the number injured over fifteen years of age, and then, adults.

We further gave them a breakdown of the primary causes, and then classified as to type, collisions with pedestrians, and so forth. We gave the rest of the information on location, time of day, wet conditions, the driver, whether he's urban, rural, or out-of-state, the vehicles involved. In other words, we gave them a lot of this statistical data which has been condemned, more or less, by the group this morning, but we found that it has considerable value.

Surprisingly often, we find these people referring to previous copy. It might be from the year before or it might have been the week before or the month before, and they pick out some particular thing, and they'll give us a new slant, something that we hadn't thought of.

Then we also give them an editorial on what appears to us to be the important thing that we want to stress, either as a result of last week's experience or what we might judge might be the experience of the state for the next week; for instance, leaves in autumn and icy conditions later on, and so forth.

MR. LA ROSEE: That report you're talking about goes out weekly?

MR. WILKINS: Yes.

MR. LA ROSEE: That's similar to many other types of reports which are sent out by the motor vehicle administrations in various states, including Massachusetts, except that

you go into a little more detail on it on the individual accidents?

MR. WILKINS: Yes, we keep it at the local level.

MR. LA ROSEE: What is your reader interest in that? Have you ever found out?

MR. WILKINS: We've had comments from the public from time to time; criticism of bad road conditions, not sanding roads properly. If that's brought out in the course of an explanation of an accident, and the public reaction indicates that people are reading these things, that is getting to first base, I think.

MR. LA ROSEE: How much space do you get in your weeklies on those?

MR. WILKINS: Not over five inches.

As I pointed out, the reason we go into this detail each month is because there has been an interest on the part of these country editors in comparing the effects of accidents this week as against the week previous. Surprisingly often, they come to us and want to know what is happening and why these things are happening. In that way we feel that the interest is there, and we believe we're getting the story across to the public.

MR. LA ROSEE: Apparently, your reader interest is different from that in Massachusetts except perhaps, in the extremely rural suburbs. We're not getting any inquiries; it's cut and dried and requires no further comment. I don't know of any case where a story we sent out to weeklies along those lines on statistics has really created enough interest for them to send an inquiry in on it.

MR. VIBBERTS: My chief problem is how to get material to the papers on how to cut accidents. The papers are very willing to spread the fatalities all over the sheet, but they're not too willing to take the material which might have prevented that particular accident.

I have been sending out a weekly release. I have 58 motor clubs in the state affiliated with our state association, and I send each of them each week a weekly release which has something to do with the driver, the car, weather conditions, or to specific hazards that may appear. While we have had fairly good acceptance of that from both daily and weekly papers, there are still a lot of them who see no particular need

for it. Yet, if an accident which results in a fatality should occur in any one of those localities that week, and lots of times one occurs which ties in with the press release, they won't use the press release, but they'll smear the accident all over the paper. I don't know what to do to get them to accept the material.

MR. BULGER: There's one answer to that, and that is if you'll take your material and instead of writing a story about it, get a cartoonist to draw a diagram or cartoon on that subject, you'll get immediate acceptance, and probably every paper in your territory will be interested. Make it either a one-column or a two-column cartoon and have it matted or sent out with electrotypes. The best way is to query your papers and find out if they can handle mats or prefer electrotypes.

MR. JONES: I can confirm that. I would say that practically every weekly in the State of Illinois uses mats.

THE CHAIRMAN: I've found that the weeklies will use maps, diagrams, charts, and pictures very readily, and sometimes you can run a little story under a picture.

MR. CRAWFORD: One way to get copy in a newspaper is through some local man, a safety director or safety promoter or state trooper who knows the editor personally. That might sound like taking advantage of the editor, but the copy, then, can be made to appear as coming from that particular citizen. Quote him as saying it: "Avoid these hazards as follows."

MR. LA ROSEE: I made a little study with a few editors of weeklies, and I got some interesting reaction. For instance, one editor tells me to humanize the story and leave out the gruesome details; another one says to make it interesting, effective, make it gory. Still another one says: "Tell facts."

I think that part of it is all right, but in all cases the summary is that the editors want facts and will explore any matter which smells phony. That was brought up in the previous discussion on dailies; if there is any scent to it at all, they don't want it.

I talked to a priest, Father Sexton, who is the Editor of the "Pilot," the diocesan organ for the archdiocese of Boston, and he stated very emphatically that, "Any copy should be based on a common sense ap-

proach to the general public. It should be submitted to a 'key man' on the press staff and certainly should not be overdone. Plain facts to express the desired feature are desirable. They should be constructive and of a definite value from a public service point of view."

MR. HICKERSON: I'd like to ask Mr. Watson two questions. First, what size should these mats be held to? Would you say if you could crowd it into one column, it would be better than two, and not to make the mat ever more than two?

MR. WATSON: Yes. We used to syndicate a series of articles, all under the same title but each one complete in itself. We have discovered when we put those out in series form, they sell better than two to a column, and the two to a column sell better than a full column. Our experience has been the same on cartoons. I think our cartoons in the two-column size sell better than the three-column size. Some of the most successful pictorial features are the little one-column cartoons.

MR. HICKERSON: Another thing, when should this stuff be mailed to the weekly editor? Would you say the previous Saturday?

MR. WATSON: Yes.

MR. HICKERSON: What would you say the latest would be? Supposing you sent the man the copy late, and he filled the space up with ads, and you know darned well your copy is not going to be used;

if you get it there early, it has a better chance, don't you think?

MR. WATSON: Yes, most country editors go to press on Thursday or Friday, but it's better to get it in his hands on Monday, or not later than Tuesday.

Mr. LA ROSEE: Don't most of the editors require it be in by Tuesday noon? They set a deadline at Tuesday noon, but if anything comes in before the rolls are made up, why, they'll take it.

MR. CRAWFORD: If it's general copy, I think they'd rather have it Friday or Saturday to give the linotype operator something to do just as soon as he's through for that week. Then as you get near their deadline, they want fresher, more newsy copy.

THE CHAIRMAN: Getting back to localizing stories, I found it's much more important to try to localize stories for the weeklies than it is for the dailies. One way in which we have done that with pretty good success is to get out a suggested release to be issued in the name of the sheriff or the chief of police or somebody of that sort, and shoot it around to them. Often it will get more attention coming from the county seat than it will coming from the state capital.

That's true, to some extent, of dailies too; the local officials have cooperated with us very well on it. We've done it, particularly, on New Years Eve's drives, on that sort of thing.

WEDNESDAY MORNING SESSION

October 4, 1944

Joint Session—Motor Vehicle Administrators, Driver Licensing and Accident Records Groups

Presiding: T. ELMER TRANSEAU, Dir., Highway Safety Bureau, Dept. of Revenue, Harrisburg, Pa.

Utilizing Accident Records More Effectively in Driver Licensing Procedures

A Panel Discussion

Discussion Subjects: Using Accident Records in (1) Examining Procedures; (2) Clinical Treatment; (3) Suspensions and Revocations; (4) Supporting Licensing Legislation.

Participants:

Discussion Leader—T. ELMER TRANSEAU.
 SGT. JOSEPH A. CHILDS, Asst. Commanding Officer, Safety Traffic & Operators License Div., Michigan State Police, East Lansing, Mich.
 CAPT. JOHN B. DRAPER, Chief, Driver License Div., Department of Public Safety, Austin, Texas.
 T. A. MARSHALL, Chief Examiner, Div. of Public Safety, Indianapolis, Ind.
 L. G. TRIPLETT, Supvr., Operators' License, Dept. of Revenue, Frankfort, Ky.

CHAIRMAN TRANSEAU: The subject of the use of accident records is an interesting one to those who have used accident records in the past extensively. The first topic covers examining procedures.

CAPTAIN DRAPER: I think we have been negligent in using our accident records in setting up examining procedures.

Do we know exactly what is happening so far as the examiners and people in charge of examinations are concerned? Are you giving any thought to accident records, where accidents are happening, who is involved, who are the drivers and so on? I know we are.

When we set up our examining procedure, and we do have a good examination, we give the same type of examination to everyone that takes it. Anyone who applies, if he wants an operator's license, must take the same type of examination regardless of age, sex, driving experience or race.

I wonder if we are right on it? It

might be that a person of a certain age group or certain occupation group should take more of a written test than boys and girls in high school, who probably had some training. It might be that our large Mexican population should be given more of a road test.

After all, a driving test is an educational program; whether we talk along that line or not, it is educational. We give a Negro, if he comes into the office for a chauffeur's license, exactly the same test that we would give a taxi cab driver, or a man eighteen or twenty years old.

I think we are wrong, but how are we going to make the changes? In the first place, we have got to find out what our accident experience is, and I doubt that we are going in to our accident records as far as we should to get the necessary information. I see a lot of study that we can do.

I am supervisor of the Accident Section as well as the Drivers' License Section and I spend quite a lot of time in both sections. I feel that I can sense a definite connection between the two departments that I didn't know until I was transferred into this type of work.

I don't think there are very many states that have made a study at all of their accident records in setting up their driver's license procedure. I think we have got to do it. It is going to take us some time to do it and we are going to have to get better reports from our investigating officers first.

Then we are going to have to go to our examiners and sell them on the idea

that there is a possibility in those records and teach them how to use them. Now when an examiner is giving an examination, there are certain things that he can say and do that will create a favorable impression upon the applicant.

Does that examiner talk the same way to all applicants regardless of age, sex, driving experience, etc.? We do practically the same way. We aren't training those examiners to take those racial groups or age groups or driving groups with various driving experiences and talk differently to them, and try to sell them on our program. It seems to me that we have got to do that, and until we do that I think we are way behind what we really should be doing.

MR. MARSHALL: Up until we brought out our manual last year, we had never used accident records. In fact, our examiners didn't have any idea how many accidents happened in the state of Indiana, or what were the causes or the violations involved in accidents, so when we brought out the new manual we did make some study of accident reports. We find that as examiners we must do certain definite things.

For instance, in a driving test, we find that an applicant over the age of sixty or sixty-five or seventy years will get in his car and look around to see if anyone is coming and he will proceed to start his car and pull out into the traffic without ever looking back again.

Now, after the driving test is completed we could say to the applicant that he did a very poor job in leaving his parking space; that he pulled into the line of traffic without looking back and, of course, he would come back with the argument that he had never been in an accident and he had been driving for twenty-five, thirty, or thirty-five years.

Then we can pull out our manual and say, "Well, you evidently have been very fortunate, because five per cent of all the accidents were caused, over the age of sixty, by leaving a parking position improperly." You then have something to talk to him about; something to show him.

The same thing applies to a younger applicant. You get in his car and he starts out. He looks back and he sees a

car coming. He will say, "I can beat that guy." So he comes out of the parking position into the line of traffic. Then we use that same thing on him.

We also have those who drive down the wrong side of the road or the wrong side of the street. We mention that when we get back. They probably will say, "I have been driving for thirty years and I have never had an accident." They evidently have been fortunate because twelve per cent of all the accidents are caused by driving down the wrong side of the road, so we feel we have something to talk about there. The boys are using it to a very good advantage in our examinations.

I feel that our examination questions should be based on the cause of accidents but we use the same procedure in Indiana that they do in Texas. We give a taxi or semi-truck driver the same examination, the same questions. I think it is wrong and should be corrected. Give them questions in the different age groups and for different types. I think women should be given different questions and coached differently on the driving tests.

Perhaps we are all wrong unless we change our examinations to conform with past accident experience. We all know we can't carry on a good safety program unless we can get our past accident experience, and if it is worth anything, as no doubt it is, we ought to make the changes so that we could give different types of examinations.

Here is a group of boys and girls who are speeders. Why can't we stress a lower speed to that group and see what it will do? Then there are people who are over-age. We can talk to them about signals and right turns and turns from proper lanes, and so on.

CHAIRMAN TRANSEAU: Just to show this man knows what he is talking about, Mr. Marshall has figures which show in the age group under twenty, seven per cent of their troubles are from excessive speed; twenty to sixty, three per cent; and over sixty, one per cent. That indicates the older you get the slower you are.

I can see one danger that I guess everyone can see. You would have to use a great deal of diplomacy in initiating any

variation in your examination. Otherwise, someone who failed might say he had been discriminated against. In our state in normal times, one applicant out of three fails on the first attempt. Some of those people, if you had such a system as you describe, would undoubtedly say they weren't treated right.

How can we get around that? Can we make it a matter of departmental regulation, with the examiners told to bear down a bit on that part of the examination that, for instance, affects the taxi driver or the commercial driver; or, would you make it open that there was a difference in the examination?

CAPTAIN DRAPER: I would make it open. The first thing you have to do is retrain your examiners if you are going to adopt this thing. It wouldn't take long to do it. You have got to have your examinations uniform and if you are going to give different types of examinations to those various groups you have to start at the same time and train those examiners so everyone will receive the same type of examination in that age group.

I wouldn't try to hide anything about it at all. I would say, "You are in this age group. You have had this driving experience. You are a white male and here is the type of examination you take."

HOWARD P. LEATHAM (Director, Drivers' License Division, Utah): We vary our road tests slightly for what we call our Class "C" license. That is a common carrier license. We make it a little longer and take in a few more problems such as crossing railroad tracks and such, so we do have a variety of tests, at least to that extent.

CAPTAIN DRAPER: I think that a lot of states are doing that, but if a man comes in Class "C," regardless of driving experience or race, do you give him the same test?

MR. LEATHAM: Yes.

CAPTAIN DRAPER: We have three different examinations. Operators and chauffeurs, passenger cars, trucks and haulers of passengers; they all take a little different type of examination. I don't think that is enough.

MR. TRIPLET: When a man comes

in for a truck driver's license do you require him to take the examination in a truck or do you permit him to take the examination in a regular passenger car?

CAPTAIN DRAPER: We permit him to take the examination in any type of vehicle he comes in because under our law if a passenger car is used, it can be a commercial motor vehicle as well as a passenger car. It depends upon what he is hauling; not upon the type of vehicle, but what he is using the vehicle for.

We base our examination on the fact that if he wants a license to drive a truck we ask him questions pertaining to clearance, lights, height, length, width, weight, etc., that we wouldn't ask a taxi driver. Then we take him on a little longer test route. There is more stress on his ability to drive.

Another thing, if his vision doesn't quite come up to the standard, we issue a restricted license. This would apply equally to a taxi driver or a truck driver that had the same vision.

MR. HARDEMAN (Director, Division of Motor Vehicles, South Carolina): I would like to ask Captain Draper if he has explored this idea far enough to determine how many different types of examinations would be involved.

CAPTAIN DRAPER: No.

CHAIRMAN TRANSEAU: In Pennsylvania the union of drivers, teamsters, chauffeurs and what not attempted to put a bill through the legislature which would have given us a sure enough commercial operators' license, but, as is generally known, the vested interests killed the bill because they believed it was merely an attempt to enumerate a commercial operator's status in the state.

I don't think it was that at all. I think it was really sincere because, after all, it is rather ridiculous to take a fellow who is going to drive a truck and let him try out in a Ford coupe. Some day we will get away from that, I am sure.

CAPTAIN DRAPER: At one time it was tried out in Texas, but we changed to the present system. You are not licensing a man to drive any certain vehicle. What if he makes an application to drive a Mack and instead of doing that is driving a Chevrolet? Or he comes out driv-

ing a Ford truck and you give him the test. Then he goes back to the plant and starts driving a Mack.

There is just as much difference between driving a Ford truck and a Mack truck as there is in driving a passenger car and a Ford truck, so why not license a man to drive any kind of vehicle? I don't think you can license him to drive just a particular kind of vehicle.

SERGEANT CHILDS: I think one of the things we haven't discussed is getting down to the purpose of a driver's examination. There are really two things. One is to determine the experience and competency insofar as it is reasonably possible for the operator to drive the motor vehicle safely. However, in addition to that, driver examining offers a wonderful opportunity for education.

I think that practically every state doing any driving examining has what is termed a driver's manual; something available to the applicant before he applies for his license. I think what is in that driver's manual should be based a good deal on accident records. For instance, we have so many accidents, and we know those accidents are not caused by defective vehicles to a great extent. We know that they are not caused to a great extent by defective roads. We do know that they are caused by unlawful acts or unsafe acts on the part of drivers and pedestrians; that the unlawful acts or unsafe practices of drivers result in these accidents. This could be incorporated into a driver's manual.

Too many times I feel that the driver's manual is an explanation of the laws of the state without any adequate explanation as to why those laws must be obeyed by the driving public.

If we could get the idea across in the manual that accidents are caused by driver misconduct and pedestrian misconduct rather than by bad roads and bad cars in some way or another, I think we could also get across the idea that after all a driver's license is a privilege. It is a privilege granted by the state to some person found to be competent to operate a vehicle; and, being a privilege, it is something that can be taken away in the

form of suspension and revocation by the state.

To me the primary function of a driver's license is getting that idea across in an educational approach. You can back up that educational approach by forming your questions along the lines of those things which cause accidents as shown by accident records.

In other words, the actual examination is the information behind the educational program that makes the people read the driver's manual. I think it would be well for anyone in thinking of a manual and driving examination questions to study pretty carefully accident records.

CAPTAIN DRAPER: Your thought is that if you could place in the applicant's mind at the time he makes the application for a license the fact that he falls in a certain age and racial group and that that group is responsible for this type of accident, and this percentage of accidents, that you would like to see that done?

SERGEANT CHILDS: I would like to see more in that manual than just a bare statement of the law. To me, explaining the law to somebody doesn't mean much unless you explain why we have such a law. In other words, you can spend all day talking about speed or stop signs or signals or anything else, but unless you get across the idea that that signal or that sign or that law is not there so the policeman can go out and make an arrest, but so this individual himself will be protected, so the other people will be protected, so that the whole stream of traffic can move more conveniently, including the individual that you are talking to, you are not accomplishing much.

If you get the idea across as to why we have that law, that is one thing. It is another thing, however, to get the idea across as to what happens when you violate that law both in terms of accidents and the frequency of occurrence.

CHAIRMAN TRANSEAU: Our drivers' manual does stress the things you mention. We pick out the most frequent cause of accidents and stress that. In fact, it has always seemed to me that a learner or a young driver should have the best possible instruction you can give along certain lines, such as what are the

most frequent causes of accidents, which the average man certainly doesn't know.

MR. TRIPLETT: Driver licensing from its very beginning should be based on the accident records of the drivers in the community. For example, in Kentucky, we may find that certain causes of accidents will be more prominent due to the mountainous country and the condition of the roads.

It is quite different in Kentucky as compared with a state like Indiana or Illinois where roads are level and straight. For that reason in our state, in giving the examinations, we should stress, perhaps the causes of accidents in that locality, using our accident records as a basis.

We should be able to say to the applicant, "Now you are eighteen years of age. In Kentucky, the accident record for applicants for drivers' licenses of your age has been this cause and this cause and this cause more than anything else." Then we should stress the importance of driving to avoid those accidents. In this particular case, I think Mr. Marshall said that speed was the greatest factor contributing to accidents in the state of Indiana for that age group. That principle should be followed on down the line.

In other words, the whole drivers' licensing procedure is an educational program. Now, in order to properly educate our drivers we must go back and study the history of the drivers over a period of time and obtain information which will enable us to educate these applicants that come in for drivers' tests.

Then, after we have obtained that information, we should educate our examiners in such a way that they may pass that information on to the applicants. Then at the time of taking the test the examiners should stress the importance of the applicant's driving in such a way that their privilege will not have to be taken away from them.

We should stress, also, the fact that the driving privilege is entirely left up to them. If they will drive in such a manner as to prevent accidents or prevent their being involved in accidents or prevent their being arrested for traffic violations they need have no fear of losing that privilege.

The whole thing is to try to tie all this in on the basis of the accident record experience.

For example, in certain communities, we

may find that accidents are more prominent during the hours from five to seven, and that they are occurring in a certain restricted area in that community.

Now, if you are giving a test to a person that lives in that community, and who expects to drive most of the time in that community, there is an opportunity to pass the information on to the applicant when he first begins to drive on the highways. You have forewarned him and that may prevent his becoming involved because of ignorance.

CAPTAIN DRAPER: Bear in mind, however, that you are still giving him a license to drive anywhere in the United States.

MR. MARSHALL: In Indiana we have eighteen districts. I have thought several times it would be very good if we could tabulate accident reports in each district.

We tried out a sample set of questions some time ago which included one asking how many people were killed in traffic accidents in the state of Indiana and how many in the United States. There were none, or very few, of the applicants that came anywhere near the correct number. We didn't expect them to, but it did give us a chance to drive home to them that there were so many killed.

If we could take a district in our own state and the examiner could say to the applicant that there were so many killed in that district, in his own district, during the first six months of 1944, I believe he would drive home to the applicant more emphatically this idea rather than saying there were so many killed in the United States last year. The United States is a big country.

Insurance men tell me that if you really want to sell insurance, go into a neighborhood where a farmer and his wife have been killed or the barn burned down. You can really sell insurance then because the people are thinking that there is something they need.

If our examiners, likewise, could say that right there in the district there were so many people killed the first six months of 1944, I believe it would drive it closer home than to say something about what happened over in Pennsylvania.

CHAIRMAN TRANSEAU: By the same token, if we had Sergeant Childs' idea that the information ought to be in the

manual, then it would be a fair question to ask them the most frequent cause of accidents on the open road or in cities in our state.

If that information were available, perhaps you could get it in their minds.

One fatal accident in six is caused by the vehicle leaving the road. Some are on curves, some on straight highways. Something like that might make an impression on the young driver, particularly if he were taught that the things he had to guard against included so much speed that he might run off the road on curves. That is a primary thing in many states.

SERGEANT CHILDS: It so happens that in Michigan I am in the same position that Captain Draper is. I have something to do with accident records and have something to do with driver licensing at the same time, but whenever I pick up a summary of accident records I start studying age groups.

When I do that the question always pops into my mind as to how many people in this age group we have driving in Michigan anyway? I think it is the duty of the accident records people to make available certain records for the license department, but how about the licensing department giving to the accident records people something about the number of people licensed in a particular age group so the accident records can be better distributed?

MR. ROSENWALD (Traffic Engineer, Minnesota Dept. of Highways): I have been wondering if we have been entirely honest with the driver. I looked at a booklet that has recently been prepared for driver training and as a teacher's guide. I opened it up in the middle and the first thing that struck me was, "What to Do When Making a Turn."

It seems from this book the first thing you must do is signal; then you must ascertain whether you can do so safely; then determine whether you are in the proper lane. After all that is done then you can go ahead and turn. You have given your signal in the first place, so that is out of the way. In other words, if you give the signal properly all the rest is secondary to that.

I think we should come right out and say that the major cause of accidents is carelessness. If a driver is not careless,

speed is not a factor. It is only a factor when he is careless.

I can't quite agree on the importance of examination of drivers. It seems to me that we sometimes leave the impression that the driver licensing system exists for one sole purpose—that of examining somebody.

I don't think we are entirely honest with the driver when we are failing to point out to him that the fundamental thing he has to guard against is carelessness.

CHAIRMAN TRANSEAU: Mr. Rosenwald, wouldn't proper driving training preliminary to examination virtually answer everything you brought out?

MR. ROSENWALD: That is right.

SERGEANT CHILDS: I think that is true, but I feel we ought to go farther than that—carelessness in what? We have to tie it down more closely, but just "carelessness" is a little intangible.

Most drivers are more careful at intersections than between intersections, but in Michigan our fatal accidents are between intersections. We need to get that point across to drivers.

MR. ROSENWALD: There are more miles between intersections.

CHAIRMAN TRANSEAU: I hope to live to see the day when our drivers' examination will have this question prominently displayed near the beginning, "What preliminary instruction have you had that you offer yourself as a candidate for a driver's license?" Until we get that, we are going to have a lot of disagreements about a lot of these things.

The next subject has to do with "Clinical Treatment in Relation to Accident Records."

Up until a comparatively few years ago I regarded the so-called clinics as something hardly worth bothering with. Incidentally that is a misnomer. I believe clinics have something to do with bedside treatment of patients. That is according to good dictionaries. Nevertheless, the word has grown into use in this field to indicate some sort of hurdle that you ask a man to jump in order to see whether or not he is likely to be a good motor vehicle operator.

In our state, a man might be driving twenty, twenty-five, thirty, or thirty-five years and never have an accident. We are very suspicious of a man with that length of experience who has two or three minor

accidents. We feel that this man is a good driver, for he has proved it over the last thirty years, but is it possible that because of his age or some other condition he has slipped to the point, either mentally, physically, or what have you, to the point where he is beginning to have accidents? Why is it he suddenly has these accidents?

Now our dream is that in Pennsylvania we can reach the point some day where we can say to a man like that, "It is not very far from your home to the nearest clinic. We are going to ask you to go over there some day soon and see for your own benefit as well as the other users of the roadway whether or not something is wrong with your driving."

"Sure, we understand you have been driving all these years. Your record is very good. You have a right to be proud of it, but something may be wrong. Let us find out."

The biggest thing we find in the operation of the clinic is that even the professional drivers appear to be afraid to take the examinations; presumably in the thought they may lose their licenses. Yet our experience doesn't show that at all.

What we discover is that at the most, except in very rare cases, a man has developed some deficiency, or he has a deficiency that he never has known about, that somewhat limits his driving ability. Our argument then is that we can help him to drive better if he will do what the examiner tells him to do.

For instance, one of the most common defects that we run into—and it often happens with professional drivers—is a man with one good eye—possible 20/20—but the other eye is weak. He doesn't know it. Possibly he isn't the type that does a lot of driving or possibly he drives with the good eye doing the work that two should do.

That one eye condition may result in his developing some practices on the road that are not good. For instance, we have shown that there is a tendency not to drive in a straight line where there is an imbalance in the two eyes. There is a tendency to angle down the road until the driver notices he is approaching the edge of the road. That is particularly true with high-crowned roads.

Another very good illustration is so-

called tunnel vision which is a limitation of the peripheral area that you can't see without looking directly. I can see Sergeant Childs without looking at him. My peripheral vision is normal. However, certain people can't see much more than what is directly in front of them.

The remedy is simplicity itself. Naturally there is no way of curing it but that driver can be told to keep moving his head from side to side in an effort to overcome the particular deficiency, particularly in hazardous locations.

Shortly after the outbreak of the war it became apparent that too many men, as far as the Army and Navy were concerned, were being forced to drive. Usually all they were asked was, "Can you drive an automobile?" or, "Do you think you could drive a truck?"

For instance, the Fourth Naval District, which covers Pennsylvania, has, I believe, some eight or nine thousand drivers in that area.

There happened to be one young fellow in their service—a lieutenant at that time and since a lieutenant commander—who had worked with us and suggested that if we would make this equipment available at different points in that district they would try to get all their drivers to take these tests.

To make a long story short, over a period of time we did, with the aid of the state police, set up in eight different points and finally were fortunate enough to get the commanding Admiral to take the test. He is not a young man but he passed the test. He said, "All right, if I can pass these tests every driver in this district is going to pass or he won't drive."

In addition to the tests I mentioned they tested color blindness, depth perception, and various tests you would find of that type. With equipment we had borrowed or built we were able to do a good job of testing.

We finally got to the point where a considerable part of the Army establishments in that section and practically all of the Fourth Naval District wouldn't have a driver unless he could pass those tests.

We are talking about accident records in relation to these hurdles that they ask these men to jump. In connection with the tests there is an opportunity for an ex-

aminer who knows his business and has been properly instructed to explain to a driver, for instance, what it means when he doesn't have proper depth perception.

For instance, in reviewing our accidents, when we have hearings we frequently run into the type of accident where the man has made a bad pass. What did he think when he ran into something which he thought was half a mile away when it was only a quarter of a mile away?

Sometimes we can establish poor depth perception on his part. It might be poor judgment, but if we can get that man in a clinic we can say, "All right, you don't show up on the depth perception test. Your eyesight is not any too good anyway."

Then you can show him why and explain to him that he had better be careful in the future in making his passes, and be sure how far away that approaching vehicle is. If we can do that, then we think we have got something.

In other words, we try to sell them the idea all through these clinical tests that we are not trying to take anybody's license away; we are not trying to limit anybody's license, unless it is absolutely necessary and essential for the benefit of all the other users of the highway. All we want to do is help the driver find for himself what condition he is in physically, mentally and as a driver.

We say, "If you do have any hidden defects that may be unknown to you, we want to show you what it is and suggest how you can offset or overcome that defect."

There can be no question with that one simple illustration I have given that accident records tie directly into this type of work. You may explain to a man who has a very poor ability to resist glare under nighttime conditions that he ought to be very careful at night or perhaps shun night driving at all unless it is absolutely essential and maybe not then.

We have had people say that they took the glare test because they thought something was wrong with their eyes; that they never could see well at night. They would say they were going to give up driving at night for they didn't have to drive at night.

I view this particular clinical work we are talking about as educational. In fact, all our work is educational. Suspensions

and revocations shouldn't be punitive. If we would hold that in front of ourselves, this work would appeal to us as entirely educational because where there is understanding, there is no need for punitive measures.

The point was made here before this morning of not so much "don't" but "don't because." That is the way you have to do with children and that is the way you have to do with motorists.

Years ago I was in a part of this work that had to do with signals and markings. It became axiomatic that if you put a sign up that said, "Slow" the motorist would say that he didn't care. You want him to go slow. Why? If you say, "Slow, pedestrians in roadway," he will probably slow down but if you just say, "Slow" he probably won't do it.

We must tell him why these things should be done. Don't say, "Don't do this," but say, "Don't do this because all our experience shows it is a bad thing to do."

SERGEANT CHILDS: We have to teach people to do a dangerous thing in the safest way possible. I don't like negative approaches in educating drivers with "don't's." You tell a school child crossing the street that it is dangerous to cross the street; therefore, you teach him to cross the street in the safest possible way. Then you may accomplish something.

You don't say to the child, "Don't cross the street," because sooner or later he will have to cross the street. The same way with driving a car. It is dangerous driving a car at night. The experience is bad but you can't say, "Don't drive at night." We can't say that, unless he is a very bad driver.

CHAIRMAN TRANSEAU: Results with these clinics have been good. The Navy is very reluctant that any figures be quoted but I asked sometime ago what improvement they got when they took this rather radical step. I was told I could say their accident experience showed about a fifty per cent reduction after they insisted that their men go through these tests.

SERGEANT CHILDS: Inasmuch as you are an examiner of civilians you couldn't be as strict as the Navy. As long as the clinic is used for the purpose of aiding people to become better drivers rather than aiming at

the specific purpose of eliminating drivers, I think it is a good thing.

There might be a danger of being too enthusiastic about a clinic and use it as a process of revoking licenses. There are a lot of drivers I know who are physically handicapped to some degree but they can drive safely if there is no limitation of mental abilities to compensate for that physical limitation.

CAPTAIN DRAPER: You don't try to force a man to go through the clinic even though he has a bad record?

CHAIRMAN TRANSEAU: We can. Under our law the secretary has a right to satisfy himself about the physical and mental conditions of any operator. When a hearing examiner has made a thorough examination of the facts and he is convinced there is something erratic about the participants in the accident, he has power to recommend an examination.

Since we don't have this equipment at as many points as we would like to, in most cases we send them to the state police for re-examination, which probably bears down mainly on the road test and how to behave with red lights, stop signs, and so on. However, if they can be sent to the clinic a thorough checkup is given and it is as thorough as we know how at this stage of development.

SERGEANT CHILDS: How much training does a man need to be able to conduct one of those clinics?

CHAIRMAN TRANSEAU: I have heard all kinds of opinions. Some people think a couple of months; other people say six months to a year must be spent with fellows experienced, observing their conduct and what they do in handling different types of operators. My guess would be that the more time put on it the better.

The subject, "Suspensions and Revocations," is going to be handled by Mr. Triplett.

MR. TRIPLETT: Our accident reporting law specifically states that the accident records that are made by the individual involved shall be strictly confidential and without prejudice to the person making the report.

Our operators' license law does not provide for the suspension or revocation of an operator's license for being involved in an

accident without information that the driver was either physically handicapped or had committed a violation of the motor vehicle laws in contributing to the accident.

I don't think you can utilize accident records in suspensions and revocations of licenses as much as you can utilize the accident records for the purpose of making an investigation or requiring a hearing, which in either event may result in information that would lead the Commissioner or Director of the Division to act on the suspension or revocation of a person's driving privilege.

We ought to stress that very clearly, because if the average citizen driver felt that the report he made on the accident and which we use mainly for other purposes in our state would be used against him or might be used in connection with taking his driving privilege away from him, it would affect reporting.

It is highly important that we devise some means of changing the law, if we can do it without affecting accident reporting, to make further strides in the suspending of driving privileges based on accident records. Anybody who is constantly involved in accidents would be shown by investigation to be either physically incompetent or careless or to have violated the motor vehicle laws.

We are just not prone to have accidents unless there is a good cause for it. If it is carelessness that caused the accident on the part of this driver or the other driver, then we ought to be able to put our finger on that.

If this man is consistently getting into accidents certainly we should withdraw his privilege to drive, at least for a definite period of time, or else send him to a clinic or have him re-examined in reference to certain abilities. It may be his eyes, or his hearing or other physical disability.

If you see from the investigating officer's report that there was some physical defect or motor vehicle violation, we could have our officer make a recommendation that this man's driving privilege be withdrawn without his knowing that it came from the accident reports.

It is highly important that we utilize accident reports, indirectly if not directly, and bring about the revocation or suspen-

sion of a license, if justified. It might come from an investigation of the accident rather than from the report of the accident sent in by the driver of the car. In that way you would be merely utilizing the report as a basis for making an investigation in that respect.

That is the point I was trying to make. I am afraid if you don't watch you are liable to bring about a situation where you wouldn't be getting accident reports.

MR. ROSENWALD: I think perhaps we have a clue to that. My own law is modeled the same as yours, on the uniform code, except we have more teeth in our law as to confidential features. As a matter of fact, any employee who discloses any of that information, even to the officer who has made a report on the same accident, is subject to loss of his job.

You can use those reports in this way, however. I think your law probably allows these reports to be used for accident prevention purposes, or something to that general effect.

MR. TRIPLETT: We should utilize the information on those reports more than we have in the past. I think that many, many states have for one reason or another been more or less lax in enforcing a good accident reporting system. I think more time and effort should be spent in promoting that thought of a program in the states. Many states have an accident reporting system in effect now, but are using it only partially. They are not stressing its importance enough all the way down the line.

After all, that is what we are trying to do—prevent accidents. If we can get reports they will be a great help in preventing others.

CHAIRMAN TRANSEAU: If we can show that a man was negligent or careless in an accident, we will suspend his license. Lately we have been giving a man a thirty-day suspension for failure to file an accident report.

Under our law we can hold a hearing following an accident. Between the reports and the hearing we can pretty nearly tell whether or not we have evidence that is likely to stand in courts of law.

We have the right of appeal to the

courts in our state. We may feel justified in saying, "All right, it was Transeau's fault. Childs wasn't quite as guilty, so he gets thirty days, while Transeau will get a heavier sentence." Then I may get another thirty days for failure to file an accident report, which is an innovation.

A man from our department visited a hundred and eighty-two police chiefs through our state in the smaller cities. He asked them if they wouldn't cooperate with us in reporting at least the larger accidents themselves.

We even devised a simple form of report that we thought wouldn't be too much trouble for them. They at least tell us that John Jones and Bill Brown had an accident. Mr. Brown was hurt about eight hundred dollars worth in damages. It took place at such and such a road, on such and such a day. When we get those we, at least, have leads.

In some of our districts in towns near Philadelphia we got seventy-five reports in three weeks' time. We were amazed. We wouldn't have gotten nearly so many with the old system. We were now in a position to write to the drivers and ask them why they hadn't reported for they should know we were going to take their license if they didn't.

Going back to the law which says that a man may be suspended after a hearing before the secretary if he has violated any of the motor laws of the state, the Supreme Court decided some years ago that there didn't have to be a conviction in order to suspend a license. In other words, we can still take his license if we have got such evidence, perhaps not enough to convict him criminally, but enough to satisfy ourselves and the court that we hadn't made a mistake.

We will sometimes take a man's license away on the first accident. We do that not to be spiteful or to abuse our power but when we believe he has shown that it was something that he did deliberately or it was his bad attitude which brought about the suspension, it is more of a lesson. Also it is usually only for a short time.

Usually our first thought is how long has this man been driving; has he ever had an accident; has he ever been arrested; shall we suspend; if so, for how long; and how

soon will we release him in view of his good record?

MR. ROSENWALD: Ordinarily you have a case under which he could be convicted of a violation, probably.

CHAIRMAN TRANSEAU: The Supreme Court made this distinction: to prove a man criminal you must have evidence beyond a reasonable doubt. They said in our case that we only needed to show a preponderance of the evidence.

MR. ROSENWALD: We are fortunate that we don't have to hold a hearing before we can suspend and we do exercise that right rather freely. We sometimes give a thirty-day suspension as a warning.

MR. TRIPLETT: Do you use the basis for calling a hearing the accident report itself or do you have other reports? I am still thinking about the accident report being used as a basis because it seems to me that would certainly hinder a program of accident reporting if you use the report itself.

Since we would either have to use our accident report or make an investigation, I am trying to find out for my own information how you do that.

CHAIRMAN TRANSEAU: Sometimes we use the driver's report. Sometimes an accident won't be investigated by the state policemen as they might be out on some other call at that time.

We received last year some eighty thousand reports. Since most of those were double reports, we will say there were forty thousand cases and we held about ten thousand hearings. That means we selected about one out of four and let the other three out of four go either because they were of a minor nature or because the citation clerks who call the hearings were afraid there wasn't sufficient evidence in those cases to justify suspension. Our power to hold a great number of hearings is limited so we try to confine them to the more serious cases. Nevertheless, that is kept on the man's record and may result in a hearing at some future time.

SERGEANT CHILDS: We use the accident reports in a hearing. The man holding the hearing has the accident report right in front of him. The man who holds the hearing is a state man and holds the hearing in the county in which the person

resides. It may be based entirely upon an individual accident or may be based upon a combined accident and violation record.

It may be based on a comment made by the investigating officer that the man's condition was such that he was physically incompetent, or anything of that nature. The officer who was responsible for calling those people in reviews the report, not necessarily in terms of severity, but in terms of how this accident occurred; where it occurred; whether it occurred through irresponsibility on the part of somebody; or, something of that nature.

We call a lot of men; not as many as in Pennsylvania, but we do call a lot of people in for re-examination. We don't suspend or revoke a license without a hearing. We give the man his day in court and in case his story disagrees considerably from the facts as they seem to be in front of the officer, he holds his recommendations in abeyance until he makes further investigation of the matter.

However, he can recommend a suspension up to a year. A suspension can't be over a year but he can also recommend a revocation if he feels it justifiable.

We use the accident report. It may be a deterrent to reporting but we find this to be true. Our law requires the individual to report forthwith to the nearest police officer—state police, county police, or county officer—and usually the person who feels that he is not to blame calls the police department. These officers go out and make a good many investigations of accidents.

I wouldn't say every one is investigated by any means because we do miss some. They miss the less severe and we also miss quite a number of one-car accidents where somebody runs off the road and didn't hit anybody else.

MR. TRIPLETT: We have had quite a lot of cooperation from the state of Indiana on accident reports and suspensions and revocations of licenses and have had numerous cases. I will mention two of them that happened several months ago.

It seems that two Indiana residents were involved in accidents in the state of Indiana and a hearing was called. It developed at the hearing that these two people were subject to epileptic attacks. In fact the epileptic

attacks were responsible for the accident in two separate and distinct cases.

We have had others, but I am pointing out these two because one of them lived in a bordering town of Kentucky and the other moved to Kentucky. He procured a Kentucky license and stated on the application that he was not subject to these attacks and had no physical disability.

In some manner the Indiana authorities learned that he had procured a Kentucky license and communicated with us. We suspended the license in Kentucky and a hearing was requested. We granted the hearing and I wrote to Indiana for a copy of the transcript of proceedings of the Indiana hearing.

In one instance we were not convinced that the man was subject to epileptic attacks. In the other instance the man made several trips to Frankfort with statements and affidavits from several physicians, among them being affidavits, I presume, from his physician in the town where he lived in Salem, Indiana.

Even with that information we wouldn't give in until we finally got a sworn affidavit from the physician that had testified in the hearing in Indiana. We had three sworn affidavits from physicians but this one who had testified at the hearing in Indiana swore that this man was not subject to epileptic attacks, so we reinstated his privilege in Kentucky.

I wrote to the Indiana authorities. I notified them what we had done and our basis for reinstating his privilege to drive in Kentucky.

I think there is no doubt that that sort of thing goes on many times, particularly in bordering towns where West Virginia, Kentucky, and Indiana meet.

Perhaps we who are in the Drivers License Bureau have had in mind for some time that we should reciprocate with each other more in filing reports of the residents of those states with the licensing administrators of the other states. In that way we might be able to prevent a lot of that sort of thing going on.

There is no doubt in my mind that numerous people who have their driving licenses revoked for various offenses go into another state and give addresses in that state. I don't know how we can work it

out. I wanted to throw that out for thought in dealing with accident reports, because if Kentucky residents are involved in accidents in some other state and we could get a report it would help materially.

We do get that information in a number of cases, but we don't get all of them. I think we probably ought to forward the accident reports covering accidents to the home state.

MR. MARSHALL: I remember those two particular cases. In fact, the salesman was a thorn in our side and we were glad he moved to Kentucky.

CHAIRMAN TRANSEAU: The next topic covers the use of accident records in supporting licensing legislation.

I have a query here that might possibly fall under that category. Mr. Rosenwald would like to know what our reaction might be to a probationary license for younger drivers.

MR. ROSENWALD: Just a short time ago I happened to meet with a group from Minneapolis which was made up largely of young men and women from the high schools. It had to do primarily with some of their cutups after football games and the like. At that time this general question arose as to what to do with younger drivers. After listening to them, I asked them what their reaction would be to the idea of a probationary license.

Now in our state to get a driver's license up to eighteen they can only be licensed with their parents' consent. Their parents are responsible. That age group is from fifteen to eighteen. Well, I wondered how they would react to the idea for that same period from the bottom age until the age of eighteen of only getting a probationary license. Then when they reached the end of that period, if their record was clear, they would get a full license for driving.

You know I was surprised; that bunch of youngsters rather took to it. It appealed to them as having a salutary effect. They would have to be unusually careful during this period because they naturally prize a driver's license. That is their number one desire as soon as they are old enough and they want to be sure that they get a license. I believe in a case like this they would want

to be very sure that they had a record that would justify the issuance of a full license.

CHAIRMAN TRANSEAU: In theory we regard ours as a probationary license. Our law is sixteen and eighteen and occasionally parents will write after the children receive the license and say they are not behaving and want the license taken and we cancel it.

The first thing after an arrest which is brought to our attention is the age. That is a pretty hard thing for a young fellow who has gotten in trouble after he has been driving a few months when everybody says that he certainly is not doing the right thing and why not take away his license. If he has been in a wreck you are bound to do that.

CAPTAIN DRAPER: Going back to accident reports, it seems to me the statistics should be studied more. Of those boys and girls, sixteen and seventeen years of age, what percentage of accidents are they involved in as drivers?

We say they aren't safe drivers and that your high rates of accidents come from this age group. I am going to disagree with you. I don't think it is. I think they are driving safer at that time than at eighteen, nineteen and twenty.

Then you ask us what percentage of drivers are in that age group and we come back and ask what percentage of your middle-aged people travel our highways. How many are in that age group?

The accident section supervisors want to know something about the age group of people that you license. We just don't know and you aren't giving us that information. I am talking about myself because I am doing both the jobs.

Now, how many people, boys and girls, thirteen, fourteen, fifteen, and older are driving without licenses in your states? If you will make a survey I think you will find there are lots of them.

MR. ROSENWALD: I made a check after this little meeting I told you about. I was curious about those under our driving age, under fifteen. I made a rapid check for 1944, the first six months, and the last six months of 1943, as well as the first six months of '43.

In 1943 I found we had two under-age youngsters involved in accidents. In six

months there were only two. However, we had three in the first six months of '44, but I was surprised that it was as low as that number. That wasn't a particularly bad record, I thought.

CAPTAIN DRAPER: I am inclined to think that when drivers first start driving without a license they are more careful drivers than they are after they gain confidence. I think we may be wrong in not licensing fourteen and fifteen year old people in our states.

I think they are driving anyway. Surveys in our schools show that about eighty per cent of the boys and girls are driving even though they don't have licenses. Now they start out operating an automobile and violating the law and creating a disrespect in their minds for the drivers' license law. Would it not be best to license them if they are driving anyway?

MR. ROSENWALD: You are bringing up a very nice question. We have bumped up against it very much. After all, we are an agricultural state and we will have to admit that these farm boys and girls from the age of ten on up deliver milk to the creamery.

I have seen youngsters younger than that run the farm tractor and do it very successfully. By the time they are fifteen they have been operating farm machinery and what have you for years.

Now a legislator from the rural district would in a moment drop that age down to twelve. I suppose he wouldn't hesitate to drop it down to that age because he is convinced that the farm boy and girl is fully capable of driving at that age.

The big doubt comes when we ask if the city boy is qualified at that age? Has he had the opportunity?

CAPTAIN DRAPER: They can get a license in Texas at sixteen without an authorization from the county judge; if they can prove necessity, at fourteen or fifteen years of age, through evidence to the county judge. We can issue a license upon the request of the county judge of their county.

MR. MARSHALL: In Indiana we had in the first six months eighty-six reported accidents involving drivers under sixteen years of age. You have also got to take into consideration that there are a lot of accidents involving those under sixteen that

are never reported for the simple reason that the average individual thinks in his own mind that his insurance is no good if that boy or girl hasn't a driver's license.

Therefore, they slip around and in the back door and get the fender straightened out and never report it. However, we did get eighty-six reports of accidents in Indiana in the first six months of this year.

And to prove that they are driving you may see that they are driving during the vacation period of May and June. In other words, we had nine in April and it steps up to seventeen in June. When the snow is on they are not driving but when the sun is shining they are going to the neighbors.

MR. TRIPLETT: I agree that we have many, probably hundreds, of drivers under the age of sixteen in Kentucky that are driving cars, particularly in the rural areas. I am wondering whether or not the accident reporting and accident records would reflect such a bad driving record for that age group, and if it would not be wise to probably lower that limit.

I am inclined to agree to a limited license. We have a license now that is a limited license and is good as long as the person drives in a proper manner.

CAPTAIN DRAPER: What is the accident experience in different age groups—in fourteen- to fifteen-year-olds as compared to the ages sixteen to seventeen?

CHAIRMAN TRANSEAU: The Council makes a statement in this year's *Accident Facts* that special studies have indicated, based on mileage of drivers under twenty, that they have the highest accident rates. Unfortunately I don't know how many people there are in those age groups. I do know, though, that the fatalities with younger drivers are out of all proportion.

CAPTAIN DRAPER: Talking about young drivers, does that include the eighteen and nineteen year-olds? What is the record in comparison to the fourteen and fifteen year-olds?

SERGEANT CHILDS: I have three summaries of the 1943 experience. One is urban, one rural and one state-wide. In 1943 we had eight drivers under the age of fourteen involved in accidents; one in a fatal accident.

In the fourteen and fifteen age group

there were a hundred and twenty-nine involved in accidents, with three fatalities. In the sixteen to nineteen group there were 1,419 accidents with seventy-six fatalities. This was in the rural section.

In the urban section we had a hundred and one under fourteen. In the fifteen and sixteen age group there were sixty-eight with one fatality. In the sixteen to nineteen group there were 1,649 accidents with nine fatalities.

In our state-wide fatalities we had two under fourteen, five under fifteen, sixteen in the sixteen to nineteen year group.

Our law in Michigan is fourteen years of age for licenses. We can license a driver at fourteen years of age with the parents' consent or signature and on up to eighteen, but the enforcement officer is not able to arrest this person in the ordinary way until he reaches the age of seventeen—not eighteen, but seventeen.

We feel—I am talking of the policemen now—that it would be a good idea to issue a probationary or conditional license to the person fourteen, fifteen, and sixteen, because all the enforcement officer can do is take him to the probate court which is quite a lengthy procedure. It requires a petition to the court to declare him delinquent. It means a lot of monkeying around and most policemen don't like to have a record of a delinquent minor on a case of individual traffic violations.

I think conditional licensing of fourteen, fifteen, and sixteen year-olds in our state would be a good thing. It is true that any license is a conditional license but it might bring it to an individual's attention if we called it such.

MR. MARSHALL: In Indiana in the first six months there were 642 sixteen-year-old drivers involved in accidents and it stepped up to 1,131 with seventeen-year-olds. I am sure that we have just as many sixteen-year-old drivers in Indiana as we do seventeen-year-olds, which bears out your argument that when they gain confidence they are going to be involved in more accidents.

CAPTAIN DRAPER: I think that is true. Your high age group was eighteen and nineteen, wasn't it?

SERGEANT CHILDS: In the young people, yes.

CHAIRMAN TRANSEAU: Of course,

we don't know exactly how many there are in each of these groups. We are in the dark there.

SERGEANT CHILDS: Our really high age group is twenty-five to thirty-four because there are probably more of them.

MR. MARSHALL: We issue in Indiana a beginner's permit. There were a hundred and sixty-three who were licensed operators and today only about seventy per cent of them come back for conditional license so they do drive at least three months at the age of sixteen and the fact they do not come back proves there are as many sixteen-year-olds driving as there are those of seventeen.

CAPTAIN DRAPER: We are going to have to get information to furnish the accident section as to different age groups, sex, racial groups, etc., that you are licensing in your states. We aren't doing it now.

SERGEANT CHILDS: That would help a lot in talking about these age groups.

CAPTAIN DRAPER: It would help the accident section, too.

SERGEANT CHILDS: Connecticut made a study that we look back to but we don't know that it applies in Michigan. It probably does but there are few states that have made a study on age groups.

MR. ROSENWALD: I believe it would be worth while to study wrecks a little more because I don't think the youthful spirit accounts for that difference entirely. I think there is something he has not got—the perception, the timing, and the thinking, and the action.

Your seasoned driver needs only two—perception and action. He can cut out some of those steps. The youth hasn't driven enough and he has to have the full three periods so actually, while his mind acts quickly because he is young, it takes longer time. His reaction extends over a longer time than that of the older and more seasoned driver. In the face of the fact that he thinks he has a quicker reaction he has to have more and he isn't aware of that. In other words, he doesn't realize that he is

at a disadvantage approximately of one-third of that reaction.

MR. L. S. HARRIS (Executive Director, American Association of Motor Vehicle Administrators, Washington, D. C.): I am trying to get information on this particular subject right now. Some of the states that reduced their minimums on account of war are going to want to put them back up and I believe they are going to have trouble doing so if they don't have information to show the legislature.

I am anxious that the states give us that information just as rapidly as they can. Some of the state records are so set up that they can give it to us without much trouble; others cannot.

It is a very important thing to us, particularly from a national viewpoint. The Association has adopted or approved the minimum age of sixteen and we would like to hold it if sixteen is correct. If that is not correct, we would like to know it. We have got to have the facts to work on. We can't do it through theory.

SERGEANT WHITTALL (Division of Accident Prevention, Washington State Patrol): In response to Mr. Harris' request, we started to do some work. These are just preliminary figures. We went back as far as 1940 and compared the number of drivers under sixteen with the total number of drivers involved in rural accidents in our state and we find that in 1940 we had 0.18 per cent and in 1941, 0.2 per cent. In the last nine months of 1942—in the first three months' period we lost some of the cards so we used the last nine months as probably typical of the year—it went up to 0.39.

Incidentally it was about that time that our agricultural permit went into effect which allowed under-age drivers to drive for the purpose of delivering commodities to and from the market. In the first six months of this year the percentage was 55. In other words, the first six months of 1944 was about three times as high as those under-age drivers involved in accidents over the year of 1940 so it may indicate a trend.

WEDNESDAY AFTERNOON SESSION

October 4, 1944

General Session

Joint Session with American Association of Motor Vehicle Administrators, American Association of State Highway Officials, International Association of Chiefs of Police and Institute of Traffic Engineers

Presiding: KENNETH B. COLEMAN, Pres., Coleman Industries, Seattle, Wash., and Chairman, Committee on Post-War Traffic Safety Planning.

Plans for Post-War Traffic Safety

A Symposium

(A) Post-War Planning in Street and Highway Traffic

BRIG. GEN. D. C. DRAPER, C.M.G., D.S.O.

Chief Constable, Toronto, Canada, and President, International Association of Chiefs of Police

Paper Presented by F. A. ROFF,

1st Vice-Pres., International Assn. of Chiefs of Police

Any plans for post-war traffic safety must take into account the vastly enlarged transportation picture that the war has brought. No longer can we look at traffic police work as a local or even a national job. No longer is traffic policing merely a matter of control, enforcement of laws, regulation of speed and conduct on our highways. Now we see it as a job of management to facilitate the movement of vehicles, persons and goods over our streets and highways as directly, safely and quickly as possible. The necessity for co-operation of all agencies concerned and of country with neighboring country becomes more and more obvious.

The highway traffic picture in this hemisphere now grows beyond the limits of any one country. Stemming from a stage of development temporarily halted by the war, our motorists, on business and pleasure, after the war will have more places to go and will go farther and in better vehicles—and probably with greater eagerness to get there in a hurry—than ever before. With a highway reaching from Alaska, through Canada, the United States and Mexico, down into Central America and soon into South America, traffic control and highway safety become problems affecting two continents. Not only must there be international co-operation among police agencies of all countries in the apprehension of

criminals and crime prevention, but we will need coordination of the work of traffic police, at least in the countries of these continents—and agreement among us as to methods of traffic regulation and uniformity of laws.

To those of us who have been kept close to home by war work and gasoline and tire shortages, the freedom to travel when and where we wish will be a release to a new luxury that will quickly become a necessity. To our young men and women returning from war theatres half way round the world, distances formerly inconceivable will seem commonplace. The world becomes smaller as travel, through curiosity, necessity and scientific development, widens our acquaintance in it.

The United States will continue to have the greatest share of the problem of traffic safety. Its enforcement and safety agencies, traffic engineers, motor vehicle administrators, highway officials and other groups concerned will continue to lead in planning for and putting into effect the measures which year after year must be developed to keep pace with a steady increase in motor vehicle use. I am told that the United States expects to see 50,000,000 passenger cars on its highways within ten years after the close of the war—and, if management by police, farsighted accomplishments by engineers and comprehensive advance plan-

ning by all concerned with safety on the highways is not effective, also expects to see an estimated 80,000 traffic deaths and 2,500,000 persons injured annually by 1960. The forecast of widely expanded travel is good. It can lead to greater co-operation among nations, profitable growth in both business and culture. The forecast of inevitable slaughter on the highways must be a challenge to us all.

This challenge is taken up in the program for post-war traffic safety mapped by the National Safety Council's Committee on Post-War Traffic Safety Planning, headed by Mr. Colman. The program fulfills admirably its purpose of providing a structure through which each of the 40 sponsoring organizations can contribute to achievement of greater traffic safety in the United States and other countries after the war.

Concern All

The elements of the program in each case are primarily the concern of one agency, but in varying degree are also the concern of the others. Construction of new roads, improvement of existing streets and highways and use of control devices are matters in which police can serve as observers and can report to those who plan and build them how well they fulfill their functions. Effective traffic law enforcement depends not only on departmental organization and administration but on correlation of police activities with those of the engineer, the educator, the motor vehicle administrator, the courts and the legislator. Safeguards that can be effected by a wise driver licensing program are the concern of all of us, particularly of the police.

Revelation of accident causes and points where traffic control by mechanical or human device has failed are to be found in accident records—police work that serves as a guide to every other agency striving for greater traffic safety. Traffic safety education for all who walk or drive—and that means everybody but the bed-ridden or imprisoned—is a year-in and year-out project. It must be extensive and intensive, so that every candidate for a license understands the responsibilities that go with the privilege of operating an automobile. Police must also be educators, co-operating with the specialists in the field of safety education. And finally, legislation must keep pace.

Here, too, the police must be of positive help and should take the initiative in presenting their needs.

It is essential then that in promotion of greater safety on our highways today and in the years of greater personal freedom after the war each co-operating group must correlate its activities with those of the others and all agencies that can contribute to this work should do so. It follows also that the success of the whole program depends on the effectiveness of each unit.

The part of the police in the over-all transportation picture is an important one, as has been suggested. Traditionally, the defenders of the people and their property, and throughout history always occupied with the hunt for criminals and alert to prevent crime, the police, in the newer responsibility of traffic control, continue to fulfill their pledge to protect the lives and property of the people.

Many police administrators, I believe, do not yet realize the full scope of their responsibility. Theirs is the job of management, or control which, correlated as we have said with the work of other agencies, must provide safe, speedy and efficient movement of vehicles, persons and goods over our streets and highways. Congestion and accidents, by-products of highway transportation, are two of the biggest problems they must face under their oath to protect life and property. Action after an accident has happened is not enough. Routing, delays and more officers on the job are not enough to eliminate the causes of traffic congestion. Farsighted planning is necessary, and particularly a recognition of how large a portion of the police department's program is represented by traffic problems. Police administrators must realize what percentage of their resources this part of their work will rightfully claim. Were a police administrator to base personnel assignment on loss of life alone, or economic loss, for that matter, he would have most of his force busy trying to prevent traffic accidents and delays resulting from congestion. As an example, I am told that in one American city of 78,000 people, during eight years, one life was lost through crime while 100 lives were taken by traffic accidents. If a police administrator should assign his men 100 to one to traffic, obviously the department

would be seriously out of balance. What is necessary then is that traffic police work be organized on a business-like basis, backed by research and analysis of accident records, planned for today on a pattern that is elastic enough to cover the problems of next year, and flexible enough to grow and adapt itself to new conditions of the years to follow. The smallest local police agency must operate on as practical and enlightened a plan as the largest, and supporting and furthering the traffic management of all traffic police must be well planned, uniform legislation and effective, impartial traffic courts.

Personnel Standards High

Personnel standards for such a program must be high and traffic police training must be thorough. Specialized training in traffic control techniques is available and

traffic police from Canada and Central America, as well as many from United States, have been trained at the Northwestern University Traffic Institute.

The place of the police then in post-war traffic safety is one of management of a suddenly released large volume of traffic, expected to grow rapidly, the facilitation of traffic flow, prevention of accidents and congestion. Vital to the success of this work is organizational balance within the department, thorough continuing study of the problems involved, and correlation of police work with that of other agencies concerned with traffic safety.

As president of the International Association of Chiefs of Police, I pledge the continued effort of the police to understand and meet their responsibilities in bringing about greater safety on our streets and highways.

(B) ITE Plans for Post-War Traffic Safety

HAROLD F. HAMMOND

President, Institute of Traffic Engineers, New York City

Just a year ago, the Institute of Traffic Engineers drafted a post-war Traffic Program. Three major objectives were established:

- (1) To de-congest urban centers and other critical locations.
- (2) To "accident-proof" streets and highways to the maximum degree.
- (3) To coordinate highway traffic plans and operation with highway planning and design, and community planning.

The ITE recognized that in addition to the new problems of greatly increased number of motor vehicles, miles of travel, changes in land utilization, old vehicles in poor mechanical condition, inadequate terminal and parking facilities, and insufficient emphasis on time values of travel, the old problems also must be attacked—problems of geometric design for traffic demands, critical parking problems, and improper application or non-uniformity of signs, signals, and markings.

Initially, the post-war program was not sufficiently detailed to present the specific projects that had to be undertaken or the way of accomplishing them. Therefore, a

special Institute Post-War Traffic Planning Committee consisting of thirty outstanding municipal, state, and non-governmental traffic engineers, was appointed to undertake the job of expanding the initial program.

Several days ago, the chairman of the Post-War Planning Committee, in a committee progress report to the Institute Business Meeting pointed out that the final program, which will be completed very soon, will properly expand (from a traffic engineering standpoint) the three-point engineering section of the traffic safety program presented in the publication, "Danger—Traffic Jam Ahead."

The Institute feels that, along with other national organizations sponsoring "Danger—Traffic Jam Ahead," such as the American Association of State Highway Officials and the American Public Works Association, it has a definite responsibility in helping to carry out the three-point engineering section which includes: (1) New Road Construction; (2) Betterment of Existing Streets and Highways; and (3) Traffic Engineering Administration. Institute interest in the program is obvious, since these three points are identical with the

three components of ITE Post-War Committee activity.

Four sub-committees are now putting their reports into final form. The final report will be directed to mayors, city managers, state officials, and support groups, and will state concrete problems of highway transportation, describing ways to attack these problems to obtain full utilization of highway facilities. The report will emphasize the values of applying engineering skills to traffic operational problems. It will also show how states, counties, and cities can utilize traffic engineering approaches and procedures.

The National Conservation Bureau recently conducted a survey to determine what principal traffic problems must be solved for safe and efficient motor vehicle and pedestrian traffic after the war. It sent a questionnaire listing ten traffic problems to a representative group of motor vehicle and transportation experts in all parts of the nation. The replies revealed the following as most urgent: (1) Parking; (2) Pedestrian Control and Safety; and (3) Redesign of Streets and Highways. Opinions differed, however, depending on the type of work in which individuals were engaged. Thus, City Engineers considered the parking problem of greatest importance, with pedestrian control and traffic channelization second and third. State engineers considered redesign of streets and highways first, channelization of traffic second, and signs, signals, and markings third.

Both city and state police considered pedestrian control most important. City police considered parking second, while state police considered speed second. Speed took third place in the opinions of the city police, and redesign was third with the state police.

Magazine Initiates Study

A second study by TRAFFIC ENGINEERING magazine, as to what subjects readers felt most important to stress in the magazine, again showed parking as the subject of major interest, followed closely by city planning and signs, signals, and markings. The fifty city officials who answered the questionnaire put parking first, city planning second, and pedestrians third. The forty-two state officials voted freeways as the subject of top interest, parking second, and speed third.

While these several studies clearly show the interest and thinking of traffic authorities, they do not reveal what traffic improvements will actually be made to meet post-war traffic problems. The ITE Post-War Traffic Planning Committee is now conducting a comprehensive questionnaire study of what the larger cities have done to date about drafting specific plans for making post-war traffic improvements.

Of some 150 municipalities contacted, over 100 have already replied. A rough check reveals that a surprisingly large number of the cities have already gone quite far with their post-war traffic plans. The following are among the measures which they have indicated they plan to utilize extensively:

Provision of attractive and convenient off-street parking so that more curb parking may be prohibited in congested areas.

Conversion of existing or reconstructed wide thoroughfares into limited-access streets and highways by more restriction of turning movements and the use of continuous raised medial strips.

Providing more pedestrian safeguards such as barricades, special walks, islands, grade separations, and pedestrian signals.

Development and application of improved forms of intersection channelization to provide safer but also more rapid movement of traffic.

Greater use of one-way streets, where need demands, in both large and small communities.

Making traffic control devices and measures function more in accordance with varying traffic demands and conditions.

To implement and carry out sound and worthwhile traffic plans requires the full cooperation of all interested agencies. Moreover, it requires that these agencies, particularly the American Association of State Highway Officials, International Association of Chiefs of Police, American Public Works Association, and Institute of Traffic Engineers get together more frequently to discuss and plan their related interests.

At the Eno Foundation Traffic Conference held in New York City last spring, I heard for the first time representatives from some of the national organizations just men-

tioned frankly discuss how closely their work was related and how they were dependent upon each other for success.

Speaking in behalf of the traffic engineers, I pointed out how much a traffic engineer depends upon others to carry out a constructive program. It is pretty well recognized that there are four traffic engineering functions:

Traffic Studies
Traffic Planning
Traffic Design
Traffic Control

(C) Plans for Post-War Traffic Safety

C. F. JOYNER, JR.

President, American Association of Motor Vehicle Administrators, and
Commissioner, Virginia Division of Motor Vehicles, Richmond, Va.

So far as the post-war years are concerned, the American Association of Motor Vehicle Administrators does not anticipate them with undue alarm as some seem to do. Most of us are old enough to remember the post-war years of the other war and, although there were not so many motor vehicles on the road then, the behavior of the drivers was not, in any sense, alarming. With this in mind, we have developed what may be termed a progressive long term, over-all program and are now beginning to get it underway.

We must remember that the public official carries the burden of public safety. The principal objective of our program is to furnish direct service and assistance to our member departments in matters of uniform practices and procedures, departmental organization and planning, research and studies currently needed, selection and training of personnel, and related matters.

The program is designed with the view that the Association can best contribute to the work of its individual members by the cooperative development of needed additional nationally uniform standards—standards that include the most effective and economical practices and procedures developed in the several states—standards that express to the public the maximum freedom of movement consistent with the minimum of regulation necessary in the interest of safety.

The three basic elements of our program are: to work directly with and through pub-

lic officials for effective action; to develop methods and techniques and train personnel to apply them; and, to energize and maintain informed public opinion in support of our progress. We confidently believe that large benefits will result from the extension of this type of program. The development of the details of our program is a continuing process, necessarily so because of changing conditions and requirements. But, in order for you to know of some of the things we propose to do, I will briefly outline some of the most needed and important as follows:

Legislation

We will continue with increased energy our promotion and support for more uniformity in motor vehicle laws and regulations throughout the nation;

Promote and support legislation for nationally uniform reciprocity between states for vehicles in interstate commerce;

Promote and support legislation where needed for the statutory adoption of the minimum flooring for sizes and weights of motor vehicles;

Promote and support legislation for improved and uniform vehicle registration and license laws.

Driver Improvement

The average driver is today our, yours and mine, greatest safety problem. He comprises ninety per cent or more of all drivers. He is the fellow who passed all the tests and has been licensed to drive

a motor vehicle over public streets and highways and is supposed to be a safe driver. But, he is not too safe a driver. It is he who causes most of the traffic catastrophes. We have had him with us continually since the first horseless carriage and still we know very little about him. We have spent millions of dollars and a quarter of a century of time following the same old rut in trying to educate him to be a safe driver and to avoid accident, with hardly any favorable results. Cold, voluminous statistics and figures he will not read. Posters, pamphlets and press releases berating him mean nothing to him—they are for the other guy.

Discouraging as our program in improving the average driver has been, we still believe we can find a way to reach him and, with the help of all cooperating organizations we are going to continue our efforts.

Our Association acknowledges, and rightly so, that the driver problem is principally its responsibility and is therefore giving a major part of its effort and facilities in trying to solve it. "Driver Improvement" is our major objective and our program on driver improvement includes:

Driver behavior studies in cooperation with Public Roads Administration and traffic enforcement agencies;

Use of adequate accident reporting systems and practices and the proper uses of accident reports and statistics by administrators, police, highway departments and courts;

National uniformity of driver examinations through the adoption and use of the Association's standards of practices and procedures by properly selected and trained examiners;

Development and use of nationally uniform driver reexamination program;

Development and use of nationally uniform practices for the suspension and revocation of driver licenses;

General improvement and standardization of driver license law administration and enforcement;

Development of a new safety approach to average adult drivers; and,

Active participation in a nation-wide high school driver training program.

Licensing War Veterans

In addition to the driver improvement program I have just outlined, a committee has been appointed to study the problem of licensing the returning war veterans. This committee will work in close cooperation with the Army, Navy, and Veterans' Administration to develop ways and means of rendering the best possible services in assisting the veterans to again take their normal places and occupations in society. The Committee will furnish all state departments with the information as fast as such information is assembled. Through this work we expect to rehabilitate many veterans into safe drivers. We are looking forward to their return—not dreading it.

Pedestrian Regulation and Control

Our next greatest problem to solve is that of the pedestrian. The pedestrian is today in the unenviable group of people which is furnishing the largest share of traffic casualties. He, like the average driver, seems to be immune to education of the usual type. But, in cities where sincere effort is being made to control and regulate pedestrian traffic, progress is being made. It has been definitely proven that the police officer in uniform is by far the best possible instructor in pedestrian safety. But, in a great majority of our cities, particularly the larger ones, there is no attempt whatever to regulate and control pedestrian traffic because of an imagined political reaction. We do not subscribe to the belief that the citizens of a community would vote against an official who tries to protect them from death and injury which they are subject to by their own carelessness. So, we are including pedestrian regulation and control in our safety program.

Our Pedestrian Committee is working to develop a nationally uniform program which will necessarily have to depend on the assistance and cooperation of highway officials and engineers, traffic engineers, state and local police and all supporting organizations. The Committee is charged with the duty of providing the leadership and stimulating interest in the program throughout the country. We believe we will find ways and means to reduce pedestrian accidents.

Compulsory Vehicle Inspections

We propose to urge the resumption of periodic vehicle inspection in the states

formerly requiring them as soon as possible after cessation of hostilities.

We will resume our efforts with new energy toward procuring uniform inspection laws and regulations in all states not now having them.

In cooperation with Public Roads Administration and the automotive industry, we plan to activate two research projects concerning safety of operation of motor vehicles. One will consist of engineering studies and road-testing of vehicles for development of adequate uniform brake performance standards and for development of additional safeguards in the operation of passenger vehicles, including school buses. The other will be for the develop-

ment of uniform standards for the operation of official inspection stations, both public and private, and performance standards for testing apparatus and equipment. Through these projects we hope to contribute toward safer post-war motor vehicles.

I have outlined the most important features of our program of traffic accident prevention. As you can see, the program is basic—it is fundamental—and is designed to support and assist the public officials charged with the responsibility of public safety. It merits the sincere support and cooperation of every organization and individual. I am confident we can depend upon the help of all here today.

(D) Plans for Postwar Safety

H. G. SOURS

Director of Highways of Ohio, Regional Vice-President, A.A.S.H.O., Columbus, O.

Before the war, there were 33,000,000 motor vehicles operating over the highways in the United States. Today, there are approximately 28,500,000 and with the exception of trucks and buses, they are operating on a greatly reduced mileage basis. The most of these are the same vehicles which operated in 1941. A large percentage of the 1941 tires are still doing service, although many of them would long ago have gone to the junk pile under normal conditions. Speeds, as well as mileage, have been greatly scaled down during the war. The normal highway improvement program of new construction has been deferred and in some cases, old roads have badly disintegrated under wartime hauling.

With this factual background we can readily foresee postwar traffic creating two separate problems:

First, the problem following immediately on the lifting of war-time restrictions, orders and regulations.

Second, the problem which will confront us in the future when normal traffic con-

ditions return, volumes increase and new models of motor vehicles become a reality.

The first period may bring a sharp rise in the accident curve, particularly the serious and fatal accidents. Removal of restrictions will bring an increase in road speeds. The return of many men and women from the armed services will put a greater number of younger drivers on the road, which will naturally bring up speed rates. However, many of these have received valuable training and experience in the handling and care of motor vehicles. They may be better and safer drivers when they return than when they left. Regardless of this speeds will increase and in addition, much of the equipment will be old and unsafe for high speeds. Tires will undoubtedly be the cause of many accidents unless new tires are available in unanticipated numbers by the end of the war.

The tonnage being hauled by trucks will quite likely drop rather sharply for a while and then will rise again with the reconversion of industry. During the war emer-

gency, many trucks are loaded to capacity and most of them are overloaded.

This sums up the problem, as it now appears, for the immediate postwar period. What, then, should be done about it?

We have often heard of the three E's of traffic safety—Enforcement, Education and Engineering. In the immediate postwar period, Enforcement will quite likely occupy the number one spot. Education and Engineering take time. Both can be carried on during the first period but the results and benefits will appear later. Some phases of Education, such as publicity campaigns, will help but too often they are spasmodic rather than basic and fundamental. Certain phases of Engineering, such as signs, markings, regulation of directional flow of traffic, parking and careful maintenance of highways can be of immediate benefit but the results of Engineering in design cannot be turned into visible effectiveness overnight.

It is quite likely that a very substantial number of drivers will voluntarily conform with necessary restraints. There will always be those, however who will drive recklessly and dangerously and injure and kill others as well as themselves.

The second problem is a long-range one and will become most noticeable after we have recovered sufficiently from war-time restrictions and shortages for traffic conditions to resume normal growth.

Design Problematical

What will happen in the design of motor vehicles is not definite today. They may be lighter and they may be faster, although danger may throttle higher than pre-war design speeds. It is not likely that we will greatly lower the top speeds of the better types of cars. Efforts may be made for greater permissible legal loads for trucks. But there is little likelihood of load limits being lowered. The amount of traffic will increase and possibly at an unexpected rate for some years after the war. The aeroplane will be an additional factor in the transportation of people and some kinds of materials. The railroads will quite likely modernize and expand their service. All of these factors will tend to increase motor vehicle traffic but they may modify and alter the pattern somewhat.

The short-distance, everyday trips into

and out of the cities will be increased. The spread of population into the rural areas surrounding the urban centers will greatly expand. This will further the need for home-to-town transportation by private automobile. Undoubtedly the use of the motor car and the light truck by the farmer will greatly increase. The use of the aeroplane commercially and privately and the increase in the number of airports will call for surface transportation to and from landing fields and airports. The aeroplane, conceivably, will open up many heretofore inaccessible vacation lands which will be served locally by highways. The truck, more than ever, will act as a supplement to the railroad and the aeroplane. The pattern of traffic quite likely will change and the total will greatly increase.

What should be done to meet the demands of traffic in the second period? The problems fall into three major categories.

1. There will be the planning, design and construction of arterial expressways into and through the large cities, the bypassing of some of the smaller cities, and the belt-bypassing of others. These will be the roads which will collect, carry, and distribute large volumes of traffic quickly and safely. Projects of this kind require careful study, traffic analysis, and scientific planning and design. They are costly and often become involved with many obstacles which cause delay. However, they will be the cheapest and the best in the long run. Street widening will not solve the problem except temporarily and the costs of right-of-way and damages will be disproportionately large.

This type of work is expensive and there may be some reluctance on the part of public officials because of the high cost and the fear of public reaction. We should not consider the cost per mile as the yardstick for measuring cost of this type of work, but, rather, the cost per person served. Oftentimes the cost per person on major improvements is really less than on some of the much lower types of work.

2. The second problem is that of modernizing the main trunkline highways between the cities in the nation's primary network. Some of this work has already been done but the greatest part still lies ahead. The expressway, in many cases, is the

ultimate design toward which we should work. Careful selection of routes, to avoid duplication and hold down the over-all mileage of trunklines is essential. Much of this type of improvement will be on new location, leaving the existing facilities to serve local traffic.

3. The third problem is that of the orderly expansion and further development of the rural farm-to-market, school and mail route. The ever increasing transportation of farm products to market is one factor. The opening up of tourist areas is another.

Engineering Major Factor

It is quite apparent that Engineering will be one of the major factors in highway safety in the long-range period. The faults and the lack of skill and responsibility of motor vehicle drivers are more pronounced than in the operators of any other type of transportation. The railroad locomotive engineer, the helmsman of the ship and the pilot of the aeroplane are all highly skilled operators. Hence, more than ever, safety must be built into our highways to make them safer for all the users.

There are several fundamental items which should be included in the design of our major trunkline highways. Modifications of the different types of treatment are in order to more properly meet the conditions and to keep our design within the bounds of economy.

The following are some of the items which must be considered if we are to build safe highways on our major routes:

- (a) The multiple lane divided type, using a median strip as wide as possible. A narrow divider may be used under certain conditions but should be raised where its width is limited.
- (b) On heavy traffic routes, the limited access or expressway type supplemented with proper interchanges is the most desirable. While its initial cost is greater the gain in functional advantages is so great that the additional cost will be offset in most cases.
- (c) Expressways and major improvements should, in general, be on new location. Better alignment and grades may be found at less cost on new location.

Much of the local traffic can be kept off the major trunklines by leaving the old road or street to serve it.

(d) Uniform and standard traffic control devices result in less confusion to the driver and increase safety.

(e) Special facilities for pedestrians, including safety islands, sidewalks, markings, etc., are essential for safety where pedestrians cannot avoid highway traffic.

(f) The removal of street car rails and the resurfacing of some of the existing major streets will oftentimes greatly increase traffic capacity and safety.

(g) The regulation of parking on some of the main thoroughfares can produce excellent results. Prohibition of parking on certain streets to form an inner belt for traffic distribution and circulation, can often produce some amazing improvements.

(h) In any improvement, adequate lane widths are essential to safety. The high-speed car and the wide truck of today cannot possibly operate safely over the old narrow lanes.

(i) Proper widths of shoulders and adequate shoulder treatment must be provided for maximum safety.

(j) Oftentimes on a two lane highway, the addition of a third or fourth lane for passing on long grades with fast and slow-moving vehicles improve the traffic conditions.

In existing highways some items must at all times receive careful attention:

- (a) Pavement surfaces and shoulders must always be kept in repair.
- (b) Blind spots, sharp horizontal and vertical curves, sight distances at intersections, railroad and highway crossings and bridge approaches can be made much safer through special treatment based on studies of the local conditions.
- (c) Proper signing and marking contribute to safety.
- (d) Slippery surfaces can often be deslicked and had skidding accidents prevented.
- (e) Snow and ice control is very important. The travelling public expects to

be able to use the highway at all times, day and night. Proper equipment, trained personnel and a system for quick action in emergencies are all necessary. Operators of snow and ice control equipment should be under standing orders to get out on the road whenever necessary without waiting for orders from headquarters. A system of reporting winter road conditions in the early morning and evening radio broadcasts over the regular stations can be of great value and be much appreciated.

Traffic Bureaus

A highway department should have a Bureau of Traffic and Safety. Most departments have made good progress in this direction. Until recent years, however, the principal function of such bureaus has been to handle highway signs, markings, etc., and to treat dangerous spots on existing highways. Recently, however, the progressive highway department has coordinated the work of the Bureau of Traffic and Safety with the other bureaus of the department, particularly design. While the Traffic Engineer has several independent duties to perform, he also is definitely tied in to the other related bureaus of a department.

As a result of the research and studies carried on by the Traffic Engineer in traffic performance, terminal behavior, parking, other traffic handling facilities, roadway capacity, etc., he is able to recommend geometric design features not only under standard conditions but for special problems as well.

In some highway departments, traffic surveys covering such items as origin and destination, volume, speed, accidents, congestion and parking and the analysis of the data collected, are combined with traffic planning which covers the field of gen-

eral location, capacity, functioning and operation of routes and terminals. Careful traffic planning is particularly important in the location and the development of expressways and major thoroughfares.

In other highway departments there are separate bureaus, Traffic and Safety and Planning Survey. In such cases there may be overlapping of functions. In any event, however, the two functions must be definitely coordinated for proper planning.

Traffic control is normally a function of the Traffic Engineering Bureau. The application of regulatory measures to develop the maximum effectiveness and safety in the movement of traffic is a function of Traffic Engineering. The prescribing of corrective treatment to existing highway facilities from Traffic Engineering studies is a very important function.

The traffic engineer can make a real and lasting contribution to safety. Through the scientific analysis of available and collectible facts, safety can be injected into the design of highways. Through careful and proper maintenance and the sound regulation of traffic movement, the maximum efficiency on the highway can be obtained.

The accident record on our highways over the past years is nothing to be proud of. In spite of our efforts, it has been much too high. I hesitate to risk a guess, however, on what it might have been had it not been for the efforts put forth by the various agencies interested in highway safety. Most highway departments are becoming more and more safety-conscious. Traffic engineering as an integrated part of any well-balanced highway department should be given a place of equal prominence with the several functions which any well-balanced highway department must perform.

THURSDAY MORNING SESSION

October 5, 1944

Group Session for City and State Police

Presiding: JAMES T. OWEN, Superintendent of Traffic, Police Dept., Kansas City, Mo.

Post-War Traffic Police Problems

A Panel Discussion

Training—GORDON H. SHEPHERD, Acting Director of Training, Northwestern University Traffic Institute, Evanston, Ill.
Personnel—COL. EDWARD J. HICKS, Commissioner, Connecticut State Police, Hartford, Conn.
Enforcement—JAMES A. FRYER, Chief,

Washington State Patrol, Olympia, Wash.
Public Education—JOSEPH L. LINGO, Director, Public Safety Institute, Purdue University, Lafayette, Ind.
Equipment—CAPT. MASON L. MITCHELL, Supt. of Traffic, Police Dept., Louisville, Ky.

(A) TRAINING: GORDON H. SHEPHERD

The most urgent need in post-war police training is a clear understanding of the aims of such training. It must consist of more than just lectures on police tactics and procedures, laws, departmental regulations, and so on, which have long been the bulk of the police training program. The purposes include development of the individual police officer which will enable him to perform police services most efficiently. Included must be development of attitude, beliefs, viewpoints, morale, knowledge of police problems and skills and abilities for meeting these problems. Upon the ability of the individual officer to think clearly and quickly in time of emergency depends not only the safety of himself but also the lives and safety of other persons.

An important part of any training program must be the ability of instructors to whet the appetites of students for learning. Interest in the various subjects must be initiated and maintained if students are to absorb the knowledge offered by instructors and texts.

The active support of officials is a requisite to any effective training course for police officers. The chief administrator, commanding officers and government officials of the state or city must be so well informed concerning the need for adequate police training and the essentials of a proper training program that they will endorse it fully and provide the necessary means.

A sufficient amount of the police officer's

time must be made available for training purposes to enable him to absorb the materials included in the program. Some administrators regard three weeks as an adequate period in which to conduct recruit training; others realize three months is not sufficient time. When those responsible for police training finally agree that half the working time of a new policeman during the first year of his employment and five per cent of his time during each year thereafter should be devoted to training, then the time essential to a good police training program will be provided.

Adequate funds are necessary for a proper police training program. Capable instructors can not be retained at a patrolman's salary, nor can a good director of training be held at a salary which is lower than is paid in comparable fields. Training aids must be purchased and physical facilities provided. Police administrators and other officials have yet to prove to themselves that it is good business to spend money for police training. The armed forces and big business organizations have proved that this is the soundest kind of investment. The production of well-trained police officers is so far superior to that of untrained or poorly trained men that ample expenditures for training can easily be justified.

A job analysis of the duties and responsibilities of policemen in various levels will furnish a guide for the training program. A schedule for recruit and in-service training

which will fill the requirements set forth by the job analysis should be maintained. A director of training, either full or part-time, who is qualified to organize and administer the training program will add much to its value. He must be responsible for all phases of personnel training.

Progress has been made in police training programs in recent years. More progress may be anticipated in the coming year. A wide acceptance of the value of training by the armed forces and industry has

conditioned public thinking so that they will support the need for adequate police training. Police should now accept their responsibility for developing their training programs and should recognize that this item has an important bearing on the professionalization of the police service. Other agencies which are interested in good government generally may be relied upon to help the police in their efforts to provide full-fledged training to improve performance by all police.

(B) PERSONNEL—COL. EDW. J. HICKEY

Personnel shortages have been created in most police departments by the demands of the armed forces. This is easily understood when we consider that the armed forces require about the same type of man who is attracted to a police job, plus the fact that most departments have maintained rigid physical requirements for entrance and have insisted that members maintain good physical condition while employed. It is not known whether or not the end of the war will bring a rapid return to their old positions of police officers who are serving with the armed forces. Many of them are assigned to duties which will go on long after the cessation of hostilities. It is hoped that they will be released as promptly as possible to permit their return to the essential job of policing.

The department has an obligation to re-instate qualified members who have been given leaves of absence to serve with the armed forces. It has an equally important obligation in determining that these men are physically qualified upon their return to the rigorous duties of policing. This means that a complete physical examination must be made a condition of re-employment; one that is as rigid as that given to the new recruit. Refresher training should be given as needed to aid returning members to quickly resume proficiency in police duties.

Certainly in the post-war period police departments will have many applications for employment. Capable young men with no previous police experience have become ac-

quainted with some policing techniques during their military service and will have had their interest aroused in policing as a career. Men who have had military training and military experience have gained some things which will be valuable to the police department. The instilling of obedience to orders and the conditioning for strict discipline are valuable attributes for a police recruit.

There are, however, many other things to be considered in an applicant for the police service. With this in mind, certainly it is natural that in the case of applicants who have equal qualifications the preferred candidate should be the one with military service. This does not mean that military service alone will make a man suitable as a recruit for the police service.

Impartial use of a merit system for employing new police personnel and for governing promotion can be of inestimable value to a police department. Candidates competing for appointment or promotion must be made aware of the fairness of the system and the impartial administration of it by police officials. Such a system can do much to prevent the formation of cliques which invariably result in disgruntled groups within a department.

Established merit systems should be continued; those departments not presently employing such a system should bend their efforts towards securing an efficient merit system. Its use will enable recruits and seasoned officers seeking advancement to be selected on a uniform basis which is acceptable to all members.

(C) ENFORCEMENT—JAMES A. PRYDE

The post-war period will bring enlarged problems in the street and highway traffic field. The police must play a leading part

in advancing solutions to these problems. It is a duty of the police themselves to get the public to support the police depart-

ment and its program. Progressive departments are more and more realizing that they must be the ones to initiate, not just to follow, programs concerning public safety or others in which the police have a primary interest.

A first requisite of an effective enforcement program must be reasonable, enforceable legislation. Since this does have an important bearing on the quality of the enforcement program, police must look ahead at contemplated legislation. Non-enforceable laws should be opposed; such laws already in effect need to be revised, or stricken from the books. Police departments must establish their position so strongly with the general public that they will have something to say about the laws that are enacted.

Careful recognition of their responsibility will enable the police to serve the public most effectively and to such an extent that the residents of any community will understand and properly evaluate the public service rendered by their police department. Police service is an integral part of the city or state; it must be rendered so effectively that the general public will recognize it as such.

Law enforcement is basically a local problem, but each enforcement agency must cooperate closely with every other enforcement

agency. Enforcement policies must be uniform and the application of enforcement procedures must be uniform if ultimate effectiveness is to be obtained. Uniformity in these things will do much to procure for the police service the public support it deserves. Motor vehicles operators and pedestrians more readily accept enforcement when it is based upon uniform regulations, uniform policies and uniform procedures. Criticism of individual enforcement contacts is reduced, public resistance is lessened, and public apathy is overcome when citizens see safe driving and walking regulations enforced impartially and uniformly throughout an area.

These things can be secured only through top-notch active administration in police departments. Careful analyses of current problems, regular exchange of information with other departments, the application of proved methods of controlling traffic problems and constant alert supervision in the field are essential to an effective traffic enforcement program. More and more chief administrators feel that periodical tours of duties in the field working closely with subordinates are an effective method of maintaining a close contact with actual enforcement needs. They provide an effective method, also, of obtaining the solid backing of the public for the police program.

(D) PUBLIC EDUCATION—PROF. JOSEPH L. LINGO

Public education, in its true sense, is more than just personal or departmental ballyhoo. Attempts to publicize or build up an individual in the name of public education invariably result in failure of both the selfish interest and the true aims of public education. On the other hand, a conscientious effort to do a good job in educating the public to the needs of traffic safety will reflect credit to the organizations and all of the individuals participating.

Public education, or public relations—call it what you will—must start within the department and must be based upon effective administration, sound organization and uniformity of action. The department can begin to put its own house in order by first designating one member to handle the public education program. The selection of this individual must be based upon qualifications

for the job. He must be familiar with the problems and with the various channels available for reaching the public. He must point out to them why certain enforcement methods are necessary and show how the individual can lend his aid to the overall program.

The continued use of auxiliary police forces offers valuable public contacts. Such continued use should be encouraged, not alone for the usefulness for this trained force in handling special events and emergencies, but also because they represent many sympathetic public contacts. Many prominent residents of communities have volunteered their services as auxiliary police officers. Through their training they have been impressed with the importance of the public service rendered by police departments and have obtained a better understanding of the

methods employed to meet public needs and of the needs of the police service. Consequently, valuable outlets are provided for disseminating traffic safety information, not only to the members of this force, but to their families and friends. Each, because of the direct contact, has a sympathetic interest and is more receptive to suggestions than he would be from most other channels.

Selectivity must be utilized in the public education program to avoid wasted efforts. Careful analyses of accident records will indicate the direction in which educational materials should be aimed. The locality suffering from the heaviest accident experience, age groups, employee groups, types of accidents occurring most frequently and the violations occurring most frequently in accidents are all to be secured from analyses of accident records and offer valuable information for directing educational efforts at the items contributing most to the accident experience. Through this selective approach maximum effectiveness can be obtained for the effort put forth.

Police training has a pronounced effect upon the acceptance of educational ap-

proaches in the traffic safety field. The influence of proper police training on each contact made between the public and the individual police officer can do much to augment the acceptance by the public of necessary regulations and of safe driving and walking practices. The efficiency and attitude of the individual officer represents to the individual citizens the makeup of the entire police department. If the citizen is impressed favorably, he more readily agrees to the need for observance and more readily heeds pleas for support which are brought to him through newspapers, posters, radio, etc.

Enlisting the support of scientists, prominent business executives and other professional men in the community to serve on special police committees or to study special police problems can be a valuable means of securing public cooperation.

These are just a few of the many methods available to police organizations for securing public support through public education. Utilization of methods found most effective in a community is essential to any effective balanced program for traffic safety.

(K) EQUIPMENT—CAPT. MASON L. MITTLER

Equipment for the police service in the post-war period brings, first of all, the need to emphasize some faults which existed in the pre-war period and during the war. Outmoded, run-down police buildings used by many departments create an unfavorable atmosphere for members of the police organization and for members of the public. Modern, efficient police buildings will create in the men themselves the desire to improve personal appearances and attitudes and will encourage progressive outlooks upon the assignments of the individual. In addition, the civilian who visits police headquarters or a district station receives a much more favorable impression of the public service afforded by the police. Industries and business houses, large and small, have found it advantageous to maintain modern, well-kept offices, chiefly for the influence on workers and the public impression created. If these profit-making enterprises consider it a good investment, certainly it must be an equally good invest-

ment for police departments representing Government.

Members of police departments must themselves pay more attention to appearances. Greater efforts to maintain automotive and other equipment so as to not only function more efficiently but to present a better appearance will pay dividends in increasing public support for the police department. During the war automotive equipment and some other items, have had longer than normal periods of service. Much of this will need to be replaced as soon as such items become available so that many departments will be off to a good start with vehicles which not only look good, but furnish powerful, efficient units for patrol and other police activities.

Undoubtedly improvement made by the armed forces in radio equipment will be reflected in the communications setups of police departments in the post-war period. Increasing use of three-way radio telephone units and the realignment of police radio

bands to prohibit interference by commercial users will add to the increased efficiency of police services.

Many items of equipment affect the police program, even though they are not used directly by the department. For example, the reasonable use of parking meters affords an effective method of parking control. However, if meters are installed in sections where they are not necessary, it brings criticism upon the department and resistance to other phases of the enforcement program. Periodic compulsory inspection of motor vehicles to assure proper mechanical performance puts upon the police the additional burden for maintaining an adequate number of field checks for defective equipment. On the other hand, this same program is effective in reducing accidents. Consequently, it adds to the effectiveness of traffic safety work.

Conjecture as to the probable improvements in motor vehicle equipment by the manufacturer brings to mind a number of things which may be helpful in reducing accidents. For example, the use of side loading trucks to reduce the amount of maneuvering necessary for loading and unloading would also reduce congestion in business districts. Such trucks would merely pull up alongside the curb and load or discharge cargo rather than taking up a large portion of the street width.

Modern laboratory facilities, increased efficiency in street lighting and traffic signal installations can all add much to the effectiveness of the accident prevention work of police departments and others.

Discussion

Q. What is the minimum age for Connecticut State Police recruits?

COLONEL HICKEY: The minimum age qualification has been 23 years. In my opinion this will probably be lowered to 21 years in the post-war period. The trend seems to be to employment of younger men throughout the police field to enable longer periods of public service by the individual.

Q. Are cars painted white or some other conspicuous color best suited to traffic patrol work?

SUPERINTENDENT ONEY: I believe the selection of car markings must depend upon the problems presented in the

area to be patrolled. Conspicuous, identified and unidentified cars each serve a particular purpose in the police control field. In general, most departments find it necessary to use all types of cars because of the need to apprehend habitual traffic violators, to deter other potential violators, and because it is necessary to use the same vehicles for other police assignments.

COLONEL HICKEY: The conspicuous patrol vehicles serve to keep the men on their toes. They are aware that the distinctive markings on the car keeps them in the public eye and are therefore constantly reminded of the need for exemplary behavior and effective performance. There is, however, some advantage in having unidentified cars used in patrol work since when the public becomes aware of this situation every approaching vehicle presents the possibility of a police unit observing their driving behavior.

CAPTAIN JOHN F. ONEILL, Police Dept. Philadelphia, Pa.: The red police vehicles used in our city afford a valuable safety factor to the officer in pursuit and at the scene of an accident investigation. In addition, the motorist who is flagged down realizes that the order has been issued by a police officer with the proper authority for stopping them.

FRED L. TODD, Chief, Mississippi Highway Patrol, Jackson, Miss.: In Mississippi we are compelled by the legislature to use white cars for traffic control work. I would appreciate suggestions as to how to secure the needed changes in this requirement.

CHIEF PRYDE: We have had good results in the State of Washington with a conspicuous patrol vehicle, but do find it necessary to supplement the work of these cars with unidentified automobiles. I believe that assigning a conspicuous car and an unidentified car to the same patrol at the same time, keeping a constant interval of perhaps five miles between the two and maintaining a close record of violations observed, would be helpful in bringing the problem to legislators. In this way it would be possible to determine the effect of the two types of vehicles upon passing motorists and thus demonstrate the usefulness of each type.

COLONEL HICKEY: Another possibility is to obtain the experience from

other states in the use of various types of police patrol vehicles. I believe some tests similar to that outlined by Chief Pryde have been run in a number of eastern states in past years and that this information would be available upon request.

Q. What is the value of warnings as an enforcement measure?

CHIEF PRYDE: To discuss the value of warnings as an enforcement measure, it is necessary to differentiate between the various types of warnings. The verbal warning has some value, but it is extremely difficult to measure. It should not be used to replace a written warning, but should be reserved for use at times when it is impossible for the patrol officer to issue a

written notice of violation, such as when he is assigned to point control of traffic or engaged in accident investigation. The written warning, if forwarded through the proper channels and made a part of the driver's permanent record, does serve a useful purpose in the enforcement program. Maximum effectiveness is possible only when suspension or revocation of the driving privilege follows the accumulation of a number of warnings by an individual. Warnings are not intended and should never be used to replace a proper arrest. If the violation warrants the issuance of a citation or an arrest on view, that procedure should be used, reserving the warning procedure for certain border-line violations or for use during the initial phase of a new part of the enforcement program.

THURSDAY MORNING SESSION

October 5, 1944

Joint Session, Traffic Court Group, Motor Vehicle Administrators, and Enforcement Officials

Presiding: HON. WILLIAM H. GILMARTIN, Judge, Corporation Court, Fort Worth, Texas.

How the Motor Vehicle Department Can Help the Courts and the Police

By JUDGE EDMUND B. SMITH
Municipal Court, Kansas City, Missouri

I shall not attempt to review the laws of the 48 states creating state motor vehicle departments, nor make an analysis of the judicial interpretations of these laws.

State motor vehicle departments usually have these functions:

1. The issuance of licenses for drivers of motor vehicles (and perhaps for the vehicles themselves);
2. The suspension or revocation of such drivers' licenses, either after a hearing on specific charges preferred by proper authority, or upon receipt of notice of final conviction of a driver on one of a certain list of driving offenses set out in the appropriate statute;
3. The keeping of records of convictions or violations, or perhaps both, as furnished by reporting authorities.

4. To these functions might be added the keeping of accident records, with proper classification as to whether fatality, personal injury or property damage resulted.

State motor vehicle department heads can help the court by devising and placing in effect simple, standard forms for the reports which the courts are required to make to them. Anything which tends to shorten the work involved in preparing the report will be of benefit since it will encourage full reporting of all essential matters. Too often a court clerk is discouraged by a lengthy and involved form, is strongly tempted "to skip it," and as a result, no report at all is forthcoming, or if one is made, it is so sketchy and inadequate as to be almost useless. Forms should be clear and understandable, and as short as possible,

consistent with eliciting the required information.

Again, progress can be made by reducing the number of forms in use. If the department has been using two for court reports, a study should be initiated to see if perhaps they cannot be combined and one workable form substituted for the two. I strongly recommend that forms for reporting convictions be devised by the Motor Vehicle Department itself, and that the matter and content of reports be not left to the individual judgment of each reporting court or enforcement agency. The drawbacks of the latter system (lack of system would be a better name for it) are so apparent that no comment thereon is necessary.

Let us assume that your system of reports from courts is in good functioning condition, with short, understandable forms, and that you, Mr. Commissioner, are getting good cooperation from all the courts in your state in sending these reports in promptly. From the standpoint of the judges, what is next to be desired?

For one thing, I hope that you have a system where the names of all licensed drivers in the state are set up on cards, and that you post promptly (and how I want to emphasize promptly) from your reports to your cards all convictions, violations, suspensions and revocations. Then you will be in position to answer when you get any inquiry from a court about the record of a driver who is before that court for sentence, and better yet, the answer will be up to the minute.

In many jurisdictions, the courts do not have the power to suspend or revoke drivers' licenses, and such suspension or revocation is accomplished by action of the Motor Vehicle Commissioner either on recommendation of the court in which the driver has been tried and convicted, or in some instances, after a hearing on charges preferred by police authority, generally state police. In such case the Commissioner should act promptly when he gets a recommendation from a court to suspend or revoke a driver's license, and only the gravest of reasons should impel him to withhold such action after he has received such a recommendation. I mean this latter comment to apply only in cases where the Commissioner is given by the law a discretion

as to whether he will or will not suspend or revoke the driver's license after conviction of certain offenses has been reported to him.

Since courts should have, and do have, the public welfare very much at heart, anything done in the operation of the Motor Vehicle Department which promotes the public welfare is of benefit to the courts. Therefore, motor vehicle commissioners who operate under a state law which vests considerable discretion in their department as to the issuance of driver's licenses, will be serving the public and the courts if they require something more than a perfunctory written application and a fee from the applicant. Actual driving tests with skilled observers accompanying the applicant will keep many an unfit driver from procuring a license to drive, thus preventing many accidents and injuries, and saving many lives.

For several years now, we have had in this country a splendid program for the improvement of the administration of justice by improving traffic courts, under the joint sponsorship of the American Bar Association and the National Safety Council, with other interested organizations participating. Regional conferences have been held all over the nation. Kansas City is proud of having been host to the first of these conferences, and again, this year, such a conference was held there in connection with the Central States Safety Congress. Much good has undoubtedly been done at these meetings, but I am sure that much more could be done if we could get the people who so far have not attended, to come to one of these conferences. And this is where the head of the State Motor Vehicle Department enters the picture.

Motor vehicle commissioners and superintendents of state police can give leadership to the program of improvement of traffic courts. Since theirs is a state office they can take the initiative in arranging for state meetings or regional conferences of traffic court judges, prosecutors, and police, where the problems of traffic law enforcement and the adequate functioning of traffic courts can be thoroughly explored. What must be done is to widen the circle of those who are interested in the subject. Every time we get a judge or a prosecutor or a police official to come, for the first time, to such a conference, we are making

progress. Still further progress will be made when they attend not just once, but many times. A motor vehicle commissioner cooperating in sponsoring such a meeting, should be able by the very prestige of his office to get a larger attendance of the right people, than if the meeting were held without his cooperation. Many judges, prosecutors and police officials do not receive large enough salaries to permit them to come to conferences at their own expense. Here again the motor vehicle commissioner may play an important part, for

a letter from him may persuade an otherwise reluctant mayor and council to pay their expenses to the meeting. Many municipalities want their traffic courts to keep abreast of the times.

May I say that in my opinion the closer motor vehicle departments, the police and the court work together, the better will the results obtained be? The problems of today are large; the problems of tomorrow will be staggering. With cooperation all three groups can meet and solve them, of that I have no doubt.

How the Courts Can Help the Motor Vehicle Departments

By W. L. HARDEMAN

Director, Motor Vehicle Division, State Highway Department, Columbia, S. C.

There is no end to the war against preventable accidents. We all realize that in this struggle for all-out accident prevention, we face a continuous job demanding the most effective use of every weapon at our disposal. Emphasizing the imperative need for a more efficient and improved use of the enforcement weapons shall be our purpose in considering "How the Courts Can Help the Motor Vehicle Departments."

The work of the police, the patrol and the prosecutors and the efforts of those responsible for driver control stand or fall before the Bar of Justice. The traffic court truly establishes the standard of public acceptance of traffic law observance.

Traffic cases in many of our courts do not fit into the regular course of business and consequently do not receive the treatment warranted in the minds of the motor vehicle administrator.

The need is apparent of informing our courts of the necessary needs of those directly concerned with bettering conditions on streets and highways and, in turn, we should expect in time that the traffic case will be accorded distinct treatment or at least gain a place of equal importance with other cases on the docket.

Methodical and impersonal procedures in traffic cases will extract fines—a certain number of fines will raise enough revenue to satisfy the budget that has been set up for the operation of the court—but such procedures are not conducive to better un-

derstanding of traffic problems. Neither do they contribute towards the education of our citizens as to the responsibility which they have in connection with the operation of their vehicles.

Leniency at the hands of the court develops an indifference on the part of the traffic law violator. Little or no headway is made in the correction of the violation-prone violator who realizes that his chances of escaping with a light fine in the traffic court are good.

There are many concrete examples of such leniency. There are cases of repeaters or consistent violators, with minimum fines levied on second and third offenses. These offenders, to whom the payment of small fines mean little or nothing, continue their bad driving habits until the accumulative violation limit is reached and they are removed from the road by the suspension of their licenses.

Loss of operating privilege—serious under any circumstances and especially so when a livelihood depends on the operation of a vehicle—comes as a decided blow causing a mental repercussion of lasting proportions. The imposition of heavier fines for second and subsequent offenses would in most cases act as deterrents sufficiently strong to make correction at the proper time.

We find that forceful business-like administration of justice, together with fair and impartial treatment of offenders, definitely builds respect and good will for our

entire program of traffic control. On the other hand, lackadaisical procedure, leniency and discrimination often result in deficient attitudes and poor cooperation.

The backbone of any driver improvement program depends upon the records maintained on the individual operators. Therefore the courts, as the prime source of this material, can add materially to the effectiveness of the program by furnishing promptly court records on all cases involving infraction of motor vehicle laws.

Apparently not clearly understood by our magistrates, justices of the peace, and other trial judges, these records are of paramount value, and practical plans making them available for use in connection with the driver improvement program should be established.

Citing our own experience, records of the conviction of intoxicated drivers, hit and run operators, and others that are considered the most serious cases are as a general rule transmitted. Holding equal importance are the records of convictions for reckless driving, speeding and other numerous moving violations often considered of minor importance but which contribute largely to our accident problem.

Much can be gained by establishment of a uniform and regular reporting by the traffic courts to the state motor vehicle administrator, of cases handled, disposition and sentences imposed, cases undisposed of, cases appealed or continued, and accident facts brought to light. With this information the administrator can measure, to some degree at least, the effectiveness and efficiency of such traffic regulation that comes under his supervision, procedures and departmental practices, patrol enforcement and other control measures.

Of prime importance to the motor vehicle department are reports of cases involving accidents. In these cases information concerning the details of the drivers' actions and a report on the responsibility for the accident as determined are especially helpful.

The trail of out-of-state drivers and follow-through action also merits consideration in this respect. It is desirable to furnish the home state of such drivers with copies of conviction records for motor vehicle offenses so that disciplinary action can be

taken by the motor vehicle administrator of the driver's home state. This exchange of information is now being made quite successfully by a number of our states.

The conclusion has been reached that in the effort of driver control, the suspension and revocation of driver licenses is a function of the state authority administering motor vehicle laws.

Because the punishment involved in removing an operator from the road temporarily is so effective and because judges are often in a position to ably determine the proper application of this measure, it is felt that provision should be adopted by those in authority to make judicial recommendations effective, or at least to provide recommendations to guide and support the action of the administrator.

Traffic courts in appreciating the value of this type of punishment, in recognizing the program of driver improvement apart from the immediate punishment of the violator, and in realizing the need for removing the repeater or accident risk from traffic circulation, can contribute much in furnishing trial court information and recommendations helpful to the administrative head.

Another contribution that can be made by the court deals with the continuance of cases, appeals and suspensions. It is essential, when dealing with the traffic violator, that cases be handled with expediency and promptness. To the Motor Vehicle Department this position is of vital importance.

Too often, continuances are a favorite form of "fixing" and frequently are designed to avoid trial. It is recognized that in many instances they are found desirable and proper, but postponement not only creates difficult problems for officer and motor vehicle departments, but all too often results in non-disposition or pigeon-holing of the cases.

The practice of "suspensions" of sentences is most disappointing to the enforcement officer, who often would accept with better grace and understanding a direct acquittal. To the motor vehicle administrator, particularly if he holds the responsibility of directing enforcement policies and is concerned with recording driver action, suspended sentences are most confusing. These suspensions, holding a disturbing sameness in character as compromises, are

generally looked upon as detrimental to traffic law enforcement.

It is quite true that many judges are apparently not concerned with safety. Many through thoughtlessness fail to visualize the seriousness of any offense which does not result in an accident. Still others consider the function of license suspension or removal of an operator from the highway wholly a responsibility of the state in which they have little or no direct concern. Much can be done by our courts to help the motor vehicle departments in the effort to develop public realization and consciousness of the inevitable result of continued violation.

The application of rule-of-thumb fines and penalties for similar offenses (when existing conditions, attitudes and past records are ignored) contribute toward the expeditious completion of the docket but avail us nothing toward the development of a desired public reaction.

The court faced with the necessity of imposing a penalty, with clear-cut evidence of violation under review, has an opportunity to greatly assist our safety educational program. Judges having the opportunity of giving thought to the personality of the defendants before them can ably present a lasting lesson in pointing out the fallacies in the driver's line of thinking.

One recommended aid is the traffic board, diagram chart, or blackboard to enable the officer, witness or defendant to depict accurately what took place in a violation or an accident. Diagramming the question under consideration aids all in determining responsibility, guilt or innocence, and brings out in court the understanding desirable of the relationship between violations and accidents with the traffic responsibility portrayed in high-light consideration.

The judge must see that the defendant leaves the court room with a wiser outlook. The driver who does not receive a thorough understanding of the seriousness of the practices under review will lack a knowledge of the fate he tempts by dangerous driving habits.

To have the violator leave the court thoughtful and cooperative indicates the best possible administration in traffic law enforcement. To further have him leave "wiser" if perhaps "sadder" is certainly a gain for all.

In traffic safety, we are rapidly developing improved standards in driver licensing, police enforcement methods, speed zoning on hazardous sections of roadways, driver education and driver training programs. Vehicle inspection has continued with improved procedures in many states and definitely will continue to hold a spotlight position.

The most encouraging recent development toward uniform procedures, a better understanding among all agencies concerned with the regulation of traffic on the highways, and a more profound appreciation of the work being done to make our people safety-conscious is the program of traffic court conferences being held from coast to coast.

Much good is certain to accrue from such state conferences bringing together judges, lawyers, and traffic enforcement officials, and much good can grow out of meetings such as this where we study together our mutual problems in the campaign against accidents.

Improved practices and procedures in the court handling of traffic cases, where improvement can be made, will bolster the efforts of the motor vehicle departments and the police, and will be reflected in the final results.

Working Together for Safety

A Panel Discussion

Panel Leader: LEE C. RICHARDSON, Director, Motor Vehicle Division, Department of State, Lansing, Michigan.

Panel Members: WILLIAM GLASHEEN, Acting Head, Motor Vehicle Referees, Bureau of Motor Vehicles, Albany, New York.

CAPT. W. L. GROTH, Safety Engineer, Virginia State Police, Richmond, Virginia.

CAPT. LLOYD W. HENKEL, Police Department, Charlotte, North Carolina.

JUDGE ROY H. PROCTOR, Superior Court of Dane County, Madison, Wisconsin.

MR. RICHARDSON: There should be a close working arrangement between the courts and the various state departments involved in traffic enforcement. Our panel will try to throw some light on ways and means of achieving this cooperation.

MR. GLASHEEN: There is a great need for reporting convictions. For example, in New York State certain cases require mandatory revocation of license. All serious offenses are recorded against the driver. After three serious violations the license is revoked.

It is necessary for convictions to be recorded so that proper action for revocation can be taken by the administrator and the poor drivers eliminated from the highways.

Judges in New York State are required by law to report convictions within 48 hours and are subject to a fine if the conviction is not reported. The failure of bond is considered a conviction and is recorded as such. The administrator is empowered to suspend or revoke drivers' licenses.

The Department has several referees who hold hearings on the suspension or revocation after violations are reported. These referees make their recommendations and the administrator suspends or revokes a license upon the basis of these recommendations.

The order of suspension or revocation may be appealed by the violator to the Supreme Court. Where the law requires that the license be revoked upon conviction of a certain offense, the judges will often take up the driver's license if he is convicted of such offense and send it to the Motor Vehicle Department to be held until the hearing on suspension or revocation. This is really extra-legal, as the judges have no authority of law to take the driver's license and no one but the administrator may revoke the license.

CAPTAIN GROTH: The Motor Vehicle Department should keep a record of all convictions and keep the record up to date. If convictions are promptly reported, records are then available so that the police officer may get in touch with the Department and know whether the violator is a regular and consistent violator of the law. This record is made available by police short-wave radio, which is now in use in many states and will probably be in use in

all states before very long. Records are also made available to other states where so requested.

Furthermore, if the record is kept up to date, it can be introduced in court at the time of sentencing a violator for the purpose of enabling the judge to determine a proper sentence in view of the past conviction record. Judges are not authorized to pick up licenses, but when revocation is mandatory, the judge will take the license.

CAPTAIN HENKEL: A police officer must be permitted some discretion in making an arrest. If he felt that the cause of traffic safety would best be promoted by not making the arrest, especially in a case where the circumstances were extenuating or when there was some question as to whether or not a violation had occurred, the officer would have the right not to make an arrest.

Discussion

Many of the judges thought that this was trying the case on the highway; that the officer should arrest the violator, charge him with each violation which was noted, bring him into court and let the court determine the guilt or innocence and also the penalty to be imposed. Some of the judges, however, supported the police officers and felt that if the judge was to be allowed discretion in disposing of traffic violations, the officer must be allowed some discretion also.

However, this would be only in cases where there was some doubt or extenuating circumstances and would not be in cases where there was clearly a violation and a serious one. It was noted that in view of the fact that a court cannot try a person upon any charge with which the violator has not been charged, the officer must be careful to list every possible charge on the ticket and allow the court to determine which charge the violator was guilty of as a violation.

CAPTAIN HENKEL: There must be full cooperation between the judges, the police, and the Motor Vehicle Department. The judges must be prompt in reporting convictions and where the court finds a violator guilty should assess an adequate penalty.

CAPTAIN GROTH: Those in charge of accident statistics should make it their

responsibility to see that the judges have available the results of accident study. Judges will best know how to conduct their courts and give adequate and proper penalties and know the problems which arise in arresting violators when they have before them full and complete accident statistics.

JUDGE PROCTOR: In Wisconsin the reporting by the court of convictions is mandatory and the Department has supplied uniform forms upon which reports can be made. However, the justices of the peace are not cooperating in making these reports and are not making them promptly.

Reporting of convictions is just as valuable to the trial judge as it is to the Motor Vehicle Department, since the judge cannot assess proper penalties until he has before him the previous conviction record of the defendant—and having a complete record depends upon the cooperation by all the courts of the state.

Not only must penalties be adequate, but they must be consistent according to the circumstances of the case. A lot has been said about uniform penalties but what is really meant is consistent penalties, uniform to such extent as it is possible to bring about uniform standards among the judges so that they may weigh equally a given set of circumstances in connection with a particular case. This is a long-range objective of good judicial practice in traffic law enforcement, and discussions with enforcement officers and motor vehicle commissioners such as this is an important step toward realizing it.

Discussion

It was suggested that at the next Congress there should be a thorough discussion of adequate and uniform penalties. Judges are thoroughly aware now of the need for uniform and adequate penalties, but they have never really gone into the matter of

determining what penalties are adequate and what degree of uniformity can be established for given offenses.

Summary

MR. RICHARDSON: Perhaps I can summarize the discussion under three headings as follows:

1. *Simplified Records.* After listening to the panel members and to comments from the floor, it appears to me that there is a great difference in the type of conviction records kept by the states, and National Safety Council research might well develop a suggested uniform simplified record for all these states.

2. *Post-War Problems.* It would seem that all of the states should prepare themselves to meet the increased driving problems that will follow the war. Thousands of automobiles that have not been in use because of the war will be returned to the highways and several million discharged soldiers must be relicensed as operators. In my opinion, even though there may not be a change in the driving habits of either those civilians who have not been driving during the war or of the veterans, the mere fact that so many more automobiles will be in use will unquestionably send the accident curve up. The administrators, the law enforcing officers, and the courts should be prepared to meet this post-war problem.

3. *More Frequent Meetings.* Expressions by individuals during the discussion indicate that the three groups participating in the panel are not in all states working as closely together as they might, and it therefore appears that frequent meetings of the law enforcing officers, the administrators, and the courts should be held for the exchange of information and ideas that would result in a better understanding of each one's problems and a consequent better administration of the highway safety laws.

THURSDAY MORNING SESSION

October 5, 1944

Joint Session—Public Safety Education and Traffic Education Association

Presiding: **CHARLES D. VINCIGUTS**, Director, Safety and Education, The Ohio State Automobile Association, Columbus, Ohio.

The Use of Radio in Traffic Safety Education

By **FRANK R. STEEL**

Columbia Broadcasting System, Inc., Chicago

I am in here to give you an inside view from the radio standpoint on how radio may be used for safety work without any cost to the safety promotion interests. By that I mean that there is a great deal that radio can do, and which it is very happy to do without any charge, even though the broadcast upon which the information may be given may be a sponsored program.

That divides the help from radio into two distinct groups; radio as you people know is largely sponsored by various advertisers, but, unlike newspapers or magazines, the radio itself has to furnish the editorial or entertainment portion of the program. In newspapers and magazines, the magazine or the newspaper furnishes its own news, its own editorial matter, its articles and stories and everything else that causes the people to read it. In radio, however, there is no reason for anybody to listen except for the program which partially or wholly is in charge of the sponsor of that program, if it is a commercial program. On the other hand, a certain proportion of the radio programs of the country are what we call "sustaining programs." Sustaining programs are programs which are not paid for by a commercial advertiser. They, however, cost money just the same as the others.

Those programs, therefore, are paid for by the local station or the network which puts them on. It makes a very distinct difference to your people going to the radio stations or networks to get safety information on the radio, because if it is a sponsored program, then you must work either directly with the sponsor or closely in conjunction with the people of the station and the network who are handling the commercial programs. If it is a sustaining program, you merely go to the educational

or program departments of the stations or the network.

In getting information on the radio, it is important to remember that radio is the medium of all advertising media that uses emotion most and best. By that I mean that you listen to the radio not entirely to get information, but because of the use of dramatizations and the use of the human voice. Radio uses emotion much more easily than it can be done in printed black and white advertising or articles. That means that the emotional angle of it should be used fully, and you people have a particularly favorable emotional angle—nothing could be closer to the heart than the safety of the American people, particularly the children in schools. So, you have a grand chance.

The first suggestions I have to make from the radio end is that the conditions will vary somewhat in almost every place you go, practically every station. It is very important that you have a contact person for the Safety Council work who understands radio and who understands working with people, because radio is particularly a thing of people rather than of machines. It is a big organization, but it is people all the way.

Dan Thompson, who handles the Safety Council's work here with our network and stations, and undoubtedly on other networks and stations, is doing a very good job. If anybody wants to know how to handle safety work in a way that pleases the networks and stations and gets a lot of cooperation and a lot of information out of the radio, Dan Thompson is a good example. He is doing a grand job.

The easiest way to get free information for safety work on the radio, taking the sustaining angle first, is to prepare short,

concise and interesting informational bits that you put on individual pieces of paper. They should be about long enough to take one minute of reading time. In radio we go entirely by time rather than words. It would probably be 150 words, or something like that. That will vary greatly according to how fast the announcer talks. If you are down south, you don't want more than 125. If you are up here with John Harrington or some fast talking announcer, you can take 185. A good way to do it is to put up this information on a series of sheets. Don't mark them for 9:30 at night on Wednesday, the 5th, because there may be some reason you can't get on then.

A good way is to say, "This information is good from October 1st to October 15th, or October 1st to November 1st," if that is the way it is. Some will depend upon the weather, the season, but get a series of these things that are available for one minute use and which can be cut down for 30 second use.

There are a lot of openings on the radio that are what we call "station breaks." That means that between every program there is reserved by the government's regulations, a 30 second interval in which the station announces what station it is, and then has a little time in there, usually amounting to about 20 or 25 seconds, in which you may put on information the station desires. Of course, those are sometimes sold, too, even that little 15 second spot is sold.

We sell them on WBBM. There are hardly any vacancies, but these little one minute and 30 second spots are good. If you have time to do it, you could even reduce your material to either 1 minute or 30 seconds, but it isn't very hard for a station continuity writer to reduce from 60 seconds to 30 seconds, if they have the material there, so it is very necessary that you furnish the educational department, if there is an educational department—that material.

If there is such a department I would always go first to the educational department, but also, contact the program department. The educational department is hired to get as much good educational material over the radio as it can. You don't need to be afraid to talk to members of that department. They are on your side

of the thing. That is the reason I'd go to them first.

The job of the program department is to keep the listening audience of that station as high as possible, because in radio all we are selling to the advertiser is a listening audience. We don't sell them any articles or anything of that nature, as you do in magazines or newspapers, so we have to protect our listening audience.

The program department—you will have program managers in every station of the United States; the big organizations have many on the staff, Columbia having about 40 or 50 here in Chicago—will have all kinds of experts on programs. You have to work with them enough to be sure that the thing you put over is interesting and fits in fairly well with their program ideas.

For instance, on these little things, try to get material with as much human interest as possible. There is nothing mysterious about radio as to what is interesting. The same things are interesting on radio as are interesting to people. The radio is just a mass of people listening, and you want things that are interesting. Don't get too statistical or too dry, because you must remember that it isn't like a magazine or newspaper, where they will pay some money to get it, and they will probably read some of it. For radio they never pay anything. They will turn the dial over. If it's not interesting they won't listen, so you have to consider that in everything you do.

After these little spots—the station breaks and the one minute businesses—the next size program that you may have is a five minute program. There are a lot of five minute units in radio now being used, and one very successful way to "load" if you can do it, is to prepare transcriptions in which you will give them a little five minute program. It usually is a dramatic program, with actors, preferably with somebody who has some name value to the audience he or she is talking to.

It may be anybody—a well known chief of police, a mayor, some movie actor, a radio singer. Name value gets listeners very greatly in radio, the same as it does in movies.

In these things, if you go to a station—this does not apply as much to a metropolitan station like WBBM or WMAQ or WAAF, but it applies more to the great

mass of medium-sized and smaller stations—it will usually run the five minute program, if the transcriptions are well done. You have to get some radio continuity writer from the stations or chains or advertising agencies, and have him prepare a script, say—well, a very successful kind. I think, personally, is something that gives the actual dramatization of a story founded on fact. Your scripts should be mixed partly with tragedies that occur because of improper safety regulations. But don't have them all tragedy. Because they need some good effect as in the efforts of safety patrols of schools or safety measures by the state safety councils and the National Safety Council.

Don't overlook the fact that you are not just doing educational work. You have got to keep the audience interested, too, so you are giving a little nugget of a play which includes the lesson you want to teach them. Don't get it too school teacherish or they won't listen.

The five minute spot is very successful and is used by the smaller stations quite well, if you bring it to them. Have some radio people in on it to work with you so you won't manufacture stuff that they won't take.

Then, in addition, you will find in some stations that they will have a fifteen minute period which they will devote. They may say, "At ten-fifteen in the morning we will put on a safety program." Usually these programs are done most successfully in conjunction with some local motor club, like the Chicago Motor Club, here, or some person who is recognized by the state motor vehicular people. In many cases they will start out and give the weather report, and they will tell where the roads are slippery, or "this road is bad" and "this road is good," and so forth—services that are useful, and then you tie your safety message in.

For the rest of the program, you will usually have someone on who is interviewed by various people and who will have safety messages. The success of that kind of program depends entirely on how good the masters of ceremonies and the people who are planning the program are. It can be a swell program. It can be bad. If it's bad, it won't stay on long.

There is one thing I should mention before I leave the sustaining program. You

will find that in working with your contact person and working with the radio station there are certain spots on other programs—half-hour programs or spots on fifteen minute programs—where a little safety portion is very acceptable and actually will help the program. You go on and tell them how to save the lives of their children. Everybody will be interested, so therefore you may put your plug in as just a portion of some program designed for entertainment. This method of presentation is very acceptable to the stations, provided the person who is handling it knows enough about radio and is cooperative and will work around the interests of the program.

Maybe you think I am emphasizing interest too much, but we get a certain type who come from the educational groups saying, "We've got to have it this way. This must be on like this. This is part of our thinking and format and stuff. We've got to have it that way." Well, the radio stations don't have to have it that way, and they will be courteous to them but they won't put on the programs. The stations tell them why but they just don't get it that way.

The way to do it is to go there and say, "Now, what are you doing here and how can we fit in?" Then you get a lot of safety in that way. It is much more successful.

Coming now to the sponsored programs, those who don't know much about radio are likely to think, "Well, gee, we can't get our stuff into these sponsored programs. These people are paying thousands of dollars a minute for it." It is a strange thing, though, that you can. A lot of it can go in and you can go in everywhere from the station breaks clear up to the half hour programs. As a matter of fact, WBBM, for example, has two types of station breaks sold commercially.

There are the 30 second spots which are sold commercially with the provision that no one can buy them unless they use the Safety Council material as the program portion of even a station break. They are run twice a day, six days a week on WBBM, in spite of the fact that our station is turning down orders for station breaks every day. We have orders for four or five times as many as we can run, but we think enough of it—this is typical of all

the stations' thinking—to say that they cannot be sold unless they go along with the Safety Council work.

Outside of those, you have one-minute pieces. You can get on them with a little safety material. Then there are the five minute programs, again, much like the sustaining type. Little dramatized playlets are about the best for them. Then there are the fifteen minute programs which can handle a safety spot. That goes particularly well with a news program. It goes well with sports commentators, and any other program of that nature, the talking type. It goes over with a lot of women's programs, bringing in the matter of protection of children.

That brings in another thing. I would, of course, thoroughly cooperate with the

school boy patrols, because they are very close to the hearts of all the people in any neighborhood, and it makes a beautiful tie-up. You can get almost anything you want for safety in the name of the school boy patrol. Practically no station will turn you down.

Then you have the same situation on the quarter-hour programs and half-hour programs, and on some hour programs.

That, I think, as far as I see it, gives you a brief outline of the way in which you can work radio to serve your own interests. The main message I want to leave with you is that the stations and the networks are very glad to cooperate on the broad safety angle, but that you must have your contact person work carefully and thoroughly with them.

A Panel Discussion

(Same Subject)

Participants:

Discussion Leader—C. D. VANDERKAM.

PAUL EDLUND, Safety Promotion Div., State Motor Vehicle Dept., Madison, Wis.

LLOYD D. HICKERSON, Div. of Public Relations, Indiana State Police, Indianapolis, Ind.

SIDNEY J. KING, Dir., Safety Div., Dept. of State, Salem, Oregon.

MR. EDLUND: Mr. Steel, in your mention of a five minute period, you spoke of a playlet or dramatization, but in Wisconsin, we use the straight talk. Now many people object to the straight talk, saying that they won't listen to it, but don't you believe that in the case of smaller stations, such as there are in Wisconsin—Beaver Dam, Superior, LaCrosse and others, for example. In LaCrosse, we have the Chief of Police, who is well known, come on the program. If you provide him with a five minute talk once a week, that would prove effective, wouldn't it?

MR. STEEL: Yes, there is no question about that at all. In the smaller stations they will take a greater amount of talk. They don't have to have as much showmanship and entertainment. The larger the

station the more entertainment you have to put on to hold the audience.

MR. EDLUND: Each week it is our policy in Wisconsin, in the State Motor Vehicle Department, to prepare a five minute script that is sent to the key law enforcement official in every city having a radio station. That official has the responsibility of giving that talk, either on an evening or afternoon program, or whenever the program manager can arrange it. We send out a postcard that he returns, telling us the time of the broadcast and the station and the date on which it was given, and if someone substituted for him as a speaker. Even that is indicated, so that we have a constant record of which stations are broadcasting.

Now, we have noticed that these talks will be given for three or four months and then be dropped for a season and then be taken up again. Well, that is all right, because there are at least eight to ten stations out of the 23 in the State using the material, so we prepare it every week.

In addition to their use on the radio, we find that these talks are helpful in the driver education courses in the high school. In a few papers they are even printed full length. The *Beaver Dam Daily Citizen*

prints these talks one time a month. Then, we have on our mailing list over 150 enforcement officers in cities not having radio stations. These officers are able to use that material which is up-to-date, for public meetings at which they are invited to speak. They appreciate the service, apparently, because we have many letters on file to thank us for them.

I just have one thing to say about these traffic announcements. I agree with you that the date should not be indicated, and yet in a number of states I know that the warnings each week have a date at the top of each one, one for Monday, one for Tuesday, and one for Wednesday and so on. But as you pointed out, if we talk about weather, on Tuesday you have, perhaps, a warning about rain and it may not rain until Thursday, and so it is better to leave the date open that way.

Another question I would like to ask you, Mr. Steel, is this: Should you indicate the number of seconds required for the reading time at the top of each one of these announcements?

MR. STEEL: Yes, it is a very good thing to put down that timing. It saves the continuity writer from timing it himself or herself, who may be rushed, but be careful that you do have the time right. Don't just take a guess by words. Actually time it.

MR. EDLUND: Isn't it also a good idea to have varying lengths—one rather long and another shorter?

MR. STEEL: One minute is the usual time. If you furnish two, have one at one minute and one at thirty seconds. Those are the two usual lengths.

MR. EDLUND: I think that is enough for now.

CHAIRMAN VIBBERTS: I am just wondering, Mr. Steel, apropos of Mr. Edlund's question, wouldn't it be better to say "approximate reading time" to take care of that variation?

MR. STEEL: Yes. As a matter of fact, our contract for radio time is done up for fifteen minute periods.

MR. HICKERSON: Of course, my interest has been from the police angle in this question. I don't know whether it will fit with your traffic safety people or not. It perhaps will, but one thing that Mr. Steel

mentioned, aside from the mechanics of the operating program, is the contact man. I have found, in a study of the relations between radio stations and police departments in Indiana, that the breakdown occurs because the police department does not have a man to fill that gap between the police and the radio people. There are any number of programs that have been started in Indiana, local and otherwise, that have failed because the police department, and that might be the safety people in your locations, did not provide the proper assistance to the radio station. About all it would provide was a bundle of figures every once in awhile, and perhaps on occasional speaker, and they leave the rest of the burden on the shoulders of the radio station.

Well, in a number of cases the program failed when the radio script writer, or the person who was pushing the program, moved to another assignment or left for another position, so the program then was on the rocks. I think that is a very definite need, as Mr. Steel mentioned, to have that contact man. He should be a man that would not only provide what the radio station required, but have an understanding of those requirements.

It strikes me that the police departments and perhaps the safety people—I won't go into that field—need to realize a new appreciation of the value of public relations, and that is, not only to the public, but to the people who put out your material, such as the radio.

Secondly, I found it is true in police departments, and Sergeant Berlin might agree with me, that policemen, because of the nature of the work, perhaps, are peculiar people. They have not too much faith in anything, and when some officers in a division start a program, the rest of the division might say, "Now, that is a bunch of bunk. Why should they do that?" So I think it is necessary to get the acceptance of your own department before you try to get public acceptance.

I know it has worked out in one Indiana city department that way. The traffic division was seeking to educate the public on a new change in traffic procedure, and they found some criticism arising from their own department, so much, that it was necessary to explain fully what they proposed

to do before they could go ahead, and once that was done, they had far less trouble than they had first experienced.

I do want to point out, I think, from the view of a state-wide organization, the value of the use of transcriptions. You can hit your smaller stations very easily, especially if you take on the five minute or fifteen minute programs. And you avoid, I imagine, a lot of production difficulties that way, especially if you have a cast of any size. I stress that in particular because it has been used to advantage in our State. There are any number of small stations that would be glad to use that material, and even request it. If you can fill their needs you have gone a long way in promoting safety.

It is not only the larger stations that can help you, but the smaller local stations do great work towards selling safety.

MR. SIDNEY J. KING: I think that one of the things we are more interested in, more than some of the other factors, and I think it might be something well worth consideration, is the fact that we are trying to get as much community cooperation in state programs as possible. We have found that if you bring four men from the Rotary Club of some small town into the station where you are going to broadcast, and put those men on the program either in the way of a question session or perhaps through interviews, or have them tell the story of what they are doing in their own town, it serves to increase interest in that particular program in the town from which these men came, and at the same time it very often makes those particular men safety conscious where, perhaps, they haven't been as safety conscious before. We like to do that as much as possible, and before the war we were doing it all the time, trying to get at least four men or women from various communities and have them come to our stations where we make our programs, the CBS station, and have them participate in the program.

We transcribe all those programs and then send them around the state. We have sort of a waxed mail network and the transcription goes around to nine other state stations. They are received very well by all the stations. Most of the stations in our state, outside of the larger towns, are quite small, of course, and a great majority of their programs are recorded. They find

that a fifteen minute spot that comes, sometimes, in the interval of the record makes a very nice program break as far as they are concerned.

Naturally, when the men participating in the program come from the town in which the program is being broadcast, you get a little better publicity break. Usually you notify the newspaper and refer to that particular hour in the town from which this program is going to be broadcast. We have used that in quiz programs and in connection with a program based on activity in the particular town.

We like to keep away from talking programs as much as possible. I'd like to hear Mr. Steel, perhaps, make a little more comment on what is good radio as far as listener interest is concerned. We have a feeling that this is quite likely to be—I wish I had some of Charley's words, here—perhaps a dull monotony by virtue of hearing one voice over too long a period. I am not sure what the length of that period might be, but I think that there is a very good possibility that you can decrease your interest by virtue of the listener just hearing one sound or one voice for a long period, longer than is necessary. We have tried to go on that premise and avoid that.

In avoiding that, we only stick to one voice or to a talking program when we have some name value, like one of the visiting firemen or some more or less prominent person. Otherwise, we break it down to an interview with at least one other voice, and very often try to break it down into at least a roundtable with three persons. Then, when we don't have a program with any particular person or any particular name for talking, we try to base it more or less on a dramatized narrative or a strict dramatization followed by a narrative. Broken down, again, into two voices; that is, one voice in one paragraph and another voice in the next paragraph, and try to keep it at a pretty rapid-fire pace, on the theory that you are more likely to maintain interest if you don't have a monotonous program or just that one voice coming all the time. We use sound effects quite a good deal, too.

I think, unquestionably, too, that that type of program treatment is not successful unless you have trained people. You

have got to have actors or voices who are really trained and expert, and if that isn't possible I think probably it is better not to attempt it. Most stations, I believe, have—those of the larger type—characters available either in the station or have, more or less, semi-amateurs around.

You have another opportunity, of course, in drama schools or drama classes in high schools or colleges, but I do think that all the safety programs should be kept on as much of a professional level as possible. They should sound as much like the programs that you hear over regular broadcast periods as you possibly can make them. The nearer, I think, that we come to that professional level, the more reception we are going to get. If it drops down too much to either decreased listener interest or in actual production value below the professional level, we lose interest and I think we are likely to lose the time on the air. I think these factors should be considered.

I would like, perhaps, to have Mr. Steel mention one or two things about the possibilities of getting writing talent. Where do you get it? In newspapers, you will often send your material in and they will assign a reporter. Will the radio do the same? Will they assign a writer to cover the material that you make up or do you have to go out and get a commercial man? Just how can you arrange that?

MR. STEEL: Well, with the larger stations, who are pretty busy all the time, it is not always possible to get a continuity writer assigned to your particular job. There will be one assigned, but it may be on a rewrite basis. For instance, here in Chicago the material that comes in to the Chicago stations is written by somebody in the pay of the Safety Council people, and this person—I don't know who it is—is undoubtedly someone who has had experience in radio, because they come in with a certain excellence in writing. They are not automatically done. That is the most successful way.

If you have to go to the station and say, "We have to take one of your writers," who is probably overworked already, to put this stuff on, you have one more hurdle to overcome. If you can get anybody to write them and you can pay them for it, that really is the best and most successful way to do it. There are continuity writers on

the staff of all stations so that talent is available, but it is usually much overworked, because it seems that in the management of stations, they usually will hire too few writers, or they can't get them, so there are never enough to go around. They are there but you can't get them. You have to work that out with the station manager.

You brought up a very interesting point as to whether it is better to use one voice or not. I think it depends on whether that voice is good or not. There is, as I said earlier, no mystery to radio. You just listen or not, according to whether the people are interested.

As for the one voice matter, there is a fellow by the name of Paul Gibson on WBBM who talks for a full hour every day except Sunday, extemporaneously. He doesn't have anything except notes. You'd say the hour was an ungodly hour, too, from six to seven o'clock in the morning, and yet that program is probably the most popular program, taken by and large, in the City of Chicago. He has 22 sponsors and a waiting list. He doesn't do anything but talk all that time.

MR. KING: You probably have that one Mr. Gibson in Chicago.

MR. STEEL: He is not common. Gibson and I went to the University of California and we became friends there. He came to see me in Chicago. He told me about this plan and I said, "For God's sake, Paul, you can't talk for an hour. They will throw you off the air."

"Well," he said, "I can just the same, whether you think so or not."

Ordinarily, given the same amount of professional ability, of course, there is no doubt that more voices make the program less monotonous. Therefore, unless you have some Paul Gibson, it is better not to have one man talk too long, and you are absolutely correct about one thing. If you are going to dramatize your stuff, you have to be sure your actors are good. There is nothing worse than a dramatization where the actor is no good.

There is one thing that you mention, there, on which I want to place a warning. There is an actors' union, AFRA, they call it, and this AFRA greatly objects to your bringing amateur actors, even on a sus-

taining program, who are not paid. If we put on a program, a dramatization that is not sponsored, WBBM has to pay those actors, including rehearsal time.

MR. KING: There are quite a few amateur people who are members of that.

MR. STEEL: Now, that doesn't mean you can't put on an amateur. When we put on an amateur in Chicago we have to hire a professional to sit there and be paid.

SERGEANT BERLIN: Is that true of transcriptions—a transcription made with local talent or amateur talent?

MR. STEEL: You couldn't even put it on the rack. If a station ran one of your radio transcriptions against AFRA rules, you'd get the station thrown off the air. They won't dare touch it at all.

CHAIRMAN VIBBERTS: Our speaker for this panel, and the panel members, have a chance to have a little say, and we are going to throw this open, this session of "It Pays to Be Ignorant." Direct the question generally or specifically to any one of the four members of the panel. We will throw it open now and let's have your questions.

MISS MARGARET WOOLVERTON (National Safety Council): I'd like to ask a question. Is there any way that a safety council can measure the listening audience that it has, if it has its own program? If it has a program, how would it go about finding out how many people are listening to it?

MR. STEEL: That is taken care of during the daytime hours.

CHAIRMAN VIBBERTS: The question is raised as to how the Safety Council can determine the number of listeners to any particular program.

MR. STEEL: I was answering that by saying that there is what we call the "Hooper Survey," which takes a survey of the listening audience all the time from 9 o'clock in the morning until 10 o'clock at night, weekdays, and Sunday from 12 o'clock noon until 10 o'clock. That measures the exact audience at all times for the stations, so if you happen to come into one of those parts you can get it. If it comes in one of the unsurveyed portions, you don't get it, except by special surveys. Columbia has what we call a "Diary Survey" that is made in all hours of the day,

but is only made in certain times of the year.

MISS WOOLVERTON: Is that survey made throughout the country?

MR. STEEL: Yes. Hooper is made nationally and so is the Diary. Of course, surveys can be made, but they are rather expensive. A survey will cost you probably—well, in Chicago, a survey will cost about \$500. These things are not cheap. The Hooper Survey, you see, takes those figures and then sells the service to stations and networks and advertisers and agencies. It costs about \$150 a year to get the service.

MR. KING: Of course, this won't give you anything like an exact idea of your audience, but one thing that can be done is to offer something on the program so as to see if you get any returns from it. If you get any returns at all, you know that you've got some listeners, and if you happen to get a fairly good little influx, as we happened to get when the National Safety Council put out their little pamphlet on House Canning Accidents, then you know it is all right. We offered to send that to anyone interested, and made the offer on the air, and we got quite a lot of requests. As a matter of fact, in our state we got something like 15 the following day, which I personally think is rather tremendous, and those requests continued over a period of approximately two weeks, and altogether we sent out rather more than 50 or 60, which I think is quite a high request for that type of program in our particular state.

It does show you that you do have some listeners, and it is one way to find out whether anybody is listening or not.

MR. FABER (Iowa): I'd like to be enlightened a bit about the professional people using safety programs. Probably I am the only one who didn't understand him. I think that in this safety work, by using the radio to get Bill Jones to get Mary Smith to walk around the street correctly, and using the professional programs like Rinso White or Clark's Teaberry, makes you lose that personal appeal.

MR. KING: I think what I was trying to say was that the program should be kept on a professional level, and that means that they should be as good or nearly as good as the program that you normally hear over professional periods on the air. I think

that is what I said or what I meant to say, at any rate.

MR. STEEL: The other question, if I may answer that—I think I understood the question which you had in your mind I think, as to whether it is a good thing for the safety message to be tied up with commercial programs. I don't agree that it will hurt you any to be tied up with Rinso White or any other program, food or anything else, once it is properly handled. In other words, if the announcer does it properly everybody knows that it isn't Rinso White talking, anyway. You get it in such a way that the authorship of the information is clearly given, and I would not, by any means, decline to go along with any free time given on the commercial programs.

MR. J. MURRAY (Dallas): I'd like to know if you find any difficulty where you have more than one station in town, several stations that you might use. There is some sort of jealousy between newspapers and we find the same thing existing in radio, and it is a little bit difficult to get cooperation.

MR. STEEL: We don't find much of that in radio, as far as I know. I can't answer for everybody because there are a lot of stations. There are 600 or so. There may be some times when that would apply. I think, however, it would only occur where you have some program that has been very carefully worked out by the safety people and was really desired and had unusual listener interest. You know, if you had somebody who was a big star on the radio, Phil Baker or somebody, come out there, you might have jealousy as to who got that one, because it is very unusual. It is generally considered a good thing to do something for the safety people, for the good of the community, and there isn't usually the jealousy angle involved in that sort of service as much as if they got paid for it.

MR. MURRAY: I was thinking, particularly, of campaigns where you had something in which you'd want to get all the radio time you could for some particular period.

MR. STEEL: You mean, one station would get more credit because of having it exclusively. Well, I wouldn't think so, from your angle. I would, from our angle,

yes. If I were running something and I could get it exclusively, I might like it, yes, but from your angle, I wouldn't think it would be good for you to do it, because then the rest of the stations are going to be sore about it, and you will get yourself in wrong with all of them to get in better with one of them. I wouldn't think it would be a good policy.

MR. MURRAY: You'd try to put over the same thing with all of them on that?

MR. STEEL: You'd have to be impartial.

MR. MURRAY: We have it a little bit complicated. We have a municipal station.

MR. STEEL: Oh, I see. Well, it should be impartial, regardless of its being municipal. The safety people should say, "We will give it to the municipal station and the other stations." I wouldn't play any favorites, even there. I think it would be a mistake to do it.

THE CHAIRMAN: Any further questions?

MR. STEEL: Have any of the safety people here had any difficulties in working out dope with the stations and getting your stuff on?

ANSWER: We haven't been able to get the program started. Our pedestrian deaths in Akron are very, very high. What would be your suggestion of how we can start it, very briefly? Where should we go first?

MR. STEEL: Well, I think you should go first to your Akron stations, and to the various program directors, and the education departments, if they have them. I'm not sure whether the Akron stations have them or not, but go first to the educational director or the person in charge of educational work on the station, if there is one. If there isn't, go to the program director, and talk it over with him and say, "Now, this safety work is tremendously important and worthwhile," and you will find that they will—see, I know, and then say, "Well, look, we would like to furnish you some safety material," those one minute spots which I mentioned, "which you can put in at your discretion in any open spaces you have, and we strongly hope and urge that you put them in." You give them material and let them pick the time as to when to put them in. If you go about it

in the right way, I am sure the Akron stations will cooperate.

I have done a lot of advertising in Akron stations. They are mostly live wire people, and I am certain they'd give you good cooperation, providing you will furnish them with safety messages about one minute long, for them to put in when they can. But, if you go to them and say, "This is a fine thing to do and you do it," probably, they won't do it. If you go to them and say, "This is the thing to put over, these little messages, and we'd like to have you take these and put them on," I think it is almost a certainty that they will do it.

MR. WHEELER (Portland, O.): Assuming that your local stations would offer you a fifteen minute program, and again, assuming that your local safety council had up to ten thousand dollars just for that one program, could you give me an outline of what would be the ideal program? I know that no local safety council has ten thousand dollars. Could you give me an idea as to what, in your opinion, would be a good safety program?

MR. STEEL: If you had that much money to do it, I believe a program could be designed and written that would be good. First, I would get the instances that you wanted, dramatized. I'd make a dramatization for fifteen minutes with professional actors and professional writers of these playlets, and take on each one the actual story, the story of the boy or girl who was hurt, or who was saved. Base them on actual stuff, but pick stories that have dramatic value. You have to have dramatic value as well as authenticity.

Have it written up by someone who is a good dramatic continuity writer, have it dramatized, and if the person was saved, get him or her on the program, at the end.

One very successful way of doing that nowadays that saves you some money, even if you have ten thousand dollars, is this: You can have a narrator do it with sound effects and music. You can do it with an organ and a sound effects man and a narrator. It doesn't cost you much money in any station in the United States. There is no station that doesn't have an organ and sound effects and music. They have to have that to run a station.

It is a very modern way of doing it. It

is done on the biggest stations. You can put over a fifteen minute program that is very good, if it is well written and your narrator is good. You can put on a program with tremendous emotional value, and much more so because it is founded on facts. I think if I were doing that with money anywhere from one thousand to ten thousand, I'd do it that way.

MR. MURRAY: That would be economical.

MR. STEEL: That wouldn't cost much. You could probably get the money donated. Speaking about donations, I think having a worthwhile idea like that is good because you can probably go to some civic-minded people in your town and get money put up to hire the actors and get a little music and that sort of thing. If you have a specific plan it isn't hard to get the money.

MR. KING: Mr. Steel, that is essentially what we do in our programs, and the station takes the program and runs it without any program charge. It is run as a public service program, and we have to pay the cost of hiring the actors that they get. We have to pay the cost of the records and the cost of the transcription, so we get four fifteen minute programs a month for a cost in the neighborhood of from \$35 to \$40.

MR. STEEL: That's right. You can get it at very little cost. The cost is not really a stopping point. If you have a good idea and somebody to handle it properly, you can manage it.

MR. MURRAY: One good program a week is better than one daily program of mediocre value?

MR. STEEL: Yes, one good one a week is better than six poor ones, a lot better.

MR. HICKERSON: Mr. Steel, whenever the FCC puts them back on the air and we get permission to do that, what do you think of the value of the "Man on the Street" interview? That is, the interview with the person right on the street? It could be a sponsored program, I suppose?

MR. STEEL: Yes, it can be sponsored. It is a very good kind of program, when the FCC allows you to do it. They don't allow you to do it now. I put over a successful interview type of program in half a dozen cases. Again, it depends entirely on your interviewer. If the interviewer is

good, quick and natural and fast, why, you will get a swell program. Of course, if he is a dud, you have a dud program.

SERGEANT BERLIN: I'd like to get your reaction to this: I'll have to give you a little background for you to understand this. In Illinois we are planning to sponsor a contest among our students in the 600-odd driver training courses in the high schools. We have daily contact with our high school students through assembly programs, demonstrations and so forth. We have played with the idea of having all of these 600 driver training courses for a certain fifteen minute period tune in to a station which will reach the entire state. If we were to come to a major station and say, "We would like, because of the strength of your station, you to assist us here in getting the winner to talk to the others"—what would be the reaction from the public service standpoint?

MR. STEEL: I think you could get it done, if you went to a station like WBBM or WMAQ. This would be what we call a "Special Events" program. For instance, you had a National Safety Council talk yesterday afternoon on CBS. That is a good example, nationally instead of locally. That took off a regular program. They were glad to put it on because there was enough general interest to make it worthwhile. I am sure this could be put on if

you go to the special events people and sell them on the fact that your program has enough interest. They will judge partly on the fact that it is worthwhile to do so to help safety, and partly upon the interest of the thing. It will depend a lot on how you work it up. I think it's a good idea.

SERGEANT BERLIN: There is a guaranteed listening audience there, whether they like it or not. The kids will have to listen to that program.

MR. STEEL: Not only the kids. All the mothers and fathers and sisters and brothers. They will listen to it. I think you can do that with the special events department.

MR. KING: I don't know whether other states have it, but in our state we have a state-owned station and this state-owned station has programs directly wired to school classrooms for consumption. I think other states do that, too, to some extent. We prepare a script for this school hour every week and that goes directly into the schools. Maybe if you have such a thing it might channel through that, if there is no other channel.

MR. EDLUND: Wisconsin has the same idea. It is the College of the Air, as they call it. They use safety material on that.

MR. STEEL: You can get that on the School of the Air on WBBM.

Use of Films and Motion Pictures in Traffic Safety Education

By IRVIN E. DEER

Field Representative, Motion Picture Producers and Distributors of America, Inc., Evanston, Ill.

One of the interesting things in a meeting of this kind is to draw attention to the fact that the so-called Hayes Office, as somebody said, is a Muc-nosed board of censors. Most people seem to think that is about all that we do. That is just one of our many duties. As a matter of fact, we didn't take that job over until 1934, and our organization was started in 1922, although from the very beginning Mr. Hayes has been popularly known as the "Czar" of the movies.

The Community Service Department of that organization is an organization division

that has been set up for the purpose of cooperating with all sorts of groups in which we feel that we will be able to render a service.

I have jotted down a few notes so that I can get through quickly here, because I think that the discussion part of the meeting is always the most valuable. I put down three things that I should like to say as a general background.

The first is that no matter how much we perfect our mechanical equipment, and no matter how much we may develop our traffic engineering, and those are both neces-

very, in the last analysis the safety and traffic situation will depend upon the human element.

The second thing is that if we are to place our emphasis on the human element that means that we must have a continuous program of education, and in that program of education we must use the best possible techniques.

In the third place, being a representative of the motion picture industry, you would expect me to say that I consider the motion pictures one of the very important techniques which can be used.

As a matter of fact, the use of motion pictures by the government during the war has indicated as never before how valuable that technique is. The tremendous problem that confronted the nation in training the millions of men and women who came into the armed services out of civilian life was recognized by very few people. The very complicated apparatus with which modern warfare is waged, the problem of the numbers to be trained, soon led the government to adopt a technique of using motion pictures in training.

Records have been kept and in many of these processes we discovered we could save as much as 20 per cent of the time in training. In other words, when, as happens in some processes, we save as much as 80 per cent of the time in training, the overall average is 40 per cent. That indicates very clearly that this is a potentially good technique, and I believe that it will be tremendously expanded when the war is over and these millions of men and women in the armed services return to their communities to participate in the community life.

Naturally, we feel that particularly on the screens of the 17,000 theaters of the country we have an opportunity to reach a very large number of people. The general estimate now is that we have approximately 29 millions of people who go to the movies every week, and there they can see only what we want them to see because everything is darkened and they see only what is lit on the screen, and I would like to call attention to this fact, which was emphasized by Mr. Steel, in regard to radio. The same thing is true in any type of education, and particularly true of motion pictures, the thing that makes that a very fine medium

for education, namely, that the presentation is always dramatic and that it appeals to the emotions, which, after all, is a very important matter.

We need to appeal to the intellect, naturally, we need to get our information across, but in order to get action we must appeal to the emotions, and that we can do pretty well with a motion picture. Of course, traffic is motion. Motion pictures are motion, and consequently, they are probably a more effective, a more appealing method in technique of education than the spoken word, which our preceding speakers have indicated sometimes can be very dull, and certainly we have the attention of the people as we do not get it any other way.

We have been very greatly interested in the work of the National Safety Council through the past year, because they went at the thing in a way that Mr. Steel indicates is a good way to approach radio, namely, the motion picture committee that was formed first of all, outside, I believe, the National Safety Council, although, of course, including the people who are here, representing automobile companies and insurance companies.

That motion picture committee came to the industry, the motion picture industry, first, not with a request that we do something for them, but with a request that they be permitted to cooperate with us and that they do something for us. They presented statistics which indicated that through the natural, normal processes of propaganda at their disposal, they could reach no less than a few million people with messages through their publications, bulletin boards and little fillers and envelopes and all that sort of thing. They suggested that if there were sequences in motion pictures that were significant and vital for education and safety in traffic, largely, although other fields were included, that they could help publicize those pictures and draw attention to them.

Naturally, our industry was very much interested in that. Through the past ten years we have had very fine cooperation. We believe that the work of that committee has been very effective in drawing attention to those sequences and, consequently, teaching a number of people to see what they look at. The motion picture goes very rapidly and we know that there is very

much in every picture that the vast majority probably of the audience doesn't catch.

I believe that the annual award by the Safety Council for the best motion picture presentation of safety has been a very valuable thing. Colonel John Stilwell, just a short time ago, in the City of Washington, presented the annual plaque which was received by one of the officers of our organization in behalf of the Metro-Goldwyn-Mayer Studios and Pete Smith. That plaque is 1943, which was the year for which that award was most recently given, was for the Seventh Column, which was Pete Smith's very delightful and very informative and very impressive picture on accidents.

Then they have two honorable mentions. It seems that Metro-Goldwyn have the honorable mentions, also, for a sequence in "Swing Shift Maisie." Those of you who didn't see that picture may not recall that in one of the sequences one of the girls objected to having her head covered. She didn't like to have her hair all tied up because that interfered with her glamor, and her hair was caught in the machinery. You remember that little sequence, those of you who saw it.

The other safety honorable mention went to a picture made by Columbia called "Good Luck, Mr. Yates."

I think that committee has become an integral part of the program of the National Safety Council. The secretary of that committee for the last ten years deserves a lot of credit, because as a stimulus for the work of that committee there have been a lot of motion pictures made.

Motion pictures can do a great deal more than many other things in a number of ways. I was interested recently, in the matter of advertising. We have to be careful, of course. A very delightful picture, which, incidentally, is doing 400 per cent of normal business all over the country for an average, was "Going My Way." After the church had burned down and they had the thing sort of put into temporary shape to be used, it was rather interesting that the old priest comes up and very lovingly glosses the lid of an electric organ. He takes his sleeve and wipes just a speck of dust off it, and so mention is made of the

fact that it is corking good advertising for the people who make Hammond Organs.

We have made on the average, as far as our industry is concerned, in addition to the pictures that have been made by Safety Council on driving, many others. Many insurance companies have made very fine safety films, among which we might mention, "We Drivers," "Women at the Wheel," "One who is Beautiful," "The Coffin on Wheels," the "Devil Is Driving," "You Better Live," and pictures like that and they are available for wide and extensive use by local groups.

The pictures which have been made by the motion picture industry, "Hit and Run," and "Drunk Driving," have been reduced to 16 millimeters and are now available for school use and can be secured by anybody applying to the Visual Instruction Service of their State University.

In this State of Illinois, down in Bloomington, for instance, an insurance company entered into some kind of arrangement with local theaters and had this picture, "Drunk Driving," projected in the morning, when the theater was not open commercially, and arranged through the school authorities to have the high school students dismissed in groups of sufficient numbers to fill the theater. They also made arrangements with the State Teachers College, the Normal University, and the Wesleyan College which is also in Bloomington, so that in that way it was a very good setup. There was co-operation between the theater and the teachers and the school authorities and an insurance company, who did it merely as a public service in an effort to create a better understanding of the difficulties and the dangers involved in driving when you are not in full possession of all of your faculties.

I was thinking, when the question arose as to the advisability of tying up your safety education with some of the commercial people, that when it comes to any matter on drunk driving I wouldn't take it up with any of the liquor advertising people. Otherwise, there probably wouldn't be any objection.

It seems as I discuss matters of this kind that there are three problems that arise that seem to concern most people. First is the problem of where are films available, and where can they be secured easily and

without too much cost, and secondly, where can you get the apparatus. Much of this kind of education needs to be done in groups other than in the theater, although that is a very good place, particularly in the situation where the sequence comes in a regular entertainment picture, more or less incidentally. It seems to go across very much better, I think, than just a straightforward presentation. Where are you going to get the portable apparatus that can be used? Third, how can you organize to do the thing on a thorough basis, not having it merely haphazard?

Well, there are a great number of films that are available. The insurance companies have films. The schools have made films. I notice that the Safety Council has a mimeographed list of films that are free on their exhibit table downstairs. One of them was made by a friend of mine for schools on safety, "Riding a Bicycle in Traffic."

Incidentally, some of the communities might well tie in with high schools in an effort to get some of these films made. Of course, you will have amateurs doing it, but they are very effective, and apparently do a great deal of good. Incidentally, the high school where this particular film was made up in Milwaukee, was so tremendously interested in the thing that all the students became greatly aroused over it, and probably one of the best bits of education that came out of that was the education of the boys and girls in that particular school while the picture was being made. That is also a good way to do it. I think you will do a great deal, for instance, in this matter of dramatization for your radio program, too, in that way. The people who participate get probably the best education on that.

As I say, the various commercial companies have made these films and there are certain ones that have been made by the industry itself that are available for schools. I emphasize that particularly because of certain restrictions of our copyrighted material and our desire not to get into difficulty with our customers, the local exhibitors in the theaters. We have to limit the use of these pictures when we reduce them to 16 millimeters for schools only, to be shown on school time without admission. But they are easily available and very

inexpensive. You get them for the same price from the State University that you get any of your other films that are used, because the film is made entirely on a non-commercial proposition.

Those films are given by the industry on the basis that they will be distributed on a non-commercial basis; merely the cost to the State University of handling the business, is involved.

I think that the problem of the apparatus is exceedingly difficult at this time, because none of the manufacturers are permitted to release the 16 millimeter projectors, except on certain priorities which can be secured, but which are a little difficult to secure. I was thinking of what is going to happen to all these portable projectors which have been made by the different companies and sold to the government during the war. Many of these factories have trimmed their usual output and their entire output has gone to the government. There will be a large number of those projectors that ought to be available for the public, to be sold as surplus material following the war, and some of them, of course, will be unusable. Many of them, however, will be in usable condition, and others could be inexpensively rebuilt. I believe that it might be a very valuable thing, through the National Safety Council, for some approaches to be made by such a national organization directly to the government to see if some arrangement couldn't be made in the release of that surplus material for some reputable organization to get it for wide distribution. It could be done at a very low cost, and I think probably that would also solve a good many other problems.

It would solve some problems for the motion picture industry, which is somewhat concerned that not very many of these projectors should fall into the hands of chaps who would then be peripatetic exhibitors going around to a lot of small communities, giving performances which would not be altogether a credit to our motion picture industry.

The various companies have apparatus which can be borrowed. I know that because I do a lot of that borrowing myself. I have known the Ford Motor Company, for instance, to buy a hundred portable projectors on one contract. International Har-

vester Company has portable outfits. The oil companies have them. Any number of these commercial concerns have portable equipment which can be purchased. Well, it can be borrowed. Many schools are getting equipment and frequently they will permit you, by getting one of the boys who knows how to run it to go along with you, to take the apparatus around to your meetings.

My experience is that there are various numbers of groups that are open to these educational approaches. Out of my own experience, I can say that I am amazed at the great number of groups that are willing to sit down and listen to somebody talk, and I think that if you have a picture that can be used which is attractive and interesting, you can get an entree into all kinds of groups, all of the service clubs, and the women's clubs. Libraries are now getting into this field, schools are anxious to have material brought to their attention, and they are the ready-made groups that the Sergeant spoke about. They are just brought in and you have a ready-made group.

I think that our chief problem is that most of us have too much to do. If a man is writing material and furnishing it to the newspapers, he has a great deal of difficulty in taking on the radio, and if he has

some little chance with the radio he probably has no chance whatever in this field of motion pictures.

I believe that it would be a very advisable thing if we could in some way secure the cooperation of somebody who might be attached to your local safety council, perhaps on a part-time basis, or even on a volunteer basis. Let us say that the teacher in the public schools, who is a director of visual education, would be a very good person to tie up to and have some part-time service and let him have the opportunity to develop that on a real thorough-going coverage of the entire community.

I think that I want to emphasize the fact that you will get along much further in this kind of education if you go into groups that furnish you their groups all ready for you; the high school assembly, the college convocation, the women's club meetings, rather than to try to set up special groups. It is always difficult to get your audience that way.

I have been instructed to say that the motion picture industry has appreciated very much the close cooperation it has received from the National Safety Council through its officers in the past many years, and that it is very open and ready to extend that cooperation in any helpful way.

A Panel Discussion

(Same Subject)

Participants:

Discussion Leader: C. D. VIBBERTS.

E. W. WINKLER, Asst. Prof. of Electrical Engineering, State College of North Carolina.

Capt. J. O. MUSICK, Safety Div., Texas Dept. of Public Safety, Austin, Tex.

DOROTHY PENLAND, Executive Sec., South Carolina Highway Traffic Advisory Committee to the War Dept., Columbia, S. C.

MISS PENLAND: I don't think we have any problem selling anybody on the idea of whether traffic safety films would be worthwhile. The Army and Navy say that they cut their training program 40 per cent just through films and that is a very good point in itself, and the schools in South Carolina are very interested in motion pic-

tures and are using them, but we don't have a great number of films available for their use, which they think are good.

We have in our Highway Department—most of the work is done through the Safety Division of the State Highway Division, under their control, and we have in our library 39 films and more prints of those films which we consider good, and which we would prefer to send out as being approved by the department.

We have three places where people are interested in safety films. We have the general adult groups, clubs, and civic groups. We have the schools and we have the training of police enforcement officers of the State Highway Patrolmen, and we have the City Police, who also are coming in with the department and working on traffic safety.

We have a discussion on as to which is

the most important, and I am sold on the idea that the school is, because you get a more important and more lasting value throughout in the use of schools than you can get immediately through the civic groups. People here will disagree with me and say that it is important, more so than I think it is, but we don't doubt at all the training value for the men in the patrols and the other enforcement officers in the state.

Now, with those 39 films, you can see that we don't have a great deal to go around and repeat. If you wanted, say, 10 films for the schools, we might have trouble finding 10 films that we thought were awfully good. The schools say they don't want entertainment in traffic safety films. They say they want instruction, mainly. That is what we have trouble finding so far.

CAPTAIN MUSICK: We have been using safety films in our country for the last several years. We have been using any kind that we could get. I think that we have a lot of films. Some of them are good and some of them are bad. I think that it would be false if we tried to kid ourselves that all of the films we get are bad. We have been making, down there in our colleges and universities, a great many studies that we have been following with a great deal of interest for some time now.

These studies that we have made, as you no doubt can actually anticipate, show that a film properly used will increase learning in any subject. The studies that we have made show that learning has been increased from 10 to 50 per cent by the use of visual aids. We have been interested in the retention of knowledge from the use of visual aids, and of course we know that the retention of knowledge is greatly increased. Of course, its value to us is high when we can reduce the time that is required to teach a particular given subject.

Now, I think that we need a greater production of safety films for our use in the future than we have ever had in the past. I think that we are overlooking a good bet there and a good opportunity unless we do see to it that somewhere, somebody, people who know how, produce films and make them available to proper sources throughout the country.

I think that we need a little more study made of the films that we have and of the

films that we shall have in the future in this respect. When a film is made, I think it is generally true that it is appraised by a group of good authorities who state their opinion of the film, but the use of this film through a controlled situation might turn out things that we had thought about.

In our country we hope to make a good many of those studies by taking controlled situations, taking a pedestrian film, for instance, and going on to schools as nearly identical as we can get them. We will use the film with one group and make a study with the other group without the use of the film, and see just exactly what difference there would be in a month from now or six months from now, and a year from now in the retention of the acquired knowledge. I think that we need a great deal more studies in that respect.

We have made a few films ourselves. The films we have made are such that we are not very proud of them, because we had to experiment with them. I would like to hear from this group, if it is possible, before we get through, as to the reaction and experience here relative to the different kinds of films, the value of a sound film and the value of a silent film. The research that has been done in our part of the country has been rather interesting in that respect.

We have people who say the silent films are no good. Some of our studies show that a silent film, if properly used, produces good results. I'd like to hear your reactions of these 16 millimeter movies and of the film strip and the film slide machine as to what you think about them. I think that we have opportunities in all of them and that they can all serve good purposes if they are properly used.

MR. WINKLER: When Mr. Holcott asked me to pinch-hit for him he described briefly what had been done in the Highway Safety Division in North Carolina. Frankly, it is very brief as far as films are concerned. About three years ago a trailer was made showing the Governor speaking on safety. That trailer apparently did not produce the desired results, because it was only shown for a short time and no other trailer was made.

Now, it may be that they didn't have the money to make another one. I don't know. He said that he has shown a number of films produced by General Motors or by

Ford Motor Company or by others that are available. He also said that they have shown a number of the slide sound films made by the National Safety Council and others and he has found those to be very good. He said that he wanted to use more of them and hoped to work them in.

As far as my own work is concerned, I might say that as the acting director of the recently organized center of safety education in North Carolina, I have been interested in traffic safety problems. I have been working with industrial safety for three years, but I have lectured a great deal on the home safety and traffic safety. I have found two National Safety Council films very good. I have used them because I didn't have any others to use, incidentally. One is "Defensive Driving." I have shown that to a number of clubs and talked on it and it seems to produce a very desirable effect. I have shown the film, "Are Your Feet Killing You?" to several P.T.A. groups, to one or two church groups, and to three or four civic groups, and I have found that that seems to produce the desired results.

Incidentally, I have always taken ten or fifteen minutes to present the problem before showing the film and have tried to put the audience in the proper frame of mind. I think both of those are excellent.

There is one kind of film—it is my own idea—that somebody might work out. I have seen a number of machines sowing accidents, bringing out the horror, the tragedy, and the suffering, and for some reason or other it just doesn't produce the desired results. I would like to see some pictures made to emphasize that usually it is just plain darn foolishness, stubbornness, high temper or some such characteristic that the average man doesn't like to admit he has which invariably produces the accidents; which causes the unsafe act which may result in the accident.

I would like to see a picture that would emphasize these characteristics as the source of accidents, because it might make some people realize that they have certain undesirable characteristics which they might want to get rid of, and if they got rid of them I am positive we would have fewer unsafe acts and unsafe conditions, and in that way we would have fewer accidents.

CHAIRMAN VIBBERTS: What is your

feeling, Mr. Deer, as to the relative merits of the silent and the sound film?

MR. DEER: My feeling in regard to the matter is that the sound film is superior. I might say that my attendance at many state teachers' conventions, however, leads me to realize that there is a very great difference of opinion on the part of teachers as to the relative merits in the classroom. I don't think that that has been definitely settled yet. I think there are some situations in which, for instance, the slide or the film strip is a better educational technique than the motion picture. I may get shot by my outfit for saying that, but the problem with the motion picture is that it goes pretty rapidly and many parts of it may be missed.

Mr. Winkler's suggestion as to his technique is the one which is being used and recommended by those who seem to know most about the use of films in education, namely, that you do not get the desired results merely by showing the picture. You must prepare the group for the picture and it is advisable to have some discussion of it following the showing. You may then, after the discussion, want to show the picture again, because they will see a great deal more of it, perhaps, on that particular day, or if not, perhaps the following day, than they did the first time. That is good classroom and pedagogical procedure. I don't think that there is a "Yes" or "No" answer that can be given to that. I do think, however, that there is a very decided trend toward the use of the sound picture.

MR. KING (Oregon): Mr. Chairman, I have a little phobia on film, that I'd like to throw out here in connection with this particular discussion. In our state, so far as dealing with high schools are concerned, after the war, particularly, we will have to take color and sound films in or we might as well not go into the schools. That is a thing that we are facing with certainty. The reason is that there are a lot of other people taking films into the high schools and they are going to be taking some awfully good films in. They are doing that now.

You go into a high school with a film that isn't as good as they saw yesterday and the kids laugh at you. We had one case of a film we got that we thought was pretty

good. It was supposed to show an elderly gentleman and two youngsters in it; one, an elementary school kid, and one a high school kid. The high school kid, conservatively speaking, looked like he just graduated from school and every high school kid in the state caught that and laughed the minute he came on the screen.

I think that from our experience at least, you are going to have a very critical audience so far as motion pictures are concerned after the war. I think a lot of these youngsters are pretty critical now, and if you go before them with a film that isn't as good as they see ordinarily, or that doesn't meet their ideas of what is right, I don't think you are going to sell anything. It comes right back to the old story that if you are going to sell safety you have got to wrap it up in a pretty neat package, and I personally am more or less convinced that the only thing we need to do in the post-war period is to have sound and color.

It seems to me that there has been a lack of continuity in safety films. You have no series of films that you can take before a group and carry more or less of a continued story through either the pedestrian phases, the bicycle phases, through child safety on to motor vehicle driving. There is no such thing as a continuity that you can present to your audience.

We need something that you can start with in one group and follow through with good continuity, and I think the best examples of what we need are the army training films which probably most of you have seen.

I think it does the thing we need. It combines sound, the narrative which you have to have, more, even, than any characters. You have to have the narrative which explains, and you have got to have the animated drawing, which illustrates vividly and clearly the point you are making, combined with some drama, some accident and some actual scenes of life. Those points are things which I feel are very important in the future of our films. If we don't have them I don't think that we at least are going to get anywhere in our sales.

MISS PENLAND: Mr. King said what every school official I have talked to said and expressed it very well. You have to compete with professional motion pictures.

I would like to ask Mr. Deer something. Would the movie companies be interested in making, for sale, shorts that could be used in schools?

MR. DEER: It is very difficult to know what the motion picture industry would be interested in, because, for instance, in our association we have 42 companies, and they are very, very different. Some are interested in some things, and some are interested in other things.

May I say this: that I am not at all inclined to be overoptimistic about the willingness of the companies to make films for this kind of education and sell them to you. I think they would probably be more interested in an idea which could be used in a short subject, let us say, by some chap like Pete Smith or John Nesbitt, and men like that. I am using them now. We have a lot of men, but I am using those two as an example. They would be interested in a film which would be just a one-reeler that could be entertaining enough so that we could use it in the theaters and then have it reduced and made available for other groups. I think I can say that because that is what we are now doing.

Some years ago the General Education Board, which is financed as you know, with Rockefeller money, together with our office, cooperated in setting aside a hundred and twenty-five thousand dollars for a research project that was headed up by a committee composed of the most distinguished educators of America; men like Isaiah Bowman, the president of Johns Hopkins, and Edmund Day, the president of Cornell and Carl Compton of M.I.T. Those are examples of the men who furnished the brains of that panel.

They made a three-year research. They set the standards and appointed the panels of educators in each particular area of learning, and they examined some 1500 of these short subjects that we had in our vaults that had been used in the schools out of which they selected 600 which could be used as is, without any change. They were selected on the basis, not that they were educational in a general sort of way, but that they could be integrated in the school curriculum at a particular point in a particular place in a class on a particular subject.

That was a very interesting thing to us,

to discover that films which we made for entertainment were of such good educational value. We were surprised, too.

Now, I think there will be more of that in the future because that project is continuing. That indicates the general trend.

In regard to what Mr. King said about the desirability of having something that is just as good, technically, as the boys and girls are accustomed to seeing anywhere, I think goes without any question whatever, for education. Just one little point indicates how very critical and intelligently critical these young people are. Let me point out, that through the National Councils of the Teachers of English, there is being sponsored through our high schools today, courses in photoplay appreciation, just like we have courses in music appreciation, and there are six million high school students today that are taking courses of that kind.

Well, to lapse into just common colloquialisms, you can't fool these kids with any tripe anymore.

THE CHAIRMAN: Are there any more questions?

MR. DEER: May I say something on the matter of color, too, which just occurred to me. The general trend in the theatrical field is toward color. We shall have 50 pictures in color this year, which is the largest number that we have ever made in any one year. Our experience in the classroom, however, with this project which I have spoken about is this: we started with a number of films that were made in technicolor and they have been withdrawn for largely two reasons: one, that in the amateur projection that you get in the classroom, in the school, you don't get a sufficiently improved picture to make the color add anything to it, and when you realize that just the mere cost of printing—we can print in our laboratories a black and white film for about two and a half cents a foot, but to print technicolor costs thirty-one cents—we find that the difference in value is not at all commensurate to the difference in cost, particularly in the deficient film that you get.

Now, I am not saying Mr. King is wrong. I am just saying that our experience up to the present moment is that, and next year

we may have more experience which will indicate that we have advanced a bit.

I am inclined to agree with him thoroughly on the matter of sound, however. I mentioned the fact that there are differences of opinion in conventions that I attended and heard this matter discussed by teachers, but I have been inclined to favor the sound film.

MR. MURRAY: In our various localities we have had experience which is just the reverse from that which this gentleman spoke about a while ago concerning atmosphere. We found that our films give the atmosphere. We have worked in a juvenile court atmosphere and it has worked miracles. It starts off with depicting the juvenile court and it works on bicycle riding and then finally brings in automobile riding. When that film is finished—along with it we have been showing "Formations," another very good film—those children are quite ready for a dignified procedure without my having to say a word. The film has done it.

That is just something to pass along, and I took advantage of another opportunity this summer. I heard they were going to show the war films in the parks furnished by the Eighth Service Command. I got busy and got all the good films that I could get from these various sources that were furnished free. People are interested in such material due to the war and it draws a crowd, and then you spring the traffic film on them, and you have something of value.

MR. WHITTAL (Washington): I was interested in what the movie industry might be doing in the future in making animated color cartoons. There are two that I have seen, one put out by the insurance companies and one put out by the Agricultural Department, and we have had exceptionally good results with these in the lower grades. The kids think they are funny, and as soon as they see a cartoon run they become interested. With the lower grades I think they are more valuable than the other type of film.

We have thought out there that it would be a nice thing if Walt Disney could devote some time to making that type of film with the regular characters, such as Pluto and Mickey Mouse and that sort of thing.

MR. DEER: As you know, at the present

time, Mr. Disney is devoting his full time or 95 per cent of his time to war work in his studios. He has done a tremendous amount of work for Mr. Nelson Rockefeller's office, the Coordinator of Inter-American Affairs, creating pictures that are good for developing good will between our country and our neighbors to the South. He is now interested in collaborating with a person who has developed a system of teaching illiterates to read. He has developed a system by which it is possible, through the use of charts and diagrams, to teach an illiterate to read his own language in 12 lessons, and there is now a world organization to remove illiteracy from the world.

Some of us are hoping that Mr. Disney may be able to get Professor Mickey Mouse to make those 12 lessons 12 easy lessons.

Now I understand that the professors who are interested in Basic English are interested in and thinking of making motion pictures that can be used in teaching Basic English. That may be a surprise to a lot of people to realize that 75 per cent of the elementary schools in Russia are teaching the boys and girls Basic English and are using a textbook prepared by Madame Litvinof, the wife of Maxim Litvinof, who is an English woman.

The little footnote that I would put to your comment about that kind of film being particularly effective with the younger children is that it is equally effective with the older children and the adults.

MR. CLEVELAND (American Automobile Association): I don't think we can emphasize too strongly the need for better films on safety. Our organization has attempted to get together all of these films that are available, and I have shown them over and over again before school audiences, and with the exception of a few, and I am not referring to kindergarten and first and second grades, these films no longer make the impression on the students that we would like. The "Hit and Run" is good and the "Drunk Driving" is, also. They have gone over all right, but these other films that we have can in no sense compete with these films that the school children are seeing in their daily shows, not only in the movies but shows that they put on at the school.

The result is that it seems to me we do

not get anywhere and we are doing an injustice to try to teach them with these very inferior films. To entertain we use the finest material available, but when it comes to the classroom we come with something that is infinitely inferior.

MR. DEER: Perhaps it might, Mr. Chairman, be a practical working out of a discussion of this kind to suggest, if it isn't already there—the work of the National Safety Council is so blooming big that we don't realize all it is doing, but if there is no such group, would it be a service to have the National Council appoint a committee of sufficient experience and background in this field to serve somewhat as an evaluation committee? That is what we did in the schools.

Now, for instance, if a public school wants to use a film they can get it evaluated, the evaluation of this very distinguished committee that has spent three years with very good curriculum builders listing and evaluating. Maybe some committee would render a real service in saving you, possibly, from wasting your time in showing a film that won't really give you the desired results.

I don't know whether you need it. Maybe you have already got it. In view of the fact that you have spoken so often of being disappointed in your films, perhaps that is what you need; an evaluation committee that would go through the whole thing that is available, not merely printing lists of stuff that is available, but with that, an evaluation of its usability.

MISS PENLAND: I was just wondering if we could have a double-edged committee, as Mr. Deer suggested, the first part to try to sell somebody, maybe only the motion picture companies, the idea that we do have an audience for those films, and that what they can give is important. Maybe Disney would like to bring that in as a part of civic training. You could bring in all sorts of National Safety Council ideas and work, for instance, in that, including traffic court scenes, as the gentleman from Dallas suggested. I know there are people who want those films. I found that out. If it happens in a small state there must be people all over who want the films.

MR. DEER: I am not sure, but I doubt

very much that you could get motion pictures interested in making a film that could be sold to a group. They are interested in making films to be shown in theaters. If they could make a film sufficiently interesting to show in a theater then you have available something that can be used. That is as far as we have gone at the present time.

MR. KING: I think we are in the position where we will have to get somebody to make the film we want. You can't take films to the schools after they have been shown commercially. I hope, too, that there are one or two of the companies like General Motors who are interested in what the safety people want in pictures. I have had some contact with them and it would seem to me that it is perhaps this committee that we are talking about a little bit that could bring some pressure on these companies who are participating in film production. We might get our ideas incorporated in the films they make so that we could use them.

MR. DEER: At a recent meeting of educators this whole matter was thrashed out somewhat as you are doing now, and they came to the conclusion that when it came to the great bulk of films to be used in the schools they would have to depend upon companies who produced films for schools rather than for the industry that produces film for theaters. They did feel, however, that we have some films which can be thrown into the general pool if they are properly selected by those who know what educators need. That would be true of traffic education the same as schools.

These educators, however, did point out a thing which has been so clearly brought out by a number of the discussants here this morning, namely, that these films must be technically as good as the people are accustomed to see at any place. Therefore, they said that these companies that produce films for schools must employ technicians who are as good as any we have in Hollywood. That is the way they put it and they must be ready to pay the price.

That was an interesting thing, because I feel the same way about it. You have special writers, you have special publishing houses that produce textbooks. Here and there and elsewhere you will find motion

pictures that you can use, but you have got to have a special committee that can analyze those films and evaluate them so that the people who use them will know in advance that somebody with a reputation in the field has placed a stamp of approval on them.

QUESTION: I think the National Committee on Safety Education has recently set up a group that is going over all material used in school. After it gets started, I imagine it is going to take films into the scope of its activity. It is commissioning teachers who are in the field, and they will probably evaluate and send out material on this, whatever their decisions are.

THE CHAIRMAN: I am just wondering about one final thing. Is there something that this group right here can do by way of recommending to the National Safety Council, or are we out of order in doing that?

MR. CLEVELAND: Mr. Chairman, it seems to me that only half of our problem is being covered. The evaluation of the films is important, yes, but on the production of the films, I don't hear anyone say that they know of any steps that are being taken to produce the types of films we need most. It seems to me we might go on record to tell the National Safety Council of this problem which we feel should be covered by some group, and leave it to them to decide how to do it.

I would like to move that this question of having an appropriate safety film produced, or a number of them, be placed before the National Safety Congress as the problem which we feel should be considered.

MR. KING: I second it.

THE CHAIRMAN: I think we will not take time for comment. I think we are all agreed that this should be done. I will instruct the secretary to cast a unanimous ballot for this group, assuming it is unanimous.

MR. DEER: After it is all passed now, it would be entirely an unparliamentary procedure to ask a question, but would that also include the matter of evaluation?

MISS WOOLVERTON: I understand that is for that, too.

THE CHAIRMAN: I think so. It is a

two-edged sword, production and evaluation.

MR. DEER: You might do as some chap did or as the churches did in finding a chap who was a real estate operator in New York and who left a million dollars in his will to set up an organization to

experiment in the field of making religious motion pictures. If you can find some chap who will give a million dollars to set up an organization to experiment in the field of producing films in the field of traffic education, we ought to give him an award next year.

THURSDAY AFTERNOON SESSION

October 5, 1944

General Session

Presiding: CARL J. RUTLAND, Chairman, Citizens Traffic Commission, Dallas, Texas, and Former General Chairman, Street & Highway Traffic Section, N.S.C.

Where Do We Go from Here—Forecasts for Safety Based on Points Developed in the Various Sessions

(A) Police

CAPT. PAUL J. PRICE

Police Dept., Dayton, Ohio, and Chm., Executive Committee, Police Division, Traffic Section, National Safety Council

Police officers are approaching one of the most critical periods in the history of policing in our country—the postwar era. We have the opportunity to prove in this period that policing is a profession, and that it rightfully belongs on the same level as any other recognized profession. We can prove this in only one way—using all the techniques known in modern policing plus a plan of attack coordinated with all other agencies involved.

A program should already be in effect to restore police personnel after the war to a minimum of pre-war strength. We should not overlook the necessity of re-examination of returning veterans, both mental and physical. We will have an excellent opportunity to recruit from returning veterans, thus obtaining the benefit of certain types of military training and discipline even before the recruit enters a police training school.

The next logical step in our planned program is that of training. Many police training programs had to be curtailed during the past two years. This is very unfortunate because it was probably one of the weakest links in our efforts toward efficient operation, especially in municipal depart-

ments. A keen interest is being shown today by police executives in all types of training, and this is a healthy sign. Many new ideas are being advanced, one of which is the possibility of centrally located training schools in various states. To these schools could be sent recruits from communities too small to operate their own training programs. Another advantage to this plan would be that it could furnish training to officers promoted to higher rank, thus qualifying them to become commanding officers. We cannot over-emphasize the need for police training, but neither must we overlook the fact that these training schools must be of the proper type, and staffed by qualified instructors. We must guard against the "fly-by-night" schools that will probably spring up after the war.

Enforcement after the war will result in many problems, some old, some new. With the lifting of rationing and speed restrictions, millions of mechanically unsafe cars will be driven at higher speeds and over greater distances. Seven and eight year old cars will not all be replaced six months after VE Day. Then, more than ever before, we must use selective enforcement to hold our gains in accident reductions.

New and intensified educational programs will be of great importance. We must not forget the ever present need of uniformity, both in laws and enforcement policy, plays an important part in this program.

Our overall program must include the need for equipment of all kinds, much of which it has been difficult to replace during the war. In postwar development we will undoubtedly have the opportunity of obtaining new and modern equipment, from buildings to guns. We must not fail to take advantage of these opportunities. Many departments are today trying to operate efficiently in buildings that are a disgrace to the community. Many new scientific instruments have been developed during the war, and certainly law enforcement agencies

should have first consideration in the postwar period. Aside from medical science, probably more advances have been made in photography and communications than in any other branches, and both of these items are of extreme importance in modern policing.

We can see that we have an excellent opportunity to do an outstanding job in the postwar period. From the start of this war, police organizations have been regarded as leaders in the field of protection of life and property, and internal security on the home front. We have been carrying the ball, and now that we are almost ready to enter the second half, we must not fumble. Clear thinking, intelligent planning and hard work can do the job.

(B) Traffic Courts

HON. ROY A. MILES

Judge, Nashville Traffic Court, Nashville, Tennessee

As we approach the time for adjourning this Congress, I am impressed with the fact that thereupon our job begins, instead of ends.

Cooperation and coordination of effort were two outstanding points of discussion in the traffic court group sessions. It is not only important but indispensable that we encourage, in every way possible, cooperation among such agencies as traffic courts, enforcement officials, legislators, traffic engineers, public safety education leaders, and administration officials. The closest relationship among these agencies seems to lie between the judicial and executive branches of local government—that is, without proper enforcement of traffic laws by police officers, the traffic courts would be useless. Likewise, without proper disposition of traffic violation cases by the traffic courts, enforcement would be hopeless.

Cooperation between the traffic courts, the law enforcement agencies and others interested in traffic safety is indispensable.

We were reminded that traffic judges are expected to judge, not prosecute. Looking at this picture from the opposite angle, enforcement officers are expected to prosecute, not judge. This observation is not intended to relieve the enforcement officer

of their responsibility to exercise sound discretion as to what constitutes a violation of the traffic laws and when such violations should be prosecuted. There are some borderline cases in which the public interest demands that the arresting officer decide whether or not a violation has occurred or whether or not a questionable violation should be prosecuted. But as a general proposition, it is well for each of these agencies (police officers and traffic court judges) to remain steadfastly conscious of the functions they are expected to perform.

Judges are not prosecutors and should not take or be forced to take the position of a prosecutor at a trial; where there is no prosecutor, however, the judge is forced into this unpleasant situation. The traffic court improvement program will continue to bring about better functioning of such courts in this respect.

A great deal has been said about the importance of such adjuncts of the traffic courts as proper surroundings, decorum, physical facilities, competency of the presiding judge, such loyalty as will discourage the "fix," eliminate so-called J.P. practices, and generally promote a high standard of administration of justice. Improvement of our courts in these adjuncts has made and

will continue to make substantial contribution to the advancement of traffic safety.

I predict that we will return to the National Safety Congress next year with reports of continued progress in the traffic court field. This progress will be measured by the number of people whom we can interest and influence in our program of public safety. In my opinion, state traffic court conferences and local institutes offer splendid opportunities for an expansion of this program. The need for such expansion is boldly revealed by the conditions which may readily be anticipated upon demobilization of several million men in military service and the lifting of such restrictions of automobile driving as wartime conditions have imposed. The latter will involve even more millions of civilians

than will be involved by the demobilization of soldiers, sailors, and marines.

We have a serious responsibility, a responsibility which cannot be considered merely as a Sunday Christian considers his religion. Our responsibility is a full-time and big-time job. Through such conferences and discussions as the traffic judges and prosecutors have had at this Congress, supplemented by state traffic court conferences and local institutes, I predict that great strides will be made in educating the public to follow that facetious admonition to "watch the guy behind the guy in front of you."

Traffic courts have a vital responsibility and a substantial contribution to make in helping meet the post-war problems we are certain to have on our streets and highways.

(C) Public Education

CHARLES D. VIBBERTS

Director of Safety and Education, Ohio State Automobile Association, Columbus, Ohio
Substituting for Sidney King, Director, Safety Division, Department of State,
Salem, Oregon

The several meetings of the Public Safety Education group and the Traffic Education Association were well attended by representatives of the several branches of state government concerned with traffic safety education, state and local safety councils and other organizations in the field.

On the basis of developments resulting from these meetings, I should like to make this report to you a forecast of what a hypothetical traffic safety organization will be doing in the post-war era—in other words, where it will go from here!

First, this organization will be maintaining a much closer relationship with the press.

This will involve:

1. More effective personal contacts between the public relations representative of the organization and the gentlemen of the press.
2. Better cooperation with the press through the provision of correct factual materials.
3. More frequent use of pictures, maps and plates with attendant information de-

scribing and describing traffic safety activities.

4. The more frequent use of articles which provide local human interest.

Second, this organization will be maintaining a much closer relationship with radio broadcasting stations.

This will involve:

1. Having a well informed contact man on its staff—a man who knows the traffic safety field as well as the techniques of radio work. His contacts will be with the educational and promotion departments of the radio stations which use his material.
2. Better preparation of the several types of programs used by radio stations:
 $\frac{1}{2}$ -1 minute spot announcements
 5 minute transcribed programs
 15 minute programs of the dramatization or interview type.
3. Tying in traffic safety material with commercially sponsored programs.

Third, this organization will be engaged in the extensive use of motion pictures and other visual aids.

This will involve:

1. The use of films which have been prepared and evaluated by a national committee of experts in both the motion picture and educational fields.

2. The use of projectors and other equipment which will be more accurate technically and better adapted to the use of color film.

3. The use of films which are technically and educationally correct, films which meet the needs of the various grade level groups to which they are shown.

Fourth, this organization will use all types of special promotional activities in the field of traffic safety education.

This will involve:

1. First and foremost, carrying on a

continuous program of activities relating to traffic safety education.

2. Provision for special emphasis on certain phases of traffic safety education through the use of special promotional activities directed at the driver, the pedestrian, the cyclist, different age groups, railroad grade crossings, weather hazards and others.

3. Only those activities which have been carefully evaluated from the standpoint of direct action as well as carry-over value will be used.

TO SUMMARIZE: This hypothetical traffic safety organization will be doing the many things which any organization primarily engaged in the field of disseminating public safety education can and should be doing! These many things all point to the same end—reduction in traffic accidents and injuries and fatalities resulting therefrom.

(D) Traffic Engineering

ROBERT A. MITCHELL

Chief, Bureau of Traffic Engineering, City of Philadelphia

From a national traffic safety standpoint two encouraging signs have come out of the engineering sessions of the 33rd National Safety Congress and the 15th Annual Meeting of the Institute of Traffic Engineers. First, there seems to be a more definite and clear-cut picture of the responsibilities of each of the organizations and public officials concerned with the reduction of traffic accidents and congestion. The Traffic Engineering profession appears to have been accorded its rightful place in the scheme of things. Secondly, that a great deal of worthwhile thought has already been given to post-war street traffic control and safety measures. In fact, many of these plans can be put into effect as soon as we return to normal civilian life.

We have been assured by two important men in the automotive industry that at least two years will elapse after cars are again produced for civilians before any radical change can be expected in the operation or appearance of private passenger cars. As a matter of fact, they believe we will have at least five years in which to adjust our thinking on traffic control to meet any radical change in motor vehicle appearance and performance. Motorists may even

have to put up with pre-war gasoline for quite a number of years as no satisfactory method has yet been found for the production of 100 octane gasoline on an economic commercial basis.

It was indicated that the airplane might present a post-war problem to the traffic engineer. A majority of the traffic engineers who spoke felt that the profession only had a right to be concerned over the control of highway traffic generated by the location and activities of the airport. One, an officer in the United States Army Air Corps, however, saw a real opportunity in air traffic control for the traffic engineer. Citing figures recently released by General Arnold showing that 17,000 out of the 42,000 army planes destroyed so far in this war were being flown in the United States, he indicated that many of the techniques used by traffic engineers to control highway traffic were applicable to air traffic control.

Many disabled veterans, according to one speaker, will want to drive automobiles. The rehabilitation of these men for driving and how they shall be licensed to drive are problems that motor vehicle administrators and safety educators should give immediate consideration. A statement was made that

automobile manufacturers are already studying ways of equipping vehicles so disabled persons may drive them with ease and safety.

It appears from the information released at the sessions that we know more about where we are going in the matter of highway planning than any other phase of the traffic control problem. Emphasis has shifted from rural to urban areas and it looks as if better highways in and around our urban areas of population are assured for the future. The Public Roads Administration seems pretty well decided on certain details of highway construction and recommends 12 foot wide lanes; wide, well kept shoulders; and that all highways, four or more lanes wide, be separated and the wider the center island the better.

Everybody seemed agreed on one point and that is that there will be far more motor vehicles on our highways after the war than before and that unheard of congestion will be prevalent unless drastic measures are taken to improve our urban streets and highways.

This need has pointed the way towards a new method of ascertaining the travel habits of the population in any urban area. It is similar to the "public opinion" poll used by Dr. Gallup and others, and according to the Public Roads Administration has proved most accurate in determining the traffic and mass transportation trend for the entire area even though only a small percentage of the residents are interviewed. From a report given at one of the meetings this type of survey in Atlanta, Georgia, costs 75 cents per dwelling unit for the field work and approximately 1½ cents per schedule for tabulating.

It was also brought out that a great deal

more can be done to improve traffic control on our present streets and highways by various methods that have been used successfully by traffic engineers in many cities. These methods include correctly placed and timed traffic signals; uniform signs and markings; channelization and pedestrian islands and physical changes at intersections to relieve congestion. We look forward to seeing a great deal of this type of work being carried on in the post-war era.

A trend towards more consideration of public transit operation by traffic and highway engineers seems evident as some of the speakers and several persons in the audience talked at some length on the need for improving present roadways and designing new ones so as to provide more efficient operation facilities for public transit vehicles.

The relation of traffic accidents to losses of manpower and money in industry can be definitely established according to comprehensive survey reported on by one of the speakers. He stated that in one year 19 million man days were lost to business and industry through traffic accidents. He urged that management interested in efficient operation would do well to give serious consideration to traffic accident reduction programs in the post-war era.

In conclusion, the post-war program of the Institute of Traffic Engineers as summarized by its President, Harold Hammond, gives a very good indication of where Traffic Engineering believes it is going from here. That is:

1. Decongest critical locations and areas.
2. "Accident-proof" streets and highways.
3. Coordinate traffic plans and operation with highway planning, design and community planning.

(E) Driver Licensing

T. ELMER TRANSEAU

Director, Highway Safety Bureau, Department of Revenue, Harrisburg, Pa.

It would be incorrect to say that the present war has had no effect on driver licensing procedure in this country. Its most noticeable effects have been the lowering of legal age requirements in some of our states, and a greatly increased number of violations of age limit requirements in

respect to the operation of commercial vehicles.

Actual falsification of age in first applications, as well as the operation of commercial vehicles by youths below the legal age have been quite noticeable, no doubt due to the manpower shortage.

In the last connection, the American Association of Motor Vehicle Administrators has been giving much study to the youthful operator and the likelihood of his becoming a new and important part of the general accident hazard. A surprising and somewhat disturbing article appeared in Collier's magazine of June 17th last. The chief of the Safety Bureau of the Civil Aeronautics Board, a man with 17 years' experience covering the investigation and analysis of nearly 60,000 flying accidents, has recommended the lowering of all qualifications for civilian pilots. The first and probably most important change is the lowering of the minimum age for a private pilot certificate from 18 to 16 years. Many other changes are made in this proposal, including knowledge of the English language, physical and mental requirements and flying time.

It may be said that our only interest in such a change may be in its possible effect on the granting of motor vehicle driver licenses. It may be interesting to examine why the Chief of the Safety Bureau, after all his accident experience, would make such a recommendation. It appears to be because "no matter how forcefully certain rules have been hammered home at pilots, there have been and always will be accidents due to violations of the very ones set up for their safety." In other words, it would appear that many pilots, with almost complete knowledge and experience in flying, get into trouble by taking chances. Hence, it is argued, or so it seems, that we need not be so careful in selecting and training pilots, since these factors, or the lack of them, are not the chief accident causes. Whether motor vehicle administrators will ever take such a view is problematical. Personally, I do not think so. All our experience points to the need of orderly, competent and complete universal driver training, if we want accident-free operators.

It is difficult to predict the trend of driver licensing in the next year or two, due to the uncertainty at this time of the termination of the war in Europe and in the Pacific. Certainly we know that the tendency of the war in general has been to lower standards somewhat, yet paradoxically there is probably greater interest in the value of good practices in driver control as an accident reduction factor than at

any time in the past. It may not be too much to say that if the accident curve turns upward sharply at the end of the war, as many expect, that there may be a sharp tightening-up all along the line.

I do not need to tell this group that one of the major problems in this field in the next few years will be the retraining and training of disabled veterans. At this time, I wish to record two statements that have been made recently:

Quoting from Governor Kelly's speech before the Motor Vehicle Administrators in June:—"A singularly significant part of assisting the returning veteran to live a normal life in America is to arrange that his transportation by automobile be normal—and just as satisfactory as that of his friends and neighbors. To do this, he must be able to drive his own car either for business purposes or for pleasure and to do it safely."

Again:—"Every disabled veteran, no matter how serious his disabilities, should be given an opportunity to drive—if it is at all possible or practical. The position should be taken that every veteran we fail to put back on the road represents a deterrent to our normal economy and is a disservice to a man who deserves the best we can give him."

Elsewhere the Governor had said, "... It would be an equally great injustice to the disabled veteran to permit him to drive if he were to drive unsafely and thus endanger himself and others."

Quoting from the report of a committee of the American Medical Association which had been named to study problems of Motor Vehicle Accidents:—"There exists the very great danger that public sentiment toward licensing activities may be influenced by a strong sense of sympathy toward those who have become physically or mentally impaired through no fault of their own. Public opinion in this direction could most certainly establish a trend toward lowered license standards, which in turn could result in a great increase in traffic deaths."

"There is no disagreement concerning the consideration which should be extended to returning servicemen, particularly those who have suffered serious physical or mental injuries. But to allow the latter group to operate automobiles as they did in the past,

and some may even drive buses or taxicabs, is endangering not only their lives, but the lives of others every time they get behind the wheel."

The writer is impressed by the reaction to the problem of those so close to life and death as these physicians. Certainly all will agree that licensing authorities are going to have their work cut out for them in the near future. I, for one, anticipate that these

problems will be solved as have others in the past. Already there has been related at these sessions some of the experimental work now being done with veterans.

Once the problem is fully understood and faced squarely, I am confident it can be solved. Here again, the dissemination of knowledge almost as soon as it is acquired may be of extraordinary and unusual importance.

(F) General Sessions

BURTON W. MARSH

Director, Traffic Engineering and Safety Department,
American Automobile Association, Washington, D. C.

Never has there been greater opportunity for significant public service and personal achievement than will exist in the weeks and months ahead. The gigantic task which faces all of us has been emphatically presented in our traffic sessions.

The participation of outstanding national leaders and the contents of their talks make crystal clear a highly encouraging development—the growing understanding, respect and cooperation between various types of specialists whose joint efforts alone can produce the desired improvement of traffic conditions. Effective teamwork is improving all over the country with outstanding examples in many places.

Important jobs to be done have been spelled out for us most effectively. The new program for post-war traffic safety, sponsored by more than 40 national organizations and set forth in summarized form in the pamphlet, "Danger—Traffic Jam Ahead!" will prove a useful guide.

Each of us faces the problem, after choosing the few main activities to which we are going to give principal emphasis, of finding out how best to do those particular jobs. Some of the "how" has been presented most interestingly at this Congress.

Each of us faces many kinds of difficulties in getting things done these days. One thing is certain, each of us must find ways to multiply his own limited time, energy and resources. Obviously, the better organized the effort is in our community and the better staffed we are for doing it, the more can be done.

In most communities there are high-

grade, intelligent, public-spirited persons who are willing to make a civic contribution and are waiting to be called upon. It is a job to find them and they have got to feel that they are working on something worth while and important, but they will often prove to be bellwethers in getting a program accepted and into effective operation.

Commissioner Thomas H. MacDonald of the Public Roads Administration painted a most illuminating picture of highway developments, problems and futures. Whereas the emphasis used to be on how much mileage of highways could be built, it is now becoming recognized that the quality of the road and what it will produce in convenience, efficiency and safety are of greatest importance. New type of facilities—such as freeways—are necessary in urban areas where it is generally accepted that the major traffic bottlenecks and problems exist today.

The possibility of building highways with high safety factors was pointed out. The example cited was the freeway system serving the Pentagon Building at Washington, D. C., on which there has not been one fatality in more than a year since it was opened in 1943 and only three injuries, despite very heavy traffic and the fact that most drivers did not know the road net.

In terms of use, these high-type highways are not expensive. In fact, they are less expensive than other roads. Commissioner MacDonald emphasized the great need for public support of such new type facilities.

Norman Damon, Vice-President of the

Automotive Safety Foundation, presented a very comprehensive statement on progress in enforcement and adjudication of traffic cases. Mr. Damon showed clearly that while splendid progress has been made, there is much that needs to be done in uniformity of laws, in securing and maintaining adequate traffic police, in police training work, in making more vital the exceedingly effective work which can be done through proper handling of driver licensing and driver enforcement work.

Particularly outstanding is the progress which has been made in understanding needs for improvement in traffic courts. Also, driver education and training in high schools has proven outstanding. Mr. Damon pointed out that nearly 2 million persons reach driving age each year, presenting a splendid opportunity for creating safe drivers for the future.

C. F. Joyner, Jr., President of the American Association of Motor Vehicle Administrators, indicated a number of principal post-war traffic activities in the AAMVA program, including promotion of uniform motor vehicle legislation and driver improvement programs, proper emphasis on the pedestrian, and compulsory vehicle inspection.

General D. C. Draper, President of the

International Association of Chiefs of Police, pointed out the need for coordination of police with other traffic activities. He emphasized the growing recognition of how large a part of the entire police job is in the field of traffic.

Harold F. Hammond, President of the Institute of Traffic Engineers, stated that a post-war traffic planning committee has already devoted a year to consideration of post-war traffic needs. The increasing need for greater attention to problems of traffic operations and of bringing engineering skills to bear upon such problems was emphasized.

Hal G. Sours, Regional Vice-President of the American Association of State Highway Officials, described highway transportation problems of the future and ways that they must be attacked. The solution of the first stage of post-war traffic problems must rest largely on enforcement. In the longer range, engineering will become an increasingly major factor.

According to Mr. Sours, traffic engineering should be given equal prominence with other divisions in the organizational set-up of a highway department. Early traffic engineering emphasis was on signs, signals and markings. It is now importantly related to design policies and planning.

The Job We Have Ahead

By LESLIE J. SORENSON

City Traffic Engineer, Chicago, Ill., and Vice President for Traffic and Transportation,
National Safety Council

We have heard that automobiles are not going to be available in large numbers until two years after the European war is over. However, we have seen the tremendous production capacity in producing weapons of war, and should we not take this as a warning and realize that it is possible for industry to produce cars in advance of the time schedule suggested.

It is up to us as safety leaders to be prepared for any eventuality following the war. We must, therefore, be ready for meeting the problem of increased production and consequent operation of automobiles earlier than some of us are thinking.

In all of our safety planning, we must push our efforts in order to be ready when

the European conflict is over and be certainly ready when we have the Japanese beaten to the ground.

It is up to the men in this room to go back to their communities and initiate measures and carry them through to fruition which will hold the line against a great spree of accidents on our streets and highways.

It is not enough to come here to the Congress and get all of the information and inspiration of these meetings. It is up to everyone to go home and do something about the accident prevention job in his own community. If the men in this room can't do the job, who can?

THURSDAY AFTERNOON SESSION

October 5, 1944

Group Session for City and State Police

Presiding: DON F. STIVER, Supt., Indiana State Police, Indianapolis, Ind.

"POLICE INFORMATION, PLEASE"**Participants:**

Discussion Leader—DON F. STIVER.

CAPT. C. T. ATKINSON, Asst. Supt., Ar-

kansas State Police, Little Rock, Ark.

CAPT. HERMAN CRITES, Traffic Div., Po-

lice Department, Flint, Mich.

INSPECTOR L. A. HINCE, Federal Bureau

of Investigation, U. S. Dept. of Justice,

Washington, D. C.

JUDGE JAMES W. HODSON, Municipal

Court, Seattle, Wash.

INSPECTOR HERBERT J. KITCHENMAN, Com-

manding Traffic & Motor Div., Bureau

of Police, Philadelphia, Pa.

LAURENCE A. LYON, Supt., Uniform Div.,

Michigan State Police, East Lansing,

Mich.

LIEUT. ROBERT E. RALEIGH, Acting Direc-

tor, Safety Div., IACP, Evanston, Ill.

SUPT. STIVER: This will be an informal session, at which this Board of Experts will attempt to answer traffic police questions from the audience. You have attended three group sessions for police during this National Safety Congress and, I am sure, have many questions in your minds which you would like to have answered. Now is your chance to spring the tough ones on the experts.

QUESTION: What steps, if any, are being taken to adapt the use of "walky-talky" radio to the needs of police services?

INSPECTOR KITCHENMAN: In Philadelphia experiments are being conducted with this means of communication. So far we have had excellent results at disaster scenes such as fires or train wrecks. I repeat that this is still in the experimental stage.

QUESTION: What is being done to improve relations between city, county and state police?

CAPTAIN LYON: In Michigan, the State Police conduct an annual training school lasting one week for all newly elected sheriffs. The facilities of the state police and certain large city police depart-

ments are offered without cost for the use of police departments in the smaller communities.

SUPT. STIVER: In Indiana the state police have cooperated in the training program for local officers for a number of years. They are also cooperating with communities in the state in analyzing accident records to obtain information useful in enforcement planning, selective educational efforts, and for engineering purposes. The Pennsylvania State Police have run training programs for local officers for a number of years. The South Dakota State Motor Patrol and the Colorado State Highway Patrol have participated in cooperative training projects for local officers, drawing upon local police departments for both instructors and students. The Missouri State Highway Patrol makes its laboratory facilities available to all peace officers within the state as does the Indiana State Police. In the state of Oregon, the state accident record bureau summarizes the accident experience for all cities within the state on a regular basis to supply them with accident facts useful in their planning. Similar projects are being carried on in many other states. I have cited just a few as examples.

QUESTION: What is the nature and extent of the traffic training offered by the National Police Academy?

INSPECTOR HINCE: The training program is not designed to make students traffic enforcement officers per se, but rather to broaden their knowledge of general police work. The present course devotes three weeks to traffic enforcement training out of the total 14 week course. However, many of the other subjects covered are those which are necessary for traffic enforcement officers as well as for policemen assigned to other duties.

QUESTION: Will the police ever get cars designed specifically for police work?

LIEUT. RALEIGH: So far, steps taken have not been successful. The first requi-

site is for the police themselves to agree upon the type of vehicle needed and the basic equipment which it should include. Some of the vehicles designed for use by our armed forces, such as the jeep and the amphibious jeep have proved useful in certain police assignments. At the recent meeting of the International Association of Chiefs of Police, we were informed that a specially designed police vehicle would need to have widespread approval and use to bring the price within the reach of the average police department. This does not mean that it is impossible to secure such a vehicle, but that it is necessary that the police agree on what they need as the first step in designing a special police vehicle.

SUPT. STIVER: We have used the amphibious jeep to good advantage in flood areas and believe that this will become a useful police vehicle for emergency work in the years to come.

QUESTION: Are instructors available from the International Association of Chiefs of Police for re-training local police and, if so, what is the cost?

LIEUT. RALEIGH: Instructors are furnished by the Safety Division of the IACP upon application by local departments, consistent with the staff limitations of our organization. The cost is shared by IACP and the local group, with the latter expected to pay traveling expenses and living expenses of the instructor during the period of instruction.

QUESTION: What steps are being taken to improve relations between police and traffic court judges?

JUDGE HODSON: Traffic court conferences have been held in 40 states to date and are greatly improving the situation. This is a cooperative project with the Junior Bar Conference of the American Bar Association and the National Safety Council. In several states regional conferences have followed the state Traffic Court Conference and there are indications that these may become a regular method for periodically bringing to the attention of police officials and court officials new developments in the field. They have done much to strengthen and improve traffic enforcement generally at all levels. Many additional conferences are planned for the

coming year as a continuation of this program.

QUESTION: What is the status of legislation on tests for intoxication?

SUPT. STIVER: The revision of the Uniform Vehicle Code will probably include a provision similar to the present Indiana law. The success of such legislation is dependent upon its inclusion in the traffic code to prevent sharpshooting by opposition groups.

QUESTION: What is the current attitude toward mandatory revocation of a driver's license for one year when that driver has been convicted of operating while under the influence of intoxicating liquor?

CAPT. CRITES: Penalties that are too severe result in reduction of charges or failure to convict defendants. This defeats the aims of good traffic law enforcement. If judges or juries feel that revoking the operating license for a full year imposes a too severe penalty on a person convicted of driving under the influence, the result is that such charges are reduced to reckless driving or some similar charge and the defendant pays only an extremely light penalty for the violation he has committed. The use of chemical tests for intoxication can do much to eliminate this practice by presenting sound evidence of intoxication and by eliminating prosecutions for driving under the influence in cases not showing a sufficient degree of intoxication.

INSPECTOR KITCHENMAN: In the eastern states where people have grown accustomed to severe penalties for this charge over a period of years, we find judges and juries willing to convict if sufficient evidence is properly presented.

QUESTION: What can be done to curb juvenile traffic offenders?

CAPT. LYON: The juvenile traffic offender should not be turned over to a juvenile court but should be dealt with in traffic court the same as any other traffic offender. The mere fact that such offenders are granted a license to operate a motor vehicle indicates an acceptance of the responsibility for such operation. If this assumption is correct, then they should be subject to the same penalties as are all traffic law violators.

JUDGE HODSON: It would seem de-

sirable to handle the ordinary juvenile traffic law violator in the regular traffic courts rather than setting up a separate procedure in the juvenile court. In many jurisdictions, traffic offenses by juvenile violators are treated with indifference or given extremely light penalties which tend to detract from the effectiveness of good traffic law enforcement.

QUESTION: What can the police do about the psycho-neurotic cases now being released from the armed forces?

CAPT. CRITES: We have heard a great deal about the psycho-neurotics. I think it is important that we keep in mind the fact that many of these men are classed as psycho-neurotics merely because they were unable to adjust themselves to military life. There is seldom anything wrong with them mentally. Rather it is the result of a temperament which finds certain situations particularly difficult. Upon their return to civilian life they are in the surroundings in which they have gotten along well for their entire life up to the time they entered the armed forces and most of them within a few weeks are normal citizens again. Perhaps we are making too much of a problem of this particular issue. Remember, however, that among all of the persons released as psycho-neurotics, there are a few with acute mental conditions. These will require special treatment, and, in some cases, suspension of the operating privilege. A number of police organizations have had former members released from the armed forces as psycho-neurotics and upon their return to duty have found them as efficient as they were previously.

CAPT. ATKINSON: Is it not true that the serious psycho-neurotic cases will come to the attention of police by reports from their families, or neighbors? Certainly some of them will show up through driver license examinations and through physical examinations for industrial positions. It is my understanding that the armed forces will not release information concerning this matter so far as the individual is concerned. Consequently, we have no large group with which we can deal collectively. Therefore, it becomes necessary to handle the individual case as it appears through various sources. When cases requiring restriction of operating privileges come to the attention of

the police, they should certainly be reported to the state driver license authority for proper action.

QUESTION: What is the proper method for handling applications for driver's licenses from epileptics?

CAPT. LYON: This question is included on the Michigan driver's license application. If the applicant admits having epilepsy he is refused a license; if he denies being an epileptic and later is found to be so afflicted, perjury has been committed and his operating privilege is revoked. An appeal to the license board may be made if the applicant has not had a seizure for at least three years. However, doctors will not say that epilepsy can be cured.

ARTHUR H. ROWAN (Statistician, Motor Vehicle Bureau, Ontario): We receive information from Federal agencies on persons from the armed services and from health departments. Licenses are refused to epileptics.

QUESTION: What can police departments do to secure new cars now?

SUPT. STIVER: The IACP maintains a file of up-to-date information on this subject and will gladly furnish the latest information to any department inquiring.

QUESTION: How can officers assigned to intersection control be impressed with the importance of adequately enforcing traffic laws; especially in regard to pedestrian enforcement?

INSPECTOR KITCHENMAN: Our corner men were instructed to enforce pedestrian regulations sometime ago. This promptly met with a great deal of public criticism and resulted in softening of the instructions. We feel that much more work must be done in public education before our city is ready for effective pedestrian enforcement.

DEPUTY CHIEF B. R. CALDWELL (Police Dept., Los Angeles, Cal.): We have been enforcing pedestrian regulations for several years and this has met with public approval. The actual enforcement by officers was preceded by an intensive educational program designed to build public acceptance and support for this necessary form of traffic control. I believe that any city can do the same thing if they plan their entire program carefully. I would like to emphasize the necessity of preceding the

actual law enforcement program by intensive educational effort. Without the support of residents of the community, no enforcement program can reach maximum effectiveness.

QUESTION: Should officers be permitted to drive department-owned cars to and from their homes to their point of assignment?

CAPT. ATKINSON: We have found

it necessary to permit our officers to use the state-owned vehicles for transportation to and from their homes. Frequently the state officer is required to answer emergency calls at night and consequently, his patrol vehicle is required. In addition, the difficulty of securing transportation in many rural areas would place an undue burden upon officers required to travel to and from offices and assignments.

THURSDAY AFTERNOON SESSION

October 5, 1944

Joint Session—Public Safety Education, Motor Vehicle Administrators
Driver Licensing and Accident Records Groups

Presiding: **SIDNEY KING**, Dir., Safety Div., Dept. of State, Salem, Ore.

Educational Use of Accident Records

A Panel Discussion

Panel Leader: **SIDNEY KING**.

Panel Members: Dr. **JOHN R. BOWMAN**, Chief, Research & Statistics, Bureau of Highway Safety, Harrisburg, Pa.

REYNOLD HOFFMANN, Secretary-Manager, Safety Council of Greater St. Louis, St. Louis, Mo.

ALBERT E. LA ROSEE, Manager, Highway Div., Massachusetts Safety Council, Boston, Mass.

BERT L. WOODCOCK, Director, Safety Education Div., Dept. of Public Safety, Des Moines, Ia.

MR. WOODCOCK: We are fortunate in Iowa in that the functions of safety education and accident record collection are in the same department. This has helped us in the production of accident records useful to the educator. We believe there is more material in accident records for the educator than for any other user.

What can the educator use from the regular accident summaries? He is interested in the occupation of drivers and of victims. He is interested in age groups. He is interested in the time of accident, both the hour of the day and the month or season of the year. By using summaries from the previous year, he can plan for the period just ahead through the use of acci-

dent information from the corresponding period of the preceding year.

We have reached the conclusion that the best news release is one that pulls material from the conventional summaries and puts it in a brief and concise statement of the month's experience. We use one sheet—both sides—with pertinent information on type and number of accidents, time, location, and a few contributing circumstances. In our opinion, it is important that such a release be not too detailed if it is to be used by newspapers, radio stations, and others.

MR. LA ROSEE: It is possible and sometimes desirable to camouflage statistics by graphs and graphical methods. It is important in any case to keep accident data as up to date as possible, for we want to get to the individual or groups responsible as soon as possible.

We have had good success with a quarterly inter-community report. This is called a contest, but actually it is merely a tabulation of accident experience in the various communities in Massachusetts. This has aroused considerable interest and we feel that it is very worth-while.

MR. WOODCOCK: We try to keep our

records as up to date as possible, and we have had good use by both daily and weekly papers on our accident releases.

DR. BOWMAN: Newspaper releases can contain charts, maps, material in tabular form, and material in paragraph form. We have had good response from papers in Pennsylvania.

It is important to recognize that when we talk about traffic educators, we do not necessarily mean school administrators or teachers. The first educator in Pennsylvania was the State Police Department. They are still in the field today, with greatly expanded educational activities. Educational work in Pennsylvania is today carried on by four departments which have coordinated their efforts—the Department of Public Instruction, the Highway Department, the State Police and the Department of Revenue (Bureau of Highway Safety). Special studies of the pedestrian accident problem and the bicycle accident problem have met with wide acceptance, and thousands of copies have been distributed.

The outstanding feature of all this, however, is that school teachers want little in the way of safety information. Despite the fact that the law requires them to teach safety, they do as little as they can. They will use lesson plans, but they will not take the time nor trouble to create a lesson plan themselves from basic safety information. There must be a concerted effort to train educators to teach safety before we are going to accomplish much along this line.

MR. HOFFMANN: It is admittedly

difficult to get school safety instruction started, but such a program will bear fruit. Indicative of this is the record of 43-million deathless child days set in St. Louis.

There is no point in gathering statistics if they are not used, but it is entirely possible to use accident statistics among affected groups to prevent a repetition of accidents that have occurred. To do this, the data must be fresh and must be interpreted in terms of losses which the average person can understand—wage losses, family dislocations, loss to society, etc.

Urges Selectivity

We cannot use a shotgun method but must be selective. For instance, we can consider age groups and causes, placing the blame for pre-school age accidents on parents and for school age accidents on school authorities and the police. We can spot on maps the residence of drivers and pedestrians and so we can determine the racial characteristics of these people, thus directing our educational program into the most effective channels. We can locate dangerous streets and intersections. We can identify and stress seasonal hazards.

Those who collect statistics without using them are in reality misers. Accident data can be used by the engineer, by the police, by the educator and they can be used many times over. Only by such use can their collection and processing be justified. We must aim education at the group affected, however, and the education must have appeal and it must be timely.

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TUESDAY AFTERNOON SESSION

October 3, 1944

Presiding: General Chairman H. W. Warrick, Chief, Bureau of Accident Prevention, Philadelphia Transportation Co., Philadelphia, Pa.

The Urban Transit Man's Stake in Accident Prevention

By JOHN L. WILSON

President, St. Louis Public Service Co., St. Louis, Mo.

Scanning my newspaper one evening recently, I came upon an article quoting statistics compiled by the Safety Council of Greater St. Louis. These figures revealed that 748 St. Louisans had given their lives fighting a global war since the Japs took their longest step toward national hara-kari.

And in St. Louis, during that same period, preventable accidents killed 964 persons. The tribute to carelessness took the lives of 216 more St. Louisans than did the sacrifice of war.

If I had read a similar article a couple of years ago, before being connected directly with the transit industry, I would have been amazed because the figures are startling. But today, I look upon such reports with dread because of my connection with the St. Louis Public Service Company. Such statistics all too often mention transit vehicles in connection with the toll of accidents. I feel a personal responsibility in any tragedy involving a Public Service vehicle. It is a triple responsibility . . . to the operator, to the company and to the public.

All of us in the city passenger transit industry are duty bound to keep public transportation as safe as possible. Urban transit systems in America carry some twenty-two billion passengers a year. Transporting twenty-two billion passengers a year is the equivalent of handling sixty million people, half the population of the United States every day. These millions and other millions who share busy urban thoroughfares with transit systems, depend upon us to keep our service safe. The safety of these millions is the transit man's stake in accident prevention.

In the course of a year, America's city transit industry operates vehicles over approximately 3,262,400,000 miles, or roughly

the equal of 6,800 trips to the moon and back.

Men and women who put that total mileage on America's transit vehicles would find that many trips to the moon a cinch. They wouldn't have to worry about school children, nor Sunday drivers, nor dreamy pedestrians, nor junk men's carts nor any of the hundreds of hazards that can spoil a perfect-safety record in a second.

This impressive mileage is not made on open roads to the moon. It is made on the busiest thoroughfares in the world. The fact that we have relatively so few accidents is a tribute to the skill and care of street car and bus operators.

When we talk about the transit man's stake in accident prevention, we cannot look upon it as the stake of the man who owns a commanding block of stock in a transit system. Nor can we look upon it solely as a transit executive's stake. Every man connected with a local transportation system, from the washer who cleans the windshield of a bus to the president who guides the destinies of the company, has both a responsibility and a stake in accident prevention.

It is the duty of each to do his job so that it will contribute to safety as well as to efficiency in the operation of the community's transportation. That is why we consider the St. Louis Public Service Company's safety program an organization-wide responsibility.

In today's city transit industry, accidents are a decided item of expense. Their cost, to systems serving urban communities, is estimated at fifty million dollars for 1943.

The mere total, however, does not tell the whole story. Accidents are one item of expense from which there is absolutely

no return. They are a vicious hazard to the transit industry because their cost cannot be estimated accurately in advance.

For example, if we are considering a new route in our transit system, we can tell how much it will cost to equip the line. We can estimate the income with reasonable accuracy. We can come within a few dollars of forecasting the cost of maintenance. But no man alive can tell us the cost of accidents in advance. If the accident frequency is low, and the mishaps are minor, the cost will be moderate. If the rate of frequency and the seriousness of accidents step up, the cost can take away all the profits, or even put the company into bankruptcy. There's no such thing as an average accident.

While future accidents are extremely indefinite, there's no guess work about those that have happened. That is why so many of us are inclined to figure the cost of accidents in dollars and cents. Important as this phase of the expense may be, it is by no means the whole cost. If you have ever seen a transit operator immediately after an accident, you will know what I mean.

The cost of an accident in terms of its effect on employees cannot be measured accurately in terms of dollars and cents. The loss of efficiency that an operator may suffer the result of accident jitters cannot be reckoned in terms of money.

The cost of a traffic accident to the small part of the public that may be involved also is beyond an accurate estimate. The courts, insurance adjusters or company lawyers often reach a dollars and cents settlement, but dollars never can take the place of a child, nor substitute for the presence of a mother in a home, nor fill a father's chair at the head of the table. These intangible values, even more than the cost in dollars, make accident prevention one of the most essential activities in our business.

In addition to the effects of accidents that already have been mentioned, there is another damaging result. Accidents bring bad publicity.

In the postwar market, it will be essential for the transit industry, as a whole, to keep the good will it now has. It will be necessary, in the highly competitive era after victory, for the transit industry to continue to prove to the public that ours is the best possible means of city transportation. Other-

wise, the shrinkage of traffic will be so severe that the industry again will find itself in financial difficulties.

When newspapers report numerous mishaps involving any city transit system, those reports become advertising of the company's inefficiency. In the competitive postwar market, no transit company can afford unfavorable publicity of this kind.

A moment ago, I said that the St. Louis Public Service Company's accident-prevention program was broad enough to include every employee in the organization. If we stopped at that, the job would be incomplete. Our program takes in the public as well as our employees. It asks for and gets the cooperation of police, schools and other public officials.

A splendid example of official cooperation was seen in the help given in our recent safety meetings by Lt. Roland J. Schumacher, director of safety education and traffic analysis for the St. Louis Police Department. Lieutenant Schumacher, whose schedule keeps him busy day and night, took time to address each of these meetings. His practical advice has been an inspiration to our operators.

Everyone, I believe, is conscious of the need of accident prevention, thanks to the fine work that has been done by the National Safety Council and its various branches.

In selling safety to our organization and to the public, and safety must be sold, we must develop a recognition of the many small acts of carelessness that may lead to serious consequences. Most accidents are the result of someone's lapsing into an instant of carelessness.

I am going to describe briefly the St. Louis Public Service Company's accident prevention program, which is selling applied to employee relations and public relations.

I am not the originator of this program. It was under way when I arrived in St. Louis. I believe I have contributed to it, but so have many other members of our organization. My greatest contribution to the program has been to give safety work emphasis by making it a part of every executive's job, part of every employee's job.

All strictly safety activities in Public Service come under the direction of a

capable and experienced safety engineer. His work covers the promotion of safety of employees in the shops as well as the safe operation of our vehicles. I am putting the emphasis on the safe operation of transit vehicles today because other phases of safety work undoubtedly will be covered adequately by other speakers.

Under the safety engineer's leadership, we have organized two types of safety boards. The control safety board, which meets periodically, covers safety problems affecting the entire system. The board is composed of operating manager, transportation superintendent, safety engineer and, from time to time, other department heads.

Functions of the central safety board are major safety matters affecting more than one department and general safety policies.

Divisional safety boards, one of which is located in each street car and bus division office, are composed of the shed captain, representing the union; the division superintendent, acting for the company's executive staff; and two or more operators. Operator members are selected by the shed captain and the superintendent.

Divisional safety boards are interested, primarily, in safety as it applies to their own division. In practice, however, many suggestions adopted by one board are worth applying system wide.

You will notice that these divisional safety boards represent the operators, the union and company executives. Safety promotion in our organization is based on cooperation of all concerned. And that cooperation is not theory. We practice it. It is practical.

Employees are urged to submit safety suggestions to any member of the divisional board at any time. Every safety suggestion is given careful attention by the board and a definite decision is reached concerning it. Minutes of divisional board meetings, which tell what action has been taken on each suggestion, are posted where all employees may read them. This is important because employees will not keep on making suggestions if they get the idea that their offerings are filed in the wastebasket.

Our maintenance program is closely allied with our safety. Every vehicle goes through regular shop inspections which are designed to keep it safe as well as efficient

in operation. In addition to these regular shop inspections, every operator keeps a constant watch on the mechanical condition of his street car or bus. Any mechanical fault that might make safe operation difficult is reported immediately. Such difficulties are eliminated without delay by a crew of "trouble shooters" or the vehicle is replaced until shop repairs can be made. Even in times like these, when such preventive maintenance is difficult, we do not risk the safety and good will of our patrons by the use of equipment in bad order.

Now let's trace our safety program as it might apply to an individual operator. Our personnel supervisor is the first man to put the safety program actively into practice. He looks over the prospective employee to be sure he has qualifications for a safe operator. The applicant is given aptitude tests to determine whether or not he is mentally and emotionally capable of having charge of a piece of our equipment. Then he is given a physical examination to be sure he has no defects that would hinder his work.

Once he is approved by the personnel supervisor and the medical examiner, the prospective operator is hired on probation. Then he is given thorough instruction covering equipment and how to handle it safely.

Our experience in St. Louis shows that an average of three weeks of intensive training is necessary before we can qualify a man as an operator. In addition to usual classroom methods, this training includes sound-slide films and miniature vehicles to illustrate traffic problems. The program requires the student to spend several hours on the "practice track," where he can operate equipment but can't hit anything.

After the new operator completes the first phase of his training, he becomes a "learner." He actually goes on a run, with an instructor at his elbow. Our instructors are capable operators who have the knack of teaching. Their instruction is pointed toward safe operation. Even with the manpower shortage, we do not take stunt drivers on our staff.

As long as the operator works for the company, his safety education will continue. We have general safety meetings at each division office twice a year. At these meetings, we review good safety practices and

introduce new ones. This instruction is done in any of a number of accepted ways.

Recently we introduced Public Service Transit News, our company newspaper. While this publication was started to further employer-employee relations, we have found it to be a very effective means of promoting safety. Every issue gives accident prevention news a prominent position.

Letters to the organization and bulletins posted in division offices round out our safety educational work. Those of you who are familiar with sales promotion work will see some of its methods in our Safety Contests. We have two contests which are closely linked.

The Man-to-Man Contest is based on the individual operator's safety performance. The inter-division Safe Miles Contest, is a competition among division offices. Points, which may be exchanged for merchandise, are awarded both on the basis of divisional and individual safety achievement.

Success in the promotion of safety in a city transit organization requires the cooperation of the public. Therefore, we use one of four advertisements in our regular monthly schedule to carry safety messages to the public.

Usually our safety message appears in the first and largest advertisement each month. This advertisement, in addition to appearing in the St. Louis daily newspapers, also runs in all community, religious, racial, labor and other local publications. Thus we feel sure we reach every St. Louisan who can read, at least once.

While our advertisements reach the public in general, a part of our program is aimed directly at our customers and is put before our passengers. In these messages, we follow the same themes that we use in our newspaper advertising.

In September, our safety advertisement told children a number of practical ways to avoid mishaps on their travels to and from school. This advertisement, having as its sole aim the prevention of accidents, has been enthusiastically received by school officials. Evidence of this enthusiasm is seen in the fact that schools requested five thousand enlargements of the advertisement. One of these enlargements was posted in each schoolroom in St. Louis and St. Louis

County . . . in parochial and private schools as well as in public schools. Such acceptance of our advertising not only means accident prevention, but is a sign of growing good will toward our company.

Every month, we print one hundred and twenty thousand copies of "Ride Guide," a little newspaper that is distributed on our street cars and buses. Safety messages are adapted to the front page of this publication.

In addition to the standard street car and bus cards, which we use frequently for accident prevention messages, we have installed a special card rack in each of our vehicles. This special bracket, which is dedicated to safety, is placed where every patron must pass it and where it is constantly in front of the operator. Safety messages, changed every other week, are kept in this space constantly.

Already we are seeing favorable results from our campaign. There is an added interest in safety on the part of employees, a better spirit of cooperation on the part of the public, and, most important, the total number of accidents has dropped eight per cent in the last eight months. That is a substantial improvement, especially in times when street car and bus traffic is at an all-time high.

Some of you may wonder if the results of our program are worth the effort and expense. An educational campaign such as we are carrying out in St. Louis is not cheap, but one accident easily could cost a lot more than our entire promotional expense. Therefore, if we prevent just one such tragedy through the use of safety promotion, the campaign is a bargain.

If you are in the city transit industry and are planning to intensify your safety promotion or to start an entirely new program, I suggest the following procedure:

Take a good look at your problem and be sure you know all its angles. Call together all your department heads who are directly concerned. Summon your sales manager and suggest that he bring in your advertising agency. Your sales manager, working with the agency, will be a force in selling safety. Set up a definite program. A successful program must have the cooperation of the public, public officials, company executives and your operators.

Call upon the experience of your local Safety Council or the National Safety Council.

When you begin your program, remember that you are not talking to a crowd. You are addressing a parade, a constantly

changing audience. Therefore, make your program continuous. And make it a company activity that is recognized as being of such major importance that it gets the attention of every executive including the man at the top.

Modern Employee Selection Procedure

A Panel Discussion

Panel Leader: GLENN U. CLEETON, Professor of Industrial Psychology, Carnegie Institute of Technology, Pittsburgh, Pa., and Consultant on Employment and Training, American Transit Association.

Panel Members: HOMER L. HUMKE, Specialist in Industrial Psychology and Training, Indianapolis Railways, Inc., Indianapolis, Indiana.

EVERETT R. KONTNER, Head, Training Service, Safety and Accident Prevention Branch, Corps of Engineers, U. S. Army, Washington, D. C.

A. H. NIELSEN, Director of Training, The Milwaukee Electric Railway & Transport Co., Milwaukee, Wisconsin.

W. H. C. SEELEY, Director of Personnel, Toronto Transportation Commission, Toronto, Ontario, Canada.

ALEXANDER SHAPIRO, Director of Personnel, Capitol Transit Company, Washington, D. C.

PROF. CLEETON: In order to give direction to the broad subject under discussion I will raise a few general questions. The first of these I will try to answer myself.

QUESTION: What ends or purposes should modern selection procedures serve when applied to transit operating employees?

As I see it, the purpose of selection is to require that employees who will operate vehicles be efficient, keep accident rates at a minimum, maintain service as scheduled, promote good public relations, and remain with the company as satisfied employees.

Those are ideals that we are shooting at and hope we may attain.

The panel members will contribute answers to the general question, "What employment procedure will procure the employees who can be trained to meet the specifications set forth?", by answering specific inquiries. Several questions have been submitted and I will pass these along to panel members. As further questions are

submitted I will pass them around to the group.

QUESTION: How can application forms and interviews be made more effective in selecting desirable employees?

MR. NIELSEN: The interview, of course, is the basic employment technique. It is almost impossible to imagine an employment situation without an interview—perhaps several interviews. The definition of an interview is a conversation with a purpose.

The purpose is to try and obtain the necessary information from an applicant to make a decision as to whether or not you want to employ him in your company. We don't depend upon the interview alone. In the last few years we have developed a number of aids in the nature of tests, use of application blanks, perhaps even photographs or letters of application. None of these techniques could be used alone. In many cases the interview is the most important device to get the necessary information from the prospective employee.

Too often we have paid too little attention to the interview and the application blank. They have been taken for granted for so many years that perhaps we haven't even checked in the employment office to see what kind of interview is given or the type of application blank in use.

There is often much extraneous information requested with no employment significance. For instance: school names, elementary through high school, might be requested. The applicant fills out the blank and then it may be found that nobody does anything with the information.

My first suggestion would be: take a look at the application blank again. See if there isn't some information requested that

has no employment significance. If such things exist get rid of them and obtain information from the application blank that we can use.

There are, of course, a few things like whom to notify in case of an emergency—information that we want and need if we do employ a person. Those things should not be eliminated, but let's be sure the information we do use with respect to age, marital status, and other such information is in there.

We should be able to train our interviewers so they will obtain the information wanted. Let's look at an interview as a three-part device—not only to get information—but to give information and make a friend for the company.

That first contact with the company is very important in my opinion, and a friend can be made or lost in that interview, whether or not the person is hired.

The interviewer's attitude is important. He should observe the applicant from the standpoint of whether or not he is going to be successful in this work; whether or not he will properly adjust himself to the job and become a successful and veteran employee; rather than to look at the person and think, "I wonder if this fellow has the qualities to fill the job?"

Just that change in point of view might be helpful.

PROF. CLEETON: Can physical examinations be used to select the occupationally fit, as well as to eliminate the physically unfit?

MR. SEELEY: I am not too sure I thoroughly understand the meaning behind that question. If it means to what extent physical examinations can assist in deciding whether a person is occupationally fit—that is one thing—but whether the medical examiner in carrying out the physical examination can select the occupationally fit is the other side. It has been our experience over some twenty years that medical examiners take a purely physical view. Their training has been purely along physical lines and that is where their interests lie. We have had two types of setups which work out more or less satisfactorily in different respects. If the medical examiner is reporting to the employment official solely on an applicant's fitness or unfitness, the

employment people have nothing to guide them in salvaging the unfit for occupational purposes to which they could be fitted.

That was the experience of the Army authorities in both the United States and in Canada, until the stage was reached where they were discarding far too great a percentage of soldiers in one case, and perhaps workers in the other.

There can be a middle ground where the medical examiner is used to augment the selection of occupationally fit by the personnel people. In too many companies, and I think ours has been one, the medical examiner is a part-time official who has a large number of employees or applicants reporting in for medical examinations.

He is not altogether clear as to what purpose they are going to serve in the organization. He has a general idea of the requirements of the operating personnel, but perhaps too often very little understanding of the intimate details and physical requirements of other work in the organization.

As a consequence, if a personnel man obtains from his medical examiner a statement of fitness or unfitness of an applicant, he has very little to guide him in making placement. I am afraid there is a heavy wastage—perhaps unnecessary—in the loss of applicants to the company these days when every applicant counts.

There is one field that we may be able to exploit to get a closer association between medical examiners and their reports of applicants' fitness in the particular type of work available in the company.

PROF. CLEETON: What level of abilities are necessary for street car and bus operation and how can such abilities be measured?

MR. HUMKE: I wish I were able to speak with the background of understanding with respect to the data which you people have at hand, which would help me to answer that question.

I must limit my remarks to consideration of 176 cases tested for drivers in Indianapolis. These had a median IQ of 73, which is better than the IQ of 38 per cent of the people. We do not have data for a long enough period of time to answer definitely the question, "what scores are necessary to keep accident rates at a

minimum?" But on the whole we can say that people may be too intelligent to drive safely. You may occasionally have had an intelligent man do a good job, but it has been our experience that if a man is too intelligent (IQ of 105 or near that) the incidence of accident is high. Likewise, the accident rate is high for those with low IQ scores. About one-tenth or one-fifth of the people we tested are too low to make satisfactory drivers.

The second question on promoting good public relations is one on which we really have no significant data. There are several reasons for that. We are attempting to do something to secure a little more of a definite report in that respect. The chief reason we do not have the data is because we do not have a detailed report.

Some of you people may have a very significant method of finding out just what the score or rating of your drivers is in promoting good public relations.

The third question has to do with remaining with the company as a satisfactory employee. People of high intelligence do not remain. Many, perhaps, do not have had accident records, and if not discharged, will leave, for other reasons. Those of too low an intelligence are, of course, discharged.

You probably would have arrived at these answers by your own intuition, without any statement from me. However, there are a number of other significant aspects of intelligence tests which are of considerable interest here and of which we have made considerable use.

PROF. CLEETON: Is emotional stability an important factor in selecting street car transportation operators, and can it be measured?

MR. SHAPIRO: In my opinion, emotional stability is the most important factor, but I don't know if it can be measured in terms of paper and pencil tests or by any other terms. I am not a trained psychologist and my knowledge of the subject is based on operating and later on personnel experience.

You can utilize people who are emotionally unstable for operating work if you have to. In Washington, D. C., we have utilized them because we couldn't get anybody else, but when this is done, there is

considerable risk and a great deal of patience and intelligence must be used.

A small organization which knows its individual employees and can follow up individuals and learn their moods—and you have to go that far—and which has supervisors who are human beings and, unfortunately, some of our supervisors don't always fall into that classification, you can take an emotionally unstable man, and by coaxing him along and putting him on the back and kicking him in the ribs, get some work out of him. Sometimes you can get very good work out of him.

However, as a general statement, in normal times you are better off if you don't have emotionally unstable people operating street cars and buses.

How can you tell an emotionally unstable person if you haven't definite tests such as a psychologist gives? There are a number of tests with which experiments are being made that seem very helpful for certain definite purposes, but my friends who are trained psychologists tell me there is no one such test that is infallible.

In the absence of such tests, you must use common sense and be a little patient. Employment applications, when studied carefully, will reveal evidence of emotional instability by constant changes of jobs, residence and things. An interview also provides evidence.

If you take the time and have the patience and are able to supply confidence, a lot can be obtained from the applicant about what he has done which will give a sidelight on whether he belongs on a street car or in a shop. A credit report will give a lot of help.

Combining all of these, you can, in most cases, spot the emotionally unstable person without much difficulty.

PROF. CLEETON: Can ability to develop motor skills be determined before hiring? If so, how?

MR. KONTNER: The answer is a hesitant yes — hesitant because research studies have not, as far as I know, answered conclusively some fundamental questions.

Skill, according to T. H. Parr, is the integration of well-adjusted performances adapted under varying conditions to attainment of desired results. Motor skills in this

discussion are to be differentiated from such other skills as may be used in instructing and training and adjusting differences, and in investigating interests and morale.

In order to consider the problem from the standpoint of practical application, what are some of the questions and what aspects of the problem should be indicated? Is the aptitude for motor skills a general quality such as mechanical ability, or are specific factors involved in motor skills?

Is the pattern of the activity the most important factor? Will the trainability depend upon the degree or quantity of attributes of motor skill aptitude? Will motor training tend to produce the same level of performance? Will training tend to produce the same relative level of performance by both superior and inferior trainees? Are tests of motor skill, which can be used to select the best or eliminate the worst, sufficiently satisfactory for our purposes, or do we want the tests which are diagnostic, or on which training activities can be based?

The enumeration of these suggests that the problem is not as simple as we would like to have it. In the time available no attempt can be made to tell of the research with which you might not be acquainted, and which tests have been attempted to find answers to these questions.

Some who have investigated point to the fact that the test of motor skills, such as are included in operating vehicles, should consist of work samples or highly analogous tests. This provides a cardinal principle in answer to the second part of the question.

An analysis of the operation of a vehicle in the field of our particular and immediate interests will show that some very complex adaptation must be made through a wide range of varying situations, such as making a left hand turn at a congested intersection. That may not be the most difficult situation, but the number of elements to which attention must be given is high. Other conditions add the time factor so whatever decision and consequent action is made must be rapid.

The eyes must provide the stimuli. If the timing of the motor element is faulty there will be a failure in the type of decision which depends upon accurate knowledge serving as a basis of reasonable and good judgment in operating vehicles. The exer-

cise of skill is truly an integration of well-adjusted performance to attain the desired end.

The Corps of Engineers, Army of the U. S., has a program of examining tests on selective training of motor vehicle drivers. Because of Civil Service requirements these are not pre-employment tests. They can be used for the basis of assignment but are no pre-employment test. However, I believe they lend themselves very well to pre-employment purposes.

Professor Amos E. Neyhart, Pennsylvania State College, and Road Training Consultant, American Automobile Association, served as the consultant for this program and more recently has given much time to the Personnel Procedure Section, Adjutant General's Office.

This program includes a written information test, a battery of psychophysical tests, five skill tests, and a road test. A demonstration of these tests, as far as facilities are available and time will permit, will be given immediately following this session.

The written standardized test has 50 questions, of which 30 are true and false and 20 are multiple choice. In the psychophysical tests there are: visual acuity; night adjustment; depth perception; steadiness; and eye-foot reaction.

The road test covers a course of at least five miles and includes right and left turns, stops, railroad crossings and other maneuvers pertinent to the operation of a Corps vehicle.

The test data from examining and testing over 31,000 motor vehicle drivers have provided material for this written standardized test. The refinement of the program will depend upon the objectivity and relative weight of the test, but—I may say this—it has been disappointing in not being able to find validity on which one would be able to base a very definite statement.

The problem of determining the ability of developing motor skills before hiring, is to choose work samples and highly analogous test elements of the operations performed. These should satisfy the criteria of reliability, validity and objectivity established as to your particular group and based on your statistical data and according to your own forms.

PROF. CLEETON: The next question

isn't on the list but is on the program, "Procedure recommended by the American Transit Association."

I will mention certain phases of this program because it relates to some of the answers given here today. The accident research program's preliminary outline, going back as far as 1941, on which there has been more or less continuous work since that date, suggests the basic features of a sound selection program including application forms, interviews, and interview rating forms.

It would include a mental ability examination, the A.T.A. examination with which some of you are familiar. There is a complete visual, physical and dental examination.

I would say that is one of the biggest problems that hasn't been solved yet. Reference, credit and personal investigation has been touched upon here as being done quite well in some companies and not so well in others.

Plans for motor ability tests have been developed at Pittsburgh. An experimental test was developed, using ideas borrowed from Milwaukee, Cleveland, Washington and elsewhere. I took advantage of every opportunity to use an idea that we were able to incorporate when I happened to be in one of these places.

I understand that the Capital Transit has a model of that device, or rather has the first of those devices. I believe it will be in operation next week. We are beginning to have something there that we, at least, can get some information from.

In regard to the aptitude for personality test, various places have the test labelled "The Personal Reaction Test" on which experimental data is being checked and collected at the present time. This, again, is a very difficult problem.

Then there is the question of a final interview and rating. After you have all these elements—how are you going to put them together so you will give the proper weight to the various elements? That is a question I wouldn't attempt to answer.

E. E. GROVER (Columbus and Southern Ohio Electric Company): What type of person is chosen to interview and what training is he given before he is set loose to talk to prospective employees?

MR. NIELSEN: The people are trained

to do the preliminary interview. The applicant comes into the employment office and wants to place an application for an operator. Our interviewers are rather old employees in the organization. Brand new people have not been put on this job. These older employees understand operations quite well.

Each of the interviewers has had an opportunity to take the breaking-in-training of an operator and thus has an appreciation of the job, because the interviewer has to play a very important part in furnishing information about the job to be sure the applicant wants it when he learns what it is about.

Applicants often come into the office with the idea that they are going to like being an operator but they need additional information before deciding to take the job. They certainly need to know something about hours, schedules, and other special conditions they will encounter such as snow fighting duties.

The applicant should have a good idea of the job before an extensive employment procedure is applied. So, I would say, at least, give him an opportunity to be with your training people so he understands the various phases of work.

The second interview is given by the people who administer the motor ability tests and the general intelligence tests. These people have the same training but we have had people who have a background of training in the general art of interviewing.

It happens the two people who do that kind of interviewing have been trained in college to handle an interview. In reference to the subject Mr. Shapiro discussed—emotional stability—they get to the question of economic stability, general personality and personal make-up.

They are the ones who can appraise those things and who understand the make-up of an individual so that during the interview they get the information desired. I believe the way to summarize that is to say the interviewer should be given a chance to understand and get the feel of a job. If necessary, give him the entire preliminary training so that he may understand the difficulties of the job and the tremendous

importance of the general personality factor in being a successful operator.

MR. SHAPIRO: This is probably the most important point in the selection procedure. I have always felt that the preliminary interview is to some extent the foundation of the success of a company because it decides whether a person is going to be employed as an operator and a company is no stronger than the operators it has on the street. We have gone about obtaining the results which Mr. Nielsen spoke of by reversing the procedure.

We have trained 4,000 operators in less than five years, which means we must have interviewed four or five times that number. We borrowed from the Transportation Department two men experienced as operators and made preliminary interviewers out of them. All applicants for jobs as operators must go to the training division, and the superintendent or the assistant superintendent takes time to personally interview these people. If they say "No," the person is not accepted regardless of anything else.

The Training Division is charged with the responsibility of giving the company a satisfactory operator and if they are charged with that responsibility they ought to have something to say about the material being sent to them.

When they accept a person, it is up to them to make good and produce a satisfactory operator. Thus, we have made it a rule in the past six years that every applicant for an operator's job must be approved by either of these two men in the Training Department and the Employment Division has to consult with them and get their approval before the operator is accepted.

Probably by using experienced operators for preliminary interviews, the same results are obtained as with Mr. Nielsen's procedure of teaching interviewers operating procedure.

MR. SEELEY: In combination with Mr. Nielsen and Mr. Shapiro, I believe that the preliminary interviewer should have more intelligence than the applicants. That is not always true.

He should have sufficient time to go into the interview. Too often, due to fluctuating numbers of applicants, the interviewer doesn't have the time with the applicant he feels necessary.

When an interviewer feels he is under

pressure, he naturally shortens the interview and takes a chance—the company later finds it has taken a chance. A check back will show, I think, that too often the interviewer is inadequate for the job or is under pressure.

MR. MEHRENS (Omaha and Council Bluffs Street Railway): Keeping in mind the possible compensation angle of a case in the event of the employee being involved, or in a claim involving an accident—how deep or how extensive should the physical examination be? Shall we go deeply enough to take into consideration venereal diseases, lung infections and nerve disorders?

MR. SEELEY: The question of venereal disease is an especially important one. I have attempted to convince five different medical examiners of the advisability of giving a blood test to every applicant but the reaction has invariably been against such practice.

They indicate there are other simple tests that can show any deterioration of the nervous system that will answer for our purposes and, peculiarly enough, I don't think it is true. However, they do catch some through whatever tests they have.

In regard to lung infections, we are thinking it might be advisable to put our people through a travelling chest clinic. However, most of our applicants are above the age where tuberculosis is prevalent.

I am not a doctor. I am led to believe, however, that tuberculosis appears most frequently in the "teens," or early twenties and later somewhere in the fifties. Most of our particular group are ranging from 26 to 70 and the number in the older group is relatively small. However, we may go into it.

As far as compensation is concerned, I don't believe chest conditions play any great part. If the man is severely affected, he should be sent in to check.

Today there are fewer doctors and more applicants so we are having the same experience with doctors as with interviewers. In other words, they are working under pressure and applicants are sliding through. Doctors are checking the obvious but won't go into detail. The more time for examination, the better the examination.

A question regarding physical examination is whether the doctor, if he is in the Claims Department, is the most suitable

for examining applicants. Our experience shows it is absolutely essential to have a doctor who can be trained to be personnel-minded rather than claim-minded.

We are getting a lot of other things from our doctor in addition to an applicant's freedom from claim risks. A claims doctor who is not in sufficiently close touch with the developments in the personnel office is not in a position to be satisfactory compared to the doctor who is most closely associated with the actual selection staff and permits them a certain amount of freedom to discuss certain types of cases with him. In working closer with the doctor, we are salvaging a number of applicants we formerly were losing.

A. G. FINK (Saint Louis Public Service Company): In all this discussion it has been indicated that interviewers send an applicant to the Personnel Department, then to the Medical Department and last to the Operating Department. Do you think it advisable for him to go to the Operating Department before he ever has a physical examination?

MR. SHAPIRO: I don't believe it is necessary for the head of the Operating Department to interview every applicant for a job as an operator. It is physically impossible where a large number of people are employed.

Secondly, I don't believe the head of the Operating Department is particularly well qualified to choose operators. He is the man who is picked for his ability to run the company—the system. I believe different talents are necessary in selecting people as operators.

These days we are trying to get the good we used to get from a foreman interviewing people he was going to employ by utilizing people who know the job as well as the foreman, and at the same time, eliminate the personal element that the foreman was boss of that shop, and if he didn't like a man's haircut or didn't like the cut of his nose, he didn't hire him. We are trying to pick people for their ability to do the job not on the basis of physical characteristics but on the basis of many other things, which combined give a clue as to whether the individual will prove a satisfactory employee for that particular job.

W. J. MACK (Philadelphia Transporta-

tion Company): It is my understanding that the Instruction Department of Washington interviews all the men because they are responsible for those men. What is the explanation that the operating man doesn't get a chance? He is responsible for them for a long while.

MR. SHAPIRO: The Instruction Department is part of the Operating Department and it simply performs a specialized function in the Operating Department.

MR. SEELEY: I think it is common in most Personnel Departments, not only in transit but in others, that operating departments do not definitely have a say before the applicant is finally employed. That is so in our department, and it is so in almost every Personnel Department in my city.

It is definitely the responsibility of the Operating Department. The Personnel Department is a part of it and is only doing the initial screening and saving the Operating Department from seeing a lot of misfits; they send only the people whom they are satisfied can do the job. So, in most companies, the practice is for the Personnel Department to do the screening and send to the Operating or Maintenance Departments for final approval those who are going to work. The principle is that if a man isn't satisfactory to the head of the department, he is going to work for; that man isn't going to get a fair deal.

No department is infallible and in following that system you make certain the Personnel Department hasn't slipped on what the original requirements were. This is a double-check.

M. H. VAN MONEN (New Orleans Public Service, Inc.): By whom should the testing devices be applied—the Personnel Department or the Training Department?

MR. HUMKE: Over a number of years, it has been my experience that too often we, in interviewing departments, or in testing departments knew too little about the actual operations to be performed. Considerable can be added to the success of the total selection program if more help is asked from operating and maintenance people.

We could improve our interviewing techniques. Our application sheets could more closely integrate the interests of people on the firing line.

I don't know that we can entirely separate

from a functional point of view this matter of testing and training. Surely there is a very close relationship there in any industry.

In Indianapolis we have been able to grade out our tests and give the tests scores to the trainees—often within the first half day of the training program. Good use has been made of this exchange of information. It seems to me that the answer is neither "yes" nor "no," but "let us have closer integration than we now have."

PROF. CLEETON: I believe that perhaps would be accepted. Whoever does either testing or uses the results needs some assistance. In fact, more than they are used to, because there is probably no greater sin being committed, not only in transportation but in other industries, than somebody using a test simply because somebody said it was a good thing to do—in getting a lot of test results and not knowing what they mean.

That applies to all of us. There are also situations where tests are not given in the selection procedure. They are given in connection with training as a guide in dealing with the employee or prospective employee during the training period, so I think a survey of the industry would show a great many things.—Tests given by so-called experts; stenographers; part-time employees; psychologists on the company's staff; consultants; and persons within the company trained to give these tests.

It is the use and the interpretation of them that is extremely important and it is on that point that I think not only the people interested in developing tests but those who use tests probably ought to feel a little more humble and perhaps confess a bit of weakness.

In confessing weakness I have an alibi—touched on by Mr. Humke—that we get a lot of beautiful test scores and a lot of results from interviews, maybe scored numerically. We get results of doctor's examinations. Then we haven't any good criteria to check them against because the accident method of analysis used by some of the companies are, to put it mildly, not a very good criterion of the man's actual work or liability to the company.

I wish the operating people would find some way of giving those who hire an adequate estimate of the work of each and every employee. If they did that, a check

could be made on it and test these testing devices and check the medical examinations to see if something is being done to get the kind of persons wanted.

D. W. FOUTZ (Indiana Service Corporation, Fort Wayne, Indiana): I understand it was 767 people who were checked and you got 105. Were these operators as good as you are getting today?

MR. HUMKE: These people were tested before they were trained.

MR. FOUTZ: Does that apply to applicants you are getting today?

MR. HUMKE: There is a peculiar incident in that connection. Early in the program we made a check of high school graduates who had made applications. In that analysis we found 107 high school graduates. Their median was 107. That gives a little picture of what the status is in respect to high school graduates accepted for testing who passed the interview selection.

MR. PERRY (Omaha, Nebraska): Do you use the A.T.A. test? In Nebraska we have found them as low as 20 and as high as 110. I have found high school graduates and teachers with 50 and 60. I have had truck drivers with no more than eighth grade education with 80 and 90.

MR. HUMKE: We were using the Otis Test when the A.T.A. came out—or at least when the A.T.A. came to our attention. We gave the A.T.A. to 200 or 300 people and checked comparative scores. They were comparable.

You won't get any different scores in using the A.T.A. or the Otis, or any other test, as far as that is concerned. Of course, what has been said about scores is a known fact. People without schooling may score high and people with much schooling may score low. Of those 767, it was, perhaps, our people range between an I.Q. of 129 and as low as an I.Q. of 58.

PROF. CLEETON: I might say in respect to tests that they are highly imperfect. Educational institutions have probably had more experience with tests as a means of placement and prediction than has industry.

In an educational institution we think we are doing quite well if four out of five test scores tell us much of anything; that is, if we can predict on 80 per cent of the

people we test, we are doing exceptionally well. This imperfection exists in the test. An instance of why there is an unreliable test or an unreliable score on a test is you might get people who are testwise. I, for instance, can take any test that you can provide and beat it simple because I know how it was made.

The smart high school kids have been tested up-hill and down-glen. There is entirely too much testing going on in school. Probably there is not enough in industry. Some of the high school students are pretty test-wise and know if they guess heavily they are going to get a better score than if they don't.

I would say that if four out of five test scores tell anything the batting average is high.

MR. SHAPIRO: Would you say a word about some of the tests to people who are illiterate but who are intelligent? I think some of these gentlemen might be glad to know about that.

PROF. CLEETON: The army found it was necessary to develop pictorial tests. They were working to get a test for literacy and the army found that for certain adults they had to develop pictorial tests.

Pictorial tests were not enough for some of them. They had to develop manipulative tests, particularly following verbal instructions. Then the Chinese came along and they didn't know what to do about that. So whether or not we have adequate tests for literacy, I don't know.

MR. SHAPIRO: How about the Columbia University Test that is being used?

PROF. CLEETON: It is being used in industry.

MR. SHAPIRO: We are using it, or trying it out. It is one of those Thorndike tests.

PROF. CLEETON: There is a test the army is using at the present time which will be the best test for illiteracy one could possibly use when and if the army is willing to release it. I may be talking out of turn, but I think you will be able to get something out of that test.

HAROLD R. DANFORD (Director, Education Division, National Conservation Bureau, New York): Those are not specific. How about older employees?

PROF. CLEETON: If you are going to

get a line on the test and give to older employees, you won't be able to measure the test, because frequently old employees are not too good a criterion to go by. Those people have survived frequently in spite of educational limitations. They have mastered enough of the minimum skills of a verbal nature to get by, but in many communities the question of illiteracy is a tough one.

One company put high school graduation as requisite. Someone in the company objected strenuously to it but let it stand to see what happened. This was before the war. Much to their surprise they got all the high school graduates they wanted. It was difficult to find a person without at least some high school training.

MR. MACK: Should the Personnel Department object to an employee coming in who fails or should it pass the test over to the Operating Department?

MR. NIELSEN: I don't know why, but we turn them down.

MR. SHAPIRO: It all depends upon what is meant by the Personnel Department. If it means, as it does to some people, someone who has come from the outside and who has had the misfortune of going to a college, there seems to be a stigma attached to that in this business, unfortunately.

I, too, hide the fact that I received a college diploma at one time. That is our situation. If the personnel department is staffed with people who have been through the Operating Department and who are merely being assigned to a specific task, then I don't see why there needs to be a quarrel about it.

If you mean personnel people who have had no experience with actual operation, then I would say there might be a legitimate criticism—but not in all cases. Where the Personnel Department is a part of the Operating Department and has the responsibility of keeping the line out and keeping on schedule, I don't believe there is any need for worry. It is all in one basket. Get it together and you will get results.

MR. MACK: I apologize to my friends from Washington but I believe the man who hires has some responsibility.

PROF. CLEETON: How do they do it in Philadelphia?

MR. MACK: We try to have our Employment Department do it to some extent.

I have come to the conclusion that someone in our Employment Department has been out here to one of these big motorcar companies and puts them through on a production basis. I was trying to learn if anyone else was having the same experience in dropping the test down to 20 and somebody makes a zero and somebody in the Employment Department put a three along side the zero and we get them.

MR. HENDERSON (Cleveland, Ohio): I believe the standards set by the Employment Department are below the standard set by the Operating Department. I don't think that our people who do the hiring turn anyone down who would ever get by the Operating Department.

PROF. CLEETON: In defense of the standard examination, if you hire at 25 ap/ nobody fools with the test scores, you will probably be right four out of five times. Let me get this in the record. You will be right to this extent: a mental ability test

will not measure whether or not a man should carry a Phi Beta Kappa key. It measures whether a man has sense enough to learn through training.

If he makes a score of 25 on the A.T.A. test, he can be trained, and if your Training Department can't train him, you shouldn't blame the test.

MR. MACK: We did conduct an analysis just from the point of view of a motorman. We took some low marks—as low as 8—and made motormen out of them, but we have never been able yet to make a one-man operator out of them. We can make a motorman regardless of the score but not a one-man operator.

PROF. CLEETON: I used to argue with a man who said there wasn't much difference between an I.Q. of 60 and an I.Q. of 10, if you had long enough time to train the individual, and maybe that has something to do with it.

WEDNESDAY AFTERNOON SESSION

October 4, 1944

Presiding: ARTHUR J. NAQUIN, Safety Counselor, New Orleans Public Service, Inc., New Orleans, Louisiana.

Problems Peculiar to the Transit Industry

By MR. WILLIAM R. MCCONOCHE

Project Mgr., De Lurw, Cather & Co., Consulting Engineers, Chicago, Illinois

Three questions arise in connection with the problems of traffic which are peculiar to the transit industry. They are related and we'll discuss them one at a time. The first question is: "Will the transit industry's traffic problems ever be solved in operations at street grade?"

What do we mean by traffic problems? A measure of degree of traffic congestion is the low operating speeds which we face. Another measure is the accidents with which we are confronted, and perhaps a third aspect is the safety and convenience of the passengers we carry.

An optimum speed for transit operation is probably the speed at which we operate in the outlying districts of our systems—about 15 miles per hour, or a rate of about 12 miles an hour when we get into the more

congested part of the route. At 15 miles per hour it takes 4 minutes and at 12 miles per hour we travel about a mile in five minutes. We can charge that loss in some degree to traffic congestion. Assuming about 4 traffic signals per mile, we lose about 30 seconds per vehicle per mile. The other half minute can be charged to various peculiarities of street traffic congestion and to the greater number of passengers we handle.

When we get to the heart of our city the speed drops very rapidly. Speeds of two and one-half or three miles per hour are not unusual in the large cities, and we can charge the dropping off of speed to street traffic congestion.

It is in our Central District that the greatest number of accidents happen per

mile of route. No other area of the city has the same rate of accidents as downtown. Likewise, a large proportion of our passengers are destined for the downtown area. If we can do something about the traffic problem downtown, we can gain many times the rate at which we gain time by curing our traffic problems in the outlying areas, so let us leave the outlying district.

I would like to present for your consideration that, the downtown traffic congestion problem being what it is, the only way to completely eliminate or cure congestion in the central district for transit vehicles is to place that operation on a separate level. Because elevated operation is unpopular, this will mean subway. I don't mean rapid transit subway, but rather short subways that go outside, just outside the fringe of the area and loop back and go out and return to the street surface. Many large American and Canadian cities, such as, Washington, D. C., Detroit, Montreal, and Toronto, and several others are considering that method of separating their transit vehicles from the congestion of general street traffic downtown.

With street car, trolley bus and gasoline bus under ground, street congestion is entirely eliminated from the time schedule consideration for downtown centers. Accidents will be reduced because of the safety of operation on each isolated right-of-way. Gone will be the problems of other vehicle hazards, passengers slipping on ice and snow, darkness, sudden stops and other problems with which you are all too familiar. From the passenger standpoint, it adds immeasurably to their convenience, comfort and safety.

Now to go on to the second major question: "Can the city officials look to better transit facilities as the answer to traffic congestion, downtown parking and other related problems?"

The interference between street car or bus operation, on the one hand, and private automobile and truck transportation, on the other hand, is entirely mutual. Each blames the other for tying him up and adding to his running time.

Also, the parking problem which is plaguing every city official these days could

be solved to some extent if public transportation was so fast and convenient that a larger portion of the population would leave their vehicles at home.

Likewise, the pedestrian problem on downtown streets would be eased somewhat by short subways. Many people would be taken off street surfaces since they would alight from their transit vehicles in the subway close to their destination. The same stations or mezzanine levels of these stations could be used as underpasses, especially when weather conditions become hazardous for pedestrians.

The objective of freer traffic movement can also be reached by running the cars and buses in subways. The capacity of traffic thoroughfares would thus be increased at considerably less expense than the contemplated street widening, new streets, building of express highways, and other suggested expedients.

Now to discuss the final question: "Why don't transit companies lead the way in planning transit facilities for their cities?"

There are some of the defensively weak answers offered by some timid units of the transit industry. Active promotion of the plan would be tantamount to admission that the transit system was bad. Another, suggesting such improvements might result in the city fathers suggesting that the plan is a part of transportation and should be paid for by that industry. Still another, promotion of such changes belongs to city planning and that is not our business. Reactions of this type just don't belong to long-range planning.

There is no point in trying to segregate ourselves from the interests of the whole city and it is to the interest of everyone to provide good transportation. Municipal officials are fully justified in cooperating with the transit officials and vice versa in solving this problem.

We can't finance such a project, but our transit industry can assume vigorous leadership in furthering better all-around transportation for the people.

By eliminating traffic congestion, in one stroke we can help our own industry and better serve the entire community regardless of mode of transportation.

Transit Operating Accident Analysis

A Panel Discussion

Participants:

Discussion Leader: M. A. KRAFT, Accident Prevention Eng., American Transit Assn., New York City, New York.

KARL A. BEYERS, Traffic Eng., Georgia Power Co., Atlanta, Ga.

CARL BRUST, M.D., Medical Staff Officer, Kansas City Public Service Co., Kansas City, Mo.

W. D. FOUTZ, Supt. of Transportation, Indiana Service Corp., Fort Wayne, Ind.

LT. ROLAND J. SCHUBACH, Dir., Safety Education & Traffic Analysis, Police Dept., St. Louis.

WILLIAM TUCKER, Accident Analyst, Capital Transit Co., Washington, D. C.

CHAIRMAN KRAFT: We might consider briefly why we are interested in accident analysis. It provides a basis for developing and carrying on the active accident prevention program in a sensible and logical manner. It also provides the basis for carrying on a continuing program which I think needs to be emphasized.

I don't believe there is any argument as to the merit or need for accident prevention. I don't think there will be any argument as to whether we should have accident analysis.

However, there are quite a few different concepts of what accident analysis is in the transit industry should be; that is, as to the scope of it. Now, that is what the concern of the panel is this afternoon; to try and bring out the complete scope of accident analysis as we see it respectively.

First, we might briefly outline a concept so we will have something concrete to consider. In preventing accidents just what are we going to prevent and what is an accident? I would like to put it this way: You have a combination of circumstances or conditions. They involve a specific transit operator with a specific transit vehicle and a specific pedestrian, motorist, passenger, or fixed object and that occurs at a specific location.

All of these things are very specific and all are identifiable. Now, does not that give us the logical approach to the problem that

we are faced with? First, we have a combination of circumstances, which, translated, is the type of occurrence; and then you have the operator; then you have the vehicle; then the pedestrian, motorist, or passenger, or fixed object; and, finally, a specific location.

Now those would seem to be respectively the approaches to your accident problem. There are five separate and distinct approaches.

Let us pick on the operator first. He seems to be the brunt of all our fault-finding. I think we might look at the operator in two respects, or in the analysis of the accident in respect to the operator.

First there is the individual accident occurrence. He has an accident. Then you analyze that in relation to that man at that time. That is one phase. The next phase, perhaps, would be the review of the accumulated experience of a man which is perhaps two entirely different things.

Now, to start this discussion I am going to call upon Mr. Foutz, from Fort Wayne, to give us a little picture of how they handle this problem of judging the individual accident in relation to the man and also the accumulated experience of the man.

MR. FOUTZ: We started this present system we have about 1937 and in 1940 when we started trolley coach operation on about half of our lines, the system was revised to take care of the trolley coach operations.

Our system was set up over the ATA system but we had to go a little further in the number of items we checked operators on. We carry an individual check of these operators. In the past few months, as much as we wanted to keep it up-to-date, there were a lot of things we had to do.

We had twenty-seven things we checked on these various accidents that come up from the operator and we carry individual records now. In 1940 when we started the trolley coaches we started a system of awards for operators on chargeable and non-chargeable accidents on which they could win uniforms.

We attached more importance to the chargeable and non-chargeable part of the

accident than we have of going into the street conditions, the weather conditions and the various other items of that kind. Those, however, do come into our analysis under our chargeable definition.

"A chargeable accident is one which might have been prevented by the operator if he had exercised reasonable forethought, judgment or skill; or, it is one that might have been prevented by knowledge of conditions or use of practices reasonably to be expected."

When you first read that over you would think there could hardly be an accident without it being charged, but they can have them.

When all these accidents come in they are first reviewed by myself and I determine whether I think they are chargeable or not, and this is passed on to the safety director and on to the transportation manager.

Each of us initial this accident blank as to whether we think it is chargeable or non-chargeable. Of course, two out of three makes it one way or the other. We agree on it and when that is finished we attach a slip, and if it is chargeable it is so specified and the accident report and a note is sent to the safety director and an original copy is sent to the operator, notifying him that the accident has been charged.

It is surprising how these men having accidents won't even wait for the chargeable notification, but find out if the accident has been charged or is going to be charged to them.

After this notification is sent to the operator, he has ten days in which to protest the charge. He can bring in new information; go up and talk to the director, and a good many of them do; and when they finish, if he feels that it has been unjustly charged or if the operator has brought in new information he passes it on to me and the transportation manager and we reconsider the accident as to whether it should be charged or not charged.

Repetition of chargeable accidents is cause for dismissal. On our follow-up on that at the end of each month, the safety director furnishes me with a list of all accidents we have had; how many are chargeable and how many unchargeable; and possibly that list furnishes a breakdown of the causes of chargeable accidents.

Then this is given to my street super-

visor and instructors and they follow up these operators who have chargeable accidents and also use this list of causes to check all the other operators they ride with in order to prevent more accidents of the same type.

CHAIRMAN KRAFT: All companies do not have the same methods. We want to see if there is one best method or several good methods so we will perhaps find another in the practices of the Capital Transit.

MR. TICKLE: In analyzing accidents at the Capital Transit, we try to see wherein the operator failed so that he can be told and so avoid another accident.

He is charged with an accident if he fails to observe any precaution that can be expected in reasonably prudent driving. That holds in all cases, including the action of the driver of the other vehicle who may be primarily responsible for the accident, which corresponds to this chargeable or non-chargeable responsibility.

It is rated on a five-point scale, using the alphabetical symbols. That responsibility is not based on a relative position of two drivers, but rather on an operator's own part of the accident; on his opportunity to avoid an accident.

You may say it relates to the operator. It is on the basis of relating the operator's action to perfect driving. When we get those accidents and analyze them and get an understanding of what has happened, the accident is rated and the discipline is suggested.

In most cases there is a reprimand for minor accidents and in case of a reprimand we send out a memorandum to the operator describing how we feel he could have avoided that accident. The reprimand and rating for each accident is posted on the operator's card which the operator carries and it serves as an index of accidents by the operator.

That accident card carries each accident, the number given to it by the claim department, the code, describing the type of accident that it is and a very short description of the accident.

That accident card, together with a general record card is reviewed occasionally at certain points. The first time is after

his probationary period. After his training period he has three months of probation.

The second accident of any type is cause for review of his record. The second report of unsafe practices, such as running red lights and such unsafe things is cause for review.

The third accident in a month—that means any kind of accident—is grounds for review. It takes two vehicles to make an accident and the history of his accident record is reviewed at that time.

Then there are two general reviews of the card every year; one a semi-annual and one annual. At this time high-accident men are segregated out for either interviewing or to call their attention to the fact that they are in the high-accident group.

All men who have had more than two are called high-accident men. In some cases they are called in for an interview and in other cases they are referred to the training division. Also in some cases the review shows that we have a man who is a detriment to the company.

Of course, any very serious accident, such as collision of company vehicles or a serious pedestrian accident means that the cards are again reviewed and this business of reviewing the cards implies, or involves the superintendent of the training division and the director of personnel as well as the safety men going over the cards.

From that an opinion is produced as to what should be done with the man.

CHAIRMAN KRAFT: There is one question I am not sure is perfectly clear. I would like to ask you, Mr. Tickle, to get this point across: Is it not true that in determining the responsibility according to this five-point scale, that that is done by you as an accident analyst who does nothing but that?

The general custom is to have it handled by either the divisional superintendent or the transportation people, who are also handling operations as well as this matter of reviewing and determining responsibility in individual occurrences. Instead, in your case, you make those decisions.

MR. TICKLE: That is right.

CHAIRMAN KRAFT: Dr. Brust, it seems to me that several years ago when we were doing some work in Kansas City,

we came to the conclusion that the medical aspects or physical conditions of the men had some bearing on accident causation and that those needed a little attention and perhaps referral of a man to the medical staff for examination. Will you try to give the benefit of some of your experience in Kansas City?

DR. BRUST: The procedure within our company has two phases as far as the medical is concerned.

We frequently examine a man who is a repeater on accidents, as these two gentlemen have described. If there is an accident which is the responsibility of the operator, we examine that man specifically with regard to conditions that might have caused that particular accident. Then we carry on our semi-yearly—or did up until the war-time—or periodic physical examination.

Now with regard to the individual cases, I might illustrate what I have in mind by two different cases. One man had several accidents in which he would cut a corner and hit a fixed object with the bus. Examination revealed that he had a weakness in one of his eye muscles so the eye turned to the right. He had double vision and would come six or eight inches closer to an object than he thought he was and thus have an accident.

Then, on complete physical examination, proved to be a toxic condition which could be cleared up. He was treated accordingly and was rehabilitated and is operating a trolley bus.

Another case was a man who became unreliable in reporting accidents. He made rough starts and stops and began to brag about what a good operator he was. He came in and said that he could operate a car at sixty miles an hour and stop it on a dime.

An examination revealed that he has paresis and, of course, he was referred to a psychiatrist for proper treatment. He was not rehabilitated as an operator.

In regard to periodic examinations, the periodic physical examination will reveal a great many things which can be of importance after they have accumulated over a period of time.

The record of these operators is briefly: we found the defects which could be responsible for accidents in an alarming num-

ber of cases; the percentage of those having eye defects was 7.4; ears, 2.8; heart, 2.6; hernia, 1.9; blood pressure elevation, 9.2; positive Wassermann, 4.5.

In physical examinations it is important to have a close cooperation with the operating department. There must be someone who can get these men back to the medical department. It doesn't do any good to get a physical and put the card in the file and forget about it. If that man is not followed up and whatever information there is on the card checked back to the operating department, of course, the whole thing is worthless.

We might roughly summarize the conditions which can be of some information value and also important from a periodic examination standpoint. I believe high blood pressure, myocardial disease, positive Wassermann as indication of syphilis, and diabetes, as well as diseases of the blood vessels affecting the brain and eyes are the important conditions you should know about and they will be important as some of these cases come along.

CHAIRMAN KRAFT: Dr. Brust, there is one question I would like to ask before we pass on temporarily from this subject. You mentioned the periodic examination and I believe that you find that the information you get from your periodic examination enables you to do a better diagnostic job when we send a man back in case of individual accident or a bad accident record.

DR. BRUST: Yes. Very recently we had a good case in point of a man whom we knew had a positive Wassermann since 1936. Recently he became nervous and was involved in one or two minor accidents. As soon as he came in we were on the lookout for active syphilis. It was proved on a spinal puncture that the man had early paresis and he is now under treatment. That is one illustration. There are many of these cases.

I don't mean that every operator that has an accident will be found to have some organic disease. These are in the minority, I would say, and most of them will be found not to have organic disease as a basis of their accidents.

CHAIRMAN KRAFT: That gives me an opportunity to put in a little better here what we think to be in terms of analysis

is merely an attempt to get a clue or to run down a clue. You may do that four hundred times, or four hundred and ninety-nine times and the five hundredth time you may find the answer. Then the work of analysis has been of constructive value to the company.

One valuable feature which I am afraid is altogether too badly neglected has to do with the isolation of accidents by location. To traffic engineers, that is heresy, you might say, because that is one of the basic approaches of the traffic engineer to accidents and other difficulties in general street car traffic.

I am going to call on Mr. Bevins to explain that type of approach.

MR. BEVINS: We might start by citing specific cases. One of our heavily traveled streets in Atlanta is intersected by another heavily traveled street, an artery going across town. It was protected by regular four-way traffic signals and everything seemed to be all right, but we had right-angled collisions at that particular location.

The traffic signal was center-suspended; the type which hangs from a wire in the middle of the intersection. We had one accident after another at that particular location.

Going out there and looking it over we found as you look west in the late afternoon you were looking directly into the sun. This intersection is located at the bottom of a little valley and the motorist couldn't see where he was headed when the car was tilted down, or the street car was tilted down. They had to look up at the light and in looking up looked directly into the sun and got a false impression of the light many times and misjudged the color of the light so they pulled into the intersection. Then the first thing you know there was a collision.

It was a very simple matter to correct by putting in side-mounted signals at the far right of the intersection. Also we were prepared to put in a baffleboard behind the signal but found it wasn't necessary once we have the light over to the side for then there was sufficient background from the trees, bushes and houses to shield it from the sun. We haven't had any more trouble at that particular location.

Not only were we, the transit company,

having accidents but the city in general was having the same difficulty at that location.

I was interested in sitting in these sessions, hearing different operating men asking what they could do about having car collisions; they were having a lot of car collisions. In these days they are constantly on the upswing and we have been having the same experience.

About six weeks ago we decided it was high time to do something and had a meeting with the operating people. They said, "Well, of course, we are hiring a lot of new men and new men aren't careful as the older men doing things. They are doing things to suit themselves and not using discretion here and there but look at the level of enforcement in the city police department? It is undermanned and they are not able to enforce the statutes so they let the people run hog wild over the streets. They stop here and there suddenly; they stop in front of vehicles. We run into them, or there are two street cars close together and when the first car has to make a sudden stop because some man in an automobile decides to turn left, but can't make it.

Things of that sort went on and still the accidents kept going up so we ran a little analysis. We took the car collision reports for the year of 1942, the year of 1943, and on up to date in 1944, and boiled them down by the type of collision; whether it was a car trailing another car; a head-on collision; a right-angled collision; or, whether there was an automobile involved in the thing, and so on down the line. All these things are similar to the ATA suggested procedure.

Seventy-six per cent of our collisions occurred when our street cars ran into the rear of another street car. Those accidents were occurring at points where the first car would be normally expected to stop, either at a marked car stop at the intersection with traffic signal or some place of that sort where you would reasonably expect the first car to make a stop.

Only a very small percentage of car collisions of that type were caused by an automobile making a sudden stop ahead of the first street car and contrary to the opinion up to that point there really is something that we can get at there.

Of course, that brings it right down to

the operator's failure. These gentlemen have been talking about that. We haven't been able to nail that down very well; yet. We have found that the bulk of those people, these operators, had had less than one year's experience and there have been only about three and a half, or four per cent of them occurring in the first couple of months in a man's experience; and the rest between two months and a year. That first year accounts for about fifty per cent of those car collisions.

Then there is very little in the second year and about thirty per cent of them occur with older men, beyond two years' experience, so that again narrows it down to a certain group.

Of course, there are other factors you are supposed to take into consideration. I am running rough-shod over this general picture. We feel we can concentrate on a certain group of men and do some good, perhaps, on this.

Another case in the car collision field was at the end of one of our heavy lines—a suburban line—where we had a curb at the end of the line. It was a loop proposition and the track, of course, was kept greased. It is slightly down grade and the layover is such that with the operating conditions there are usually two cars at the end of the line. The second car will arrive just before the first one leaves.

We are having just an extraordinarily large number of collisions out there. The second car comes around the curve and runs into the front car. They wouldn't tear up equipment. They didn't have any collisions that hard but ever so often somebody would be boarding that first car and, of course, we would have a passenger personal injury accident on our hands. They were invariably knocked down, off the car, or would fall in the car, and that runs into money.

That situation, to my knowledge has been there for several years. Nothing was ever done about it. This particular analysis brought out the fact that the track was slick; the sand pipe wouldn't work because it was on a curve and the operator was practically helpless to do anything if he was the victim of such circumstances.

He would come around the corner at a reasonable speed, make an attempt to stop

and would start to slide. He was helpless and could only sit there and watch it run into the next car.

It was a very simple matter to see the roadway department and have them change their method of greasing that curve, so we managed to stop that type of accident. It was a very simple thing and a very obvious thing but it did require a systematic method of analysis to get to it.

Now we are lost in the shuffle of everyday operating problems and the man that attempts to keep them in his mind or separate them by so many car collisions, so many right-angled collisions, and so many rear-end collisions loses the details needed to go into that. He needs to bring it down so some sort of system or systematized method of analysis.

CHAIRMAN KRAFT: Mr. Bevins has given us two approaches. The first example he used was where they approached it initially from the location point of view, and the second example was where they approached it from the type of occurrence and by listing the type of occurrence gradually sorted the problem down until they had both according to groups of men and a specific location where a condition could be corrected.

I would like to ask Bill McConochie to give us a few illustrations of things they did in Chicago.

MR. McCONOCHIE: I have had an opportunity of using the engineering analysis approach for some of the problems that our Mr. Parker has brought up to me, usually when he would send over a high-accident location. It turns out that it wasn't the location which was wrong. It was a coincidence that a large number of totally unrelated accidents occurred at that place.

There are conditions which will cause a repetition of accidents of an identical type at the same location day after day and year after year. I can remember one that we caught up with five or six years ago.

At that time we were having about seventy-five accidents a year. They were all very minor; just clicks, and all on one street car curve. A very simple channelization which didn't cost the surface lines anything, but put in as a part of the street improvement—following a design which we prepared—practically eliminated all those accidents.

We have had about five accidents in the

past five years instead of seventy-five a year. This is an approach from the location. Another approach is from the analysis of the information available. I think of one where we started out with a small form, trying to analyze the cause of a side-swipe accident on one particular line and in one particular direction.

The form kept getting longer and longer but we finally got to the answer that most of those accidents were occurring on cloudy days. That didn't seem to mean very much, but following that a little further down the line we found the reason for that was the color of the car.

On cloudy days the car seemed to recede in the eye of the motor driver so they came too close, but on bright days they could give more leeway. We didn't change the color of the car but we put a line on the street car showing the clearance.

From the engineering standpoint, the approach to this, at least on the location approach, is to take your high-accident locations and make a little collision diagram. If you don't know what collision diagrams are you can get engineering handbooks that will tell you exactly how to go about it. That is a good approach where you have a repetition of accidents at a single location.

CHAIRMAN KRAFT: Now we have talked about some of the information and approaches but we might get down to another use or manner of following through on this approach.

We have a man with us today who, while he is not in our industry, is doing work for our industry, and they have developed a very excellent working arrangement in St. Louis whereby the police department and the transit department help each other.

I am going to ask Lieutenant Schumaker to outline the type of work he is doing and the educational aspects as well as the use of accident information.

LIEUTENANT SCHUMAKER: I feel that a close coordination and cooperation between the police department and your transit companies can go a long way in solving any community's traffic problems for a lot of reasons.

Look at your increase in passenger travel enjoyed by the transit companies. One of the other aspects in this traffic problem today is the apathy with which John Q. Public

looks on the traffic problem. There seems to be a general feeling that there is no longer a problem because so many autos are off the streets. There is gas rationing and rationing of tires and so we don't have any problems.

However, our records show differently. So do the National Safety Council's records show that we have a problem. Your accident frequency records show you have a problem. Any sound basic accident prevention program must be based on one element—first getting the facts—and the second step is listing the facts with a special study as to time, place and cause.

Then we have our three pillars Mr. Kraft mentioned: our education, our engineering, and our enforcement. On top of that and the head of the thing itself is good administration for that traffic club.

We have a new plan there where we have insisted that the enforcement be carried on not only by the traffic division or the enforcement unit, but by every uniformed police officer in the department.

The first six or eight months of this year we had a total of 33,000 moving or hazardous traffic arrests. Enforcement is a pretty ticklish thing. We have always tried in our meetings with the employees of the public service company in St. Louis to sell the idea to John Q. Public and Mrs. John Q. Public that the police do not look upon enforcement in the terms of quantity but look upon it in terms of quality.

We look upon it as selective enforcement, but the police department can't function properly by hitting in the dark. They must get the facts and analyze the facts.

Now to do that means a maintenance of the analytical bureau; maintenance of actual spot maps; enforcement maps; time graphs, showing the hours of occurrence of accidents, such as you see here. This shows the month's experience, broken down into the hours of the day. These books will be available after the panel if anyone is interested in looking at them.

Some people think a policeman wants to arrest all the people he can rather than apply educational measures, but if we can't get by with the latter we have to apply strict enforcement. We must be courteous but impartial, with the emphasis directed against these violations which are causing

accidents. That is good, selective enforcement.

On this matter of education we put a policy into effect in St. Louis early this year. Colonel James J. Mitchell, our chief, feels the same as I do; that we have a job to do together—the public, the police, the engineers and the operators of our transit lines—so we put in a system of needs.

Where there is a meeting of operators there is just a psychological effect in the policeman in uniform getting in front of the bunch of street car and bus operators. There is a little more weight, possibly than if only the traffic engineer gets up in front of that same outfit and talks about specific problems.

What we talked about at these meetings was this: I presented to the operators of the street cars and buses our entire city's accident problem up-to-date; the accidents as to location; the type of accident; the age of drivers; and the age of the pedestrian involved. We also used some of the national statistics, such as data on casualties on the war front and the home front. In other words, we were trying to affect these operators' attitudes in regard to our today's traffic problems; let them know they are important in the safe transportation of our war workers to and from the industrial plants.

We also used the house organ, which covered not only safety articles but other articles of interest to the employees of the company. We used our St. Louis figures of last year and finally we discussed the frequency, time, place, and cause of the public service vehicle accident.

We file our accidents by location. If we find four previous accidents in the past six months I make up one of your collision diagrams and it is sent over to the engineering department to check for either defect in engineering or defect in enforcement. If it is the latter, then it is our job.

MR. GROVER: On the analysis of accidents, do you take into consideration other failures or faults such as misses and discourteous treatment of passengers, or failure to turn in tickets. All those things are very annoying and show a certain amount of indifference.

MR. FOUTZ: We don't have that in our breakdown. They call it type of accident analysis. Being from one of the

smaller companies with a hundred and twenty-five operators, I get to know those pretty well from my job. I do take them into consideration somewhat in considering an accident.

However, I do not always take that into consideration in a chargeable accident because if I did, I would get down to a sort of personal feeling and I try to keep that out. If I let those things like missing runs enter in after awhile I might get to a place where I don't like him as well as some of the others so I keep that out of my mind when charging an accident.

MR. TICKLE: On that, each accident is listed in itself in the operator's general record. That is what we call that card that carries the misses and complaints and the other history of his employment. That is taken into consideration when he is interviewed.

An attempt is made to find a reason for his accident. If he is being interviewed because he is a high-accident man, we try to find what else might be causing it and then he is questioned because so many of the complaints are occurrences which just fail to become accidents; weren't quite bad enough to be accidents in many cases. For instance, there are such accidents as catching a passenger boarding the car in the door. Maybe there will be two or three complaints where somebody said that operator 666 closed the door on them. They don't make a claim or an accident report. It was not an accident for they said they weren't hurt but are just complaining about the operator closing the door on them.

There may be a few of those which can be called accidents properly but we consider them as door trouble. If a man has really hurt somebody or started the car with somebody in the door and we find he has one or two of these complaints on his record or some similar trouble it is taken into consideration in the interview.

MR. GROVER: I am talking from my own personal feelings in the matter and I am trying to analyze the cause of an accident to see if there is some reason for it. It may be entirely the man's own general makeup, his mental attitude which comes right out in all these other failures that are reported in and you find it present in the causation of your accident. I don't think an analysis is really a thorough one

unless you take a man's full history; his performance in all ways on the job.

CHAIRMAN KRAFT: I would like to second that, Mr. Grover, because again we are looking for clues. I think you will find plenty of clues in a man's over-all record that may give you an answer to his accident record. I think, too, that has to be all taken into account. I certainly hope that most companies are doing that.

MR. PARKER (Winnipeg, Canada): Those of us who are working on these accident statistics have a basis of using them for improved procedure measures and I think we should always keep in mind that accidents are reported today by the men that ten years ago weren't reported at all.

The men are educated to report everything that happens. On top of that there are two types of employees; the man that reports every little thing that happens and the other type that only reports what he thinks is an accident.

When we are judging our men we have to keep those two things in mind. Today we are conscious of the fact that everything should be reported that is liable to result in a claim. Ten years ago the men didn't do that. They waited until we caught up with them.

Today we still have two types of men. One man gets a long record of accidents that do not amount to a row of pins and the other fellow only reports one or two or three that are really accidents.

MR. MACK: Talking of analyzing accidents after they happen; that seems to me to be working on this accident prevention work too late. Is anything being done on analyzing them before they happen?

CHAIRMAN KRAFT: In figuring how you can profit from a bad accident experience, I don't think you ought to overlook in your transit program this year the value of preventive work with the operators. I presume Mr. Mack means a good followup and retraining program to catch the man as he starts to go bad before he builds up a bad record.

Now I think that I would like to get all the comments on that.

LIEUTENANT SCHUMAKER: I agree with the gentleman a hundred per cent but after all we have to have a location and have a frequency possibly before

we can find out how serious that location is. However, I heartily agree that by the process of education we might prevent these accidents.

I think it is very obvious that the average citizen just can't figure himself being involved in an accident. He will read the safety literature, listen to safety talks, but he will say you are not talking about him; it is the other fellow. I believe that is the opinion of the average citizen until it is too late, so it boils down, gentlemen, to this:

A program of education cannot be spasmodic. It has to be continuous, month after month, with safety articles, safety pictures, etc., in your house organs. You have to get the matter of safety in front of the public and in front of your operators all the time.

If you do that, possibly it will prevent the necessity of analysis after the accident occurs.

MR. MACK: What I am trying to find out is if anybody is doing anything to try to find that man's weakness before he has an accident.

Should we wait until somebody compiles a lot of figures and go over the man's record after the accident or should we find that weakness before he has the accident? I know it very definitely shows up that way.

MR. FOUTZ: The only thing we have is our instructor or road supervisor. I would just like to say that I have been rather dissatisfied with our training program for several years.

I have been in the position now for about eight years and didn't fully realize what was wrong with it until the war came on and I began to hire the class of people I hire now. Also the training program that I inherited was completely inadequate.

Now, we have worked on that but due to other things we had to do in the matter of hauling about fifty per cent more people than we had been hauling, along with the manpower shortage and trying to stay within ODT regulations, and things of that kind, we haven't been able to put into that as much as we should.

A few months ago they had a meeting in New York, and outlined the training procedure. I took that and used it for my outline of my training. I am training my

supervisors and instructors along that line; to follow up these fellows and check on the initial training as to what they were taught to do and see that they are doing it and try to get ahead of them on the accidents.

We are not doing it but I think those things come together and is the most vital thing in front of us—even more vital than city planning or anything else. We must train these operators, then follow up and analyze the man; what he does and so on before he has the accident.

The only thing we are doing is through the street supervisor and myself trying to watch these fellows by riding with them day after day.

MR. MACK: It is the first time I ever ran into that. Maybe I can give you what is in the back of my mind. It is a complete analysis of the accident records of working street car operators and eight hundred and some bus operators.

One case I have in mind is where a man has gone through and built up two or three right-angled collisions. Now if it can be shown that those are all caused by passing the other man it all falls into this one characteristic.

If I can get a man who has had two or three of them I don't even bother going out and looking at the operating record. I have been working on an apparatus we can put this student or older employee on. However, it is more for students. We want it so they will be faced with an actual operating condition right in a room all by himself. Then the results of that would be turned over to the follow-up instructor.

In other words, what I am trying to bring out is to tell the man who is going to follow up this new man where the weakness lies before the superintendent has to find out from two or three accidents.

CHAIRMAN KRAFT: Perhaps the most desirable is by work samples and I believe they are doing it in Philadelphia.

If work samples can be obtained under controlled conditions perhaps it may lead to a more selective follow-up just as some of this other information leads to selective enforcement, to selective engineering, and to selective education.

MR. SHAPIRO: Mr. Tickle neglected to tell the audience that he was a good

street car operator before he learned how to analyze accidents. He didn't learn by analyzing his own accidents. Also he neglected to say that he is a part of the operating staff. He is not set up on high all by himself but is a part of the operating staff. He was given this specific job to do because the rest of the members of the operating staff all have specific jobs and we don't want to keep him away from those jobs.

Accident analysis is something that requires a great deal of attention and you have to keep at it. Mr. Tickle and the people that work with him—and there are four of them all together—read about eight thousand reports in the course of a year and there are statements by witnesses that go with those reports, as well as other reports of the foremen and car houses and garages about equipment and police incidents, etc. They must read all those things that pertain to accidents. That is a lot of reading to do.

Seriously, Mr. Tickle goes to the scene of the accident and gets a drawing and makes time and distance studies. Now, I think that is an answer in the case of a large company that can afford to pay three or four people for analyzing accidents in that way. I think it is different in the case of the smaller company, but it can be a part-time job.

Now the point that Mr. Mack brought up is one that we have given a great deal of study and thought to.

In normal times it is followed up by instructors and the information given to division superintendent. At the present time we practically have to take some people that we wouldn't under normal conditions.

I think the answer to accident prevention is first of all, very careful selection and training procedures, but even with the most careful procedure mistakes will occur. You have men hired without that procedure; then you have these cases which the doctor discussed where people all of a sudden apparently for no good reason become accident prone.

You will always have accident analysis and always have follow-up to do after accidents happen, but I think that, assuming that you have thorough selection and thorough training, then the next step is to fol-

low up on the street. If that is done in a systematic manner and the instructors utilize all the available material in the man's record and if that is passed on to the superintendent so he will have some knowledge of it, you can hope to do some preventive work.

In 1936, when we had a very unfortunate condition as far as accidents are concerned, we showed a remarkable improvement by putting on the street fifteen people who did nothing but follow up. This was a follow-up on about fifteen hundred operators—about one to every hundred—and we got wonderful results in no time at all—in one or two months—riding around and correcting wrong conditions and talking safety and all that sort of thing.

However, that isn't your answer because that is not sufficient in some cases for you may have to dig a lot deeper, as Mr. Kraft has pointed out. You have to look for real causes which sometimes are medical causes or psychological causes, financial causes, or what have you.

CHAIRMAN KRAFT: Perhaps we could follow up Mr. Mack's comment on trying to prevent something before it happens. Perhaps we should consider the physical examination, both the initial and the periodic as some of this preventive work to keep the job of accident analysis down to a minimum later on.

DR. BRUST: We all know that if you have some men working who have chronic diseases which do not keep them off the road entirely they must be watched. In other words, a man has a positive Wassermann and no symptoms at all. He goes along and takes his tram, and as long as he does that all is well.

If you have a good periodic observation of those men you will find, or, at least we found, that you can keep better track of them. We had twenty-three men, who in 1936 had positive Wassermans and who considered themselves as healthy men. Since that time, five of those men have developed active constrained nervous system syphilis. Two of those are already dead and one is rehabilitated enough to be a janitor, and the other two are no longer operators.

You will find a certain number of men with chronic heart disease. That doesn't mean they can't operate at all but they

must have frequent examinations. You must have frequent observation of those men if you are going to permit them to continue operating.

One man who had an organic condition and was taking the periodic examination was discovered to have some advancement in that condition. Two weeks later he dropped over dead. I think we may have prevented an accident in that case by removing that man from operating.

That is my idea of the possibilities of periodic examinations—health examinations. As I stated earlier, you must have a man in your department who is your go-between between your medical man and your department. That has to be handled very gingerly, very carefully so that you maintain good relations with your operating department and with your medical department.

If you let your men feel that this medical information is becoming common property or common information around the property it is bad. It has to be kept strictly confidential and by so doing some of these organic conditions can be watched and the men permitted to continue working. Of course, a good many of them will be withdrawn from service on account of these organic diseases.

At the present time; or, I might say since the war and since the business of freeing men to their jobs, we are having a great many examinations—two or three a week—of men claiming nervousness and stomachache and disorders of various kind, giving every reason why they can't stay on the job. They want a release to go to some other employment.

Of course, those cases are quite troublesome. It is hard to evaluate a man when he says that he vomits every morning; that he has to get off the bus or street car and vomit. You may examine him to your heart's content and you will find no organic disease. It is a psychological question that is very intricate and very difficult to answer.

MR. MACK: If a man shows a positive Wasserman, will you pass a man with plus 4? Can you keep him in your service?

DR. BRUST: Yes, we do not discharge anybody. When this program of periodic examination was started, we did not discharge anybody because he had a positive

Wassermann, but we knew who had a positive Wassermann and, as I said, I think that almost twenty-five per cent in eight years developed active advancement of that condition. That is an indication that that group of people is hazardous and it is a good thing to know who they are.

MR. MACK: Does it come under the Department of Health in your state? Is there a law on your Wassermann test?

DR. BRUST: We don't have that law. That was confidential but our medical staff had a personal interview with every one of these men. They were informed they had this thing and were advised to take treatment from their doctors—who are their personal physicians.

They gave enough cooperation in nearly every instance that we knew how much treatment they were getting.

There is one other point there about discharging, or if we allowed them to work. I understand that one of the steam roads in Missouri discharged a whole group of men in a certain department because of positive Wassermans. Those men stayed discharged about six months and brought a lawsuit and recovered all wages.

MR. MACK: We are compelled to report it. They don't go to work if they are dealing with the public until they get a clear bill of health from the state.

MR. BOWMAN: I would like to know the experience of the various operating companies as to when they consider a man accident-prone? Do they wait until he has three a month with no claim cost and pass another man up that has had one accident that month that may cost five hundred dollars? What is the dividing point?

CHAIRMAN KRAFT: Before I put that question to one of the members of the panel, I would like to comment that I think the word "accident-prone" is badly misused. We ought to consider another word because some of these folks get labeled "accident-prone" when it is really not true.

MR. TICKLE: We don't use the phrase "accident-prone." We call them high-accident men. Maybe we are dodging the issue a little there. Then when we have a man whose record card, for instance, shows six

accidents per year, that will probably put him into the high accident group.

Now, as the gentleman from Winnipeg said, some men report everything. This man with six accidents may have been one of these, and in four or five of those he might not have had any responsibility. He would have had no responsible part in their cause, but he would, perhaps, unfortunately still be called a high accident man.

However, he wouldn't be in any danger of being fired or being given a suspension, but if among those six accidents which another man may have, there are four or five of them not only chargeable but definitely his fault, that he definitely contributed to the accident in a strong way, you might say, then it is time to bring him in and interview him, and check his eyes again and send him to the doctor to see why he is having those accidents.

For Mr. Grover's benefit, I will say that is the man we also check against his general record card to see whether he is missing and reporting sick, etc. When we find that condition that is when we get our man in and really see what is cooking with him.

MR. GORDON (Bureau of Safety): On one of the companies that we look after, we found that out of a hundred and eighty men we had eighty who were having a terrible accident record. I talked to the general manager about it and asked him why and suggested that we analyze them.

We analyzed the accidents of these hundred and eighty men and we boiled it down to seven men; seven men were having almost every one of those accidents.

After talking with each one of those seven persons we found all kinds of causes, of course. There were sick wives, sick children, indebtedness, weren't feeling good that day, and all the excuses that men can give.

I agree with Mr. Grover's statement of a moment ago that temperament has a lot to do with accidents.

I want to say a word to Mr. Bevins about rear-end accidents. We had a lot of rear-end accidents on this property. Our committee went out to study it. There were six or seven of us. We found that the cars on the street where the traffic

was heaviest were running the front fenders under the rear end of the other car and sometimes they didn't stop. Sometimes they hit a little gob of grease and went bang into the head car with attendant cases of internal injuries to passengers and motormen and things of that kind.

So we studied this over and said, "Why not have them stop ten feet back of the other car?"

We put it up to the general superintendent. He said, "I will issue that instruction, if you fellows say that is the thing to do."

The rear-end collisions began to decrease but the next month when we went out—the same committee—to investigate and see if they were really observing the rule of staying ten feet back, we found them two and three and four and five feet away from the other car.

There is a sample of just that indifference that is in too many men's minds. In talking to the men at the next safety meeting, I said, "Fellows, why in the world don't you fudge on your own side instead of the company's? Why don't you stay back eleven feet instead of nine or even one?"

In regard to our accidents in the run-around at the end of the line, I am wondering if you have thought about keeping one car outside until the other has gone?

MR. TOM WICKER (New Orleans, La.): You know, after listening to all these engineers, I feel like my work is mighty sorry. I am glad my boss isn't here at this meeting for he might have fired me. I think all that they said is true and I feel there is another matter they didn't mention. I think a lot of people have something the matter with their heads as well as with their bodies. There are people whose minds just don't seem to coordinate. Their minds don't function. They can't keep their minds on the job.

We have an antiquated system of fare collection. The collection is done by hand and a man has to keep his mind on his business—or women either, for I have three hundred women working out there. If seven people pay seven cents each we want forty-nine cents on the register. Well, an addle-headed person is liable to ring up fifty-six cents or forty-two cents.

It is my business to study the records,

the register records and tell whether there is any steal or just a nit-wit.

If he is a nit-wit he is liable to ring up too many and if he is stealing he never rings up enough. There are not exceptions to that rule. Now that same sort of thinking has been going through my mind for a good while with reference to safety.

This is a big study and I am going to add my two cents to this. I think the biggest gain that we can make is in the selection of the right kind of people ahead of all others. Keep out these nit-wits. Keep out the people who have too much temper and too much temperament or emotionally unstable or who are too darned selfish. A selfish man is a poor man to have on a street car, bus, or in an automobile.

He is a hazard. He thinks the street belongs to him personally. If a pedestrian walks along the street and not looking he will wake up in the hospital because he leaves it entirely up to that pedestrian to get out of his way.

He takes the attitude that why should he slow down for that insignificant bump-head and knocks him off. We have to select the right kind of people; train them well, and even that is not enough.

There is one more thing. You can't get away from it—enforcement. Yes, sir, en-

forcement is an important thing. If you can't enforce discipline on your property you had better check out and go to work for the government.

Right now we are all having a time trying to handle this enforcement job. I have had them throw their badges right in my face. However, that will not last always. After this war things will get back to normal and to made-work, raking leaves and such stuff, and people will want to hold their jobs. When that time comes we can have discipline again.

However, we can still maintain a minimum of discipline and we have to. For instance, I don't permit anybody to steal on our property. We will leave the cars in the barn first. We don't permit them to be insubordinate. We have had lots of them walk out.

We don't allow them to work drunk. They have tried it but there is a limit. You have to crack down sometimes and in my opinion you have to strike a middle-of-the-road course and stick to it. You can't be hard today and soft tomorrow. You can't fluctuate. You have to go down the middle of the road. Be reasonable and fair and, above all, be firm. You have to do it, and if you do, all these things will begin to correct themselves.

Safety Exposition Exhibitors

EXHIBITION HALL—SHERMAN HOTEL

Alphabetical List of Exhibitors of Industrial Safety Equipment

- Actna Casualty & Surety Co., Hartford, Conn.**
Insurance Underwriters.
- American Abrasive Metals Co., Irvington, N. J.**
Safety Treads, Abrasive Paints.
- American Alliance Co., Inc., Buffalo, N. Y.**
Industrial Safety and Fire Protection Equipment.
- American-LaFrance-Fomrite Corp., Elmira, N. Y.**
Fire Protection Equipment.
- American Mat Corp., Toledo, O.**
Safety Matting and Switchboard Matting.
- American Optical Co., Southbridge, Mass.**
Industrial Safety Goggles, Respiratory Devices, and Protective Clothing.
- American Safety Tank Co., Kansas City, Mo.**
Safety Fuel Tanks for Trucks.
- Ampco Metal, Inc., Milwaukee, Wis.**
Beryllium-Copper Non-Sparking Safety Tools.
- Automatic Canteen Co. of America, Chicago, Ill.**
Food Services.
- Bausch & Lomb Optical Co., Rochester, N. Y.**
Safety Lenses and Goggles.
- Bear Manufacturing Co., Rock Island, Ill.**
Motor Vehicle Inspection and Correction Equipment; Static and
Dy-Namic Balancing Machines.
- Benjamin Electric Mfg. Co., Des Plaines, Ill.**
Industrial Lighting Equipment; Call and Warning Devices;
Punch Press Safety Device Equipment.
- Boyer-Campbell Co., Detroit, Mich.**
Face Shields, Welding Helmets, Safety Tongs, Grinder Guards, Inspection Lights,
Protective Clothing.
- John H. Breck, Inc., Springfield, Mass.**
Protective Creams and Hand Cleaner.
- Brown Shoe Co., Chicago, Ill.**
Safety Shoes.
- R. H. Buhrke Co., Chicago, Ill.**
Safety Equipment and Allied Products for Construction and Maintenance Work.
- E. D. Bullard Co., San Francisco, Cal.**
Safety Equipment.
- Burrroughs, Wellcome & Co. (U.S.A.) New York, N. Y.**
First Aid Equipment.

- Carbisulphoil Co., Dallas, Tex.
Antiseptic Emulsion, Ointment, Liquid Soap.
- Cardox Corp., Chicago, Ill.
Fire Extinguishing Systems, Fire Trucks, and Mobile Extinguishing Equipment.
- Calanese Celluloid Corp., New York, N. Y.
Plastics for Safety Devices.
- A. B. Chance Co., Centralia, Mo.
Live Line Maintenance Tools and Equipment.
- Chicago Eye Shield Co., Chicago, Ill.
Head and Eye Protective Equipment.
- Columbus-McKinnon Chain Corp., Tonawanda, N. Y.
Chain and Chain Hoists.
- C-O-Two Fire Equip. Co., Newark, N. J.
Carbon Dioxide Fire Extinguishers, Hose Units, Manual-Automatic Systems, Smoke Detecting Systems.
- Davis Emergency Equip. Co., Inc., Newark, N. J.
Respiratory Protection, Combustible Gas Indicators, General Safety and First Aid Equipment.
- Dickson Safety Products Co., Los Angeles, Cal.
Personal Protective Equipment.
- Dionol Co., Kalamazoo, Mich.
Ointment, Protective Creams, Salt Tablets.
- Dockson Corp., Detroit, Mich.
Industrial Head and Eye Protection.
- C. B. Dolge Co., Westport, Conn.
Fungicides, Protective Creams, Skin Cleaner, Cutting Oil Germicides.
- Dugas Engineering Co., Marinette, Wis.
Fire Protection Equipment.
- Dunn Products, Chicago, Ill.
Industrial Protective Clothing Made from Rubber, Asbestos Cloth and Leather.
- Duo-Safety Ladder Corp., Oshkosh, Wis.
Safety and Fire Ladders, Ladder Shoes.
- E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.
Hand Protective Creams, Industrial Hand Creams, Neoprene Products, Rayon Yarn.
- E. & J. Manufacturing Co., Philadelphia, Pa.
Resuscitator Inhalator and Aspirator.
- Elliott Service Co., New York, N. Y.
Foremanship Training Material, Bulletin Board Displays on Safety, Quality and Waste; Suggestion Systems.
- J. H. Emerson Co., Cambridge, Mass.
Automatic Resuscitation and Respiration Equipment.
- Finnell System, Inc., Elkhart, Ind.
Floor-Care Machines and Floor Treatments.
- Franklin Research Co., Philadelphia, Pa.
Anti-Skid Floor Maintenance Materials.
- General-Detroit Corp., Detroit, Mich.
Fire Protection Equipment.

- Goodyear Tire & Rubber Co., Akron, O.
Non-Slip Surfacing Materials.
- Holcomb Safety Garment Co., Chicago, Ill.
Protective Clothing Made of Asbestos, Leather and Fire-Proofed Duck.
- Hollywood Turban Products Co., Chicago, Ill.
Protective Headwear for Women Industrial Workers.
- Hynson, Westcott & Dunning, Inc., Baltimore, Md.
Mercurochrome and Thauis Lozenges.
- Industrial Gloves Co., Danville, Ill.
Protective Clothing, Gloves, Mittens, Headguards, Leggings, Flame-Proof Suits.
- International Cellulose Products Co., Chicago, Ill.
Menstruation Materials for Women in Industry.
- International Shoe Co., St. Louis, Mo.
Safety Shoes.
- Iron Age Div., H. Childs & Co., Inc., Pittsburgh, Pa.
Safety Shoes.
- C. Walker Jones Co., Philadelphia, Pa.
Industrial Knitted Specialties, Protective Clothing.
- Junkin Safety Appliance Co., Louisville, Ky.
Safety Guards for Punch Presses, Splint Type Stretchers.
- Justrite Manufacturing Co., Chicago, Ill.
Safety Caps, Safety Flashlights, Electric Lanterns.
- Karel First Aid Supply Co., Chicago, Ill.
Industrial Hospital Supplies, First Aid Supplies.
- Keystone View Co., Meadville, Pa.
Industrial Vision Tests.
- Walter Kilde & Co., New York, N. Y.
Fire Prevention and Extinguishing Equipment and Systems.
- Kimball Safety Products Co., Cleveland, O.
Protective Clothing, Gloves and Goggles.
- Klear-Vu Products Co., Newark, N. J.
Safety Caps, Hair Guards, Arm Guards, Aprons.
- Walter G. Legge Co., Inc., New York, N. Y.
Non-Slip Floor Polishes and Treatment, Non-Sparking Floor Treatment.
- Lehigh Safety Shoe Co., Inc., Allentown, Pa.
Safety Shoes and Rubber Boots.
- Lien Chemical Corp., Chicago, Ill.
Soaps, Cleaning Compounds, Disinfectants, Insecticides Deodorants, Maintenance Supplies.
- Lightfoot Schuls Co., New York, N. Y.
Powdered Hand Soap for Industrial Use.
- Loam Mfg. Co., Inc., Indianapolis, Ind.
Blow Guns, Spraying and Cleaning Guns, Water Savers.
- MacWhyrts Co., Kenosha, Wis.
Wire Rope and Wire Rope Slings.
- Thom McAn Safety Shoe Co., New York, N. Y.
Safety Shoes.

- B. F. McDonald Co., Los Angeles, Cal.
Industrial Safety Equipment.
- Medical Supply Co., Chicago, Ill.
First Aid Kits and Supplies.
- Melli-Blumberg Corp., New Holstein, Wis.
Safety Line Markers for Roads, Streets, Airports, and Industrial Plants.
- Metropolitan Life Insurance Co., New York, N. Y.
Life, Health, Accident, Annuities and Group Insurance.
- Melflex Products, Akron, O.
Flooring Materials, Treads and Standing Mats.
- Milburn Co., Detroit, Mich.
Protective Creams and Plastic Safety Clothing.
- Mine Safety Appliances Co., Pittsburgh, Pa.
Safety Equipment for Personal and Plant Protection.
- E. R. Moore Co., Chicago, Ill.
Work Clothes for Women.
- National Safety Council, Inc., Chicago, Ill.
Services and Material for Safety Education.
- National Society for the Prevention of Blindness, New York, N. Y.
Conservation and Utilization of Eyesight in Industry.
- Oil-Dri Co. of America, Chicago, Ill.
Oil and Grease Absorbent.
- Onox, Inc., San Francisco, Cal.
Athlete's Foot Preventive.
- G. H. Packwood Mfg. Co., St. Louis, Mo.
Skin Cleansers, Soap Dispensers, Cleansing Cream.
- Patent Scaffolding Co., Chicago, Ill.
Safety Ladders, Scaffolding and Work Stands.
- Phister Mfg. Co., Newark, N. J.
Maintained Air Pressure Liquid Fire Extinguishers.
- Protectoscal Co., Chicago, Ill.
Safety Devices for Hazardous Liquids.
- Pyrene Mfg. Co., Newark, N. J.
Fire Extinguishers, Compounds and Systems.
- Rose Mfg. Co., Denver, Colo.
Industrial Safety Equipment.
- Safety Clothing & Equipment Co., Cleveland, O.
Industrial Safety Equipment.
- Safety Engineering, New York, N. Y.
Publishers, Safety Engineering Magazine.
- Safety First Shoe Co., Holliston, Mass.
Safety Shoes.
- W. H. Salisbury & Co., Chicago, Ill.
Linemen's Rubber Protective Equipment.
- A. Schrader's Son, Brooklyn, N. Y.
Pneumatic Safety Control Devices.

- Sellstrom Mfg. Co., Chicago, Ill.
Face and Eye Protective Equipment.
- Spencer Turbine Co., Hartford, Conn.
Industrial Vacuum Cleaners and Dust Collecting Equipment.
- Standard Safety Equipment Co., Chicago, Ill.
Personal Safety Protective Equipment.
- Stapan Chemical Co., Chicago, Ill.
Skin Cleanser.
- Stonewall Signs, Inc., Denver, Colo.
Accident Prevention Signs.
- The Straus Co., Pittsburgh, Pa.
Personal Protective Equipment.
- Sugar Beets Products Co., Saginaw, Mich.
Skin Cleanser and Cleanser; Non-Slip Floor Treatment.
- Surdy Mfg. Co., Inc., Chicago, Ill.
Safety Appliances for Machines and Underfoot Hazards.
- G. H. Tennant Co., Minneapolis, Minn.
Floor Cleaning Machines, Floor Seal and Floor Wax.
- Trimont Mfg. Co., Roxbury (Boston), Mass.
Forged Steel Safety Tools.
- United States Army, Washington, D. C.
- U. S. Safety Service Co., Kansas City, Mo.
Industrial Safety Equipment.
- Wagner Electric Corp., Brooklyn, N. Y.
Industrial Hydraulic Brakes.
- Wahler Products Corp., Brooklyn, N. Y.
Industrial Safety and Fire Equipment.
- Watchamoket Optical Co., Inc., Providence, R. I.
Industrial Safety Goggles.
- Waverly Petroleum Products Co., Philadelphia, Pa.
Oil Absorption Material.
- Weaver Mfg. Co., Chicago, Ill.
Automatic Brake Testers "Safety Lanes."
- West Disinfecting Co., Long Island City, N. Y.
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- F. H. Wheeler Mfg. Co., Chicago, Ill.
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- Willson Products, Inc., Reading, Pa.
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