

TRANSACTIONS

29th

NATIONAL SAFETY CONGRESS

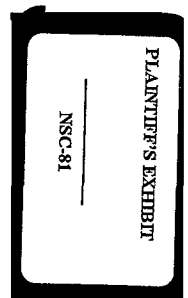


STREET AND HIGHWAY TRAFFIC,
COMMERCIAL VEHICLE, TRANSIT,
CHILD EDUCATION AND HOME
SAFETY SESSIONS

CHICAGO
OCTOBER 7-11, 1940

NATIONAL SAFETY COUNCIL, INC.
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THE Transactions of the 29th National Safety Congress and Exposition of the National Safety Council, October 7-11, 1940, are published in two volumes. Volume I contains the General Subject Sessions and the Sessions of the Industrial Sections of the Council. This is Volume II. Volume I has been distributed automatically to Industrial Members of the Council; however, other members may receive a copy of Volume I on request if they are particularly interested in industrial safety problems.

THE Transactions are a condensed record of the proceedings of the Congress. The papers and addresses have been edited to delete extraneous matter, abbreviate the less important portions, and emphasize information which may be of particular usefulness in promoting effective safety organization and other accident prevention measures. These volumes are, therefore, a somewhat abridged version, compact, practical and of especial value to the safety student and the executive interested in achieving more thorough accident prevention success. The original manuscripts are available for reference, if desired, 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 may be contrary to Council policies. However, it cannot accept responsibility for all of the views expressed either in the papers presented or in the discussions which followed these papers.

NATIONAL SAFETY COUNCIL, Inc.
20 North Wacker Drive
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MONDAY AFTERNOON SESSION

October 7, 1940

Joint Session with Institute of Traffic Engineers

Presiding: JUDGE HARRY H. PORTER, Chief Justice, Municipal Court, Evanston, Ill., and General Chairman, Street and Highway Traffic Section, National Safety Council

Interest and Plans of the War Department in Relation to Traffic Control

By LIEUT.-COL. A. D. BRUCE

War Department, General Staff, G-3, Washington, D. C.

Some of the questions that have been asked lately are: What is the traffic set-up in the Army? What is the Army doing to solve its traffic problems? How can civilian agencies assist the Army in the solution of these problems?

We know we shall have many traffic situations. They will vary from one in which the density of troop concentration is low, the road net is ample, and the danger of interruption is small, to the opposite extreme in which the massing of troops, and the scarcity of good roads and danger of their damage by hostile action make it difficult to maintain supply and troop movements.

In the first case, the minimum of control is required; in the latter, a rigid control of

traffic is necessary, particularly while extensive troop movements are under way.

Our Field Service Regulations, the bases of all training regulations, has the following statement: "In general, the methods of controlling and assisting traffic developed in civilian practice should be followed, with only the modifications necessary to meet the military requirements."

The essential differences between peacetime civilian traffic and military traffic in a theater of operations are, military traffic is subject to sudden interference and it gives prominence to secret movement at night.

The fact that military traffic is subject to sudden interference by hostile activities requires that the plan of road circulation and

traffic control be flexible, so that damaged points may be by-passed at once, and that arrangements be made for prompt repair.

Movement of traffic at night with secrecy requires the development of means of marking the roads and of lighting vehicles to assist drivers and at the same time avoid detection by airplane observers. This is a problem that is entirely foreign to normal, civil practice.

With this general orientation we come to the question: What is the traffic set-up in the Army?

The provision of a plan of circulation, when required, the determination of the necessary control measures, and the supervision and coordination of the various agencies involved are functions of the G-4 section of the general staff of the headquarters which controls the area involved.

Recommendations for a plan of circulation, the maintenance of the existing roads, and their improvement and extension where feasible; the provision of suitable road maps; and the posting of signs along the roads indicating routes, localities, and establishments as shown on the maps, are functions of the Corps of Engineers.

Coordination

Enforcement of regulations and orders for traffic control and expedition of traffic are functions of the military police.

The provision of means of communication by telephone, telegraph, or radio, between traffic control posts of the military police, or other agencies involved in traffic control, is a function of the Signal Corps.

The provision of suitable vehicle accessories, including adequate brakes, and satisfactory lights is a function of the Quartermaster Corps, Ordnance Department, or other service which provides the vehicle. Maintenance is also a problem of these services.

The training of organizations and of individual drivers in the proper use of the roads is one of the important responsibilities of organization.

The development of anti-aircraft protection of bottlenecks is primarily the function of the Coast Artillery.

Defense against chemical warfare, especially the decontamination of road areas, is under the Chemical Warfare Service.

The Judge Advocate General is faced with the establishment of traffic rules.

The evacuation of civilian population are functions of G-1 and G-3 of the General Staff.

It is thus seen that we have quite a problem in coordination.

The next question we set out to answer is—What is the Army doing to solve its traffic problems?

In the spring of this year large maneuvers were held in the Ft. Benning and Louisiana areas. More motor transportation was involved in these maneuvers than ever before. Report after report indicated that our traffic control system must be improved.

Among the numerous recommendations was one to improve our training literature on Traffic Control. This is where my division (G-3) fits in.

In July, 1940, the Automotive Safety Foundation offered to assist the War Department in improving traffic control. Advantage was taken of the offer and a conference was arranged. Present at the conference were several civilian experts.

The purpose of the conference was to determine by informal discussion with the various civilian experts what application, if any, the experience of these experts might have to the problem of military traffic control.

The following three main subjects were discussed at the meeting: traffic engineering, training of traffic military police and driver training and fleet operation.

As a result of the conference Captain Everett, who is here today, was designated to attend the National Institute for Traffic Safety Training and since then has gotten in contact with many civilian experts.

Arrangements were made for civilian experts to witness the maneuvers of the First, Second, and Third Army. Among these experts was Sidney J. Williams. Their excellent reports have been disseminated to the interested agencies in the Army for study.

Later, a study was submitted to the Chief of Staff on means of improving training literature who approved a letter on this subject to the various agencies involved. Their studies are raising many questions that must be answered. For example, at the suggestion of Army and civilian experts tests may be made to develop scientific driver selection

and training that combines useful civilian developments in this field with the best military practices, and to determine additional basic factual data with modern Army equipment. The solution of some questions may involve changes in organization in the Army but definite steps toward their solution are being taken.

Civilian Assistance

The last question is: How can civilian agencies assist the Army in the solution of its problem? They can devise a simple means for facilitating cooperation between military, state and city officials for traffic movement. In this connection we may need centralization on both sides. A centralized agency in the War Department and a central association among state, county and city authorities. For example, the problem of who to get in touch with in the metropolitan area of New York is a difficult one. An ideal to work toward would be to obtain through one association the selection of routes and provisions made for marking of routes and control in the execution of plans.

Continue to push the simplification and unification of traffic rules on the grounds of national defense. In this connection the

question of licenses for maneuvers is a troublesome one.

Continue to emphasize driver selection and training, safety measures and the like.

Since you have offered your help we expect to call on you from time to time to locate National Guard and Reserve officers in civil life now engaged in traffic work; to secure additional experts when required; to assist in drawing up courses, lecturing and the like in the several courses or schools for traffic control, driver training, driver tests, etc.; to let us know of improvements in communication for traffic control; to devise necessary equipment, to assist us to develop training films and strips from the Army viewpoint; to augment your disaster plans for flood, fire, earthquake, with plans for evacuation of civilian population. I repeat I have mentioned only a few of the problems.

I would like to point out that at the present time we have had to decentralize a great deal of the work for the improvement of traffic. So many people who write or come to Washington to help us get a feeling of being pushed around. In order to obviate this as near as possible we are using the Automotive Safety Foundation as a central agency for contacting the proper personnel to render or receive assistance.

The Present Challenge of Traffic Accidents

By SIDNEY J. WILLIAMS

Director, Public Safety Division, National Safety Council, Inc., Chicago

The number of traffic deaths in the United States went down continuously for 17 months from November, 1937, to March, 1939. Then 12 of the next 15 months, through June of this year, showed increases. In July the toll went down 3 per cent, compared with July of last year, but it went up 18 per cent in August, the greatest percentage increase in three and one-half years.

The national death rate, in terms of mileage driven, went down 19 per cent in 1938, 5 per cent in 1939, and seems to be holding about even, so far this year. This trend in rates is an important technical fact, but it is a poor alibi for any sustained rise in deaths and injuries.

It is our business as traffic and safety experts to make the motor vehicle a safe as

well as an increasingly useful feature of American life. With what we now know about individual and community control of motor traffic there can be no possible excuse, in peace or near-war or war, for letting the national toll even approach the 1937 record of nearly 40,000 deaths, nearly a million and a half injuries, and billions of economic loss.

Elated by the 1938 showing of over 7,000 lives saved, some of us were bold enough to prophesy that within a few years an annual death toll of 30,000, 20,000 or even 10,000 would be regarded in retrospect as an inconceivable waste, unworthy of a civilized people. Must we now regret that proud boast and hope that no one remembers it? That is the present challenge of traffic accidents?

So many factors can help to cause or to prevent a single accident, and to raise or lower the city, state or national total, that it is easy to "explain" a change in either direction. Two years ago I said that accidents were going down because we had better highways and cars, better administration of better laws, better safety education and publicity and organization, better understanding by the individual. Even then I pointed out that many states and cities had the weakest kind of safety program, that their rates were inexcusably high and that their decreases, if any, had been more lucky than deserved.

Three Dangers

A year ago, when accidents were beginning to go up again, I said that the Safety Movement was faced with three serious dangers: the threat of unwise economy in official functioning and safety campaigning; the threat of political interference, and the threat of public lethargy—a reaction from the hectic wave of popular interest which started with "And Sudden Death" and which I fear is today too anemic to stand up against a World Series, to say nothing of a World War.

Perhaps that suggests the crux of the whole matter. Was safety a fad, like miniature golf? Is it a luxury, to be forgotten when sterner issues arise?

Safety Is Efficiency

I need not prove to you what you already know: that, leaving aside all the humanities, safety is just another name for efficiency. Both mean the same—doing things the right way, in the factory, on the highway, anywhere. In this year and month, more than ever before, we just can't afford to have a powder plant blow up, either by accident or by design. We can't afford to have traffic accidents tie up the swift and sure movement of goods to and from munitions plants and Army depots, not to mention the movement of the motorized Army itself.

Every accident is a symptom of something wrong. Accidents and the things that cause accidents, cause congestion and delay; and we cannot tolerate congestion or delay either on the assembly line or on the high-

way. I venture to say that unintended sabotage through accidents is a greater menace than the sabotage of alien agents.

Tolerate No Losses

We cannot afford the loss through accident of a man who is serving his country in this crisis, whether behind a lathe or on the General Staff. In peace time, when such a loss occurs we may muddle through—but not in time of crisis. According to news reports, one factor in the French collapse was the death of General Billotte in an automobile accident just when he occupied a key position in the Franco-British effort to pinch off the German drive to the Channel.

We have a real job ahead of us! We must stop losses of men and material everywhere, because our country needs men and material. We must keep the highways open for military traffic, and "military traffic" today—or tomorrow—means every kind of traffic in every one of the 48 states.

Correct All Defects

We must therefore quickly correct the defects and deficiencies in our highway system, or alleviate them with signs and signals. We must police these highways for maximum efficiency, and further insure the proper use of them through driver license control. We must train all our young people, and many older ones if we can, so they will know how to handle their own vehicles and, if need be, Uncle Sam's. The Army needs our help in recruiting great numbers of competent drivers. Our state and community safety organizations have an important role to play in the mobilization of all forces for national defense.

We must do all this despite the handicap of public indifference and a considerable amount of personal recklessness due to war emotions. We must face budget economics, which means that we must somehow do a better job on the same or less money. We all, officials and citizens of every rank and interest, must submerge petty differences and conflicting ambitions.

Can we do it? Will we do it? You in this room, more than any equal body of men in the United States hold the answer. I'm betting that we can and will.

Report of Committee on Pedestrian Control and Protection

By LESLIE J. SORENSON

(Member I.T.E.) City Traffic Engineer, Chicago, and Chairman of Committee on Pedestrian Control and Protection

The following is a summary of the facts and recommendations presented in the 1940 Report of the Committee on Pedestrian Control and Protection. The complete report is available in a pamphlet from the Council's Traffic Engineering Bureau. It presents new information relative to the pedestrian problem as well as a discussion of methods of reducing pedestrian accidents in rural and urban areas.

The Report contains information concerning the status of pedestrian regulation in 180 cities having ordinances regulating pedestrians and a description of numerous educational activities now being conducted in cities throughout the United States for pedestrian safety.

Facts and Recommendations for Pedestrian Safety

1. Although the cities in the United States have enjoyed a decrease of 28 per cent in annual pedestrian deaths since 1930, rural areas have suffered an increase of 41 per cent and the trend continues upward in 1940. These facts offer a major problem for states, counties and city officials whose duty is to protect pedestrians as well as motorists.

2. Nation-wide interest in the urban pedestrian problem and extensive acceptance of pedestrian responsibility have been developed in recent years. Physical protection and educational material have been provided in many cities by city officials, safety councils, safety commissions, civic organizations and others. More and more cities are now enforcing traffic laws that regulate pedestrians as well as motorists. Similar activities are recommended for the protection of rural pedestrians.

3. Studies of pedestrian accidents have shown persons of certain age groups, occupations and areas to be particularly susceptible. These groups should be educated through agencies which they understand and in which they have confidence.

4. The high frequency of child pedestrian

accidents during daylight hours and adult pedestrian accidents at night demands more attention of persons responsible for traffic safety. Half of the pedestrian deaths occur between six p.m. and midnight, while these six hours account for only one in three fatal non-pedestrian accidents.

5. Public officials (state, county and city) should investigate the seriousness of the pedestrian accident problem. Accident records provide this information and point the way to needed remedies. Accident records indicate the locations and the types of physical protection most urgently needed by pedestrians, and more officials should be making use of them.

6. Pedestrians share street and highway facilities with motorists. It is reasonable and necessary that pedestrians also share the responsibility for the safe use of these facilities. Nearly 200 cities and several states have recognized this by enacting traffic laws regulating pedestrians as well as drivers. Other cities and states should adopt similar laws as provided in the Model Municipal Traffic Ordinance and the Uniform Act Regulating Traffic on Highways.

7. Instructions for safe walking should be provided uninformed pedestrians that they may recognize and accept the responsibility for their own safety.

8. Pedestrian obedience to regulation should be made as easy as possible and violations more difficult. Traffic signals, protective barriers, tunnels, bridges, islands and pavement markings should be used where needed. However, traffic signals should not be erected unless warranted by the traffic volume, and tunnels and bridges should not be built unless conditions indicate clearly that they will be used. They should be so designed and located as to provide maximum protection and encourage obedience to pedestrian regulations.

9. Pedestrians must be compelled to obey rules of the road and drivers must be forced to observe the rights of pedestrians if accidents are to be reduced to a minimum.

The Motorist Looks at the Pedestrian

By BURTON W. MARSH

(Member I.T.E.), Director, Safety and Traffic Engineering Department, American Automobile Association, Washington, D. C.

The motorist looks at the pedestrian and sees the most neglected factor in traffic. He also sees the chap who accounts for two-thirds of fatalities and nearly half of the injury toll in cities. For the country as a whole, he sees the person who accounts for two out of every five killed.

The motorist looks at the pedestrian and says to himself, "There's the last object in the world that I would want to hit." For the motorist realizes that almost every pedestrian crash involves injury or death, whereas he knows that hitting another car or fixed object very often results in no injury.

The *considerate* motorist looks at the pedestrian and says, "Why, I was in that fellow's place just before I got behind this wheel. 'I'm the one now 'encased in armor' and it's up to me to give him a break. We're both street users and we've both got to learn to get along together—on a fair co-operative basis, according to a reasonable set of rules-of-the-game. Go ahead, brother, (waving his hand). I was about to turn but you have the right-of-way here." Note please that this is the *considerate* motorist of whom it may be said, "Abu Ben Adam, may his tribe increase—"

The *inquisitive* motorist looks at the pedestrian stranded in mid-street and asks, "Why wasn't he warned when there wasn't enough remaining time for him to cross before the signal light changed?" Or, "On so wide a street as this, why isn't there a safety isle in the center for him?" A bit farther down the street at a jog intersection he sees a pedestrian trying to cross where traffic is never stopped and asks, "Why aren't there barriers there so he can't walk out into trouble?"

A bit farther into the midblock and WHAM! He slams on his brakes and swerves, narrowly avoiding an adult pedestrian crossing from between loading trucks and never even once looking toward the inquisitive and now nervously-gulping motorist. "Why, oh why, isn't more emphasis given to training pedestrians in sound walking practices?" he mutters, his heart still

in his mouth. "I have my rules to follow and my responsibilities in traffic. And if I don't do as I should, I am quite likely to be penalized. The man afoot can't expect me to do the impossible—he should observe his rules for walking and accept his responsibilities in traffic."

The *night-driving* motorist looks at the pedestrian—or at least looks FOR him—but finds him mighty hard to spot when dressed in all dark clothing. Isn't it reasonable" he asks, "for the walker at night to wear or carry something light-colored? And furthermore, this is a very busy artery and I've read of numerous pedestrian crashes on it at night. Why isn't it effectively lighted?"

A voice answers "Yes, those are good points, Mr. Driver, but until this artery is traffic-lighted or until walkers are trained to show 'something light-colored, it's up to you to keep your headlights adjusted and clean, your windshield clean, and to drive slowly enough so that you won't hit a pedestrian."

The *sober* motorist looks at the pedestrian—and sees one lurch drunkenly across the intersection, paying no attention to the red signal. Another driver whose view of the tipsy walker is hidden by a moving truck is BARELY able to avoid hitting the befuddled hooper. Says the *sober* motorist, "Now if I were to drive in that condition, I'd be in for real trouble. Why shouldn't that pedestrian be taken into custody, at least for his own protection?"

All of these motorists look at the pedestrian and ask, "Why aren't these pedestrian problems being given more attention?"

"Well," answers their Motor Club secretary, "one reason is that communities do not really appreciate how bad the pedestrian toll is, and that lots can be done about it. One trouble is that the main facts haven't been obtained in our community."

"Have the facts been obtained anywhere?" asks a motorist.

"Yes, the AAA has made a very extensive study," replies the secretary, "and the

results are most interesting." For example, these key facts are typical:

Ten Key Crash Facts

1. *Pedestrians lead in toll.* In cities, two-thirds of those killed and nearly one-half of those injured in traffic are persons afoot. Even outside cities, one-quarter to one-third of those killed are pedestrians.
2. *Middle-Aged and Older.* Grandpa—aged 50 or over—is the victim in the majority of pedestrian fatalities.
3. *Male.* Seven out of ten pedestrians killed are male.
4. *Death After Dark.* Some four out of five adult pedestrians are killed in hours of dusk and darkness.
5. *Non-Drivers.* Non-drivers, ignorant of problems and limitations of the man at the wheel, account for nine out of ten deaths to persons of licensable age.
6. *Jay-Walking and Playing.* In cities, jaywalking in the midblock is usually the leading wrong practice of adults, while most children are killed at play.
7. *Intoxication.* Studies of brain tissue or body fluid by New York City's Medical Examiner and the Coroner of Cuyahoga County, Ohio, (Cleveland area) involving some 600 cases, indicated that two out of five pedestrians killed had been drinking substantial amounts of intoxicant.
8. *Low Income and "Foreign" Groups.* Unduly high proportions of pedestrians killed in cities come from low income and "foreign" residence sections.
9. *School Children.* The fatality record of school children has improved consistently while the adult toll has grown much worse. However, school children have by far the worst INJURY rate of any age group. Hence the schools still have much to accomplish in traffic safety training.
10. *Vigorous Programs Produce Reductions.* Contrary to what many have thought and now think, records show that intelligent pedestrian programs will prevent many pedestrian deaths and injuries.

"Say, those are interesting facts, and they will help me," states the motorist-looking-at-the-pedestrian. "As I understand it, our own community's facts may be different. They should be obtained; then we all would have a basis for improving the situation.

But what are the reasons behind those facts? There must be reasons why pedestrians are so often involved in traffic crashes."

Traffic specialists of the American Automobile Association believe that the following are among the main reasons:

Six Reasons for Crash Toll

1. Elderly non-drivers, predominant in the toll, do not understand driving problems, such as distances required to stop, difficulty of seeing pedestrians (particularly in rain and when dressed in dark clothing), the many things the driver must watch, limited ability to swerve car suddenly.
2. Pedestrians, noting bright lights of car, think they can be seen much sooner than drivers "spot" them. Drivers very often overdrive their headlights.
3. Many pedestrians do not accept their responsibilities in traffic. In Minnesota, in 1939, two-thirds of pedestrians killed were breaking some sound walking rule.
4. Older pedestrians do not make proper allowance for their poorer vision—especially Night Vision—for hearing defects, for slower walking pace, lessened alertness and momentary lapses of attention to traffic.
5. In many places, there are unsatisfactory pedestrian facilities. Examples: lack of a traffic signal face ahead of pedestrian crossing at crosswalk, too long traffic signal periods, lack of pedestrian islands, crosswalks which motorists cannot see at night and in bad weather.
6. Many communities still do not know their pedestrian FACTS and hence have an inadequate basis for a sound program of pedestrian aid.

"Those sound reasonable" says the motorist.

"Yes," says the secretary, "but the accident measure does not represent the whole picture. As a matter of fact, the average pedestrian is vastly more irritated, if not enraged, by the delays and inconveniences to which he is so often unfairly subjected, than he is concerned about being on the casualty list. So to meet the pedestrian's needs, pedestrian convenience should receive equal attention with pedestrian protection. An effective program based on both factors will gain general public support."

"A program, you say. Well, one surely seems to be needed. But it doesn't seem to me that the job to be done is an easy one. For to a considerable extent it involves changes in customs. There must also be changes in attitude by both we motorists and pedestrians. Those afoot, especially the middle aged and older, must get out of their minds the horse-and-wagon days' attitude that they may walk when, where, and as they wish and it's entirely up to the motorist to see that they are not hit. But until pedestrians have been trained to cross streets and walk along highways fairly and sensibly, I can see that we motorists, having control of the instrument which can do the injuring and killing, must so drive that a crash may be avoided even when pedestrians do foolhardy and unfair things."

"No," answers the secretary, "it's not an easy job, nor is it one that can be done overnight. But that's no reason for the apathetic attitude of some major officials and citizen leaders. In a recent field trip covering a dozen cities in one state, a number of such persons were found who admitted the problem but just didn't believe that much could be done."

How wrong that viewpoint is, numerous progressive cities and some states are demonstrating. Schenectady, for example, reduced pedestrian fatalities 82 per cent in 1939. In the past few years, Cleveland by vigorous programs, has cut fatalities to those afoot more than one-half. Springfield, Mass., co-winner with Kansas City, Mo. in the 1939 National Pedestrian Protection Contest among cities of 100,000 to 500,000 population, cut fatalities from 13 to 7 in 1939 and reduced pedestrian injuries by more than one-third. For the first six months of this year, Rochester, New York's progressive program has reduced pedestrian fatalities from 13 to 4. And numerous cities have pedestrian death rates of less than one-third those of others.

"Well," said the inquiring motorist, "it looks as though various communities are proving that much can be done. But from what you have said, it appears that before any real program is going to be carried out, a selling job must be done."

"Right!" replied the secretary, "and that's one reason I'm so glad to talk this over with you. For it's those of us who really see the need and realize what can be done

who are going to have to do that selling job."

"Well," said the interested motorist, "I'm willing to do some selling, but how should our community go about this job? Aren't there a few simple, practical steps which can be recommended?"

"Yes, there are," replied the secretary, "and in considering these remember that the need for action is great, for the pedestrian is indeed number one problem child in traffic. Yet most communities are not making anything like satisfactory progress. The main reason is neglect, of lack of sufficient emphasis on the needs of the man afoot."

Six Steps to Get Results

"Here is a six-point basis for getting desired results in your community."

1. *Get someone assigned to the job of becoming your pedestrian expert.* The seriousness of the problem warrants this perhaps seemingly drastic step! In the larger communities, this should be a full-time assignment, at least until the situation is greatly improved. Where a traffic engineer has a staff, a man on that staff might well be given this job. In communities where that is impractical, a keen police officer might be the best selection. Incidentally, the police are accustomed to this idea of specialization where the problem warrants it. They have fingerprint experts, ballistics experts, scientific crime detection laboratory experts, officers who become expert in juvenile delinquency and its prevention, and some have hit-and-run case experts.

"But is there enough specialized work to warrant such an assignment?" asked the inquiring motorist.

"If you doubt this, let me suggest that you study this AAA manual—pedestrian protection. Yes, there is plenty to keep any keen interested person very busy."

2. *Have your pedestrian expert-to-be get the main local pedestrian facts* so that he and you will know just what your main problems and needs are. Obviously, this is the only sound way to tackle this or any other problem. And your facts and needs may differ from those of other communities.

3. Organize for a "total war" on pedestrian accidents and inconveniences. The job is not wholly a traffic engineering or police job. Schools must do better their job of training children. Newspapers, radio stations, motion picture theatres, churches, automobile clubs and other civic agencies, mass transportation companies, insurance companies, etc., should do their part in adult education. The city attorney should check to see that proper ordinances exist and prepare amendments and new proposed regulations as needed, to be enacted by the legislative branch.

Steps in the "Total War"

Organization is necessary to get all such agencies informed and united on the need for action—and then to get each to do his part of the job, in a *coordinated* program.

If your community has a Traffic Commission, get it to set up a special pedestrian committee. Or better, get it to direct each of its committees to propose a list of important practical activities which it will carry out or promote, for pedestrian aid. If there is no Traffic Commission or similar organization working steadily on traffic improvements, have one organized. Section five of the printed Model Traffic Administrative Ordinance will serve as a useful guide.

"Organization is necessary to do any important job well. I agree to that," said the motorist, "What's next?"

4. *Decide on a vigorous, continuing pedestrian program which can and will be carried out.* It doesn't need to be expensive. Much can be done with no special municipal funds, desirable though they are. Many civic-minded leaders and agencies will contribute time, materials and services.

The program should keep going the year 'round, with always some worthy activities getting public attention—and with enough variety, merit and showmanship to attract public interest and cooperation.

5. *Work everlastingly for active public cooperation, for it is essential to success.* Providence, Rhode Island's national record of 156 days without a traffic fatality—which means 32,501,384 man-days—rests not only on a splendid program but also on

superb public interest and active cooperation.

6. *Enter and utilize the national pedestrian protection contest* for the stimulation which active participation will provide, and for the materials and suggestions sent every three weeks. Every state and 390 municipalities are entered in the 1940 contest, sponsored by the American Automobile Association. If your city has entered (it can still enter if it has not) see that full use is made of the materials and of the competitive spirit which is one of its main values.

"That pedestrian contest idea should help. Yes, those six steps seem practical and I'm going to propose them to the government and civic leaders in our community," concluded the motorist. "But suppose they agree—then they'll want some specific activities and some materials to use in their projects. Where can they get these?"

"From several sources," answered the secretary.

Source of Safety Materials

"Our motor club and the American Automobile Association have, I believe, the largest selection as Three A, aided by grants from the Automotive Safety Foundation, has made this a major project for four years now.

"Here is a kit of sample and guide materials, and incidentally, every city and state entering the contest not only receives such guides, but also receives this pedestrian pointer—bulletin every three weeks. We particularly invite cooperation of cities and states in a Pedestrian Interview Plan, designed to secure pedestrians' viewpoints and factors concerning accidents.

"In addition, excellent materials and aids are available from the National Safety Council, the Liberty Mutual Insurance Company, the Travelers Insurance Co.—in fact, about every national organization working in the traffic field can and will help.

"I only wish, too, that there was time to tell of some grand work being done by Connecticut, New York, New Jersey, Massachusetts, Minnesota—to mention only a few states, and by Rochester, New York, Cleveland, Cincinnati, Detroit, Minneapolis, Hartford—to mention only a few cities."

MONDAY EVENING SESSION

October 7, 1940

Dinner for City and State Police

Robert C. Dunn, Attorney-at-Law, Toledo, O., presided as Master of Ceremonies and made a cryptic extemporaneous dissertation of humorous character.

The "Chairman's Report" was presented by Matthew J. Bolger, Inspector of Traffic, Police Department, Newark, N. J.

The "Secretary's Report" was given by Professor Joseph L. Lingo, Director, Public Safety Institute, Purdue University, Lafayette, Ind.

The speaker of the evening then was introduced, as follows:

The Modern "Code of Honor"

By WILLIAM J. CAMERON

Director of Public Relations, Ford Motor Company, Dearborn, Mich.

(The following is a summary of notes taken by a reporter during Mr. Cameron's address.)

You can't be immune from safety in the United States today, said Mr. Cameron. The safety movement is too comprehensive and too effective in saving human life and preventing accidents. Safety has become a modern religion (we all know the meaning of a white cane, signal lights, pavement markings, rules of the road, school safety patrols, etc.).

On the other hand danger has a fascinating attraction for all of us—we left land to conquer the sea and then looked to the air. A corduroy road of frozen bodies paves the way to the poles.

We have come to realize in industry that the worker is an asset and that his individual safety is a public responsibility, for the public pays for carelessness and loss of life: the training of new men.

We are learning to be excessively safe instead of considering life excessively dangerous, as we did when the motor age began to alter our lives.

The possibilities of dangers are increasing, yet accidents grow fewer because we are controlling our problems on the highway through enforcement, engineering and education.

To correct a false impression: statistics say one out of five in this country owns a car—this isn't true. There may be in existence enough cars to average one out of five, but that won't work out any more than it would be true to say one out of five persons owns a cap.

We are still amateurs on the road both as drivers and as pedestrians—out of 40,000,000 drivers about 2,000,000 can be classified as trained drivers.

The attitude of the present generation is safer than among those who lived in the first part of the motor age. Today the smart thing is to drive safely.

We carry a code of honor in our minds when we go out to drive—to protect the other fellow as well as ourselves.

"Twelve fatalities for every 100 million vehicle miles traveled."

TUESDAY MORNING SESSION

October 8, 1940

Group Session for Traffic Court Judges and Prosecutors

Presiding: JUDGE PHILLIP B. GILLIAM, Municipal Court, Denver, Colo., Chairman, Committee of Traffic Court Judges and Prosecutors, Street and Highway Traffic Section, National Safety Council.

The meeting was held for the purpose of discussing such topics as handling juvenile traffic offenders, what to do with the impecunious violator, and extra-legal penalties.

James A. Geroulis, Assistant Corporation Counsel, Department of Law, Chicago, suggested that in speed cases involving juveniles in Chicago, parents are brought to court and the judge proposes the defendant visit a specified hospital and donate \$5 (or some other amount set by the judge) to patients in the hospital. After this is done, the defendant re-appears in court and the judge discharges him. Mr. Geroulis pointed out that the Chicago Municipal Court considers speeding a social and not a criminal problem.

Chief Justice Harry H. Porter of the Evanston Municipal Court disagreed with this point, saying speeding and drunken driving were legally criminal cases and should be considered as such.

One of the judges present stated that one-third of all traffic cases in his city involve juveniles.

Judge Harper Harb, Municipal Court, Little Rock, stated his court allows juveniles to deposit licenses on minor violations for from 30 to 60 days. Judge Harb said he once sentenced a school boy offender to do chores on his father's farm for 30 days. In another case, he sentenced a minister to attend a violator's school.

Judge Gilliam, in talking about extra-legal penalties, said that Denver drunken drivers formerly were sent to jail for week ends rather than for 30 successive days when such imprisonment might mean the loss of income. He said this idea was a failure because many of the offenders would not appear voluntarily for week end imprisonment, and when found by the police were often intoxicated.

Regarding the impecunious violator, Judge Gilliam said the Denver Municipal Court sometimes suspends sentences when the defendant cannot pay but will work it out on some municipal job, such as laboring on park grounds.

TUESDAY MORNING SESSION

October 8, 1940

Group Session for City and State Police

Presiding. MATTHEW J. BOLGER, Inspector of Police, Traffic Division, Newark, N. J., and Chairman, Committee on City and State Police, Street and Highway Traffic Section, National Safety Council.

What's New in Traffic Law Enforcement?

By A. R. FORSTER

Director of Training, Northwestern University Traffic Institute, Evanston, Ill.

The fundamentals of a good traffic law enforcement program remain today essentially the same as they have been defined in recent years. It cannot be said there is much that is new in the sense of radical innovations in policy or techniques. Whatever may be classed as new relates primarily to improvement in the quality of recommended practices and in their increasing application, with good results by departments throughout the country.

To answer the question it is necessary to analyze the fundamentals of good traffic

law enforcement, re-examining proved basic concepts and studying their recent extension and development. It is, however, imperative that we at all times keep in mind the fundamentals of good enforcement if sound programs are to be developed and pursued. There is a real danger, in this as in other fields, of our becoming so concerned with minor refinements and novel ideas that we lose sight of fundamentals and permit our activities to become unbalanced and to develop major inherent weaknesses. This examination of the fundamentals of en-

forcement logically divides itself into two phases: (1) standards of quality; (2) enforcement facilities.

The first important quality standard is that there must be an adequate amount of enforcement. Studies have conclusively established the definite inverse ratio between the amount of enforcement and the frequency of accidents. The need for keeping enforcement up was recognized years ago when the "enforcement index" was first developed. The deterrent effect of a given amount of enforcement, or enforcement index, is proportional to the nature of the accident experience in a given locality and the character of the driver group under supervision. These elements being variables, it is obvious that what constitutes adequate enforcement will be a variable from place to place. It is, therefore, important that each police agency not only bear in mind the importance of having an adequate amount of enforcement, but that it define as accurately as possible what constitutes adequacy under its particular conditions and seek to hold consistently to that level.

In addition, proper enforcement policies must be developed and pursued. Enforcement is not always applied in strict conformity with the letter of the law. Legislation is often modified by the policies guiding enforcement application. Development of enforcement policies is justified whenever they make possible a better quality of enforcement. Policies are sound only when they assure a kind of enforcement which assures proper balance between the needs for reasonableness and for effectiveness, and when they are uniformly observed by all officers insofar as practicable. These conditions are best met when general control of policy formation is vested in the administration rather than being left entirely to individual officers.

Selective Enforcement

The third quality standard is that enforcement should be highly selective. One of the major weaknesses of enforcement programs in many jurisdictions is failure to direct effort to various times, places and violations in proportion to their importance in the accident problem. Obtaining selectivity in enforcement is not only essential but is also the most logical first step improvement. It is generally within the power of

the police themselves, regardless of obstacles to improvement of some elements of the enforcement program, to apply it selectively. Proper use of available personnel is, moreover, a requisite to the making of requests for additional enforcement facilities.

Newest developments in selective enforcement include its more widespread use, refinement of planning techniques and development of more thorough methods for checking the degree of selectivity actually achieved. Many so-called selective enforcement plans have not achieved the desired results because of unsound planning. Assignments must be based upon study of accident records which give a reliable indication of how enforcement may be most effectively directed. More widespread recent recognition of the fact that selective assignment planning does not necessarily constitute selective enforcement has led to the development of performance records whereby work can be checked to determine the actual degree of selectivity. This is a vitally necessary followup technique.

Next is the need for "post accident" enforcement, or the direction of attention to violators involved in accidents. This has been widely neglected in the past, but there are clear evidences of its increasing application. The development of improved accident investigation by police and emphasis on the fact that, in most cases, thorough investigation gives the officer a legal basis for signing complaints (even though he did not witness the violation) are helping to extend enforcement along this line.

Finally, in the list of standards, is the need for an adequately high conviction rate and for penalties appropriate to offenses. There is growing recognition today of the fact that enforcement in terms of arrests alone is almost meaningless. Enforcement is real deterrent on potential violators only when to the probability of apprehension there is added the probability of conviction and punishment. This is primarily a court responsibility, but there are many things the police can and must do. Among these are making proper arrests, improved case preparation, improved court room demeanor and methods of testifying, increased use of scientific aids to enforcement, such as chemical intoxication tests and formulae for determination of speed from skid marks, the avoidance of "fixing" and attempting to

"sell" prosecutors and judges on the desirability of good enforcement.

Police need to recognize two important facts: (1) effective court work is dependent upon the quality of police work as well as prosecution and judicial work; (2) the police cannot reasonably criticize the court or seek better cooperation unless their own enforcement work is above reasonable criticism.

Facilities for Enforcement

The attainment of these objectives depends upon several important elements of what may be called the facilities for enforcement. Failure to meet standards may generally be traced to some weakness herein.

First is the nature of police organization for conducting the traffic program. The desirability of specialization has been clearly demonstrated and many municipal police departments have created special traffic divisions. There is, however, need for refinement in the internal organization of most traffic divisions. There is also need for recognition of the fact that creating a special traffic unit does not mean that all other units of the department are relieved of traffic law enforcement.

State departments, with their limited personnel, cannot specialize in the same manner as cities. However, an encouraging recent trend in rural enforcement is the tendency of state departments to specialize at least in principle by providing special headquarters units for planning and supervision of traffic activities and by devoting a greater portion of personnel to traffic enforcement.

More attention is also being given, as it should be, to undesirable practices which, to a great extent, qualify the potential advantages of specialization. Among these are failure to employ selective assignments and the drains upon patrol strength for special details. The former has already been mentioned. Special details should be handled only when the public interest is served, and motorized traffic patrol officers should not be assigned to them unless absolutely necessary.

Administration

There is a growing realization of the critical importance of administration to the success of an enforcement program. The

needs in this respect are gradually being fulfilled, but still demand considerable attention. They include the appointment of well-qualified commanding officers to traffic administration posts. Such assignments must include the delegation of authority commensurate with responsibility and the development of better programs of administrative activity.

The next element is personnel training. One of the most generally encouraging signs in the police field recently has been the growth of interest and activity in personnel training. Unfortunately, much training activity has not been of sufficient quality to make it effective. Better planned courses and a higher quality of instruction can do much to increase both the desire and ability of police personnel to do a good job.

Adequate equipment, particularly motor vehicles used in traffic patrol work, is essential. Most commonly observed weaknesses are poor maintenance of motor vehicles, an inadequate number of patrol vehicles and failure to provide types of equipment well adapted to operating conditions.

Certain advances are being made with respect to equipment. One of these is the growing practice of using motorized officers for parking supervision. Another instance is the increasing use of scientific investigational equipment, including chemical intoxication test devices and photographic equipment.

The final element is the type of tactics employed. Despite the importance to an effective enforcement program of the methods employed in its execution, there is still much non-uniformity and a widespread use of inefficient methods.

Practice and opinion vary so widely on many tactical questions that it is difficult to summarize the situation briefly, particularly with respect to such issues as the relative merits of one or two-man patrols, the desirability of open view patrolling as opposed to semi-concealment methods, or the conspicuousness of traffic patrol cars. However, there is evidence of growing efforts to determine factually the desirable practices to follow.

Two new developments in the field of enforcement tactics, are outstanding in recent refinement and more widespread use. These are the employment of devices to check speed over measured distances and the

use of the "traffic sampling" technique. Some cities have found these speed checking methods safer and more effective than the more commonly employed method of pursuing and pacing speeding cars, although there is still some question as to the extent to which it should be employed. The sampling technique has, in various forms, often proved effective in detecting violations which frequently pass unnoticed and in creating a greater deterrent effect, partic-

ularly on such violations as drunken driving and operating defective vehicles. The most outstanding recent development in sampling techniques has been increasing popularity of the "blockade" method. Experience has shown, however, that this must be applied, if at all, with considerable discretion. It must avoid the aspect of a drive, must be as selective as possible, should not occasion undue inconvenience and should not interfere with the maintenance of regular enforcement work.

Statewide Coordination of Traffic Enforcement Activities

By P. T. BEVERFORDEN

Sergeant of Safety and Education, Indiana State Police, Indianapolis, Ind.

Present day traffic, being of more than purely local interest, has produced a great number of problems which are comparatively new in our work. These are problems which require and involve the active coordination of all policing agencies. Having been in active police work for over 10 years, I have seen a great deal of the petty jealousies and scrambles for credit that have existed between our various federal, state and local police departments in regard to criminal activities. In some instances we are beginning to see the same thing in traffic work. One of the major responsibilities of every organization interested in traffic enforcement today is to realize that personalities, egoisms and getting the credit have no place in their program. Going even farther, they must use every possible means to combat these very practical enemies of cooperation that are steadily undermining the efficiency of modern traffic control. Too many excellent traffic programs have failed completely because some superior officer took newspaper credit for an outstanding piece of work done by the man on the beat.

To me, the coordination of traffic enforcement activities involves more than just an understanding of uniform procedures between police agencies. Coordination is essential to each agency. We have all seen the police department when the detectives refuse to do traffic work and where the traffic officers pass up criminal work. The training program that produces such conditions is bound to fail. The coordination of which I speak involves a definite understanding between every officer in all depart-

ments as to his own powers and duties and how they fit in harmoniously with others.

In Indiana the facilities and personnel of the state universities, the Automobile Protective and Information Bureau, the State Police Chiefs Association and the State Municipal League have been used in cooperation with the State Police in a complete service and training program for all police agencies dealing with traffic problems.

Our service and training program originated in 1937 when the Public Safety Institute of Purdue University, the State Police and the Automobile Protective and Information Bureau began offering assistance to any city or county police department in installing scientific accident prevention bureaus and conducting in-service training. Staff members from each of these organizations were assigned to work directly with all police agencies in the state at no cost whatever to the agency requesting the services. At the very start, the cooperation of the Indiana Police Chiefs Association, the Indiana Traffic Safety Council and the Indiana Municipal League was sought and obtained. The support of these groups has largely accounted for the success of the program.

Accomplishments

Since 1937, the following work has been completed by the cooperating groups:

1. Complete police department surveys, including recommendations for improvement were completed in 12 cities of more than 15,000 population.

2. Re-organizational programs including the installation of accident prevention bureaus, personnel and record systems, accident reporting systems, "no-fix" ticket systems, warning ticket systems and general procedures for determining a selective enforcement police were completed in six cities of more than 25,000 population.

3. In-service training programs for the police personnel were completed in seven cities of more than 25,000 population.

4. A one week intensive basic course for traffic officers from cities under 25,000 population is conducted each year at Purdue University at no cost to the attending officers.

5. Direct in-service assistance is rendered to all officers who attend the Purdue school in setting up report and record systems, ticket systems and general enforcement activities in their own departments.

6. Special re-training courses and follow-up assistance is given in each of the cities where services have been rendered. Staff members spend at least two days each month in follow-up work in each city for the first year.

7. Short conferences and assistance to police officials in 21 cities on general traffic enforcement problems.

8. In-service assistance to eight cities in conducting traffic studies and surveys in conjunction with the other enforcement activities.

Our purpose in conducting this type of service and training program in Indiana is to bring about greater coordination of enforcement activities and methods and to assist in the development of well organized and fully trained police departments. Each phase of the program is designed to assist the department in doing the type of enforcement job that will result in reduced loss of life and property.

Examples of Results

Muncie, a city of 50,000, experienced 13 traffic deaths during 1939, nine of these during the first seven months of that year. Following the installation and training program, Muncie went through the first seven months of 1940 without a single traffic death and is one of the leaders in the National Traffic Safety Contest.

Anderson, an industrial city of 45,000, experienced eight deathless months following their installation and training program in 1939. During the preceding year of 1938, Anderson had eight traffic deaths.

These are, of course, some of the cities where the best results have been obtained, but every city in which our group has worked has shown a definite reduction in deaths over the average of the preceding three years' record.

We feel that we have a practical program in Indiana for the training and assistance of all police groups. The responsibility for the teaching and research is centered in the state (Purdue) university where it rightfully belongs. The services are available at no cost and at all times. Staff members who direct the program have all done actual police work. For those of you who might be interested in conducting any phase of this type of activity let me offer a few suggestions in the form of cautions which I feel may save you a number of headaches. These don'ts we have learned through the school of mistakes and experience.

1. Don't attempt to force yourself or your program either directly or indirectly on any police official or group. Too many training and service programs have been "sold" to police officials by over-zealous citizen groups only to fail because they were not sincere.

2. Don't feel that by selling the Chief of Police or Mayor of a city that your job is completed. Many service programs have collapsed because the officer on the street who must do the actual job is not completely sold on your program.

3. Don't play favorites in choosing personnel for traffic duty. Merit only should count. When antagonism is aroused between the men in another division toward those in traffic the program cannot succeed.

4. Don't neglect the officer on the beat in your training program. Too much specialization can ruin any department. Every police officer can and must be a part of the traffic enforcement program. We try to fully train every officer in cities under 75,000 population. Even in larger cities every officer should receive at least a short training period.

5. Don't criticize present methods too strongly. No police officer likes to be told that his way is not the best way of doing a

certain job. Offer a factual and balanced program with proof of results and criticism will not be needed.

What Is Included?

First, just what is included in a typical in-service training and assistance program? The first step necessary, of course, is a sincere desire for it, on the part of the city. In answering the question further let me review briefly a typical installation under our own general plan of procedure.

Early in 1939 the Institute received a request from the Mayor and Chief of Police of Gary, to assist them in the re-organization and training of their police traffic division. The first step was making a complete survey of the police department. Upon completion of the survey a list of 48 definite recommendations were submitted to the Chief of Police and other city officials. These included recommendations on equipment, records, selection and training of personnel and on organization and selective enforcement procedures. The report was accepted and the program was started. More than 10 weeks were spent by our group working directly with the Gary Department at no cost to the city. Selective examinations were given and the traffic personnel was increased from 18 men to 36 men by a re-shifting of divisions. No additional officers were hired. Two weeks of instruction were given to the men selected for traffic and a permanent training program was arranged. Courses taught in the school included accident investigation, first aid, reports and records, law of evidence, driver psychology, selective enforcement, court procedure, photography, field work, hit and run investigation and others. The old offices of the traffic division were re-vamped and the necessary report and record systems installed. On May 15, the five trained accident investigation squads and 13 trained motorcycle officers began operating.

In each city members of our group assist the police department in other phases of the balanced program. A day by day series of publicity releases on the enforcement activities of the police department are given to the local papers. Speeches explaining the purpose of the police program are made before local citizen groups and service clubs. In two cities our group actively assisted in the organization of a safety council to sup-

port the work of the police department. In general, we try to assist in any and all activities that will obtain the needed support for the police efforts in a well-balanced program. Much of the follow-up work done by our group consists of activities to gain this support.

Recommendations

In summarizing, let me enumerate the specific services we offer to police groups in Indiana at the present time through our cooperative program:

1. In-service training and assistance, including police department surveys for cities of more than 15,000.

2. Advanced training courses in city police departments where basic in-service schools have been conducted.

3. Basic and advanced training courses at Purdue University for police officers and administrators from cities under 15,000.

4. Regional training courses in various parts of the state for police officers in the regional area. Classes are held one afternoon each week for 10 weeks.

5. Special short courses for police recruits to be held at Purdue and in the larger cities.

6. Direct in-service assistance to police departments and city officials on public safety problems.

7. Development and promotion of uniform standards for recruiting police officers, personnel ratings and general enforcement activities.

8. In-service assistance to police officials in setting up administrative, organization and training programs, personnel and record systems.

9. Development and promotion of legislation designed to benefit the individual police officer and the police profession.

10. Studies and research on police problems with the university acting as a clearing house for information of value to all police departments.

We have been more than pleased with the demands for services which have come in from police agencies in all parts of Indiana. With only one staff member assigned on full time from each of the cooperating agencies and with the present facilities available through the Public Safety Institute

of Purdue, our present program must, of necessity, be somewhat limited. The services which I have mentioned are, at present available only to police agencies in the state and the program is financed entirely by the cooperating groups.

We feel that the combination of the teaching and research facilities of the university with the practical and valuable experience of police officers has proven its effectiveness as a worthwhile activity.

Idea Exchange

Conducted by CAPT. JOHN M. GLEASON

Traffic Division, Police Department, Greenwich, Conn.

The group agreed that it is vitally necessary to sell the men in the Department on the safety program before attempting to sell it to the public. It was brought out that sending men to traffic schools builds up their interest. The issuance of a house organ is also an effective means of maintaining interest.

One newspaper feature article suggested was "Around the clock in traffic safety" which depicted the police at school crossings, a motorcycle man apprehending a speeder, an accident squad investigating an accident and attending the injured parties and a maintenance crew working on traffic lights and signs.

Dayton, Ohio, has open safety meetings conducted by police for fleet operators.

Lynn, Mass., held a three-day pedestrian clinic. Eyes were tested and reaction times checked. This proved to be very popular, it was reported.

Toledo, Ohio, has furnished maps to school children showing the safest route to school. Some 38,000 maps were distributed.

San Antonio has conducted a "man on the street" broadcast in which courteous and safe drivers were interviewed. Substantial prizes were given, such as a year's supply of gasoline and a complete set of tires. The programs were broadcast twice a week.

Open house programs at police headquarters for civic groups proved to be popular. The accident prevention activities of the department are emphasized at these open houses.

TUESDAY MORNING SESSION

October 8, 1940

Group Session for Public Education and Safety Organization

Presiding: CARL J. RUTLAND, President, Texas Safety Association, Inc., Dallas, and Chairman, Committee on Public Education and Community Organization, Street and Highway Traffic Section, National Safety Council.

The Community Safety Council

By GEORGE M. BURNS

Director, Kansas City Safety Council, Kansas City, Mo.

Whenever we attempt to discuss community safety councils from a national viewpoint, we must realize that the organization and financial set-up of these safety councils

varies extremely in the different cities. Some of them are financed by and are a part of the chamber of commerce, some are operated with funds from community chests, au-

tomobile clubs, and in many other ways. This being the case, I will stick closely to the Kansas City plan.

Back in 1921, when there were only 45,000 motor vehicles registered in Kansas City it was discovered from the meager records that 71 persons had lost their lives as a result of motor car accidents. This was an alarming situation. It was decided that a community safety council should be organized in Kansas City. Not only was the Safety Council organized to study the local problem, as it pertains to traffic safety, but, rather to stimulate interest in safety in all its varied forms. It was the hope of this group of business men that the efforts of the safety council might check the rate at which accidents were increasing each year. The Safety Council is not a branch of the city government or the police department, but, rather, is composed of representatives of business firms and individuals who not only furnish the necessary finances but also supply the membership for committees. As an outgrowth of this early organization, we now have a community safety council with a membership of over 300 firms and individuals.

The working organization consists of an executive committee whose principal function has to do with the budgeting and approving of the financial expenditures and a Board of Governors comprised of approximately 75 representative business men and public officials who determine the policies of the organization.

Since the Kansas City Safety Council was first organized, it has operated as a strictly non-political, non-profit organization for the prevention of accidents in the home, on the streets and in the industries. The work of the safety council is handled through its various committees with their recommendations being submitted to the Board of Governors before any attempt is made to put them in operation. The basis upon which these committees proceed with their problems is primarily that the solution lies in the application of engineering, education and enforcement. The Safety Council is operated on the basis of the exchange of ideas with the hope that as a result of keeping the public informed through the press, radio and other advertising media, we may be able to obtain a continued strong public support.

Top Men Needed

Since the community safety council works for the welfare and safety of all the citizens, we must have only the most influential citizens of the community as officers and personnel on the governing board. Top men must first be sold on the need for safety before any great results can be obtained, second, the names of these men lend prestige to the organization and cause Mr. Average Citizen to feel that if John Jones, the president of one of the most respected banks of the community, is affiliated with the safety council it really must be a worthwhile project and merits his support and cooperation. These people are also of very material assistance when there is need for new or special legislation.

To the end that accomplishments may result, the safety council should always act as a coordinator for all interested agencies in the promotion of community safety. The reason for this is very evident when we consider that if the police department, the city administration, the schools and other interested agencies conducted their own program there would be a great deal of duplication of effort and many things attempted which would be directly the opposite of one another. With such administration of a safety program, it is readily seen that the all-important general public would become confused and the program would bog down with no tangible results being achieved.

As you know, the public must be informed of the necessity for new legislation or enforcement and favor it before it can ever hope to be successful. Many of our best programs for traffic safety have met defeat because the people were not informed about what could be accomplished. Since the community safety council is an unofficial organization, it is the group which can best take to the public, the problems of traffic safety and the proposed plans for the corrective measures needed to solve these problems. The reason for this is apparent when we consider that should the proposal come from the Mayor, for instance, the members of the opposite political party immediately form the opinion that he is merely building campaign material. With this type of reaction, to the program, it is easily seen that after a few members of the city council hear complaints of this nature, they are likely to at-

tempt to curry favor of the general public in their desire for re-election and pass ordinances which would totally block the traffic safety program.

Reaching the Public

Now, how does the community safety council reach the people to prepare them for new methods of traffic control? We use every known form of publicity to accomplish this sometimes colossal task. We supply speakers for radio broadcasts, luncheon clubs, parent-teacher groups, churches and many other civic groups. The community safety council prepares and distributes thousands of copies of material telling of the problem and calling for the support of the general public in the undertaking to save lives in the city. All of these things have a tendency to stimulate a desire for just the things which are needed.

To reduce the pitiful slaughter of our children, the safety council began organizing junior safety councils in the schools. These proved to be very popular and very effective. Now the safety council sponsors and furnishes all needed supplies to 103 junior safety councils in the public and parochial

schools. In 1937, Kansas City won national acclaim for completing 430 days without death to a child under 15 by a motor car and we were able to go more than two years without death to a child of elementary school age.

At the present time, because of the splendid work of our junior patrols, no elementary school child has been killed by a motor car while going to and from school for a period in excess of five years. We feel that the activities of this group played no small part in making possible the winning of the Grand Award in the National Traffic Safety Contest last year. One other activity of the community safety council which plays a very definite part in the traffic safety program is the work that is done with the fleets in the promotion of safety.

In Kansas City, we conduct a contest with 69 fleets operating some 2,000 vehicles.

The results of the work of the community safety council are intangible; we cannot say that we have saved a certain life or that we have prevented a specific accident. How far our work extends, no one can tell, because we measure results by accidents that might have happened, but did not.

The Traffic Safety Commission

By RALPH W. ROBINSON

National Safety Council, Inc., Chicago

The Traffic Safety Commission is a body created by ordinance, composed of responsible public officials and a number of civic and business representatives. Its operating expenses are provided for in the city budget. It has a full-time director with an adequate staff. Its budget provides funds for educational and other safety activities.

The functions are to coordinate and stimulate the activities of the official agencies concerned with the traffic safety problem and the private agencies which can be of service. The Safety Commission is a special educational institution.

The Commission is designed to provide leadership for the traffic safety movement and to marshal all the available forces within the community in a well organized, systematic attack against traffic accidents. It has no absolute, direct authority, but it

has in its membership, on its working committees, or otherwise associated with it, those public officials who do exercise all of the authority of the city government relating to street traffic safety.

Its functions are primarily advisory and educational. The power the commission can wield is the power of organized and specialized knowledge, and of cooperative effort.

In my opinion it would be impossible, under the American conception of government, to give to any one official agency absolute authority over all governmental functions concerned with the traffic accident problem. Some of those functions are: legislation, police, prosecution, courts, street design, construction and maintenance, street lighting, control of public utilities using the streets, fire prevention, traffic engineering planning, city planning, erection and main-

tenance of traffic control devices, budgeting and taxation, and public schools.

When you consider all these functions which have some direct bearing upon traffic safety, and which operate more or less independently, controlled mostly by the city charter and a mass of ordinances, it becomes quite apparent that some means must be devised to coordinate their traffic activities, if the city is to gain real control of traffic accidents.

Some means must be devised to educate the responsible public officials in the modern techniques of traffic accident prevention, and to stimulate the adoption and application of improved practices.

The safety commission is designed to bring about a meeting of minds through frequent contact, and through factual studies including studies of the activities of the several departments bearing upon traffic control and safety. These studies measure the results being obtained. Comparisons are made between the practices being carried on by the city, and the methods of accident prevention which have proved especially effective in other cities, to determine the feasibility of adopting better methods.

Organization of the State Safety Council for Traffic Safety

By HAROLD L. MUELLER

President, Oklahoma State Safety Council Associate Editor, The Daily Oklahoman and Oklahoma City Times, Oklahoma City, Okla.

I cannot understand a campaign that too often appears waged on the theory that the way to vanquish the enemy is to whip him on the head with a pamphlet or a tabulation.

Inexperience may be the explanation of my impatience with slow progress of the attack. Possibly gains cannot be made rapidly. I don't know.

Out of a short experience I have arrived at a few conclusions.

A state safety council or a statewide organization of some kind is essential to the conduct of a militant safety program in any state.

I believe this because I have become convinced that the reduction of traffic accidents like the preservation of liberty requires constant hammering.

A state council is the hammer.

The processes are scientific. That means patient investigation, the gathering of pertinent factual data, and the interpretation of such facts in terms of improved departmental action. Promulgation to the public of interesting factual material and of the highlights of plans being developed or applied for the protection of the public is an important part of the Commission's work. That is essential as a means of building public support for the application of sound accident prevention measures.

Studies of this nature, and especially matured plans for betterment, or action under way, furnish a splendid basis for public safety education. Education founded upon such matters can be made interesting and vital. In my opinion that kind of education commands far keener attention than safety education based upon platitudes, general statistics, and personal opinions.

A Traffic Safety Commission of the kind just described has been established this year in Portland, Ore., a city of 310,000 population. It is in successful operation, and is now conducting its activities along the lines I have described.

When I first became acquainted with the existence of a state safety council in our state I was not convinced it was an essential element in success of a state program.

I could not see, for instance, why a state safety program could not be conducted effectively by our state department of public safety.

There is a safety program in Oklahoma because there is a state safety council and whenever, or if, the state council goes dead, the program will collapse. We have a safety department and a highway patrol in our state because a safety council got the department created and the patrol established. We have an official attitude favorable to safety activities because of the untiring efforts of a safety council.

I can say this because the credit for these accomplishments goes to others; not to me.

The important work and the heavy work was done while I still was casing across stoplines. As I have learned, by degrees, how safety councils are formed and how they operate I have become converted to their usefulness.

I do not now believe a safety program can be carried on aggressively in any state if the re-responsibility for the success of the program rests principally upon one group of individuals or one class of individuals. I do not think a program can accomplish maximum results if it is, for instance, entrusted solely to officials or political hands. A safety organization composed of all the sheriffs of a state, even though each was sincere, could not get a statewide safety job done.

I do not think a safety group composed entirely of newspaper editors could direct a completely successful program; nor a council composed wholly of safety experts and engineers; nor a council composed only of representatives of insurance companies; nor a council composed of a committee for the membership of the state legislature; nor a council composed of automobile mechanics, or highway builders or paving contractors, or main street merchants, or ministers or mayors.

Representatives from each of these fields must be included, to the extent it is practical to do so, in the membership of the board of directors or the executive committee of the state organization.

The policy-making group of the state council should include as great a variety of viewpoints as possible.

Otherwise the program will be lop-sided, the objectives will be selected unwisely, the program will be narrow—rather than broad—and the cooperation of agencies vital to success will be lukewarm or absent.

The state safety council must have the genuine, honest and energetic support of every public and private agency and group that can strengthen the attack on loss of life, injury to human bodies and damage to property. It cannot afford to overlook any; it must have them all.

It must be so constituted that it not only can rationalize divergent viewpoints and harmonize antagonistic interests but it should have among its membership the men and women who are the representatives—the spokesmen, if possible—of diverse

groups that may not be in agreement on anything but the belief that an improvement in traffic safety is important.

The state council should be big enough and strong enough that, collectively, it is more powerful than any of its elements. It must be representative enough that it can apply pressure to accomplish desirable, beneficial ends and to block undesirable or selfish or crackpot proposals.

Once organized and operating, a state safety council should not forget its primary function.

Its Primary Function

My idea is that a state council's primary function is to provide leadership and direction for a statewide program and to harmonize and coordinate the activities of all of the many agencies that are interested in, and can be interested in, traffic safety.

In performing this function it is most important to establish a broad program in which the public and official viewpoints are properly balanced. And their activities and participation thoughtfully coordinated.

When official activity leads, the safety organization must see that public interest is maintained in proportion. When official interest and activity lag, the state organization must persuade officials it is the public's desire to have greater interest and activity.

When both official and public interest lag, the state organization must generate public interest and stimulate official interest.

In balancing a program and coordinating the various activities, I know of no better general guide than the three E's of traffic safety: Education, enforcement and engineering.

Every phase of traffic safety activity falls into one of these classifications. I can think of no other classification to add to these three. I do not think any one of the three can be neglected.

It is up to each state safety council to study the over-all traffic picture in its state and to decide which of the three E's should have the greater stress—the greater emphasis.

If my observation is correct the emphasis now being applied is not equal on each of the three elements of the problem.

The emphasis seems applied in the following order: Education, enforcement, engineering.

I do not believe this order of emphasis is getting maximum results. At least, not maximum immediate results.

The order should be revised to put enforcement first, engineering second and education third.

I say this because I believe I perceive both bull-headed resistance and scornful indifference to the present style of traffic safety education.

People want to know who's telling them how they should drive their automobile. They bought it, didn't they? And they have a right to drive it, haven't they? They drive as safely as they think necessary.

What are the stories in the newspapers that have a deterrent effect on reckless, careless and illegal driving? I believe they are the stories of two kinds: Those that report strict enforcement; and those that relate the sordid details of bloody accidents.

I hate to think we have to kill somebody in gruesome fashion every day or so and spread the story across the pages of our newspapers to scare readers into decent driving.

There is a weakness, too, in the horror type of accident story. From the standpoint of education. Though it may cause the reader to pause and think he is likely to shrug his shoulders and say, "That will never happen to me."

The accounts of strict enforcement—vigilant patrols, many arrests for violations, courageous prosecutions and certainty of punishment—register effectively on every individual.

I don't feel that increased traffic on the highways this year and the element of jitter

caused among drivers by concern over the war are a sufficient explanation for the increase in motor vehicle wrecks. I think relaxed enforcement, which the public seems to prefer—although it expresses itself otherwise when questioned—accounts considerably for the rise in the accident line on the 1940 chart.

Where greatest responsibility rests and where largest results can be obtained with a given amount of effort are controversial questions which each safety council must study earnestly.

Decision of the majority then should guide the council's activities. There is a tendency to go off on tangents and make problems seem harder than they are. After all, there are only three elements embraced in traffic: The driver, the car, and the roadway upon which the driver operates his car.

The car is further advanced than the other two. Roadways need to be better engineered. But if every new mile built in the United States is engineered perfectly from the standpoint of safety there still will be hundreds of thousands of miles of obsolete and hazardous slab. We can't remake our highway system overnight. It would take hundreds of millions of dollars of money we haven't got. We have to replace poorly-engineered roads with modern roads as we can afford to do so.

We have left only the driver to work on for immediate results. Appeals don't seem to register very strongly on him. It looks like he has made stiffened enforcement imperative.

Safety councils must support the officers who are faced with this unpleasant task. And they must realize that if stricter enforcement is to avoid public kickback the laws, rules and regulations must be sound and sensible.

TUESDAY AFTERNOON SESSION

October 8, 1940

General Session

Presiding, JUDGE HARRY H. PORTER, General Chairman, Street and Highway Traffic Section, National Safety Council.

Selling Enforcement to the Public

By ELIOT NESS

Director of Public Safety, Cleveland, Ohio

In the past traffic enforcement was a relatively new problem. When they were picked up for some infraction, respectable members of society were subjected to police regulation for the first time in their lives.

To most policemen of the period, a violator was a violator; no matter whether his arrest was of a criminal or traffic nature. As a result, respectable citizens were humiliated and mistreated because they were subjected to the same treatment as thieves and criminals.

The enforcement was wholly unrelated to traffic experience. Spasmodic drives and speed traps became common and traffic arrests tended to become merely an excuse for raising revenue.

Consequently, the public became very hostile toward traffic enforcement policies of police departments.

It was not long before intelligent police officials saw the necessity for a fair and effective enforcement program as well as a friendly public relations program.

Accident investigation was established on an exhaustive and scientific basis. Squads were set up on a selective enforcement basis, every accident was carefully investigated by trained officers and complete information gathered. The accident facts were interpreted by experienced officers and traffic engineers. Officials were now in a position to know when and where accidents were occurring, their types and, finally, why they were occurring.

With all this data before them, police officials could now determine accurately the proper attack necessary and were in a position to go before the general public and explain their problem. The police explained what they were planning to do and why, as well as what they hoped to accomplish. This was substantiated by authoritative statistics. A well-promoted educational program was found to be the most effective and desirable way of selling enforcement. A public relations bureau, or a comparable body, was set up to act as a liaison and press agent for the police department. Officers were carefully selected for special abilities along this line and were assigned on a full time basis.

The bureau supplies newsworthy information which subtly promotes the enforcement program to newspapers; scripts were written for radio programs and a speakers' bureau set up to furnish speakers to clubs, industrial meetings and various social gatherings. Literature was widely distributed as well as posters and signs obtained from generous firms. Trade papers and foreign language publications were regularly supplied with appropriate articles.

The educational program was laid out on a selective basis. Hazardous practices were specified and attacked, dangerous places and locations concentrated on and accident-prone groups reached.

The result of all this was that hostile public attitude gradually changed to a friendly and cooperative spirit when people learned that the police program was based on an honest and real need for the betterment and good of the entire community.

The police strategy board decided upon and guided the public relations policy. A monthly luncheon meeting was held, sponsored by the safety council and under the chairmanship of the director of public safety. It was attended by top-ranking members of the police department and officers vital in traffic safety, as well as invited guests.

Reports were read from the traffic engineer, the traffic statistician, public relations bureau, child safety division, enforcement bureau, traffic post division, etc. Suggestions and ideas were introduced freely and openly discussed by the entire board.

Judges, police, prosecutors, reporters, city officials, etc., were invited to participate whenever their experience and position was believed to be of value in connection with some problem. Awards for the safety contest were presented at these meetings.

The meetings of the strategy board have done a great deal toward originating effective weapons and methods for traffic enforcement. They have encouraged suggestions and ideas from all members of the police department and have served as an efficient and effective means of consolidating and formulating a successful policy for traffic enforcement and safety.

Report of Committee on Tests for Intoxication

By DON F. STIVER

Director, Indiana Dept. of Public Safety and Chairman, Committee on Tests for Intoxication

The following is the Summary of Committee Recommendations presented in the 1940 Report of the Committee on Tests for Intoxication. The complete report is available in pamphlet form from the Council's Traffic Engineering Bureau.

During the past year, the Committee has continued its program of promotion of scientific tests. In addition, it has undertaken three projects which are reported upon in the report. These are:

1. Study and preparation of recommendations on methods for handling drunken pedestrians.

2. Study of tolerance to alcohol.

3. Study of legal problems relating to compulsory tests.

Also, the 1940 report contains information on new accident facts, the growing use of chemical tests, methods for training police in use of scientific tests, and methods for developing interest and support among officials and the public for such tests.

Summary of Committee Recommendations

The following recommendations include those which were made in the progress report in 1939. They are presented here in revised form as a complete summary of all the recommendations made by the Committee:

Examining Suspected Persons

1. In every examination to determine intoxication, questions should be asked at the scene of the accident or violation, to collect evidence for ruling out possible false defense, of illness, injury, taking of medicine, drinking since the accident, or non-operation of a motor vehicle.

2. Officers should be thoroughly trained in the examination procedure, particularly with reference to observing objective symptoms, and should use a special report form for recording answers to questions, observations of physical conditions, and results of coordination tests.

3. The Alcoholic Influence Report Form is recommended for use by city and state enforcement departments. Parts of the form that are not adapted to local conditions may be omitted so as to shorten it.

4. Chemical tests of body fluids or breath should be used in all cases where drivers are suspected of being under the influence of alcoholic liquor, as a supplement to the officer's examinations. They should be used also in questionable cases involving pedestrians suspected of being under the influence of alcohol.

5. Clinical examinations by physicians are recommended at least for those cases in which the person has been injured or complains of illness.

Obtaining Specimens

6. Specimens for chemical tests should be taken as soon as possible after the accident or violation, to permit a more accurate estimate of the degree of influence of alcohol at the time. In important cases, samples of two body different materials should be taken, or a second sample of the same material should be taken at a later time, to provide evidence for a more convincing case.

7. Whenever possible, sufficiently large specimens should be taken to permit duplicate tests when a case is to go to court. A portion of the specimen always should be retained in a tightly stoppered container, sealed and kept in a refrigerator until the case is closed to give the defense an opportunity to make a check test.

Borderline Limits

8. When the concentration of alcohol in the blood is above 0.15 per cent, all persons show a definite loss of that clearness of intellect and control of themselves which they would ordinarily possess. The Committee recommends therefore that blood alcohol concentrations above 0.15 per cent should be considered as definite evidence that the driver or pedestrian was under the influence of alcohol.

9. When the level of alcohol in the blood is 0.15 per cent by weight or below, a great many people will be under the influence of alcohol. The Committee recommends prosecution in such cases when the circumstances and results of physical examinations confirm such evidence. However, when the level is below 0.05 per cent, the person should not be prosecuted for such a charge.

10. The Committee recommends that in

every case all available evidence of abnormal actions or conditions should be obtained to permit presentation of a more convincing case, even though the blood alcohol concentration may be above 0.15 per cent.

Legislation and Definitions

11. Each state should consider the adoption of legislation dealing with the use of evidence obtained from chemical tests. The wording of the provisions of the new Indiana law (Chapt. 48, Art. 5, Sec. 54, par. 2, 1939) is suggested as a model for states.

12. There should be a state law or city ordinance providing definite minimum penalties for a pedestrian under the influence of intoxicating liquor while in a cross-walk or on a street or highway. This might be in addition to the usual law regarding public intoxication, and would be based on need from the standpoint of protecting pedestrians from traffic accidents.

13. The phrase "under the influence" should be used in place of the term "intoxicated" in laws and ordinances. Legal definitions of the phrase "under the influence" should be improved, clarified and made more uniform. The Committee suggests adoption of the Arizona definition as one step in improving legal definitions.*

Setting Up a Testing Program

14. Before using chemical tests for enforcement purposes, a carefully planned educational program should be carried on for several months, to stimulate interest and to obtain support from judges, prosecutors, police officials and the public in the new program.**

15. Police, chemists and others who will be handling specimens for chemical tests should be given thorough training in the proper procedure for handling the specimens so that results of the tests can be admissible in court.***

16. The Committee is of the opinion that most of the commonly used chemical tests* are satisfactory provided they are properly made by competent and well trained persons. For practical medico-legal purposes, the methods when properly used can be considered as specific for alcohol.†

*Steffani vs. State, 42 Pac. (2nd) 615.

**See discussion in complete report.

***Instructions for examining suspected persons and obtaining specimens are given in a mimeographed memorandum "How to Handle the Drinking Driver," available from the National Safety Council.

17. A person who plans to make chemical tests for possible court use should first make a complete set of control tests to establish his range of accuracy. The analyst then will be able to testify in court on his ability to make the tests without appreciable error. Only those who have had thorough training should be permitted to make the tests.

18. The Committee strongly recommends that the testimony in court with reference to the effects of alcohol and the meaning of different body fluid concentrations be committed solely to competent specialists who have thorough knowledge of the literature and an adequate experimental background on the relationship between test results and physical impairment.

19. A fee should be paid for the analysis of the specimens especially when the analyses are made in a private laboratory or by a private physician. In cases involving convictions, consideration should be given to including the fee as a part of the court costs. When this is done, suspects should be advised of the procedure.

20. City and state enforcement departments should work with police surgeons, physicians, hospitals, departments of health, and other technical persons or departments in the establishment of cooperative arrangements for making chemical tests and for presenting expert testimony.

21. Ultimately, a state-wide testing system should be adopted in each state, with Standardized laboratories, preferably approved by state departments or courts, set up in centrally located districts.

Other Recommendations

22. Educational information should be prepared to inform the public in a more specific manner of the hazards of driving or walking after drinking and to develop public support.

23. Educational and enforcement methods should be directed at drinking pedestrians on streets and highways as well as at drinking drivers.

24. The Committee recommends the use of chemical tests in civil as well as in criminal cases, and recommends also that their use be considered by industry in determining intoxication of employees when necessary.

†A description of several test methods is given in the 1938 Committee Report. Copies of this report are still available from the National Safety Council.

25. The Committee should continue its program of scientific study and promotion, looking forward to completion of the final Committee report in 1941. During this next year, particular attention will be devoted to (1) promotion of scientific methods and of

legislation, (2) completion of study of compulsory tests, (3) study of tolerance to alcohol, and (4) development of an administrative procedure for cities and states in carrying on a procedure of chemical tests.

Report of Committee on Speed Regulation

By D. GRANT MICKLE

Traffic Engineer, City of Detroit, and Chairman, Committee on Speed Regulation, N. S. C.

During the past year, it was planned to complete the study of the entire speed problem by giving special attention to speed enforcement, educational materials relating to speed and speed regulation, and to complete the study of speed control in municipalities. Three sub-committees were appointed to accelerate these studies.

It was hoped to have the final Committee report ready for presentation at this time. However, a great deal of material and suggestions were assembled by these Sub-Committees, and it was found that more time was needed to finish the job. Hence, it has been decided to present a brief report of progress at this time, and to delay completion of the final report until at least some time early next year.

The three project Sub-Committees which have been working during the past year are as follows:

1. Sub-Committee on Educational Materials, Professor C. C. Wiley, Chairman.
2. Sub-Committee on Urban Speed Control, T. J. Seburn, Chairman.
3. Sub-Committee on Enforcement of Speed Regulation, Captain C. J. Scavarda, Chairman.

This progress report contains a brief summary of the activities of the Sub-Committees, and a review of the major recommendations. During the remainder of this year and the first part of next year, it is planned to prepare the final Committee report which will summarize information presented in the three preceding reports and will outline in some detail the essentials of a reasonable speed control program for states and municipalities.

Review of Sub-Committee Reports

The Sub-Committee on Education was appointed to review existing educational

material on speed control, to attempt to harmonize conflicts in data or statements, and to select materials for educating the public on control of speed for safety. The various means for carrying on the educational program also were to be studied.

Subjects relating to speed control on which the public should be informed were subdivided into three classifications:

1. Need for operating at reasonable speeds.
2. Education on speed limits and on enforcement policy.
3. How to adjust speeds to conditions.

The Sub-Committee on Urban Speed Control has concentrated its attention primarily on development of an urban speed control program based upon the speed provisions as given in Act V of the Uniform Vehicle Code. This speed control program includes (1) setting proper speed limits, (2) establishing speed zones where necessary, (3) carrying on an educational program, (4) reasonable enforcement of speed regulations.

The Sub-Committee on Enforcement was appointed to develop a policy for the enforcement of speed laws. Such a policy was desired as a guide for police administrators when preparing instructions for patrol officers and as an aid in achieving a proper balance between enforcement of speed and other traffic regulations.

The Enforcement Sub-Committee's recommendations stress the need for all police departments to adopt a uniform policy for enforcement of speed regulations and to furnish specific instructions to officers. Under the enforcement policy recommended by the Sub-Committee, tolerance would exist only as may be necessary to take into account possible errors in speedometers and in pac-

ing. Much of the enforcement would be conducted under the basic rule that no person shall drive a vehicle on the highway at a speed greater than is reasonable and prudent under the conditions and having regard to the actual and potential hazards existing.

Enforcement Policy—The essential points in the statement of enforcement policy include the following:

1. Enforcement of speed regulations should be directed most critically against drivers who are involved in collisions while operating at excessive speed.
2. Enforcement should be directed against all persons who are driving at a speed too fast for the conditions regardless of whether the speed is in excess of lawfully established speed limits, or below them.
3. In accident cases involving excessive speed, officers should seek all evidences from which they may determine the speed of the violator's vehicle prior to the accident.
4. In cases of excessive speed when there is no accident, officers should determine the speed driven by pacing or by some other acceptable method. Then, they should obtain all other available evidences that the speed driven was unreasonable or unsafe or potentially so. This will involve notations on all pertinent conditions such as weather, visibility, highway surface, traffic and physical conditions, and information on speed or the range of speed customarily driven at the time of day upon the section of street or highway. Speed limits should be noted, but will be useful as evidence only when the speed driven was in excess of the limit.
5. Tolerance should exist only as may be necessary to enable officers confidently to swear that the person apprehended was actually driving at or in excess of a certain speed.
6. At any point such as an intersection, hill crest, curve or other location where actual or potential dangers exist because of lack of adequate visibility distance, any speeds in excess of the critical limit, should be deemed in violation of the basic rule and subject to inflexible enforcement. Proof that a speed driven was unlawful may be established by presenting engineering data showing that at the place any rate in excess of the critical speed was potentially dangerous.

Since each Sub-Committee has stressed

the value of reasonable speed limits, some attention to that subject is warranted here. It is well known that speed limits which are posted in many locations are entirely too low. This applies both to the posting of the usual residence district and rural speed limits, and to the posting of special zoned speed limits.

Need for Reasonable Speed Limits

This situation is partly the result of obsolete speed limits, but it is due also to the mistaken belief of some officials and of many persons living in the area that low limits are necessary to hold down speeds.

In many localities speed limits have been posted at unreasonably low values because it was the line of least resistance. Persons living along the streets ask for the low limits to "protect their children," and obtained support for the lower limits from their aldermen or other officials in their part of the city. In addition, police officers favored the lower limits since it made less work for them to get evidence of a speed violation. When the limits are set sufficiently low, the officers could make all speed arrests for speed in excess of the limits, with no need to make arrests under the basic speed rule during times of unfavorable weather, visibility or traffic conditions.

At present there seem to be three schools of thought as to what speed limit signs should mean to the motorist. Some officials appear to think that they should serve merely as guides to reasonable speeds under average favorable conditions. Others think that they should represent the maximum speed generally permissible under normally favorable conditions. Still others say they should represent maximum speeds above which a driver never should go, irrespective of conditions. The first two generally favor the *prima facie* type while the last recommends absolute limits.

In some localities officials tell the motorists that the speed limits are maximum values above which they never should operate. Then they establish lower values for the limits, often below the prevailing speeds of traffic, apparently under the assumption that the motorists will use them as guides to reasonable speeds and recognize that they can exceed them without danger of arrest. This is then followed by an enforcement policy which does not begin apprehension

until the posted limits are exceeded by some indefinite amount.

Thus under favorable conditions there are actually two official speed limits, the one shown on the sign and the one where enforcement begins. Since the average motorist has no means of knowing the spread between the two under different conditions and in different localities, he must set his own values and in so doing may run into conflict with the law.

When police administrators adopt uniform policies and when police officers are trained to carry on a greater share of the speed enforcement under the basic rule, there should be less resistance to establishing and posting higher and more reasonable limits. Complaints of local persons can usually be overcome by getting these objects to drive their own vehicles over the section in question at speeds which they consider as reasonable maximums. They are usually surprised to learn that their speeds and the prevailing speeds of other vehicles are considerably higher than the speeds which they had recommended as desirable maximums.

In more than half the states there is authority for establishing special limits through zoning on through streets and on streets in outlying parts of cities. If this authority were exercised as it should be, much of the unreasonableness of speed limits would be eliminated. In the remaining places where there is no zoning authority, the existing speed limits should be posted only on sections of street or highway where the limits are suited to the conditions. If these two steps were to be followed, motorists would have much more confidence in posted speed limits.

Motorists also should be told of differences between *prima facie* and absolute speed limits. They should be told that if they do exceed *prima facie* limits, they are subject to arrest and must be prepared to prove that they were driving at a reasonable and prudent speed.

Recent speed studies in Kansas City, Missouri, have shown the value of posting proper speed limits. There, results of speed observations show that actual decreases in driving speeds resulted from posting increased and more reasonable speed limits. In one instance, a change of speed limit from 25 to 45 miles per hour on a section

of street outside the built-up district resulted in a change in maximum speed from 72 to 45 miles an hour, and a change in average speed from 37.8 to 34.1 miles per hour. There was no change in enforcement.

Value of Speed Observations

Another point stressed in each of the three Sub-Committee reports was the value of speed observations in establishing reasonable speed limits and in guiding the enforcement and educational phases of the speed control program.

It is the firm conviction of the Committee that drivers want to drive safely and that most of them stay within reasonable limits most of the time when they are on familiar streets and highways. Thus, observations of the speeds of vehicles at any one location should be a good clue to the safe speed at that location under the same conditions.

Some will be driving too fast, it is true. Traffic engineers often consider that 10 or 15 per cent of drivers are going too fast, and use the top speed of the remaining 85 or 90 per cent as an indication of the maximum speed for safety.

It is rather discouraging sometimes to find that existing posted speed limits are set a great deal below this 85 or 90 per cent speed value. In one instance recently, only 10 per cent of the cars were observed traveling within the posted limit.

Of course, speed observations are not the only information to consider in determining the proper numerical value of a limit for a speed zone. The past accident record should always be considered, along with results of trial runs. Yet, a posted numerical limit should never be set so low that more than half of the traffic exceeds it under normally favorable conditions.

More detailed criteria in terms of speed observations are now being developed for use in safeguarding the establishment of reasonable limits. It is expected that these tolerances will be in terms of leeway allowed on either side of the 85 per cent or 90 per cent speed.

In addition to using speed observations in determining proper values of the posted speed limits, it is recommended that city and state traffic engineering authorities make periodic speed observations throughout their

jurisdictions for use in education and enforcement as well as in engineering. The results will be useful in the following ways:

1. Information on ranges of speed at different locations should be referred to police administrators for use in instructing patrol officers.

2. The educational program should include information on the ranges of speed customarily driven on different streets and highways, and the need pointed out for motorists to keep within the speed ranges.

3. As speed practices change, results of the observations will be useful in revising posted speed limits through zoning authority, and in identifying locations where the blanket speed limit is sufficiently reasonable to be posted there.

Summary of Sub-Committees' Recommendations

1. There is a general need for the establishment of higher and more reasonable speed limits on major streets and highways in cities through zoning or legislative authority. Speed limits should not be posted except at locations where the numerical limits fit the conditions. Similarly, speed zones on rural highways must also be established with reasonable numerical limits.

2. Representative speed observations are a good measure of the reasonableness of a speed limit, although comparative accident experience must also be considered. A posted numerical speed limit should never be set so low that more than half of the traffic exceeds it under normally favorable conditions.

3. Traffic engineering authorities should make periodic speed checks throughout their jurisdiction and results should be used in engineering, enforcement and educational phases of the speed control program.

4. As speed limits are established at higher and more reasonable values, police officers will need to give more attention to enforcement of the basic rule, especially when weather and visibility conditions are unfavorable and traffic is heavier than usual. This should be included in police training programs.

5. There is need for proper balance between attention to speed control and attention to other safe driving and walking practices.

Campaigns should not be based entirely upon speed control; likewise, speed control should not be neglected by concentrating traffic safety activity almost entirely on some other phase such as pedestrian control or control of drunken drivers.

Urban Speed Control

Recommendations which deal primarily with the urban speed control program include the following:

1. The first step in a speed control program in a city should be a traffic engineering study of the streets to determine which section of street will need to be zoned with special zoned speed limits and to determine the proper values of those limits.

Studies for determining proper zoned limits should include at the very minimum (a) representative field checks of motor vehicle speeds, (b) studies of accident distribution, and (c) trial runs over the sections. The numerical values of the limits should conform with the conclusions reached in the engineering studies; otherwise limits should not be posted at all.

2. Speed limit signs should be erected at regular intervals throughout the city so that motorists will be informed of the prevailing limits. In some states, it will be necessary for the city council officially to adopt special limits for the speed zones so that they may have legal significance.

3. A continuous and educational program should acquaint citizens with the program and its fairness to the results from speed observations will be helpful in encouraging voluntary obedience to the posted limits.

4. The educational program given support through enforcement. Much of this in business districts and at unfavorable weather or traffic conditions must be based upon the basic speed on posted speed limits.

Enforcement

Recommendations of the Sub-Committee include the following:

1. Every police department should prepare

and follow a uniform policy for enforcement of speed regulations similar to that previously outlined.

2. In traffic officer training, emphasis should be placed upon officers acquiring the ability to discriminate in the determination of charges to be preferred against violators. Charges should be appropriate to the offense committed. With regard to speed control, there is a special need for distinguishing between such offenses as following too closely, driving too fast for conditions, improper overtaking and passing, being on the wrong side of the road, and reckless driving.

3. To guide administrators in determining proper balance between excessive speed enforcement and enforcement directed at other violations, the administrators should make periodic law observance studies. The resulting data on frequency of various types of violations should be used to supplement accident report data on contributing violations in determining whether patrols are making as many apprehensions as they should on each type of violation.

4. States now having restrictive provisions with respect to securing evidence of speed violations should repeal them. When special speed checking methods are necessary, care should be taken to insure their accuracy.

With respect to this latter recommendation the Sub-Committee found that 10 states have laws which place limitations upon methods for obtaining evidence of the speed at which a motorist was driving. Two states, Oregon and Virginia, entirely prohibit the use of speed traps obtained through speed traps. Other states, Maryland, Pennsylvania, and Washington, permit the use of such evidence under certain conditions. The Washington state law contains a requirement regarding accuracy of the speed-measuring instrument, but the final statement on the law is the length of the "trap."

must be at least one-quarter of a mile in length would seriously limit its application. (It may be better to avoid use of the term "trap," by using a term such as "speed check station" or speed "timing.")

Education

The following are among the recommendations of the Sub-Committee on Education:

1. Motorists should be told of the need for operating at reasonable speeds suited to the conditions. They should be told what officials are doing to aid them in adjusting speeds to conditions, and should be furnished specific educational information on how to make this adjustment.

2. Officials must make sure that all posted speed limits are reasonable if they expect to keep faith with the motorists. When the blanket speed limits are not suited to particular sections, the limits should not be posted there at all unless the limits are changed to reasonable and proper values through zoning.

3. When limits are reasonable, motorists should be told that posted *prima facie* speed limits should usually be considered as maximum limits. They should not be exceeded unless conditions are unusually favorable and the motorist can show that he was driving at a reasonable and prudent speed.

4. Educational information should be directed at officials as well as at motorists. They should be impressed with the need for providing reasonable limits with adequate enforcement.

The Sub-Committee reports contain detailed recommendations and discussions supporting the recommendations. These Sub-Committee reports will not be available in printed form. They will be included in condensed form in the final Committee report which should be in print by next May.

WEDNESDAY MORNING SESSION

October 9, 1940

Group Session for Engineers

Presiding: Professor ROGER L. MORRISON, Department of Highway Engineering and Highway Traffic, University of Michigan, Ann Arbor, Mich., and Chairman, Traffic Engineering Committee, Street and Highway Traffic Section, National Safety Council

Selling Traffic Engineering to the Community

By THOMAS E. WETZLER

City Engineer, Peoria, Ill.

The selling of traffic engineering is much the same as the selling of toothpaste, electric sweepers or the latest model motor car. It must be sold from the purchaser's standpoint. The salesman must demonstrate what his product will do for the consumer, who, in the case of traffic engineering, is the traveling public. Will the proposed improvement add to the convenience of the property owner, the merchant or the man behind the wheel? Will it contribute to his pleasure or efficiency? If the proposition is presented from this angle it can be sold with greater ease.

In the past traffic engineering has been administered much in the manner of a dose of medicine. We have prescribed safety measures, speed regulations, etc., with the explanation "this is good for what ails you—so take it and smile!" They haven't always smiled.

Instead of selling traffic regulations, it is the business of the engineer to sell increased traveling facilities, reduced time between place of business and home; greater profits to the merchant and convenience to the shopper. In other words, "Don't sell the steak—sell the sizzle!" What will your program of traffic engineering do for the general public and the individual?

While traffic engineering is designed to cut down accidents and increase safety, an approach from this angle is much like treating the symptom instead of the disease. Accidents are a symptom of traffic inefficiency. While traffic counts and accident surveys are important from a fact-finding basis, it devolves upon engineering to utilize these facts with an eye to improved traffic design, rather than to impose upon the public regulations which seek to govern and restrict.

Something over two years ago it was proposed that Hamilton boulevard in Peoria be improved. This is a main artery from the business district to the residential section. In order to increase the capacity and efficiency as a modern thoroughfare it was necessary that the street be widened. This proposal met with united opposition, both from the property owners and various civic

organizations. How to sell that idea to the public was the question. Here's how it was done.

In the first place the pavement was worn out to a point where repairs were impractical. Our first wedge was "cost appeal." We told the property owners, "If we pave this street in its present form, as you suggest, you will have to foot the entire bill. On the other hand, if we modernize the street from a traffic safety angle, the funds will come from state motor fuel tax."

This financial arrangement was entirely agreeable. However, both the property owners and the general public balked at the idea of sacrificing any part of the boulevard or parkways, the latter of which contained many beautiful trees.

Now our original plan was to cut the 24-foot boulevard in the center to eight feet, leaving the parkways and trees intact. A public hearing was called, but instead of offering this plan, we presented an entirely different suggestion—one which we were sure would be rejected.

The meeting ended with the majority of the people against any improvement and all opposed to the plan suggested.

The following day several of the objectors were asked to come to the engineer's office for a conference. They were received one at a time and after discussing the plan submitted at the previous meeting, the alternate scheme was suggested. This apparent "compromise" worked.

Another Problem

Another major improvement which required a large measure of salesmanship as well as engineering, was Franklin street—which borders the central business district.

For several years attempts had been made to widen this street, but in the face of organized opposition by the property owners and lack of public interest, the improvement was abandoned.

First we called a public hearing of the property owners and learned that their attitude had not changed. It was suggested by them that four lanes could be provided on a

40-foot pavement if parking were eliminated. Taking the property owners at their word we proposed to the traffic commission that parking be eliminated from Franklin street.

The first day that "no parking" went into effect the merchants on the street voiced their disapproval in no uncertain terms. A petition, signed by these merchants, was presented. It demanded that the traffic commission call a special meeting to lift the "no parking" restrictions immediately. We refused to take any action before the next regular meeting of the traffic commission a week hence, wishing to generate all the heat possible before making our next move.

At this second meeting, which was held jointly with the board of local improvements, the indignant merchants and the property owners were in attendance. When the tenant merchants learned that the no parking suggestion had come from their landlords, heated arguments between the two groups followed. At what we considered the proper moment, the suggestion was made that a committee of five property owners be appointed to meet with the city engineer in order to formulate a plan agreeable to all.

This improvement demonstrated the fact that often the salesman of traffic ideas must have recourse to various methods, all of which hinge on the proposition of selling his idea from the customer standpoint.

Elliott Street Extension

The latest and quite the most ambitious project we have yet tackled is the proposed Elliott street extension in Peoria. This will provide a link in the route for cross-river traffic to and from the bluff section and leads directly from the second major bridgehead. It will dead-end a second major street at the base of the bluff.

Dead-ending this major street met opposition from certain groups interested in our major street plan. However, we explained that when increased traffic makes it necessary, we can carry this street over the Elliott extension. At present traffic does not warrant the expenditure.

When we first proposed this plan much confusion and opposition were raised, many residents of the bluff section holding the idea that it would necessitate a tunnel with large portals in front of their costly homes. A petition opposing the improvement was

filed, bearing a formidable list of names. In spite of newspaper publicity and descriptions of the project the public was uncertain as to just what this improvement would accomplish. We saw that it would be necessary to do some hard selling in order to put the plan over. Consequently we built a model of the project, hoping thereby to clarify our objective. It was displayed at various civic clubs and organizations and the plan was explained in detail. Pictures and descriptions appeared in the local newspapers, with the result that opposition to the improvement has almost entirely disappeared.

From our experience with selling this idea I would conclude that in all complicated engineering improvements, a miniature of the plan makes selling much easier and is a sound method of overcoming public resistance and misunderstanding.

One of the most immediate problems which confronts the traffic engineer of today, one that calls upon his resourcefulness both as an engineer and a salesman, is the congested central business district of larger cities. Because this problem has in large measure remained unsolved, we see outlying districts cropping up in residential sections, with a resultant loss of business to the downtown merchant and the depreciation of property values, thereby creating "blighted" areas.

Parking meters in Peoria have partially solved the parking problem, but in submitting remedies for downtown traffic congestion we have attempted to show the businessmen that it is to their interests to help the city promote parking lots in the blighted areas near the business section and offer free parking to the public.

A recent proposal was made to eliminate parking entirely on Washington street in the wholesale district, reserving the space for loading and unloading purposes only, providing that all vehicles be parked parallel to the curb. This was passed by the traffic commission and presented to the city council, but due to lack of interest on the part of the merchants and the public, there was no action taken. The proposal was pigeonholed. We are still working on this problem, trying to stir up sufficient public interest to exert pressure upon the city council to take the necessary action. As it stands now it is "no sale." Likewise the promotion of free parking lots to be spon-

sored by downtown merchants in cooperation with the city is still on the shelf.

While the salesman of traffic engineering cannot hope to score a hit every time, while often his plans for public safety and traffic efficiency are met with indifference or downright opposition, he can find individuals and organizations willing to back any sound improvement. In our case we have had 100 per cent cooperation from the Illinois State highway department. We have had exceptionally fine support from the newspapers, both with news items explaining the projects and editorials backing them. The Chamber of Commerce has been a valuable help through its safety council in making suggestions for traffic safety and in backing plans in this direction.

Another factor in promoting civic engi-

neering of any kind is the support of the municipal governing body. Much of the impetus given to our proposals for traffic improvement has been provided by the Mayor, the Commissioner of Public Works and wherever public interest has backed such proposals the City Council has passed the necessary legislation. This cooperation is of primary importance in any community.

In conclusion, the traffic engineer must not only have available exact information in the way of traffic counts and accident surveys, he must be able to visualize the workings of his plan beforehand, understand the public reaction to same and then—square his shoulders, put on his best Dale Carnegie manner and go forth and sell his bill of goods to the ultimate consumer—Mr. and Mrs. John Q. Public.

Cooperation of Traffic Engineers with Transit and Enforcement Officials

By HAWLEY S. SIMPSON

Research Engineer, American Transit Association, New York City

The ends to be sought by an intelligent traffic engineer, transit or enforcement official, are very much alike. Each is a public servant. The first and last are employed by the public. The second is engaged in an enterprise endowed with a public interest and, while its revenues come from private sources, it is required by law and regulation to operate in the public interest. Thus the three individuals should have as their prime objective the best service to the public they can possibly give.

That objective is to better the transportation and communication facilities which we now possess or which we can construct. This can be done individually or it can be done cooperatively. But what can be done cooperatively better than individually? If we can answer that question, we have answered the question: "Why cooperate?"

The need for an intelligent and cooperative attack on our traffic problem arises from the fact that transportation is a very complex function. On this is superimposed the pedestrian with his own special and highly individualized characteristics. To keep all these units moving safely so that each has appropriate freedom and encroaches

least on the rights and privileges of others is not very simple.

Traffic has often been compared with the flow of water in a pipe. No analogy that has been repeated by so many people was ever more absurd. Water is made up of multitudes of identical molecules, each of which acts exactly like every other one. All that a sanitary engineer has to do is design a water system, provide a source of supply, and sit back confidently and predict what is happening everywhere along the line with reasonable assurance of accuracy if he has made no mistakes. Traffic is the exact reverse. It is made up of millions of units, no two of which will react precisely the same under identical, external influences.

It is a clear recognition of the heterogeneous nature of traffic that will bring us to a real understanding of the traffic problem. The engineer who has laid out a traffic system cannot predict what will happen with any assurance that his predictions will be sustained. The more experience he has, the more nearly his assumptions will be borne out.

Because of the way in which the traffic stream is constituted the knowledge of many

people whose contacts with the problem, and thus their approach to its solution, may differ widely is essential to any intelligent attempt at achieving better traffic conditions.

Let us look at the relation between the traffic engineer and the enforcement official. To effectuate traffic plans devised by the engineer, they must be understood by the enforcing official who is going to have a large part to do with their success. To understand why a particular plan was adopted, the facts and considerations leading up to its adoption must be clearly understood by everyone who is to have a part in its operation.

I think that, in the early days of traffic engineering, there may have been a lack of understanding between him and the enforcement official as to their respective provinces and relationship. That is to be expected in any new functionalization of traffic handling. That this transmission has been successfully accomplished and an appropriate arrangement of responsibilities established in so many cities is a clear indication of the effectiveness of cooperation brought about by a fuller understanding of the several parts of the traffic problem by those engaged in its handling.

Investigate Accident Causes

Both traffic engineering and police officials can most effectually cooperate in the investigation of street, vehicle and human conditions which contribute to the causation of accidents. By that I do not mean the investigation of individual accidents for establishing responsibility or as preliminary to criminal litigation. That, clearly, is within the province of the police official.

It is with the investigation of mass groups of accidents that the traffic engineer can be of most assistance to enforcement officials. Here again I do not mean merely the preparation of the conventional monthly accident report, important as that is. Rather, I refer to the necessity of breaking down these figures into their component parts and the investigation of specific locations, groups of vehicles or groups of individuals which seem to be appearing too frequently in the accident record. Such investigations are of a statistical and technical nature and their significance can best be determined by trained engineers.

This is not to say that the enforcement officials have not been alert. What it probably means is they have been doing the best they could, but except for such investigations as I have mentioned, their attention would not be directed to these places where conditions are such that increased enforcement, even though coupled with decreased enforcement in other sections, will result in a greater return to the public.

Three locations seem to be most suitable for city traffic engineering departments. One in the public safety or police department, one in the city engineering department and one in a separate traffic engineering bureau. There is much to be said for the establishment of a traffic engineering department both in public safety and city engineer's offices. I think the preferred location depends largely upon local conditions and doubt that general recommendation of preference can be made. Traffic engineering departments have been successful in both locations.

Ultimately, however, I foresee that the work of traffic engineering departments will develop to such a point that it will become highly desirable to establish a formal disassociated traffic engineering bureau. I say this not because it is impossible to maintain a traffic engineering bureau in an existing department but because the work is so highly specialized that it can best be directed by an official concentrating solely upon these duties. In most city governments, the establishment of such a new department is not feasible without special enabling legislation. I could not, however, adequately cover the cooperation of traffic engineers with others without mentioning what, to my mind, is an extremely desirable objective.

The Transit Official

The vehicles the transit official operates differ materially from others in the traffic stream. Street cars, for example, are fixed in direction. While at free-running speed they approximate the speed of automobiles, they are required to make frequent stops and so their over-all speed is less than that of a free moving passenger automobile. Buses have similar characteristics except for the important distinction that they are not fixed in direction and are free to maneuver on the streets. However, this freedom is limited by the necessity of stopping at the curb to pick up and discharge passengers and

so they, too, operate differently from other vehicles.

It seems to me that the primary objective of the three officials about whom we are talking should be to eliminate, so far as possible, the traffic conflicts that may arise from the way in which the characteristics of these vehicles differ. If these conflicts can be alleviated every user of the streets will tend to benefit. I think it may fairly be said that nothing which will act to improve mass transportation service can in any way interfere with the freedom of the use of the street by others and will, in most cases, result in improvements for every one.

Elimination of Conflicts

If we proceed on the assumption that such elimination of conflicts is desirable, we presuppose the cooperation of transit and police officials with the traffic engineer. Through his experience, the operating head of the transit company and his associates are most clearly aware of the situations which give rise to these conflicts.

These conflicts occur primarily at one point, the intersection.

Anything that tends to better conditions at this point will improve traffic flow throughout the area generally. I think it can be said there are just two things which, if intelligently applied here, will clear up most of the conflicts between units with different operating characteristics. The first is the traffic signal system. It should unquestionably be designed for progressive operation. But the mere fact that the signals operate progressively is not enough; they must be timed intelligently. Studies leading to the timing of progressive signals should consider the relative volume and speeds of each of the several classes of traffic and a timing should be worked out which will function most successfully for all vehicles. To move street cars and buses, as well as passenger automobiles, successfully through a progressive signal system, it is extremely important that speed and loading and unloading time studies be made on the transit vehicles to determine the probable operating conditions which must be met during each period of the day. With this information, a mass transportation time space diagram can be worked out, as well as one for automobiles alone. Then, often, by slight adjustments in the two timing programs, a new time space diagram can be developed which

will best accommodate the total traffic and cause the least delay.

The second cause of conflict is in the fact that both street cars and buses must stop and stand in the street to receive and discharge passengers. To accomplish this function as rapidly as possible, and so with the least delay to other traffic, adequate attention should be paid to the installation of loading zones for street cars where traffic conditions warrant and the proper location and length of bus stops. Much of the criticism levelled at the street car and bus by private operators comes about because of inadequate provision for loading and unloading at intersections. These objections can be practically eliminated by a careful study of the requirements of mass transportation vehicles. Then, after their adoption, by the rigorous enforcement of no-parking regulations to provide maximum street space.

Studies conducted by the American Transit Association have developed considerable information about the best design of loading zones and the space required for bus stops. These show that, with notable exceptions, safety zone design and distances allocated at the curb for bus stops, are well below the standards essential for maximum traffic and transit efficiency. The exceptions occur in those places where traffic, transit and enforcement officials have cooperated in the alleviations of these conflicts.

In closing, I should like to make one recommendation to transit companies. If this recommendation were generally adopted, it would, I believe, promote much more effective cooperation of the three groups. I think it highly important that the transit company set up a traffic engineering department within its own organization, headed by a competent traffic engineer, to work in close cooperation with the city traffic engineer and city police officials and handle company traffic engineering problems. This is being done by many city transportation properties and it is gratifying that the trend is strongly in this direction. It should be encouraged by traffic engineers and enforcement officials in cities where no single individual has traffic engineering responsibilities of the transit company. Any city large enough to maintain a traffic engineering department has reached a point where the transit company can well justify the employment of a full-time traffic engineer.

Using Speed Observations in Zoning

By L. E. HENDRICKSON

Electrical Engineer, Minnesota Highway Department, St. Paul, Minn.

Designers of traffic facilities consider present requirements and try to estimate the future demand that will be placed on these facilities. The traffic problems are approached with the attitude that the public must be served, and the solution which favors the majority is generally adopted.

Let us consider the problem of establishing proper speed zones for streets and highways. Factors that must be considered are:

1. The area through which the street or highway passes. Rural, semi-urban, urban or congested urban.
2. Provisions for pedestrians.
3. Parking.
4. Roadside exploitation and encroachments.
5. Traffic volume. Peak flow; average flow.
6. Type of traffic. Percentage of commercial vehicles.
7. Number of intersections and conflict areas. Sight distance at these locations.
8. Alignment and road surface. Width of right-of-way.
9. Accident experience.
10. Prevailing speeds before zoning.

Without going into the discussion of these different factors in their relationship to one another, let us just consider "Prevailing speeds before zoning."

Taking the viewpoint that the majority of motorists drive conscientiously, we may assume that these motorists will choose a speed which they feel is reasonable and proper. If this fact is properly taken into consideration, enforcement will be less burdensome and drivers are encouraged to comply with posted speed limits, with a resultant increase in respect for all traffic regulations.

Our problem now is to obtain this information, analyze the data and correlate it with all the other factors. Before discussing this procedure, it might be well to provide a brief background of speed zoning in Minnesota.

In 1935, "Speed 30 Miles" signs were erected by the State Highway Department

in all municipalities in the state. Often these signs were erected at the city or village limit without regard to whether the highway was an open or built-up area. In 1937, under a new law which permitted the Commissioner of Highways to establish speed zones with *prima facie* limits of 30, 45, or 60 m.p.h. (50 m.p.h. at night in 60 m.p.h. zones), an experimental speed zone was established on U. S. 169 from Elk River to Grand Rapids; approximately 150 miles. This highway was chosen because it had sections of concrete, bituminous, and gravel surfacing, straight and winding alignment, sections of restricted sight distance, and heavy tourist traffic during the summer months.

Public Approved Zoning

No speed observations were made prior to this experimental zoning, but test runs were made by engineers and highway patrol captains before the signs were erected. After the zoning had been completed, hundreds of questionnaires indicated almost 100 per cent approval of the principle of zoning and of the zones as established. Public interest was very keen because this was the first highway in the state on which speeds higher than the long established *prima facie* limit of 45 m.p.h. in rural areas, and the more recent absolute limit of 30 m.p.h. within municipalities were legally permitted. At the beginning of each different speed zone, "Begin 30 Zone," "Begin 45 Zone," or "Begin 60 Zone" signs were erected. The confirmatory speed signs carried the message "Speed 30 Zone," "Speed 45 Zone," or "Zone 60 Nite 50."

In 1938 we zoned 1700 miles of the most heavily traveled highways. The same method of zoning was followed and, in addition, a mercury tube device was used to check speeds on curves. This tube was calibrated to ring a buzzer or flash a light when the curve was negotiated at too high a speed. Speed zones were thus established for curves instead of posting maximum safe speed signs for the curves. Because of the legal limitation permitting the use of only 30, 45, or 60 m.p.h. zones, many of the curves were

zoned for speeds from five to 10 m.p.h. slower than was needed. Deceleration zones of 45 m.p.h. were established between 60 m.p.h. zones and 30 m.p.h. zones. These zones were 0.2 mile long, tests having shown that it takes that distance for the average car to decelerate from 60 to 30 on a level highway without application of the brakes and without coasting. This deceleration zone was decreased proportionately on up grades and similarly increased on down grades. As an added safety factor the "Begin 30 Zone" sign was erected 0.1 mile in advance of the exact location where the speed should first apply.

In 1939, the legislature amended the highway traffic regulation act to raise the prima facie speed limit outside of municipalities to 60 daytime, and 50 nighttime. The power of the Commissioner to determine and establish speed zones was made much broader by authorizing him to establish speed zones either above or below the statutory limits, on any street or highway on or off the state trunk highway system, on the basis of an engineering and traffic investigation. This power can be exercised on streets or highways not a part of the state trunk highway system only at the request of the local authorities, and who in no case possess such power. The speed limits as established and posted were made absolute.

These changes in the speed law also changed the method of speed zoning somewhat. Prior to 1939, it was usually advisable to raise the speed limits on rural highways from 45 to 60. After passage of the 1939 law with the higher prima facie limit, it became necessary to zone only those areas where a speed limit below 60 was required. With the change from prima facie to absolute limit speed zones, much more care had to be exercised in their establishment. In order to provide more uniformity in zoning, it was decided that whenever possible zones of 30, 40, and 50 would be established, with 60 m.p.h. zones to be used only where it would be desirable to have an absolute instead of the prima facie limit.

In July, 1938, the Department made arrangements with Dr. Herbert J. Reich of the Electrical Engineering Department at the University of Illinois, for the construction of an electrical speedmeter similar to the one in use at that time by the Illinois Highway Department.

The Electric Speedmeter

The operation of the speedmeter is fairly simple. Two flexible rubber-covered electrical switches are placed on the highway 15 feet apart. On highways wider than two lanes, small air tubes, connected to diaphragm-type air switches which make the electrical contact, are used instead of the electrical switches. The switches or tubes appear as pavement joints on concrete roads and blend in with the surface of bituminous roads. These switches are connected to the speedmeter through long lead-in wires. The speedmeter is generally kept in a private car with regular license plates and with no distinguishing identification. The car is usually parked close to the location where the speed survey is being made, but is parked far enough from the traveled portion of the highway and in such a manner so as not to present a traffic hazard or in any way to influence the speed of the traffic. Motorists generally pay little attention to it.

The front wheels of the vehicle strike the first road switch or air tube. This starts the building up of a charge on the condenser. At the same time, a relay disconnects road switch so that the rear wheels will not affect the meter. When the front wheels strike the second road switch the electrical charge is stopped. The amount of the charge on the condenser is determined by a vacuum tube voltmeter, and this is read directly in miles per hour on the calibrated milliammeter. The speedmeter is checked by a pendulum which gives the same time impulses as are provided by a vehicle traveling the 15 feet between road switches. Controls are provided for adjusting the meter to read correctly. At least 100, and preferably 150 or more, vehicles for each direction of traffic should be observed and the speeds recorded separately for each direction. Truck speeds should be kept separate from car speeds. Where traffic is extremely light, we have not considered it worth while to spend over three hours for one survey trying to record a reasonable number of vehicles.

Picking the Sample

The speed surveys should be made during hours of the day when traffic is fairly normal. It is not reasonable to check just the peak flow, which might be causing congestion. If time permits, it is desirable to make more than one speed survey at the same location, or else make surveys at similar near-

by locations and combine the results to get a larger sample. Needless to say, speed surveys made under adverse weather conditions or when the road surface is wet, slippery or covered with snow or ice, will not give a true picture of the situation under normal conditions.

Before getting set to make a speed survey, the operator should ascertain that there is nothing unusual within a reasonable distance that might affect the speed of traffic; such as, construction or maintenance work, improperly parked vehicles, near-by police cars, or obstructions on the highway.

Locations where the speed survey is to be made should be as representative as possible. If speeds at intersections are to be checked it is helpful not only to get the actual speeds through the intersection, but also at places in advance so as to get approach speeds. Similarly, speed surveys made at the beginning of the curve might be supplemented by surveys made in advance of the curve, and also at places on the curve where there might be an accident "hot spot."

Using the Data

Once the data is gathered, the question of how to use it arises. Should an average speed be determined? Should the upper limit of the pace (the 10 mile interval of speed containing the largest number of cars) be considered as a top limit to be established, or should a certain percentage, such as 85

per cent, of the traffic be assumed to be driving reasonably and the other 15 per cent assumed to be driving too fast? While the average speed is useful in some types of speed surveys, we have not used it in our zoning procedure because a few extremely fast cars or slow cars might unreasonably affect the average figure obtained. The upper limit of the pace and the speed at or below which 85 per cent of the passenger cars are being driven, are given a great deal of consideration. Generally, there will be but little difference between these speeds, and the speed zone selected from analysis of the speed survey data may be slightly above or below them. The other factors to be considered in arriving at the proper speed zone to be selected will determine this, however.

No matter what speed zones are established there will always be complaints that the speed zones are too high or else traffic does not obey them at all. Reliable speed surveys give the traffic engineer some factual data to check these complaints and, as so often happens, to refute all or at least most of the allegations made.

In making speed observations prior to zoning, we very seldom inform police officers or local officials that the speed survey is to be made, but in checking speeds in zoned areas we often invite them to witness the speed survey. This builds good will and helps to establish confidence in the data obtained.

WEDNESDAY MORNING SESSION

October 9, 1940

Joint Session with City and State Police and Traffic Court Judges and Prosecutors

Presiding: RAY ASHWORTH, Chief of Police, San Antonio, Texas.

What Is Wrong with Traffic Law Enforcement?

By W. K. INGRAM

Chief of Police, South Bend, Indiana

You would expect a police officer to take the attitude that life would be much simpler and easier if policemen did not have to bother with such nuisances as prosecutors

and courts. But I am not at all certain that life would be better under that kind of set-up.

Law enforcement by the police alone isn't a new idea. That is the way things are in

Italy, Germany, and Russia. In this country we like the checks and balances that come under a system of divided responsibility. But there are drawbacks. Probably the most striking example of the bad side of this divided responsibility in law enforcement occurs in the application of traffic law.

I recognize that there are many things wrong with both the policing and the prosecution of traffic law. But, the main fault, in my opinion, is that the courts just haven't caught up with the automobile. It seems to me that there is a tremendous lag between the reality of the modern motor car and the court's technique in coping with the new situation.

I have known a judge to sentence a man from three to 10 years' imprisonment for stealing an old car. Then I have observed this same judge five minutes later fine a man \$10 for driving while drunk and then suspend the sentence.

No "Oomph"?

Part of the explanation is that the average judge is just plain bored when a traffic case comes before him. Traffic cases don't have the "oomph" of a nice assault and battery. These judges do not realize that the case docketed under the dull code of reckless driving, driving under the influence, speeding, or failing to yield right-of-way, are cases involving needless expense and pain.

How can a judge turn from a perfectly fascinating case of wife-beating to an innocent-looking charge of driving under the influence, and keep his proper perspective? Wife-beating is the sort of thing that every red-blooded American resents. Driving under the influence is too often looked upon merely as something rather naughty.

In other words, too many of our judges do not know the meaning behind traffic laws. Their thinking is still back in the horse-and-buggy days, when a man could get joyously drunk and rely on the horse to take him safely home.

But, even when the judge realizes that traffic law enforcement is a serious business, he is often so handicapped by the legal formalities of his court that there is not much he can do about it. Then the system, rather than the judge himself, is at fault. Legalistic procedure in traffic cases is top-heavy—a moss-covered antique.

Most traffic cases today involve almost the same procedure as our most serious offenses, such as murder, rape, and arson. You know that in many courts traffic cases are, in fact, handled on the same docket.

Why not set up a streamlined traffic court that is quite as modern as the automobile itself? If a separate court is not practical in some of the smaller cities, at least the court could allot a special time for handling traffic cases.

Indiana System

Perhaps the magistrate court is the answer. In Indiana these courts were authorized by the legislature to "meet the many new problems which arise from modern highway traffic and from other complexities of modern life," in the words of Professor James J. Robinson, of Indiana University, a leader in modernization of law enforcement.

These courts are designed to remedy the evils of the justice of the peace system and to relieve the crowded dockets of the city, circuit, or superior courts. The magistrate system almost automatically brings traffic law jurisprudence up to date, regardless of the variation in the views of individual judges.

My first indictment against the courts, then, is: The judges do not take traffic cases seriously. Number two is: The system itself is not designed to handle traffic cases. Number three: Endless technicalities play on the side of the guilty defendant and operate against the innocent defendant.

You will agree, I am sure, that half the penalty, inflicted twice as quickly, is far more effective than twice the penalty administered only half as quickly. If we could remove delay from court procedure, we will win more than half the battle toward real traffic law enforcement.

The eternal procrastination of our courts, is the bane of the police officer's life and a thoroughgoing nuisance to every citizen who is so unfortunate as to have to appear in a traffic case.

Witnesses many times are required to spend all day in court only to be told they must return the next day. Naturally they make a mental reservation never again to be an eye-witness to a traffic violation, a drunk driver, or a traffic fatality.

There is something else which is quite as destructive as needless delay. That is the scornful attitude of some courts toward police officers. This attitude destroys police morale.

The court, on the other hand, can exercise a powerful influence in building up morale. I don't mean that a court should favor the police. Not at all! Sometimes, by reason of legal restrictions, the court must acquit a defendant whom the court knows is guilty.

Under these circumstances the judge could be of immeasurable benefit to the police department if he would frankly explain to the officer—privately, if possible—where the officer failed to make an air-tight case. Then, even though the prosecution lost, the morale of the officer remains intact.

Too many courts take a lofty attitude. Some judges humiliate witnesses, abuse officers, and look down their noses at prosecutors. The judge fumes with satire and scornfully ridicules his victims.

Of course, it is not so tough for the prosecutor, as a rule. The judge, being a lawyer—but not always a good one—has some appreciation of the prosecutor's job. I am sorry to say that there is no requirement that judges have any knowledge of traffic problems.

Let me quote Harry H. Porter, Chief Justice of the Municipal Court, of Evanston:

"To the traffic judges of this nation let me say: This institution and this authority committed to your care is sacred to the people of this nation. Conduct it with the best of judgment, skill and morality at your command. Justice, complete and unbiased, must not be delayed, sold nor denied to any person, upon penalty of your own conscience."

You know, some courts brag about their ignorance of traffic matters, just as kings used to brag that they could not read or write. These courts, basking in the light of their own esteem, grandly decline to participate in community safety organizations, or to cooperate in a study of traffic accident problems.

Some of these courts are funny. The judge makes such absurd sentences as requiring the violator to visit a morgue, to write an essay, or to take a generous dose of castor oil. This is about as effective as

the old style judge who used to order wife-beaters to kiss their wives every morning, or go to church for a year.

This is not traffic law enforcement. Silly sentences do not deter anybody from violating traffic rules.

Another senseless practice that has been held over from olden times is maintaining separate fines and costs. If a man has to pay \$1 fine and \$10 costs, he has been sentenced to pay out \$11. He has merely academic interest as to what part was fine and what part was court costs. Publication of the fine "\$1 and costs" looks bad in the local newspaper and carries but slight deterrent value. It is even worse if it reads "\$1 and costs; costs suspended."

Suspended Sentence Evil

The police have very properly been given the devil for fixing tickets. Many cities have passed so called anti-fix ordinances. But these ordinances do not, as a rule, touch the courts.

It seems to me that just about the most pernicious form of fixing is the suspended sentence ordinarily practiced by our courts. It is pernicious because it is essentially hypocritical.

The court says, in effect—"You are guilty. But I am a pretty good fellow. I'll let you off this time." And then the court judiciously and pompously descends the bench serene in the belief that he has added one more vote when election time comes around.

Either a city is going to permit tickets to be fixed, or it isn't going to permit tickets to be fixed. It makes no difference, from the standpoint of law enforcement, whether the fixer is a cop, a prosecutor, or a judge, and it doesn't matter what particular technique is used.

I think the refusal of a court to convict for traffic violations arising from accidents—taking the attitude that the court does not wish to leave the defendant open to damages from a future civil suit—is at least a first cousin of the ticket fix. It is certainly a rank miscarriage of justice.

What kind of reasoning is it that permits a court to decide that a man shall go free when his actions have resulted in an accident that endangered lives and limbs, at the same time punishing another law violator whose actions haven't hurt anybody.

When you get right down to it, what right has a police officer to give a violator a ticket, to arrest a violator on the street, write out a notice to appear, and release the violator on his own recognizance? These are court functions. Legally, no arrest has been made by the mere issuance of a ticket, legally, the man can be released on his own recognizance only by the court. Moreover, no police officer has a right to issue a subpoena, another function of the court. Yet,

this is done necessarily by the police to avoid stuffy court rules.

My only reason for calling attention to the police sins in this respect is to point out this moral: At least police operations are flexible. All the admitted faults of the police department can be cured by proper organization, administration, and well-trained personnel. I wonder whether the courts may be brought up to date so readily.

What Is Wrong with Traffic Law Enforcement

By JUDGE PERRY A. FREY

Municipal Court of Cleveland, Ohio

Before making the bold statement that the police can and should do a better job, let me say a word about their bosses: the mayors, councilmen who control the purse strings, police chiefs and traffic commissioners. It is the duty of these gentlemen to know that traffic safety is now demanded by every community. It is their duty to make a careful study of the problems and then—and this is of paramount importance—to furnish the police departments with sufficient funds to bring their man-power up to par and supply them with the proper tools for adequate enforcement. After this is done, the courts and the police must assume the balance of the burden.

Courts vs. Police

There is no doubt in my mind that whoever championed the cause of either the courts or police could hurl some very stinging darts. If this procedure were followed, Mr. and Mrs. Motoring Public, acting as the referee, would be inclined to think less of courts and police than they now do. To make their work effective, it is necessary that both command the respect and cooperation of the public.

The first step in this direction should be a complete understanding and the proper respect by both for the corresponding problems, duties and functions of the other. One should not attempt to run or dictate the affairs of the other. Satisfactory results, however, are largely dependent on the cooperation each receives from the other. Often when a judge remands the traffic

officers he is looking for an opportunity to discharge some offender whose friend might have reached his car. It likewise often happens that the arresting officer will bitterly complain about the court when the defendant is dismissed, in order to cover up their own deficiencies in preparing their case.

The Traffic Officer

What can we expect of the traffic officer? Is he doing the best job he is capable of? Is he an agent for the prevention of accidents on the highway, and is he at all times exercising his authority for our protection? It is indeed regrettable, but nevertheless true, that we are oftentimes disappointed in our expectations. We find for instance, in some traffic officers the characteristics and qualifications more suited to an uncouth low-brow. We also sometimes find that he is a boogey-man parading the highways scaring, ridiculing and browbeating the motoring public.

What right has any traffic officer to greet a motorist, regardless of the violation, by such remarks as, "Where's the fire?" "Where do you think you are—on a farm?" "Who do you think you are—Barney Oldfield?" "What's the matter, are you blind?" and similar remarks, perhaps not so mild. I say, he has no right, but he does have an absolute duty which is printed in almost every police rule-book in the country, to conduct himself as a gentleman at all times. The traffic officer who attempts to browbeat and scare the motorist and who uses such language, does more to break down the re-

spect of the motoring public toward traffic law enforcement, than any other fact I know of. When such conduct on the part of the police is brought to the attention of the court, it tends to weaken and destroy the court's confidence in the testimony of such an officer. Courts then look upon his every arrest with suspicion. Furthermore, such an officer brings the public's ill will and contempt on his fellow officers, who are in no way deserving of it. I realize and fully appreciate from my experience as Chief Police Prosecutor and Judge, that many times an officer is subjected to very unfair treatment by the public—this, however, does not excuse him. There should be no room on any police force for hoodlums, tough guys or smart alecks.

Besides possessing the qualifications of a gentleman, Mr. Traffic Officer should thoroughly know his job. He should first have an adequate knowledge and understanding of both city and state traffic laws. He should be able to analyze quickly the facts in any traffic situation and present them intelligently to the booking officer and police prosecutor. He should be properly schooled in obtaining evidence at the scene. He should be able to gather from the witnesses, proper and sufficient statements and he should also know how to prepare an intelligent report. He should be observing, so that at least the important details, as to distances, lighting and weather conditions and other factors do not escape his attention.

Any arresting officer should not permit his own personal feelings to influence him in bringing the proper charge. I have known officers who for one reason or the other were over-zealous in attempting to give the offender a break, and I likewise have known officers who are very solicitous in rubbing it in.

Many cases are lost and many a dangerous traffic violator escapes punishment when he is not charged with the proper offense. It is elementary, of course, that in any criminal case, the defendant must be proven guilty beyond a reasonable doubt.

Our enforcement receives a disastrous blow from police chiefs and other superiors who are more interested in the number of arrests and convictions than they are in the actual prevention of accidents. The patience of a court is severely taxed by such enforcement. Traffic men are sometimes reprimanded for not making more arrests and I

have also heard that traffic officers were instructed to bring in not less than a certain number of violators. This concept of traffic law enforcement is very dangerous and has disastrous results. It tends to stultify honest officers. Certainly the motoring public is entitled to better treatment from the hands of their paid servants. The police chief who thinks that enforcement consists solely in apprehending violators and inflicting a fine upon them does not belong in this modern era of traffic law enforcement. Our traffic departments will serve a much better purpose if they will turn their attention to selective enforcement with prevention as its purpose.

Traffic men should be stationed at the places where the most serious violations and accidents occur and at the time of day or night when a survey shows they do occur. Police should turn their attention to major violations which cause the serious accident; the use of the spot map and accident records filed by locations is essential for selective enforcement.

It should be the aim of every well-rounded traffic law enforcement program to instill in the public a genuine zeal for traffic safety. The police are in a position to assume the leadership in this phase of the program and can do much constructive work. I suggest a bureau of public relations to educate the public in the matters of traffic safety and to promote the goodwill of the citizens. This may be done by talks on safety given by the police at public gatherings and to various groups; by short announcements where large numbers of people are gathered and by the use of the radio. Safety contests also should be promoted and attractive signs and slogans displayed throughout the community. Small pamphlets and other literature is available for the police in many localities for distribution to the public. Courtesy and warning cards have also been successfully used in traffic educational programs. The police are in a better position to create and foster the good will of the motoring public and pedestrians than any other group. They are the ones who constantly are in contact with the members of their community. In the first place, school children are placed under their care and protection on the way to and from school and the police should not let this opportunity pass in dem-

onstrating to the children that they are present for their safety and protection. By showing a real interest in the children and by their demeanor and conduct toward them the police will implant in the minds of these future citizens a favorable and lasting impression of duly constituted authority.

Furthermore, by conducting themselves as gentlemen at all times in directing the constant flow of motorists and pedestrians policemen will gain public support. The conduct of our police officers in the court room is of the utmost importance. I am quite fearful that we who are accustomed to courtroom procedure lose sight of its importance and its effect on the general public. It is our duty to realize that more people gain their first impressions and perhaps their last of law and order in a traffic court than from any other tribunal. The impressions acquired there of justice, law-enforcement and legal procedure may have an important bearing on their future conduct. If they see the dignity of the law upheld

and thereby gain a wholesome respect for law and order, our work has been well done. If, on the other hand, they find the courtroom to be untidy, noisy and disorderly, we will have much to answer for.

The Officer In Court

It is therefore necessary, that the Judge conduct the court affairs in a dignified manner and it is likewise necessary that the police officer should do his part. He should never slouch down in his chair, especially when testifying. His testimony should be given in a clear and convincing manner; he should avoid the use of any slang expressions and address the court and attorneys respectfully. He should be alert to all the proceedings and never allow himself to lose his temper. He should not be vindictive towards the defendant or any witness and above all, he should be courteous and polite to every one. Such conduct will always merit the respect of the court for that officer.

What the National Committee on Traffic Law Enforcement Found

By GEORGE WARREN

Special Counsel, National Committee on Traffic Law Enforcement

The Committee, composed of judges, prosecutors, police executives, and other safety authorities, was organized in May, 1938, to conduct a nation-wide study of traffic law enforcement procedure. Arthur T. Vanderbilt of Newark, N. J., Past-President of the American Bar Association, is Chairman. Franklin M. Kreml, Director of the Safety Division, International Association of Chiefs of Police, is Secretary. George Warren of the New Jersey Bar is Secretary of the Sub-Committee on Courts. A. R. Forster, Director of Training, Northwestern University Traffic Institute, is Secretary of the Sub-Committee on Police.

The recommendations of the sub-committees cover enforcement practices of the police and of the traffic courts and prosecutors. (The report on traffic courts had already been approved by the American Bar Assn.)

Upon conclusion of the report, it was voted to endorse the report of the National Committee on Traffic Law Enforcement. This endorsement was confirmed by the Street and Highway Traffic Section at their luncheon-business meeting later in the week.

The reports of both sub-committees appear below.

Summary of Recommendations Traffic Courts and Prosecutors

Traffic Laws

1. Traffic laws with inherent defects should be revised and those which are unenforceable or unnecessary should be repealed.

2. Traffic statutes should be founded upon the "Uniform Vehicle Code" and the "Model Traffic Ordinances" with only regulations purely local in nature left to local ordinance. However, an exception should be

made where this would result in ousting local courts from jurisdiction to try traffic violations.

Traffic Courts

3. All courts should treat traffic cases apart from their other business.

4. Special courts for traffic cases are necessary when the number of cases reach 7,500 per year with a violations bureau in operation, and 15,000 cases per year when there is no bureau.

5. The ideal traffic court organization would be on a state basis with various district courts, and with circuits operating from each district.

6. Physical courtroom conditions should be improved as to facilities, arrangements, cleanliness, and appearance.

7. The taxing of courts costs as a separate penalty should be eliminated, and the fine assessed in one sum. If costs are included, they should be in a reasonable amount.

Violations Bureaus

8. Violations bureaus are to be used only when the number of traffic cases make it impossible for the court to properly dispose of them.

9. The basis for all violations bureaus should be a signed plea of guilty and waiver of trial.

10. Schedules of fines charged at the violations bureau are not to be alterable.

11. The bureau should handle the least hazardous violations and should deal with moving offenses only when they respond to treatment outside the courtroom. Major traffic law violations should never be handled in a violations bureau.

12. Assuming conformity with the recommended basis for violations bureau jurisdiction, the payment of fines by mail, properly safeguarded, is recommended.

13. Fines assessed at the violations bureau should be in average amounts used by the judge for the same offenses, and should be scaled higher for repeaters.

Traffic Judges

14. Traffic judges should recognize the fact that a knowledge of traffic laws, traffic policing and engineering is necessary in addition to a legal background and should aim to obtain an understanding of these factors.

15. Traffic judges should not be selected by local authority or on a localized basis where appointment or election on a wider scale is possible.

16. The selection of alternates for traffic judges should be safeguarded.

17. Where more than one magistrate is available for the traffic bench, it is recommended that one judge be assigned to that post permanently or for a long period, rather than the use of a system of rotation of judges.

18. Traffic judges should be under the supervision of a chief magistrate who should be given regulatory powers.

Prosecutors

19. It is recommended that the title "Prosecutor" be eliminated in favor of "Public Attorney" or "Public Solicitors" or a similar term.

20. "Prosecutors" should be assigned to traffic courts for aid in the disposition of cases.

21. Where the information on the ticket or complaint does not afford the prosecutor sufficient detail, the arresting officer should be required to furnish him with an additional report.

22. Prosecutors should not be used for the purpose of deciding whether a traffic violation should be brought to trial.

Defense Counsel

23. Bar associations should interest themselves in ascertaining what the function of a lawyer in the traffic courts should be, and in encouraging the maintenance of that standard.

Traffic Court Procedure

24. Preliminary hearings in minor traffic cases should be eliminated.

25. Summonses and tickets should be returnable on particular days assigned to officers.

26. Where the volume of cases is large the time of appearance should be staggered according to the type of offense.

27. Complaints other than tickets are unnecessary and should not be used in traffic cases where the officer witnessed the violation.

28. Dockets should be kept by the court clerk's office and traffic cases should be kept in a separate docket.

29. Dockets should be in duplicate, the disposition to be marked on the original by the judge at the time of trial.

30. Each defendant should be treated as a single case regardless of the number of charges against him.

31. Appearances should be enforced by the service of warrants through the police department and by additional fines.

32. The traffic court judge should be made solely responsible for the granting and use of continuances.

33. Continuances should not be used for the purpose of allowing violators an opportunity to obtain the money needed for the fine. Instead, surrender of the offender's license until payment is made is recommended.

The Jury

34. The use of juries in trials for summary or minor traffic offenses should be eliminated.

Appeals

35. There is need for the study and revision of the appellate procedure available to persons convicted of traffic offenses.

Conduct of a Traffic Court

36. There is a general need for higher standards of decorum and courtroom procedure in traffic cases.

Punishing the Traffic Violator

37. Juvenile traffic violators should be treated by traffic courts except where a behavior problem is involved.

38. Rigid and set fines (as distinguished from flexible standards) for the various traffic violations are to be discouraged.

39. The utilization of effective methods other than fines and sentences for the punishment and treatment of traffic violators, should be encouraged.

40. The primary aim of the traffic court should be to impress defendants with the need for traffic law observance rather than to penalize.

The Fix

41. Reduction of charges in traffic cases should be a judicial power and exercisable only by the judge.

42. Judges should hold police officer, prosecutor, or both, strictly accountable for deliberate attempts to weaken the case against the defendant.

43. Clerical procedure should be revised for the purpose of permitting audits, allocating responsibility and providing checks on the handling of cases before they are tried.

Records

44. Traffic Judges should be furnished with the traffic record of the defendant by the police department, to be used only after deciding guilt in the present case, for the purpose of assessing the punishment.

45. Drivers' records should be state-wide for maximum effectiveness and made available through police departments to traffic courts throughout the state.

46. Traffic courts should keep daily cumulative records, broken-down by division into the common offenses, and published at least annually.

Conviction Reporting

47. Bar associations and other interested groups should interest themselves, where necessary, in the problem of the failure of judges in traffic courts to report convictions as required by state law.

The Justice of the Peace

48. The justice of the peace system is outmoded and its plan of organization, ineffective for good traffic law enforcement. It is recommended that the justice of the peace should be replaced for the trial of traffic cases by a state-wide system of regular courts with trained personnel functioning on a circuit basis from centrally located seats and under the supervision of a chief judge.

Qualifications and Supervision

49.* Minimum qualifications should be prescribed for candidates for the office of justice of the peace.

50. The basis governing the number and location of justices of the peace should be revised to allow the existence of a reasonable number of officers and an efficient distribution.

51. Adequate supervision should be provided, and regular inspections made of all functioning justice courts.

Fee System and Salaries

52. The present fee system in use in most states as a method of remuneration for justices of the peace, should be abolished and replaced by a means of compensation

*Recommendations numbers 49 to 57 are subject to recommendation number 48.

not dependent in any manner upon the decision in the case.

53. Where practical, fair and adequate salaries should be given justices of the peace.

Administration of Justice

54. Courtrooms should be furnished to justices in the various localities.

55. The choice or selection of a particular

justice court by the arresting officer should not be permitted if the practical necessity therefor is removed.

56. The practice of taxing costs should be eliminated.

57. All justices should be furnished with, and required to keep, satisfactory dockets, financial and other records, and should be obliged to report to a county or state office at least monthly.

Summary of Recommendations Traffic Police

I. ENFORCEMENT REQUISITES

Organization and Personnel

1. The principle of specialization should be followed in police organization for traffic control.

2. Traffic divisions, incorporating all functions of traffic control, should be set up in city police departments as major units or the organization.

3. All uniformed units of city police departments should participate to the greatest possible extent in the traffic law enforcement program.

4. Traffic officers should be carefully selected upon the basis of interest in and aptitude for traffic work.

5. The personnel strength of traffic units in any city should be proportional to the demands imposed by local conditions.

6. Most efficient possible use of present available traffic personnel should be sought as a prerequisite to attempts to secure additional personnel.

7. Traffic assignments should be made attractive to qualified officers by elimination of unnecessary undesirable aspects of such assignments.

8. Special headquarters units for functional supervision of traffic work should be set up in state departments.

9. Organizational specialization as practiced in cities is not practicable at present in state departments, but the amount of traffic work done by all state officers should be proportional to the importance of the traffic problem and should be directed on the basis of recommendations of the headquarters traffic unit.

Administration

10. Commanding officers of traffic units should be selected upon the basis of their personal and professional qualifications for such duty.

11. Commanding officers of traffic units should be given rank and authority commensurate with their responsibilities and the relative importance of the traffic control function.

12. The commanding officer of a traffic division should have an adequate number of commanding officers to insure proper direct supervision of personnel and activities.

13. Training in administrative duty performance should be provided for commanding officers.

14. The administrative responsibility in traffic control should be conceived of as involving program planning, supervision, and support building, rather than merely routine personnel supervision.

15. Detailed performance records should be maintained and studied as a major step toward effective enforcement administration.

Training

16. Recruit training schools should include approximately 75 hours of traffic instruction.

17. General in-service schools should include approximately 30 hours of traffic instruction.

18. Special in-service courses should be conducted for each traffic unit in city departments.

19. Traffic instruction should provide attention to various topics in proportion to

their importance and the needs of the particular class being taught.

20. The quality of training must be kept at a high level by careful attention to course content planning, selection of qualified instructors, employment of effective teaching methods, etc.

21. Training must be of such character as to "sell" as well as present instructional matter.

22. Training must be used as an aid to, not a substitute for, execution of a sound enforcement program.

II. ENFORCEMENT PRACTICES

Policies

The importance of police enforcement policies as an influence on the quality of enforcement, and the necessity of determining such policies, demands careful attention to their development, in accordance with the following principles:

23. Policies should be developed by executive officers and in general uniformly followed by all personnel.

24. Policies should seek achievement of proper balance between the needs for reasonableness and of effectiveness in enforcement.

25. Enforcement action should be taken on the basis of commission of violations, without undue consideration of such elements as intent, degree of hazard, frivolous excuses, etc.

26. Non-resident violators should generally be treated in the same manner as resident violators.

27. Tolerances should be granted only when, and to the extent that, such action makes possible more efficient, reasonable, and effective enforcement than would "letting the law" enforcement.

28. The gap between an existing and a smaller desired tolerance should be closed gradually rather than suddenly.

29. Warnings should be used to augment arrest activity; a printed form should be issued, a copy being retained for filing; repeat offenders should be prosecuted.

30. Arrests should be made for major vehicle defect violations, and a defect notice, to be returned with proof of correction, for minor defects.

31. Enforcement quantity should be measured in terms of convictions, using the "enforcement index," and maintained at the level of maximum effectiveness as determined for each jurisdiction on the basis of analysis of the local accident and violation experience.

32. The use of arrest quotas should be avoided; desired levels of enforcement should be considered only in general administration of the program.

33. A low level of enforcement quantity should be raised by gradual steps rather than suddenly to the desired level.

34. Police should refrain from traffic case fixing, follow practices which do not encourage violators to seek special treatment, and enlist cooperation of other agencies in its elimination.

Assignments

Lack of selectivity in enforcement, and curtailment of patrol strength by special assignments greatly reduce efficiency in traffic police work. Elimination of these faults is the first step to be taken to increase and improve enforcement, as recommended below:

35. Motorized traffic patrol assignments should be based wholly in cities and insofar as possible in rural areas upon study of accident records to secure maximum possible selectivity as to times, places and violations. Selective enforcement should also be applied by other units of city departments.

36. Assignments should be based upon regular periodic studies of those accidents of a type controllable through enforcement.

37. Arrest records should be analyzed to determine the degree of selectivity in enforcement actually achieved.

38. Drains on patrol strength should be reduced by elimination of special details where the public interest is not served, and by reduction in other non-patrol duties of motorized officers, particularly school crossing assignments.

Tactics

Tactics employed in the execution of the enforcement program have a great bearing on its effectiveness. The following pro-

cedures are recommended with respect to leading issues in this regard:

39. Single officer traffic patrol should be maintained to the greatest possible extent, in the interests of effective control, subject to necessary modification to insure safety of officers.

40. Motorcycles are most effective in city traffic patrol work. Cities suffering a high accident rate for motorcycle officers can reduce this by improved training and supervision. Cities frequently unable, because of adverse weather, to maintain motorcycle patrol should regularly use a fleet composed of both numbers of cars and motorcycles, maintaining patrol in the former alone when weather conditions require. Automobiles are superior in general for rural highway patrol work and should be used except in areas where the motorcycle's advantages commend its use.

41. Traffic patrol cars should be clearly designated for close-range identification but not extremely conspicuous.

42. Both open patrolling and semi-concealment methods should be employed, each to the extent necessary for proper traffic supervision and adequate violator apprehension. Complete concealment and other forms of deception should be avoided.

43. Speed violator detection should be accomplished primarily by having patrol officers pursue and pace cars. Mechanical speed checking over measured distances should be

employed only where it affords the only practicable means of securing needed speed law enforcement.

44. The "traffic sampling" technique should be used only to the extent that it can serve as a helpful and necessary adjunct to patrol operations in controlling violations of a type not easily controlled by other methods of patrol work. The technique should be selectively employed, with avoidance of "drive" aspects or undue disturbance of normal traffic movement through large scale "blockades."

45. Citizen violation-reporting groups do not effectively augment regular enforcement activities and their creation by the police is not recommended.

46. Chemical intoxication tests should be employed by police as the basis for prosecuting persons driving under the influence of liquor.

47. Effective enforcement attention must be directed to violators involved in accidents through more and better investigative work and through prosecution by police rather than citizens insofar as possible.

48. Case preparation and court work of police must be improved to provide closer coordination of the work of all enforcement agencies and more effective enforcement.

49. Warrant service must be improved both as to percentage of service and efficiency of police procedure in handling this job.

WEDNESDAY MORNING SESSION

October 9, 1940

Group Session on Public Education

Presiding: PAUL F. HILL, Director of Safety Education, Department of Public Safety, State of Iowa, Des Moines, Ia.

Training the Adult Driver

By MILDRED Y. MCKAY

Director, Adult Education, Cleveland Automobile Club, Cleveland, O.

Perhaps part of the price we pay for our motor transportation could be eliminated if we spent a little more time, money and effort on the two-bit driver, who is using the bil-

lion dollar highways, and the thousand dollar cars so carelessly.

Very little has been done directly for the man behind the wheel—the driver himself.

The driver has been given roads, cars, regulations, and the cooperation of the enforcement officials, but he has *not* been taught to use them properly.

It becomes obvious, therefore, that specific, as well as general things, must be done for the man who attempts to guide a motor vehicle. Accidents happen singly and to individual drivers. It is by reaching individual drivers that an effective fight against these accidents can be waged.

Now, our problem is, just what are some of the specific things that we can do to help this man, who drives or intends to drive, do a safer and more intelligent job?

The American Automobile Association has been giving this problem a great deal of thought in the past few years. The result of this, plus a lot of hard work and some money, has resulted in a driver-training program. This program has taken hold very firmly in the high schools, and attention is now being given to the adults who do not have the opportunity to learn about traffic safety in school.

The aim of adult driver training is not only to teach the driver the actual skill required, but to bring to his attention all the possibilities at his disposal to obtain the maximum pleasure and safety from driving.

What can we do to reach these aims?

Of course, the most desirable procedure would be a complete driver training program for each new driver and a retaining procedure for many old drivers.

A Training Program

A complete driving program should have three major parts: First, a series of driver tests to ascertain whether the applicant is physically, mentally and emotionally capable of handling a car safely. Once aware of his difficulties, the individual can be taught, in many cases, to compensate for them. For instance, some individuals have a low resistance to glare. When they pass a car at night they may have to drive for seven seconds—sometimes even as long as 12 seconds—before their eyes become readjusted and they can again see clearly. Such people have a right to know how great a hazard they are and to realize how necessary it is that they refrain from driving when it would subject them to glare.

There is a definite psychological value, too, in these tests. They make the new

driver more aware of the serious responsibility he owes society when he exercises the privilege of piloting a car on a public highway; they impress upon him the fact that part of his responsibility as a driver consists of seeing that he is physically and mentally competent.

The second part of a complete program is a series of classroom lessons. As much as possible should be taught in the classroom because here a large number can be handled by one instructor at one time, thus substantially cutting the costs. In the classroom the student can be taught the names and positions of the various parts of the car, their functions, and the driver's part in controlling the vehicle by means of the levers, pedals, buttons and knobs.

There is a three-fold objective in including this kind of a lesson in an adult driver training program. First, to have the driver handle his car more intelligently because of his understanding of it; second, (this is particularly important with the more timid drivers), to give them more confidence. By understanding what makes a car go, they lose the feeling that it is some mysterious monster which may break through the traces and do unpredictable things. Third, to give the driver an understanding of the care a car requires. When 49 of the best drivers in the United States were asked to what they owed their good records, "Keeping the car in good condition," led the list.

There should be an opportunity in the classroom to study laws and ordinances. Attention should be given to the development of a commendable driver attitude. Courtesy of the road should be discussed thoroughly along with sound driving practices.

With such a program a new driver would not be permitted to guide an automobile until he has first proved himself to be physically capable of handling a car safely and has learned as much as possible in the classroom. Dual-control cars should be used for his road lessons and this should not be an obstacle to any group interested in promoting training of this kind. There was a time when dual-controlling might have been an elaborate and expensive process, but now almost any good mechanic can put duals in a car at a cost not exceeding \$25, at the very most, and it can be done for less than half of that.

Ideally, the new driver should spend at least two hours where there is no traffic, or, at least, until he has learned the fundamentals of clutch and brake control, shifting and judgment stops. That is, judging the speed and distance so that the car can be brought to a smooth stop on a four inch line. He should be kept away from other drivers until he has learned to start and stop his car on a hill without sliding back; hand signals, steering, and road positions of cars about to make turns. This is a very different procedure from the trial and error method which has been used in the past and, for the most part, is still being used in this so-called enlightened age.

A private training field has been opened by the Cleveland Automobile Club. This field was developed from a vacant lot and, although small in size, contains many of the traffic situations which are to be met on the road. There are cross streets with varying angles of intersection, railroad tracks, a traffic light, a three per cent grade, a fifteen per cent grade, curbs for parking lessons, angle parking lines, pedestrian crosswalks, etc.

Trained Instructors Needed

Road lessons should be given only by trained instructors. The best drivers are not always the best teachers. From the qualifications that are offered by applicants for positions as instructors one would think that a no-accident record over a period of time was the only requirement. The most difficult job in conducting a program of this kind is to get good teachers who have a background of good driver training.

After instructors are selected they should be given a carefully worked out course of study. After three years of experimentation, detailed lesson plans and corresponding assignments in the AAA Sportsmanlike Driving Book have been developed. If these assignments cannot be followed by classroom discussion, question sheets can be used as a study guide and as a check of the student's diligence. These question sheets, as they have been developed by the Cleveland Automobile Club, cover the assignment and the road lesson of the day and must be filled out and returned before the next lesson period. The instructor can quickly correct any mistaken idea the student may have before permitting him to progress.

Even after a complete training program, lack of experience is bound to play a part in the driver's career for a short period of time. During this period of formation and setting of driver habits, he is apt to react a little more slowly than a more experienced driver. His judgment will probably be less accurate, he may take too much or too little room on a corner, or do other things equally as annoying to the experienced driver and which may be contributing causes to an accident. For this reason, while we are talking about training the driver, let us also teach him to identify himself for his own and others' welfare. A simple means of identification is a new-driver plate that can be attached either to the license plate or the bumper of the car. Many hundreds of these are now in use in Cleveland. There is no patent or copyright on these plates and the proper launching of new-driver plates for the protection of both old and new drivers in your community would be a large step towards greater traffic safety and fairer highway usage.

Perhaps one of the largest problems in reaching and training the driver is to make the driver, himself, realize the necessity of this training. For so many years drivers have been learning by the Jones method, with which you are all familiar, I am sure, that the idea of taking the time to really study the thing out appalls them.

A course of training such as we have been discussing is being offered in many cities by the motor clubs, on a cost basis. In some states, the state is attempting to take over driver-training and is operating through its state highway patrols. Three-quarters of my class in driver training at the National Institute for Traffic Safety Training this year were state highway men who were doing, or intended to do, driver training as part of their duty as officers. A program of this kind could fall naturally into the state accident prevention program.

The Financial Side

We have had such a school in Cleveland three years, and each year has seen it grow until now it is enrolling from 150 to 170 students a month. Because we have no funds with which to subsidize such a project the cost must be borne by the student. The need and the desire of the public that such training be available is readily seen in this instance: When people are willing to pay

from \$15 to \$25 to learn to drive correctly, think of the hundreds and even thousands in this one city who would welcome the opportunity to be taught correctly if they were but given the chance, free of charge, or at most, bear only part of the expense.

Such a program is costly and people ask, "But what can we do if we can't have a complete driver-training program? Is there nothing we can do?" Of course there is. Much can be accomplished by inside courses which are not costly. One instructor can handle 100 or more at a time. These courses, which we have given in Cleveland, have proved as valuable to drivers as to non-drivers. Experienced drivers welcome the opportunity to learn more about sound driving practices, laws and ordinances, the care and upkeep of the car, etc. These courses can be started through your PTA's, Women's clubs, luncheon groups, etc. Any civic-minded organization can obtain the services of a teacher and promote such a course or, better still, interest the local AAA club to work with you. It is true that individuals who have been taught in an indoor class have not actually been taught to drive, but they are individuals who are determined to learn. Regardless of who their teacher is or will be, they are going to be better drivers for the efforts put forth in the classroom.

Reaching the Rural Driver and Pedestrian

By HERBERT B. SIMPSON

Executive Secretary, Utah Traffic Safety Council, Salt Lake City, Utah

Just because accidents occur in rural areas it is no indication that the operators involved necessarily reside there. From the number of people involved in urban accidents who reside in rural areas, it appears that all drivers and pedestrians must be reached if we are to show a material improvement.

The best way to attack this problem is by a state-wide safety program. The first step should be to secure improved accident reporting, particularly from rural areas. Accident reports must be analyzed to determine the type, location, time of occurrence, and residence of drivers and pedestrians involved. In addition to this, the habits and general characteristics of the residents of

I have been asked in the past if drivers who have been carefully and scientifically trained have better driving records than others. We are well on our way to prove that they certainly do have. The records of 854 individuals were taken from our files. These former students ranged in age from 16 to 75. Their driving experience was over a period of from one to two and a half years. The police department checked their records carefully for these names and found only five violations against them. Three were for light crashing and two for speeding. Our next task was to take from the state files, names of persons that matched as to age, sex, occupation, and driving experience the 854 taken from our files. These people had learned in some manner other than a scientifically planned course. We wanted to determine whether trained drivers made better driving records than those who learned in a hit-and-miss fashion. To date 100 names have been matched, and out of the 100 names there have been found three with violations against them in the police department. One was for cutting in at a traffic light and driving without a license, another for an improper turn at an intersection, and the third for light crashing. If this sample is at all representative of the rest we are seeking, we can expect to find approximately 25 violations as against five found in the trained group.

the state should be studied to determine the most effective ways of reaching the public generally. For example, if it can be determined that a large percentage of the population are ardent church members this presents an ideal means of reaching the people. In like manner, if a certain community is engaged principally in agriculture, contacts can be made through farm clubs.

Every possible means of reaching the driver and pedestrian should be employed. Utah is attempting to reach the rural pedestrian and driver by its state-wide, standard safety program. Our organization includes a committee of state department heads known as the Governor's Traffic Safety Co-

ordinating Committee, and the group known as the Utah Traffic Safety Council, composed entirely of private citizens. These two groups cooperate closely.

As a result, rural traffic deaths have decreased 15 per cent during the first six months of 1940, compared with the same period of 1939. During this same period rural pedestrian deaths declined 23 per cent.

About 70 per cent of Utah's population is grouped in a relatively small area in and surrounding its three principal cities. The balance of the state is rural, with scattered small cities of 5,000 population or less. While considerable effort has been put forth by state officials and the Council in assisting the cities in their safety program, we are dealing with the traffic problem on a state-wide basis, and endeavoring to reach all drivers and pedestrians.

Newspapers Cooperate

The papers of Salt Lake City have cooperated wholeheartedly with the state program. They have state-wide circulation and their policy of giving traffic safety a prominent place has been of great benefit. One paper carries a series of black and white flags to indicate the status of traffic deaths, not only in Salt Lake City, but in the heavily populated areas of the state. This creates community interest to "keep the white flag flying" in their community.

Instead of merely relating the fact that a serious accident has occurred, in every instance possible a diagrammatic picture is printed showing the details of the accident scene, the cause of the accident, and how it could have been prevented. Arrows indicate the direction of the cars, or the pedestrian involved.

These papers have also been instrumental in urging better accident reporting. In special instances of failure to report an accident, publicity has been given with the result that traffic officers are reporting promptly rather than have their inefficiency played up in the papers.

The fact that the leading papers of the state are devoting so much space to the traffic problem, often on front pages and by excellent editorials, has opened the eyes of the country press to this type of news. Now country papers are devoting more space to traffic safety. All of this is having an effect on the driving and walking habits. Local magazines have given publicity to our pro-

gram. For example, a magazine supported by the farm clubs devotes considerable space to traffic safety every month.

Radiograms Effective

In obtaining publicity we have not overlooked the radio, and have received excellent cooperation. While for some time we used public speakers for radio talks and sponsored other programs, it has been our experience that the most effective method is through the use of short messages such as radiograms that can be given from the studio when the opportunity presents itself. A series of these messages is furnished weekly to all stations in the state and have been put on the air daily without cost to the Council. Most of the stations use these in connection with the regular news broadcasts.

The Utah Traffic Safety Council issues a monthly mimeographed safety "News Bulletin." This is a 25-page booklet which outlines the progress of the program and contains statistics and all pertinent information relative to traffic accidents and prevention work. This is distributed to city and county officials, chairmen of safety committees of service and civic organizations, school superintendents, editors of newspapers, church groups, and members of the Safety Council. Much of this material has been copied by the country press and is also used by Council members and others as a background for safety talks, and by church and school groups.

Traffic safety circulars have been distributed. For example, through the cooperation of the Utah Liquor Control Commission, during the 1939 Christmas holidays each purchaser of a bottle of liquor received a leaflet bearing the following message:

"Don't turn holiday cheer into gloom. Drive carefully!"

"Many serious accidents are caused by drinking drivers and pedestrians."

This apparently was effective, as no fatal accidents involving liquor were experienced during the holiday season.

Another very effective contact was obtained through the cooperation of the Public Welfare Division. Safe Walking rules were mailed out with the relief checks. Inasmuch as this circular was thus placed in the hands of all persons on relief, a great portion of which were elderly non-drivers, the class most prone to pedestrian accidents,

it is difficult to overestimate the importance of this approach.

The State Road Commission has recently adopted the new standard for pavement marking of "No Passing" zones, and in co-operation with the Commission, the Council has circulated a pamphlet containing information with regard to the meaning of the new marking, and also containing important traffic safety rules. This has been distributed through filling stations and with oil company monthly statements; by church groups, and in other ways by which drivers can be reached.

Schools Included

This fall each school child is taking home to his parents a letter containing safe walking and driving advice. This letter is similar to the one used in Des Moines, but we are doing this on a state-wide basis, and every school child in the state is bringing this safety message home to dad and mother.

Another phase of the program was the development of a traffic safety course for elementary and secondary schools throughout the state. Two colleges have made available a teachers' training credit course in traffic safety, and we are slowly acquiring trained personnel to carry on this important work.

Safety Council members and highway patrolmen have given safety talks before elementary and high schools, and film strips and motion pictures have been given in the major high schools throughout the state. Particular emphasis has been placed on rural pedestrian problems in all school and other public gatherings.

The Mormon Church has rendered invaluable service in traffic safety education work. From 75 per cent to 90 per cent of the rural population are members of this church and a substantial number attend at least once a week.

Early this year the Presiding Bishop directed a letter on traffic safety to all Ward Bishops, asking them to take an active part in the program. This letter was read in every sub-division of every ward. One outstanding feature of the church is that once a month visiting teachers contact each home in the ward. These teachers have carried the safety message to the homes, both verbally and in printed form.

The Church holds a semi-annual confer-

ence in Salt Lake City, which is attended by representatives of most of the church sub-divisions, and at the close of each session of the conference, church leaders caution all in attendance to drive and walk with care.

Early this year the church cooperated with the principal outdoor advertising companies and erected 110 safety panels in rural localities, dealing primarily with the drinking driver.

Enforcement Plays Part

We have not overlooked the important item of enforcement which has a definite bearing on rural traffic problems. In addition to increased arrests, the State Highway Patrol has taken an active part in our campaign by warning pedestrians found to be violating safe-walking rules.

The Enforcement Committee of the Council has stimulated the training program for rural traffic officers and has conducted meetings in the larger counties, which were attended by judges, state patrolmen, sheriffs, city police, service club members, and citizens interested in traffic safety. Accident reporting, particularly from rural areas, has been greatly increased. In this connection, 5,000 accident reporting posters were prepared and distributed in local police headquarters, public buildings, and filling stations.

Driver Licensing Tightened

Prior to the existence of the Council, drivers' license examinations were conducted by the Patrol as part of their routine duty, but, as a result of the study by representatives of the National Safety Council and their effective cooperation and direction, this important function was turned over to a newly created division of the Motor Vehicle Department.

The National Safety Council and the American Association of Motor Vehicle Administrators conducted an intensive school for drivers' license examiners. A new filing and record system was adopted, as was the minimum standard examination. In addition, a driver's handbook, containing important driving rules and regulations, was prepared and distributed. The newly trained examiners conduct this rigid examination at all county seats at regular intervals. Drivers' license checks or blockades are conducted at rural locations. We found in

many cases where rural drivers had been operating a vehicle for several years without a driver's license, and their attitude was such that a license was unnecessary as they had never before been asked to produce one. In addition to the regulatory effect of the blockades, the newspaper publicity carried on in conjunction with this activity has created in the minds of all citizens a higher value of their driver's license.

As a part of the new driver licensing program, an individual driver's record was installed and records of all arrests, warnings, and accidents are filed in each individual record. When any driver develops a bad record, the Motor Vehicle Department takes prompt action to call it to his attention. In many instances, a warning letter from the department has been all that was necessary, but so far this year, revocations and suspensions have increased over 100 per cent, compared with last year.

Traffic Engineering

A traffic engineering division has been set up and all locations having three or more traffic accidents during the past year have received special study. Many engineering improvements have been made where intense study warranted these revisions. The results of these engineering studies have been called to the attention of the Patrol when it was apparent that enforcement rather than engineering was needed at certain locations. These engineering improvements have consisted of the installation of adequate lights, reconstruction of hazardous intersections, channelization of important highways, and revisions in speed zones. Fifty miles of rural sidewalks have been constructed during the past year.

The Problem of the Adult Pedestrian

By MORRIS M. NAUMOFF

Education Secretary, Better Traffic Committee, City of Pittsburgh, Penn.

The pedestrian is not the "forgotten man" of traffic; he is the "sick" man of traffic whose equal rights have been scorned in favor of the motorist. Too many palliatives have been administered the pedestrian while his rich neighbor, the motorist, has been given every possible attention. The ills of the pedestrian have not been solved by the clinical observations of safety experts. The patient needs a complete study.

One hundred and forty railroad grade crossings were equipped with train actuated warning signals, and forty-one little used grade crossings were closed to vehicles.

While Utah is fortunate in that the greater portion of its laws are in conformance with the Uniform Code, there are many important matters of legislation which are being considered by the Council.

In attempting to reach the rural driver and pedestrian, several facts should be borne in mind. It should be remembered at all times that, although practically all of the people favor traffic safety programs and endorse them heartily, they invariably forget that they also need the protection afforded by the program. It is our opinion that the entire program must be directed with this thought in view, and activities must be carried out along all lines, and with such intensity, that it is impossible for drivers and pedestrians to escape the effect of at least one or more phases of the program.

Every effort must be made to secure and maintain the support of the press and radio; all schools must share their portion of the burden in safety educational work; and church, civic, service, and fraternal organizations must be made to realize that the responsibility is partly theirs and a portion of their work must be devoted to traffic safety. Rural traffic officers must be trained and the program of the Highway Patrol and the local officers must be correlated in a broad plan of selective enforcement. An engineering study must be made of all rural traffic accidents and suitable action taken by means of enforcement and education, as well as engineering.

Basically, the problem of the adult pedestrian is one of understanding his actions, the reasons for them, isolating any future malignant growth, and setting about earnestly to cure the mental and physical ills.

A Recurring Pattern

The pedestrian pattern is a recurring one. Year after year the accident figures will bear out definite similarities in structure and

design. Plot these graphically and the trend will be almost the same for places of occurrence, hours, actions, days of the week and ages. The significance of these figures must awaken one to the need for more intensive studies.

The adult pedestrian must be considered in a far different light than the young pedestrian. The complexities of life are all too largely responsible for the over-weighted numbers of accidents in the older age groups. Perhaps certain factors may be brought to light which will give us a clearer insight and understanding of the adult pedestrian accident problem.

I believe we have made careful studies and analyses of the how, when and where factors of the problem; but I do not believe we have even begun to understand the why.

With the adult pedestrian there is the influence of "competing attentions" when he steps off the curb to cross the street. He may be engrossed in his business or personal problems and his street safety has been subjugated. There is another action committed intentionally or unintentionally, which might be called "social facilitation." That is, the pedestrian follows others who have started to cross the street in mid-block or against the red light, because they made the opening wedge for him. Stand at any intersection in the business district, whether it is signalized or not, and observe the number of people who step off the curb, hesitate for a moment while immediate traffic is rushing past; and then watch them gather courage and make a bold dash across the street.

Many adults cross streets under a "voluntary assumption of risk." They know fully well the hazards of street traffic; still, they cross where it is most convenient. For them the corner is too many steps removed from the center of the block when their destination may be only directly across the street.

Then, too, there is that group of adults who practically live in traffic. These are the business and professional people who are constantly on the same streets, encountering the same conditions of traffic day after day. They have acquired too great a familiarity with the volumes of traffic at certain points in the business section. They have developed an assumption of safety based upon repeated experiences and they

continue to follow their modes of crossing streets where, when and if they can. Here habits have been formed.

A few more examples of the crossing habits of people: a group of adults are genuinely confused by traffic in general. This is a minority class, consisting of the foreign element or very aged pedestrians. Then too, there are parents, women particularly, who, when shopping, drag their children across streets against the red light or in the middle of the block. There are many who dare to cross in congested areas in the same manner they do in their own neighborhood where traffic is lighter. There are others who cross without even looking to see the color of the light; and only after stepping into the street do they become concerned about oncoming traffic and signals.

The problem of the adult pedestrian is one of reconditioning his habit patterns in traffic. It obtains, then, that since he cannot be taught in the same manner as children, his safe walking habits must be made his everyday way of living in traffic.

Public Education

Public education achieves its desired effects when directed at pedestrians in a "point of need" manner. This means reaching the pedestrian at the time and place when and where such education is needed. Where the necessity exists to re-condition walking habits of adult pedestrians in the congested areas, media intended to correct those unsafe walking habits must be instituted. Where people cross against the red light and an officer is on duty, one of the best methods would be to instill in the officer's mind that he must safeguard the pedestrians, as well as to expedite traffic. It would be best to phrase for the officers throughout the area the words they are to use in cautioning or directing pedestrian traffic, thus creating a uniformity of usage, the repetition of which will be more impressed upon the people.

Another approach which can be used by the officers would be positive in direction and effect, such as pointing out to violators the examples of safe walking habits of others. Embarrassment by the officer should be avoided at all times, for smart-alecky remarks will do more to kill the intent than any other factor, since the public will soon

look with disfavor upon the program. Safety messages are all the more effective if they have utility value; for example, calendars, book matches, and other advertising novelties which people will keep, rather than toss aside.

A general activity of safety consciousness can be brought about by having Boy Scouts distribute cards to erring pedestrians. The copy on these cards should be given the closest of attention either from the "reason why" approach or the "human interest" angles. Other copy themes can be common sense, loyalty to community, family dependency, economic, understanding of legal rights or legal aspects of violations resulting in accidents to pedestrians.

"Point of need" safety is also the painted message on sidewalks or on the streets at intersections. Posters at intersections and in mid-block also serve to arouse safety consciousness. Pedestrian safety or warning signs can be attached to poles throughout the business area. Sandwich board type of advertising signs on men mingling with pedestrian traffic is also a good idea. Humor can be used advantageously by dressing one of these men in a clown suit and having him pantomime the walking habits of people. A bell high up on a pole to be rung when a pedestrian jaywalks across the intersection will attract a great deal of attention.

Street cars and buses can serve their patrons in a way of pedestrian education by having safety cards at the doors, to remind people that they should wait on the sidewalk after alighting. Inside car cards can point out the dangers of crossing in front or in back of street cars or buses. On the street car loading platforms safety messages can be placed, calling attention to safe ways to leave the platform. Other forms of safety messages which can be used in a street car or bus advertisement are the outside dash signs. Street car knives can be used on the windows. Printed leaflets can be inserted in the "TAKE ONE" holders usually found inside the cars.

We have not reached the stage as yet when safety messages, broadcast by radio, will reach the passengers on their way to and from work and throughout the entire day. Perhaps that day won't be far off.

The media I have mentioned thus far is

intended to reach the masses in general, rather than certain classes specifically. By no means have I attempted to cover the entire gamut of ideas which can be used; nor have I discussed the essentials of good newspaper and radio measures. Back of any idea is the proper method of convincing people of certain facts, logically presented in the terminology which they will accept. I refer to the proper wording of the copy and the use of display type that talks. Note how commercial advertising is so convincing because the idea is put across with as few well chosen words as possible.

Selective Education

When we think of the adult pedestrian problem, let us bear in mind that the field of education is necessary in sections of the city other than congested business areas. Accident spot maps show that most pedestrians are being injured in residential districts. If the analysis discloses that the problem is chiefly one of engineering, then physical safeguards for pedestrians should be planned for and installed. In those districts particularly public education will serve to acquaint the people of the proper uses of those engineering facilities provided for them. Selective education must be employed after the pedestrian accident analysis has localized the district, actions, time of day, and other factors which point to the trouble. In the residential sections, the message must be taken into the home. Community newspapers can editorialize on the actions of pedestrians in specific districts after the facts have been obtained from the traffic engineering department. He can invite the people to express their views on pedestrian safety and measures for assuring greater safety. Perhaps enforcement of speed regulations is needed in those districts. Complaints or requests for safeguards are not all of the "crank" type, but serve as an indication that safety is on the minds of the people and they have the right to be heard and the right for such measures.

Other selective media for localized areas may be through community boards of trade, women's clubs, churches, workers for social agencies in those pedestrian accident areas, posters in neighborhood stores, and leaflets inserted in packages purchased at the stores or delivered to the home. Still other means must be used in a general way, such as billboards on the sides of neighborhood stores;

or, safety posters on poles at points where two or more pedestrians have been injured during the past year.

Getting a general safety message into homes can also be accomplished through the schools by having the teachers instruct the children as to the importance of the message and the fact that the message must be taken home to the parents. Signatures of the parents could be obtained to assure their having read the message. Handbills can be used in a general plan of distribution to these homes.

Home owners are more interested in pedestrian accident facts when they can be told how many people have been injured or killed on their particular street or district. We may take the lesson now in use in Wayne County, Michigan, by having police officers (this could be done easily by fledgling officers) call upon each household in the rural regions. He should per-

sonalize his message. For example, he could obtain beforehand a directory listing of the residents on his streets (if this is done in a city) and, when the door is opened, he could address the woman as Mrs. Martin, and she would feel that the officer has a personal message to her; and he really does. After he has given his short speech, he can leave the leaflet, asking Mrs. Martin to discuss it with the members of her family that evening.

Educating adult pedestrians is a job which requires careful planning and execution. Instilling safety consciousness into adults can be accomplished through a continuous program of intensive activity of purposeful and selective education. Safety is a commodity today more vital to each individual than, perhaps, most commodities offered to the public for their consumption. Still, safety can and must be sold, and the public as a whole will buy safety because the premium is their life.

WEDNESDAY NOON MEETING

October 9, 1940

Luncheon-Business Meeting

Presiding: JUDGE HARRY H. PORTER, General Chairman, Street and Highway Traffic Section, National Safety Council.

General Chairman Porter explained that reports of the six study committees were being made at the various sessions and would be omitted at this meeting. Administrative Committees would, however, report.

George Warren was called upon to report for the National Committee on Traffic Law Enforcement, substituting for Arthur T. Vanderbilt, Chairman. Mr. Warren is Special Counsel for the committee. Chief Ray Ashworth of the San Antonio Police Department moved that the general meeting confirm the endorsement of the report, which had been made at the Wednesday morning session. The motion was carried.

Chairman Walter B. Martin of the Annual Congress Program Committee strongly urged that members of the section continue to cooperate with the incoming committee.

The Committee on Traffic Accident Records has worked with the National Committee on Uniform Traffic Accident Statistics and the form recommended by the Subcommittee on Forms is essentially the Standard. This report was made by Wilbur S. Smith, Chairman. The Committee recommended that plans for the preparation of a manual on uses of accident records be advanced during the coming year.

Chairman Roger L. Morrison of the Committee on Traffic Engineering reported that his committee has been established to promote closer association of traffic engineers and others responsible for traffic planning. One session has been held and another will be, he said.

It is desirable to make further studies of selective education. Chairman Carl J. Rut-

land stated in reporting for the Committee on Public Education and Safety Organization.

Chairman Phillip B. Gilliam of the Committee on Traffic Court Judges and Prosecutors reported that twice as many judges were attending this Congress as in former years.

A report on the banquet for city and state police, as well as the group sessions for them, was made by Chairman Matthew Bolger of the Committee on City and State Police.

Chairman Walter D. Ladd of the Nominating Committee presented the slate of officers for the coming year and officers were elected, as listed elsewhere in this record.

Dr. Miller McClintock, Retiring Vice President for Public Safety, told the meeting, in his talk on "Organized Traffic

Safety," that the Street and Highway Traffic Section has made a substantial contribution to the adjustment of rapidly changing traffic conditions. Dr. McClintock said the challenge of traffic safety has meant that all who were interested when the section was organized in 1929 are still interested and many who have become active since then participate in the affairs of the section. He paid tribute to the industrial members who foresaw the importance of promoting traffic safety and were willing to support it. They were cognizant of the fact that more than 50 per cent of the injuries and deaths of persons engaged in industries occur away from their work, he explained.

In reviewing the work of the six study committees, Dr. McClintock commended the activities, saying it has brought together information and experiences that have helped solve many traffic problems.

WEDNESDAY AFTERNOON SESSION

October 9, 1940

General Session

Presiding: JUDGE HARRY H. PORTER, General Chairman, Street and Highway Traffic Section, National Safety Council

Progress in Uniform Traffic Legislation

By LOUIS R. MORONY

Executive Director, American Association of Motor Vehicle Administrators, Washington, D. C.

(Editorial Note: Mr. Morony spoke extemporaneously. The following is a brief summary of his discussion.)

"In contemplating legislative activity you should first analyze the legislation you already have, the degree of success resulting from present legislation, and then determine whether or not new or additional legislation is imperative."

Mr. Morony emphasized the fact that groups are often tempted to agitate legislation because they feel that they should show some activity in that direction. He stressed the point that going to a legislature often was the last resort, and then he indicated the proper approach to bring about

an acceptance of new legislation from the legislature.

Mr. Morony stated: "motor vehicle legislative advisory committees, such as the one set up in California, are extremely helpful. They not only are in the position to make progress in a legislative program by assisting in bringing about the enactment of sound legislation, but they are equally helpful in preventing the enactment of obnoxious legislation."

"The Uniform Code," Mr. Morony pointed out, "should be kept in the background and used as a model and not something that might have a tendency to confuse those

not familiar with it because of its size. Officials charged with the administration and enforcement of motor vehicle laws should have some latitude, discretion, and author-

ity in adopting reasonable rules and regulations in order that their administration program will move along with national trends."

Report of Committee on Night Traffic Hazards

By HARRY TUCKER

Professor of Highway Engineering, North Carolina State College, Raleigh, N. C.
and Chairman, Committee on Night Traffic Hazards, National Safety Council

The following are the facts and recommendations for night traffic safety presented in the 1940 Report of the Committee on Night Traffic Hazards. The complete report is available in a pamphlet from the Council's Traffic Engineering Bureau.

The report was prepared by the Committee on Night Traffic Hazards to give public officials and other interested citizens a condensed summary of the night traffic accident problem and recommended methods of prevention of night collisions.

The Committee was organized in 1936 to study the many angles of the night traffic problem. With the cooperation of the National Safety Council's Statistical Bureau, data have been collected from all sections of the country. The accident experience has been divided between urban and rural and between pedestrian and non-pedestrian accidents. Special studies have been made regarding the intoxicated pedestrian and the intoxicated driver problem at night.

The effect of visibility on accidents has been investigated and numerous examples of accident records have been obtained comparing the accident experience before and after changing visibility conditions. This information is included in the report.

Facts and Recommendations for Night Traffic Safety

1. Traffic hazards and accident severity begin to increase at an alarming rate at sundown. The fatal accident rate per mile of travel is three times as high at night as during the day. These facts present a major problem for state, county and city officials whose duty it is to provide an effective program for traffic safety at night as well as during the daytime.

2. From 1930 through 1939 daytime fatal accidents dropped 18 per cent but night fatal accidents increased 15 per cent. An increase

of 32 per cent in fatal rural night accidents accounted for the unfavorable trend. This points to the need for further study of the rural night accident problem.

3. Increased night travel on rural highways, combined with higher potential speeds of vehicles, has made night driving more hazardous under ordinary conditions. Engineering, education, legislation and enforcement must be initiated to aid in solving the rural night accident problem.

4. The use of intoxicants is an important factor in night accidents. Statistics indicate that pedestrians and drivers who have been drinking are about five times as frequent in fatal night accidents as in those occurring in daytime. Enforcement officials should remove intoxicated pedestrians, as well as drivers, from the hazards of traffic before they are injured or killed.

5. Lowered visibility seems to be the major difference in the hazards of night and day driving. It is necessary that drivers and pedestrians realize this and give more attention to their safety under these adverse conditions.

6. Pedestrian accidents, primarily adults, constitute a relatively high proportion of night accidents in urban areas. Half of the pedestrian deaths occur between 6 p.m. and midnight, while these six hours account for only one in three fatal non-pedestrian accidents. It appears that the pedestrian often takes for granted that he is being seen by the motorist when he can see the headlights of the automobile. Thus he walks confidently into the path of the motor vehicle unseen by the driver until it is too late to avoid an accident.

7. Most traffic signs along the highways in rural areas, and some signs in cities, are even more important to motorists at night than in the daytime. It is necessary, there-

fore, that they be seen at night well in advance of the hazard. To increase their visibility they should be illuminated or reflectorized. In some cases, conditions require that they be larger than standard signs which are satisfactory for daylight conditions.

8. Since vehicle headlights are the main source of illumination for most highways, owners should maintain them in good condition for best visibility and comfort for themselves and other drivers. Motorists should always use the proper headlight beam. The upper or country beam should be used on rural highways whenever there are no vehicles approaching within 1,000 feet (about two average city blocks). The lower or traffic beam should be used when approaching other drivers and when driving on well-lighted highways or well-lighted city streets.

9. The maximum safe operating speeds of vehicles at night are considerably lower than for daytime conditions because of decreased visibility. The Uniform Vehicle Code of the National Conference on Street and Highway Safety recognizes this in recommending a differential between day and night speed limits. Additional reductions are recommended for drivers at night wherever necessary to conform with the conditions confronting them.

10. New drivers should be taught night driving techniques in their initial training after they have become acquainted with driving in daylight.

11. Reflector buttons and reflector markers are definite aids in delineating curves and designating hazards on highways. Their use is recommended on the outside of curves, on approaches to bridges, culverts, "T" intersections and on entire sections of important highways having numerous curves and other inherent hazards.

12. Striping of the center line and "No Passing Zones" is especially helpful to motorists at night. The painted lines often can be seen farther and easier than the pavement edge. More highways should be marked in accordance with the latest standard practices.

13. Traffic safety lighting continues to demonstrate its value for reducing certain types of accidents. It appears to be particularly effective in protecting pedestrians. A scientific analysis of night accidents should be made by city and state authorities to determine high night accident areas. When these have been located, their conditions should be studied to see whether physical changes in the street or highway are necessary and whether there is adequate lighting for traffic safety.

14. Scientific street lighting should be provided at least in those places where studies of accident records and spot maps show its need. Wherever proper street lighting might eliminate certain types of night accidents such improvements should be considered. Where such a condition can be anticipated in new design and construction and when a light colored pavement is reconstructed with a darker surface, the lighting should be studied to see if it is adequate. Wherever new lighting is installed, it should be designed to provide adequate visibility for traffic.

15. Additional accident records before and after the installation or improvement of street and highway lighting are desirable for revealing further the types of accident patterns which yield most readily and consistently to lighting. Such data would aid city and state officials in treating existing night accident problems and forestalling similar ones in new construction.

16. Research on automobile headlamps should be continued to obtain the maximum amount of safety from them.

THURSDAY AFTERNOON SESSION

October 10, 1940

Group Session of City and State Police

Presiding: INSPECTOR E. JACK ERWIN, Traffic Division, Police Department, Toledo, O.

Debate: Resolved That Pedestrians Are More Responsible for Pedestrian Accidents Than Are Motor Car Drivers

Affirmative—DAVE SHERMAN

Department of State, Lansing, Michigan

When you hear that 32,000 persons are killed, and a million injured in motor accidents annually, do not visualize merely the mile-a-minute driver of a car sideswiping a truck, but think equally of the citizen on foot. Traffic surveys show that pedestrians are often actually to blame for their own deaths or injuries.

The motor vehicle operator, in most states, is required to be licensed, to have fundamental knowledge of motor vehicle laws such as speed and traffic regulations, and of the things he must do under certain conditions. He must prove himself physically capable of operating a vehicle, must have proper eyesight, and a good mental coordination, which he must prove through written tests and actual demonstrations. He is then subject to restrictions on the highway: traffic lights, one-way streets, safety zones, parking rules, speed zones and numerous other safeguards. As a result the motor vehicle operator has been brought well under control.

But what of the pedestrian? You have seen him crossing streets diagonally, walking with his back to traffic and stepping from behind parked cars. A national survey reveals that, even where there are traffic lights in cities, three out of four pedestrians fail to obey the lights, while 98 per cent of the motorists obey them to the letter.

Actually three out of five of the pedestrians killed last year were crossing between intersections, and most of them were just three or four feet from the curb, indicating that they had stepped in the path of the approaching car without stopping to look or listen. They must come to realize that in failing to obey the ordinary traffic rules they are courting sudden death.

During the World War thousands of those examined for service were found to be color-ignorant. Not having studied or been taught colors they could not name them. My opinion is that the average pedestrian is color-ignorant. He does not know the speed at which a car operates, nor the distance it covers in a split second.

Pedestrians are ignorant of the rights of motorists. They haven't been taught traffic rules. Yet they can be taught, and as they become car-conscious, there will be a noticeable reduction in our fatalities.

You may ask me: "Can pedestrians be controlled?" I've known that they can! Who would have believed that the recent tremendous reduction and present steady decrease in child fatalities could be accomplished through educating children? Yet, we find, as a result of school safety patrols, and safety education in the schools, child fatalities per year have been reduced 10 per cent. If this can be done with children it can and must be done with adults.

Properly marked intersections must be provided to discourage crossing elsewhere. Side-walk signs "cross-here"; traffic light with signals for pedestrians as well as those for motorists; full publicity—every medium that can be used to make people safety conscious, and, above all, stringent regulations regarding jay-walking must be employed. The use of educational features and an impartial enforcement of all traffic laws will result in making people additionally safety conscious.

Dr. Gallup, in his recent poll of the entire nation, revealed that 90 per cent of those interviewed were in favor of regulating pedestrian traffic. If the people want it, we are remiss in not taking some steps to insure such regulation.

Is it lack of legislation? The weakness of our judges imposing penalties? The weakness of our legislators? Is it the weakness of our enforcement agents? It may not be, but the time has arrived when drastic and determined steps must be taken.

What happens where pedestrians are controlled? Tucson, Atlanta, and Dallas, are some of the 65 cities that endeavor to regulate pedestrians. What do their records show? It was found that the number of Mexicans killed in Dallas was twice that of any other nationality. By means of signs in their own language, simple and easy to understand, and by enforcing the traffic rules

to the letter, Mexican fatalities were cut 58 per cent in one year. What would that mean, gentlemen, if these rules were enforced on a nation-wide basis? Instead of 12,600 pedestrian deaths there would be less than 6,000, not as a result of regulating motorists, but of requiring pedestrians to observe ordinary rules of safety.

I would suggest a *pedestrian control week*, observed simultaneously in every

state sponsored by the American Association of Motor Vehicle Administrators in cooperation with the press, radio, American Legion, and other groups. You would have a local group as a nucleus so actively interested that, with your enforcement program, the campaign could not fail. Such a reduction in pedestrian deaths would result that the nation would be astounded.

Negative—CARL JENKINS

Department of State, Lansing, Michigan

Everything which has been done in the cause of highway safety has been done from the viewpoint of the motorist. Engineers have provided him with underpasses, overpasses, divided roadways, center lines on highways, highway lighting and efficient signs and signals. The motorist has been taught to make use of these devices, and to obey the regulations, always with the idea that such use and such obedience will result in his safety.

As a pedestrian I have been left to my own devices, and forced to devise the simple philosophy that it is up to me to cross streets and highways as best I can. To help in my efforts I have had nothing but the abuse and scorn of the motorist upon whose sacred domain I have presumed to trespass. In short, I must consider myself the forgotten man of this mechanical age.

Consider if you will for a moment, the millions upon millions of dollars which have been spent for the construction of highways designed purely for the purpose of vehicular traffic, and contrast with this the pitifully small amount which has been used for pedestrian facilities. Consider the scope of the highway lighting program, and place against this the meager amount of public funds which has been devoted to the lighting of intersections where pedestrians are required to cross.

Remember too that we are a democracy of nearly 140,000,000 people, and that only 30,000,000 people own motor cars. I contend that, in a democracy, the rights of the majority are paramount, and that any legislation which tends to benefit the minority to the detriment of the majority is class legislation and cannot be tolerated.

I agree with my opponent's contention

that the administrators and legislators are the persons who must correct this situation. I propose, therefore, to bring certain specific charges against the motorist, and to suggest a program, which if adopted, will, in my opinion, bring about a radical reduction in the pedestrian accident rate.

I charge you, Mr. Motorist, with consistent, and habitual violation of the speed laws, despite the fact that speed too fast for local conditions is a leading cause of accidents. I charge that it is common practice to overdrive your headlights, and that it is ordinary for you to drive without that due regard for the rights and safety of others, which is a provision of all of our traffic laws. I charge too that it is your custom to violate the right of way granted to pedestrians, and that you ordinarily operate your motor vehicle paying little attention to children at play on the streets. I charge, in short, that your attitude is, that you are monarch of all you survey, and nothing can be permitted to interfere with your triumphal progress.

Having made these charges against the motorist, I propose that we present to this arrogant individual a bill of rights for the pedestrian. Experience has shown that an unpopular law cannot be enforced, and I suggest, therefore, that they have been provided for the motorist. I recommend the liberal use of the "pedestrian walk" signal which is so easily incorporated in any traffic signal system. I recommend also the adequate illumination of all pedestrian crossings, and the strict enforcement of parking regulations, particularly one requiring that parked vehicle be not less than 25 feet from an intersection.

Having provided these facilities, I recommend that you carry on for a limited period of time and educational campaign for the purpose of teaching the pedestrian to make use of them. After such campaign, it will be in order to undertake

enforcement of the pedestrian regulations, and I assure you that, if facilities are provided, and educational steps taken, any attempt at enforcement will be met with hearty cooperation on the part of pedestrians.

Second Affirmative—JOHN BOWEN

Department of State, Lansing, Michigan

You, the pedestrian, have been called at once the "forgotten man" and the problem child of street and highway safety. Nobody loves you, because nobody wants to assume responsibility for you.

At least two thirds of your dead were adults, fit subjects for statutory regulation. That would seem to pull you out of the problem child category.

It is highly significant, too, that your mortality rate first started to climb at the same time that the delivered horsepower and potential speed of the medium priced automobile showed a marked upward trend. You failed to adapt yourself to a changing world by the cultivation of added safety habits. For your walking habits, you alone are responsible. You claim you are careful. Some enforcement authorities say you are incorrigible. Well, five of the larger cities have undertaken to test your vaunted carefulness: Milwaukee, Dallas, Cleveland, Providence and Kansas City. And as a result, in those cities, where enforcement activity was directed against you as well as against the automobile driver, 45 per cent were saved from self-destruction in one year.

The Gallup poll says that you want to be regulated. An increasing number of important cities is commencing to believe it, and—in one form or another—they are granting your own wish. Those cities are: Chicago, Los Angeles, San Francisco, Birmingham, Minneapolis, Rochester, Hartford, Wichita, Atlanta. Results in all those cities have been most gratifying, and human lives have been saved in consequence.

As a result of this pioneering experience, we now know a number of things about

you, Mr. Pedestrian, that we hitherto only suspected.

We know that in all urban areas, three out of five of your dead brethren crossed in the middle of the block.

Seattle has found out that you do not like to wait for the green light longer than 18 seconds; but you will, if you know that you must.

Denver has learned that you do not blow up when you are fined for jaywalking after you have been knocked down by an automobile; instead you pay up.

Connecticut and Washington, D. C., have proved that about 90 per cent of you who become mortality statistics never did appreciate the driver's point of view. They had never had driver's licenses. Now that hardly seems fair, Mr. Pedestrian. The motorist appreciates your point of view, because he, too, is at times a pedestrian. You will say, perhaps, that statutory regulation of your walking activities will only serve further to curtail your liberties in a world where the frontiers of liberty are already tautly circumscribed. But changing conditions make imperative new techniques and new controls. Whether you like it or not, whether I like it or not, that way of life that the sociologist calls the inductive culture is now definitely on the up-grade; its spread is inevitable. And with its spread, there must come even to America a wider spread of police powers than the American people have heretofore ever known. That is not to say that we, as a nation, are headed towards regimentation. Any measure that is for the conservation of human life is not regimentation, it is humanitarianism.

Second Negative—STEVE WHITE

Department of State, Lansing, Michigan

The question of the responsibility for pedestrian accidents lies very definitely with the motor car driver. Our opponents of the affirmative side have attempted to prove otherwise by the submission of some statistics gathered from a few cities throughout the country where experiments have recently been made in rigid pedestrian enforcement.

Contrary to what our opponents would have you believe—the people of this great nation do not stalk the public streets and highways 24 hours a day, seeking to hurt themselves beneath the wheels of some unsuspecting motorist.

We are all pedestrians by nature. In times of danger we can stop instantly; we can reverse from a forward motion; we can turn sharply without up-setting; we can jump, side-step and side-slip; we have maneuverability that no man-made machine can ever attain. Yet this maneuverability, marvelous as it is, has been unable to cope with the devastating speed and crushing weight of the juggernaut of the public way—the motor vehicle.

Our opponents have quoted some statistics on the experience of cities where rigid pedestrian control has been tried. We admit that the results show a remarkable decrease in pedestrian fatalities, but we maintain that is not the whole story. This same rigid pedestrian control pre-supposes a rigid control of drivers and we cannot have a rigid control of drivers until we impress upon them that the pedestrian also has a legal right to the public road, and that we intend to enforce the granting of the right of way to pedestrians when they are using the public road in a legal manner.

We have also heard from our opponents that pedestrians account for about 40 per cent of the nation's traffic fatalities. While the statement in itself is correct, it is, at the same time, highly misleading and subject to misinterpretation. From that statement it would seem that pedestrians were involved in almost half of the nation's traffic accidents. On the contrary—and this is the most damning evidence of all against the driver—pedestrians were involved in only 5 per cent of the total motor vehicle acci-

dents last year in the United States. I quote from the statistics of the National Safety Council which show that there were 5,700,000 motor vehicle accidents in the United States last year; pedestrians were involved in only 270,000. In other words, the pedestrian was able to escape this careless, thoughtless, uncontrolled driver of 95 per cent of the accidents that drivers had. It is a tribute to the alertness and skill of the pedestrian, but it shows that what might be just another accident between two drivers, with only slight property damage, is usually fatal when the pedestrian is involved. Surely we need no better proof than this as to where any accident-proneness lies.

In the majority of cases, accident statistics are obtained from the compulsory reporting of accidents by drivers. These driver reports, in most cases, give the cause of the accident from the driver's point of view, but the pedestrian gets no opportunity to state his views. However, taking these accident reports as they stand, and without giving the pedestrian a hearing in most of them, we find—and I again quote the figures of the National Safety Council—that nearly one-fourth of the pedestrian deaths in the nation last year involved pedestrians who were doing exactly what our opponents claim they do not—crossing properly at intersections. Many pedestrians were struck down as they walked or stood on the sidewalk.

Why did not our opponents tell you of the hours of the day during which the majority of pedestrian deaths occur? Because they know that this would be a further indictment of the motorist. I will tell you that 52 per cent of the pedestrian deaths occurred between 6:00 P. M. and 12 midnight—the dark hours. And despite the fact that there are far fewer pedestrians on the public highways during these hours than in daytime—drivers took a little more than half their toll during this time. The reason for this high frequency after dark is found in the experience of New Jersey during the first year of the compulsory inspection law. Almost one-half of the registered vehicles of the state were rejected on the first inspection because of mechanical defects, and

50 per cent of these defects consisted of faulty headlights.

Both of our opponents have mentioned in glowing terms the recent poll conducted by the American Institute of Public Opinion. The result is further proof of how rational the pedestrian is. The typical answer given by the average pedestrian was "I am against jay-walking. I suppose I do it myself, but if there were strict laws against it, I'd be a lot more careful." But this very rational attitude on the part of the pedestrian presupposes a rigid control of the driver, and until the driver is brought under control, a rigid pedestrian law will be unenforceable.

We have heard of the pedestrian who steps from behind a parked car and is struck. With our parking rules adhered to more in the breach than in the observance—the vehicle from behind which the pedestrian walked has many times been parked on the wrong side of the street, or double parked, or quite possibly parked in a way that obstructed a crosswalk. Yet, because

a pedestrian walked from behind it, he is charged with attempted suicide, and the driver of the illegally parked car does not enter the picture.

Our opponents demand to know what the pedestrian knows about stopping distances and the physical laws of motion. I demand to know what the average driver knows about stopping distances. By far, the great majority of drivers arrested for speeding, frankly admit, ignorance of their speed. They were not looking at the speedometer!

Despite the fact that the driver with a few drinks is more of a menace on the road than is the inebriated driver, in many cases, in order to get a conviction for drunken driving, it is necessary to prove that the defendant was unable to stand on his feet. Ability to stand unsupported sometimes seems proof of competence.

These facts that I have presented can lead to only one conclusion! That the motorist is responsible for the vast majority of pedestrian accidents!

Practical Pedestrian Enforcement in States

By CAPTAIN T. N. BOATE

Chief, Traffic Division, Pennsylvania Motor Police, Harrisburg, Penn.

It should be understood at the outset that "enforcement" does not necessarily mean arrest and punishment for some violation of the law. The more sensible interpretation of this term, especially as applied to the pedestrian and his relation to the moving vehicle, is that of obedience to requirements requisite to the adequate protection of the person travelling afoot.

Solution of this overwhelming problem by pedestrian enforcement, which may be classed as direct police action against an offender, education in all of its ramifications, and highway construction and design, has been blocked by age-old principles involving the psychological factor of "right of way." It is argued that people travelled on foot over highways as a matter of right, long before the advent of the automobile. Travel by this means is still both necessary and desirable. Consequently, there is a natural inclination by the pedestrian to move about entirely free of restraint, resenting and disobeying, either willfully or as a matter of indifference, all rules of conduct promulgated for his safety.

With this kind of a background the factors comprising our problem seem to be:

1. Rapid increase of truck and automobile traffic by the millions.
2. Increased speed of motor vehicles in both urban and rural areas.
3. Gradual acclimation of the pedestrian to the automobile which, in addition to a natural resentment of this encroachment on his rights, is slowly resulting in a careless disregard of the potential danger of exposure to motor traffic.

For relief from the devastating consequences resulting from this condition the police are looked to for a major role. Are police forces generally prepared to meet this problem? Have they met the prevailing conditions, as the principal agency for protection of the public square? And, finally, have they done something about it that has produced results? The record speaks for itself. While there have been great and productive efforts put forth, by police forces throughout the nation, frankly, there is an abundance of room for improvement. So,

in this brief discussion, let us look to our weaknesses and see what can be done for improvement.

It has been my observation that police forces in the role of street and highway traffic regulators lack coordination. Further, there is a marked tendency to seek the shelter of comparison by pointing the finger at other municipalities with records as bad, or worse, than your own. Battles have never been won by finding excuses for reverses, or, as we have heard so often lately, retreating to prepared positions. These things only tend to complicate the issue. Let us face with resolution the problem existing in each of our jurisdictions and insist upon the state taking the initiative by properly preparing and making available a sound plan of action which, when tried and proven, shall not be deviated from, excepting for improvement gleaned from experience, until our objective of proper pedestrian regulation has been achieved.

A Cooperative Plan

My conception of such a plan revolves around cooperative efforts and sound basic planning in which every city and state will immediately undertake a comprehensive program of pedestrian accident prevention. With the motor vehicle accident fatality experience being 50 per cent and upwards pedestrian, the highway safety program must be largely centered around this all important factor. We are told that, in general, the pedestrian problem is more acute in cities than in rural areas. Thus, however, by no means lessens the responsibility of the state police force to maintain an adequate plan for pedestrian protection and control. A long range statewide program should include:

Leadership. The state police should assume the initiative by advocating a more comprehensive pedestrian protective program.

Statistics. Devise and maintain a system of gathering accident case history quickly. Information designated to form the basis for police action, as in all other lines of activity, must be not only accurate but fresh. The remedy indicated by analysis of statistical data must be applied quickly to be effective.

Accident Analysis. Make a thorough analysis of all motor vehicle accident fatalities and distribute such information to police forces throughout the state. Such an analysis should completely localize the information made available. Local police officials

may be interested in what the other fellow is doing but they are more particularly concerned with their own problems.

Coordination of State and City Police Forces. In the solution of the pedestrian problem, coordination of all police forces is an absolute prerequisite to success. This essential cooperative effort is not, however, always immediately forthcoming. Under such conditions, success is sometimes obtained by enlisting the aid of motor clubs and other organizations interested in highway safety, to prevail upon local authorities to cooperate by providing increased concentration on pedestrian protection and general traffic law enforcement.

Selective Patrol. To utilize accident information fully as a basis for highway patrol activity, it is necessary to study carefully the accident experience on any given highway and first arrive at the number of hours of daily coverage required to provide what may be termed "ideal police coverage." This having been done, assignment of officers to cover such highway by patrol in four or eight hour shifts as a permanent detail will bring the most satisfactory results. Under this system responsibility for proper policing of sections of highway found to have a high accident density may be delegated to particular officers. Since it is plain that such officers have been given the responsibility of accident prevention on their patrol, they will put forth their best efforts. This is better than the common practice of assigning an officer to a different patrol each day.

Selective Enforcement. In general, the rural pedestrian problem involves four principal conditions: The intoxicated pedestrian; the pedestrian who walks with traffic; the pedestrian walking along highways during hours of darkness without a light and wearing dark clothing; and school children walking along the highway while en route to and from schools. The rural police officer may afford proper protection for such pedestrians by taking into custody persons found to be walking along highways while intoxicated and to detain them until sober in the interest of their own safety, to urge all persons to walk toward traffic when walking along a public highway, to educate pedestrians walking on highways during hours of darkness and to be present in the vicinity of schools during hours when children are en route to and from their homes. In this connection it would not seem far amiss for the police offi-

cer to visit homes on patrol and drop in on school assemblies for the purpose of pointing out, specifically, existing hazards in the immediate neighborhood and to discuss those things which are important for pedestrians to know.

Legislation. To give proper effect to the above matters of enforcement it is considered advisable to obtain legislation prohibiting the walking on or along highways by persons under the influence of intoxicating liquors. This condition may, of course, be proceeded against without specific authority in the vehicle code. It is believed, however, that the mere fact such a prohibition is contained in the traffic laws curtailment would be effective, to some extent at least, without enforcement. Likewise the manner of walking on highways and other requirements for pedestrians should also be specifically covered by traffic laws if definite action is expected to be obtained uniformly throughout the state. Legislation of this nature is often objected to on grounds of regimentation, arguments being advanced that pedestrians should be given precedence over vehicular traffic and that their ancient right of free movement should not be interfered with. This feeling on the part of some people is well illustrated by the age group accident fatality record from which we find that the pedestrian over 50 years of age is frequently the victim of motor vehicle accidents. Thus, states which have not already done so will unquestionably on this basis eventually adopt legislation along these lines and it is believed that the sooner this is effected the more quickly our program for pedestrians will reach a state where a substantial decrease in the death toll will be reached.

Engineering. We have found that the police can effectively co-operate with the traffic engineering division of the department of highways by being constantly on the alert and making available the result of studies of highway conditions and bringing about the erection of warning signs, designation of pedestrian crosswalks and illumination of sections of highways having a high pedestrian traffic density and where otherwise found to be most needed. In this respect it is believed that states which include in their uniform sign system a sign directing pedestrians to walk against traffic have effectively controlled this phase of pedestrian regulation on rural highways.

Publicity. On the theory that the accident problem is essentially a local one, it is believed that studies made of traffic conditions for the purpose of effecting a reduction in the accident density should also be dealt with as a local problem in making news releases. Studies of this nature confined to county areas have proved to be of wide public interest and readily accepted by local newspapers. When a traffic officer is assigned to study conditions in any particular area the purpose of such study should be immediately publicized, as well as the results and recommendations. This will make the public aware of the hazards on highways in the immediate vicinity of their residences and should have much to do with bringing about increased caution when driving on highways found to be unusually hazardous.

Accident Facts. The police cannot effectively participate in a highway accident prevention program unless they have complete information on the current experience from which the "how, when, where and why" of accidents that are happening may be determined. In this respect monthly or yearly reports of accident concentration are helpful in the control of highway patrol coverage and formulation of selective enforcement policies if such information is reasonably well localized or restricted to areas covered by police substations. This is true because accident experience of this nature, embracing as it does some evidences of regularity, traffic control and regulations may be planned in advance by the police to meet such conditions. On the other hand, to combat effectively changing conditions of a hazardous nature, detailed information immediately available is absolutely necessary as a prerequisite to applying the proper remedy in time to prevent the development of a condition, which has already resulted in one or two fatalities, from becoming a major disaster.

The need for a rapid and more complete reporting of accidents has been met and solved by some police forces, through the medium of a system of reporting within the police force. This embraces a semi-weekly or weekly check-up on key sources of information to obtain essential accident information for immediate transmittal to a central collecting agency. Here the accidents are analyzed by a staff of experienced officers,

who, in addition to being qualified to fully utilize information furnished, have access to all available information on existing conditions. They are, therefore, in a position to pass on the relative importance of data received.

The success of this system rests with the ability of the police force to obtain all of the information available on accidents by frequent contact with every possible source of information, such as police forces, sheriffs, coroners, agencies for gathering vital statistics, states' attorneys and newspapers.

This form of procedure, even if confined to a study of accident fatalities only, places the state in a position to report on accident fatalities quickly and accurately. We know this has not always been true in the past. It also provides a means for prevention of accidents by: Better police coverage of danger spots, which cannot be anticipated by a study of accident trends, but which can now be met because of the speed and completeness with which accident information is furnished, and increased educational value of publicity on accident facts.

Practical Pedestrian Enforcement in Cities

By INSPECTOR B. R. CALDWELL

Administrative Division, Los Angeles Police Department, Los Angeles, Cal.

Discussion of this subject seems to fall into two parts: What we have in the way of pedestrian enforcement, and what we should have, as determined in part from a recent survey made of our "walking dead."

We have, in Los Angeles, a paradoxical situation. It is alleged on the one hand that we enjoy a reputation for pedestrian traffic law observance. Yet, an outlandish and inexact number of walkers are killed each year—with little abatement in sight. A brief history of two main factors in this observance may explain the paradox. One factor is the pedestrian obedience of regulatory devices. The other is the observance by motorists of the pedestrian's midblock crosswalk privileges, in our central traffic district.

As long ago as 1921, an ordinance became effective requiring traffic signal observance by the pedestrian. Los Angeles did not make the mistake of attempting immediate application of such a provision without some preparation. A thorough painstaking publicity campaign was conducted. A strong appeal was made to public sportsmanship, together with reference to possible ridicule. Every human factor was given consideration. Then, when the effective date for the legislation came, the publicity was intensified. Offenders found their pictures in the morning papers depicting them in some ungraceful or dangerous situation; some classic examples of idiotic facial expressions, ridiculous, absurd and undignified postures, and stupid walking habits were

printed. Amusing cartoons were published of the unsafe practices and the personalities involved. Thus the public was shamed, caajoled and jollied into reception of a restriction which might very easily have caused rebellion. There was almost immediate and universal compliance with the new regulation.

A Bad Experience

A neighboring city recently attempted to enforce a jaywalking ordinance which had been in existence since 1926. No warning was given and no preparation was made. The unfortunate officials of that city soon had a "sit-down" strike on their hands! Pedestrians sat in the middle of the streets and defied motorists and officers to do anything about it! Those cited gave fictitious names and addresses, and police efforts came to naught.

In Los Angeles, however, after the first success, the full effect of the new measures was guaranteed by constant vigilance coupled with enforcement. Intersection officers are frequently reminded of this phase of traffic control. Now, when a pedestrian proceeds across an intersection against the signal, he meets with a shriek from a police whistle; a warning signal from the officer; scowls and horn blasts from the motorists and surprised stares from other pedestrians.

One result has been that during 1939, it was found necessary to arrest but 73 persons for such violations. Those arrests were for the most part by citations. It is sincerely believed that enforcement of this kind is

doomed to instant failure in the absence of carefully laid plans for developing a favorable public opinion or sentiment or consensus. The public must be led gradually to accept the enforcement and the reasons for that enforcement must be made readily apparent.

The second factor, in pedestrian control in Los Angeles exists principally in the central traffic district. The blocks of the north and south streets running through this district measure about 660 feet long. It was deemed unreasonable to expect the walker to proceed to the intersection from midblock, whenever he wished to cross the street. Recognizing a human factor, mid-block crosswalks were established and publicity was directed chiefly to the motorist respecting his duties at such locations. The walkers were not ignored, however. An appeal was made to them not to arbitrarily monopolize this new convenience at the expense of the drivers. It is at present refreshing to observe motorists almost un-failingly stop to permit those on foot to cross. So it is that during the time when police officers were guarding the downtown intersections, we find that the death rate was negligible. But let us look briefly at the other side of our paradox.

During 1939, about three out of five (58.6 per cent) of our traffic fatalities were pedestrians, following a national trend. Of those 286 walkers, we found that almost a third were killed within a two and one-half mile radius of Seventh and Broadway, the accepted center of the principal traffic district. This area comprised less than 20 square miles, about 4 per cent of the total area of Los Angeles! Yet, this same area in this imaginary two and one-half mile circle embraces the greatest concentration of signal control devices and foot traffic officers in the whole community. Most of the deaths occurred, however, after dark when the officers were no longer on duty and many of the signal systems had been shut down.

To go on with some of the devices employed to reduce pedestrian hazards. One hundred and ten pedestrian tunnels have been constructed in the past few years, yet on one street with a particularly bad auto-pedestrian experience, it was found that the tunnel was not used. The location was at the crest of a curved, paved double hill near a grade school. The youngsters were surviving because they used the tunnel. The

adult victims did not. Almost 100 per cent of those killed were feeble, and dressed in the darkest clothing.

In another area having a bad experience, we found many of those struck were drunk and had emanated from bars in the vicinity. Action, taken under the alcohol beverage control act against the bartenders as well as against the drunken pedestrian, was found unusually effective.

Another excellent plan consisted of mailing a safety card to all those receiving aged aid assistance. Sixty-five thousand such appeals were mailed, all to persons 65 years of age and over.

A weekly radio program is conducted in the manner of an open forum whereby listener participation is encouraged. A considerable portion is utilized in discussing the pedestrian problem.

A new appreciation of traffic in relation to police work is taught to our "In-Service" training classes in which two per cent of the sworn personnel attends weekly. Results here have been more than satisfactory.

Where there is no carry-over or officer guidance, or where there is a prevalence of signal disobedience, an old but effective device is used. A roving four-man squad of foot officers patrols key intersections issuing citations and warnings and discouraging unsafe habits of both the pedestrian and the driver.

Some years ago, and up to last year, a mobile sound car patrolled those areas with poor pedestrian observance, calling attention of all within hearing to some violator.

Weekly releases of safety suggestions, tips, and relevant traffic statistics are made to some 300 newspapers and radio editors throughout the county.

"What We Should Have"

Now as to what we *should* have in the way of pedestrian enforcement. At the outset, I suspect we must all confess that we have been "shooting in the dark" in this matter. We tell each other it is serious, wag our heads ominously and proceed to "pass the buck." It strikes me that we need to know a great deal more about our pedestrian and his habits than we now know. We have already amassed a great fund of information about the driver, but little has been discovered about the man on foot. A

beginning in this direction has been made in Los Angeles.

National records indicate that the first few steps taken by the pedestrian into the street are the most dangerous, yet our recent survey indicates that he had reached an average of better than 23 feet from the curb before being struck down. This occurred on a street with an average width of 56.5 feet. This makes us wonder about self-serving reports by drivers to the effect that the victim loomed up in front of them suddenly from behind a parked car! We found further that we had a composite pedestrian about 52 years of age crossing or walking after dark on a composite street paved with asphaltic cement or asphalt in 87 per cent of the cases; the kind of pavement which has a very low light reflection factor; lighting was uniformly poor after dark. He was, in 96 per cent of the cases, wearing dark or medium dark clothing. In a large proportion of the cases, he was killed in his own neighborhood, where he should have been familiar with all the potential hazards. In nearly three out of five cases, he was struck at an intersection, and in a business district. In but 8.7 per cent of the cases did he have a driver's license. In 97 per cent of the cases the weather was clear. In 74 per cent of the cases he was struck after dark.

With these and many other suspected factors in mind what might we conclude as to enforcement possibilities in the future?

The average Los Angeles shopper comes into the central traffic district and obeys signals and motorists yield the right of way to him when he wishes to cross in mid-block. The same shopper returns to his own neighborhood and proceeds across an intersection with the assurance that his right of way will be yielded by the motorists. They did so when he was downtown—why not here?

There is a carry-over of this understanding and action into the outlying areas. The driver, when approaching an intersection seems to expect to be allowed a free passage. Having seen pedestrians use crosswalks in other areas, he does not expect to find a walker suddenly in front of him in the middle of the block. A recent check of average speeds in the above-mentioned two and one-half mile area shows that there is a variation of from 13.5 miles per hour to about 22 miles per hour. This would seem

to indicate that it is not speed alone which is killing our pedestrians. Furthermore, it would not seem altogether feasible to use numerous officers for speed enforcement in this area where speed was not so great a factor.

Examination of the reports shows that violation of the pedestrian right of way is most often the principal factor. This jibes very closely with the study of the points of impact which showed that the pedestrian was, in three out of five cases, in or near the center of the street. With this thought in mind, a check was made of citation experience. It was found, as is so often the case, that most of the enforcement was for driving through stop signs, running stop signals, and speed. Running through a boulevard stop, for example, was responsible for a very small percentage of collisions in 1939. Compared with the number of convictions for such a violation we found a ridiculous enforcement index.

Driver Responsibility

I recommend that more attention be given the matter of yielding the right of way to pedestrians. We found that our officers write an average of 40 citations per week for such violations, whereas a decent index would indicate the necessity for at least 200 or 300 per week. I contend that simply to raise the over-all enforcement index without regard for the fatal violation is evading the issue and our responsibility. After all, we must admit that the pedestrian does lack that essential judgment of approach speeds; he very often has not had much or any driving experience; he is not familiar with driver problems and limitations; he does not compensate for his own limitations. Therefore, it is up to us to afford him some measure of safety by more stringently controlling the drivers at those fatal points indicated.

Next, high collision frequency "after dark" shows the need for more men at that time. Many traffic officers at present assigned during the day to intersections and to the enforcement of parking regulations could be reassigned to four-man roving patrols to attend to the hazardous left-turn movements, failure to give hand signals, and right of way violations.

A third recommendation would be more extensive use of mobile sound units to aid

the above-mentioned foot patrols at strategic points.

A fourth recommendation would be to utilize more fully the possibilities of regular radio car patrols. They could be assigned to patrol, in full view, those streets carrying heavy traffic during peak hours.

A fifth recommendation would be to publish and distribute a well designed pamphlet to every resident in each geographical area, calling attention to pedestrian hazards and driver responsibilities. These could be distributed by the radio car officers between calls over a period of weeks, or by service groups from high schools located in the above areas.

A sixth device would be a rather long-view program involving adequate street lighting. This of course is not a police problem, but by directing significant information into the proper channels, departments can do much toward ameliorating our highway "blackouts." Much money is spent to make roads smooth and to remove many hazards due to curves, but a mere pittance is expended to enable highway users to see a clear way ahead. Much of the former objection to expensive lighting installations has come because the major part of the costs would accrue to property fronting the highways so affected. Studies show, however, that car-mileage on these fatal streets is extremely high, and that the users are not necessarily indigenous to the district. Where such installations have been made in Los Angeles, there was a drop in collisions of 78 per cent, and a 92 per cent drop in fatalities.

A seventh recommendation relates to

fingerprinting and licensing of pedestrians as a device to make them more aware of their responsibilities, and to make enforcement more effective. Harking back to the unfortunate experience of the neighboring city in their pedestrian program, such a plan would preclude giving fictitious names, and would serve many other enforcement purposes.

The eighth recommendation is to encourage more detailed analysis of our pedestrian experience. We should know more about where the pedestrian came from. What kind of traffic regulation training did he have prior to being struck? Did he come from a small town or large metropolitan city? It might even be significant to discover his work and play habits; his physical agility; his mental condition; his occupation; his economic status and other factors tending to preoccupation and inattention.

In conclusion I should like to present the matter of popular misconceptions and propaganda disseminated by well-meaning but perhaps ill-advised authorities. We have found many persons who believe that vehicles can "stop on a dime," that certain tires are more effective than others, that certain brakes are superior, and other glowing references to miraculous performances. Abiding faith of the pedestrian in these alleged abilities is, we can't help but believe, a factor in their sometimes fatal false sense of security. Certainly it is no satisfaction to the victim to have proven someone a fantastic liar. Police authorities can assist in debunking many such popular misconceptions in the public mind.

Information Wanted

The concluding feature of the city and state police group sessions was conducted by Professor J. L. Lingo, Director of Public Safety Institute, Purdue University.

The program consisted of two-minute answers to practical enforcement questions by a board of officials comprised of the following:

H. W. Johnson, Superintendent of the Traffic and Safety Division, Kansas City Police Department.

Lieut. Franklin M. Kreml, Director of

the Safety Division of the International Association of Chiefs of Police.

Inspector B. R. Caldwell, Administration Division, Police Department, Los Angeles, California.

Daniel G. Reynolds, Director of Public Safety, Miami, Florida.

Lieut. Kreml was asked "Should all accidents, even the most minor when there is no damage, no injury, and apparently no serious violation be reported? This question asked with regard to time lost by officer of

accident bureau recording such accidents when no apparent useful information can be obtained from such reports."

Lieut. Kreml answered "Ideally, all accidents where there is damage or injury, regardless of the degree of severity, should be reported. As a practical matter, realization of this idea is of course impossible but effort should be made to secure the most thorough reporting and investigation of accidents. Certainly many minor accidents which would thus be reported would not aid much in revealing need for various types of accident prevention work, but it is unsound to draw the reporting line at any minimum severity level. Severity is not the basic criterion of the importance or significance of the accident and drawing such a line tends to discourage the reporting of many accidents even above the minimum level. It is thus good insurance in the interest of thorough accident reporting to take any minor reports, even though they may have little value or significance, so that the greatest possible volume of accidents will be reported."

Director Reynolds was asked "Should not the arrest and conviction of a drunken pedestrian, when he is obviously jeopardizing himself, be considered a traffic arrest and conviction and be included when calculating the enforcement index?"

Director Reynolds answered "Of course in calculating the enforcement index, it is standard practice to count moving violations only but it would be possible for a drunken pedestrian to be a hazard without moving; that is, he could be lying down in the street."

Inspector Caldwell was asked the question "What are your suggestions for a radio safety program? Do you think three minutes or fifteen minutes is more effective?"

Inspector Caldwell reminded the group that safety programs on the radio are in competition with other types of programs. He advised: "Try to use device on air which will stimulate listeners to some kind of action, such as writing, telephoning, or telegraphing; try to obtain time on large station at a favorable hour; avoid inane platitudes; make script spontaneous, natural, reasonable and avoid abstractions; supply known measurements, actions and operations; avoid time conflict with popular comic program; avoid

dramatic programs unless fully equipped for production in competition with best on the air; use interviews sparingly; inject human element by using names of people writing for information, safety material, or reporting some condition."

Inspector Caldwell listed the following programs which are used by the Los Angeles Police Department:

1. "Traffic School of the Air"—educational; questions and answers on traffic law; discussion of road rules, etc.

2. "Step On the Gas!"—interviews with racing drivers; their lives and ideas on traffic law and safe-driving practices.

3. "Traffic Interviews"—talks with well-known radio, movie and civic personalities.

4. "Traffic Mix-Up of the Mis Family"—the average American family in traffic; strong human interest; dramatic.

5. "What's the Answer?"—Another quiz program, using traffic questions for material and commercial organization drivers as competitors.

6. "Voice of Safety"—listener queries read and answered; short dramatizations of local traffic incidents.

7. "Spot Announcements"—One minute announcements sent to stations just before some outstanding date, holiday, or public event. (Christmas, Armistice Day, Labor Day, etc.)

8. "Traffic Tribunal"—Listeners' questions, complaints, suggestions and requests read and answered over air. Serves as clearing house for "pet-peeves," hazardous locations and conditions. Latter referred to proper agency for action. Copies of local laws on traffic offered free to anyone taking trouble to write.

Inspector Caldwell added: "The objectives of police agencies engaged in radio activity seems to be two-fold. One, to increase the amount of attention devoted by average listeners to traffic problems; and two, to 'sell' police service. In general, any device which will serve to achieve those objectives should be valuable where facilities exist for such activity. Listeners may not remember specific items discussed on such radio programs but they do tend to retain a favorable impression toward a progressive, continuous program of traffic safety."

"Since the same amount of care and research must be given the program which emanates from a small station as that from a large one, every effort should be made to establish a contact with major key network outlets. This same principle applies with respect to the time of day and the day of the week. These factors, of course, vary in different localities. Daytime programs might better be directed toward the women of the community; while evening broadcasts might be more general in appeal.

"Audience participation is perhaps the most valuable device. If your program stimulates listeners to ask questions by mail; to send requests for pamphlets, posters, copies of laws, etc., you have been able to overcome a natural inertia among listeners. If audiences go so far as to make written responses, that very activity on their part encourages still further cooperation."

In commenting on the length of program that he would recommend, Inspector Caldwell said: "Our opinion is that the 15 minute program would be more effective in the long run. We have a feeling that the average listener will receive more retainable information in that length of time; longer explanations of traffic problems can be outlined; a greater appeal to reason made on basis of scientific measurements and operations."

"The shorter or 'spot' announcement type of program demands expert writing. They must have an emotional 'punch' often impossible from a practical standpoint at least as far as police personnel is concerned. The effect is more fleeting and unless repeated day after day, a given concept might fall short of its objective. Further, control is not always possible; that is, when 'spots' are submitted to stations, there is no guarantee as to when they will be used. On the other hand, if a large key station would 'plug' your announcement day after day immediately following a very popular news broadcast or 'strip' program, the shorter type of program would conceivably be much more effective than the longer informational type. Another factor is that 'spot' announcement time has a high commercial value and most stations have all available time sold out, at least at favorable times of day or night."

"All in all, then, considering opportunities

and demand and considering available police time devotable to such long-view educational work, we must conclude that the longer type of program is more effective."

Lieut. Kreml was handed the question: "Should every violator of any regulation be summoned or arrested?" He answered: "In theory, every violator of any traffic regulation should be summoned or arrested. In practical enforcement, however, policies modifying this theory to some extent are both necessary and desirable. In the first place, the principle of selective enforcement, generally recognized as highly desirable, arbitrarily requires a certain degree of concentration on leading violations at the times and places of their most frequent commission in connection with traffic accidents to the partial exclusion of other less serious aspects of the violation problem. Secondly, some degree of tolerance above the letter of the law is frequently desirable in the interest of making enforcement adequately reasonable and permitting officers to be certain of the commission of the violation. Thirdly, it is also a sound policy where enforcement has not in the past been very strict to gradually tighten up control, rather than to suddenly switch to a policy of adhering to the letter of the law. Finally, experience has shown that many borderline and minor offenses can be effectively dealt with through the use of warnings. For these reasons, it may be better, as a practical matter, and the purposes of enforcement are often served adequately by policies which depart somewhat from the theoretical principle of letter-of-the-law enforcement."

Director Reynolds received the question: "Do you advocate re-examination of drivers at periods, say every three years? Why? If so, what period do you suggest?"

He answered "Yes, mainly to have some control for the aged drivers. We all realize that drivers in the upper age groups can lose their hearing or eyesight in a short time. In order to obtain a start on this re-examination of drivers it is suggested that they be re-examined every three years. Another suggestion and one that we are trying out in Miami is that a driver after he reaches a certain age must be examined every year when he applies for renewal of license. If this applied against all the age groups, a majority of our citizens might think this too harsh so we are trying it only against the older drivers."

Lieut. Kreml was asked if he felt that the same basic enforcement methods are equally effective in both city and state police work. He said, "Generally speaking, the same basic enforcement methods are equally effective in both city and state police work, although some variation in detail and execution of enforcement activities is often necessary. For example, the same degree of specialization of traffic law enforcement patrol work is not possible in a state police department where every man must do practically every type of police work. In city departments, a special group of traffic patrol officers can be created. This requires some variation in selective enforcement planning and execution. However, with respect to such general matters as enforcement policies, tactics of patrol apprehension and securing of evidence, the general principle of selective enforcement, etc., the same enforcement methods will apply. It is a matter of slight variation as between cities and states, with the same general principles and objectives in mind."

Inspector Caldwell was asked a very controversial question, "To what extent should police traffic cars be marked? What about white cars?"

Inspector Caldwell: "Police traffic cars, if used for the primary purpose of traffic law enforcement, should be marked in a full distinctive manner. The word 'distinctive' should not be confused with the word 'conspicuous' although a conspicuously marked car for traffic enforcement would not be objectionable."

"It is desirable, at times, to have inconspicuous or non-distinctive marked automobiles employed in traffic patrol for definite and specific purposes, not entirely related to traffic enforcement regulations. Where the purpose of the latter is primary, any means used to call attention to the use of the automobile is advisable. In some states, both officers and their motor equipment used primarily for traffic law enforcement are required by law to be distinctive in appearance, and here there is no choice. In many places where enforcement appeared to be unusually lax, it was discovered that uniformed patrol officers, in plain, unadorned automobiles, were permitting all manner of violations in their actual presence. Later, when patrol officers were patrolling in distinctively colored cars, this form of neglect

was so apparent that official action could not be neglected."

"It was also learned that former habits of snatching a few minutes of sleep on a quiet side street or visiting for an unusual length of time in questionable places, could not be done without exposure. This alone was a decided improvement in Los Angeles and is felt to be justified; sufficiently so as to encourage making nearly all patrol cars distinctive."

"The chief value of distinctive colored cars is largely psychological and Part 2 of this question can be answered in this respect. The full psychological value is achieved only when the impression is created that a far greater number of machines are on patrol than are actually available. White cars are considered excellent in this respect. In one city where less than thirty well marked automobiles were being utilized for traffic patrol, an inquiry was directed to several organizations by a member of an official City Board, regarding their estimate of the number of distinctive colored automobiles on patrol, and the answers ranged from 75 to 500."

"Action may be taken by officers in well marked automobiles and all passing drivers are conscious of the event. Where the same action is taken by officers in an inconspicuous car, it will probably escape notice. Concentration of the distinctive type of vehicles for test purposes on certain streets has resulted in extreme favor of the well marked vehicle. In cities with a tremendous area, it is believed the need for distinctive colored automobiles is even greater than in those cities with a concentrated area."

"In some places a reduction in the crime rate has followed marking autos quickly recognizable as a police vehicle. One reason being the ready volunteering of essential information by the public."

Lieut. Kreml: "I don't believe any arbitrary answer can be given on the question of the desirable degree of conspicuousness in traffic police cars. The idea of very conspicuous cars is supported by the principle that the presence of police has in itself a deterrent effect on violators, and that the more conspicuous the car is, the more readily drivers will recognize its presence. However, this deterrent effect is necessarily proportional in effectiveness to the number of patrol units and the consequent frequency

with which drivers are under supervision. If, as is generally true today, there are in an area so few patrol cars that the average motorist is rarely under direct police supervision, there is serious question as to the value of the deterrent created by the presence of the police.

Lieut. Kreml added: "Certainly it would be desirable to have enough patrol units to prevent violations without the necessity of a large volume of arrests, but since this is not generally possible today, we must, as a practical matter, recognize that some more effective deterrent than the mere presence of the officer must be created and this is possible only with a less conspicuous car than one which is all white or otherwise similarly made conspicuous to an extreme degree. At the same time, it is desirable that police cars be so marked as to be recognizable at close range, so that there may be no question as to the identity of officers when stopping a car.

"Persons seeing a police car at close range

should be able to recognize it and thus be impressed with the fact that there is patrol supervision. Therefore, I believe it desirable that a compromise be followed in marking police cars by marking them so that they are neither extremely conspicuous nor extremely inconspicuous. This is usually best accomplished by lettering or other devices on the sides of the car."

Lieut. Kreml was asked, if in his opinion, Chicago's use of neon signs on cars was practical. He answered: "I believe the foregoing comments provide an adequate answer. A car thus marked may be regarded in the class of quite conspicuous police vehicles and the practice is justified only if sufficient number of cars are available to keep traffic under almost constant supervision."

Inspector Caldwell was asked for his opinion and he said "I believe Chicago's use of neon signs is entirely practical, if meant to describe the car as an official police vehicle."

THURSDAY MORNING SESSION

October 10, 1940

Group Session of Traffic Court Judges and Prosecutors

Presiding: JUDGE JOHN GUTENRICH, Municipal Court, Chicago.

Relation of the Pedestrian and the Driver

By JUDGE BEN S. DAVISON

Corporation Court, Houston, Texas

There must be a complete understanding and spirit of cooperation between the pedestrian and the driver, if there is to be a reduction in the heavy toll taken each year in auto-pedestrian accidents.

Why do people jaywalk? Because they think they can save 30 seconds, and because they think they are smart enough to take care of themselves. Other people may get hurt crossing between intersections, but not they!

There's your answer to why pedestrians are killed and injured being out in a traffic stream where they have no right to be, and

where they know they have no right to be. It is not as though all these people were ignorant natives from the wilds of an African jungle who had never seen an automobile before. If they were, there might be some excuse for them. The majority of them are city-dwellers, and all of them, whether from town or country, know the habits and rules and behavior of motor cars.

I hold no brief for either motorist or pedestrian. Where either is wrong, I shall there place the blame. We do have accidents, entirely too many of them, between cars and pedestrians in which drivers are to

blame, but isn't it a fact that we have a tendency, through mass thinking, to blame all the automobiles for all such mishaps? A million readers of a million newspapers shiver with horror as they read a news item of another pedestrian being killed on a city street, and practically every one of them automatically pictures the driver of the car as a Mephistopheles with a pair of horns and a forked tail driving his Chariot of Disaster.

As a judge, I know better. In the first place, virtually no motorist willfully runs down a pedestrian. In the second place, the average driver observes the rules of the road. Somewhere there are usually contributing factors on the pedestrian's part which throw a portion of his own actions into the making of an accident.

Some Heedless Walkers

For instance, in spite of repeated warning, cautions, admonitions, urges and beseechments by the authorities, by the press, by the radio to cross crossings safely—and to remain on the sidewalk until the green light flashes, there are still hundreds of thousands of our highly intelligent citizens who teeter-totter on the edges of the curb or stand boldly on the street surface itself practically daring a motorist making a right or left hand turn to touch them!

Here is distinctly a defiance of both safety and the law. It is decidedly immoral to taunt another person into creating an accident, or through obstructive opposition, cause a perfectly law-abiding motorist to swerve or stop suddenly, endangering his own safety and that of drivers behind him. Yet pedestrians do these things, and then wonder how on earth they wind up in the hospital.

No White-wash Brush

I don't want to preach one-sidedly against the pedestrian, and bearing aloft a white-wash brush for the motorist. But when out of 108 pedestrians who broke the law and crossed between intersections in 1939, nine were killed and 99 were injured, surely there are two sides to this question of auto-pedestrian fatalities.

The individual hears of this case and learns of that, he reads about this one, and

that one, but he does not sit all day long hearing the evidence and the facts, as do we judges. So I feel I am privileged to picture from them to you as I get them—cases after cases and incident after incident.

But it doesn't do any good to tell the whole world about these facts and figures unless we do something about it. What can we do? We often think we have reached the limit in our campaign of education, and then we look at the record and find 32,000 automobile deaths a year staring us in the face.

Child Records Excellent

Occasionally I believe we stress too much the duty of the automobilist and not enough, the duty of the pedestrian. We are beginning to do pretty nicely in our school system, and I am rather proud to say modestly in Houston we have gone a long way towards cutting down accidents to school children. But how are we going to reach the grown ups?

These people must be taught somehow. Who is going to do it, and how? Frankly, I do not believe that we have yet found the technique which fits, we have not driven the facts home hard enough and firmly enough to catch the popular attention.

Increase the Tempo

Am I treading on dangerous ground if I suggest that the press, the radio and public speakers become a little more violent with these statistics? Not for a day, not for a week, but year after year.

There are, of course, coincidental activities which must go on. The timing of traffic lights is important. Certainly all streets in a big city don't carry the same loads—certainly at easily located spots there is need for shorter and longer waits between light-changes. But these we must put in the hands of competent traffic engineers who know their business. There are hundreds of things which ought to be done, and are being done to make the city streets safe for pedestrians. And still, my argument's show, I think, we must go farther than this—we simply must teach the adult pedestrian as well as the child in the schoolroom, and the motorist.

Are Traffic Court Cases Different?

By JUDGE LeROY DAWSON

Municipal Court, Los Angeles, Calif.

(Editorial Note: The following is a brief summary.)

Theoretically, traffic court cases are not different, but practically they are very different. They are different because you can't treat the average violator of traffic laws as a criminal. The average violator believes that his past good record should be taken into account, and that he should therefore be treated leniently. Of course, even though this may be the first recorded violation for a defendant, the judge can be reasonably sure that there have been many violations previously for which no arrests were made.

Described at length the fight against ticket fixing in Los Angeles. It was won in relatively brief time with a firm and unwavering policy.

The worst trouble for traffic judges comes from the better elements in the community. The typical attitude in court is "why do you take the word of a common ordinary policeman against that of an honest citizen (or businessman, etc.)?" It is at times difficult

to choose between the word of the policeman and the defendant, and it is true that the judge must check up on the policemen or they will go hog-wild. Nevertheless, the most adamant citizens are apt to be the most in error concerning the layout of streets at the scene of the arrest and other facts pertinent to the alleged violation.

Drivers should be zoned rather than highways. Some people's minds don't work faster than 15 miles per hour.

The judge must handle each case psychologically—must reach the individual and determine his attitude, and then apply the best cure for the faulty attitude. Each violation, whether or not it caused an accident, must be assumed as potentially lethal. The defendant before the court must be assumed as allergic to the safety education current in the community. Only the important cases should be brought to the court, and then enforcement should really apply. Slogan for traffic judges: "Take Your Time, Or I Will."

The Meaning of Speed Laws

By JUDGE H. E. HARB

Municipal Court, Little Rock, Ark.

Under the "Uniform Act Regulating Traffic on Highways," the speed of vehicles is regulated upon a basis of sound discretion, considering the existing conditions which affect safety at the time and place.

The basis upon which the driver shall regulate his speed, and upon which the courts shall adjudge the legality of his speed, is what is known as the "basic-speed rule," stated in section 51 of the Uniform Act: "No person shall drive a vehicle on a highway at a speed greater than is reasonable and prudent under the conditions then existing."

That pronouncement of the Uniform Act is practically a restatement of the familiar rule of civil law as to due care. Upon first consideration, the rule might appear too uncertain in its terms to support a criminal

charge of speeding, on the theory that the driver could never know definitely whether he is complying with the speed law until a court or jury should pass upon the evidence. And in the earlier cases on that question, appellate courts of three of the states held that such a statute was too uncertain for a criminal statute. But the weight of authority early established that such a speed rule furnishes a valid basis for criminal charges of speeding, and it is interesting to remember that some of the states, where automobile traffic was the heaviest and where the legislatures and courts would be expected soonest to arrive at effective traffic regulation, upheld the view that similar statutes were proper bases for criminal prosecutions.

In Arkansas, the legislature has amended the Uniform Act by prescribing absolute

maximum speeds beyond which it is unlawful to drive under any circumstances: 60 miles per hour for all motor vehicles, 55 for passenger busses and half-ton trucks, 45 for trucks carrying up to five tons and having brakes on all wheels, and so on. But these maximum lawful speeds are lawful only when, under the basic speed rule, they are "reasonable and prudent under the conditions then existing." And it may be mentioned that these maximum speed limitations appear to be reasonable for Arkansas in view of the varied topography of our state and the particular type of traffic on our highways. However, the Uniform Act itself contains no absolute maximum limitations upon speed except that under the basic rule they must be reasonable and prudent.

Prima Facie Limits

Then, as a more nearly definite guide for motorists, officers, and courts, the Uniform Act establishes what it calls "prima facie speed limits."

This does not change the familiar rules of criminal law in regard to presumption of innocence, reasonable doubt, and burden of proof. It does, however, make it necessary for the driver to produce evidence of the reasonableness and prudence of his speed when he has exceeded the prima facie limit.

These prima facie limits within municipalities may, however, be reduced by the municipalities, with the approval of the State Highway Commission, at such intersections on the highway as the municipalities may determine advisable, and the prima facie limits at such intersections are the speed limits which are posted on highway signs there. And municipalities may increase

such prima facie limits on highways such as through highways, but even there the municipalities may not increase such limits to more than 45 miles per hour.

The prima facie limits do not relieve the driver, of course, of the duty to retard his speed for intersections, curves, hill-tops, dangerous road conditions or pedestrians or vehicles using the highway, when circumstances require him so to retard.

Where bridges and other elevated structures are posted with signs stating the maximum speeds allowable, proof of excessive speeds on such structures is conclusive evidence of unlawful speeding.

"Authorized emergency vehicles," such as fire equipment, police cars, and ambulances, are exempted from application of the prima facie limit rule when they are sounding their sirens, bells, or exhaust whistles, but the drivers are not thereby relieved of the duty to drive with due care for the safety of other persons and property.

The Act also takes note of the fact that exceedingly low rates of speed may also be dangerous, and it prohibits driving "at such a slow speed as to impede or block the normal and reasonable movement of traffic" except where circumstances require such reduced speed.

The summons or a notice to appear which the officer serves upon a driver accused of violating the speed statute is directed to specify the speed at which the driver is charged to have driven and also the prima facie speed limits applicable to the locality.

The Uniform Act specifically provides that the prima facie speed limit shall not affect the burden of proving negligence in civil cases.

THURSDAY MORNING SESSION

October 10, 1940

Group Session on Public Education and Traffic Engineering

Presiding: ROY S. MARSHALL, Vice-President, Seattle Traffic and Safety Council, Seattle, Wash.

Use of Statistics in Public Safety Education

By DONALD G. VAUGHAN

Engineer, Aetna Casualty and Surety Company, Hartford, Conn.

Statistical sources are divided into two general classifications: general accident statistics and data obtained from specific studies.

General accident statistics would include "Accident Facts" published by the National Safety Council, various state motor vehicle department reports, police department reports, data compiled by the Interstate Commerce Commission Bureau of Motor Carriers, vital statistics as compiled by various health departments and the United States Bureau of Census, "Automobile Facts and Figures" as published by the Automobile Manufacturers Association and similar reports.

General accident statistics are compiled for larger areas, entire states or the entire country. They are more general in their classifications and cannot be used to obtain needed physical improvements. In order to obtain the specific remedies we must go further. What then can we do with this mass of data as accumulated in such publications as "Accident Facts"? That is an answer I have been seeking for several years. I have seen the time and effort that goes into compiling this data the National Safety Council finally presents to us in this booklet. I have wondered whether the expenditure of time and effort is worth while. This has been and still is a questionable subject. For instance, in each community of 100,000 population or over, at least one person spends the greater part of his time accumulating this material. Last year there were 93 such cities that reported. This means that in these larger cities there are at least 93 people engaged the greater part of the year in preparing material. To this can be added all of the work carried on in the smaller communities and in the state departments or other sources of these accident figures.

It means a tremendous amount of work. How much of this is wasted because we cannot or do not do anything about it? For instance, if you should look at Page 91 of the 1940 "Accident Facts" you will notice that it contains direction analysis. That is, the number of drivers going right, left, straight through, etc. It is interesting in-

formation but we do nothing about it. Look at the next pages. Pedestrian Action. What do we do about this? Practically nothing. The next Page 93 shows Highway Characteristics. They are interesting but nothing that we can correct without obtaining further specific information about the particular highways involved. Still this matter is all accumulated for us at a tremendous expense.

You may ask, "Should we do away with this?" I would emphatically say "No." We must know what is happening, how we are doing and where we are going. That is what this record gives us and it also allows us to compare the record with that of previous years. It also lets us know what our record is compared with that of similar communities.

This material could be changed so as to make it more useful; secondly and most important, more use could be made of the information after it is obtained.

Let us take up the first point. Could some of these classifications be changed so that they would be more useful? I believe they can. It would not be much of a loss if some of them were eliminated. Changes have been made in the past few years but this form will have to be continually changed to keep up with our changing traffic conditions and our changing needs for various forms of accident data. Every committee that contemplates such changes has to balance the value gained by such rearrangement against the loss of not being able to make comparisons with previous years. It is very easy, however, for such committees to add details that apparently are desirable and to fail to consider the burden of detail that is being built up for some one else to attempt to handle.

Another thing that we must remember is that there are many inaccuracies in this type of data. Most of the information is based on reports of operators. You know how a driver is always right. His accident report construes the facts so that he is right according to the report. This all goes into the accumulative data. Much misinformation balances out, but in some of these cases the

information obtained in the classification is not accurate.

More and more must we consider the tremendous amount of time and effort that goes into these accident facts. More and more must we endeavor to simplify the gathering of these so as to eliminate insofar as possible inaccuracies and classifications that are used very little. This will then release the people who are working on them so that they can put more time on the specific studies which are more immediately productive of beneficial results.

I was once actively interested in the compiling of this material and did some of the analyzing personally. I felt that the effort expended far exceeded the returns. Since then a number of changes for the better have been made in the forms used for obtaining this information. I still, however, hear complaints that it is a lot of work with little in return. That is why I am convinced that further improvement can be accomplished in simplifying the form.

My second point was that more use could be made of the information after it is obtained. Everyone can go a lot further in the uses made of this material and this will eventually bring the returns everyone has been seeking.

Soon after sending the monthly summary to the National Safety Council, most cities give the newspapers a story on this summary. The data can be mimeographed in whole or in part and circulated to interested agencies such as police officials, school principals, local traffic authorities, parent-teachers associations, etc.

A week after the monthly summary has been published, a second story can be obtained by studying the results and comparing them with those of the previous month, the same month last year, or some similar period.

From this comparison one single item can be obtained such as an unusual increase in pedestrian accidents or a remarkable decrease in bicycle accidents. A story developed around such a comparison is of news value and will receive space in the local papers. This procedure will assure at least two newspaper stories each month.

Radio stations will make use of some of this information in their safety programs or spot announcements.

If there is a speakers' bureau and it is active in furnishing speakers for club or association meetings, these compilations should be furnished the speakers.

Statistics or accident tables in themselves are very uninteresting and are not read or assimilated by the general public. These records, therefore, should be given the publicity man's touch. They should be given eye appeal, if that is the correct term.

Local organizations interested in safety should give considerable thought to the interesting presentation of statistics. How else can you let the general public know your problems?

It is very easy to accumulate interesting and usable material in the information obtained from specific studies. This would include traffic counts, driver and pedestrian obedience studies, collision and condition diagrams, etc. Usually the remedy for a bad situation is found as a result of such studies.

I believe this material if properly used is of extreme importance in finding the most serious accident locations and in applying the most sensible remedies. It is also of use in showing logical reasons for turning down certain requests that are not of enough importance in comparison to the whole to warrant immediate correction.

Recently state highway departments have used vehicle volume counts in allotting expenditures for new road building programs. They have been able to combat political or financial influence by showing the public the logic of making improvements on the highways having the higher vehicle volume and the higher accident frequency.

I have endeavored to gather a few ways of presenting this material that might be of interest to you. On the other hand, you may know of other material that you consider better than that which I show you. You may, however, see some way of presenting data that has not already occurred to you. I believe we should all be seeking new ways of presenting this same old material. Only through such new methods of presentation are we going to reach our drivers and pedestrians.

In starting a revised safety committee and in cooperation with the National Conservation Bureau, we developed a series of charts for a loose-leaf booklet. Here we accomplished a two-fold purpose. First we acquainted the new members with the up-

to-date accident situation and refreshed the memories of our older members. Secondly, we provided these people with excellent material for use in talks when they were called on to give such at our various clubs, etc. Many of our committee members were city officials and these charts presented the accident story to them. Each member was provided with such a book. It being in loose-leaf form, the committee member could keep all his committee material in the book and we at headquarters could furnish him with additional charts if they were needed. We had fourteen pages of charts and tables as follows:

1. Economic loss and prevention expenditures.
2. Pedestrian and motorist fatalities.
3. Pedestrian-residence spot map.
4. Hour of day study of pedestrian accidents.
5. Pedestrian night accidents spot map.
6. Summary of pedestrian fatalities.
7. Chart of fatalities and personal injuries.
8. Driver residence spot map.
9. Chart of personal injuries.
10. List of worst intersections.
11. Spot map of worst intersections.
12. Spot map of worst intersections the previous year.
13. List of worst streets.
14. Five-year spot map of fatalities.

From time to time we furnished additional data such as sheets on "Getting Results" as published by the National Conservation Bureau, studies of certain intersections giving collision diagrams, report on

our measurement of the proposed traffic light installation and other similar material.

Another item we are trying is a one-page sheet each month to interest the officials, committee members, newspapers, etc. We are using this to give the meat of the accident data to date and also to prod officials into action.

Small booklets or leaflets are of extreme value, especially where they can be cheaply printed, and given a large circulation. We recently issued 30,000 of these. Other communities have issued similar leaflets. Accident data is taken from the summaries and made the basis or theme of such leaflets.

Larger charts can be maintained and used to illustrate accident trends or need for improvement in certain areas. Spot maps will show where education and enforcement should be concentrated.

Reports on special studies can be given special attention. Recently we made a study of court cases. We wanted something done about enforcement but needed a report to prove our case. For three months we studied the situation.

Posters both inside and outside should be developed from the accident data.

All possible use should be made of this material in education of the public and in selling public officials on the importance of needed improvements. Without these accident facts you cannot hope to present your case. On the other hand, the gathering of statistics should not become too cumbersome. Only those classifications which will be used later should be accumulated.

How a State Department Can Help Local Communities

By JOHN L. TOWERS

Assistant Traffic Engineer, Illinois Division of Highways, Springfield, Ill.

There are several reasons why a department with statewide organization is in a particularly good position to render aid to local communities:

1. **Knowledge of Traffic Conditions.** Whether the department in question is a Highway Department or Motor Vehicle Administration Department, or other, the background of knowledge gained from such work is a vital aid in applying remedies in individual situations. This is augmented

when the department handles state traffic administration and accident reporting.

2. **Scope of Organization.** Statewide organization assures more uniform application of engineering and educational measures.

3. **Type of Personnel.** Because of experience and special training in traffic administration, which is not available in cities without a traffic engineer, technical service can be rendered to municipalities; also to

counties. However, the type of service rendered to local communities should depend upon the personnel assigned to this activity, both as to size and qualifications.

These reasons indicate that there is not only an opportunity but a responsibility for effective help to local communities; a responsibility as great as for any other of the welfare services.

Some of the aid which can be given to political subdivisions may involve matters under the jurisdiction of the department. In such cases collaboration with local officials promotes interest and an insight into the solution of traffic problems. Much of the help which it is possible to give, however, involves matters entirely under the jurisdiction of local officials. Here the approach must be purely that of an interested and informed friend and every appearance of infringement of authority avoided. In Illinois we have endeavored to give help only to promote local interest in doing the work. Nothing should be undertaken which promotes dependence upon a state agency for performing a local service.

One very useful tool for the promotion of all traffic safety activities in municipalities has been the National Traffic Safety Contest. Enrollment in this by eligible cities gives state representatives an opportunity to promote and assist in the activities upon which this contest is judged. City officials more readily engage in such activities when they are objectively set up by an impartial agency such as the National Safety Council.

The results of enrolling 100 per cent of the eligible cities in Illinois in this Contest and then cooperating with the cities to promote their standing in the contest is evidenced by the awards made. Cities under 100,000 population, where the influence of state representatives is felt most, secured nine out of the 42 places awarded to cities in this population group in the last five years. If awards were apportioned according to population, we would have had probably two or three.

Education

1. **Promotion of local safety councils.** In cities where interest in traffic safety has been aroused and previous work done by department representatives so that acquaintance with, and confidence of the local people has been gained, local safety councils can be promoted with success. A properly organized safety council consisting of quali-

fied men is decidedly the best agency for education of the local public. After its formation continued assistance should be given. Connecticut varies this procedure by having the Highway Department budget a portion of its funds to finance a State Safety Commission. The State Safety Commission then helps organize and service local safety committees or councils. I am informed several other state safety organizations function in a similar manner.

2. **Educational exhibits.** At state and county fairs, city safety shows and automobile shows, worthwhile exhibits can be displayed. This can be done without cooperation of local groups but is more effective when done with such cooperation.

3. **Maintenance of Police Safety Squad.** A small but efficient detail of men can, among other activities, handle requests by local groups for talks and picture shows.

4. **Driver Training Courses.** The promotion of driver education and training courses in the secondary schools is one of the most important activities which can be undertaken by a state organization. However, such a program should only be undertaken with a full knowledge of the work involved and the type of personnel needed. In Illinois we have been fortunate in having been able to start courses in over 600 of the 1,000 high schools. Our program has offered the following services to the schools:

- (a) Supply text material at cost of printing.
- (b) Arrange for special lectures.
- (c) Schedule Safety Squad Officers to show pictures, lecture, and assist with road demonstrations.
- (d) Supply test materials.
- (e) Borrow dual control cars from automobile dealers.
- (f) Supply certificates of award.
- (g) Conduct road tests in connection with state drivers' license examination.

5. **Teachers conferences and courses.** A need arising from the traffic safety courses has been the presentation to teachers from each community of the techniques of teaching the subject matter involved. Toward this end a series of one-day conferences have been held in various parts of the state for teachers and school administrators. Also, courses have been conducted at the five

State Teachers Colleges. This year, the Center for Safety Education of New York University conducted a two-week credit course at the University of Illinois.

6. **Traffic Safety Contest Reports.** Discussion of this subject probably falls more logically under educational activities than any other, since in the end the value of the report is educational. As mentioned previously, we feel that the National Traffic Safety Contest is a useful instrumentality for the promotion of all traffic safety activities, since the annual contest report furnishes a thorough inventory of such activities and shows up the weak spots in the safety program.

Each year our engineers assist the cities in making out these reports. When the analyses of the reports are prepared by the National Safety Council we review these with the local safety committee or city officials so that deficiencies in the safety program may be thoroughly understood.

Enforcement

1. **State Motor Vehicle Act.** A state motor vehicle act is of primary importance to the state as a whole, but a State Act Regulating Traffic on Highways based on Act V of the Uniform Vehicle Code is helpful to local communities in two respects. First, the Act requires the publication of a Manual of Uniform Traffic Control Devices which serves as a guide to communities in the installation of such devices. Incidentally, it assures statewide uniformity in the application of traffic control devices. Secondly, the Uniform Act can be made the basis for drafting a Model Municipal Traffic Ordinance for adoption by municipalities. Such an ordinance can be made much more specific in its recommendations than the more general Model. Department engineers have assisted a considerable number of Illinois cities in adopting an up to date traffic ordinance largely because they had available the ordinance we prepared for statewide adoption which contains provisions of self-

izing that, to handle the many phases of traffic control work, more than casual observation and instruction in the subject are needed. For this reason, Department representatives have been able to stimulate interest among the police so officers representing 60 Illinois cities have attended the Northwestern University Traffic Safety Institute.

3. **Promotion and Assisting with Police Schools.** In addition to giving concentrated, specialized training to a few men in the traffic department, it is possible to bring to the entire police staff lectures on general phases of traffic control. Municipalities occasionally have "police schools" consisting of a week or two of lectures by authorities on various phases of crime detection and control.

4. **Traffic Administration Counsel.** Even after officers have had training, inertia in the police department may make it difficult for the men to develop the type of program about which they have learned. In numerous cases, the state representative finds it necessary to continue assistance in various matters after officers have had the training. These include installation of accident reporting systems, tabulation of accident records, study of accident prone locations, selective enforcement programs, collision and condition diagrams, parking studies, and so forth. Not only our engineers but our Safety Squad Officers render aid to local police. Our officers gain more confidence than engineers in questions relating to enforcement, and local police feel they are talking with men who understand their problems. All of the safety squad have completed special courses at Northwestern University Traffic Safety Institute, and are qualified to give counsel to city police departments. To put the police work on a satisfactory basis, it is recommended that the Chief of the force or some other administrative officer be trained first. Unless this is done, if our experience is any criterion, a great deal of promotional work is necessary to sell the administration on the need for conducting the pro-

communities with a good safety program, but wherever a safety program exists we have endeavored to tie up with it and give the local group an opportunity to introduce it as a feature of their program.

6. **Traffic Dispatching Service.** During the summer months, the State Police, through the facilities of one of the large broadcasting companies, have broadcast information about traffic conditions from hour to hour over busy week ends. These broadcasts tell the motorists the traffic conditions on the more important thoroughfares and urge the motorists to take less congested roads. This, of course, is a big help to local police departments.

Engineering

1. **Traffic Engineering Studies.** As mentioned before, the Illinois Division of Highways assists authorities in making many engineering studies on streets entirely under local jurisdiction. These are made usually to give moral support to officers who have had some special training and are trying to carry out a local program. Studies made for cities on streets under local jurisdiction have included collision diagrams and condition diagrams at high accident locations and analyses for application of corrective measures; speed and volume checks; parking studies; complete analysis of city traffic light systems; street lighting studies; and so on. Most engineering studies are conducted on state routes, but where feasible, city officials are kept informed of the progress of studies, the technique used, and the conclusions arrived at because of the educational value this has along traffic engineering lines. Thus, to officials who have been accustomed to formulate remedial measures on the basis of casual observation and snap judgment, we are able to demonstrate the value of a scientific approach to traffic control and the need for making a correction only after thorough study has shown warrant for the change.

2. **Aid to Counties.** I am informed that

When an analysis is completed, the officials of each community in the county are called together for a round table discussion of the report.

3. **Promotion of the Use of Traffic Engineers.** One of the outstanding weaknesses in many statewide programs has been the failure to arouse sufficient interest among city officials to adopt traffic engineering techniques in dealing with the traffic problem. It has seemed difficult for us to convince city administrations, and this includes a number of City Engineering Departments, that it is just as important to use proven engineering techniques in the operation of their streets as it is to design, construct, and maintain them on an engineering basis. Because of the missionary work done by State Traffic Engineers in the cities in extending help of various kinds, the need for specialized help in solving traffic difficulties is gradually being seen.

There are a number of agencies which furnish good counsel to municipalities which do not have a traffic engineer and do it without charge. Some of these are motor clubs, insurance organizations, the National Safety Council, National Conservation Bureau, and the Highway Department. But such help as these agencies can give must be periodic and cannot include the day to day contact with situations which is needed for proper and timely solution. In spite of all possible help from the outside, each city with any kind of traffic problem should have a traffic engineer or assign the duties of the office to the engineering department.

4. **Training for Traffic Engineers.** During the past summer we canvassed men engaged in traffic work, including city engineers, city traffic engineers, and county superintendents of highways to see what their attitude would be toward attending a four-day lecture and demonstration course at the State University; a surprising amount of interest was shown.

The subjects to be covered are: Intersec-

THURSDAY AFTERNOON SESSION

October 10, 1940

Joint Session with Commercial Vehicle and
Transit Sections

Presiding: E. E. GROVER, Director of Safety and Claims, The Columbus and Southern Ohio Electric Co., Columbus, O., and General Chairman, Transit Section, National Safety Council.

Street Traffic Conditions and Mass Transportation Safety

By GEORGE BARTON

Traffic Engineer, Chicago Motor Club, Chicago, Ill.

I think I express accurately the average motorist's viewpoint in saying that he cordially dislikes the street car and bus. I believe this is a shortsighted policy because mass transportation and private motorists have much in common.

Mass transportation accidents fall into three general groupings; one, accidents peculiar to transit—such as derailments; two, accidents to passengers; three, typical traffic accidents. This latter group, constituting over half of transit's accident problem, has no characteristic peculiar to transit. They are just ordinary right angle or rear-end collisions, sideswipes, head-on collisions with turning vehicles, and so on. Some result from improper behavior by the motorist, some are evidence of error by the transit operator, while others may be attributable to the physical conditions on the street.

If 50 per cent of mass transportation accidents are just ordinary traffic accidents, then both transit and motorists can profit from activities which will eliminate street traffic hazards. This work also will favorably affect transit's other accidents, particularly of the passenger type. I learned a large percentage of passenger accidents occur with the sudden accelerations or decelerations necessary to avoid conflicts. Further, many of the passenger accidents injuries result from the sudden impact when the mass transportation vehicle itself actually comes in contact with other street-users. Therefore, it appears that mass transportation safety is directly related to street traffic conditions.

It is commonly accepted that accidents in street traffic are one evidence of street traffic

inefficiency and this holds true for buses and street cars.

May we agree then, in considering this question of mass transportation safety, not to confine our attention to safety matters alone, but to look a little deeper with traffic efficiency as our concern? In considering concrete cases, I believe I can most readily demonstrate how similar are the interests of mass transportation and street traffic.

It appears to me that there are four general classes of treatment which make for improved traffic flow for both mass transportation and private motor vehicles. In each classification there is work to be done both by the mass transportation authorities and street traffic authorities.

Classes of Improvements

The first class of improvements are those that can be obtained most easily and with virtually no expenditure of money. Two obvious steps that immediately demand attention are enforcement and education to improve driver behavior. Well administered driver license laws work toward this same end. There also are many simple and practical engineering treatments. For example, double parking is one of the greatest obstacles to efficient transit operation, as well as to general street traffic operation. Would not both transit and motorists benefit if the engineers planned an equitable, enforceable parking time limit? On many crowded streets where a free lane for moving traffic is not available between the street car and the autos parked at the curb, it would be profitable to the general public to eliminate parking at least in the rush hours.

When no parking zones are established to provide for bus stops, it is not the bus patron alone who profits. In cases within my experience the few parking spaces sacrificed by the motorist are a good investment in traffic fluidity. Instead of buses blocking moving lanes as they load and unload, the motorist has a chance to move. Another source of annoyance to all of us is the constrictions resulting when vehicles park opposite safety zones, causing motorists to be delayed, who, in turn, hold up street car movements. A better coordination of traffic signals obviously will permit free movement by both automobiles and mass transportation vehicles. If needlessly restrictive signs can be abolished, both will profit. Simple treatments like pavement markings are of decided aid to both. Stop-clearance lines speed street car loading and encourage pedestrian safety. The same is true with marked crosswalks. Street car clearance lines encourage timid drivers to pass when it is safe for them to do so.

This list of work for street traffic authorities includes the ordinary functions carried on today in virtually all our cities. Have we reached perfection in sign and signal work, street marking, parking control, and the like? Most assuredly not, and additional attention to these matters will jointly benefit transit and private street traffic.

While the public authorities are doing this work, there is something transit authorities can contribute. First, they can select and train personnel, just as private car drivers require selection, training and control. Second, just as enforcement is required to regulate the behavior of many motorists, so also additional regulation of transit personnel may prove desirable. Third, could not more transportation agencies look toward the inherent safety of their vehicles just as public traffic authorities are seeking to improve the mechanical efficiency of automobiles through such means as compulsory inspection? I personally have seen many a bus turning across traffic lanes, without adequate mirrors to permit the driver to see where he was going. Buses may lack turn signals. If bus operations call for one of these cumbersome vehicles to cut right across several traffic lanes, isn't it only fair that they be equipped with signals which will tell the unsuspecting motorist what is about to happen?

There are needless inefficiencies of transit

operation, or at least so it seems to me. For example, an unexpected street car stop located in the center of an unusually long block was the site of several pedestrian accidents. When the stop was abolished, the pedestrian accidents ceased, and efficiency was improved.

Second Class of Improvements

The next classification of improvements are those requiring a little more time or a little more money. What is it that traffic authorities can do in this connection?

Make equitable provisions for transit: In one case within my knowledge an entire street through a business district was being redesigned without any thought for bus routes, loading and transfer points, or terminals.

Simple street widening: On many narrow streets a free lane for motor traffic can be provided merely by setting back curbs a few feet at a very reasonable construction cost.

Provide channelization: Both vehicular and transit traffic will be speeded up and safeguarded by channelization projects which fill up confusing street space, confine traffic to apparent and definite lanes, and permit more expeditious signalization.

Install loading platforms: Raised platforms, properly lighted and perhaps fenced, assist in the expeditious loading and unloading of street cars, and avoid the necessity for the motorist to wait until this lengthy process is completed.

Develop off-street storage: The creation of off-street terminal facilities for automobiles in concentrated business areas will reduce traffic delays and confusion for transit and motorists alike.

My ignorance of mass transportation problems makes me hesitate to suggest changes in transit systems; yet to me it seems obvious that transit should consider modernizations comparable to those just suggested for street traffic.

Off-street terminals: Just as street space needed for moving traffic may be provided through storing automobiles off the public streets, similarly traffic flow can be enhanced if terminals for street cars and buses were more commonly provided on private property rather than in the public streets.

Revised operations: A certain amount of "loading" to meet schedules may be unavoidable.

able for both street cars and buses. For my part I believe I have seen this overdone. Better scheduling then suggests itself as being desirable to eliminate exasperating delays, even if it is necessary to make track adjustments to gain that end. A second type of operating inefficiency occasionally seen is the manner in which transit vehicles turn into or across the public streets. In one instance, buses made three left turns around a small triangular shaped block, seriously impeding the traffic when the same service could have been rendered with three right turns if the track layout had been changed. Or as another example, I could point to widened streets on which the carlines are far off-center endangering street car and auto passengers alike.

Third Classification

A third classification of activities designed to further street traffic efficiency may be defined as simple planning. The primary objective of this simple planning should be the segregation of mass transportation movements from street traffic. These two classes of street users, like oil and water, mix with difficulty. For example, a major incompatibility is desired speed of operation. A street car making stops at block after block at best averages a low speed, while the through traffic seeks to maintain a speed two or three times as great. Further, mass transportation by its very nature seeks to serve congested business centers with their pedestrians, parking, loading and unloading, and the like. Such streets as these should never be contemplated as through traffic arteries.

Plans for segregation such as may be considered by public agencies include—

Construction of by-pass routes: In towns large and small, through highways are being taken from the retail district and sent through the edge of the town or are skirting it entirely.

Development of by-pass streets: In many

cities, section and half-section line streets through years of developments have become business and traction streets, while being the only continuous streets across town, they are likewise forced to carry high speed motor traffic as well. Through constructive planning, parallel streets may be opened up or made continuous so that they will attract motor travel, leaving the old long established street free from through traffic.

Similarly, there seem to me to be parallel activities.

Seek a sound balance between mass transportation and motor vehicle use: Even as a representative of the private motorist, it is necessary for me to give recognition to the fact that mass transportation agencies can, if they wish, attract patronage from the ranks of the private motorist. Certainly the traveling habits of the daily worker can be influenced by the type of service rendered by transit. When transit offers faster, quieter, more frequent and cleaner service, some of our traffic problems may solve themselves.

Eliminate duplicating services: Transit authorities will admit that here and there needless duplication of service is rendered by street car and bus lines. In one case within my own knowledge an excellent potential one-way street system two and four blocks from a major car line was needlessly invaded by buses driving some motorists back on to the car line street.

Fourth Classification

Little need be said here regarding my fourth classification in which I have placed long range traffic and transit planning. It may be some day that our transit and traffic problems may be solved—and the conflicts and accidents ended—when our cities are redesigned with street systems of modern design, or with multi-level streets through which traffic is segregated, and when transit is improved with modern units operating through modern structures.

Improved Street Lighting and Accidents

By KIRK M. REID

Nela Park Engineering Department, General Electric Company, Cleveland, O.

This paper is a supplement to that portion of the report of the Committee on Night Traffic Hazards which presents examples of recent night-accident reductions

through improved street lighting. These data, together with those previously reported, show that one-third, one-half, or often more, of the night accidents are pre-

vented where good visibility is provided. On urban streets, and on those portions of highways with high night-accident experience, the cost of providing good visibility by modern street and highway lighting has been found to be less than one-third the losses from the accidents its prevents.

The Program Committee requested that this paper include special attention to the influence of illumination upon four classes of accidents. Generous assistance was received from Hawley Simpson, S. P. Andrews, E. J. Kreh, L. J. Schrenk, E. J. Reeder, and R. G. Jasper.

1. Visibility as affecting intersection accidents, particularly vehicular accidents of the sideswipe and headon types.

The report of the Committee on Night Traffic Hazards presents three examples of intersection accident experience before and after lighting improvements were made.

At three Chicago intersections, inadequate illumination was replaced by sodium-vapor lighting. In the 12 months preceding the installation there were 34 personal injury accidents and 61 property damage accidents at these intersections. In the 12 months following there were 12 personal injury accidents and 28 property damage accidents—a reduction of 58 per cent.

The lighting was modernized at 155 intersections in Saginaw, Michigan. Previously, 46.3 per cent of all accidents at those locations occurred during darkness. Subsequently, the night accident dropped to 31.6 per cent of the total.

Sodium lighting was installed at 25 Los Angeles intersections. Comparing equal "before and after" periods, night fatalities dropped from 12 to none and night injuries from 128 to 15.

In none of the above instances could an analysis of the accidents by types be obtained.

2. Visibility as affecting pedestrian accidents, particularly when boarding or alighting from buses and street cars.

An analysis of traffic fatalities by types has been made in Detroit on 31 miles of heavily traveled thoroughfares. Pedestrian fatalities dropped from 36 to 14 per year when the street lighting was modernized. At the same time, fatalities of drivers and occupants of automobiles dropped from 13 to 4. While the ratio of reduction was higher for car occupants, it is noteworthy

that the most lives were saved among pedestrians.

On a street car line in Indianapolis passenger-type accidents occurred at a somewhat higher rate per passenger carried at night than by day. No information was available on the nature of the accidents nor on the adequacy of the street lighting.

Pending more detailed studies, the report of the Committee on Night Traffic Hazards summarizes the conclusion: "Traffic safety lighting continues to demonstrate its value for reducing certain types of accidents. It appears to be particularly effective in protecting pedestrians."

3. Visibility as affecting falls of passengers boarding or alighting from buses and street cars.

No data could be found having sufficient bearing upon this topic to warrant inclusion.

4. Visibility as affecting collision accidents involving buses and street cars.

A two-year analysis was made of the collision accidents per trip on the Indianapolis car line previously mentioned. The night accident frequency per trip was found to be 8 per cent greater than that by day. A similar study in Elizabeth, N. J., covering all transit operations, likewise showed an 8 per cent higher accident frequency per trip at night. The combined records of 18 bus companies, on the other hand, showed 21 per cent fewer collision accidents per trip at night. Another study, covering street cars only, showed a curve of vehicular collisions which followed closely the curve of number of cars in operation; in fact, the two curves cross four times over the 24-hour period.

From these scanty data, one would conclude that good or bad street lighting has little effect upon accident frequency in transit operation. Hawley Simpson has warned, however, that very minor as well as serious accidents were included in most of the data, and a different picture might develop if the accidents were classified by severity.

Such classification was found possible in only one case; the street car study just mentioned in which the curve of accident frequency followed closely the curve of cars in operation. It was found that the night severity was 40 per cent greater than that by day, based upon cost of claims. In spite of this increased accident severity at night,

operators of buses and street cars may properly be complimented by using better than average care after dark, because the over-all traffic accident severity at night is 60 per cent greater than that by day.

S. P. Andrews, Chairman of the Engineering Committee, Transit Section, reports that his Committee recognizes the incompleteness of most of the transit accident data now available, and is now laying the groundwork for more detailed studies. It would therefore be appropriate to review the information which is needed for comprehensive studies on visibility as affecting transit accidents.

From the standpoint of traffic engineering, most of the "before and after" studies have lacked important details on all three of the major items—the accidents, the traffic conditions, and the lighting. Still less often have collision diagrams been used to depict the accident experience and to facilitate complete analysis. Only an occasional investigator has included figures on traffic volume or has expressed the data in terms of accidents per vehicle miles or per pedestrian crossing.

The information on the lighting has perhaps been most deficient. The usual practice is simply to refer to the accident experience under "old and new" lighting, or "before and after" lighting improvement. Such general verification that better visibility reduces night traffic accidents is, of course, helpful to those broadly responsible for traffic-safety programs. But more definite information is needed.

The need of more quantitative information on lighting in relation to accidents is recognized by the Illuminating Engineering Society's Committee on Street and Highway Lighting. That Committee also recognizes the importance of making safety lighting recommendations more definite and more usable.

Now the Committee is completing a new publication, "Recommended Standards of Street Lighting" which will supersede the Code. The recommendations for each street classification are in terms of the average and minimum lumens per square foot, or foot-candles, delivered to the pavement and to the sidewalks. That is, the premium is properly placed on lighting equipment which distributes effectively a greater proportion of the light over the street and sidewalks.

Safety lighting specification in terms of minimum and average foot-candles, while a substantial step forward, is not considered to be the ultimate basis. The degree of safe seeing is also affected by such factors as the reflection characteristics of the pavement and the amount of glare. "Recommended Practice" states: "Since a primary purpose of street lighting is to provide safe seeing for motorists and pedestrians, the specification of street lighting eventually may be in terms of visibility. Researches now in progress may afford a basis for such specification."

The Institute of Traffic Engineers Special Committee on Street Lighting recommends that study and research in evaluating lighting effectiveness and specification be continued with a view of obtaining additional quantitative information for more definitely rating or evaluating various street lighting systems from the standpoint of visibility and its relation to traffic accidents and traffic facility.

The researches mentioned above have shown that visibility for night traffic safety as provided by street and highway lighting, depends upon three principal factors: (1) The brightness of the pavement at points along and across the street, measured at the near-grazing angles at which motorists and pedestrians view a roadway; (2) The brightness of representative obstacles at points on and near the pavement; (3) The veiling brightness or glare from the lighting system and other sources on or near the roadway.

Under former techniques the above brightness of pavement and obstacle could be measured and the veiling brightness could be computed. Such determinations required long hours of field work by an experienced test crew late at night, followed by lengthy and involved computations. Such techniques, though practicable, were so laborious that they were seldom used.

A new instrument, called the Street Lighting Evaluator, now permits quick and accurate measurements of these three factors. With the cooperation of traffic engineers, it should be possible to correlate measured values of visibility with detailed accident experience under typical conditions of street and traffic. Specification of traffic safety lighting could then be placed on a definite and fully rational basis.

Report of the Committee on Winter Driving Hazards

By RALPH A. MOYER

Associate Professor of Highway Engineering, Iowa State College, Ames, Ia.,
and Chairman of the Committee

The following is the Summary and Recommendations of the 1940 Report of the Committee on Winter Driving Hazards. The complete report is available in pamphlet form from the Council's Traffic Engineering Bureau.

The complete Report presents the following information gathered in its year and one-half of research: (1) the winter accident problem; (2) results of the Lake Cadillac skidding and traction tests; (3) the special accident hazards of winter motor vehicle driving; (4) the effect of climate and topography on these hazards; (5) mechanical equipment and driving practices recommended to drivers for safe winter driving; (6) knowledge of drivers concerning winter hazards; (7) winter highway maintenance for safety; and (8) the elements of a sound system of winter road conditions reporting.

Summary and Recommendations

1. Accident death rates as related to motor vehicle travel are highest in the winter in all sections of the country. Winter death rates are about 40 per cent higher than summer rates in the northern half of the country, and about 20 per cent in the southern half. The two major causes of this winter accident problem are winter conditions of snow and ice, and longer hours of darkness.

2. One of the major winter hazards is inadequate traction on snowy and icy roads. Inadequate traction, coupled with speed too fast for road conditions and with other improper driving practices such as lack of winter equipment and faulty braking, frequently results in skidding. The proportion of accidents involving skidding is only about one per cent on dry roads, but is as high as 27 per cent on wet roads and 50 per cent on snowy-icy roads.

3. The most striking fact revealed by the Lake Cadillac skidding and traction tests was the surprisingly wide range of performance with bare tires on smooth ice. Braking distances from 20 miles per hour averaged 110 feet on dry, sticky ice at near-zero temperatures, and 228 feet on wet ice at thawing temperatures with the sun shin-

ing. Similarly, times of acceleration from 10 to 20 miles per hour varied from 6 to 19 seconds and maximum speeds on circles of 100-foot radius from 20 to 10 miles per hour, on dry and wet ice respectively. Average winter day-time temperatures commonly approach thawing, at which time the wetter ice conditions prevail.

4. Although tires with good treads are preferred to smooth tires on dry and wet roads, performance with new tires is no better than with smooth tires on snowy and icy surfaces. Motorists should not, therefore, rely upon tread design for anti-skid protection on these surfaces. Tires of special mud or lug designs, however, have advantages on loose snow, although having no advantages on smooth ice or packed snow that is icy.

5. The common practices of lowering tire pressure and increasing the load over rear wheels to increase traction on slippery surfaces are not recommended. The resulting increase in traction for stopping is slight, and this is more than off-set by reduction of safe speed on curves.

6. The use of tire chains is the most practical means of self-help for increasing traction on snowy and icy roads. On rear wheels they decrease braking distances and increase rates of acceleration from 20 to 60 per cent on dry and wet ice respectively, as compared with bare tire performance—the variation in improvement being due largely to the wide range of bare tire performance on dry and wet ice, while performance with chains is fairly uniform at all temperatures. Braking distances from 20 miles per hour on ice varied from 75 to 125 feet, and times of acceleration from 10 to 20 miles per hour from 4 to 7 seconds. New chains on all wheels further reduce braking distances about 30 per cent below those with new chains on rear wheels only. On icy curves, however, speeds with chains should be no higher than without, because chains on rear wheels only do not add to control against skids.

7. The spreading of treated abrasives on snowy and icy roads makes driving safer.

Braking and acceleration performance is from 30 to 65 per cent better than on bare ice—this variation also being due primarily to the wide range of performance with bare tires on dry and wet ice, since performance with treated abrasives is uniform at all temperatures down to about zero degrees Fahrenheit. Braking distances from 20 miles per hour with treated abrasives averaged 75 feet, and times of acceleration from 10 to 20 miles per hour averaged 4 seconds. With untreated abrasives performance is from 10 to 55 per cent better than on bare ice; braking distances from 20 miles per hour averaged 100 feet and times of acceleration from 10 to 20 miles per hour averaged 5 seconds.

8. The other most serious hazard of winter driving is reduced visibility. This is caused, first of all, by longer hours of darkness, with the night accident problem seasonally more extended in northern than in southern states. Snow and sleet storms and accumulation of frost on windows seriously reduce visibility. Drifted snow may hide culvert headwalls and other obstructions. Motorists should maintain adequate visibility for winter driving through proper conditioning and maintenance of equipment, by keeping outside surfaces of windshields and windows free of snow and ice, and by preventing formation of fog and frost on inside surfaces through condensation of moisture inside the vehicle.

9. Safe driving requires much more skill and caution in winter than in any other season. Speeds must be reduced on wet, snowy and icy roads because of the lower traction and the impossibility of sudden maneuvers in emergency situations. To drive with equal safety on packed snow, speeds with chains on rear wheels must

be about 25 per cent, and with bare tires about 45 per cent, lower than on dry pavement. For equal safety on smooth ice, speeds with chains or with abrasives must be about one-half, and with bare tires about one-third, of speeds on dry pavement.

10. Highway departments should strive for "bare pavement maintenance" during the winter season. This can generally be accomplished by prompt and complete snow removal. Where it is not possible to prevent the formation of ice, the spreading of abrasives treated with sodium or calcium chloride is recommended. This treatment embeds the abrasive particles in the snow or ice, and improves vehicular performance about 30 per cent over that possible with untreated abrasives.

11. It is recommended that state highway officials establish standards for the proper illumination of snowplows and other maintenance equipment, to give drivers adequate and uniform warning of such hazards. Standards should also be established for marking of culvert headwalls, guard-rails, and other low obstructions that may be covered by drifted snow.

12. State highway departments should develop effective systems of winter road condition reporting, so that drivers will be sufficiently warned of storm and road conditions. This information should be made readily available through all publicity media, and should be accurate and dependable. Safety instructions dealing with road or weather conditions should be combined with the reports. State highway departments should also strive for uniformity in the meaning of their reports to the public, so that drivers in inter-state travel can properly interpret the reports in the several states.

FRIDAY MORNING SESSION

October 11, 1940

Joint Session with Child Education and Transit Sections

For a full report of this session, please turn to the Child Education Section, on page 165 of this volume.

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MORGAN B. SPEIR, JR., Horton Motor Lines, Inc., Charlotte, N. C.

TUESDAY MORNING SESSION

October 8, 1940

Fleet Safety

Presiding: T. B. JOHNSON, Manager, Delivery Division, Marshall Field & Co., Chicago, and General Chairman, Commercial Vehicle Section, National Safety Council.

The Commercial Driver's Opportunity to Prevent Accidents

By T. L. PREBLE

Supervisor of Automotive Transportation, Tide Water Associated Oil Company, New York City

It is necessary for obvious practical purposes to expand this discussion to include those executives to whom the drivers report, together with the company policies under which they operate.

This word "safety" seems, in the minds of many, to have developed a certain nuisance value. I have met many well-meaning executives to whom the word represents something intangible but vaguely important. There are others, however, who are keenly alert to the problem.

In many fleets, particularly the larger ones, some very effective results are being produced, but the majority of commercial vehicles are operated in smaller fleets and by individual truck owners. Further endeavor must be made to get constructive suggestions, therefore, in the hands of all fleets, large and small.

I am inclined to agree with Dr. Harry R. De Silva, who said in a recent letter to me, "I, personally, am very much impressed with the fact that there is a great deal of rule of thumb methods in fleet work and very little research. We have attempted to do a little research ourselves, but find that most truck fleets are pretty well satisfied with their present methods and about the last thing they are really interested in is research, except of a superficial nature."

Men whose work involves direct driver supervision should adopt a three-fold conception of their jobs; First, they should thoroughly school themselves in safety facts; second, they should institute specific procedures in the interest of really putting driver safety over the counter; and third, they should wherever necessary, produce

data proving to their superiors that safety and self-interest are on common ground.

Driver Safety Facts

Men who supervise drivers should be keenly aware of the importance of an unremitting study of safety facts. Let no supervisor deceive himself as to the simplicity of the problem!

Types vs. Causes. Facts must be *usable*. Max D. Kossoris, in his Sept. 1939, article in the *Journal of the American Statistical Association*, points out that statistics too frequently portray *types* of accidents, but do not get at *causes*. Commercial vehicle operators whose fact-getting procedures are inadequate can always obtain assistance from their insurance companies, from the National Safety Council and from numerous other sources. Such procedures should always include comparisons with fleets engaged in the same industry.

Costs. Like other accident facts, costs should be accurately tabulated and should be frankly discussed with drivers. Why should not the management take the driver into its confidence by factual discussions of the effect of accidents on costs,—including such obviously important items as insurance premiums, repair costs, damaged merchandise, cost of "time-out-of-service" of the vehicle, and so on?

Frequency. Accidents frequency should receive constant analysis. Operators should be challenged by such salient facts as are summarized *annually* by the National Safety Council.

Technical Facts. Keeping abreast of the advance in technical knowledge is of obvious importance. Consider, for example, the problem of skidding. Much is being accomplished by various agencies (e.g. the Society of Automotive Engineers) by way of improvement of our understanding of the behavior of the vehicle on various types of highways and under various conditions of weather. Much valuable data can be obtained from insurance companies, and other sources. All such data can easily be translated for the benefit of the driver.

Signalling and Positioning. The excellent point made by Mr. J. Willard Lord in a paper delivered last May in Lansing, Michigan, deserves more interest in our driver training. He stresses the point of the driver giving a more adequate knowledge to others

on the highway as to his intentions by virtue of the positioning of the vehicle for left turn, for right turn, etc. Mr. Lord also bears down heavily upon the use of signalling alone. For example, "does not a required hand signal, when pulling away from the curb, tend to divide and ease the sense of responsibility? Wouldn't we be far better off if we taught and required the driver to look back, and back far enough to make certain that when he pulls away from the curb, he can enter the flow of traffic smoothly without causing an accident or being involved in one."

Mr. Lord continues by emphasizing that this should be the driver's definite responsibility, giving him no slightest alibi such as the hand signal produces.

Inattention. Last August, Dr. A. R. Lauer of Iowa State College was quoted as stating that most violations are not deliberate and that most accidents are caused by inattention. Except for the occasional commercial driver, usually of the rather emotional, chip-on-the-shoulder type who is sometimes guilty of retaliatory driving. We can all agree, can we not, that most violations are not deliberate on the part of commercial vehicle drivers. As far as inattention is concerned, it is significant that the operators of the petroleum industry's commercial vehicles had a considerably better safety record in 1939 than that of all truck transport, according to statistics issued by the National Safety Council. This may or may not be because of better driver selection and training in the petroleum industry. But assuredly we can conclude that inattention is present to a very negligible degree, if at all, because of the nature of the load carried. Similarly, the pamphlet "Motor Carrier Accidents" covering the calendar year 1938, issued by the Interstate Commerce Commission concludes, from its great mass of statistics, that "apparently more care is exercised by the truck driver during the winter months than when the highway is not in a hazardous condition." Here again is an illustration of the type of specific facts which should be presented to drivers,—and which if *forcefully* portrayed will be remembered and, therefore, will contribute toward a lower accident rate.

Alertness, Defensive Driving. A man once stated that rule No. 1 on the highway for all drivers should simply be this, "Drive at

all times, on the assumption that everyone on the highway with the exception of yourself is an imbecile." Of course, that badly overstates the case but we must take measures to cultivate a deeply ingrained habit of alertness.

Adverse Legislation. All concerned, from the driver to the chief executive, should know the effect of poor driving on adverse legislation and regulation. This is a matter of tremendous potential consequence which receives far too little discussion.

Public Relations. I have seldom heard a driver talk which effectively handled this important question of the driver's influence on public relations. Yet is there anyone who cannot recall at least one instance of the adverse commercial effect of driver arrogance?

This matter of public relations,—of courtesy, is again a subject which can and should be tied down to a factual basis of presentation to drivers. There is no sound reason for ignoring it in driver training programs, or for leaving it to the tender mercies of vague and misty generalization.

Programs and Procedures

Measures must be taken to enhance the pride of commercial vehicle drivers in their work. Mere knowledge of the techniques of driving, important though they obviously are, is insufficient.

Although there are many notable exceptions, it would seem fair to state that in general, so-called "training" has been limited largely to exhortation, preachment, driver safety "pep talks" and the like,—followed by punishment for a responsible accident.

As a matter of sound and practical psychology, will we not all admit that too many driver-instructional talks have been stodgy and dull, have carried the dramatic impact of a telephone directory, and have involved the constant use of the word "don't"? Won't we agree that in place of this ever present negative we should substitute positive and informative facts, carefully prepared with the object of proving to the driver that his work is dignified and deserves being termed an art?

Rules. Rules must exist. They must be fair, and must be carefully and constantly drilled into the drivers. But there should be no compromise if they are broken. There

is as much fallacy in the old saw that "Rules are made to be broken" as there is loose reasoning in the common half-truth "practice makes perfect."

Rules should be explained by charts, by photograph, by road demonstration, by object lesson. Rules that have been broken should be reviewed carefully, in order to determine whether modification, or stricter enforcement is in order.

There should be periodical physical examinations of all drivers, and they should be pointedly advised as to the importance of keeping in good trim.

Supervisors should rather frequently ride with drivers,—especially the "accident-prone." Drivers with good records should ride with those having poor records.

Records. That adequate records, containing genuinely useable data, should be kept is obvious. But it would be well to point out to smaller operators the very useful material which they can obtain from their insurance carriers. Many insurance companies are willing and glad to furnish this data and also to make occasional vehicular inspections.

Driver Clinics. Of course, very few fleet owners can afford to operate anything comparable to a driver clinic. This is not to deny the undoubted importance of clinical procedure. On the contrary it is probable that many companies can, if they only will, organize a definite program of driver enlightenment and training which will have at least some of the effect of a clinic.

Driver Meetings. Driver meetings should be reasonably frequent, should permit free discussion, and above all should involve carefully planned schedules of genuinely enlightening talks.

Broad generalizations, as well as detailed matters of driving technique must be handled in these meetings, but both are subject to something more tangible and penetrating than a platform speech. Take the word "courtesy" for example. Would it not make a driver think more deeply if he were asked the question,—and made to answer it in writing, "Why should I not be too close to the corner in stopping before a red light?"

Verbal and written quizzes are of great importance and I recommend that they be incorporated into specific, rigid, procedure, so that highly important facts may be made

to sink in. They simply cannot be driven home by speech making alone.

Furthermore, if properly organized and

supervised, driver courts, possessing an element of self-government, can be very effective in the promotion of careful driving, and improved attitude.

Presentation of National Safety Council Awards in the 1939-1940 National Fleet Safety Contest

Outstanding facts in the contest were commented on by Mr. Lew R. Palmer, Conservation Engineer, The Equitable Life Assurance Society of the United States, New York City, and Past-President of the National Safety Council, as follows:

The Ninth National Fleet Safety Contest, sponsored by the Commercial Vehicle Section of the National Safety Council, was brought to a close on June 30, 1940. 1,340 fleets participated in the Contest. They operate well over 93,000 vehicles.

This commercial vehicle army traveled 47,000 miles per accident—not quite as good a record as they had the previous year, but still a striking proof that "gentlemen of the highways" is not just a catch-phrase. Furthermore, the slight increase in accidents reported for these commercial operations was considerably less than the increase in accidents experienced by the general driving public.

Ever since the first Contest—a six-month one back in 1932—this national competition has had a steady growth—in number of competing fleets—in number of vehicles entered—in miles operated—and in value to the competitors themselves. As these contests continue their growth, I know I'm safe in predicting that accident rates will become even lower—and these will represent cumulative savings in human life and limb, and just plain dollars and cents.

The purpose of these contests is to help reduce accidents by fostering competition between fleets with similar types of operation. For the sake of fair competition, all contesting fleets were divided into 19 divisions—first, by type of vehicle and geographical area, and second, according to the nature of the operations. Three of these divisions were further sub-divided into four size groups, ranging from large-mileage fleets to small-mileage fleets; two were divided into three size groups; and 11 were divided into large and small fleets. Thus,

there are 43 groups in which awards were earned.

The rules of the contest provide that the winner in each group shall be the fleet having the lowest number of accidents per 100,000 vehicle-miles. In the event that two or more fleets are tied for first place in any group, the winner is the fleet which operated the largest number of vehicle-miles.

As in the previous year's contest, all fleets that reported a perfect record during the year, but are not receiving a plaque, are getting a certificate in recognition of their achievement. Just as in last year's Contest, the records of winning fleets were verified through their insurance carriers.

A new feature of this year's contest is the Certificate of Merit. These special certificates are being awarded to the 140 fleets which, with the winners, made up the top 20 per cent of the rankings in each Contest group.

Mr. Palmer then, in the name of the National Safety Council, presented handsome Bronze Plaques to the winners of first place in the contest, and Certificates of Merit to winners of second and third place, and also to those deserving Honorable Mention, as given in the lists below:

For-Hire Inter-City Trucking Division LARGE FLEETS:

The Winner—Perfect Record—Pioneer Motor Service Inc., Rock Island, Ill.

Second—Dealers Transport Company, Kansas City, Mo.

SMALL FLEETS:

The Winner—Perfect Record—Buckingham Transportation Co. of Colo., Inc., Billings, Mont.

Second—Perfect Record—Buckingham Transportation Co. of Colo., Inc., Casper, Wyo.

Honorable Mention—Perfect Record—Ameen Transfer Line, Ishman, Mich.

**Private Inter-City Trucking Division
LARGE FLEETS:**

The Winner—Perfect Record—The Timken Roller Bearing Co., Canton, Ohio.
Second—Texas Long Leaf Lumber Company, Oakhurst, Tex.

SMALL FLEETS:

The Winner—Perfect Record—Trexler Farms, Springwood Division, Allentown, Pa.
Second—Perfect Record—Trexler Farms, Miscellaneous Operations, Allentown, Pa.

Honorable Mention—Perfect Record—Sloss Sheffield Steel & Iron Co., Retail Stores Division, Birmingham, Ala.
For-Hire City Trucking Division

LARGE FLEETS:

The Winner—City Messenger Company, Detroit, Mich.

SMALL FLEETS:

The Winner—Perfect Record—Southern California Freight Lines, Indio Div.
Private City Trucking Division

LARGE FLEETS:

The Winner—Perfect Record—U. S. Navy Yard, Washington, D. C.
Second—Perfect Record—U. S. Navy Yard, Puget Sound, Wash.
Third—Perfect Record—U. S. Navy Yard, Philadelphia, Pa.

Honorable Mention—Perfect Record—U. S. Navy Yard, Mare Island, Calif.

SMALL FLEETS:

The Winner—Perfect Record—Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.

Honorable Mention—Perfect Record—Sloss Sheffield Steel & Iron Co., Manufacturing Dept., Birmingham, Ala.
Bakeries Division

GROUP I:

The Winner—Schulze Baking Co., Peoria, Ill.
Second—Schulze Baking Co., Omaha, Neb.

Third—National Biscuit Company, Syracuse (N.Y.) Bread Bakery.

GROUP II:

The Winner—Weber Baking Co., San Bernardino, Calif.

Second—Continental Baking Company, Clarksdale, Miss.

Third—Continental Baking Company, Waterloo, Iowa.

GROUP III:

The Winner—Perfect Record—National Biscuit Co., Charleston (S. C.)

Second—Junge Baking Company, Joplin, Mo.

Third—Continental Baking Company, New Bedford, Mass.

GROUP IV:

The Winner—Perfect Record—National Biscuit Co., San Antonio, (Tex.)

Second—Perfect Record—Junge Baking Company, Coffeyville, Kans.

Third—Perfect Record—Continental Baking Company, Hostess Cake Depot, Berkeley, Calif.

Honorable Mention—Perfect Record—Continental Baking Company, Hostess Cake Depot, Sacramento, Calif.

Honorable Mention—Perfect Record—National Biscuit Co., Niagara Falls, N. Y.

Beverages & Ice Cream Division

LARGE FLEETS:

The Winner—Castles Ice Cream Co., Garfield, N. J.

SMALL FLEETS:

The Winner—Monmouth Ice Cream Co., Asbury Park, N. J.

Coal & Ice Division

LARGE FLEETS:

The Winner—The Union Ice Co., Ventura County, Calif.

SMALL FLEETS:

The Winner—Perfect Record—Central California Ice Company, Bakersfield.

Honorable Mention—Perfect Record—Southern United Ice Co., Meridian, Miss.

Honorable Mention—Perfect Record—Central California Ice Company, Turlock & Modesto (Calif.) Division.

Honorable Mention—Perfect Record—Southern United Ice Co., McComb, Miss.

Dairies Division

LARGE FLEETS:

The Winner—Muller Dairies, Inc., New York, N. Y.

Second—Dairyland Milk Plant, Dallas, Tex.

Third—Whiting Milk Company, South Shore Division.

SMALL FLEETS:

The Winner—Perfect Record—Sweitzer Creamery Company, Detroit, Mich.

Second—Perfect Record—Supplee-Wills-Jones Milk Co., Trenton, N. J.

Third—C. A. Straubel Company, Green Bay, Wis.

Laundries Division

The Winner—Ripley's, Inc., Topeka, Kans.

Second—Inceda Laundry & Cleaning Company, Houston, Tex.

Newspaper Division

The Winner—The Canton Repository, Canton, Ohio.

Petroleum Division

LARGE FLEETS:

The Winner—Panhandle Refining Company, Central Texas Division.

Second—Panhandle Refining Company, West Texas Division.

Third—Magnolia Petroleum Co., Northern Division, Dallas, Tex.

MIDDLE-SIZED FLEETS:

The Winner—Perfect Record—Panhandle Refining Co., New Mexico Div.

Second—Shell Pipe Line Corporation, Mid-Continent Area.

Third—Gulf Oil Corp., Gulf Production Div., Ft. Worth, Tex. Dist.

SMALL FLEETS:

The Winner—Perfect Record—United Gas Pipe Line Co., San Antonio Dist.

Second—Perfect Record—United Gas Line Co., Houston, Dist.

Third—Perfect Record—United Gas Pipe Line Co., Wichita Falls Dist.

Honorable Mention—Perfect Record—United Gas Pipe Line Co., Monroe Dist.

Honorable Mention—Perfect Record—United Gas Pipe Line Co., Southwest Louisiana Dist.

Honorable Mention—Perfect Record—Panhandle Refining Co., Oklahoma Div.

Honorable Mention—Perfect Record—Shell Oil Co., Inc., Norco, Louisiana.

Public Utilities Division

LARGE FLEETS:

The Winner—The Toledo Edison Co., Toledo, Ohio.

Second—Utah Power & Light Company, Salt Lake City, Utah.

Third—Florida Power & Light Company, Miami, Fla.

MIDDLE-SIZED FLEETS:

The Winner—Missouri Public Service Corporation, Warrensburg, Mo.

Second—Central States Power & Light Corporation, Tulsa, Okla.

Third—Godfrey L. Gabot, Inc., Charleston, West Virginia.

SMALL FLEETS:

The Winner—Perfect Record—City Light & Water Utilities, Ft. Wayne, Ind.

Second—Perfect Record—East Coast Telephones, Inc., Warsaw, Va.

Third—Perfect Record—Superior Water, Light and Power Co., Superior, Wis.

Honorable Mention—Perfect Record—Shell Pipe Line Corporation, Telephone & Telegraph Division.

Honorable Mention—Perfect Record—Electric Light Department, City and County of Honolulu.

Honorable Mention—Perfect Record—Virginia East Coast Utilities, Inc., Killmarnock Division.

Honorable Mention—Perfect Record—Chicopee Electric Light Department, Chicopee, Mass.

Honorable Mention—Perfect Record—Northwestern Public Service Company, Huron, South Dakota.

Honorable Mention—Perfect Record—The Key West Electric Company, Key West, Fla.

Retail Stores Division

LARGE FLEETS:

The Winner—United Parcel Service, Pasadena, Calif.

Second—United Parcel Service, Newark South, N. J.

Third—United Parcel Service, White Plains, N. Y.

SMALL FLEETS:

The Winner—United Parcel Service, Ventura & San Bernardino, Calif.
Second—United Parcel Service, San Diego, Calif.
Third—United Parcel Service, Long Beach, Calif.

Wholesale Division**LARGE FLEETS:**

The Winner—J. E. Bejin Cartage Co., Inc., Detroit, Mich.

SMALL FLEETS:

The Winner—Perfect Record—Booth Fisheries Corp., Washington-Idaho Div.

Inter-City Bus Division**LARGE FLEETS:**

The Winner—Southern Greyhound Lines, Lexington, Ky.
Second—Pacific Greyhound Lines, Div. No. 3, Los Angeles, Calif.

SMALL FLEETS:

The Winner—Perfect Record—Las Vegas-Tonopah-Reno Stage Lines, Las Vegas, Nev.
Second—Pacific Greyhound Lines, Div. No. 1, El Paso, Texas.

City Bus Division**LARGE FLEETS:**

The Winner—Wisconsin Public Service Corporation.

SMALL FLEETS:

The Winner—Perfect Record—Toye Bros. Yellow Cab & Gray Line Tours, New Orleans, La.
Honorable Mention—Perfect Record—Charlottesville & Albemarle Bus Co., Charlottesville, Va.

Taxicab Division

The Winner—Perfect Record—Toye Bros. Yellow Cab Company, New Orleans, La.

Honorable Mention—Perfect Record—Blue & White Cab Company, Bismarck, N. D.

Passenger Car Division—Eastern Area**GROUP I:**

The Winner—Socony-Vacuum Oil Co., Inc., White Eagle Div., Kansas City, Mo.

Second—Socony-Vacuum Oil Co., Inc., Albany, Div., Albany, N. Y.

Third—U. S. Engineer Dept., Lower Mississippi Valley Division.

GROUP II:

The Winner—The Atlantic Refining Co., Southern Div., Philadelphia, Pa.

Second—Socony-Vacuum Oil Co., Inc., Lubrite Div., St. Louis, Mo.

Third—Standard Oil Company of New Jersey, Virginia Division.

GROUP III:

The Winner—Perfect Record—City Light & Water Utilities, Ft. Wayne, Ind.

Second—Perfect Record—C. A. Strubel Co., Green Bay, Wis.

Third—Perfect Record—South Carolina State Highway Department, Central District.

GROUP IV:

The Winner—Perfect Record—New Haven Gas Light Co., New Haven, Conn.

Second—Perfect Record—American Utilities Service Corp., Savanna, Illinois.

Third—Perfect Record—Clover Farm Dairy Co., Memphis, Tenn.

Honorable Mention—Perfect Record—Ebling Creamery Company, Detroit, Mich.

Honorable Mention—Perfect Record—Nashville Pure Milk Co., Nashville, Tenn.

Honorable Mention—Perfect Record—Badger Brodhead Cheese Co., Monroe, Wis.

Honorable Mention—Perfect Record—Charleston Oil Co., Charleston, S. C.

Honorable Mention—Perfect Record—The Patent Scaffolding Company, Inc., Chicago, Ill.

Honorable Mention—Perfect Record—Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.

Honorable Mention—Perfect Record—U. S. Navy Yard, Washington, D. C.

Honorable Mention—Perfect Record—Shell Oil Co., Inc., East Chicago Refinery.

Honorable Mention—Perfect Record—U. S. Navy Yard, Philadelphia, Pa.

Honorable Mention—Perfect Record—Manchester Gas Company, Manchester, N. H.

Passenger Car Division—Western Area**GROUP I:**

The Winner—Magnolia Pipe Line Company, Dallas, Texas.

Second—Magnolia Petroleum Company, Western Division, Dallas, Tex.

Third—Gulf Oil Corp., Gulf Production Div., Ft. Worth, Tex. Dist.

GROUP II:

The Winner—United Gas Pipe Line Company, Beeville District.

Second—Panhandle Refining Company, Central Texas Division.

Third—Shell Pipe Line Corp., Telephone & Telegraph Division.

GROUP III:

The Winner—Perfect Record—Shell Pipe Line Corp., Mid-Continent Area.

Second—Perfect Record—Northwestern Yeast Co., South Central Div.

Third—Perfect Record—Loyalty Group, Southwestern Dept., Dallas, Tex.

Honorable Mention—Perfect Record—Central States Power & Light Corp., Tulsa, Okla.

Honorable Mention—Perfect Record—United Gas Pipe Line Company, Wichita Falls District.

GROUP IV:

The Winner—Perfect Record—Hiram C. Gardner, Inc., Denver, Colo.

Second—Perfect Record—Amarillo Gas Company, Amarillo, Texas.

Third—Perfect Record—Board of Water Supply, City and County of Honolulu.

Honorable Mention—Perfect Record—Northwest Cities Gas Co., Walla Walla, Wash.

Honorable Mention—Perfect Record—St. Louis Dairy Co., St. Louis, Mo.

Honorable Mention—Perfect Record—Ajax Pipe Line Corp., Tulsa, Okla.

Honorable Mention—Perfect Record—Southwestern Transportation Co., Texarkana, Tex.

Honorable Mention—Perfect Record—Peoples Light Co., Davenport, Iowa.

Honorable Mention—Perfect Record—Shell Oil Co., Inc., Honolulu Division.

Honorable Mention—Perfect Record—Shell Oil Co., Inc., Norco, La.

Honorable Mention—Perfect Record—Borden's Dairy Delivery Company, Burlingame Division.

Honorable Mention—Perfect Record—U. S. Navy Yard, Mare Island, Calif.

Honorable Mention—Perfect Record—Borden's Dairy Delivery Company, San Rafael Division.

Honorable Mention—Perfect Record—Borden's Dairy Delivery Company, Fresno Division.

Honorable Mention—Perfect Record—U. S. Navy Yard, Puget Sound, Wash.

TUESDAY AFTERNOON SESSION

October 8, 1940

Presiding: J. M. BARKER, Director, Fleet Operations, Washburn Crosby Co., Central Division of General Mills, Inc., Chicago.

Getting Safety Across to the Driver-Salesman

By R. C. HAVEN

Safety Engineer, Continental Baking Company, New York, N. Y.

In the beginning we must realize that getting safety across to the salesman-driver differs in many ways to the job of reaching the average truck driver. Let us assume of course that both types are high grade men, for responsible fleet operators do not

trust their valuable equipment and cargoes to irresponsible drivers if they know it.

It is true that so far as traffic rules and regulations are concerned, the problem is the same for both types. The marked difference is in the characteristics of the men

and duties they are called upon to perform. Keep in mind that our discussion here has to do primarily with the men's minds and driving behavior and not with mechanical devices.

Let us make at least a partial comparison between the two types of drivers:

1. He is primarily a salesman and secondly a truck driver. In other words, driving a truck to him is a means to an end.

2. Being primarily a salesman he must be a student of sales, actually taking time to study sales methods. The regular truck chauffeur has no sales problems to worry about.

3. As a salesman he must know all about the product he sells as well as company policies.

4. He must be a diplomat and psychologist since he deals with many different types of human beings which make up the customers he serves daily.

5. The salesman-driver handles money and keeps records. The other type of driver does little or none of this.

6. He makes many regularly scheduled stops daily whereas the ordinary truck chauffeur does not, although he may confine his activities to a certain territory.

7. As a rule the salesman-driver is more agile, quicker of action.

8. It is only on few occasions that he has a helper and has on his mind the many details pertaining to sales as he pilots his truck through traffic.

9. He is required to maintain a neat personal appearance at all times whereas the other type cannot always do this.

Of course the truck chauffeur and other drivers of trucks, such as used by special delivery and service companies, have things to contend with that the salesman-driver does not; handling heavier trucks which are more difficult to back into small areas; lifting heavy objects, and repairing breakdowns on the road; all of which involve driving and other accident hazards.

At the beginning let us remember—we are dealing with men's minds—their human traits and behavior rather than mechanics involved in the operation of a truck. We are assuming for the moment that the truck which the salesman will handle is always in perfect mechanical condition.

If we are to succeed in making and maintaining a safe salesman-driver we must, as far as possible, select a man who is in good

health, has an alert mind and is willing to learn.

Because of certain barriers of selection known to most of you, we cannot always control the first item but certainly we can subject the applicant to a rigid physical examination and if we find him unwilling to learn, can take whatever steps are necessary. I will not go into the physical examination except to say that all applicants should be able to see with or without glasses, have both arms and legs, be of the proper stature and otherwise in good health.

As to alertness of mind and willingness to learn, these need no further elaboration.

Some Fundamentals

It makes little difference whether we are starting a safety program among a large number of salesman drivers or whether we are trying to improve a safety program—already in progress. There are a few fundamentals which should be remembered:

1. To get the best and most lasting results we must eventually reach our drivers through individual analysis and individual education.

2. We must have a plan to work and then follow it consistently. This plan should be flexible enough to admit changes when necessary.

3. The plan should be based on the idea that results cannot be achieved over-night. Fleet operators make a mistake if they think they can suddenly change bad habits of long standing or develop and maintain safety ideas that may be new to the salesman.

4. The plan for safety in any fleet should be based on certain basic principles among which we might mention:

- a. Knowledge of our problem.
- b. Knowledge of our men.
- c. Common sense and fair play.
- d. Humanitarian principles.
- e. Economics.

5. Getting safety across to the salesman is nothing more than selling him an idea. The approach should be based on the fact that the salesman-driver is less able to stand a personal injury loss than the company is able to stand a property damage loss. We should not make the mistake of first emphasizing the company accident loss.

6. Pride of accomplishment is also a major factor in obtaining lasting results.

7. From the psychological standpoint it

is well to consult the salesman-driver when compiling safe driving rules and regulations.

8. In all of us there is a human desire for recognition. It goes without saying, therefore, that suitable recognition in the form of awards should be provided.

Educating the Salesman

Who should teach the driver? Who should be responsible for his driving behavior? The answer to this is, in my opinion, the sales supervisor. There are a number of logical reasons why the driver's immediate superior should do the educational work:

1. The supervisor is the salesman's first line of defense and, therefore, should furnish the necessary information, inspiration and know-how.

2. It is natural for an employee to look to his supervisor for guidance.

3. Salesman-drivers prefer to receive safety and other instructions from this source.

4. Orders or instructions received from more than one source may cause confusion.

5. Better control of the employee's driving behavior results from one-man guidance.

6. Instructions can best be followed through by the supervisor.

7. It is possible that the salesman-driver may lose confidence in the supervisor if some outsider (in the company) does the supervisor's job of educating his men.

8. If the supervisor is qualified to hold his job he will prefer to assume the responsibility.

So it would seem to me that our big job in getting safety across to the salesman-driver is to first educate the educators—the supervisors. They must be equipped with every known safety procedure and material that will enable them, in turn, to teach the men for whom they are responsible. Of course, the supervisor must know his job. For instance, he must have sufficient experience to enable him to issue instructions based on knowledge. He must know the safest way to do the things he is asking the salesman to do and must realize that every salesman-driver has a different mentality. The supervisor must be acquainted with the salesman-driver's personal habits and understand his every whim. He also must have before him at all times not only the salesman's family history but also a record of his driving experience, such as number of accidents, causes, responsibility,

cost, etc. He must be sympathetic and have the proper attitude; getting results through kindness rather than fear. Finally, he must learn to be explicit when talking to the salesman, making sure that the latter understands what he is saying. It goes without saying that management must take an active interest in the safety program, provide means to educate the supervisors, keep accurate accident frequency and cost records, supply the proper educational material, (posters and other literature) and furnish the necessary awards, rewards, etc.

No program will succeed without management's enthusiastic cooperation and material aid. In our own company our procedure is about as follows:

1. We select for salesman-drivers men of the salesman type.

2. We decide upon their possible qualifications, first upon their ability to drive a truck, secondly upon their sales ability.

3. They are subjected to rigid physical and mental examinations.

4. They are thoroughly schooled in sales procedure and the use of all accident forms before being put on a route.

5. When first given the responsibility of a truck and assigned a route, they are given an assistant and are not permitted to drive their truck until they become familiar with their customers and other sales details when away from the bakery, until they have adjusted themselves to their new surroundings and feel comfortable behind the wheel.

6. Their behavior is constantly watched by the supervisor.

7. Close watch is made of their routes as to growth and a check is made of all accident hazards and necessary changes are made in the directions they drive when to do so will eliminate traffic hazards.

8. As an incentive for continued safe driving and recognition for same, our pin award plan provides a certificate for six months driving without a chargeable accident, bronze pin for a year, silver for two years, gold pin for three, a letter from the president for four years, a gold pin with a diamond for five years. The five year pin contains a removable numeral in the center and it is raised as a man continues his clear record year by year. This plan started January 1, 1932. On January 1, 1942 those men who have gone ten years without a chargeable accident will be presented with

a Hamilton pocket watch. The dial will bear the words, "Safe Driver" and the back will be appropriately engraved including the salesman's name. For the Supervisors a beautifully engraved Certificate of Appreciation with the company's gold seal is pro-

vided. Only the Supervisor having the best record at his bakery wins this award.

An honor roll is provided for those Managers developing the best records for certain accomplishments.

How to Organize and Carry on a Practical Maintenance Program

By R. H. CLARK

General Superintendent of Transportation, Consolidated Edison Co. of New York, New York City

When Alfred P. Sloane was asked why he did not produce a small car consisting of the mechanical necessities and a body with all chromium plate and frills removed; he advised that it would not pay. With the increased ability of the manufacturers to disguise a small car under a dashboard weighted down with the latest types of streamlined, repair defying, aviation looking instruments, fleet operators have been tearing their hair in exasperation waiting for someone to produce such a vehicle.

Aside from the cost of maintenance, some companies thought the dressed up type of car was much too undignified and lent a tone of frivolity not consistent with their business. Mr. Sloane indicated that the public demand for a big car, wrapped in a small package, was so much greater than the fleet operators demand for the other, that production would be thrown out of gear to make this specialty. Also, that general acceptance of the dressed up vehicle was in the long run more economical since the trade-in or second-hand value would be greater. It is true that this applies principally to the small passenger cars and not to large commercial vehicles, each of which is, in many respects, a completely original unit depending upon its application.

It does indicate, however, that in spite of all that has been said about the highways and highways being clogged with business vehicles, John Q. Public, as an individual operator, is still the predominating factor to be considered in the safe operation of our vehicles on the public highways. It is a pity that this group of individuals, each of whom considers himself an automotive engineer, is not represented here today.

Today executives have become so conscious of the hole into which money can be poured to maintain a fleet of trucks, that every item of expense is eyed with the hope of bringing about further reductions. Too many crackpot ideas and theories have been foisted upon transportation executives with a view to eliminating 25 per cent of the oil bill, cutting gas consumption in half or eliminating carbon by means of a prayer and a turkish bath. Executives have found there is a necessary expense which they recognize as legitimate and reasonable for their particular business and transportation application.

The Safety Program

Hand in hand with the growth of transportation and the study which leads to the establishment of its proportionate share of the total expense of a business, the recognition of the necessity for a safety program came into the picture. For a time safety campaigns and periodical concentrations on safety first meetings, steps in the development of present safety methods, were ineffective and expensive. Executives were paying plenty for experience. In this case, however, they paid more cheerfully as the idea of the inevitability of accidents was fast dwindling. They recognized that accidents, and particularly industrial accidents, could be reduced if not entirely eliminated.

A motor vehicle maintenance program operating under a transportation superintendent with his staff on one hand, and a group of drivers on the other seem to be the generally accepted type of organization for operating a fleet today. Whether the mechanical group is on the company payroll

or whether the work is given out is beside the point. In the long run this is purely a matter of economics and the company pays the bill anyway. Geographical location, tax rates, labor laws, insurance rates and scattered concentrations of vehicles over large areas are factors in determining a company's policy in this respect. At a forum conducted under the auspices of the SAE last spring for the benefit of Public Utility Fleet Operators this subject was discussed without arriving at definite conclusions. There were opinions both pro and con which in most cases began or ended with the statement, "We have found the most economical thing to do, etc." The most economical thing to do in New York may not be true in Chicago. There is one danger that should be guarded against and that is the pride that so often accompanies the well equipped shop. All too often millers, lathes or grinders are purchased and are only used occasionally. This type of equipment was built for production work and cannot pay for itself when only used occasionally. However, this too is more or less governed by local conditions, depending upon the outside services available. The important thing is not how or by whom the work is done, but that it is done economically under the control of the supervisor in charge of transportation.

Automotive maintenance organizations rarely spring up over night. In most businesses today the automobile picked up where the wagon left off. In most instances the stable boys, wagon builders and drivers of the early days found they had to learn a new technique.

For our purpose we may say that there are three outstanding stages in the history of a motor vehicle. We shall not include manufacture as that is another problem. They are: Selection or purchase, determined by application; Maintenance in operation; Retirement.

Probably everyone here will recognize the incongruous position of the transportation operator who, given a piece of equipment rated at a ton and a half, day after day is called upon to stretch the ability to limits far beyond the extra margin of safety built in by the manufacturer. Chief mistake, either intentional or otherwise, is overloading. Leaders though we are in the application of the motor vehicle to industry, for the past few years there has been a tendency to buy on the light side of a given make

for greater economy. However, the drift back to a more sensible application is apparent.

The electric street truck, which properly applied, has always made money for its owners and is slowly but surely returning in a modern form to certain fields of business that never should have toyed with the idea of a gas truck. But so many purchases of the electrics were made to obtain the resulting operating economies in fields where only the gas truck should have been considered, that for a time there was a lull, while the maladjustment underwent a period of observation and correction. Certainly none of the advantages of economy and safety of any given make of vehicle either gas or electric can really be obtained by applying it to an overrated job. Let us remember the word application.

Preventive Maintenance

The economical and safe operation of any fleet of trucks is dependent upon the mechanical maintenance program. Systematic preventive maintenance avoids premature depreciation and insures a longer mechanical life. I make this statement because I feel there is no other alternative. Maintenance programs, based upon a strictly "repair when necessary system," have been outmoded. Today it is not a question of system of preventive maintenance as compared to a system of repair. The question is how sufficient is, or how much better can we make our preventive maintenance system.

The idea of prevention of a mechanical breakdown is the all important factor in maintenance work. With the exception of heavy duty equipment a complete overhaul today represents accumulated neglect. Mechanical adjustment, whenever possible, must be made by anticipating mechanical failure. The extent to which negligence in making a repair in time, and which is directly responsible for loss of life and property due to motor car accidents, is one of those intangible things that can only be guessed at. The negligent who get by are lucky, and those who do not leave so little evidence that the cause of mechanical failure is often lost in a pile of broken glass and twisted metal.

Preventive maintenance work schedules are in most cases based on the miles travelled and, at the end of certain prearranged

periods, vehicles are inspected for certain items. In other cases, the inspection and repairs are made on a time basis. It is unimportant whether the controlling factor is a mile or an hour, since both of these are merely accounting factors that I shall refer to later.

A schedule of preventive maintenance should be so laid out in the mechanics' working schedule that there will be no interruption of service to the department or operator and no rush on the part of the mechanic. I believe that the mechanics, who are responsible for the mechanical excellence of well organized fleets, are so familiar with them that it is unessential to use the elaborate printed forms so often recommended when preventive maintenance systems are installed.

No preventive maintenance system could possibly work unless a record is maintained of all types of mechanical failures, road jobs and adjustments that occur between each cycle, so that the responsibility for each job can be definitely placed. This will keep the mechanic and his foreman on their toes and it will eliminate the inquiring mind.

There are certain fundamental things which the management should prescribe as the required mechanical work in every preventive program. Many of these can be determined by the nature of the fleet and the nature of the business. Some of the suggested required items might be changing the oil filter cartridge, changing the battery, general lubrication, checking regulation car equipment and tools, and any other items that the management might find desirable. In our own organization a car undergoes preventive maintenance inspection every ten weeks, at which time a mechanic and a helper inspect and make the necessary repairs or adjustments immediately.

What is the nature of repair under this system? Units changes if necessary, motor tune-ups, brake adjustments, brake relining, accessory repairs, ignition and electrical adjustments, general lubrication including inspection of rear end and transmission, clutch adjustments, general tightening of body, light body repairs and tire inspection are all items that might have to be performed under preventive maintenance, in fact any mechanical operation. It is interesting to note how, when applied to a fleet of older trucks, the repairs required between cycles also drop

off. The desirable situation, of course, is to apply preventive maintenance to a gradually changing fleet, so that eventually all cars purchased will have been acquired while the preventive maintenance system is in effect.

Daily driver complaints constitute about the only inexpensive method of determining the repairs required from day to day. The role played by the driver, in advising the mechanical group of the peculiarities in the operation of his vehicle, is another step in building up long vehicle life. Preventing little ones from developing into big ones is essentially the preventive maintenance spirit. Mechanics who are working under preventive maintenance tend to become more sensitive to poor adjustments, discern more rapidly, develop a critical eye and ear and begin to realize the importance of "An ounce of prevention is worth a pound of cure."

We find, therefore, that repairs fall into two general classes. Those made on the preventive maintenance schedule and the correction of the daily chauffeur complaints or running repairs. I have found it profitable to divide the mechanical force in accordance with these two types of repair. In this way, a mechanic doing an inspection on one night is not encouraged to look for the opportunity to sneak back and correct a mistake the following night. If an inspection is incomplete, it is far better for the schedule to lag for a day or two. Mechanics are encouraged to ask for more time if required. A thorough job is more important than an up-to-date schedule. When a mechanic has released the car it is presumed, without reason, that it is in good running order. Until the next inspection all subsequent repairs are potentially his fault. Individual responsibility has been encouraged and I find that the men generally take great pride in assuming it.

A mechanic should not be pinned down to a definite routine in the performance of his preventive maintenance work. For his guidance and memory, it might be well to list the items that may be subject to attention, but as far as arranging the work in accordance with some prearranged plan, I feel it is unnecessary and limits his output. Limits him because all too often something not listed requires attention. He should have an opportunity to work any part of the vehicle that his experience tells him will not survive

another inspection. You will say perhaps that too much authority has been delegated to the individual and that the foreman's word must mean very little. The fact is quite the opposite. In these days of unions and labor disputes, this idea goes a long way toward making each man feel that he is sharing in the responsibility of keeping the wheels rolling. He appreciates that he will have an opportunity for a hearing in the presence of his foreman, at which time he will have to be right.

Hours vs. Miles

Because of the nature of our business the average mileage per car, per year is low, and for this reason "hours in service" is the basis for final cost analysis. Mileage has become a standard of comparison for physical evaluation when a car is about to be retired. It is also for this reason that our maintenance schedule is operated on a time basis.

Arbitrarily presuming that for every nine cars a mechanic is employed, a garage operating 200 vehicles would require 22 mechanics. On the basis of an inspection every 10 weeks or approximately every 50 working days, it would be necessary to schedule the work at the rate of four cars a day. With two men assigned to each vehicle on preventive maintenance a crew of eight would be required, and 14 for general repairs or work complaints. The eight on preventive maintenance will work their entire eight hour shift on the four jobs assigned for that night, while the 14 others will average about four jobs each on various cars. Horns that won't blow, lights that won't light, doors that won't close, brakes that won't hold, constitute the majority of the repairs falling into this group. The chauffeurs complaint sheets are carefully checked. If it is found that the complaint is caused by care-

lessness on the part of the mechanic on inspection, the mechanic and his foreman will be given an opportunity to explain it the following night.

The distribution of the ratio of cars to mechanics may shift from one garage to another as occasions and emergencies require.

Three and a half years of application to the basic principle of preventive maintenance in this field, applied to both old and new vehicles, has eliminated much of the guess work in mechanical repair. Costs have been reduced, time out of service has been minimized.

Preventive maintenance spreads automotive maintenance activity over a 12-month period, ironing out seasonal labor peaks; reduces future costs by easing the severity of a breakdown when it comes; creates a better spirit of cooperation between the mechanical group and the operating departments and instills into all a safety consciousness that prevails 12 months out of the year. An organization with a low labor turn over, and a high average for years of individual service will benefit by it.

Vehicle Retirement

Fleet operators have long pondered when an old vehicle should be replaced. Formulas have been written, theories of depreciation set up, applied and made workable and for a time successfully. But how often in just such a fleet are vehicles of one make and year disposed of while others are retained. The human element as represented by the driver, road conditions and length of different routes, tendency to overload, errors in original application, inherent weaknesses at the time of purchase and the accident record are all factors entering into the hastening or retarding of the retirement date.

WEDNESDAY MORNING SESSION

October 9, 1940

Rules and Tools of the Fleet Safety Engineer

Presiding: H. S. COLE, Assistant Superintendent, Evening Star Newspaper Co., Washington, D. C.

Management's Interest and Responsibility for Safety

By DON M. GOODWILLIE

Safety Engineer, The Willett Company, Chicago

Management must want safety just as it wants sales; it must have a safety engineer or a person definitely responsible for safety in the same manner and for the same purpose as it has a sales manager. The old idea of sticking up a few safety posters, having one safety meeting a year in the garage before starting the day's work and leaving the rest up to the insurance carrier is out of date.

There must be constant follow-up by management of the safety program. This follow-up, in my opinion, consists of the interest and desire by the management for safety and the definite delegation of the responsibility for safety to one man.

First, management must place the responsibility for safety with a competent and experienced safety engineer with background and training. He should be selected by the same basic principles which govern the hiring of any executive. Too often, and usually following a series of accidents, a temporary hubbub takes place, and the result is that someone is hired without the necessary qualifications at a nominal salary. Or, in the smaller organizations, the job may be given to a minor foreman or clerk. He may lack the proper background, plus the important fact that, by the very nature of his previous position, he does not command the respect of department heads and general personnel. This is an evasion of responsibility on the part of the management.

Get the Right Man

Management should hire the proper man to do the job; pay him well; and give him an appropriation for expenses, and watch for results. Unless there are some unusual technical factors present, I believe in bringing in a man from the outside. I realize that in small organizations this cannot be done. In that case, it may be possible to justify a full time engineer by assigning correlated activities to him such as personnel, public relations, and the handling of small claims and complaints. As a final alternative, management may assign the job to an executive, such as the operating su-

perintendent. In that case, management must see that this individual gets some tools of the experienced safety engineer. He should attend such meetings as these; the company should join an established safety organization in order to keep abreast of the latest developments. He should cooperate closely with the safety engineering department or his company's insurance carrier.

Some may ask how large should a fleet be to justify a full time engineer. That is always a question, based on many variables, but I should say 50 units or more.

A full time engineer with complete authority is management's first responsibility. At this point the job is well started, but hardly finished.

It is most important that the management should demonstrate "constant executive interest." If we are having a safety meeting or party as we call them, I exert every effort to have the head of our company present. This interest, expressed by the giving up of personal time, lends prestige and momentum to any safety program.

Analyzing Results

If any safety program results should be carefully analyzed and presented to the management, which, in turn has the responsibility of minutely scrutinizing the work that has been done and making suggestions. Do not create a department and then forget about it; there are dollars in safety as well as in sales.

Many large fleet owners believe in the principle of "paying for their mistakes." We feel quite strongly about this. Faulty equipment, maintenance and personnel are strong accident producing factors. When any of these factors produces an accident it costs management money. Management will show its desire to accept safety responsibility by actually paying through its own channels, with its own draft and clearing over its own signatures. While I am not advocating self-insurance as a general rule it seems that, by the retention of a small amount of self-insurance, a much greater interest in safety can be created in man-

agement, and in turn through the whole organization. If it costs the company \$100 by its own check to settle a claim caused by brake failure everybody gets stirred up about it. Considering the fact that there is no real difference who pays the small claim it has always been amusing to me to note the difference between the way people react to a claim covered by insurance and one self-insured.

Management should place the safety engineer in the status of a department head, giving him complete authority over all matters pertaining to safety, and back that authority up completely. It is often said that titles mean nothing, but I believe they are a psychological aid to the safety engineer—bulletins or orders signed "Director of Safety and Personnel," for example, have more authority and meaning to the average commercial vehicle operator than one signed merely "Safety Department," or "Safety Engineer." In many large fleets the safety engineer's job is comparatively new; the operating and maintenance departments, in particular may look upon him as an evil, and not a very necessary one at that. Management should encourage cooperation between

the other departments and the safety department.

A Good Investment

It has often been said that to make money you must spend money. If management is to get a return from its safety expenditures there must be an honest investment. To have a competent engineer in charge and then tie his hands by refusing to provide for him and his department in the budget in a sensible manner is to throw the whole safety mechanism into reverse gear. Providing adequate clerical and secretarial assistance will give the safety executive time to devote his efforts to major items, and not tie him to a desk over which will pass a mass of detail that could just as well be handled by an efficient clerk. An adequate budget will enable the engineer to provide rewards and incentives for safe driving; to invest in, and experiment with, new safety devices; to publish a safety house organ; investigate completely all accidents; to check the background of all new personnel thoroughly (the last being an increasingly important factor with general conditions as they are today).

The Responsibility for Safety

By EBER S. LUSK

Director, Safety and Personnel, Peter Eckrich & Sons, Inc., Kalamazoo, Mich.

We often have heard the old alibi "my business is different." So are the leaves of the trees, and the experts tell us that there are no two fingerprint patterns alike. But the general principles of all legitimate businesses are similar—despite the differences of approach which we may employ in the selection and training of individuals. In the main, all businesses have similar basic safety problems and in our own company's business of manufacturing and distributing a million pounds of sausage products a month we have found "the responsibility for safety" is accepted as the personal responsibility of each individual worker, no matter what his job. Each worker is ever mindful of that fact!

From the very moment a man is interviewed for a job he learns to make safety his personal responsibility. Before he goes to the company physician, before he is given his first job assignment, before he is al-

lowed to be fitted for his safety shoes and other safety equipment, before he has completed his probationary or trial period of employment his mental attitude toward his job enables him to know that his success and his happiness are assured only as long as he observes the common sense rights and privileges of safe workers in his department.

Remembering that management's job is one of administrative education; we have found the safe worker is rewarded and receives living benefits in true ratio to the interest he derives from his individual investment in safety principles. When an injury occurs to one of our plant workers or when one of our drivers is involved in a traffic incident, the individual employee knows that it is his personal responsibility to report the facts: freely, honestly and impartially. He knows that management will get the facts. Consequently, he voluntarily sets in motion the fact-finding machinery

Management's Interest and Responsibility for Safety

By DON M. GOODWILLIE

Safety Engineer, The Willett Company, Chicago

Management must want safety just as it wants sales; it must have a safety engineer or a person definitely responsible for safety in the same manner and for the same purpose as it has a sales manager. The old idea of sticking up a few safety posters, having one safety meeting a year in the garage before starting the day's work and leaving the rest up to the insurance carrier is out of date.

There must be constant follow-up by management of the safety program. This follow-up, in my opinion, consists of the interest and desire by the management for safety and the definite delegation of the responsibility for safety to one man.

First, management must place the responsibility for safety with a competent and experienced safety engineer with background and training. He should be selected by the same basic principles which govern the hiring of any executive. Too often, and usually following a series of accidents, a temporary hubbub takes place, and the result is that someone is hired without the necessary qualifications at a nominal salary. Or, in the smaller organizations, the job may be given to a minor foreman or clerk. He may lack the proper background, plus the important fact that, by the very nature of his previous position, he does not command the respect of department heads and general personnel. This is an evasion of responsibility on the part of the management.

Get the Right Man

Management should hire the proper man to do the job; pay him well; and give him an appropriation for expenses, and watch for results. Unless there are some unusual technical factors present, I believe in bringing in a man from the outside. I realize that in small organizations this cannot be done. In that case, it may be possible to justify a full time engineer by assigning correlated activities to him such as personnel, public relations, and the handling of small claims and complaints. As a final alternative, management may assign the job to an executive, such as the operating su-

perintendent. In that case, management must see that this individual gets some tools of the experienced safety engineer. He should attend such meetings as these; the company should join an established safety organization in order to keep abreast of the latest developments. He should cooperate closely with the safety engineering department of his company's insurance carrier.

Some may ask how large should a fleet be to justify a full time engineer. That is always a question, based on many variables, but I should say 50 units or more.

A full time engineer with complete authority is management's first responsibility. At this point the job is well started, but hardly finished.

It is most important that the management should demonstrate "constant executive interest." If we are having a safety meeting or party as we call them, I exert every effort to have the head of our company present. This interest, expressed by the giving up of personal time, lends prestige and momentum to any safety program.

Analyzing Results

If any safety program results should be carefully analyzed and presented to the management, which, in turn has the responsibility of minutely scrutinizing the work that has been done and making suggestions. Do not create a department and then forget about it; there are dollars in safety as well as in sales.

Many large fleet owners believe in the principle of "paying for their mistakes." We feel quite strongly about this. Faulty equipment, maintenance and personnel are strong accident producing factors. When any of these factors produces an accident it costs management money. Management will show its desire to accept safety responsibility by actually paying through its own channels, with its own draft and clearing over its own signatures. While I am not advocating self-insurance as a general rule, it seems that, by the retention of a small amount of self-insurance, a much greater interest in safety can be created in man-

agement, and in turn through the whole organization. If it costs the company \$100 by its own check to settle a claim caused by brake failure everybody gets stirred up about it. Considering the fact that there is no real difference who pays the small claim it has always been amusing to me to note the difference between the way people react to a claim covered by insurance and one self-insured.

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From the very moment a man is interviewed for a job he learns to make safety his personal responsibility. Before he goes to the company physician, before he is given his first job assignment, before he is al-

lowed to be fitted for his safety shoes and other safety equipment, before he has completed his probationary or trial period of employment his mental attitude toward his job enables him to know that his success and his happiness are assured only as long as he observes the common sense rights and privileges of safe workers in his department.

Remembering that management's job is one of administrative education; we have found the safe worker is rewarded and receives living benefits in true ratio to the interest he derives from his individual investment in safety principles. When an injury occurs to one of our plant workers or when one of our drivers is involved in a traffic incident, the individual employee knows that it is his personal responsibility to report the facts: freely, honestly and impartially. He knows that management will get the facts. Consequently, he voluntarily sets in motion the fact-finding machinery

first to save himself the need of remembering warned-over facts.

And we have found that an up-to-date personnel record, simplified so that only the essentially relevant facts are available, is a big help in removing the cause of unsafe practices. Without the human factor in accidents we feel that there would be little need for personnel records as a part of our safety program. The nature of the records is determined by the kind of the job in which the worker is engaged. For example, through the cooperation of our auto-maintenance and sales department workers we obtain individual truck reports. These report forms are pulled in duplicate and carried in a metal clip inside each cab. Each report is made out by our driver and is checked for "grief" or irregularities by a garage mechanic and any troubles noted are corrected before the report is sent in. Maintenance costs, daily mileage and corrected troubles are tabulated for accounting and other purposes. Vehicle accident report forms and not-at-fault witness cards are carried in each cab ready for use. Here again the individual driver is held strictly accountable for reporting details on every traffic incident whether it be a dented fender of "unknown" origin or an accident of a serious nature. And each incident, whether an accident or not, is reviewed within 24 hours by the branch manager in charge before the report is signed and delivered to the personnel-safety department.

Monthly safety meetings in each plant and branch, safety bulletins, inter-plant and inter-fleet safety contests and company-wide participation in local and national safety programs all serve to stimulate and maintain that renewal of individual interest which we regard so necessary in our plant and fleet safety programs, month after month. It seems that our workers, our foremen, our

branch managers, our department heads and our company officials have the idea that when one man tells another what to do, the time of both is taken up with a job which one man should handle. And that is one more reason for my belief that the individual who has initiative and has been selected and is acquiring experience for tomorrow's job is the one upon whom we should show an increasing confidence. We should permit him to share with us the results of his safe working habits so each in turn may enjoy the savings which such cooperation most certainly assures.

If we conclude with the assertion that it is the individual on the job, the individual behind the wheel, or the individual who pushes the button in any functional capacity is one upon whom "responsibility for safety" should be imposed, isn't it equally fair to conclude that there should be safety "compensability" shared by each individual who keeps his personnel-safety record on the profit side of the daily ledger? And here is how we have that worked out:

A study of our records up to about two years ago, prompted us to go self-insured on our workmen's compensation. Our net savings during the first year was 56 per cent of the premium paid the previous year. Up to the end of August, 1940, our loss experience was 126 per cent in actual to expected. Individual worker responsibility for safety has done that for us with an approximate savings of \$5,000 a year in insurance.

In fleet safety during the year ending June, 1939, our records showed an accident rate of 2.54 in nearly two and one quarter million miles. In the year ending June, 1940, in over two and one quarter million miles our vehicle accident rate was 1.43 or a reduction of nearly 50 per cent under the previous year. And we credit the individual driver with the responsibility for this safety achievement.

Accident Reports and Analysis

By H. D. SCHEFFER

Director of Safety, Auto-Owners Insurance Co., Lansing, Mich.

While it is important to control the individual driver, if accidents are to be prevented, it is even more important to control the drivers of commercial fleets. Such con-

trol is possible only if adequate records are maintained.

Fleet accident records are not adequate unless they are accurate and comprehensive.

They must show clearly the unsafe acts of the company's drivers and condition of the vehicles, and suggest how the same may be corrected. They must also provide a basis for intelligent handling of the legal consequences of accidents.

If we are to have records of accidents which will be of value, we must have complete reports. Accident reports always raise the question "Should all accidents be reported?" Regardless of the size or seriousness of the accident it should be reported and given every attention at the scene. The reason for this is that far too many minor accidents eventually turn out to be serious, especially if an ambulance chasing attorney gets hold of them.

This however, may be largely prevented by obtaining adequate information at the scene. Even if it does not prevent the case from reaching an attorney, it will in any event produce the type of information necessary to legal defense. It has been our experience that when complete and accurate accident information is obtained, many cases never go to trial nor are even pressed for settlement.

In order to obtain the information which will be most beneficial and at the same time may be obtained in an easy and quick manner, we should supply the driver with a condensed report form. Usually the only time available for the securing of information is before the police arrive. The National Safety Council's form Vehicle No. 2 is a good example.

Accident Information

Even when furnished with report cards the driver should be instructed in their use and also to recognize certain phases of an accident which are of vital importance.

Therefore, after any injured have been taken care of, and the vehicles protected from further damage, he should obtain the name and address of the other driver, and the license number of the vehicle, because the driver of the other vehicle may not own it.

He should obtain the names and addresses of any passengers, then those who might be injured or deceased, and if it is possible, the place to which they were removed. The names and addresses of any persons who might have rendered first aid, for they might later be of great value as a witness. Then the names and addresses of any other

witnesses. If no one saw the accident, then the names and addresses of those who arrived first.

It also is very important to give special attention to accidents involving minors. If they are seven or younger, they are held free of contributory negligence, which places the responsibility for the accident directly upon the driver.

The driver should lose no time in reporting accidents involving serious property damage, personal injury or death. This should be done by phone or telegraph. A few hours lost might make a considerable difference in the outcome of the loss. An accident involving an infant child should always be reported. If you are not self-insured, you should make certain that your insurance carrier has settled the loss in this manner. Otherwise, you may find yourself with a serious law suit on your hands, which in the case of a one year old child may come at any time within a period of from 21 to 23 years later, depending upon the laws of the state.

It is also very important to report the damage done to the other vehicle or object. If there is an insurance company involved obtain its name and address, for this might be most helpful to you later in settling the loss.

A general description of the accident should be given, and if carefully phrased questions are used on the accident report card, much assistance can be given the driver in this regard. Measurements should be taken where ever possible, but if it is not, then carefully stepped off distances will be sufficient. The driver should be sure to indicate which direction is north and give any landmarks which might be used for identification purposes. Sometimes a sketch proves helpful. We do not recommend having the driver take lengthy statements; names, addresses and license numbers of the persons and vehicles involved are of more importance, and then too, trained investigators are better equipped to take statements.

When Police Arrive

After the police arrive, the driver should cooperate with them in every way. He should also obtain the officer's name, badge number, and the station from which he operates, so that a check-up might be made later on his report.

To facilitate the checking of the police report, duplicate police forms should be used. Most police posts or stations will not let you see the accident reports but will read them to you. Therefore unless you have a form which is an approximate duplicate of theirs you will have a great deal of trouble checking it.

From these two reports, the drivers and the officers, a final analysis report of the accident may be compiled, and for this purpose we recommend the use of the National Safety Council's form vehicle No. 1. The compiling of this report should be done with further questioning of the driver by an official of the company and every point should be considered, for it is at this time that definite responsibility for the accident may be determined.

If a good job has been done in reporting the accident and in maintaining an accurate accident file, then concrete evidence as to the cause of the accident will be forthcoming. You may be reasonably assured of this if the forms described in the National Safety Council's Safe Practice pamphlet D-4 are used as recommended by the Council.

Let me leave one word of caution: Regardless of what forms are used, drivers must be thoroughly instructed as to their use before the accident occurs or they will be of little use to them in an emergency. A good example of these instructions may be found in the National Safety Council's Fleet Safety Memo No. 18.

Reports alone will not stop accidents! They must be analyzed and a really adequate analysis requires both a routine procedure and special study. Time will not permit a detailed discussion of the accident analysis, so I will make only a few brief suggestions.

Keep individual drivers' records, and for this purpose, I recommend the drivers' record card shown in the Safe Practice Pamphlet D-4. If this does not meet your needs in every detail, it at least should be used as a pattern. This type of record card will afford you an opportunity to study the entire experience of each driver. But to do so efficiently a record file should be set up. Two common methods for filing accident records are shown in the National Safety Council's Fleet Safety Memo No. 11.

These records plus the use of the long or short form analysis or tally sheets described in pamphlet D-4 will provide you with the knowledge of the actions and circumstances of the accident which forms the ground work for accident prevention.

The information derived from the forms I have just mentioned will be comprehensive and consists of the type, severity, and location of the accident. The conditions under which it occurred, such as the weather, roadway, hour of the day, day of the week, etc. Conditions and actions of the drivers and pedestrians. They will also provide information as to who was involved and establish responsibility for the accident thus affording an opportunity of preventing an accident's recurrence.

Selection of Personnel

By HAROLD J. JONES

Director of Safety and Personnel, Automobile Shippers, Inc., Detroit

Recently I noticed a motor company advertisement headed by these words: "Get the Low Down on Dodge Job-Rated Trucks." In the body of the ad, it explained that "Job-Rated" meant a truck that fits the job.

If the employment manager knows the type of job to be filled and knows definitely what information he wants from the applicant and how to get it, he thereby can get the "Low-Down" on the applicant and can efficiently "Job-Rate" him.

Of course, where all the employing is

done at one central office, an employment manager can generally handle the situation. But in many fleet operations, drivers are employed at various terminals by the local supervisor. In that case, the employment manager does not come into personal contact with the applicant before he is hired. He must, therefore, depend largely on how well the local supervisor handles the selection. Most of our difficulties arise when supervisors who are not trained in employment procedures attempt to select driver

personnel. This is especially true when there is an immediate need for drivers during a peak period and they are tempted to hire without giving much attention to the applicant's qualifications.

In our organization, we supplied our supervisors with a definite procedure. Each man hired is placed on 30 days' probation under the supervision of an instructor-driver until he qualifies. Failure to qualify in this period results in dismissal.

In our instructions to the supervisors, we stressed, among other things, two subjects of inquiry by which he can "job-rate" the applicant: good character and competency.

Have you ever questioned men in a supervisory capacity for an explanation of character? I found they had a general idea of the subject, but in defining character, they were not in agreement. In other words, there was a conflict of thought in the evaluation of character. We have often heard the expression, "The man lacks character." What we really mean is, "The man has few fixed moral or ethical standards."

Therefore, character becomes a major factor in your decision to employ, because the greedy, dishonest, overbearing, selfish, unprincipled man who cares naught for his friends and fellowmen must be weeded out. I believe it is so important that I divided character into two component parts: dependability and responsibility.

We all agree that we must employ dependable drivers. We all agree that the men we employ must be relied upon to drive our vehicles without direct supervision over many miles of highways—one who can be trusted and will take pride in his equipment and drive safely day in and day out.

Systematic Supervision

Our drivers must be reliable and trustworthy. Therefore, to be assured of dependable drivers, you must provide the terminal supervisors with a procedure that will enable them to obtain the facts that will ultimately prove the dependability of the applicant.

It is a foregone conclusion that dependability cannot be judged wholly upon an interview. Honesty is an attribute of dependability. We, therefore, might judge dependability through honesty.

So, it is important that we instruct our supervisors to dig deeply into the applicant's past. Know for certain that he is reliable and trustworthy in all his actions.

Home Life Influences

In dealing with responsibility, practically the same procedure should be followed. By all means insist that the supervisor check into the home factors of the applicant. I am a firm believer in the knowledge that in the home lies the secret to a man's responsibility. Therefore, be absolutely certain that he is devoted to his wife and children, or whether he is a chiseler, moving about from one place to another to avoid paying rent and other just debts, to the embarrassment of his family. Does he drink and squander money that should be used for the support of his family? Has he the habit of borrowing and never paying back? Is he the sporting type—lady-killer, card-playing party boy?

In my opinion, character is the dominating factor in the employment of a man. Give me a man who has high principles, and I can teach him what is necessary and make him a loyal and efficient employee.

After disposing with the character question, however, we must of course be certain that we employ competent drivers. Competency should be divided into four component parts: ability, experience, suitability and fitness.

On ability, we should set up a procedure to follow in determining the skill of a driver.

Next, we should have definite requirements as to experience; how the applicant will perform under actual driving tests, his knowledge of safe driving rules and of I.C.C. Safety Regulations.

Minimum and maximum age limits should be determined as well as the weight and height required by your particular operation. Further, the applicant should be intelligent and mentally alert.

Then, the matter of fitness and why a physical examination is necessary should be stressed. In our own case, we arranged with doctors to examine each likely applicant on physical standards patterned along the lines prescribed by the Interstate Commerce Commission.

Training of Personnel

By FRED L. STRUGGLES

Assistant Manager, Department of Safety and Personnel,
Greyhound Management Co., Cleveland, O.

The primary cause of accidents involving commercial vehicle drivers is not the lack of plain driving ability but the failure to recognize possible hazards until too late, or else the unwillingness to keep under control to avoid an accident regardless of conditions.

Therefore, the important thing in training drivers so as to reduce accidents is to sell the man the idea that safety pays and to instill in him the will to drive safely regardless of what other drivers might do.

The question of a man's ability can be determined without much difficulty. Generally, a review and verification of previous employment plus a road test will show whether he has this ability or is capable of acquiring it with a little practice and coaching. But instilling the will to drive safely requires time and patience.

Therefore, it is my contention that the actual training of new drivers should not be disposed of by means of a short road test or a trip or two with a regular driver. Instead, an impressive training program, in keeping with the needs of the individual company, should be formulated to make the applicant safety minded. The training should be devised so that it will be difficult for any applicant regardless of previous experience to be approved unless he applies himself. When employment conditions permit, the training should require some sacrifice on the part of the applicant.

The time to do this selling job is before and not after the man is employed, as prior to employment, he is in a more receptive frame of mind. Satisfactory completion of the training course should be made a requisite of employment.

The Training School

The establishment of a regular training school is recommended when practical. Regardless of whether or not it is practical to operate a school, it appears desirable to have the same regular drivers handle the driving instruction for new men. This assures uniformity of instruction and enables instructors to develop their technique. Care must

be used in the selection of instructors from your driving personnel.

The actual supervised driving practice should include actual stopping distance tests on the highway with loaded vehicles. The driver should be required to pace off the distance. Tests should be made at different rates of speed to illustrate how the stopping distance increases out of proportion to the increase in speed.

Considerable can be accomplished towards making a driver safety minded by talks and illustrated lectures on defensive driving. The stopping distance tests should be supplemented with talks designed to drive home the precautions necessary and what it means to be under control at hazardous points so as to be in a position to avoid potential accidents. These talks should also be designed to create pride in the driver's safety record. Courtesy to other motorists should be encouraged.

Some mechanical instruction should be included in the driver's training especially as to those units vital to the safe operation of the vehicle. This is especially important on inter-city operation so that the driver is capable of making minor emergency repairs enroute. It is also felt that the driving efficiency of a man is increased if he has a working knowledge of the units of his vehicle.

Interstate Commerce Commission and state regulations as well as the company safety rules should be thoroughly covered. A short written examination covering the major points of the training course at the completion of the preliminary training before employment is desirable to assure proper attention. It will have a good psychological effect.

Safety Re-Training

Safety meetings are one of the most widely used means of follow-up on retraining. Such meetings must be varied and made interesting through the use of outside speeches, presentation of safety awards, discussion of operating problems of the com-

pany affecting the driver by representatives of other departments, analysis of accidents taken from the company claim files and safety movies. Safety quizzes as well as other matters affecting the drivers' duties

with cash awards to the winner are instructive and generally well received.

The performance record of individual drivers should be constantly watched and conferences held with individuals showing a tendency to slip.

Bonuses, Awards and Penalties

By C. G. BENDER

Safety Director, The Kellogg Company, Battle Creek, Mich.

When we study well regulated and organized safety efforts in industry, we are impressed with the soundness of the underlying principles of the program. If industry has established certain fundamentals of safety, why can't we in motor vehicle activities profit by that experience? Accordingly, let us consider whether, by the use of bonuses, penalties and awards, the respect of the employee can be arrested, his good will gained, his cooperation encouraged, and whether the program will have lasting and far-reaching beneficial results.

Awards

It is human nature for individuals to like recognition. If this is sincere, the employer will surely gain the respect of the employee, encourage cooperation, create the proper attitude towards safety and create employee good will. However, I believe that a sincere award need not necessarily be of appreciable money value. There are many plans which can be promoted under these qualifications, as for example:

1. A commendatory letter over executive signature.
2. Taking a group picture and distributing copies to those recognized.
3. Holding a smoker at the employer's expense.
4. Holding a dinner furnished by the employer.
5. Publicity in your local or company newspaper.
6. Many others, including the presenting of certificates, medals, pins, rings, etc.

Penalties

The usual interpretation of a penalty system is that it is comparable to a system of monetary fines. This means the fines would be levied for: Certain types of accidents; accidents for which the employee

is responsible; a series of accidents, and other offenses.

In my opinion, such a system has no place in promoting a safety program. Surely it would not be conducive to aiding a desire to work or drive safely. It would not encourage cooperation, it would not create good will and it would not gain employee respect. On the other hand, it would create a lack of confidence, it would tempt the filing of false reports and facts, it would encourage the temptation to file no report, especially in minor cases; it would more surely destroy morale and create ill will. It would put the employee in the light of being forced or driven to do a job that he should accept willingly.

One personnel director summed up the effect of a penalty system very precisely when he said:

"The best salesman for his competitor is that salesman the next day after having received a monetary penalty for being involved in an automobile accident."

Penalty systems shatter all the fine traditions that the average industry has fought to establish through its safety effort.

Accordingly, I maintain that a penalty plan does not deserve even trivial consideration in safety, unless, of course, a company has such a general penalty plan that it fines a person for every type of job failure, such as failure to treat customers with courtesy, failure to maintain exact and reasonable time schedules, failure to land an order, failure to observe company rules regarding general policies and all the other failures with which we are confronted year after year.

Penalties, however, should not be confused with discipline. Disciplinary action must always remain a possibility, both in safety and all other activities or duties.

Bonuses

In the same manner that it is poor policy to penalize a person for accidents, so also is it inadvisable to pay bonuses for not having accidents. We all recognize safety as an integral part of any man's duty, and as such, should not be pointed out as something for which an extra bonus is necessary. Paying a bonus makes safety superficial.

If bonuses are superficial, there can be little hope that they will fill the bill. True, the effect would be different than under a penalty system, but would not constitute a solid footing unless accompanied by many other strong safety features.

We must, not, however, overlook the fact that if a company has a general bonus plan, which involves production, quality, etc., then safety should have a bearing on the obtainable bonus.

One other exception, if the company has a penalty plan, it should necessarily be imperative that it also have a bonus or re-

ward plan. The first, without the second would make a very unbalanced situation and would create additional embarrassing circumstances. It seems logical that if a man is placed in a position to lose money because of an accident, by the same token he should have the opportunity to benefit because of a perfect record.

In the final analysis the adoption of a bonus and penalty plan is a temptation to follow the line of least resistance in showing rapid improvement and to forget the essentials that must be drilled into an employee if successful safety efforts are to be forthcoming. A good program is designed to be successful and to show improvement over a period of years, rather than to accomplish immediate but premature results.

Accordingly, I suggest that we in our vehicle program follow the experience of industry and try to eliminate all frills from our program, especially those that are superficial and those that destroy morale, good will and personal pride.

WEDNESDAY AFTERNOON SESSION

October 9, 1940

Rules and Tools for the Fleet Safety Engineer

Presenting: H. S. Cole, Assistant Superintendent, Evening Star Newspaper Co., Washington, D. C.

Committee to Make Inspections and Determine Responsibility

By J. P. HOLTRAMP

Fidelity and Casualty Company of New York, Chicago

Where the operations are extensive with various terminals and shops, a committee to inspect the physical condition of buildings, docks and shop equipment has been found a useful tool to the safety engineer. This committee is similar to the plant safety committee. Its members are stationed at the garage or terminal. It meets regularly to review the personal injury accidents which have occurred at that terminal. One member regularly makes an inspection of the docks and equipment and submits recommendations to correct unsafe conditions. These recommendations are reviewed by the committee and submitted to the safety di-

rector and management for their action. The committee should consist of three or four members, rotated so that all employees have the opportunity to benefit from the safety discussions. The chairman should be the local terminal or garage manager and the membership should consist of dock hands and mechanics.

Committees on Responsibility

Some of you may inquire why one man cannot determine whether the driver is responsible for the accident. This works out all right where one man is wholly responsible for all the varied functions of a fleet

operation. Fleets of this type will necessarily be small, say up to 25 pieces of equipment, with little turn-over of drivers and close contact between the operator and drivers.

For the large fleet, however, we find that responsibility for maintenance, dispatching, hiring and training of drivers, safety and general operating practices are divided. One man cannot keep up the desired contact with the drivers, and it is my experience that a committee to determine accident responsibility has an important place in the safety program.

A committee to determine accident responsibility, when functioning properly, will develop the following information, valuable to the fleet safety engineer:

1. Determine the responsibility for each vehicle accident, after a thorough analysis of it.
2. Present an opportunity to do effective educational work with the drivers who are having the accidents.
3. Provide accident prevention material for safety meetings.
4. Develop information that might be helpful in the settlement of claims.

Committees of this type are commonly called: Trial Board Meetings, Safety Board Hearings, Courts of Inquiry and Kangaroo Courts.

With the Kangaroo Court the driver explains his accident before a jury of drivers, one driver acting as prosecuting attorney, another as defense attorney. The judge is generally the safety director or superintendent of the fleet. After hearing the case the jury states whether the accident will be charged to the driver. Some of these meetings are held before all the drivers so that they will all benefit from the discussion.

Another type of committee is the Trial Board or Safety Board Hearing. It is my experience that this type of committee is preferable, because it will be treated with more respect than a committee composed of drivers only, and its membership is reduced to a minimum. This committee should consist of the following men:

1. A representative of the maintenance department—preferably the head.
2. The superintendent of the fleet.
3. The safety director who acts as Chairman and conducts the meeting.

4. Two or more drivers.

5. A representative from the insurance carrier.

I do not believe that it is necessary to have more drivers than representatives of the other departments. After all, the main thing is to see that the driver gets a square deal when his accident is analyzed. Unless the committee has a reputation among the drivers for giving them a square deal, it will defeat its own purpose and will lower driver morale. This committee includes a representative of each department so that, if any question regarding equipment or maintenance comes up, there is a representative of that department to answer it. The committee should decide whether the accident is chargeable to the driver. It should not determine the penalty. That should be decided by the manager of the fleet after receiving the committee's report.

If the accident was not charged to the driver, and if the loss was reduced considerably through some action of his, he should be commended. This should also be brought to the attention of the management and to the other drivers by a notice on the bulletin board or an item in the company paper.

Holding Meetings

In holding these meetings it is important that the driver be made at ease when he enters the room. The driver should be introduced to everyone in the room that he does not know. The chairman should have the driver's accident report in front of him and also the driver's previous accident and employment record. The driver should be asked to explain his accident in detail. Toy automobiles and a layout of highway and intersections is sometimes provided. After the driver has explained the accident, the committee, in turn, should ask the driver questions on points not clear to them. It is important that this committee have the right attitude. Members should not ride him or be too critical. The driver should be asked whether in his opinion he was at fault. Safe driving practices which could have avoided the accident should be discussed. When he leaves the meeting he should have a clear impression of what to do if he ever gets into the same accident situation again.

Some committees classify accidents three ways:

1. The driver is fully responsible.

2. He is partly responsible.
3. He could do nothing to prevent the accident.

There will be a tendency to place the greater portion of the accidents in the second class, that is, the driver is partly responsible. It has been my experience that it is better to make a clean cut decision and either charge the accident to the driver, or absolve him of any responsibility. When a driver knows he will be charged with an accident even though he is partly responsible, it will tend to make him a safer driver.

The practice of telling the driver that he will not be charged with his particular accident, providing he finishes the year, to get a safety award, is not fair to the other drivers.

General rules on what constitutes a chargeable accident should be set up at the inception of the plan and before the committee starts to function.

Contests

By MARK FERRARI

Supervising Fleet Engineer, Continental Casualty Co., Chicago

There are various types of safety contests, the two most prominent ones being intra-fleet and inter-fleet contests. Inter-fleet contests, as we all know, are generally conducted by safety councils, National and state, and in many cases by chambers of commerce.

An intra-fleet contest is conducted between drivers of the same organization.

There are five cardinal principles of a successful contest:

1. Management and supervision
2. Driver interest
3. Efficient committees
4. Suitable awards or trophies
5. Successful conclusion

Starting with the first principle of management and supervision, it must be accepted that unless the management can be sold on the contest and takes an active part, the contest should not be started. If the management is not interested we cannot expect the drivers, committee or anyone else to pay much attention to it. Management should systematically plan the contest, deciding definitely on how long it is to run, who shall determine the chargeability

The frequency of meetings depends upon the size of the fleet and the accident frequency. They should not be held too far apart. For a large fleet of over a hundred vehicles, they should be held weekly. For an average fleet of 50 vehicles; twice a month. Conditions of each fleet are different. There is also the problem in the long haul fleet, as to how to get the driver at the committee meeting. This is a problem for the safety engineer.

With local cartage fleets the problem is much simpler because all men are in the terminals every evening. With local fleets it has been found practicable to hold these meetings an hour or so before quitting time, an extra driver taking over the work of the "defendant." Or the meeting is held after the drivers are through. Best results will be obtained if these meetings are held on company time.

of accidents, and what shall constitute a chargeable accident. All these points should be outlined to the drivers at a special meeting called by the management. Meetings should be called from time to time during the year. Management should be present and re-emphasize the importance of this contest, complimenting the men and encouraging the men who have had accidents to fall in line quickly so that the competition will not lag.

Maintaining Interest

Charts showing the standings of the teams engaged in the contest should be posted in a suitable place in the garage where all the contestants can see them. Slogans encouraging accident prevention should be assembled around it.

The driver's interest can be easily obtained if we sell him on an idea that he is individually responsible for the standing of his team. To build up this interest, drivers should be allowed to elect the team captains and should be encouraged to choose a man who has the respect of the other members of the driving personnel; a man who is a go-getter and will take an active part at

the safety meetings. Drivers' interest can be further developed by management if the men are called in and told that their efforts are appreciated.

It may take a little time to get full cooperation from the drivers, but if we keep working it will not be long before the drivers will be greatly enthused, our Safety Meetings will be more active and there will be a raising of the morale to a higher degree.

Fair-Minded Committee

The committee to decide on the chargeability of accidents should never be one-sided. The driver should feel the contest is carried on to make him a better driver, not to put him on the spot. The committee should comprise two drivers and one executive, giving the drivers the balance of power in the voting. An appeal should be made to their sportsmanship to decide the case strictly on its merit and according to the rules set down by management at the beginning of the contest.

Many contests lag mainly because no suitable award or trophy has been set up. It is not sufficient to state that if the drivers win the contest for their team an award will be given. We must state what type of award it will be and the best way to decide that is to find out in what our men are

interested. Some companies have been known to give the drivers of the winning team a week's vacation with pay; other companies have taken their men to banquets and then to a ball game, while some have set up a cash award to be divided among the winning team. But the main thing to remember is, that the type of award must be announced at the beginning.

The Conclusion

The contest cannot be called a success unless the conclusion is better than the beginning. Many companies, when reaching the conclusion, simply elate themselves over the fact that their accident experience and costs have been reduced. Then they hold an ordinary safety meeting to award the winning drivers. This is the time that we should not miss the boat. This is the time that we can do the most to encourage drivers to drive carefully in the future in order to avoid accidents. This is the time we must let all men know that we did appreciate their efforts in the past year by giving them a banquet separate from the one to the winning team, inviting both the winners and the losers, and again thanking the winners for their efforts and encouraging the losers to win next year. Newspaper publicity showing what our drivers have done is also a good method of complimenting the men and keeping up morale.

First Aid, Road Trailing and Checking

By C. H. BUSS

Safety Engineer, Brady Transfer & Storage Co., Fort Dodge, Ia.

The trucking industry, by its very nature, is not composed of one or more plants, as is the case in other industries. Normally the employees in the trucking industry are isolated. True, at a few of the larger terminals where there is somewhat of a concentration, such as a sizable dock crew and perhaps the home station for a number of drivers, we have first aid rooms, well equipped. In our experience, we have found it valuable to have several department heads trained in first aid. While it is difficult to get any dock worker or warehouse worker to report for first aid, if they can be induced to report even minor injuries, then it is natural for them to report to their superiors.

On all shifts throughout the workday there is one department head ready to make simple dressings and in more serious cases, has authority to order injured worker to company doctor. A plan we hope some day to embrace is having a stenographer who is also trained in nursing. It would be fine to have a registered nurse, but the work-rolls in even larger motor freight terminals are not large enough to afford such expense. In addition, the work is not particularly hazardous. This steno wears white, saving several dollars a month on clothes, and it is fairly easy to find a girl who will be willing to do part-time first aid work. On the other hand it would be virtually impossible to get a nurse to type letters.

This nurse-clerk idea is worked out, to my knowledge, during day time only.

As to getting employees in the trucking industry to report for first aid treatment, I suppose they are like men in other industries, they think it is sufficient to report for bandaging of minor cuts and scratches. It is one thing our safety programs do, however, to get men safety-conscious and we find that truck drivers are more prone to report for treatment. This is as it should be, as we train our heaviest guns on them in our educational work.

Our fleet is so fortunate as to have several former Boy Scouts as drivers who are trained in first aid and life saving. My company has recently employed some drivers who formerly operated trucks in CCC camps, and it is mandatory with Uncle Sam that these men carry American Red Cross First Aid Certificates. Members of our safety staff, and we have a safety supervisor every 225 miles, all have safety training and can give excellent account of themselves in case of emergency. However, these groups represent a minority of our driver force.

From the standpoint of proficiency as set by these men, it is hoped to get all of our drivers to take a course in first aid training and have all units equipped with first aid kits. An increasing number of large fleets are providing extensive first aid training and drivers who qualify in the Advance Course are provided with a first aid kit and a mobile first aid plate for their unit. Surely it is the dream of every safety director to have all of his drivers trained in first aid. In addition to the Christian and humane value of this, without being too commercial, we cannot overlook the advertising value of emergency-trained truck drivers.

However, there is one phase of first aid that the majority of our truck drivers can and do perform. By the very nature of their job, traveling up and down the highways day in and day out in all seasons, they see many accidents and it is sad but true, see so many that they are not greatly upset at coming upon the scene of an accident. We believe that because our drivers see accidents so frequently and can keep their heads clear they are in position to do the most good by their ability to give calm and sensible direction in handling injured per-

sons. The driver is the man who can suggest to the assembled throng not to crowd the injured person, to give him or her a chance for a breath of air. He will direct the crowd to remove the unit from immediate path of danger and thus prevent accident from becoming two accidents where one was one too many. He will counsel bystanders not to move injured persons unnecessarily. He knows that great harm can be done by increasing shock, in the all-too-common practice of rushing injured persons madly to a hospital. He can counsel persons at the scene of an accident that it is better to bring the doctor to the scene, or wait for an ambulance, than to attempt moving. In fact I would say our policy for driver's help in emergency is like explaining mushrooms. We start not with where mushrooms can be found, how they are best prepared and eaten, but we start with what not to do with toadstools. So our driver training in first aid starts with what not to do in case of accident, as being the greatest good they can do in case of emergency. This we consider very definite first aid training.

Road trailing or observation represents the main effort of our engineers. Someone high in the insurance field estimated that insurance engineers see a driver one-millionth of the time he is driving. Some member of our safety staff trails every driver about two miles at least four times a year. This is two miles in every 10,000, so I believe we have those odds cut down. However, we know it is only a fleeting glance, so to speak.

It stands to reason that we must make the most of the very short time we do see a driver. Without being too dogmatic, we have arrived at certain more or less iron-clad rules we follow in observations. Observations must be made at all times and everywhere. That sounds like a big order, but any less effort will not produce results, and if I am sure of anything in safety, I am sure that observations will produce results. I am sure our accidents decrease in direct proportion with intensity of observations. We must see the driver in the middle of the morning when he is thinking about the day's work ahead. We must see him at noon when streets are crowded. We must see him in the middle of the afternoon when he is becoming tired. We must see him at suppertime, during the evening, at midnight,

at 3 a.m. when all is clear, but not clear enough, and at dawn. I impress dawn as that is the time when drivers are more likely to become sleepy. Observations must be made on lonely stretches of road miles from any terminal. They must be made near railway crossings, at the foot of hills, on city streets and in country towns. Also we make observations as drivers near major terminals. Observations which give you a less clear picture are unfair to the driver and to you.

Incident after incident could be given where favorable observations are made on drivers we know by grapevine are reckless. Many times we have had drivers thrown into jail for reckless driving who have repeatedly had favorable reports. This does not speak very well of our observations. It points a finger and says we are not doing a complete job.

We believe the ideal observation is made without the knowledge of the driver, if that is possible. Remember, you do not have to be seen even through a rear view mirror. Every commercial establishment along the highway is ever-ready to transmit word along the line of your presence, in addition to the fact that the drivers, of course, grapevine your probable whereabouts. It starts before that. Many times members of the office or garage force in the home terminal send the word along. We do not believe in hiding behind trees or bushes, because the little value gained is easily erased by the complete disgust of drivers.

One place where observations can be made unseen by drivers is a tourist camp. Because of the presence of many parked cars, he cannot with any degree of accuracy pick out your car as he drives by. It is our custom to get a conveniently located cabin and make observations. When one of our units drives by, we can then follow with minimum of notice. If, however, you believe your presence is discovered, it is a good idea to proclaim yourself openly by flashing your lights and waving as you overtake the truck. This takes from the mind of the driver a little of the idea that you are spying on him. At least some drivers will believe you just happened to overtake him. If possible, we believe it is a good idea to pull drivers off at a safe place and hand them a copy of the report you made. If it is good, he feels good. If it is bad, it is a

good idea to let him know that you cannot tolerate "cowboying."

Not all observations are made on the move. Parked trucks invite our men to stop in and talk over a cup of coffee. We have found litch-hiker, asleep in trucks and other serious violations. Also the friendly cup of coffee helps out the relationship with the better class of drivers.

A copy of all observation reports should go into the personnel files of the driver and published in a bulletin, or as in the case of my company, in the house organ. However, we do not publish all observations. This would give too obvious a clue to the drivers as to the effectiveness of our patrol work. We try always to leave an element of doubt in their minds as to how often we might be observing them without letting them know it.

One of the big problems confronting a safety department in a company where there is leased equipment and even company-owned equipment on line-haul operation, is getting the had drivers into the safety office for a talk. Many times we do not see a driver once in three months. We adopted a rule that in addition to the adverse report itself, a special report calling for disciplinary action should accompany reports that are especially bad.

These report forms are printed on blue paper. This makes them stand out. Then the home office issues a note to the terminal where that driver is likely to call next, on a flaming red form which states that Driver John Doe on Unit so-and-so is to be dispatched to the home terminal at once. In case that cannot be done, he is to be dispatched in the direction of the terminal and other terminal dispatchers notified to send him on in to get onto the carpet. This color scheme may sound childish, but a blue report coming into our home office gets the right-of-way to my desk, after my boss has looked it over (which I encourage) and a flaming red card in the terminal mail is not likely to be mixed up with other office papers, accidentally or sympathetically.

I might add that every member of our staff, except myself, actually enjoys this trailing work. We have four ex-drivers as safety assistants. It is to them like a pitcher striking out an opponent. They really like to show truckers that they cannot put any-

thing over on them. They are effective. One of our men caught me doing 32 in a 25 zone and I did not know he was behind me, although I was actually looking for him. In

spite of my personal dislike for trailing, I am sure it is so effective that it holds a very important position on our safety program.

Accessories for Safety

By A. W. MEINKE

Superintendent, Audit and Engineering Department, Indemnity Insurance Company of North America, Philadelphia.

Accessories not only help to prevent accidents, but also driving strain under trying conditions and conserve the driver's energy for other important duties.

To ignore the numerous difficulties and worries of the commercial driver and to place upon him the entire responsibility for preventing accidents, is a mistake that is made too frequently. Poor visibility is one of the greatest problems of the driver. To improve visibility there are rear view mirrors, windshield wipers, sleet removers, defrosters, sun visors, rear curtains to kill head light glare from behind, anti-glare goggles or glasses, fog lamps, spot lights, etc. Many of these aids are not as commonly used as they should be. Is it because we are failing in our duty to assist the commercial driver?

Another serious problem to the commercial driver is to convey signals and warnings to other motorists and pedestrians in the most effective manner. To help him carry out this responsibility there are stop lights, flasher bulbs, directional signals, colored reflectors, marking lights, red flags, flares, fuses, horns and backing buzzers.

Backing buzzers are used with good results on taxicabs in New York City to prevent pedestrians from walking behind the vehicle when it is about to back. Could we profitably make greater use of backing buzzers, flasher bulbs, or some of these other accessories for signaling or warning others in the streets?

The next problem of the driver is how to operate the vehicle safely when road traction is low. To assist at such times there are tire chains, non-skid tire treads, tire regrooving tools, and road sanders. Poor road traction costs us millions of dollars every year. Are we making full use of

these accessories in an effort to save some of those millions?

It is a right serious problem to stop a car or to hold a parked vehicle on a hill when brakes are not dependable. To assist the driver there are booster brakes, decelerometers for testing brakes, hydraulic-brake-liquid coolers (to prevent vapor lock), and special parking brakes without the common rack and pawl lock that has been known to become worn and defective. Have we done all we can to prevent those deaths by making and keeping brakes dependable with the aid of these accessories?

Another group of accessories includes such items as special seats with deep springs to protect the seats of the driver's pants from road jar, radios to soothe their shattered nerves, and carbon-monoxide testers.

My last group of accessories are those that help the tired supervisor. They permit him to sit in the office away from draughts and colds, and at the same time exercise full road supervision. This group includes the speed governor, the service recorder (an indicator chart showing through the vibration of a needle just how steadily the vehicle is in operation), and two kinds of traffic eyes (one a device for taking pictures of unsafe driving acts, and the other an arrangement for proclaiming to the world through a system of lights and horns any infraction of the speed laws).

Have we given full consideration to the use of accessories for safety to help the driver who really has a difficult job? Have we made full use of accessories for safety to save lives and destruction to property? In a balanced fleet safety program, we should not overlook the benefits of accessories for safety.

Report of the Committee on Commercial Vehicle Safety Films

By DWIGHT D. GARDNER

Personnel Director, Commercial Motor Freight Inc., Columbus, O.

One year ago we had the first showing of our first fleet safety film. Since that time almost 500 copies of "Defensive Driving" have been distributed. We have asked some of the purchasers what results had come from the use of the film and here are excerpts from some of the replies:

(1) "Since the purchase of the fleet film 'Defensive Driving,' we have shown it at several locations on our property. At every showing, we have heard numerous favorable comments."

(2) "The film was built around a truck operation but we operate buses; however, there is so much good in it that we use it at every safety meeting and have lent it to many other commercial fleets in this territory."

(3) "We firmly believe that along with any safety meeting or talk the showing of a picture adds materially in fixing safety in the minds of employees and makes a more interesting meeting."

(4) "Our thoughts concerning the value of this film may be judged from the fact we have purchased 25 copies of it."

(5) "We should have at least one new film a year."

At our last meeting, the Committee announced that a cataloging project was under way for the listing of available fleet safety films. However, the preparation of a catalog from scratch was felt to be unwise and in its place we have prepared Fleet Safety Memo No. 19. Later, based on suggestions and criticisms from our members, this Memo will be revised in catalog form.

We have a brand new commercial vehicle safety film in preparation. The title is, "What to Do If an Accident Happens." We expect to have it available for distribution about November 1, and believe it will be an outstanding contribution to our fleet film library.

THURSDAY MORNING SESSION

October 10, 1940

Commercial Vehicle Safety Information, Please!

Presiding: DWIGHT M. McCracken, Director, Traffic and Safety Bureau, Liberty Mutual Insurance Co., Boston, Mass.

The session was planned as a panel discussion of accident problems common in the traffic safety field. Chairman McCracken introduced the members of the panel.

Asa Caldwell, Hale-Haltell Co., McAlester, Okla.

H. S. Cole, Assistant Superintendent, Evening Star Newspaper Co., Washington, D. C.

John W. Jacobson, F. J. Boutell Drive-way Co., Flint, Mich.

Charles G. Morgan, Jr., Manager, Division of Operations, American Trucking Associations, Washington, D. C.

Fred W. Rice, Safety Engineer, Cushman Motor Delivery Co., Chicago.

THURSDAY LUNCHEON SESSION

October 10, 1940

Presiding: T. B. JOHNSON, Manager, Delivery Division, Marshall Field & Co., Chicago, and General Chairman, Commercial Vehicle Section, National Safety Council.

Federal Safety Regulations

By H. H. KELLY

Chief, Section of Safety, Bureau of Motor Carriers, Interstate Commerce Commission, Washington, D. C.

(The following is a summary of extemporaneous remarks.)

Mr. Kelly outlined some of the activities of various Government agencies in the field of highway safety. He mentioned the important contributions to uniformity in highway and bridge construction and maintenance through the Federal Aid specifications, administered by the Public Roads Administration, and said that this work in building safer bridges and highways with reduced grades and wider curves and standard signs and markers must have, ultimately, important effects on highway safety.

War Department specifications for Army vehicles, especially as regards their engine and brake performance, are improving vehicle design, he said; and added that the training of drivers under the War Department's emergency program may provide a new source of driving personnel for commercial operators. He touched briefly upon some outstanding examples of safe operation in Government fleets and spoke of the activities of the Federal Interdepartmental Safety Council in promoting the compilation of accident-frequency records and the standardization of accident report forms.

Turning to the motor carrier safety regulations of the Interstate Commerce Commission, Mr. Kelly spoke gratefully of the cooperation of State agencies and the resulting progress toward nationwide uniformity in requirements for the safety of bus and truck operation, through adoption by the States of

rules conforming to those of the Commission. He said that more than 75,000 copies of the Commission's "little blue book" of safety regulations had been sold to the public, and that reprints of portions of the booklet had been issued by numerous associations of carriers, insurance companies, and others.

Admitting that what he had said thus far sounded very encouraging and optimistic, Mr. Kelly warned the audience that the accident trend in the country as a whole, and in the motor transport industry as well, has turned upward this year, the rising accident figures constituting a challenge to all workers in this field. He said, however, that in the experience of leading fleets was still to be found the justification of safety efforts, and cited the results of the National Safety Council's annual safety contests, and the competitions of such organizations as the American Trucking Associations, Inc., and the National Association of Motor Bus Operators, as demonstration of results now being accomplished in keeping accident levels down and thereby saving lives and property.

In conclusion, he said that out of a tragic world crisis appeared to be emerging two facts of importance to the motor transport industry—first, increased reliance upon highway transportation, and second, imperative need for efficiency in operation—which is only another way of saying safety in operation.

THURSDAY AFTERNOON SESSION

October 10, 1940

Joint Session with Street and Highway Traffic and Transit Sections

(For a complete report of this session, see the Street and Highway Traffic Sessions, on page 88 of this volume.)

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 *W. A. BROWN, Tennessee Electric Power Co., Nashville, Tenn.
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 *E. I. KREN, Philadelphia Co., Pittsburgh, Pa.
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 *A. P. SCHENDLER, National Pneumatic Co., Rahway, N. J.
 *H. V. SCHREIBER, Capital Transit Co., Washington, D. C.
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 *G. R. WHITMORE, Illinois-Iowa Power Co., Peoria, Ill.

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- H. F. WEBB, West Penn System, Pittsburgh, Pa.
- N. L. YOUNG, Southeastern Greyhound Lines, Lexington, Ky.

*Past General Chairman

MONDAY AFTERNOON SESSION

October 7, 1940

Presiding: General Chairman, E. E. GROVER, Director of Safety and Claims, The Columbus & Southern Ohio Electric Co., Columbus, O.

Physical Condition and Visual Acuity as Factors in Accidents

By GEORGE W. ZEIGLER

Chief Inspector, New Jersey Department of Motor Vehicles, Trenton, N. J.

Some of the things I will say here may appear to be controversial. This is natural, because we in the Motor Vehicle Department who do this work, are not physicians, but have been forced to base our conclusions on our own experiences.

The first drivers' license law was probably a revenue measure principally, because no examination was required. After a further lapse of time some states, among which New Jersey was one of the first, started examining applicants for driver's licenses. In the beginning little or no attention was paid to any but the most obvious physical defects. The examiners were concerned only with finding out whether or not the applicant could handle the vehicle reasonably well. It has only been in late years that consideration has been given to the physical condition of the driver; because this field of investigation is so new there is little statistical data available. As time goes on, however, we will undoubtedly build up a fund of information which I feel sure will justify the belief of many of us that physical condition and visual acuity are extremely important.

About 18 months ago Commissioner A. W. Magee of the Motor Vehicle Department, asked the New Jersey Medical Society to appoint a committee to study the question of physical condition, insofar as this condition relates to the driving practices. After more than a year's work, the committee reported that because of the complex nature of the problem, it was not at present in a position to make a detailed report or any recommendations, and has suggested that the study be continued over a number of years. When completed, these studies will undoubtedly produce a report of the greatest importance and may bring about far-reaching changes in our licensing procedure. For the present, therefore, we are forced to depend upon our own experience in order to judge whether or not certain types of physical difficulties, and certain diseases should operate to bar the afflicted person from the possession of a driver's license.

We in New Jersey, have reached certain conclusions in regard to the need for restricting drivers who suffer from various diseases and also the need for restricting those drivers whose vision does not come

up to the prescribed standard. Information on which we have based these conclusions has come to us from several sources.

One is the accident reporting system. In addition to the reports made by drivers, we receive numerous reports from local police departments and from our own inspectors who are constantly engaged in the investigation of accidents.

Citizens Cooperate

We frequently receive reports from citizens who inform the Commissioner of any person who suffers from a physical defect or an illness which might affect the safe operation of a motor vehicle.

The study of a large number of these reports, over a considerable period, has led our Motor Vehicle Commissioner to conclude that there are certain physical ailments which must be watched closely, because persons who have these ailments may possibly be forced to give up their driver's licenses. So far there are only three diseases which we have used as a basis for the revocation of the driver's license. These are: epilepsy, diabetes and certain forms of heart disease. You must understand, of course, that in addition to these specific diseases, there are certain physical defects such as amputations, paralysis, etc., which might make it necessary to refuse a driver's license to the afflicted person.

In certain of these defects such as amputations, the condition is not progressive and it can frequently be compensated, especially in private driving. It is possible, in some of these cases, therefore, to license the applicant with certain restrictions. One of the restrictions which may interest you is that we do not license applicants with physical defects, to operate vehicles used for the transportation of persons for hire, because we feel that the driver of a bus should be in possession of all his faculties, because of the responsibility imposed upon him. On the other hand, a disease such as epilepsy, is a real menace, if a person suffering from it is allowed to drive a motor vehicle. It has been our policy for a considerable period of time, to revoke the driver's license of any person found to be suffering from this disease. When called upon to surrender driver's licenses, these people will frequently contend they can be safe drivers, even though they suffer from epilepsy, for the reason that they have no fore-knowledge of an attack.

While this may be true, in some cases, it is poor policy to rely upon it, because we have in our files, records of numerous accidents which have occurred because epilepsy has stricken an operator while driving.

As a result of a new law requiring the State Department of Health to report epilepsy cases to us, these people are being required to surrender their driver's licenses.

Those of you who are obliged to investigate prospective drivers as part of your work should make every effort to determine, before hiring them, whether or not they suffer from this disease. Ordinarily, this can be determined only by an exhaustive investigation among the applicant's friends and relatives, and if possible, by consultation with his personal physician.

Diabetes

Some people may find it hard to believe that diabetes can disable a person to the point where he cannot drive safely. The disease itself seldom does disable a person. Our trouble has been with people who have refused or have been too careless to follow their doctor's directions. A diabetic patient who does not take the insulin prescribed for him may go into a coma as a result of his neglect. On the other hand, persons who do take insulin find it necessary to eat within a specified period. Persons who neglect to eat after taking the insulin may suffer from insulin shock. It will be clear, therefore, that persons who follow their doctor's directions, may be safe operators. On the other hand, a person who cannot be depended upon to obey his doctor, should not be permitted to drive.

For these reasons, the fact that a person has diabetes does not by any means, indicate that he should immediately lose his driver's license. On the other hand, if a diabetic patient is involved in an accident and the evidence discloses that the accident was brought about by his disobedience of his doctor's orders, undoubtedly the Commissioner of Motor Vehicles will rule that reasonable grounds for revocation of his driver's license have been established.

I do not want any one to get the idea that I am recommending that a person afflicted with diabetes be refused a position, because of his illness, but I do want to point out to you that before such a person is taken on, his past experience and habits of life

should be carefully investigated in order that you may determine whether or not he is the type of person who can be trusted to be careful.

Heart Disease

We do not have as much information on the various forms of heart disease as we do on the other two diseases mentioned. One reason for this is that these sufferers frequently die in the accidents which are brought about as the result of the ailment. The death, of course, makes it impossible for us to get any specific information on the ailment itself. At present most physicians, for reasons of ethics, are hesitant about disclosing to the Motor Vehicle Department, information concerning their patients who suffer from one of the several forms of heart disease. The patient, himself, is the last person in the world who will reveal this information, and for this reason it is extremely difficult to handle a situation of this nature. There are some physicians, however, who have come to the conclusion that it is to the patient's own interest, to give up the driving of an automobile, if he is a sufferer from heart disease, and have so advised both the patient and the Department.

I believe that this attitude will become more widespread in the future. This will be one step toward reducing the number of those unexplainable accidents which occur so frequently. In order to bring about this improved condition, of course, we must have the complete cooperation of the members of the medical fraternity.

From what I have said, it must be obvious that we do not have nearly as much information on various diseases and their relation to accidents, as we should have. It is obvious, therefore, that a study of this entire situation should be made, preferably by the medical profession. I believe this study should be undertaken in every state and that the reports should be correlated by a central committee which should be given power to prepare a report and recommendations so that the motor vehicle administrators will have something definite to guide them. If these studies are made, and the results turned over to the American Association of Motor Vehicle Administrators, we will have the basis for a program of handling persons afflicted with diseases which might make them unsafe operators.

If some means can be found whereby doctors can ethically furnish administrators with reports of patients who are unsafe operators by reason of their physical condition, this will be another step forward in the accident reduction program.

It is entirely possible, and indeed probable, that some of these steps cannot be taken without the passage of enabling legislation in the various states. If this type of legislation appears to you to be desirable, I earnestly recommend that you initiate it in your own state.

Visual Acuity

In New Jersey, we have found it advisable, to refuse a bus driver's license to a person who has suffered an amputation or who has vision in only one eye or whose vision in the weaker eye, is less than 20/100 on the Snellen chart. As far as amputations are concerned, this is probably in line with the procedure of most bus operators. There are, however, some companies who do not consider that the lack of vision in one eye is sufficiently serious to warrant the refusal of a bus driver's job to the person concerned. However, the responsibility imposed on the driver of a bus is so great that I do not feel that a person with vision in only one eye, should be allowed to drive one.

We have in New Jersey, a record of accidents involving persons afflicted in this way. The records show that they were consistently involved in more accidents than persons with vision in both eyes.

New Jersey started giving vision tests in 1927. At first the test was given by persons engaged in the correction of vision as a profession. After a short time the work was taken over by our own inspectors, because the other method had proved unsatisfactory. There are a number of systems in use, some of which are quite simple; some of which are very elaborate. I do not recommend the use of a system which is too simple, such as where a Snellen chart might be hung on a tree in the vicinity of the road test, nor do I recommend a very elaborate system, for the reason it takes too much time and brings out information which is not needed. There is one point which should be emphasized here, and that is that whatever type of test is used, it must be uniform throughout the state.

The test given by us is relatively simple

and can be given quite speedily. This is important in a state where we must examine approximately 140,000 applicants a year, with about 50 men available. While this test has given quite good results, we are of the opinion that it can be improved and we are now engaged in the study of an entirely new type of test which, when completed, may give us much more information on the vision of drivers. The new test is in an experimental stage and is being given as an addition to the standard test. Because we have so little information on it, I do not think it advisable to discuss it at this time. When our work has been completed the results will be published and made available.

As far as the more elaborate tests are concerned, they are probably very fine in their way, but in my opinion they take entirely too much time and, as I said before, bring out information which is not needed. I believe I have said already that we require at least 20/50 vision in at least one eye, with the exception, of course, of bus drivers. Some states are requiring 20/40 vision and some require only 20/60. Either of these standards will probably prove quite satisfactory, provided that every effort is made to stick to the standard itself, and also to see to it that the test is given in such a way that exact results will be obtained.

Field of Vision

In addition to the visual test, we have given considerable thought to the idea of testing the field of vision of the driver. We will be in a much better position to report on this phase of the subject after our experiments have been completed. I am not yet convinced that we should refuse to license a person whose field of vision is partly restricted because my experience, so far, has led me to believe that these people, if their vision is otherwise satisfactory, can compensate for the lack of field. This is not true, of course, if the field is restricted too much.

We are also studying the question of night blindness and susceptibility to glare. As you probably know already, physicians claim that this condition, in many cases, is caused by lack of vitamin A in the diet, and that it can be corrected when the necessary vitamins are supplied. This question is also part of the experiment which we are con-

ducting and we expect to gather considerable information on it during the coming year.

One question which is, in my opinion, highly important and to which, so far, little attention has been paid, is that of depth perception. I believe it is a factor in many accidents. It seems to me that a person who is allowed to operate a motor vehicle should at least be able to judge, approximately, how far away another motor vehicle, a pedestrian or a fixed object may be from him. I have personally examined a number of drivers who have been involved in fatal and serious personal injury accidents. In a large number of these cases, where the accident could not be explained in any other way, I have found a lack of depth perception which would obviously explain the accident, because the driver was unable, by reason of his affliction, to judge distance properly. In making these tests I have made use of an adaptation of the old-fashioned stereoscope as well as the Howard depth perception apparatus used in the United States Navy. While these tests are necessarily slow and for this reason difficult to give to all applicants for driver's licenses, under our present system, they appear to me to be of sufficient importance to be adopted generally, even though this adoption may involve the expenditure of funds for additional personnel.

Unquestionably, a test of this type should be given to applicants for bus driver's jobs.

Color Blindness

Color-blindness appears to be a controversial subject. A number of the states do not reject for this affliction, giving as their reason, the fact that some color-blind persons are able to compensate for their trouble, and are able to avoid accidents, even though they are unable to determine the color of signal lights. I am unable to agree completely with this idea. A color-blind person will tell you that he can judge by the arrangement of the signal, which of the lights in the signal system is lit. He will also set forth the contention that he can judge the indication by the operation of other cars. These contentions set forth a good argument for the color-blind operator, but they fail to take into account, the conditions of operation. For instance: It may be possible for a color-blind person to oper-

ate by means of the position of the signal on a clear day, when there is nothing to obstruct his vision. The situation on a rainy, foggy night is, however, quite different. Then the operator cannot see the signal itself nor in many cases, can he see the signal mast, but must depend for guidance entirely on his color-sense.

Then, too, signal systems are not yet uniform. The argument that a color-blind person can be guided by the actions of other cars is equally fallacious for the reason that there are frequently times when no other traffic is visible to the operator. Under the circumstances, he must depend entirely on his own judgment.

I am not so much concerned about a person who has difficulty with the amber color, nor am I unduly exercised over a person who has trouble with the green. I contend, however, that a person who is red blind (and these people are sufficiently numerous to be cause for trouble), that these people should not be granted driver's licenses, because if a man is unable to tell of his own knowledge, when he should stop his car, he is not a safe person to be allowed to operate motor vehicles on our busy highways. In New Jersey, therefore, we follow the practice of rejecting the red blind in every instance.

There are numerous tests for color-blindness in use today—some are so elaborate and take up so much time that they are virtually useless to a motor vehicle administrator. Others are relatively simple and entirely practical from the point of view of the driver's license test. At one time in New Jersey we made use of the yarn test. We found it was too elaborate and not particularly fair to the applicant.

The Ishihara test has been used in New Jersey. This is a remarkable test and produces almost unflinching results. However, it is entirely too difficult for the average person and not at all necessary, because there are numerous persons who can identify the colors in the signal lights with ease who cannot pass the Ishihara test. The New Jersey test now consists of a single lens mounted in the top of the eye box. We use a single lens in preference to three separate lenses in order that the applicant will not be able to "play position" on the lights. Mounted in back of the lens in such a way that the light value coming through the lens

will be equal, is a red bulb, green bulb and amber bulb. The inspector is able to light any of the three lights at will. If the applicant fails on this test he is advised to see his oculist or optometrist. In the event that he returns and again fails, he is rejected!

Color Ignorance

There are some people who are color-blind and there are a large number who are color-ignorant. These color-ignorant people, for some reason or another, have never taken the trouble to learn colors and it is quite possible to correct their trouble with a few days' study. In making tests for color-blindness for driver's license purposes, the examiner should be very careful to stick to purely red, green and amber. The use of other colors tends to confuse both the applicant and the examiner and may bring about results which are false.

Other Defects

In addition to the obvious physical defects which I have discussed, there are others not so simple which may enter into the safe operation of motor vehicles. For instance, the question of fatigue is an important one from the point of view of the bus operator and the transit industry. The New Jersey law limits the operation of buses by any particular driver to a maximum of 12 consecutive hours or 12 hours in any 16. The rules of the Interstate Commerce Commission in regard to bus and truck operations, are still more severe, limiting the operation, under these circumstances, to 10 hours in any day with a weekly maximum of 60 hours, and in exceptional cases, 70 hours.

While the question of fatigue concerns every driver of motor vehicles, it is especially important in the case of bus operators. They should be limited in their hours of work so that they will not become unduly tired and it is the responsibility of the management to see to it that these drivers, when off duty, secure a sufficient amount of rest so that they will be able to resume their duties the following day, fully recovered and able to take care of themselves and their passengers.

From the foregoing it will be clear that we do not as yet have sufficient statistical information on physical condition, various diseases and visual acuity, to accurately de-

termine their value as factors in accidents. We have had sufficient experience, however, to show that the conditions mentioned do assume major roles in some of the accidents with which we are concerned.

In our attempts to reduce automobile accidents we have progressed through various stages from the simple driver's license examination to the present type of test which incorporates a severe road test and a complete visual test. We have now reached the stage where as far as the driver is concerned, we must go further into his physical condition and have a more complete knowledge of him before he is permitted to oper-

ate on our highways. In addition to this I believe that we will shortly reach the point where we will reexamine, at stated periods, all of our licensed drivers.

We have made use of safety education as a means of developing in the mind of the driver, the fact that it is up to him to operate in a manner consistent with safety. All of these steps have proven of great value as witness our present accident record compared with the records of a few years ago.

Much, however, remains to be done, and I am firmly convinced that one of the most important fields is that of physical condition as far as the driver is concerned.

Selection, Training and Retraining of Operators in Transportation Service

By J. G. DICKINSON, Superintendent of Accident Prevention;
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Transportation safety depends on selection and training of vehicle operators. The transit industry has for many years been vitally concerned with this problem and transportation operating executives have developed many plans for its achievement. Perhaps there is no other industry which must depend so completely on the individual efficiency of its employees.

There is no supply of skilled operators on the market. Every new employee must be carefully selected and trained. The problem of restraining also assumes sizeable proportions.

For the observation and judgment test the applicant is given a picture of an accident which he is to study for a limited time. The picture is then removed, and he is given a test paper. Several multiple-choice questions are asked about the accident picture. In addition, there are several multiple-choice questions intended to test common-sense. There are also several problems involving simple mental arithmetic to test the applicant's ability to make change for fare collection. This observation and judgment test requires about 30 minutes. When completed, it is scored, and the applicant is then given the performance test.

A comprehensive study was made of the operator's job to determine just what abili-

ties a man must possess to become efficient. With this in mind, the performance test was developed to measure the physical and mental abilities of the applicant.

The test equipment consists primarily of a signal board, an operating pedestal, and a recording device. Visual and audible signals are transmitted from the signal board, and the applicant responds to them with hand and foot operations. These are recorded and it is possible to measure reaction time, coordination of hand and foot movements, ability to learn, general nervous condition, fatigue, and tendency to be distracted.

Administration of the performance test is divided into two periods, the training period and the test period. During the former, the applicant is taught the responses to the signals and allowed to practice them. The training time is recorded as well as the errors made. For the test the signals are given at an increased rate and are interspersed more than for the training period. The test is scored.

In effect the idea of the performance test is very simple. We give the applicant a sample job, train him in the performance of this job, observe the time required for training, and then test his ability after he has been trained. Observing and measuring the manner in which the applicant learns

this new job is the secret of the whole thing.

The entire selection test procedure requires about one and a half hours per applicant. Our experience with it has demonstrated conclusively that through it applicants who are not suitable for the job are immediately weeded out. We know that an applicant who has passed the tests is a man whom we can train to be an efficient operator.

Final Interview

After passing the selection tests the applicant is given a final interview by the superintendent of transportation who gives final approval for the student to enter training. The student then reports to the supervisor of training at the transportation training building and is given a cap, badge, punch, and money changer, and is assigned to a class.

While we were developing the selection procedure in the early days of the training division, we also learned that it was difficult to train a new man if too much information were given at one time and if too much were expected at the start. We found that it was not very practical to instruct about the equipment that was being operated while out on the streets where traffic demanded the student's attention. The conclusion was soon reached that if it was possible to teach an operator the fundamentals of vehicle operation away from traffic, we could reduce the training time and at the same time avoid accidents. We experimented at first with a practice route which was subject to a minimum of traffic congestion and which did not delay regular service materially. This proved to be sufficiently advantageous to encourage the idea of a practice track entirely away from street traffic, on our own private property. Fortunately we had a tract of land, adjoining one of the largest car stations on the system, which was sufficient to accommodate a quarter-mile track. With approval for the use of this land for training purposes, we constructed the training track in 1926.

This track incorporates regular road features and provides the student experience in meeting practically every type of operating condition which he will encounter later in operation over our system. Laid out with hills, curves, street crossings, and regular

stops, and equipped with an electric track switch, block signals, and section insulators it has proved an ideal training ground. The regular stops, which are both on level ground and on grade, are given street names which the student calls in standard manner.

In 1928, we completed a bus practice road laid out inside the loop of the training track. The practice road is also designed with hills and curves, and it has road intersections and regular stops, some of which are located on grades. Part of the road surface is macadam and part is concrete. With the advent of the trackless trolley, in 1936, we installed trackless trolley overhead above the bus practice road.

Training Building

The transportation training building, located adjacent to the training track, houses the office of the training supervisor and is the headquarters for transportation training activities. On its second floor are five classrooms equipped for the instruction of small groups. One room is suitable for the use of projection equipment. It also has facilities for testing special equipment. Another room is used largely for the conductor part of operator training. This has a large amount of bulletin board space where schedules, transfers, accident and equipment condition reports may be mounted. Standard railings can be set up here for practice in the mechanical manipulations necessary for the conductor's job. The third room is used principally for training motormen. Here is a row of controllers where starting and notching practice is given on dead equipment. The fifth classroom is devoted to training bus operators.

The first floor of the training building is assigned to a wide variety of cut-away equipment and demonstration models. Here is a shortened model street car stripped in such manner that all electrical and air brake equipment is exposed, and the flow of electric current and compressed air can be traced. A demonstration board of the power circuit is used to show students how the four motors on a car are connected, how certain motors may be cut out of the circuit, how resistance is used to control the speed of the motors, and many other features. There is an air brake demonstration board with the actual equipment set up on a rack. A railway truck is exhibited

as are also various cut-away models of bus motors, transmission and differential.

In addition to training track, road and equipment it is, of course, essential to have an adequate staff of instructors. The supervisor of training and his assistant conduct the program with the aid of eight regular instructors. All of these teachers have been long in the service and who hold the same rank as street supervisors. We have also organized a corps of 35 platform instructors. A platform instructor is a regular operator who by experience, aptitude, and training is best qualified to carry on the training of student operators while they are in training under actual operating conditions out on the system. The platform instructors were picked through interviews and selection tests.

The transportation training division is provided with adequate clerical help and keeps complete records of every operator's performance.

Our student training program can best be considered as divided into three periods. The first period consists of three days of training at the building and on the training track. This is followed by a period of about 15 days during which the student is assigned to a platform instructor from the car station where he is to work later. The third period, of one day, takes him back to the training building for a check-up and final examination before being turned in as a regular operator.

For the first training period instruction is given usually to small classes of four or five students. Instruction begins with an introductory classroom lecture stressing the importance of the job and what it means to the new employee as well as to the company. Each student is given an operator's manual which forms the basis for instruction on such matters as our equipment, fare collection, rules and regulations, public relations, and information about Milwaukee. The instruction program is varied and is not allowed to become monotonous. Considerable time is spent on the training track. Students are always anxious to get their hands on the controls of a piece of equipment, and training track practice is introduced early in the program. Classroom instruction, lectures and demonstrations, and practice on the training track continue for three days, constantly under the direction of regular training instructors. Training in accident

prevention and reporting are given proper attention. At the end of the three-day period each student is taken to the car station out of which he is to work, introduced to the division superintendent, and assigned to a platform instructor.

The second period of the training program now begins. The student, who has been instructed in his future duties and has become accustomed to the feel of the controls, now is allowed to operate for the first time carrying passengers in traffic. He is assigned to regular runs and continues with the platform instructor for at least 15 days. We have learned that best results in training are attained when the student-operator is assigned to one carefully selected and trained platform instructor who continues with him through the entire training period. When the platform instructor believes that the student has acquired sufficient skill, he is reported as being ready for final test.

The Final Test

For the final test, the third training program period, he returns to the transportation training building where a full day's examination is conducted to determine whether he has acquired sufficient knowledge, skill and ability to be passed. An examination in the Wisconsin traffic code is made a part of this check-up. Having passed satisfactorily, the student is turned in, as we say, to become an operator and assigned to work as a regular employee. Now, for the first time, he takes his car out alone on a run.

Even then, his training is not entirely completed. Regular instructors are assigned to follow up and ride with him at least once a day and frequently twice a day. This regular follow-up is continued for from two weeks to one month or until the regular instructor believes such close follow-up is no longer necessary. Then for two or three months the regular instructor rides with, teaches and rates the new operator regularly but not so frequently. Finally he is placed in the regular schedule of follow-up instruction in use for all regular operators.

Careful follow-up has become a very important part of our program, particularly during the first few months of operating experience.

With our student training program we believe that we have control of all the in-

formation that gets to a new operator. We feel certain the habits formed are correct, and that careless and wrong instructions will not conflict with best practice. There are many situations which occur infrequently and are very confusing to a new operator, but if the training program provides instruction on these infrequent happenings, we are able to get uniform performance in most of them. We have attempted to incorporate every important situation somewhere in the training program.

After an operator has been on street car work for a reasonable time, he is eligible to apply for bus operation when it is available. He may then be tested again, and is sent back for retraining. This program is very similar to that followed for student operators except that during the practice training there is no duplication of work already covered. Instruction and training on the bus practice road are given by the regular instructors. Then the applicant is assigned to a platform instructor on regular runs. A final examination is given and follow-up instructions are made by regular instructors until the retraining is considered complete. Manuals and instruction material are issued to augment this training.

When an operator has operated a bus satisfactorily for a reasonable time, he may apply for trackless trolley work. If such work is available, he again is tested and retrained through a program incorporating instruction and training at the transportation building and on the practice road, a period of operation with a platform instructor, final examination, and then follow-up inspections by regular instructors.

Our present training procedure has been in effect about 14 years. Since 1928 we have trained approximately 2,600 men for street car, bus, or trackless trolley service.

Follow-up instructions are made regularly by instructors who cover the entire personnel. We long since abandoned the idea of instruction reports giving single gradings such as "good" or "excellent." Our present plan requires that rating be according to a definite plan. A manual which describes all of the operating faults that an operator might be subject to is used for follow-up instruction. The operator is given a grade on each of 17 general classes of operating skill, and a report is sent to the training division. We have learned that it is much more satisfactory for follow-up

instruction reports to be made in this manner.

All of this training work is supplemented by numerous other activities. We use National Safety Council material freely to help keep accident prevention before our operators. Sound-slide films, including seven of our own production, have been exhibited to most of our operators at car stations. This series of programs covered subjects pertinent to good public relations. Our employees' magazine carries articles each month on training, accident prevention and related subjects.

At times special projects have been included in the training program. An example is a study of accident-prone men which we conducted a few years ago and in which the accident rate for the group of men under consideration was improved 82 per cent in two years. More recently, when trackless trolleys were introduced on our system, we began to experience a disproportionate number of falling-in-car accidents. A detailed study of these cases determined causes and through our training program we have been able to produce a 60 per cent reduction in that type of accident.

All accident reports are routed through the training division where each case is posted on the individual operator's record. This continuous record furnishes at a glance each operator's accident experience and makes possible quick investigation when needed. As soon as a chargeable accident is posted, we refer the case to a regular follow-up instructor who immediately gets in touch with the operator to review with him the cause and to provide any instruction necessary to correct the difficulty. Whenever an operator experiences two chargeable accidents within a year, he is sent to the supervisor of training for an extensive interview, reviewing his record completely. Follow-up instructions are also scheduled immediately, and all effort is made to discover and eliminate accident causes. This procedure is also followed in cases of operators whose records indicate too frequent non-chargeable accidents.

Naturally, we are keenly interested in the results attained through our extensive program. One measure of accomplishment is found in the declining accidents and accident costs.

In 1927 we began classifying accidents as

chargeable and non-chargeable. Since that year the number of chargeable accidents has been reduced more than 50 per cent. At the start of the record 22 per cent of the operators completed the year free from chargeable accident. In 1939 over 1,000 operators, nearly 70 per cent of the operating personnel, had no chargeable accidents.

The peak in total number of accidents was reached in 1929 with the preceding four years also producing near peak records. Since that period the number of accidents was reduced to a minimum in 1933 with the reduction equal to 49 per cent. In 1939 the reduction was 40.3 per cent.

Accident costs are a sizeable figure in transportation operation. Money spent in settlement of claims produces no profit and furnishes as tangible results only a file of releases. The highest figure in our accident costs was reached in 1924. From that year there was a steady trend of reduction which in 1933 amounted to 62.6 per cent. Following that there was some increase to an

amount in 1936 equal to 52.2 per cent of the 1924 peak. During the last three years the trend has again been downward with a reduction in 1939 of 59.5 per cent in comparison with 1924.

It is interesting to note that in recent years we have conducted a large amount of retraining made necessary by the additions and changes in operation from street car service to bus and trackless trolley service.

Since accident costs are a major operating expense, it is natural that we measure the effectiveness of our training program in terms of accident figures. We believe, also, that there has been other accomplishment which is not so tangible. The program has produced substantial improvement in operation and has been a benefit in public relations.

Experience since the start of the training program has convinced us that transportation safety depends on training.

WEDNESDAY AFTERNOON SESSION

October 10, 1940

Transit Safety Information, Please!

The discussion leaders were E. J. Kreh, Manager, Accident Prevention, Philadelphia Co., Pittsburgh, Pa., and H. W. Whitcomb, Chief, Bureau of Accident Prevention, Philadelphia Transportation Co., Philadelphia, Pa.

The session featured a series of lantern slides illustrating safe and hazardous conditions and practices encountered by transportation companies. The slides were discussed in detail, first, by the discussion leaders, and then by the audience.

Some of the salient points of discussion were the advantages of three steps on buses and trolley cars instead of the conventional two. This permits smaller risers and makes it easier for the passengers. It was stated that step riser heights should be uniform wherever feasible.

The step heights on various buses used in trial operation by the Philadelphia Trans-

portation Co. range from 14½ to 16 inches from street to first step, and from 8¾ to 13½ inches for the next or succeeding steps. They prefer, from a safety standpoint, a first step of the necessary height of 15 inches and two uniform steps of 8¾ inches at both front and center doors.

The point was also made that except where there is ample space to bring both the front doors of the bus within easy stepping distance of the curb, it is safer to make the stop in the moving traffic lane. Attempting to pull a bus in adjacent and parallel to the curb where there is not sufficient space sets up three separate and distinct hazards.

(1) Possibility of colliding with auto parked nearest corner.

(2) Possibility of discharging passengers from a position where they are likely to step on the edge of curbing and fall. This is

particularly true with the center exit door which often is in a position sufficiently close to the curb for passengers to attempt to reach the sidewalk, but far enough away to make a misstep likely.

(3) Possibility of collision with another vehicle upon re-entering the moving traffic lane.

It was also suggested that the present trend toward increased interior illumination on buses and streetcars may cause a glare condition, especially in sections of the city where street lighting is not adequate. Possible hazards created by too much interior light are:

(1) Possibility of alighting passengers falling due to temporary blindness resulting from effect on eyes of a sudden change from bright lights to darkness.

(2) Possibility of increased vehicle and pedestrian collisions when operator turns from fare collecting and brightness of vehicle to darkness of outside street as vehicle is started.

(3) Increase in direct or reflected glare on operator's windshield.

The point in increased illumination where value ceases and hazard sets in can be determined only by considerable study. But it is something for transit operators to think about.

Traffic engineering studies were pointed out as needed in solving various traffic problems of concern to bus and street car operators. An analysis of accident causes frequently shows a need for physical improvements. The importance of full cooperation with the city traffic engineer by transit officials was emphasized.

The location of a street car stop too far from the intersection to give free access to a corner gas station was shown to be a primary cause of accidents in one of the illustrations. Re-location of the stop at the standard position near the intersection eliminated the majority of accidents at this particular spot.

THURSDAY AFTERNOON SESSION

October 10, 1940

Joint Session with Commercial Vehicle and Street and Highway Traffic Sections

(For a full report of this session see the Street and Highway Traffic Sessions, on page 88 of this volume.)

FRIDAY MORNING SESSION

October 11, 1940

Joint Session with Child Education and Street and Highway Traffic Sections

(For a full report of this session see the Child Education sessions, on page 165 of this volume.)

JOURNALMENT

Child Education Section

Officers 1939-1940

General Chairman—J. ANDREW HOLLEY, Agricultural & Mechanical College, Stillwater, Okla.

Vice-Chairman—NED H. DEARBORN, Dean, School of General Education, New York University, New York, N. Y.

Secretary—MARION TELFORD, National Safety Council, Inc., Chicago.

Officers 1940-1941

General Chairman, J. ANDREW HOLLEY, Head, Department of Teacher Education, School of Commerce, A and M College, Stillwater, Okla.

Vice-Chairman, NED H. DEARBORN, Dean, School of General Education, New York University, New York City.

Secretary, MARION TELFORD, National Safety Council, Inc., Chicago

WEDNESDAY MORNING SESSION

October 9, 1940

A Symposium on Current Problems in Safety Education

Presiding, MARION TELFORD, National Safety Council, Inc., Chicago.

Translating Safety Concepts into Action

By LEWIS A. RILEY

Research Consultant, National Conservation Bureau, New York City

The present world situation has brought a great many of us to a realization that the training of our emotions is perhaps of more vital moment than the training of our logical faculties. There is a suspicion abroad that the power to think dispassionately may not have as great a survival value as the power to feel passionately. In our eagerness to learn how to think clearly with the frontal lobes of the brain, perhaps we have neglected that powerful energizing process that some call "thinking with the blood."

When I first considered the question of what modern activity offered the greatest scope for experimentation on emotion in action, I realized that driving an automobile was our greatest national game. Furthermore, and best of all, it was the least inhibited by ancient customs.

Today 40,000,000 Americans are driving cars. Furthermore, in city and suburban traffic an average driver makes between 200 and 400 "psycho-dynamic" contacts with other drivers every hour. These contacts involve both emotional conflict and cooperation and they require not merely good reflective thinking, but a type of flash-quick observation and mental judgment which constituted the instinctive or "kinesthetic" intelligence that I was seeking particularly to explore.

I cannot make clear this emotional approach to driving skill until I have offered some explanation of the relationships between our upper level of conscious idea and those deeper semiconscious levels of control which athletes so plainly use.

The situation in respect to conscious

knowledge and its emotionally digested "action feeling" can be illustrated by the case of a beginner driving his car who is letter-perfect in all the tables, formulas, and textbook data. He knows his car momentums, braking distances and reaction times. He has memorized all the rules and regulations and traffic laws. Suddenly a pedestrian makes a false move and steps out into his path. The student has no time now to look at his speedometer or calculate how many feet away he is—no time to remember his momentum formulas and frictional coefficients. He has, if he is lucky, the small half of a second in which to sense his momentum, sense the amount of tire grip he actually has on the actual pavement under him, sense the movement of other cars and pedestrians that might interfere with his turning quickly, make a shrewd decision as to his stop-turn, and execute it with unhesitant muscular skill.

"Instinctive Skill"

This complex interplay of sense observation, subconscious decision and muscle reaction makes up the faculty and function that I would propose to call "instinctive skill." This is the action faculty that our research training is seeking to develop. It is too unconsciously quick for the slower process of reflective thinking. The terms "good habit" and "conditioned response" fall short of it because this larger instinctive control includes an element of trained observation and an element of intelligent decision which our idea of habit does not cover. Most of us use the word habit as an automatic physical response to a fixed condition or stimulus.

But there is nothing mechanical or fixed about our instinctive intelligence; like a flash it observes every new complex situation and as quickly assembles a varied response to fit the conditions observed. This instinctive type of intelligence is used by athletes and taught by coaches as an everyday experience.

The factual information that we offer a student by word of mouth or in books and classroom instruction might be likened to the cud a cow chews. The cow takes in raw fodder, selects and rejects and chews it into shape for further digestion. Similarly, the student accepts a certain amount of factual information, works it over into what we call opinion or knowledge, and stores this in the

"cud-sack" of his conscious memory. He can produce most of this information at any time for examination or debate, but it is lightly held and easily changed or discarded. He does not yet feel it strongly in his action centers. Emotionally he has not yet digested it into the deep and powerful motives that energize and control his dynamic behavior.

It might be claimed, therefore, that "Knowledge is power"—only when knowledge has been emotionally digested.

A fencer or boxer does not consciously remember one-tenth of the lightning-like interplay that he observes and plans and executes in the furious few minutes of his bout. Nevertheless, some form of subconscious directive intelligence was in charge of his activities during those moments. It is this level of intelligence that I think might properly be designated as "instinctive."

Below this obviously trainable level of emotional control there lies another level which I would call the "autonomic level" of intelligence. On this level our pattern of behavior is even harder and slower to change or condition. Nevertheless it is quite plain that on this level, also, some form of intelligent observation and directive decision takes care of the way in which our glands and other organs deal with such emergencies as wounds, fractures, bad air, bad food, fatigue, infection and poisons. Down below this autonomic level lie the elemental urges and dynamic emotional balances which I propose to discuss a little later.

We might compare our whole directive control system to an iceberg that floats one-seventh above the level of consciousness and about six-sevenths below that level. This rough comparison might help suggest that our behavior control system is one indivisible functional unit in which the emergent section is open to self-conscious examination and the direct command of conscious will, while the submerged section is out of reach of quick conscious adjustment and can be altered only by repeated suggestion and the use of strongly emotionalized practice.

Must Establish Cooperation

The essential problem of education for effective living is to establish a smooth working cooperation between reflective thinking and its executive partner, instinctive feeling. Thinking with the mind should be the master, and thinking with the blood

should be the body servant of our personality. It would be ruinous to make instinct the strategist and leader of our personality. It is equally ruinous to make reflective thinking the operating manager of action.

Such an emotional-mental partnership depends on the leadership of our mind and spirit in establishing the ideals and broad policies of our conduct. The conscious intelligence is able to select and prepare that part of experience which it considers suitable for emotional digestion. By such selection and by repeated self-suggestion the conscious intelligence has power to condition our instinctive controls. Furthermore, by intelligent will and moral choice the highest level of our directive control, man's spirit as we call it, is able to establish the dominant leadership of either attraction or repulsion in the elemental emotional balance. The positive forces of creative good will can, if we have the will and the intelligence, dominate life's destructive hates and fears.

I offer one further statement of emotional relationship which I think is the most fundamental of all: Below all the various specific levels of control lies the emotional pressure balance that furnishes life with its creative or destructive dominance and direction.

There is a very simple and fundamental energy relationship that shapes our physical universe: A force is never actual or active until it meets a resistance.

Mental and emotional balance has always been the ideal of human behavior and character. Such balance means the restraint of one force or emotion by an opposite force. The force of selfishness is restrained by the resistance of generosity. The force of emotional attraction is checked and restrained by a necessary repulsion. The desire to live is balanced by a craving to kill ourselves. Just as physical health is the metabolic balance between nutrition and waste, between growth and decay, so emotional health is the balance between our attractions and our repulsions in this inner world of idea. This elemental condition of balance is plainly shown by Dr. Karl Meininger in his recent book, "Man Against Himself."

Obviously, however, to produce an action or an effect, one element of the emotional balance must slightly but steadily overcome the other element, yet without destroying it.

Effective and controlled action, however, never results from our attractions completely destroying our repulsions. An unbalanced idealist is one whose dreams of perfection blind him to the necessary self-interest of himself and others. An unbalanced miser is one whose selfishness blinds him to the generosity and idealism that other people possess and that he himself needs.

Building up a better world depends upon our making the attraction of kindness, cooperation and generosity master over the inherent and necessary repulsions of dislike, fear and selfishness.

Motives for Safety

Either one of two such opposed and necessary emotional motives can be emphasized or made dominant in dealing with safety. One is the way of skill and adventure, and the other is the way of caution and escape. The ideal gives the love of skill and adventure the edge over an active fear of the dangers and difficulties. On the other hand, no great skill or success in living can be gained by neglecting the risks of any venture.

The present traffic safety movement has developed a valuable and necessary knowledge of the difficulties and limitations of our highways and automobiles. We could not drive well without such knowledge. Furthermore, it has brought out many vital points in respect to skilled habits. Some very fine and valuable research work has been done, showing the limitations of the eye and muscle response and the bad effects of fatigue, alcohol and emotional distraction on our powers of observation and response.

The only fault to be found with the present program is its dominant concern with the avoidance of difficulties. Some degree of concern with fear is necessary, but it is negative. It tends to correct and destroy bad habits without creating good substitutes. A shift of emphasis therefore seems needed.

The admiration of, and confidence in, skilled performance might better be made the dominant motive. With that spirit in a healthy ascendancy we could safely develop the fact that our new skills, based on well trained observation and response instincts, will have plenty of hazards and difficulties to overcome.

Everyone enjoys a game that challenges his best efforts. Our nation has built up a

word preeminence in athletics by its admiration of courage, its spirit of fair play, its devotion to the ideals of skill by patient practice. It is this type of positive emotional attitude which our proposed experimental work is seeking to develop. With these direct and simple emotional relationships in mind we should be able to give driver training a renewed interest to both young and old.

Must Arouse Interest

Athletic coaching experience shows that success in such dynamic training depends primarily upon arousing interest and developing morale—and secondarily on developing an instinctive grasp of certain fundamental skill factors.

The pressure that powers creative behavior is emotional attraction or interest. The student must supply his own enthusiasm—skill simply cannot be forced upon an indifferent student.

Athletic discipline is essentially self-discipline—and athletic practice, which is often painful punishment, is largely self-applied practice. Interested self practice is emotionally impossible when the instructor stands over the student with a whip. As for road instruction, the student will find plenty of opportunity for driving a car and for this self-practice—if we arouse his interest, show him the craft and tactics of the game and its essential manipulative controls.

The point to be grasped is that the verbal presentation of an idea or fact, the mental acceptance of it and its memorizing by the student, is merely a preliminary step. The second step is to sell the idea or fact to him as an emotional interest and fix it instinctively in his feelings by having him of his own initiative do something to discover and develop keen observation and good tactics. Then finally he should practice them physically with sustained interest, preferably as a driver in a car, as operator of a model car on a practice board, and also as an observer in a car. Getting the feel of the maneuver helps to develop emotional attitude, and constantly suggesting to himself the attitude helps to get the feel of the maneuver.

The more we arouse the students' interest in this game of driving skill, the more tactics and skill tricks they will hunt for and try out for themselves; and, on the return swing of the cycle, the more tactics and

methods they discover and practice, the keener grows their interest in the game. It is like the self starter on our cars—if we press the right interest button, the student's emotional urge will supply all the driving energy we need.

We should therefore point out to the student first and foremost the positive attraction of expert performance and show him the positive methods used by the experts to drive better than the average. The fear of accidents, the fear of legal punishment and of ridicule are good methods of restraint—we need these emotional repulsions. But we should use them to break up bad habits and restrain the recklessness of over-adventurous drivers. They do not serve to create anything; they are negative or destructive emotions.

Building up an expert performance is founded emotionally on the creative attraction of skill, on our admiration of expert performers whom we imitate as heroes and champions, and, above all, upon the creative attitude of sympathy and insight which builds up an intuitive knowledge of human nature. This dominance of creative sympathy and understanding, which we call insight, results in a personal magnetism, which is the cohesive building force in all social relationships.

Training in Fundamentals

A good coach takes apart his game, analyzes it into what he calls the "fundamentals." He trains an athlete in each one of these separately. Then he fits the trained pieces together, like a picture puzzle, into a smooth-working, unified performance.

There are many possible methods of articulating the elementary skills of driving, but it seems possible to start with four main divisions: Insight and anticipation; the skill of quick sense observation; instinctive judgment, and the skill of muscular execution or dexterity.

Using the basic relationships of emotional dynamics, our experiments have had some success in bringing into focus a number of interesting factors in all four of these fundamentals. There is not sufficient time to discuss all these factors in detail. But since more work has been done on the element of insight and anticipation than on the others, I will suggest the experimental approach in teaching it to the students.

To cross a stream of heavy traffic means

that you must in part oppose what the other drivers want to do and in part accept what they want. It is vitally important, therefore, to develop a quick understanding of the feelings and habits of the group you are driving with.

Sympathy and a friendly attitude are vital to a happy and successful life. When we lack it, we are constantly surprised and irritated by what others do. When we have it, however, we are able to make allowances in advance for errors that we quite understand. We understand these errors because we do similar stupid acts ourselves. Self-knowledge of our own weaknesses is an essential part of our understanding of others.

Now consider the negative side. How does anger weaken skill? The answer lies in our own common sense experience. Possibly, some time in driving your car, irritation has moved you to say, "I can't imagine what that crazy fool was thinking of." You have answered your own question. Dominant and over-mastering anger paralyzes your imagination; it cuts down your power to anticipate.

Nervous tension, of which ill controlled anger is perhaps only one effect or symptom, has another bad effect; it narrows our field of attention and it stiffens our muscles. In basketball, for instance, it is vitally important that a player have wide vision or wide attention. I have seen a fine basketball

player taken out of the game because a rival player "got his goat." The good player's growing irritation concentrated his attention on the single player who was bothering him, until finally he watched that one man so exclusively that he could not keep track of the other players.

The result of a friendly attitude in practice is the faculty we call insight. This friendly anticipation prevents surprise, relaxes nerve tension, widens our attention and strengthens our ability to observe, decide and act efficiently.

Anticipation can be developed by suggestion-practice. In this we offer ourselves rational ideas and factual information on the idea-intake level (conscious learning level). We then digest that information by the method of suggesting its practice as emotionally pleasant, while steadily practicing the acts.

Thus, to understand people in the deep sense of steady sympathy and liking, we must practice the general attitude of friendliness by doing many small acts of courtesy, generosity and friendliness. At the same time we can make its practice also develop our understanding of the peculiar habits and methods of the specialist we call an automobile driver. We thus develop character in general by applying creative interest and sympathy to building a specific skill of anticipation in driving.

Techniques for Developing and Installing a Program of Safety Education

By G. H. REAVIS

Director of Research, Cincinnati Public Schools, Cincinnati, Ohio

The following is a summary of Mr. Reavis' talk. Mr. Reavis described the methods used in developing and installing a safety education program in the Cincinnati Public Schools:

First of all, a proposed program was defined. All available safety literature was accumulated and consulted. National safety leaders were asked for help and advice, as were also local groups both in and out of the school system.

The existing accident report system was analyzed, and the data were found to agree with national norms wherever comparisons

were possible. Thus, in cases where no local statistics were available, it was assumed that the national norms would apply.

When the need for various points of safety emphasis was determined, various courses were analyzed to discover "safety spots," or places in which safety instruction could be incorporated. In the home economics courses alone more than 200 such places were found.

It was necessary to sell teachers on a philosophy of safety and on their individual responsibility for safety education. Teaching outlines and published safety material:

were sent to teachers, and their reaction was requested. They were asked, in other words, to help work out the course. A monthly bulletin was sent out to maintain interest and to keep the teachers informed in regard to the progress.

A group of committees was organized to prepare try-out courses for various grade levels. It was found that the program could be applied from several angles: a. Classroom; b. School-wide organization, through student safety council and safety patrol; c. Club activities; d. Seasonal aspects; e. Periodic emphasis or drive.

Although the course was organized as

thoroughly and efficiently as possible, it was realized that improvements could be effected and that revisions would have to be made on the basis of experience. Records were kept which indicated the methods and courses through which safety probably could best be taught.

On the basis of these records the safety course has been republished in final form.

This approach to the safety course helped provide material that is: 1. Comprehensive; 2. Continuous; 3. Planned; 4. Has sequence; 5. Is emphatic; 6. Is the outgrowth of experience; 8. Permits both integrated and separate treatment.

Teacher Liability for Pupil Injuries

By FRANK W. HUBBARD

Director, Research Division, National Education Association, Washington, D. C.

Innocent as teachers may individually feel themselves to be of wrongful conduct toward their pupils, cases do arise in which teachers are sued by pupils, or by their parents, on account of injuries sustained by pupils while under the control of their teachers. Every person has a right to freedom from bodily injury, intentionally or carelessly caused by others; yet in every human relationship there is some possibility of injury. If the risk is great, the legal liability for possible injuries should be investigated.

Teachers run two types of risk with regard to pupil injuries. First, the teacher who uses corporal punishment runs the risk of "suit for assault and battery." In this instance, the teacher's legal status is that of a substitute for parents, in *loco parentis* is the legal term used, and the liability of the teacher for injuries inflicted through corporal punishment revolves around his status in *loco parentis*.

The second actionable situation is alleged negligence which causes bodily injury to pupils. Most frequently this type of injury occurs on playgrounds, in athletics, in chemical laboratories, in shop classes or in transportation.

Since the teacher's relationship with pupils is such that injuries do occur and suits are occasionally brought by pupils or parents, it is worth while for teachers to give a little thought to the legal conditions underlying their liability.

A tortious act is a wrongful act consisting of the commission or omission of an act by one, without right, whereby another receives some injury, directly or indirectly, in person, property, or reputation. A tort may arise out of the following acts: (1) an act which, without lawful justification or excuse, is intended by the agent to cause harm and does cause the harm complained of; (2) an act in itself contrary to law, or an omission of specific legal duty, which causes harm not intended by the person so acting or omitting; (3) an act or omission causing harm which the person so acting or omitting did not intend to cause, but which might and should, with due diligence, have been foreseen and prevented.

One might suggest that no teacher would intentionally injure a pupil. But the teacher who administers corporal punishment does so intentionally; the resultant injury may be considered a type of tort. A teacher who does not instruct a pupil as to the method of using a dangerous tool in the shop has omitted a specific legal duty, and if harm ensues, is liable for tort through negligence. Great weight is given in the law to the foreseeability of danger; if a danger is obvious and a reasonably prudent person could have foreseen who did not foresee or failed to prevent a foreseeable injury is liable for a tort on account of negligence.

Misadventures, pure accidents in which there is no negligence, are of course not

actionable. There are many occasions, however, where the teacher must defend himself against an accusation of negligence. The reasoning of the members of a jury is often incomprehensible to those who understand better all the implications of a situation.

Teachers, therefore, should be forewarned that never can too much caution be taken to prevent injuries to pupils either through disciplinary measures or through accidents. If teachers know exactly what is expected of them, they can better fit into the legal scheme of affairs and avoid suits, or at least be in a more understanding position for self-defense. It is better to take precautionary measures against accidents than it is to risk the task of convincing a jury that a particular case did not involve negligence on the part of the teacher.

I. Liability for Injuries from Corporal Punishment

Under common law, the teacher has the legal status of a conditionally privileged person standing in *loco parentis*. The parent has wider privilege than the teacher, since the latter is limited to situations which fall within his jurisdiction and responsibility as a teacher. The parent, and the teacher in *loco parentis*, are privileged to certain conduct under certain circumstances and for certain purposes. This privilege includes physical chastisement or other forms of punishment for the purpose of enforcing reasonable discipline. If a parent exceeds his privilege, he is criminally liable, but if a teacher exceeds his limited privilege he may be liable not only criminally but also civilly by tort actions.

Statutes Restricting Corporal Punishment

State statutes which deal with this subject are of several definite types. In the District of Columbia and New Jersey, corporal punishment is prohibited. The New Jersey law reads as follows: "No person employed or engaged in a school or educational institution, whether public or private, shall inflict or cause to be inflicted corporal punishment upon a pupil attending such school or institution."

Almost all states have laws forbidding cruelty to children (sometimes merely included in provisions against cruelty to animals). If corporal punishment administered by a school teacher be excessive or adminis-

tered with a dangerous instrument or in an improper manner, the teacher is liable to apprehension under such laws. Penalties for the conviction of cruelty to children vary in the several states. The most severe penalty appears to be the one provided in Missouri, where the punishment is "imprisonment in the penitentiary not exceeding three years or by imprisonment in the county jail not exceeding one year or by fine not exceeding one thousand dollars or by both such fine and imprisonment."

The third type of law bearing upon the teacher's authority consists of sanctions for moderate and reasonable punishment through the definition of assault and battery in the penal codes of nine states. Arizona, Minnesota, New York, North Dakota, Oklahoma, South Dakota, Texas, and Washington have laws almost identical with that of Montana which may be quoted as follows:

"To use or attempt or offer to use force or violence upon or toward the person of another is not unlawful in the following cases: . . . when committed by a parent, or an authorized agent of any parent, or by a guardian, master, or teacher, in the exercise of a lawful authority to restrain or correct his child, ward, apprentice, or pupil, and the force or violence used is reasonable in manner and moderate in degree."

Common Law Principles on Discipline

As a general rule a school teacher, so far as it may be reasonably necessary to the maintenance of the discipline and efficiency of the school, and to compel a compliance with reasonable rules and regulations, may inflict corporal punishment upon a pupil for insubordination, disobedience, or other misconduct. The infliction of corporal punishment by a teacher is largely within his discretion, but he must exercise sound discretion and judgment in determining the necessity for corporal punishment and the reasonableness thereof, under the varying circumstances of each particular case, and must adopt the punishment to the nature of the offense, and to the age and mental condition and personal attributes of the offending pupil, using an instrument suitable to the purpose, and, considering the circumstances and conditions of the particular offense and pupil, the punishment must not be inflicted with such force or in such manner as to cause it to be cruel or excessive or wanton or malicious."

Court Cases Resulting from Corporal Punishment

Forty-eight cases of assault and battery have been brought against teachers in the last hundred years according to the *National Reporter System*.⁶ Thirty-one cases were decided in favor of the teacher because of his status in loco parentis. Seventeen cases were decided in favor of the injured pupil because the punishment had been unreasonable, excessive, malicious, or given in an improper manner.

Corporal punishment has decreased in frequency and in severity over the years. Many school boards forbid or restrict its application. The majority of court cases were heard before 1900. However, two cases came up during the 1920's (decided in favor of the teacher), and two verdicts have been given against the teacher since 1930. In view of these recent cases, the present discussion is pertinent.

In 1935 a teacher in Vermont was fined \$450 for striking an 11-year-old girl with a book. The child's kidney was injured. The court ruled that a teacher has the right to punish when necessary but if the punishment is excessive or improper, the teacher is liable for assault and battery. In the opinion given in this case, the test for excessive punishment was defined as "that which would be so held in general judgment of reasonable men."

In 1931 a California teacher was fined \$100 in the criminal courts and is now facing a charge of \$12,100 damages for assault and battery in the civil courts.⁷ The penal code of California (273a) makes it an offense for a teacher to punish at all under unwarrantable circumstances or with excessive punishment under warrantable circumstances, or with excessive punishment under warrantable circumstances. The test of reasonableness applies both to the punishment in the first instance and to the question of degree. Permanent injury or disfigurement was held not to be the test of unlawfulness of punishment.

II. Bodily Injury Caused by Alleged Negligence of Teachers

Frequently a pupil is injured while under the supervision of a teacher, and occasionally the teacher is at fault. Accidents occur most frequently in transportation of pupils and on the playground or in sports. Some accidents also occur in shop classes and chemical labo-

ratories. The extent to which the teacher in charge, or the driver of the school bus in the case of transportation accidents, is liable for the injuries sustained by pupils is a question legally answerable only through application of the principles of negligence.

For example, a pupil who fell and cut herself on a glass flower bowl which the teacher had told her to fill with water could not hold the teacher liable for negligence. This injury was purely accidental; no negligence was involved, and the teacher was not legally liable.⁸ Conduct, however reasonable, frequently creates a risk for someone, but conduct is not negligent unless the risk involved is unreasonably great. Some injurious consequences must not only be possible but also probable.

What Is Negligence?

Negligence is any conduct which falls below the standard established by law for the protection of others against unreasonable risk of harm. In general, such conduct may be of two types: (1) an act which a reasonable man would have realized involved an unreasonable risk of injury to others, and (2) failure to do an act which is necessary for the protection or assistance of another and which the actor is under a duty to do.

When Is Negligent Conduct Actionable?

Liability for negligent conduct is conditioned upon two considerations: the character of the conduct and the nature of the results. The amount of caution required is proportioned to the amount of threatened or apparent danger. Risk may be legally unreasonable where the seriousness of the possible harm is great even though the chance of actual materializing into harm may seem comparatively slight. On the other hand, if a harm sustained is different from what might have been foreseen, the conduct causing the harm is not negligent.

Test of Foreseeability

The first test for determining the liability of an actor causing injury to others is the test of foreseeability. When a reasonably prudent person could have foreseen the harmful consequences of his act, the actor in disregarding the foreseeable consequences is liable for negligent conduct. It is the exposure of persons to unreasonable risks which characterizes negligent conduct, and the test of reasonableness of the danger and the care and caution necessary to avoid it is what would be considered reasonable

by an ordinary reasonably prudent man. When a person is doing anything in which an individual of ordinary prudence can foresee danger of harms to others, the law imposes a duty upon him to employ reasonable care.

If the damage is done by a deliberate and independent, though innocent, act of a human being, the defendant's prior and antecedent negligence will be the legal cause if the intervening human agency was foreseeable. This principle is sometimes applied to situations in which the harm is immediately caused by acts of children not negligent on their part by reason of their years, although the acts might have been negligent if done by adults.

Contributory Negligence

Obviously, these generalizations bring up the point of contributory negligence, which is defined in law as conduct on the part of the injured person which falls below the standard to which he should conform for his own protection and which is a legally contributing cause, cooperating with the negligence of the defendant in bringing about the plaintiff's harm.

Reasonable self-protection is to be expected of all sane adults. With some few exceptions, contributory negligence bars recovery against the defendant whose negligent conduct would otherwise make him liable to the plaintiff for the harm sustained by him. Both parties being in fault, neither can recover from the other for resulting harm. When there is mutual wrong and negligence on both sides, the law will not attempt to apportion the wrong between them.

Extent of Liability

The far-reaching implications of liability for negligent conduct may be seen from the following abstracted outline from rules in the law of torts.⁹ If the actor's negligent conduct has resulted in any injury to another so as to create a right of action, he may also be liable:

- (a) For physical harm resulting from fright or shock or other similar and immediate emotional disturbances caused by the injury or the negligent conduct causing it.
- (b) For additional bodily harm resulting from acts done by third persons in rendering aid irrespective of whether such acts are done in a proper or negligent manner

- (c) For any disease which is contracted because of lowered vitality resulting from the injury caused by the actor's negligent conduct
- (d) For harm sustained in a subsequent accident which would not have occurred had the person's bodily efficiency not been impaired by the actor's negligence.

Furthermore, a person may be liable for injuries resulting from his conduct, where the prior physical condition of the plaintiff is unknown. Several examples of this rule may be found in the cases dealing with sports where the physical education instructors were found liable for injuries sustained by pupils who had some physical defect unknown to the instructor.

Specific application of the principles of negligence may be studied in greater detail by examination of typical court cases involving suits brought by pupils against teachers for injuries allegedly caused by the teacher's or bus driver's negligence.

III. The Schoolboard's Responsibility for Injuries to Pupils

Every individual is responsible for his own torts but ordinarily, in law, the principal or employer is also responsible for the injuries caused by his agents, servants, or employees. This legal principle is called *respondent superior*. However, the teacher, though an employee of the schoolboard, is under contract for the purpose of giving instruction and has therefore the legal status of a quasi-independent contractor, not that of an agent or servant.

Immunity of School Districts

One may ask why the common law ruling against holding quasi-public corporations liable for their torts. The basis lies in the common law reasoning during the middle ages in England: first, the king can do no wrong; second, the state represents the king and therefore can do no wrong. Being infallible, the state cannot be sued without its consent. The state is therefore immune from legal suit. The school district is a division of the government, an arm or agency of the state. The school district is therefore immune to tort action especially since education is a governmental function of the school district.¹⁰

There are hundreds of court cases which uphold this theory. In addition, other reasons have been given in court opinions for the

nonliability of school districts: school districts are acting *volens volentis*; they receive no profit or advantage from the performance of their delegated duties; they have limited powers, only those powers which have been given them explicitly, and the permission to commit a tort has not been granted them; they are authorized to collect taxes for educational purposes only, not to pay damages; furthermore, school property is exempt from attachment to pay damage claims.

On the other hand, there seems to be some theoretical trend toward the abolition of the theory of nonliability. A number of court opinions and legal authorities in their treatises have admitted the injustice of the common law theory, as may be evidenced by the following quotation:

"If the doctrine of state immunity in tort survives by virtue of antiquity alone, is an historical anachronism, manifests an inefficient public policy, and works injustice to everybody concerned, the legislature should abrogate it. But the legislature must make the change in policy, not the courts."¹⁰

Statutory Imposition of Responsibility

In New Jersey and New York only have the courts allowed injured pupils to recover damages from school districts in the absence of statutory imposition of liability. Several cases in New York were decided in favor of the plaintiff before the statute of 1937 which definitely placed the liability upon the board of education.

New Jersey in 1937 passed a law permitting school boards to pay the legal expenses of teachers when suit is brought against the teacher for damages to pupils. In 1938 New Jersey passed another law which is practically identical with the New York law.

The situation in these two states, however, is unusual and the general philosophy is contrary. Several other states have approached the question of district liability from a different angle; that is, the state legislatures have, more or less successfully, fixed responsibility upon the school boards for injuries arising out of their negligence. These states are California, Minnesota, Oregon, and Washington. The statutes in California and Washington have served as obviously intended, but in Minnesota and Oregon similar statutes have been interpreted by the courts in such a way as to nullify their purposes.

The recent laws in New Jersey and New York make definite the school district's liability; the permissive laws in California and Washington are reasonably definite. The permissive laws in Minnesota and Oregon have been misinterpreted so as to nullify them and cause the height of confusion. In the other states there is less or no confusion because there have been no permissive laws calling for judicial interpretation.

In four states—Alabama, Arkansas, Illinois, and West Virginia—the state constitutions prohibit suits against the states (and school districts, being considered arms of the states, thereby come under the same prohibition). Although 21 state constitutions¹¹ authorize suits, in most instances they are expressly limited to suits on account of breach of contracts. In other instances the permission is stated in such broad terms that it has always been interpreted to exclude tort actions.

Implied Acceptance of Liability for Pupil Transportation

In several states school districts have been authorized to purchase insurance covering pupil transportation accidents. This type of law may imply imposition on the state (or its subdivision) of a limited degree of liability. However, Wyoming and Colorado, while authorizing insurance for transportation, have at the same time specifically denied that such insurance shall be "construed as creating any liability against the school district. . . ."

A few quotations from the various state laws will illustrate the type of authorization. The 1935 Colorado statute quoted below is identical with the 1933 law in Wyoming.¹²

"The district board of any school district in the state of Colorado operating and maintaining transportation route or routes under the statutes of this state is hereby authorized to procure liability and property damage insurance covering buses used on such routes for the transportation of school children; the premiums thereon are to be paid out of the funds of such district, but only in cases where the school district itself owns or rents such buses, otherwise to be paid by the contracting operator of such buses; provided, that there shall be no right of contribution on the part of the school district to the insurance carrier; provided, however,

that nothing contained in this section shall be construed as creating or intending to create a liability against the school district so insuring said buses except in such amount as is covered by an existing and valid policy of insurance; provided, further, that failure to procure such insurance shall not be construed as creating any liability against the school district by reason of any injury or damage to the property of others, occurring in the operation of any such bus or buses."¹³

Liability for Safety Patrols

The practice of assigning pupils to safety patrol service in order to safeguard the other children going to and from school has opened up an entirely new field of possible hazards. No state statute, authorizing the safety patrols, has imposed on the school board or the municipality any liability for accidents to pupil patrolmen. On the contrary, in four states the law asserts the nonliability, not only of the school district but also of its employees.

Minnesota makes definite and clear that no liability attaches to the following:

" . . . the school, educational institution, governing board, directing authority, or any individual director, trustee, superintendent, principal, teacher, or other school authority by virtue of the organization, maintenance or operation of such a school patrol because of injuries sustained by any pupil, whether a member of the patrol or otherwise by reason of the operation and maintenance thereof."¹⁴

The question may be raised as to whether or not a school patrol is an integral part of the school program. New Jersey recognizes the patrol idea as follows:

"Any organization of pupils whether designated as a patrol, council, court, club, committee, or school police which has for its purpose the prevention of accidents to pupils in the school building, on the school grounds, on a sidewalk or path adjacent to a street, road or highway, or in a school bus or other vehicle approved for the transportation of pupils shall be regarded as an essential part of the school program and as a method of safety instruction and shall be employed and administered as such by the school personnel."¹⁵

Although several states have thus specifically declared their nonliability for accidents in connection with safety patrols, either

by statute or by legal opinion, the likelihood of accidents has been minimized by adoption of the *Standard Rules for the Operation of School Safety Patrols*.¹⁶

For example, Pennsylvania has included in the statutory authorization of safety patrols a prohibition against the directing of vehicular traffic by student patrolmen, "nor shall any safety patrol member be stationed in that portion of the highway intended for the use of vehicular traffic." These precautions are effective in reducing the hazards but the question of liability in most states remains as yet unanswered.

IV. Liability Insurance Protection

As a result of the feeling that common law immunity of schoolboards often works a hardship in individual cases, there has developed a movement to require schoolboards to purchase insurance. The purpose of these plans is to reimburse parents of pupils for hospital and medical cost arising from accidents at school, thereby insuring children proper care and removing undue demands upon family incomes.

In New York and New Jersey, boards of education now are required by law to have insurance.¹⁷ But in some other states the right to purchase insurance has been denied by competent legal authority under the theory that school revenues cannot be used for this purpose. For a school district to provide such insurance would be to imply that the state or one of its agencies could be sued which, as shown previously, is contrary to common law and has not been abrogated by statute in a majority of the states.

Colorado, Florida, Minnesota, Vermont, West Virginia, Wisconsin, and Wyoming empower local boards of education to purchase liability insurance covering pupil transportation. North Carolina has taken care of the situation through a budgetary item rather than through insurance.

Tennessee and Alabama have laws permitting other types of insurance which the courts have interpreted as to include liability insurance.¹⁸

Unauthorized Insurance Contracts

In states where no statute confers upon schoolboards the right to contract for insurance, a schoolboard which moves to take insurance is subject to grave difficulties. Court decisions have followed two leading cases in this respect. In both cases, school-

boards had, without statutory authority, provided for group life insurance.

In New York the court ruled that the city had no authority to enter into a contract insuring its employees "for their own benefit."¹ This case has been cited and followed in a number of subsequent cases.

The second leading case was decided in 1921 also but the decision was contrary to this New York case. In New Mexico² it was held that the schoolboard has the right to carry group insurance for school teachers and employees under statutory authority "to defray all expenses connected with the proper conduct of the public schools."

Insurance for Driver Training

A special problem regarding liability has arisen in connection with school driver-training programs. Agencies which cooperate in furnishing automobiles for school use usually insist that insurance be carried on these automobiles. In states where schools are not authorized to purchase insurance, the general procedure has been to have the insurance premiums on training cars paid by the local automobile club or dealer, or by some other cooperating party. In states where boards have apparently assumed liability for transportation accidents, the statutory permission to take insurance on vehicles used in transportation may possibly be construed so as to permit insurance on driver-training cars.

Policies taken on school fleets have been endorsed to cover driver-training cars; in other cases separate policies have been taken on the cars used in road instruction. In the four states where general liability has been imposed, school boards are required to take general liability insurance and may take policies on the automobiles used in their program.

Limitations of Insurance Taken by School Boards

General insurance principles hold that, if a policy is endorsed with an agreement not to use a defense ordinarily open to the insurer, such defense cannot then be used. Applying this general principle to the subject under consideration, it may be inferred that the school board taking out insurance should have the company agree in writing on the policy not to defend from claims thereon with the defense that the school board had no right to take the policy, having no liability and therefore no loss against

which to indemnify. This endorsement plan has worked successfully in some instances. It has not served to solve the problem, as for example in the case of *Hughes v. Hartford Accident and Indemnity Company*³ where the policy contained the endorsement. However, a clause of the policy reads as follows:

"No action shall lie against the company until the amount of the damages for which the assured is liable by reason of any casualty covered by this policy is determined, either by final judgment against the assured, or by agreement between the assured and the person or corporation making the claim."

This situation arose: The school board could not be sued, and therefore no judgment could be obtained by the injured party against the school board. The insurance company would pay no claim without such judgment. The injured party could and did sue the insurance company, which defended on the grounds that the schoolboard was a governmental agency and no agreement had been made not to use this defense against any third party (only against the school board).

In a similar situation, when an insurance company used this defense in West Virginia, the court ordered it to refund the premiums accepted or stand the amount of the judgment,⁴ since the premium is the essence of the insurance contract.

Limitations of Insurance Taken by Individual Teacher

Although pupil injuries occur most frequently in transportation, and several states have permitted or required insurance on school buses to reimburse the injured pupil for his financial loss, there remains the large number of states in which no such insurance is allowed, and excluded also is the class of injuries not covered by insurance when allowed but restricted to transportation accidents.

Since school districts outside New York and New Jersey, possibly California and Washington, cannot protect their teachers from damage suits on account of negligence, inquiry has been made into insurance policies individually available to teachers. It was learned that such risks are insurable provided the assured is willing to pay a premium set by insurance companies to compensate them for the risks they assume.

For example, physical education teachers must pay a higher premium than academic classroom teachers, and where such insurance is taken on a group basis most companies require in the group a proportion of at least four other teachers for every physical education teacher.

In order to set a premium within reach of the average school teacher, most insurance companies insert into their policies one or more exemptions. If the teacher taking out such a policy is not alert, it is possible that the protection sought is entirely nullified by the operation of these exemptions. For example, most policies exempt payment if the insured fails to give first aid to the injured, or if he gives first aid improperly. Some policies cover only accidents caused "by reason of the performance for the schools, described in the application, of his or her duties as described." The following exceptions are listed in another policy:

"(a) Caused by the assured's willful, deliberate and/or malicious acts; or

"(b) Caused by the rendering of or omission to render professional services except as an instructor; or

"(c) Caused by or arising out of or resulting from corporal punishment; or

"(d) Caused by vehicles owned, operated, rented, hired or in the care or custody of the assured."

All injuries caused by corporal punishment are excluded under (c). All transportation accidents are excluded under (d), as such accidents are insurable through another type of insurance, i.e., automobile liability and property damage policies. Exception (b) probably would exempt the instructor from all protection in extracurricular activities. The exception that may be the most troublesome is (a), since particularly anything which the teacher might do, which would develop as the cause of a pupil accident, might be argued by an insurance attorney as a willful and deliberate act.

In view of the prohibitions and the dangers set forth in this section, teachers who attempt to protect themselves by an individual liability insurance should do well to seek the advice of the state insurance commission before taking any policy.

REFERENCES

¹Disciplinary problems have caused many types of court cases. Only those dealing with corporal punishment come under the classification of as-

sault and battery. Suspension or expulsion is not actionable in tort unless some pecuniary loss has been felt by the pupil or parent. In case of unlawful expulsion, the proper procedure is mandamus to compel reinstatement.

²Revised Statutes of New Jersey 1937, Vol. I,

Title 18, Chapter 19, Article 1.

³Missouri Statutes Annotated, (1932) Vol. 4,

Chapter 30, Section 4025.

⁴Revised Codes of Montana 1915, Annotated,

Vol. 5, Chapter 20, Section 10940.

⁵Corpus Juris 36: 1084, 1100.

⁶The National Reporter System is a series of re-

ports on state cases of appellate courts. Published by the West Publishing Co., Chicago, Ill. Issued by geographical regions of the United States.

⁷Melen v. McLoughlin 176 A 297 (1935).

⁸People v. Curtis 300 P 801 (1931).

⁹Ganecott v. Davis, 275 N. W. 229 (Mich. 1937).

¹⁰American Law Institute, *Restatement of the*

Law of Torts, Vol. II: "Negligence," Chap. 16,

Topic 2, p. 1209-23. St. Paul, Minn.: American

Law Institute Publishers, 1934.

¹¹This immunity from liability of school districts, as agencies of the state, has been carried to far that in Iowa employees of the school districts have been considered immune as individuals. The leading case for this theory is *Hibbs v. Independent School District of Green Mt.* et al. 251 N. W. 506 (1933) 255 N. W. 463 (1934). This is the only case of its kind. The opinion given is that "exemption of school district from liability for damages resulting from negligence in performing governmental functions applies to officers and employees thereof. When acting in its purely governmental capacity, municipalities are not liable in damages resulting from negligence on the part of its officers, servants, and agents. No reason would, however, seem to exist for . . . deny the same to an employee of a school corporation when similarly engaged." However, the state supreme court has recently overruled this decision.

¹²Borchard, Edwin M. *American Bar Association*

Journal 11:495; August 1935.

¹³Arizona, California, Delaware, Florida, Idaho, Indiana, Kentucky, Louisiana, Nebraska, Nevada, North Carolina, North Dakota, Ohio, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Washington, Wisconsin, and Wyoming.

¹⁴Supplement to *Wisconsin Revised Statutes 1915*

Annotated, Chapter 99, Article 8, Sections 99-838.

¹⁵1935 Colorado Statutes Annotated, Volume 4,

Chapter 146, Section 117.

¹⁶Mayo's Minnesota Statutes 1927, Vol. 3,

1915 Supplement Ch. 14, Sections 2831-85 (italic

ours).

¹⁷School Law of New Jersey, 1938, Paragraph

97, p. 231.

¹⁸Copies of these rules may be obtained from

the American Automobile Association, Wash-

ington, D. C. or from the National Safety Council,

Chicago, Illinois.

¹⁹Pardon's Pennsylvania Statutes, 1936 Title 24,

Sec. 448.

²⁰Thompson's Laws of New York (1939), Part

I, Chapter 16, Article 20, Section 569 a.

²¹92 SW (2d) 414, 134 So. 461 (Ala. 1931).

²²People ex rel. Terbuch and Powell v. Doble

189 N.Y.S. 29 (N.Y. 1921).

²³Nohl v. Board of Education 199 P 373, 15

ALR 1085 (N.M. 1921).

²⁴134 So. 461 (Ala. 1931).

²⁵Adkins v. Western and Southern Indemnity

Company 136 SE 302 (W.Va. 1934).

WEDNESDAY LUNCHEON SESSION

October 9, 1940

Presiding, J. ANDREW HOLLEY, Head, Department of Teacher Education, School of Commerce, A and M College, Stillwater, Okla.

The business meeting of the Child Education Section was held Wednesday noon, October 9, at the Stevens Hotel.

The Nominating Committee recommended that the incumbent officers be reelected unanimously. This was placed in the form

of a motion, and the motion was carried.

The group discussed the need of a personalized, flexible medium for the exchange of ideas in the Child Education Section, and the possibility of publishing a monthly news letter was considered.

WEDNESDAY AFTERNOON SESSION

October 9, 1940

INFORMAL CONFERENCES

Problems in Teacher Education for Safety

Presiding, J. ANDREW HOLLEY, Head, Department of Teacher Education, School of Commerce, A and M College, Stillwater, Okla.

Problems of Teacher Education and Safety

By CARLETON WASHBURN

Superintendent of Schools, Winnetka, Ill.; President, Progressive Education Association

Educating teachers for safety is a part of the broad problem of selecting and educating teachers for children. The teacher who is the kind of person needed for the whole job of education is one who has insight into the needs of society and the needs of children, who has skill in meeting these needs, and who has a philosophy of life in which relative values have their right interordination. Such a teacher inevitably does effective work in safety education; so let us consider the broad problem of teacher education and only incidentally the more specific problem of safety education.

First, we must select the right type of person for the teaching profession. The decreasing birth rate is fortunately making the number of applicants for our teachers colleges far in excess of the demand for teachers. This is enabling teachers colleges

to be much more selective than they were in the past.

The schools of education in our universities, however, are not yet clearly facing the problem of selection in terms of limiting numbers of students to fit the needs of schools. Any good student in a university whose grades are fairly high can take educational courses and become certified for teaching. Then the selection devolves upon the school administrators. This may be effective, but is sometimes wasteful, and hard on the student who has invested time, money, and effort preparing to be a teacher.

Whether the selection is made by the training institution or by the administrator, we should see that those entering the profession have the fundamentals necessary for effective teaching—that they are healthy physically, that they have well-adjusted,

emotionally stable personalities, that they have reasonably high intelligence, that they have marked sensitivity, especially in the field of human relations, and that they have a broad social outlook.

Having selected good material for our future teachers, we must see that their pre-service education is not narrowly specialized. Each teacher must be developed in two inter-related fields—the study of society and the study of children.

The study of society must not be primarily bookish but should be based upon real experience. In the past we have relied upon reading history textbooks, possibly textbooks in economics, political science, and sociology, textbooks of literature, and so on, and listening to lectures on these subjects. This sort of bookish education tends to give students merely the dry bones rather than the living realities, and frequently it leaves them quite unaware of the problems of today and of the emotional surges that are affecting human behavior. Even the facts of economic, political, and social life are not learned in connection with real human beings but as doubly distilled and lifeless symbols.

Direct Experience

New College at Teachers College, Columbia University led the way toward a more realistic approach. It sent students out into factories and onto farms and had them do actual work among workers. Bennington College, through its long winter recess, encourages its students to take part in the economic and social life of the world today. Antioch College, through its cooperative plan, puts students into jobs alternating with their studies. The Chicago Teachers College sends its students on innumerable trips to factories, housing projects, commercial houses, slums, and art centers. All of these are steps in the direction which we must take if our teachers are to be living men among the living. They must see first hand the lives and problems of the human beings whose children they are going to teach, and must, as far as possible, participate first hand in these lives.

On such a foundation of direct experience they can extend their insight into society through pictures, motion pictures, and exhibits. Then, and then only, they can build on this sure foundation through the use of the symbols of speech and the printed word. Surely the vicarious experiences provided by

lectures, discussions, and reading are essential, but they have meaning only in so far as the symbols represent realities.

With this kind of background, and simultaneously with achieving it, prospective teachers must study the needs and problems of society. Among these, of course, will be the needs and problems of safety.

One cannot study the labor movement without seeing the drive that organized labor has made toward safer conditions of working, and the industrial conditions that have led to this drive, and the distance we have yet to go if human life is not to be sacrificed to carelessness or greed. One cannot study housing problems without again coming upon the necessity for safety and the problems involved in achieving it.

And so on through the various problems of family life, personal and social relationships, family, community, and world economy and political organization. In each of these fields the teachers should become aware of the problems that exist and should be set toward the attempt to solve these problems.

It is not a part of the job of teacher education to hand out ready-made solutions any more than it is the problem of education itself to do so. The important thing is to awaken people to the awareness of the problems and to instill in them a high resolve to seek solutions.

Safety is only one of many aspects of the various problems that will be attacked. We must be careful in our awareness of the need for safety education not to make it a disproportionate part of the curriculum, but rather to see it as one thread woven through the whole fabric of the study of the needs of society, a factor not to be neglected, but a factor not to be distorted by overemphasis.

Must Study Child

Concurrently with the study of society, there must be a study of the child, his needs and his development. This again must be based upon real experience with real children. In the old San Francisco State Teachers College Frederic Burk saw to it that every student from the end of the thirteenth week of school to the time of graduation was every day in contact with actual children, having responsibility for these children, and thinking in terms not of children, in the abstract, but of John and Henry and

Mary. In most places, however, practice teaching has tended to be a semester or so of isolated experience, comparatively unrelated to the rest of the student's course in the teachers college or university. It should be a foundation for a large part of the student's work; it should be the center around which discussions and study are integrated.

The direct experience with living children should be expanded through pictures of children under different conditions, through discussions, and through reading. But again the learning through symbols cannot take place until the symbols have achieved meaning through real and direct experience.

The analysis of needs and problems of children will include their physical needs, how the physical organism develops and what it must have for its best development. Safety will definitely play its part here, the safety that comes with achieving skill to meet situations in which one is likely to find oneself—not a passive safety of avoiding all hazards, but an active safety of recognizing hazards and learning how to cope with them successfully.

The need for developing coordination, for developing healthy bodies, for action rather than passivity—all such needs will come out as one studies the child; and learning how to meet them will be a necessary part of teacher education.

Then there are the emotional needs of the child, the needs for self-expression, security, and social integration. The person who does not fully understand childhood and who is overconscious of safety is liable to fall into the error of overcaution.

The child whose expression is constantly restrained by cautions and prohibitions, instead of achieving skill and a sane attitude toward hazards is liable to break loose and be reckless if for no other reason than to get revenge on those who have constantly thwarted him.

Avoid False Security

The child's security must not be based on a feeling that no dangers exist or that he can avoid all danger. Children crave the feeling of risk, as witness their vicarious thrills through the dime novel of the old days, the movie and radio and even comic strip adventure of today—trashy, many of them, yes, but popular because they answer the child's need for a feeling of hazard. Security does not come from depriving chil-

dren of the sense of danger and the adventure of coming close to it, but rather from developing skill and understanding.

This is far from all that there is to security from a mental hygiene standpoint. A child must feel loved and must feel that he belongs in the family and in the community, but safety education may contribute its small quota to the sense of security if the safety education is wise.

The teacher, in studying the emotional needs of the child, must also see that he has opportunities for social integration which comes from cooperative purposing, from working side by side with his fellows toward a common end. Extended, this becomes training in citizenship.

In addition to studying and meeting the child's physical and emotional needs the teacher needs to learn to meet his intellectual needs. He must have the skills necessary to coordinate his work and play with those of his fellows. Hence the necessity for reading, writing and arithmetic. Hence the necessity for a certain common basis of knowledge.

The teacher not only wishes to affect behavior, but wishes to see that behavior is intelligent. Therefore she helps children to understand the whys of what they learn. An understanding of the whys of safety behavior is a part, even though a small part, of meeting children's intellectual needs.

Then, children have social needs. I have already mentioned these in connection with their emotional needs, because they are so closely tied together. The child needs emotionally to feel himself to be a part of the family, the school, the community. And from the standpoint of the well-being of society, he must be able to extend his social consciousness to the state, the nation, and the world at large. What I said earlier in regard to giving a teacher social understanding through direct experience, followed by discussion and reading, applies equally to children. They must see the needs of society and must resolve mightily to do their part in meeting these needs.

Right here, much of the factual material which is included in safety education has its rightful place. The frequency of accidents and the causes of them are vivid examples of certain genuine social needs. The teacher in studying the child and helping him to become a socially conscious individual who

feels responsibility for helping society to meet its needs will necessarily bring these facts before the children, first through direct experience right in the school, on the playground, and through cooperation with the parents in the home, and then through a broader analysis of the community and the larger world.

Pre-Service Education

When one discusses pre-service education of teachers one inevitably covers the main factors of in-service education. The superintendent, principal, supervisor, or other specialist in the school system is there primarily to help teachers do the most effective job of which they are capable. He is therefore engaged in the process of teacher education just as much as—and sometimes much more than—the faculty members in a teacher-training institution. There is an ever-continuing follow-through of pre-service education.

There is danger that teachers immured within the schoolhouse will lose contact with society. People who are concerned with the development of teachers must see that they are brought into continual contact with the community, encouraged to take part in community activities, encouraged to concern themselves with the broader political, economic, and social issues of community, state, nation, and world. Continual stimulus and encouragement must be given if teachers are not to slip into the rut of imparting sterile knowledge to docile children.

At the same time that the teachers are stimulated toward active membership in society and continuous recognition of social problems, they must also be encouraged to carry on their study of childhood. In the traditional school the teacher was not so much concerned with studying what children needed, studying their development and how it could best be fostered, as he was with imparting information and drilling in skills. The child was the plastic clay which the teacher molded.

Fortunately children are not plastic clay. They are vital human beings, each with his own determination to be more fully himself. The teacher's job is not to force-feed these individuals, but to study them and supply their personal and social needs as those needs become manifest. And the job of the administrative and supervisory force is to help teachers to be aware of their basic re-

sponsibility in the study of society and the study of children and in the developing of children toward self-fulfillment as participating members in a democratic society.

Throughout the pre-service and in-service education of teachers, and throughout their work with children, there must run a philosophy of life, a recognition of which values are of greatest importance and which values are to be subordinated to them.

As the teacher develops his own philosophy of life in terms of self-fulfillment and in terms of social participation toward the fulfillment of all other human beings, and as the teacher sees with increasing clearness where the subordinate values fit into the general scheme of life, she will inevitably and often unconsciously influence children toward a similar orientation. A teacher with confused values confuses children. A teacher with a clear recognition of values helps children toward a similar clarity at every point of contact—the teacher's voice, manner, adjustment of minor problems, method of handling any activity or meeting any situation, all are unconscious reflections of that teacher's sense of values, of her philosophy of life. Far more important than any direct instruction that the teacher may give is the unconscious example set by her own life.

I stress the unconscious influence of the teacher because it probably is by far the greatest. But there is a place, too, for conscious analysis. Just as the teacher in organizing her own values and her own philosophy must go through a process of constant analysis of what things are most important and what things are less important, what things contribute to long range satisfaction and to social well-being and what things obstruct these fulfillments, so, too, must she help the children consciously to analyze their problems, consciously to subordinate the lesser to the greater values, the momentary impulses to the long-run satisfaction, the seeming good of the individual to the more inclusive good of society.

Philosophy of Safety

And it is in the light of this kind of philosophy of living that safety education must be taught if it is to have meaning. The person with an adequate philosophy of life does not avoid all risks. In fact, if he is worth his salt, he takes many risks, but he takes them consciously to achieve purposes

worthy of the risks. He prepares himself as adequately as possible for his undertakings. He faces realistically all the factors of a situation and acts with judgment. Only so can he prevent carelessness, lack of foresight, and lack of skill from interfering with his major ends. Safety education as a con-

crete example, as an illustration of the way to meet various life situations in terms of wise adaptation of means to ultimate ends, can be a fundamental part of education as a whole, of the self-fulfillment of each individual as a participating member of a democratic society.

Discussion

The informal discussion which followed Mr. Washburne's address was led by members of the Child Education Section's Committee on Teacher Education, including:

Dr. HERBERT J. STACK, Director, Center for Safety Education, New York University, New York City, *chairman*.

Dr. VIVIAN WOODON, Curriculum Consultant, National Safety Council, Chicago, *secretary*.

Dr. GEORGE ANSELM, Director of Teacher Training, Woman's College of the University of North Carolina, Greensboro, N. C.

KENNETH N. BEADLE, Director, Education Division, National Conservation Bureau, 60 John St., New York City.

Dr. WALDO LESSINGER, Dean, College of Education, Wayne University, Detroit, Mich.

Dr. AMOS E. NEYHART, Administrative Head, Institute of Public Safety, Pennsylvania State College, State College, Pa.; Road Training Consultant, American Automobile Association.

Dr. F. R. NOFFSINGER, Educational Consultant, American Automobile Association, Washington, D. C.

The discussion was opened with the ques-

tion, "Should a specific course in safety education be organized for teachers?"

A compromise view on this question evolved: That, because of the lack of understanding and appreciation of the needs and possibilities for teaching safety through the materials and activities of other courses, a separate course in safety should be organized. This might be considered a first step or stage toward more complete integration of safety with other courses and departments.

The importance of having teachers get some first-hand experience in safety was stressed. The necessity of getting teachers inspired to meet the new responsibility in safety education was also pointed out.

The desirability of integrating safety in special departments, such as industrial arts, home economics, and physical education, was brought out.

It was stated that safety might well be the center or core around which other concepts and skills might be developed—that the chief reason why safety is not a separate course now when considered in relationship to the importance of other courses is that the latter courses are older.

School Safety Patrols in Secondary Schools

Presiding, Mrs. WILLIAM A. HASTINGS, Vice-President, National Congress of Parents and Teachers, Madison, Wis.

Viewpoints on the Education Value of School Safety Patrols

By A. R. LAUER

Associate Professor of Psychology, Iowa State College, Ames, Iowa

In a discussion of school safety patrols at least three approaches might be made. It would be possible to discuss the theoretical

implications underlying the problem; the literature might be reviewed to bring out the practices which have been more or less

crystallized in the past; and it might be worth while to make a brief survey of current thought regarding the problem.

As a result of the third consideration, two groups of persons were approached and asked to react to a sheet of questions relating to school patrols and were asked to give other evaluations which might occur to them. These groups were:

1. Authorities in the field of safety education.

2. Administrators who are facing the problem.

This report will center about each of these possibilities, with a final evaluation based on the outstanding points of each. As in the case of most issues, there are certain to be schools which think the patrol is the only thing. Likewise, there will be those who are very much opposed to the patrol and those who are indifferent.

The present evaluation will essentially consist of examination of the basic premise and the assumption laid down. A final solution must await further experience with patrols, experiments set up to determine the change in attitudes of the patrol, as well as of school children in general; and the effect upon teachers as well as motorists.

It does not follow that because one dose of medicine is good, two doses are better. Perhaps a universal adoption of a school safety patrol would be detrimental, while well chosen locations might profit a great deal from the patrol.

Theoretical Considerations

The following assumptions or postulates are made regarding the school safety patrol, most of which are tenable in most respects:

1. That human life should be placed at the top of values assigned to the various socio-bio-physical relationships.

2. That public education is beneficial.

3. That qualified and systematic direction of behavior brings the most satisfactory results in educational progress.

4. That supervision of school children will help mold their habits.

5. That older children respect the wishes of younger ones, particularly when it is made a part of their duty to do so.

6. That younger children look up to older boys and girls for pointers on which to fashion their behavior.

7. That human judgment increases with age and training.

8. That certain tasks can be performed as well by the intellectually immature as well as by intellectually mature individuals.

9. That attitudes and unthought habits can best be established on a rational basis.

10. That adults respect the authority of children in situations of material interest.

11. That education is best accomplished by a functional approach.

12. That leadership, in the form of organized aggressive behavior, can best be developed by actual practice of the response involved.

In other words, it is desirable to develop leadership and desirable that children be capable of performing patrol duties when properly trained and supervised, and when the benefits to be derived more than offset the hazards.

Review of Literature

The school safety patrol was first organized in 1914 at Newark, N. J., and has been used there continuously since that time. In 1915 "safety scouts" were organized in Tacoma, Wash. "School police" were organized in St. Paul, Minn., about 1920; the Chicago Motor Club patrols in 1921. There are about 300,000 school safety patrols in the United States.

As outlined through regulations set up by a joint committee of the National Safety Council, the National Congress of Parents and Teachers, the American Automobile Association, the National Education Association and the United States Office of Education, the duties of the patrol are quite well defined. A few of the basic principles are:

1. The patrol is not to direct motor vehicle traffic.

2. Patrols are to stay on the curb, except when a car obstructs the way, in which case they are to move into the street not more than three paces or nine feet, and return to the curb immediately.

3. They are not to escort children across the street.

4. If possible, there should be one patrol member on each side of the street.

5. Regulations for white Sam Browne belts are set up, and patrol members are to wear them for identification.

6. The patrol members are to carry no whistles, signals or other devices in their hands.

Survey of Current Thought

In most cases the patrol is selected on the basis of scholarship, deportment and suitability for the job. Patrols are usually selected by the principal and often are trained by the local police, who may supervise the work done by the boys. In many places they are sponsored by local clubs, the motor clubs, the American Legion and the Parent-Teacher Association.

In a large number of cases they are sponsored by the schools themselves, who feel it is their prerogative, since it has been ruled that school officials are liable in case of injury to patrols.

There is no general agreement as to the sponsorship, although it seems that the schools are willing to accept outside sponsorship in most places, as it tends to divide the responsibility, at least from the layman's point of view. Naturally, there is resentment of any attempt to use the patrol for promotional purposes.

In general the consensus is favorable to the patrol, although there are some violent reactions. Among the objections to the patrol, it seems that there are no valid educational arguments; the objections are mostly points relating to liability; time and effort involved; inadequate training and supervision of the patrol; objection to the sponsor; and similar grievances. Some states have legalized the patrol. This law absolves the school officials from liability and makes

it lawful for any child over 10 to be appointed as a patrol member unless the parents object by written notice.

(Dr. Lauer distributed mimeographed material giving the results of his questionnaire on patrols. Excerpts from this material are given below.)

In general, school people favor the patrol, but they feel that the matter of sponsorship needs careful review and that possibly certain regulations should be set up concerning sponsorship.

They seem to agree that the patrol has definite educational value, but they feel that it has more value for the younger children than for the older ones.

They seem to feel, generally, that patrols should be encouraged and that they should be provided with belts, uniforms and similar equipment which will facilitate their work.

The greatest number of patrol members seem to be drawn from the seventh grade, with grades 8 and 6 next in order.

Of the "chief values of belts, uniforms and similar equipment," the three mentioned most often are: 1. For identification; 2. Motivation of patrol; 3. Recognition of leadership.

Among the "educational values of the patrol" most often listed were: 1. Develops feeling of personal responsibility in pupils; 2. Develops safety consciousness; 3. Teaches children to watch for hazards; 4. Makes good citizens and teaches law observance; 5. Teaches children to walk safely; 6. Encourages cooperation and organized effort.

Discussion

Discussion centered about the questions, "Should high school safety patrols direct vehicular traffic?"

Are high school patrols desirable? If so, how may they be organized and operated successfully?

What are the functions of the high school patrols and in what ways does their work differ from that of the elementary school patrols?

Is there need of a change in the Standard Rules for the Operation of School Safety Patrols if patrol work is extended into high schools?

Directing traffic. It was argued that in

some places safety patrols can help an inadequate police force by directing vehicular traffic; that this is an opportunity to give concrete service to the community; also that there is an educational value in the experience.

On the other hand it was pointed out that this is recognized police work and should be performed by a regular policeman or a deputy officer. In most states it is illegal to deputize a minor, and so this type of aid could not be given legally. It was stated that the danger involved—having young boys, without police power, exposed to the hazards of traffic in the street—

obviated the value of the service. The question of liability was also raised. The consensus was that safety patrols should not be permitted to control vehicular traffic except student vehicles parking on a school parking area. They can also help load and unload street cars and buses.

Desirability of high school patrols. Opinion was divided as to whether there should be a determined effort to extend the patrol movement to the high schools. There was some feeling that young people of high school age do not need this protection as do the younger children, that they should be able to care for themselves by the time they reach high school. Others present cited their experiences as an indication that high school patrols could render a worth-while service.

To be successful, the patrols must have the interest and enthusiastic cooperation of the principal and faculty members. There must be understanding cooperation on the part of the police department. There must be a responsible sponsor who does more than simply furnish belts and raincoats.

Functions. The differences in patrol problems in the rural high school, the urban high school and the metropolitan high school were discussed.

High school patrols are helpful in connection with student travel by street car and by bus; in directing the parking of student and faculty cars; in controlling student pedestrian traffic at street crossings; in observing violations of traffic practices and reporting such violations, when it seems advisable, to the principal or patrol adviser, or, in some cases, to a safety court or council within the school.

Revision of standard rules. The conference strongly recommended that changes be made in the Standard Rules for the Operation of School Safety Patrols to meet the requirements of older students. Students at this level are no longer thrilled by a Sam Browne belt or similar equipment. Also, another name might be advisable for the sake of dignity. A group of delegates from Stevens Point, Wis., reported the highly successful operation of a safety patrol in the high school for several years. Patrol members are called "police cadets." The name was chosen because it makes the boys feel that they represent the police within the confines of the school property. In this case there is the closest cooperation between the superintendent of schools, the high school principal and faculty, interested parents and the police department.

Student Participation in the Production of Visual Aids and Radio Programs

Presiding, LESLIE R. SILVERNALE, Safety Supervisor, Cleveland Public Schools, Cleveland, Ohio

Discussion

Edgar Dale, Director, Bureau of Educational Research, Ohio State University, Columbus, Ohio, shared with Mr. Silvernale in leading the discussion.

It was brought out that there are three principal ways of influencing safety behavior: 1. Actual experience; 2. Reading and discussion; 3. Visual aids, which come somewhere between the actual experience and the vicarious knowledge.

It was emphasized that "We cannot store safety learning for the future. We must anticipate certain hazards to prepare children for hazards which they will have to

face in the future."

Pupil participation in the production of visual aids is important in a safety program. It provides excellent motivation for many learning situations, and much can be learned besides safety. Among the factors which enter into such a project are interviews, scenario writing, and staging the scenes. Qualities which may be developed include dependability, cooperation, and respect for the efforts of others.

Dr. Dale described an experiment which he conducted among a group of schools in the production of safety movies.

Schools were circularized to determine the degree of interest in such a project. Those who desired to participate and who held meetings to organize their share of the project were sent raw stock by the Bureau after scenarios were submitted.

Dr. Dale showed films which were an outcome of this experiment. One was a bicycle safety film produced by an eighth grade civics class. It was "a picture within a picture"; that is, the film depicted the various stages involved in its own making.

The class first elected a film director and a number of committees. Lists were prepared of the various people in the community who could help with the project, including the police, traffic judge, parents and others.

The committees wrote for technical and safety information; they looked up material in the library; they developed a list of bar-

ards. The scenario was written entirely by the pupils.

Dr. Dale also showed a problem film, entitled "Safety Sleuth," in which the solution was left to the audience. A preschool picture was also shown.

In the discussion following the showing of the pictures it was suggested that children should do as much of the work involved in making a film as possible.

The relatively high cost of reproducing colored films was mentioned.

It was asserted that sound adds comparatively little to a good picture—that a well-planned, well-filmed silent picture can be just as effective as a sound picture.

The question was asked whether it is desirable to show an accident in a safety film. A satisfactory technique was described in which all of the action is shown up to the point of the accident.

THURSDAY MORNING SESSION

October 10, 1940

Joint Session, Child Education Section and Home Safety Committee

(A complete report of this session will be found beginning on page 177)

THURSDAY AFTERNOON SESSION

October 10, 1940

Presiding, GORDON GRAHAM, Safety Supervisor, Board of Education, Detroit, Mich.

REPORTS ON INFORMAL CONFERENCES

The chairmen of three informal conferences held Wednesday afternoon presented reports on these meetings. An account of

these reports will be found on page 152, under the heading "Wednesday Afternoon Session."

Applying the Theories of Safety Education

By WM. C. KNOELK

Assistant Superintendent of Schools, Milwaukee, Wis.; Vice President for Education, N.S.C.

There are many theories of safety education. Many believe that the only considera-

tion is the reduction of accidents. This aim is most commendable and is admittedly the

origin of the movement; it does not, however, tell the whole story of safety education.

Industry is no longer satisfied with this one objective. It recognizes that to approximate a fairly permanent reduction, the man factor must be considered. That means *training the worker*. Traffic safety presents a similar picture. To keep a sufficiently large enforcement corps on the municipal pay roll to deter every driver and pedestrian from doing willful, thoughtless, or foolish things is fantastic. It would be unwise to have such an arrangement of providing a "Corporal Conscience" for every one of us to keep us sane, courteous, and cooperative, even if it were possible, for it would keep the individual from developing his self-respect.

And so along the whole line! The individual and his idiosyncrasies are powerful factors in safety. Mechanical devices may be ever so perfect; if their user is incompetent or reckless, the story of safety may easily show increasing fatalities.

Home safety affords case upon case of this truth. Chairs that are made to sit on are used as step ladders. Cleaning fluids, effective if used in the right place, are used in the presence of an open flame. Utensils that are as dangerous as deadly weapons are left so that children may injure themselves.

This human factor—with its variable reactions both as to different individuals and as to the physical or mental conditions of the same individual—makes the training of people an imperative necessity. In this one fact lies the *difficulty* and the *hope* of safety education. I say *difficulty* because training for invariably correct conduct is very complex, not to say impossible; and I say *hope* because only in making men "safety actuated" can we realize to the full the genius of engineering and the power of enforcement.

Problem of Training Men

So we have the problem of training men in such a way that they may be actuated by proper attitudes, may be possessed of the necessary knowledge, and may feel impelled to express this skill and knowledge helpfully at all times. This is real personality development. Wherever such work is being done, we find evidences of the necessary preliminary ground work: of thinking through the problem, of organizing the

various factors involved, and of keeping a tentative, experimental, research attitude toward all methods employed.

These three points are vastly important. The first, thinking through the problem, indicates an awareness of the need for a remedy. It also involves the necessary willingness to gather the available information, and to come to some conclusion. The second, organizing the factors, is imperative because the job must be made somebody's business. Progress in reform is made only if a good plan is supported by consistent, continuing effort to enlist more and more people in the cause. The third, keeping an open mind toward our project, is increasingly essential because of the rapidly changing conditions under which we must operate.

Items in the Procedure

We have arrived at the outline: attitudes, desire for information, and interest are to be generated and stimulated by thoughtful study, careful planning, and scientific appraisal. This is the formula for applying the theories of safety education.

The Yearbook of the American Association of School Administrators, "Safety Education," presented at St. Louis in February, 1940, outlines "A Point of View on Safety Education." The preponderant emphasis is on the work of schools. The outline can be adapted to other uses, however. It is not only the school that must remember that a "pointless curiosity or a vague sympathy" regarding unsatisfactory social conditions is inadequate. Constructive remedial measures must be devised. The problem can be solved, but we must first be convinced of that fact.

For schools to assume the burden of directing the safety education for children is as it should be; for communities to refrain from making the necessary budget provisions to make such a job possible is to nullify the school's possibility here. And furthermore, for adult life to accord only lip service to the obedience needed in safety taught in the schools is also a nullifying influence. For grownups to profess adherence to a principle of procedure and then to attempt to evade the responsibility in individual cases is too fine-spun a type of "obedience" to be understood by childhood.

Philosophy of Safety Education

The Yearbook has an excellent chapter on the philosophy of safety education, written by Albert W. Whitney, of the National

Conservation Bureau. The final sentence is the thought I wish to stress:

"The development of safety technics in such fields as industry has proved to have valuable by-products, such as increased efficiency, and it is believed that the subject of safety in the hands of an understanding teacher will similarly prove to have valuable by-products for education, particularly in the development of personality and character."

Mr. Whitney has elaborated on the theme:

"Safety education cannot thoroughly justify its position in the educational field merely by its direct effects, however important these may be. We must go farther and demonstrate that it can contribute abundantly to those cultural and moral and social values which are the ultimate objectives of education."

Safety education has therefore two vital aspects. First, there must be a recognition of the social emergency which calls for a solution. Second, in teaching this objective, acquiring a safety consciousness—learning to be "safety actuated"—we must develop the personality of the learner.

Personality, social emergency, teaching, learning—these are the concepts that must be well understood. You must note how they tie in with our formula stated previously.

The idea that the type of education most necessary in traffic matters, for instance, consists simply of furnishing information and that this will result logically in accident prevention is erroneous.

Education is the process of developing attitudes. This cannot be done in a minute, or by compulsion; it comes out of interested attention, and it must be nurtured and kept alert by experiences that are satisfying. A bullying traffic officer can undo in one minute what it has taken years to create.

Discipline should be regarded not as a punishment for violating rules, but rather as a preventive measure. It should be interpreted as self-control, both physical and mental, as alert, clear thinking.

This is of the essence of good educational procedure. It applies to adults as well as to children. It places the emphasis on attitude, on a willingness to abide by reasonable control and common sense. Where this viewpoint is neglected we have evasion under the pretense of paternalism or individual rights.

All of this serves to illustrate the working out of the formula mentioned previously. It is important to note that there is no interference in this plan with the principle of proper safeguarding by mechanical means, or, with necessary precautions in first aid practices.

In traffic the evasion runs to complaint about police domination. In the home, the rationalizing that is frequently met is voiced as, "This is my home; nobody can tell me how to run the place." Home—so the excuse continues—is still a place where the individual need not subject himself to direction by foreman, traffic officer, or teacher.

The real test of whether a proper safety attitude has been developed comes in such unsupervised areas. Safety consciousness—if it is to be vital, functioning accident prevention—must lie in these attitudes. To ignore this, and to fail to build properly, retards the early solution of our problem in the general field of safety education.

Schools Have Done an Acceptable Job

Have schools been able to transmute the grosser elements of everyday safety conditions into worth-while attitudes? Have social needs been helpful in building personality? "It is not possible to measure exactly the value of the contribution of the schools and colleges to the physical well-being of the nation," according to the Educational Policies Commission. "The field of safety education, however, provides one dramatic illustration of effective results."

"What has been accomplished by the schools is by itself an unmistakable indication that a solution can be had," according to the 1940 Yearbook of the A. A. S. A. "Between 1922, the year when organized safety work was begun in the schools, and 1938 the traffic fatalities to adults increased 160 per cent; during the same period the traffic fatalities to children of school age decreased 25 per cent. There has been a saving during this period of the lives of 62,000 children of school age over what would have happened if the fatalities had followed the same trend as adult fatalities. These results may be largely due to education."

The readiness with which many superintendents have embraced the opportunity to teach this subject speaks well for their sense of discrimination and their progressive educational philosophy. Schools are to train the citizens of the future, and citizens owe

honorably service to their community. If the word service holds the implication of a duty owed and a duty performed, of unselfish devotion to a good cause, of the bestowal of a benefit upon an indifferent—not to say thankless—beneficiary, the word conveys the meaning it should. Then we may say, truly, safety instruction is a "service" schools owe to the community.

Schools training pupils for better adjustment to the changing conditions of life and society cannot remain indifferent to the need for some definite program. Citizenship is no longer a merely academic consideration of governmental structure and function. It deals with the pupil's life situations, with his every activity.

Need for Safety Education Increases

The need for safety education is greater today than ever before. Not only is this so because of the numbers involved; the machine age with its engineering safeguards has lulled us into a false sense of security, and the unprecedented economic depression that we have gone through has left us with a mind set akin to worry and fatigue.

Schools are so situated that they can help to rectify such negative attitudes. Mental health and emotional stability come clearly within the scope of their work, and as this corrective instruction can be made to quicken the "reaction time," the increased alertness will help reduce home and industrial accidents.

Safety in the Curriculum

From the angle of its importance to society and to the welfare of the child, home and traffic safety is certainly a matter of sufficient importance to include in the curriculum. A very excellent book published a few years ago, commenting on what is to be taught in the curriculum, tells us that the answer to this question most generally accepted by leaders in education is that that knowledge is most worth while which contains the greatest number of contacts with the pupil's every-day life either as a pupil or as a future citizen.

The purpose behind any method determines the worth of the method; it gives direction and meaning to method. The purpose gives meaning to whatever mode of teaching (or learning) we may wish to employ. Thus safety is an integrating factor in all school work.

What are some further considerations that

make a subject valuable and worthy of a place in a course of study? There must be opportunity for active pupil participation in the life of the school and the community; there must be sources for new and current materials to become available; there must be opportunity for proper integration; there must be a process of "inquiry, scrutiny, criticism, authentication, and verification."

If these are criteria, safety instruction provides an ideal curriculum content. Furthermore, safety is inherently a matter of cooperation and the society for which we are preparing youth will probably demand a larger degree of real cooperation than has ever been required before.

Personality Development

It is well to remember that in applying the theories of safety education we cannot have an exclusive compartment for traffic, for home, or for seasonal or recreational safety; not when we accept the doctrine of personality development through safety education. The general field must be stressed. That is what has caused me to say before, if driver training means only a knowledge of the mechanics of automobiles, an acquaintance with code specifications, and skill in shifting gears, it is hardly worth the consideration that is given to the subject. If, however, it means a philosophy of citizenship and the art of living together, it is a matter worthy of inclusion in any curriculum.

Personality development (good sportsmanship, wise restraint) and principles of democracy (obedience to the rule of the majority and special privilege for none) are then essentials in the course. The field of the emotional also must be included in this larger view. We are governed by our emotions fully as much as by our intellect. In times of emergency, calling for rapid reactions, we are prone to revert to almost instinctive habits and drives. This is particularly true in traffic.

If we refer back to our formula derived as an answer to the implied question in the title of this paper, we find that attitudes, desire for information, interest are the ends we desire in everybody in his quest for an education in safety. It is a personal matter. It is born out of thoughtful study, careful planning, and eager research. The theories are the substance for our philosophy; the latter determines our methods. Obviously, this paper cannot go into the field of defi-

nite details. That must be left to the available sources of information; to the National Safety Council and specifically to the Education Division. The wealth of material to be had there is amazing. Is this general plan adaptable to other situations?

Every home is vitally interested in the health and comfort of the children; every community insists on building for a happier, more effective mode of life; every school attempts to conserve all the good and extend the possibilities of every life; business is following the worker even after the whistle blows; all society, in brief, is striving to stimulate constructive living and to unburden itself of any drags on success and progress. How can safety education be woven as a meaningful pattern into all of this?

Industry obviously sees in safe procedure a sane factor of efficiency. Can we not insist on a comparable evaluation of the worth of a cooperating life elsewhere in society? How can people be made to feel imbued with the vital need for safety training? Directors of community life and planners of cities know that the safe way is not only the most human way, but also the most effective and economical way in the long run.

Elements of Safety Education

There are elements in this broad generalization that loom up distinctly:

1. The problem of applying the theories must be reduced to the personal one of man and his society; the individual and his relation to the various aspects of safety.

2. Attitudes and emotional set may not be neglected at any stage. These basic elements in personality can be formed at any stage, even though childhood is usually the crucial time for their formation.

3. Knowledge is good, but thinking is better.

4. Dictatorial authority is not conducive to thinking. Let conclusions be arrived at by all through personal experience. This tells the way and makes the desired conclusions one's own convictions.

5. Interest provides no royal road to knowledge, but it shortens the way to a necessary understanding. If, additionally, interest can make us yield ourselves to restraint for the general welfare (regulation), our traffic problem, for instance, is practically solved.

Promoting Safety Education

If we would expand this personal program to see it from the community standpoint, it assumes a possibly more practical form. The strands of safety theory that have been discussed, whether dealing with teacher training, safety patrols, home safety, bicycle riding, pedestrians, intoxication, or speed, must be spun into the warp and woof of an effective social fabric. The weaving will bring out the pattern.

1. First organize your safety resources into an effective, aggressive group. The movement must be kept before people as an imperative need. It must be a consistent, unremitting, energetic campaign, day in, day out. There must be no defeatism.

2. Impress the leaders in the movement—the schools are only one of the important factors—of the need to be well informed on the recent development and on the accepted modes of dealing with safety problems. Let mere opinion give way to research and authoritative judgment. The police (or enforcement officers), the engineering staff of the municipal department of streets and street lighting, the fire fighting department, representatives of adult organizations such as luncheon groups, civic clubs, parent-teacher organizations, play leaders, bicycle enthusiasts, etc. should be asked to help.

3. Crystallize this energy into group projects. Attempt no more than can be realized in a reasonable time. Home safety, traffic safety, pedestrian control, bicycle riding, accident reporting, hunting, swimming, boating, camping, offer opportunities for activity projects. It must be remembered that authoritative information is to be had on all these subjects.

4. If the education is to be really effective in its complete development, it must be able to prove its worth beyond devising only mechanical means in the saving of life and limb and money. The education must reach into the realm of attitudes, habits, characteristics, etc.—into the elements of personality. The learning process in a democracy has much more to it than mere telling; telling is not teaching. Similarly, learning is of more consequence than mere compulsory obedience. It is better to have a driver or pedestrian yield obedience to a signal because he feels impelled to do so rather than because he feels compelled to

5. To attempt to make progress in safety education through legislation is futile unless public opinion has been created and demands the enactment of definite laws. The whole safety movement is humanitarian; it

is in line with social progress and with the development of an intelligent electorate. Therefore the theories of safety, education must be applied with the same ardor as are rules of health and good conduct.

FRIDAY MORNING SESSION

October 11, 1940

Joint Session With Street and Highway Traffic and Transit Sections

Presiding, WILLIAM C. KNOELK, Assistant Superintendent of Schools, Milwaukee;
Vice-President for Education, National Safety Council.

Report of Committee on Bicycle Problems

By RICHARD O. BENNETT

Director, Lansing Safety Council, Lansing, Mich.; Chairman, National Safety Council Committee on Bicycle Problems

This report cannot be reproduced here in full both because of its length and because it is being combined with the 1939 committee findings to be published as a final report of the committee.

Those who wish to have a copy of the complete report may obtain one by writing to the National Safety Council, 20 North Wacker Drive, Chicago.

* * *

The report cited statistics on the scope of the bicycle problem. It pointed out that about 700 deaths resulted from collisions between bicycles and motor vehicles during 1939 and that there were about 34,000 injuries from this cause.

The committee gave two reasons for the increase:

1. The number of bicycles in use has almost tripled.

2. Motor vehicle mileage has increased 48 per cent.

If this trend is to be halted, the report stated, traffic officials must recognize the importance of the bicycle problem. A well-rounded community safety program must give bicycles full consideration.

Since approximately three out of every four bicycle riders injured in traffic were violating some traffic regulation, the committee declares that bicyclists must assume more of the responsibility for keeping out of accidents.

Specific recommendations made by the committee include the following:

1. All bicycles in a city should be registered, and standard license plates should be issued.

2. Standard regulations should be adopted, and police empowered to enforce them by impounding bicycles, revoking license plates, and sponsoring special courts and instruction classes.

3. Regular mechanical inspection of bicycles should be required.

4. Bicycle clubs in schools should be encouraged to teach safe riding practices.

5. Parents should insist that their children obey regulations, and they should assist them to keep their bicycles in good condition.

6. Municipalities should provide as many bicycle paths and engineering safeguards in parks and other places as possible.

* * *

The meeting was concluded with a symposium on "Child Misbehavior and Street Accidents."

Representatives of five organizations concerned with the traffic and transportation problem discussed this subject.

Child Misbehavior and Street Accidents

By NILES ANDERSON

Supervisor of Traffic and Safety Activities, Pittsburgh Public Schools,
Pittsburgh, Pa.

Any study of the relationship between child misbehavior and damage to public carriers or injury to children is hampered at the outset by a lack of accurate statistical information.

We know that a few children each year are killed and injured hitching rides on street cars and other carriers, but just how many and the pattern of the accidents we do not know.

We know that children sometimes throw stones at public carriers and sometimes misbehave inside carriers, but the extent of damage caused by the children is unknown, as is the age of the children involved.

Until the records of carriers are unlocked we will have no accurate knowledge of just what is happening. Public records and records of the National Safety Council do not reveal this information.

For the present we can assume only that a problem does exist, and consider the responsibility of the school in connection with the problem.

At the outset, while the school seeks to train in citizenship and to mold character, the school cannot be a guarantor that children will act otherwise than children or uniformly behave as adults would have them behave. The best of parents can't do this. Here is a problem in which the school plays only a part; the largest parts being played by the home, by law enforcement agencies, and by the carriers themselves.

Problem Has Two Phases

As the problem concerns the schools, it has two phases: child misbehavior while the child is away from school, and misbehavior while the child is under jurisdiction of the school.

When children misbehave away from school, the school is limited in the remedial measures it may adopt. The school cannot punish or otherwise enforce rules of society. All that it can do is attempt to develop an attitude that certain actions are dangerous, destructive or anti-social.

Conduct in connection with carriers may be included in the safety education course of study, or in connection with citizenship

lessons. Specific lessons may be planned on the dangers of clinging to vehicles, although here the problem more concerns private vehicles than it does public carriers. Specific lessons may be planned on the danger to others of throwing missiles at public carriers, and here again the lesson is one that concerns private vehicles as well as public carriers. If misbehavior is acute in one particular locality or during one particular time of the year, the schools may guide their program accordingly. If individuals or a gang can be identified, the school may attempt to "talk it out" with the persons concerned.

These things being done, however, the school cannot function further.

The home has a responsibility, and an authority coupled with this responsibility, in regard to child misbehavior. When children are at school, and going to and from school, the school stands in place of the parent and has much the same responsibility and authority. This legal doctrine of "loco parentis" gives the school an opportunity to cooperate successfully with carriers in preventing child misbehavior while the children are under control of the school.

School Buses

For example, the school may make regulations for the conduct of children on school buses, and the booklet of the National Safety Council, *School Buses—Their Safe Design and Operation*, makes many valuable suggestions in this regard. One suggestion to the driver is that he "report daily to the principal any misconduct of pupils on the bus." Pupil bus patrols are formed to bring about order as well as to assure safety.

One function of transportation in connection with the schools is that of taking children to and from school. Another function is in connection with school excursions. In cities, street cars frequently are used for trips to museums, factories, railroad stations and other places of educational interest. Both in cities and rural communities, buses are often chartered for similar purposes. In some school districts the same buses that

haul children to and from school are used for excursions during the day. In all of these instances the school continues to have control over the pupils and may and should insist that they behave properly.

Whenever pupils are transported in connection with school attendance or school activities, the school should plan the activity so that misbehavior will not occur. This means supervision, both pupil and adult.

Dealing with Misbehavior

If misbehavior does occur when the school has jurisdiction, what then? Incidents should be reported to the principal of the school concerned. The principal may then deal directly with the violators, or indirectly through the parents. In Pittsburgh we transport a number of children by taxi-cab. Occasionally these children have a tendency to put their arms outside the cabs. We have found that a note home to the parent, or a meeting between the principal and the children concerned will correct the situation.

Child misbehavior in connection with pub-

lic carriers is only a small part of the whole area of child misbehavior to which the school directs its attention. The school seeks to develop good citizens who are interested in their own personal safety, and who respect the rights and property of others. Proper conduct in connection with public carriers should be one of the specific lessons in the larger program of the school, and should be a specific lesson when any serious condition arises. Where the school has control over the vehicle of transportation or over the children, it is in a position to insist upon proper behavior, and may enforce its demands.

Let us not be too hard on children. They live in a world of restrictions and don'ts, and many have no effective outlet for the pent-up activity that is the very lifeblood of childhood years. Let us understand them as children and not treat them as criminals. Let us understand that our problem is not children versus public carriers, but children versus a complicated society in which adjustment is difficult.

Child Misbehavior and Street Accidents

By M. F. BYRNS

Director of Safety, Toye Bros. Yellow Cab Co., New Orleans, La.

Did you give little Mary or little Willie a pair of skates, a scooter, or a bicycle last Christmas? Like all loving parents, you knew the children wanted these things and you enjoyed their excitement and happiness. But did you explain to them how, when, and where they should ride the skates, scooter or bicycle? Did you give them the advantage of your experience? Did you impress them with the importance of avoiding certain accident-making practices? If you stand indicted on this charge, it is a poor consolation to know that several million parents likewise failed to give their children sufficient safety coverage.

A casual survey reveals that children involved in traffic accidents were:

Riding scooters; riding bicycles; skating in streets; playing in streets; hitching rides on automobiles and trucks; riding two on a bicycle; standing up in moving automobiles; running from behind bushes; small children left unattended; riding bicycles

against traffic; riding bicycles into obstruction; playing ball adjacent to streets; coasting down inclines near street; running from behind other children; leaning against doors in moving automobiles; riding on running boards of moving automobiles; running or sliding down embankments along the right-of-way; holding on to a moving truck or automobile while on bicycles, scooters or carts.

Child accidents are popularly classified in the age range as follows: The first class is up to 5 years; the second class includes children between the ages of 6 and 14 years; the third, between 14 and 21 years. The first class has a low accident frequency, due to greater precautionary measures by parents, nurses and others entrusted with the care of small children, and the inability of the child to move around except in a limited sphere. This protective influence no doubt reduces the risk, yet children of this group are usually involved in accidents while

riding in automobiles, such as falling off seats in a sudden stop or a collision.

In the next age class, from 6 to 14 years, the child has a greater sphere of activity. He now seeks more adventurous pastimes, like playing, skating and riding bicycles and scooters in and near streets. Less under the influence of the parents, he is now guided by whatever safety discipline or training the teachers in elementary schools may institute. During this period the child is extremely impressionable. With the correct approach he can be made to acquire lasting safety habits.

The next class, the years from 15 to 21, is the most dangerous and shows the highest accident frequency. Members of this group are practically on their own resources, assuming the role of making their own decisions. All restraint or influence either by parents or teachers or any other agency is resented or blandly ignored. Yet this is the very age in which the youth is not only a pedestrian or passenger, but is beginning to drive automobiles. When this age is reached, the greatest influence should be exercised over the youth, and he should be reaping the benefit of whatever safety habits, judgment and acts have been inculcated in the previous age classes.

Parents sometimes, knowing that a child has been guilty of some unsafe act or that they themselves have unduly exposed their children to some unnecessary danger, change the physical facts of an accident by falsifying or misrepresenting circumstances for a claim benefit. This gives the child the impression that there is a premium for getting into an accident, and thereafter the child thinks less of his own protection and the avoidance of those acts which may lead to accidents.

Parents should never boast of their speed records. They should not drive carelessly when children are riding, and thereby give the child the impression that carelessness is the "smart thing." Parents should respect traffic regulations, should discourage bad driving practices, traffic violations and stories about the fixing of traffic tickets, fines, etc., giving an impression of utter disregard for the importance of, and compliance with traffic and safe driving regulations. Many parents have unwittingly and unknowingly started children on their way to serious accidents by such acts.

A new juggernaut has been given to our youth—the motor bike. This device, capable of a sustained speed of better than twenty miles an hour, is most dangerous and should be placed only in the hands of skilled operators, well seasoned in all traffic and road conditions. These motor bikes are being operated by many inexperienced children under fourteen years of age. Police officers are prone to excuse or overlook the traffic violations of bicycle and motor bike riders. Children are, therefore, permitted to take undue and unnecessary chances.

Motorists have become involved in collisions with bicycles when these children fail to observe stop signs, drive on the wrong side of the road and ride bicycles or motorbikes without lights. The police, in overlooking traffic and safe driving mistakes instead of correcting them, are not only placing a heavy burden on the motorist, but are doing the children an injustice by aiding and abetting these dangerous and harmful practices.

The juvenile courts are slow to act other than to give a mild talk which in most cases gives the child offenders the impression that they can act on impulse and do as they please and get away with it. This is absolutely unjust and unfair to the children themselves, and the child learns too late that he has been completely let down by his parents and safe driving authorities.

The operators of passenger carriers should be especially well trained in the traffic dangers to which children may be exposed both when riding in buses or public carriers and also when they are walking or cycling on streets and roadways. This does away with the old alibi, "I did not expect the child to do that." Your operator in this day and time must know exactly what to expect and how to prepare for the avoidance of accidents.

To avoid child accidents our company regularly dramatizes children in our weekly safety meetings. At the beginning of the vacation period the commissioner of public playgrounds is invited as the guest speaker. While he is talking, several little folks are sitting or walking around the stage. When the fall school term opens, we invite three children, one each from the lower grades—kindergarten, first grade, and second grade. We also invite a school safety patrol leader.

These children give brief talks asking our operators to reduce their speed and avoid accidents in school zones. The traffic boy asks for the cooperation of all motorists.

At other times of the year, whenever appropriate, we have children on the weekly programs. This vitalizes the instructions, and the men carry away a greater inspiration. In our weekly safety booklets, which include traffic and safe driving instruction, the safety of children is featured frequently. This procedure seems to produce results, since we have had no child accidents under 17 years of age and only three involving children up to 21 years of age within the last three and one-half years.

Wonderful legends for the amusement and pleasure of childhood have been created and preserved for centuries. Christmas and the legend of Santa Claus has reached recognition the world over. Nursery rhymes and tales have been printed in all languages. The legends of Halloween, Valentine's Day, Thanksgiving Day, Arbor Day, Flag Day, Decoration Day, Constitution Day, Birthdays of Presidents and other such celebrations have thrilled children and fired their imagination. Our libraries and schools contain wonderful books of prose, romance, adventure, and poetry—all of which make lasting impressions on boys and girls and no doubt influence their actions later.

If such wonderful accomplishments have been made for the pleasure of childhood, would it not seem plausible that a like universal action with the same intensity for the protection of childhood should be instituted? Why not a safety day, set aside as a legal holiday to give thanks for being accident free and to inspire every one to a greater safety consciousness? Safety in all its phases—for play, for school, for home, should be instilled by every agency including parents, so that the child from its earliest observation may become schooled and drilled in nothing but safe acts.

While much has been done to remedy child accident frequency, still a greater effort on the part of parents to impress upon children basic rules for their protection is needed. Greater efforts should be put forth by teachers and school boards throughout the country in making compulsory safety education, not only in elementary schools, but also in the high school and college, so that these groups will assume their responsibility on the highway either in or out of cars. School boards should enlist the aid of radio stations, newspapers, clergymen and others to disseminate safety education and inspiration to parents and children alike. It should be the aim of these agencies to enlighten both the parents and the children to the saturation point.

Child Misbehavior and Accidents

By EDWARD J. KREH

Manager, Accident Prevention, Philadelphia Co., Pittsburgh, Pa.

This is a safety problem which has troubled public carriers, commercial fleet operators, and the private car driver for a long time. We believe it may be minimized through education and through the cooperation of the law enforcing agencies. A few examples follow:

Missiles thrown at passing vehicles. Often times a missile thrown flies into an open window and strikes the driver or his passengers, causing injury, or it may strike and break a window. On one property, in a three year period, 1,125 such accidents were reported. Most of these caused broken windows in the car and subjected the driver and

the passengers inside the car to injury from flying glass. In 122 cases, injury resulted, and in some cases it was severe, involving the eyes and permanent injury. Although only 1,125 such mishaps were reported, it is quite probable that many more missiles were thrown at passing vehicles, which luckily did not strike windows nor cause injury or damage. The missiles thrown were fruit, eggs, rocks, snowballs, and BB gun bullets.

The practice varies seasonally. For example, a good wet snow will produce as many as 15 such occurrences in one day. In the crowded areas, where there is little diversion for other types of play, the greatest

difficulty is usually found. The greatest difficulty is experienced in areas where playgrounds or schools are adjacent to densely travelled arteries, and in areas where children congregate.

Stealing Rides

This is a most dangerous practice and has taken lives, caused permanent injury, or confined children to the hospital for long periods of disability. Children will ride upon the sides, back, and the roof of any vehicle. In fact, they will take extreme measures and make use of any facility which offers them a foot- or hand-hold. The injury usually follows when the offender is brushed off by a passing vehicle, brushed off by a pole, parked vehicle or other obstruction, crushed between vehicles when they collide, thrown or falls off a moving vehicle, jostled off a moving vehicle by a companion, frightened by the driver or some person and jumps off into the path of an approaching vehicle, or injured while attempting to board or alight.

For a number of years, designers attempted to construct the vehicle to make it impossible to hang on, but these attempts have not been completely successful.

It is obvious that many of these accidents occur without the knowledge of the operator. Consequently, few reports are made unless the vehicle is stopped by a pedestrian and the driver notified of the mishap. Despite the fact that few are known to the operator, 125 injury cases were reported on one property in a three-year period. Some of these resulted in permanent injury, and some in death.

The problem is not confined entirely to juveniles of school age. Most all involved males ranging in age from 10 to 18 years, and they occur most frequently in the densely populated areas. A survey also indicates that boys steal rides to and from school.

It is obvious that the vehicle operator has little opportunity to control these practices. If he attempts to eject the offender while moving, he may cause him to jump into the path of a passing vehicle. If he stops to make the ejection, the offender will board again when the vehicle proceeds, and it is obvious that the aid of other agencies must be invoked.

Other Types of Misbehavior

Practices of children pulling down the

trolley when the street car stops for passengers. When committed at night, it has caused persons to fall while alighting, while boarding, or inside the car. Following vehicles have crashed into the rear end of a darkened car, and vehicles may strike the operator while he is attempting to re-wire the trolley.

Children who use public carrier vehicles on the way to and from school, shove, crowd, and push for position at the car stop. Some have been forced or thrown under a moving car and limbs amputated, or they have met death in this manner. This practice has also produced falls while boarding or alighting.

Coasting across heavily travelled intersections is particularly dangerous and gives the operator of the vehicle very little opportunity to avoid an accident. Obviously, coasting upon such streets and at such intersections should be discouraged.

Recommendations

1. Educators at periodic intervals to instruct children and discourage these practices.

2. Use the school patrol as an observation medium to report any violations to school authorities.

3. Development and distribution of instructional material by the National Safety Council to schools and other agencies which reach parents and police officials.

4. Encourage police officials and others who patrol the streets to be observant and warn offenders.

5. Newspaper and radio publicity.

6. The National Safety Council to bulletin its Transit Section and Commercial Vehicle Fleet members at periodic intervals, asking them to cooperate and urge them to bring the matter to the attention of their local interested agencies.

7. That the National Safety Council issue seasonal warnings where they apply, to educators and municipal authorities—for example, a bulletin in October, asking for instruction to children and community provision for coasting areas adequately protected. Dangerous intersections should be promptly asked. A bulletin in June, asking for instruction to children to avoid play upon the streets during the vacation period, and community provision for adequately protected play areas.

Child Misbehavior and Street Accidents

By DWIGHT McCracken

Director, Traffic and Safety Bureau, Liberty Mutual Insurance Co., Boston, Mass.

The misbehavior of children is an important factor in our traffic accident toll. The term "misbehavior" is an interesting one because it can arise from so many different sources.

A child may misbehave through lack of knowledge or appreciation of traffic dangers. Accidents from this cause usually involve very young children who toddle out into the street and are either struck by a passing vehicle or force it to strike a parked car, another vehicle or perhaps some other pedestrian.

Another type of misbehavior arises from childish impetuosity or thoughtlessness, a characteristic by no means confined to children but occurring more frequently in that age group. In this case the child knows better, but through youthful enthusiasm or forgetfulness commits unsafe acts which result in accidents of the following type: child struck when darting into the street after a ball; alighting from vehicle and struck while running in front or in back of it, particularly in the case of a school bus or street car; rushing across the street to meet a playmate or home-coming parents.

Perhaps the most troublesome type of child misbehavior is the intentional violation of traffic laws or safe practices. Sometimes it is done in pursuit of sport or a free ride; other times in a spirit of mischief, often malicious. Typical accidents resulting from this basic cause are: hitching rides on the backs of trucks or transit vehicles; stunt riding on bicycles on busy thoroughfares; coasting on unprotected streets; throwing stones at passing cars, particularly street cars and buses.

The number and cost of child accidents are not tabulated separately, and so I was unable to obtain definite figures as to the number arising from each type of misbehavior and the expense involved. Apparently the frequency or costliness, when compared with all traffic accidents, is not sufficient to warrant separate tabulation. However, such accidents, when they do happen are apt to be more serious, and the humanitarian considerations surrounding injury to children make this problem exceedingly

important regardless of actuarial considerations.

That the insurance companies are sensitive to this is apparent in the many safety activities being carried on by them to help educate and control juvenile behavior in traffic. They are working on the problem from two angles: (1) they are helping to instruct and influence children in proper traffic behavior and (2) they are helping motorists drive with such care that the careless and even reckless actions of children will not involve them in accidents.

Child Education

Perhaps the commonest method used by insurance companies in helping to educate children is the publication of booklets, leaflets, etc. These are written to appeal to children of grammar school age and have done a great deal to help sustain safety consciousness.

A good example of this is "Peter and the Whiffle Hound," a booklet produced and distributed by my own Company. This is the story of a little boy who starts out for Tom's birthday party. On his way he encounters the bad imp, Danger, who tempts him to commit, one after another, all of the outstanding traffic "faux pas" from dashing headlong into the street after a ball to hopping a ride on the back of a truck. Peter's little dog, Safety, comes to the rescue with eyes that flash red or green to indicate approval or disapproval of Peter's actions. Peter finally learns to heed Safety's ocular warnings rather than Danger's evil invitations, and he arrives at Tom's party all in one piece. Safety's eyes then take on a red and green striping to match the peppermint ice cream reward.

The value of this type of approach to the problem is reflected in the large number of requests from schools, safety councils, women's clubs, parent-teacher groups, and similar agencies for literally millions of copies of this booklet, which we supply gratis to sound, sincere, safety organizations.

For older children we have a little booklet entitled "Walk Warily." It is illustrated with humorous cartoons which put

across 15 safe-walking points with a minimum of verbiage. In addition to the usual methods of distribution, the Nassau County Police of Long Island, New York, have arranged to have the theaters hand one to each patron at the box office. Other communities have had copies handed to jay-walkers through Police or Boy Scout cooperation.

Of course there are a great many insurance companies, both casualty and life underwriters, that are doing similar work, of which these few samples are merely typical. The problem of sustaining safety interest among children requires a continuous output of new booklets in large quantities, and I feel that the insurance companies are helping a great deal to fill this need by supplementing the activities of other types of agencies concerned with safety.

Another method of education, somewhat more novel and of more limited scope, is the use of games. We have developed a game called Highway Patrol which has been used in a great many schools. It entertains as it teaches, and the children learn by "doing."

Perhaps the most prevalent child safety tool of all those put out by insurance companies is the poster. All sorts of appealing pictures have been placed throughout the land to suggest ways of improving juvenile traffic practices and attitudes.

Motion pictures afford a less frequent but highly effective education method. School children of all ages have had the benefit of such films as Metropolitan Life Insurance Company's "Once Upon a Time," Aetna's "Saving Seconds," and John Hancock's "Why Be Careless." A film directly applicable to our problem among the younger children has been "Speaking for Safety," produced by the National Education Association with the financial aid of the Automotive Safety Foundation.

The most recent child safety film development that has come to my attention involves Liberty Mutual's Davis S. Beyer Memorial Award. This goes each year to the commercial producer of the film that serves best to encourage a safer use of streets and highways.

I have here the advance script for a production of an OUR GANG story that portrays all of the necessary safety messages for children from seven to seventeen, and then some. It won't harm parents one

bit to take Junior to see it some Saturday when it is playing in the local theater. The producer has been encouraged to take this forward step of combining entertainment with a child safety theme because of the splendid support given to past Award-winning films through the established publicity channels of the many national organizations cooperating with the Motion Picture Traffic Safety Committee.

This committee is composed of 14 members and more than 100 cooperating groups reaching 43 million people. The committee not only judges the Award but also encourages the production of safety films. One film, theatrically produced and distributed, can reach 20 to 40 million persons in 8 to 10 thousand theaters in the short space of six to nine months—an educational channel worth cultivating, especially when we consider that sight plus sound provides 38 per cent greater retention value than either alone (Carnegie Institute.)

The more flagrant forms of intentional misbehavior such as stealing rides and throwing stones at passing vehicles can and should be checked immediately by enforcement without waiting for the effects of long time education.

Driver Education

The other half of the solution to the child misbehavior problem lies in accepting the old adage, "Boys will be boys." (I never could see why they didn't include girls in this.) And in taking steps to save children from those misdeeds which are found to occur in spite of all the education we can bring to bear. Here again the insurance companies are doing their part. I wish I had a dime for every booklet they have distributed on safe driving, stressing the need of looking out for children. Starting with their own policyholders, they supply these to millions each year through police departments, schools, and all the other safety channels with which most of us are familiar.

Three years ago our company brought out a booklet called "Crash-O-grams" which illustrated, by the case method, a technique termed "Defensive Driving." It showed the need for going beyond mere careful driving and obedience to traffic laws, and for driving with such defensive skill that no matter what traffic mistakes the other driver or pedestrian might make, a driver would be ready, willing, and able

to avoid the accident situation thus created. It is this type of driving that must be relied upon to save the erring child. By being constantly on the defense, a driver can protect not only himself but all others in the roadway, particularly children, from unexpected tragedy.

The insurance companies are actively working with millions of automobile policyholders directly while at the same time aiding or supplementing the excellent work of the National Safety Council, the American Automobile Association, the school and police authorities and other bodies.

Child Misbehavior and Street Accidents

By CAPT. ARTHUR V. ROTH

Bureau of Safety Education, Department of Public Safety, Cleveland, Ohio

Child misbehavior and street accidents present a number of factors which we cannot afford to overlook if we are to be successful in solving this problem. Home environments, street life, truancy, physical, psychological and emotional characteristics of the child, attitudes of independence, disrespect for law and authority are all common factors to be considered.

The Bureau of Safety Education, Cleveland Police Department, has approached this subject on a scientific basis. During the past four years we have made some interesting and significant experiments.

Our first step was to ascertain through our records what part of the city had the highest risk area. The boundaries were then defined and a survey was made in order to learn what constructive factors as well as risk factors were present. The constructive factors consisted of churches, schools, playgrounds, libraries, etc., while the risk factors were listed as pool rooms, beer parlors, movies, gangs, etc. The economic status of the area and the foreign-born white population, by country of birth, were also included in the survey. A study of the gangs ranging in ages from eight to twenty-five years, disclosed their methods of operating; the leaders and members; ages; correct names; aliases; addresses; make and license numbers of automobiles owned or used.

The various gangs' activities were rather diversified, ranging from traffic violations, destruction of property and petty thievery to serious felonies. The gangs seemed to delight in sending a barrage of rocks at any taxicab, truck or auto that would pass their way, and many times they would go to the railroad and shoot or throw stones at pass-

ing trains. These depredations resulted in some very serious accidents.

After compiling sufficient evidence as to the gangs' activities, the leaders of each gang were called in separately and confronted with the evidence at hand. We explained to them that we were not anxious to send them to jail but would rather enjoy helping those who were old enough to work to find employment, organize clubs and help them in other ways. For the younger members we would form clubs, Boy and Girl Scout troops and organize various recreational activities.

It was necessary to win the leaders over before trying to do anything with the younger members. In each case the leaders consented to go along with our program. We then called a general meeting of all the leaders, 65 in all, and there wasn't any love lost between those fellows, since the gangs were fighting each other.

With a good banquet and entertainment, the club idea was brought up. At first the leaders were reluctant to elect officers, but after one nomination was made they all wanted to be President, since one group did not want the other one to beat them. The club was organized, officers were elected and quarters were made available consisting of a library, radio room, pool room and game room. An employment agency was established. We placed more than 600 young men, including members of the club and others from the neighborhood, in industry. They agreed to bank some money each pay day. These fellows have made good at their jobs and are now carrying bank books.

Boy Scout troops were organized in the area, with police officers heading the troops as scoutmasters. The boys who booted the

American flag have now learned what it means and salute the flag. They have been taught to keep clean, cook, swim, signal and take part in various wholesome activities that youngsters enjoy. A day's outing with the parents brought more than 300 parents out to enjoy a day with their children. The preparing, cooking and serving of meals was done by the boys. This was the first time in the history of the area that such an outing of parents and children had taken place.

Girl Scout troops were organized. Girls who had been graduated from high school and were living in the area headed the troops as captains. Meeting places were procured through the help of the various pastors who cooperated in the program.

Children were taken on boat rides and to circuses, etc., so that they would have an opportunity to realize that there was something more in life than playing in the street and being destructive.

Harmonica and Flute Clubs were formed, consisting of both boys and girls. These children played for some of our civic organizations, and this helped them change their social attitudes.

Our Bureau established a day camp and also made bus transportation available. Children are taken to this camp, given a balanced diet, taught games, handicraft, dramatics, sketching, etc.

Girls in the area were in need of new dresses, and so a sewing project was conducted in which needy girls had an opportunity to make themselves new clothes under expert supervision. Materials were furnished by interested citizens. After the dresses were made we had a style show, at which colored moving pictures were taken. These were later shown to the girls. Though gratified, some of the girls said, "The dresses are fine, but we don't know how to wear them." This indicated the need of a posture school, which was subsequently organized. The mothers became interested and now help the girls make their dresses.

An Achievement Shares Company has been established for boys in their teens. Each boy gets a chance of a business education. The boys are taught how stocks are bought and sold, and why they keep 51 per cent of the stock in their company. They have a board of directors, and all the officers necessary in big business. Each boy

must work at the bench and help produce the saleable materials. The articles made include bird houses; garden markers; book shelves; and what-nots. A sales force is maintained, and the principles of salesmanship are learned. A recording is made of the sales talk given by the various would-be salesmen, and the boys listen as the recording is played back so they can make whatever corrections they think necessary to increase their effectiveness. Through this company the boys get a business and mechanical education besides receiving spending money when dividends are declared.

To keep the children out of the street we formed soft ball leagues. Each member in the winning teams is presented with a medal, also having the privilege of enjoying a banquet at the end of the season.

Our radio program, known as the Junior Safety Police Club, with a membership of 125,000 children, has been very helpful. We have been able to put some of the youngsters in the area on our program, mentioning their names, and the psychological effect has been very impressive.

A number of free moving picture shows were held in the area for children, featuring safety and character pictures. More than 2,200 children attended each show. We also had picture shows for the parents, which brought about a better feeling between the nationality groups.

Several play spots were built in the area. No damage was done to any of the apparatus because of the protection afforded by members of our club who were assigned that responsibility.

To augment our Americanization program we inaugurated flag raising before church services on Sunday mornings. This was favorably received by the parishioners.

During the hot summer months we placed showers in various parts of the area, giving both young and old a chance for a refreshing shower.

We sensed the importance of a permanent camp where we could take members of our junior safety councils and other children who are in need of some wholesome out-of-doors life. This camp is not one of a primitive nature but rather a high type modern establishment with polished floors, drapes on the windows, furnace and fire place. In another building we have a shop for handicraft work on the ground floor

and an auditorium on the second floor. We also have a farm where the children can raise various kinds of vegetables. For out-of-door activities we have an athletic field, swimming pool, archery, miniature golf course, hills for coasting, skiing, skating, etc. Religious services are held at camp.

Accidents occurring to school children throughout the city are recorded, and a complete report is sent to school headquarters each day. From there a letter carrying all the details of each accident is sent to the principal of the school the injured child attends. The principal capitalizes on this information by having the entire school discuss the accident, how it could have been prevented, and what rules were violated.

When rowdism or destruction of property is committed by students while riding street cars, the railway company notifies the Bureau of Safety Education, which makes an investigation. In the school which the offending students attend an auditorium period is held, and the laws pertaining to the violations are explained to the students. From our experience this method has been very effective.

The railway company has gone a step farther. It has made a safety movie called "You Bet Your Life." Every junior and senior high school student in the city made suggestions as to what should be included in the picture. This meant that thousands of students were interested in the making of the film. When the continuity was writ-

ten, youngsters from 11 junior and senior high schools were chosen as actors. The picture was made in sound and has had a tremendous psychological effect when shown in the schools.

With the cooperation of all railroad police the problem of trespassing, shooting and throwing at trains is being solved. This group holds monthly meetings and through various committees it has launched an educational campaign which is getting results. Placing targets in play spots and making a game of throwing has helped materially.

When a child comes in contact with police, The Bureau of Safety Education is notified. We send a plain clothes policeman to the scene. The officer takes the child home, then completes his investigation. The home investigation is made by another member of the bureau. After all information is gathered it is presented to a board of review which consists of the attendance officer of the board of education, superintendent of Catholic schools, superintendent of Catholic charities, social workers, a member of juvenile court and our officers. This board decides what should be done with the child.

Through the procedures outlined we have reduced child misbehavior 65 per cent in the area where our activities have been concentrated.

Recently we have incorporated another large area in our activities program, and eventually the entire city will be covered.

ADJOURNMENT

Home Safety

THURSDAY MORNING SESSION

October 10, 1940

Joint Session, Child Education Section and Home Safety Committee

Presiding, ROSAMOND LOSH, Executive Secretary, Children's Bureau, Kansas City, Mo.,
and Chairman, Home Safety Committee, National Safety Council.

Home Accidents—Where, How and Why?

By DONALD B. ARMSTRONG, M.D.

Third Vice-President, Metropolitan Life Insurance Co., New York City, and

W. GRAHAM COLE

Director of Safety, Metropolitan Life Insurance Co., New York City

Every day, on an average, 88 deaths result from home accidents in the United States, or 3.7 deaths every hour. Home accidents are responsible for 34.5 per cent of all fatalities resulting from accidental causes. Furthermore, home accidents represent the eighth most important cause of death, exceeded only by heart disease, cancer, cerebral hemorrhage, nephritis, pneumonia, tuberculosis, and to a very small extent by motor vehicle accidents.

In September, 1928, the public was shocked to learn of the huge loss of life resulting from a hurricane in Florida. During the period of this disaster, 1,180 persons met their death. Approximately the same number of persons die as a result of home accidents in the United States every 13 days throughout the year—a continuous disaster. During the 18 months of the World War, 50,510 members of the American Expeditionary Forces were killed in action or died of wounds. During the past 18 months, approximately 48,000 men, women, and children have died as a result of accidents in the homes of our nation.

Disabling Home Accidents

In addition to fatalities, home accidents, according to the estimates of the National Safety Council, result in 4,700,000 disabling accidents a year, or an average of 537 per-

sons disabled through home accidents every hour. Home accidents are responsible for 53 per cent of the disabling injuries resulting from accidents of all types in this country. It is further estimated by the Council that home accidents result in an annual economic loss of approximately \$600,000,000, or an average of approximately \$68,500 an hour throughout the year.

This high sacrifice of life, disabling of individuals, and economic loss would be appalling at any time. It is of particular significance now, however, when we as a nation are concerned with national defense, requiring the greatest possible conservation of manpower and resources. Accordingly, the prevention of home accidents should be considered not only from the humane and economic standpoints, but likewise from that of national vitality.

Epidemic Proportions of the Problem

As a cause of death and disability, the home accident problem may significantly be compared with some of the hitherto major diseases of mankind, many of which have yielded to scientific control. For example, during the first seven months of 1940, the home accident death rate among Industrial policyholders of the Metropolitan Life Insurance Company amounted to 120 per hundred thousand policyholders. During the

same period, a combined rate of 3.7 was noted for the following five communicable diseases: typhoid fever, measles, scarlet fever, whooping cough, and diphtheria.

It would seem logical to consider the control of the home accident problem from a public health or perhaps "epidemiological" point of view and accordingly, to review the fundamental steps taken by science in the control of other serious causes of mortality and morbidity. In general, these steps have been as follows:

1. *Scientific research*—resulting in an identification of factors responsible for the cause and spread of the disease under consideration;

2. *Local epidemiological surveys*—to determine the existence or non-existence of the disease and its etiological agents in a given area;

3. *Control and preventive procedures*—the development of a program for the elimination of conditions producing the disease in the given area.

Similar procedures adopted by industrial organizations have, according to the National Safety Council, resulted in a 69 per cent reduction in accident frequency and a 50 per cent reduction in accident severity in the period from 1926 to 1939 inclusive. Many industrial organizations have been able to reduce accidents to an even greater extent, and there are outstanding cases of large industrial plants which are now able to conduct their operations for one or even more years without an accident of sufficient severity to cause loss of time. Measures for the prevention of occupational accidents parallel those of disease prevention:

1. *Industrial safety research*—to determine the physical conditions and the working practices responsible for occupational accidents;

2. *Local plant surveys*—to determine whether improper physical conditions exist or whether unsafe working practices are followed in the plant under consideration;

3. *Control and prevention*—the development and conduct of a well-planned program for the elimination of unsafe conditions and the correction of unsafe working practices.

Because of the success of these fundamental steps in the control of disease and occupational accidents, it would seem that these same principles might well be applied to the home accident problem, along the

following lines:

1. *A comprehensive statistical analysis of home accident experience*—to determine the physical conditions and individual practices chiefly responsible for accidents in American homes.

2. *Intensive and localized home accident surveys*—to determine whether these known unsafe conditions exist or whether known unsafe individual practices are followed in the homes under consideration.

3. *Control and prevention*—the removal or correction of unsafe conditions and the development of safe practices by individuals in the home.

Actually, in the field of home safety, steps two and three are very largely the responsibility of the individual and his family. An organized program of education, however, based upon an accurate knowledge of conditions and practices responsible for home accidents, is necessary to encourage action on the part of the individual.

Some accidents are due to the design, construction, and maintenance of the building itself and may, therefore, be considered a responsibility of the architect and builder rather than of the occupant. The prevention of such accidents, however, likewise requires an analysis of accident producing conditions.

Existing Data

While we know that the home accident problem is serious, we scarcely know enough as yet to provide the basis for a real preventive program.

Upon records of the United States Census Bureau and those of State health departments, the National Safety Council annually estimates the number of deaths and non-fatal injuries incident to home accidents in the United States. The data relative to fatalities are obtained from coroners' reports and, therefore, can be considered fairly reliable as to gross totals. These data are classified according to age groups and five principal types of accidents, namely: burns, falls, firearms, mechanical suffocation, and poisoning.

No additional analysis of fatal home accidents is made on a national basis. Some health departments, however, make a more detailed analysis, the most complete being that contained in the annual report of accidental deaths published by the Kansas State Board of Health. This analysis classifies home fatalities by type, location within or

without the house, and cause.

A study of home accident fatalities for the city of Cleveland was conducted in 1935 by H. W. Green, Director of Statistics and Research of the Cleveland Health Council. In the report of this study, "How Safe Is Home?" the accident fatalities are analyzed by resident location, age, sex, economic status of the injured party, and type of accident. Some interesting case reports are included.

In the field of non-fatal home accidents, however, no comprehensive national study has been made. Perhaps the most complete analysis in this field is the five year report issued by the Travelers Insurance Company, based upon benefits paid under personal accident policies of that company. The report contains a fairly detailed analysis of approximately 48,000 home accidents, by type. No other analysis of home accidents, however, is included in the report.

A survey of home accidents resulting in hospitalization at the Cook County (Illinois) Hospital in 1933 and 1934 was made as a Works Progress Administration project sponsored by the Cook County Bureau of Public Welfare and supervised by the National Safety Council. This report contained an analysis of 4,602 hospitalized accident cases classified by location and by type.

During 1935 and 1936 the United States Public Health Service conducted a National Health Survey with W.P.A. assistance. This survey consisted of a house-to-house canvass of 800,000 families in 84 cities and 23 rural areas. The study was confined to cases resulting in disability of seven days or more. In the report of the survey home accidents were classified by means of injury, age, sex, family income groups, and nature of injury. The report contains similar analyses of other types of accidents.

The Visiting Nurse

While these studies are helpful, it is our belief that a successful preventive program necessitates a more complete and detailed study and analysis of such accidents than is now available. As an instrumentality in developing basic data essential for such an analysis, the visiting nurse has an unusual opportunity, since she is in a position to observe and analyze unsafe conditions and practices in the homes of the patients she is called upon to nurse.

Based upon this principle, an individual

home accident study covering the period from November 15, 1939, to May 15, 1940, was undertaken under the direction of Professor Irma Gene Nevins of the Kansas State Teachers College and a Fellowship Student of the Center of Safety Education, New York University. The study had the support of the National Organization for Public Health Nursing and the active participation of the Visiting Nurse Association or Public Health Nursing Associations of Detroit, Mich., Indianapolis, Ind., Kansas City, Mo., Minneapolis, Minn., New Haven, Conn., Philadelphia, Pa., Pittsburgh, Pa. and San Francisco, Cal.

As a result of this study 550 individual home accident reports were submitted by the participating members of the Associations listed. These reports are now being tabulated. The report form included the following questions, to each of which was appended a check list: "When and where did the accident occur?" "What are the immediate factors?" "What are the contributing factors?" "Who was involved in the accident?" "What was the person doing at the time of accident?" "How will the accident be classified?"

A Study by Metropolitan Nurses

In addition to collecting accident data, the visiting nurse is in an excellent position to influence safe home practices and the removal of unsafe home conditions. In order further to explore the possibilities of using the visiting nurse in both of these fields of activity, the Metropolitan Life Insurance Company early in 1940 instructed its salaried nurses throughout the United States and Canada to submit reports regarding all cases of accidental injury for which nursing service was requested. Since the Company maintains 336 salaried nursing services, employing a staff of 678 nurses who handle more than 300,000 nursing cases in a year, a study conducted by this staff is nationwide in area and covers a large number of individual homes. The study also includes some 35,000 nursing cases handled in Canada by a staff of 89 nurses.

This study was undertaken for two definite purposes: first, to collect accurate data regarding home accidents; and, second, to stimulate nurses' interest in home safety through familiarization with such data.

To launch the plan, letters of instruction were sent to each nurse early in 1940 and additional information was furnished through

regular supervision channels. No special forms were developed for the purpose, the nurses being instructed to furnish the required information on their regular case reports. They were asked to report on each case where care was necessitated by an accidental injury. They were instructed to report whether the injury was the result of a motor vehicle, occupational, public, school, or home accident.

Only in the case of home accidents were additional data requested. These include nature of injury, part of body injured, action of the injured party, location of accident, type of accident, and objects involved. The data submitted by the nurses are carefully reviewed, and form letters requesting additional data are sent to the nurses when necessary. An analysis of the final information is prepared on a monthly basis according to a number of pre-determined sub-classifications.

This study was initiated in the spring of 1940, and approximately two months were needed to carry out the proper instructional work and to obtain complete data. A test analysis of accidental injuries was prepared for the month of April and, on the basis of this study, certain necessary changes were made in the analysis form. Using the revised forms, comparable analyses for the months of May, June, and July have been completed and a quarterly analysis prepared. For each month as well as for the quarterly period, analysis sheets have been developed for three geographic areas, namely: the United States east of the Rockies; the Pacific Coast and mountain states; and Can-

ada. A total sheet, covering all areas, has also been developed.

In general, the study is confined to accidental injuries sustained by industrial and intermediate policyholders, and group certificateholders of this company. It covers cases which are of sufficient severity to require nursing service. Only a comparatively few fatalities are included. Prior to July our records did not show the number of cases requiring hospitalization. On the basis of the July experience, however, it is noted that approximately 11 per cent of all accident cases and approximately 9 per cent of the home injury cases reported required hospitalization.

According to the experience since this survey was started, it will eventually include approximately 500 home accident cases a month or a total of about 6,000 a year. Since this study to date, however, covers a period of three months, the results reported in this paper can only be considered as indicating possible trends and illustrating the type of data which will be available as the study continues.

It is interesting to note the close comparison between the percentage of home accidents reported in our study and the similar percentage estimated by the National Safety Council. For the three months covered by this study, 50 per cent of all injuries reported, or a total of 1,572 injuries, resulted from home accidents. The National Safety Council estimates that 53 per cent of all disabling injuries in the United States are due to home accidents. In the Eastern area of the United States our study shows this fig-

Table I—Nature of Injury

	Eastern States	Pacific Coast & Mountain States	Canada	Total
Cuts, Lacerations and Abrasions.....	25%	28%	30%	25%
Bruises and Contusions.....	10%	11%	18%	11%
Burns and Scalds.....	18%	18%	34%	19%
Strains and Sprains.....	12%	13%	1%	11%
Asphyxiations.....	..	..	..	..
Poisoning.....	1%	3%	4%	2%
Fractures and Dislocations.....	20%	17%	9%	19%
Foreign Bodies.....	..	1%	1%	1%
Bites.....	2%	5%	..	3%
Multiple.....	6%	..	..	5%
Other.....	5%	3%	3%	4%
Not Specified.....	..	1%	..	..

ure at 50 per cent, in the Pacific Coast states 47 per cent, and in Canada at 58 per cent.

An idea of the range of severity of cases included may be obtained from Table I. This and the five other tables in this paper are

based upon a total of 1,572 injuries, of which 1,190 were reported in the Eastern states, 280 in the Pacific Coast and mountain states, and 102 in Canada. These figures should not be accepted as indicating relative

Table II—Part of Body

	Eastern States	Pacific Coast & Mountain States	Canada	Total
Hands and Fingers.....	14%	16%	22%	15%
Head, Face, and Neck.....	9%	20%	21%	12%
Legs, Feet, and Toes.....	34%	30%	25%	32%
Arms.....	11%	9%	10%	11%
Eyes.....	1%	4%	2%	1%
Trunk.....	10%	16%	12%	16%
Internal.....	1%	3%	5%	3%
Multiple.....	12%	1%	5%	10%
Not Specified.....	..	1%	..	..

Table III—Action of Injured

	Eastern States	Pacific Coast & Mountain States	Canada	Total
Walking and Running.....	36%	32%	16%	34%
Household Cleaning.....	5%	3%	3%	5%
Laundry Duties.....	4%	3%	9%	4%
Other Household Duties.....	7%	7%	9%	7%
Cooking.....	5%	3%	3%	5%
Eating.....	2%	2%	3%	2%
Playing.....	22%	33%	27%	24%
Tending Heating Equipment.....	1%	..	2%	1%
Other.....	11%	16%	25%	13%
None or Not Specified.....	7%	1%	1%	5%

Table IV—Location of Accident

	Eastern States	Pacific Coast & Mountain States	Canada	Total
Living and Sleeping Quarters.....	15%	13%	6%	14%
Dining and Kitchen Quarters.....	27%	28%	55%	29%
Bathroom.....	3%	2%	..	3%
Hallways, etc.....	2%	..	..	1%
Cellar.....	4%	..	3%	3%
Attic.....	..	..	..	..
Stairs or Steps.....	18%	8%	7%	15%
Porch, Yard, etc.....	28%	41%	17%	30%
Garage.....	1%	3%	1%	1%
Other.....	2%	2%	7%	2%
Not Specified.....	..	3%	5%	1%

frequency of home accidents in the respective areas, but simply as a basis for the percentages in the respective columns.

Considering the extensive educational activities which have been carried out with respect to the dangers of asphyxiation due to carbon monoxide in closed garages and to improper ventilation in homes, it is interesting that only two cases of asphyxiation were reported; likewise that only 2 per cent of the cases involved accidental poisoning.

Another indication of the kind of injuries

being experienced as a result of home accidents can be obtained from a review of the parts of the body injured through accidents of this nature. Table II presents the classification used and the percentage variation of injuries on this basis.

For preventive purposes it is necessary to know what people were doing when they were injured. Proper emphasis then may be given to the development of correct practices incident to home activities. Table III shows the percentage distribution of the

Table V—Type of Accident

	Eastern States	Pacific Coast & Mountain States	Canada	Total
Falls from Heights	12%	21%	17%	14%
Falls on Levels	38%	16%	6%	32%
Falling Material	1%	—	0%	2%
Handling Materials or Objects	11%	9%	12%	10%
Stepping on Objects	6%	5%	8%	6%
Collisions with Objects	12%	16%	7%	12%
Hot or Burning Substances	12%	15%	19%	13%
Electric Burn or Shock	—	1%	9%	1%
Inhaling Gas or Smoke	—	—	—	—
Poisons, Not Gas	1%	6%	5%	3%
Other	6%	9%	13%	7%
Not Specified	—	1%	—	—

Table VI—Objects Involved

	Eastern States	Pacific Coast & Mountain States	Canada	Total
Household Furnishings or Equipment	15%	5%	14%	13%
Floor Coverings	3%	2%	3%	3%
Slippery Surfaces	4%	7%	1%	4%
Toys and Play Equipment	4%	5%	2%	4%
Tools and Sharp Objects	13%	9%	7%	12%
Utensils	7%	1%	15%	6%
Ford	2%	3%	11%	3%
Animals, Insects, etc.	3%	6%	—	4%
Heating Equipment, etc.	4%	5%	5%	4%
Laundry Equipment and Materials	4%	6%	11%	5%
Inflammable Liquids or Materials	2%	3%	3%	2%
Other Household Appliances	1%	1%	7%	2%
Plumbing Fixtures	1%	—	—	1%
Structural Defects	2%	3%	3%	2%
Firearms	—	—	—	—
Automobile	1%	3%	—	1%
Multiple	1%	—	1%	1%
Other	12%	29%	19%	15%
None or Not Specified	21%	11%	—	18%

home injuries by the action of the injured at the time the accident occurred.

For a proper preventive program it is also necessary to obtain some information regarding the place of occurrence of home accidents. Table IV indicates the percentage of injuries by room or other location on the home premises.

Considering the type of accidents (see Table V), falls on level are outstanding with a total of 32 per cent. In the Pacific Coast area, however, this item was responsible for only 16 per cent and in Canada only 6 per cent.

Lastly, the study included an analysis of the subjects involved in home accidents, as indicated by Table VI.

This survey, although incomplete and of a comparatively short duration, seems to indicate that the public health nurse is in a position, because of her training and her frequent contact with individual homes, to serve as an excellent source of information regarding home accidental injuries. In the absence of official reporting of non-serious home accidents, it is reasonable to suppose that we can look upon the visiting nurse as an effective instrument in the collection of data of this nature. Because of her training in the field of prevention and because of her close educational contact with individuals in the homes she visits, she is also in an excellent position to utilize this experience in a useful and constructive manner for the advancement of safety.

HOME SAFETY ACTIVITIES OF SELECTED NATIONAL GROUPS

The American Red Cross

By RICHARD W. THRUSH

Assistant Director, First Aid and Life Saving, American National Red Cross, Washington, D. C.

There have been safe practices of one kind and another about the places where people live since the beginning of home life—there is too close a relationship between accident prevention and self-preservation for it to have been otherwise. But admitting all this, safety for the home, as compared with industrial safety or highway safety, for instance, has lagged terribly behind the improvement and the conveniences of modern home life and the fast moving times in which we live. In fact we can well say that home safety has not only lagged but has been, to a great extent, forgotten as a definite effort while we have been busy about many other matters.

The first responsibility in the direction of safer conditions in and about our homes and toward a better set of habits and attitudes for accident prevention lies in the creation of an awareness of the problem. But awareness of accident hazards is only a part of the beginning. Along with a consciousness of what causes the accidents (which result in some 32,000 deaths in our

homes each year) must be developed a determination that these accidents in a very large measure can and shall be prevented.

The whole effort needs to be individualized. The very nature of our home life indicates this. We have no group or organization responsibility here as exists in industry, no set of laws and regulations as in dealing with traffic. Those of us who concern ourselves about this particular phase of safety realize more and more how indirect and almost subtle our approach to the home must be, however well intentioned our purpose.

From the standpoint of the Red Cross it appears that we have an opportunity and a peculiar responsibility because of the very nature of our organization set-up. There are 3,700 Red Cross Chapters in the United States. Frequently they are on a county basis, but since there are only about 3,200 counties there are considerably more Chapters than counties; in other words the Red Cross Chapters quite completely cover the entire country.

Locally those who are interested in the Red Cross are interested, too, in the other worth while community activities, and by the same token the members of other groups are interested in what the Red Cross does. Also, there are more than eight-and-a-half million boys and girls enrolled in the Junior Red Cross, so that we have an altogether natural service program relationship with the schools in particular through this medium.

The accomplishments of the Red Cross in its training programs related to safety are rather well known. It is worthy of note, however, that 656,803 persons completed courses in first aid and in water safety last year. That means that for each working day more than two thousand certificates were issued for courses that had been completed in these subjects. This work in first aid and in water safety is mentioned because it does have a direct bearing upon safety at home. For example, if a man is trained in first aid in an industry, he does not leave at the plant the knowledge he has acquired when he goes home in the evening.

But specifically the Red Cross has a program designated as Home and Farm Accident Prevention which is designed to contribute to the efforts being made for home safety. Incidentally, in linking the farm along with the home it is well to keep in mind that while, in this instance, we are giving thought to an occupation, at the same time it is an occupation which is more closely associated with home life than is true of any other occupation. Or to reverse the picture, the home life of a farm family is not confined to the four walls and possibly a yard but includes the barn, the orchard and everything to the far line fences. More deaths occur in farming accidents than in any other occupation.

The approach to home and farm accident prevention, as we see it, is through education, just as this has been true in First Aid and in Water Safety. When we think of education, we think both of children and of adults. With this in mind it is our purpose to cooperate with the schools, with young people's organizations, and with any adult groups interested or who may be interested in the problems of home safety both urban and rural.

Moreover there has been or is in our

program in the nature of campaign has been meant as a stepping stone to higher levels of interest and accomplishment. The emphasis is upon year-around program development and such seasonal hazards as need particular attention at particular times in the year.

To assist schools and youth groups in their efforts a pamphlet on home and farm accident prevention is provided to teachers and leaders. Four hundred thousand copies of this pamphlet were distributed last year as a part of definite programs developed in or through the Chapters. Based upon the information and the stimulation provided through the use of this material between nine and ten million check-lists of common hazards were distributed. Also 88,000 posters reading, "Their Safety Depends on You," were provided.

On the adult side of the program 19,000 copies of "Group Discussion Material—Home and Farm Accident Prevention" were used last year. Courses have been developed for the training of adult leaders to carry our program in Home and Farm Accident Prevention, and a start has been made in a more formalized presentation of this subject to adults in P.T.A., Granges, Service Clubs, and in a multitude of community groups ready-made and otherwise.

We have taken pains to provide much publicity for both the press and the radio and are regularly issuing a news-letter, "Home and Farm Accident Prevention."

In addition to the material produced and provided by our own organization we distributed last year through our Chapters 55,000 of the Forestry Service posters, "Yours in Trust."

Just recently we have completed a series of 14 nation-wide radio broadcasts. This program, "Listen and Live," proved to be a very interesting project with a high response from all sections of the country. We had excellent cooperation from a variety of organizations and governmental agencies in this series.

All along the line we have had excellent relationship with the schools. We are glad to have them understand that the Red Cross is endeavoring only to help them with a problem and with a program in which they themselves are interested. The same thing applies to the youth organizations. The National Safety Council has been most

helpful. Without the material they develop on home and farm accidents there wouldn't be much in the way of directional signs.

We are learning much as we go along. For instance nothing is more important than informed, interested and active local leadership in this field. We know too that there

is no more important place to contribute to the individual and general morale than through safer and consequently stronger homes. We recognize in the words of W. H. Cameron in a recent editorial, "We must go at this business of safety as though it were a life-long job—which it is!"

Boy Scouts of America

By FRED C. MILLS

Director, Health and Safety, Boy Scouts of America, New York City

The home safety program of the Boy Scouts of America is so completely interwoven with every other part of its health and safety activities that it is difficult to separate it, for we have proceeded on the premise that each part of that program gave support and impetus to the whole.

But here are a few facts and points which may help you better to understand our work. We have a three part program of health and safety:

1. Protection of Scouts; 2. Education of Scouts; 3. Service by Scouts.

Our No. 1 point in protection is the medical examination of each Scout in order to limit his activities if necessary. This I mention because of its importance to every sort of accident prevention.

Every Scout gets some home safety instruction and every one receives first aid training as a part of his advancement program to First Class rating.

From there on up a knowledge of it is mandatory.

In 1939, 101,000 Merit Badges were earned by Scouts in the following subjects, all of which have to do to a very great extent with home safety, even including Marksmanship, a major portion of which is safety with firearms in and out of the house: Firemanship, First Aid, Marksmanship, Safety.

Besides these, but very closely related to them, are the Personal and Public Health, Skiing and Swimming Merit Badges of which 88,500 were earned in 1939.

While I take pride in this report because of the fine work done by the Scouts who acquired those skills and the leaders who taught them, I feel very humble when I

consider the growing fatality list and I ask myself what excuse we have for not having done more, more and still more with our opportunities.

I ask myself why I see on the program today the names of but six national organizations making reports rather than 66 or even 666 and in all seriousness I wonder if it is to a considerable extent our fault.

Where are representatives of that most powerful influence in human affairs—the churches of America—many of whom and perhaps all are interested in the temporal as well as the spiritual welfare of their people.

Where are the racial group representatives—Negroes, Indians, Mexicans? They are counted in the toll of dead and injured.

Where are the representatives of Rural America in whose dwellings most of these home accidents occur? Why are not the representatives of the Farm Bureau, the 4-H Clubs and the Granges here?

And the Fraternal and Young Women's and Young Men's organizations? Where are they?

Perhaps our organization with its great influence among these other organizations has somehow failed to stimulate their interest. Certainly there has been a failure somewhere. They are not here but they should be. The help of every single group is needed. *What is the answer?*

I wish to submit to the Home Safety Committee of the National Safety Council the recommendation that the following information be made available for the guidance of those organizations who cooperate in this effort:

1. A definition of the home as it has to

do with safety: Does it mean the house in which we live or the house and yard, out-buildings and barns or perhaps the whole farm property, or does it mean the neighborhood surrounding the house?

2. A breakdown of accidents into kinds and then into causes in so far as they are

known.

3. An apportionment of work to various cooperative organizations. Of course there will be overlapping of effort, but that can be constructively coordinated if we talk the same language and teach the same methods and strive for the same common end.

Home Safety Program of the United States Housing Authority

By HOWARD L. WHITE

Management Review Division, United States Housing Authority, Washington, D. C.

Effective safety standards in project design and management are prerequisites of good public housing. This statement briefly sums up the attitude of the United States Housing Authority toward the question of safety in its present large-scale slum clearance and rehousing program.

Under this program 193 locally appointed housing authorities have or are now developing 467 projects of 154,209 homes. Construction has started on 276 projects of which 74 projects, totaling 29,559, homes, are either occupied or about to be tenanted. In addition, 49 projects formerly constructed by the PWA Housing Division and now under the general jurisdiction of the United States Housing Authority, are in operation.

The safety record of public housing in the United States has been exceptionally favorable. On the basis of one and one-half years of accident experience, rate reductions of 68 per cent on liability coverage and 59 per cent on fire coverage were allowed on blanket policies for 44 occupied projects. These reductions represent savings over average fire insurance costs for apartment buildings and savings over original 25 per cent preferred rates on liability costs.

A study of the 1939 accident records for the 49 PWA Housing Division Projects under USHA jurisdiction indicates, however, that there are great opportunities for further reducing accident hazards in the low-rent housing field. These projects housed 69,925 people during the year. Their accident reports list one fatality and a total of approximately 129 accidents and 61 fires resulting in injuries and/or property damage within project boundaries. An analysis of causes indicates that 40 of the accidents and

36 of the fires might have been prevented by safer planning and designing.

We realize that as more projects are completed and occupied the problem of safety for tenants and operating personnel becomes relatively more important. In addition to humanitarian considerations, economic savings to tenants which can be realized through the elimination of accident hazards are highly desirable. In view of the limited income of the average family in low-rent housing projects even a temporary loss of income because of an accident may result in extended economic hardship.

The initiation, development and management of public housing projects are vested in Local Housing Authorities. The responsibility of the United States Housing Authority is one of a banker who has loaned money and wishes to protect his investment. In protecting this investment the United States Housing Authority has found it necessary to set certain standards and policies with which local authorities are expected to conform. It is through these policies and standards, as well as through advice and counsel, that we are able through our dealings with local housing authorities to foster safety considerations.

We in the United States Housing Authority are concerned with home safety at two definite stages. During the development and construction of a project we are interested in the safe design of dwellings. After the project has been completed and has entered the management period we are interested in conducting safety education activities and rectifying any mistakes in design which might have been overlooked during the development of the project. Let us first consider the development or construction stage.

In counseling with Local Housing Authorities and in the development of written guide materials, the United States Housing Authority has made a special effort to consider safety in the design of housing projects. These many separate recommendations appearing in specifications and bulletins not specifically concerned with safety have recently been brought together in a document entitled "Planning for Safety." Design suggestions which have evolved from the operating experiences of our earlier projects have also been included.

Of the many design factors which we have considered important to safe construction and operation, only those pertaining directly to home safety will be of interest to this group. Some of the more important of these are as follows:

1. Locating residential buildings so that first floor levels are approximately 14 inches above grade in order to avoid unsensational outside steps at entrances.
2. Providing adequate dwelling unit storage facilities to minimize the necessity of storing toys, equipment, tools and items involving a fire hazard in hazardous locations.
3. Eliminating elevated porches wherever possible, and when they are used, providing high railings of safe design with toe boards.
4. Constructing entrance platforms with non-slip finishes, and with railings wherever such platforms are raised.
5. Avoiding the use of glass panels in the lower portions and in the pushing areas of doors.
6. Avoiding the location of doors too close to stairs.
7. Providing well secured screens.
8. Requiring window sills at least 32 inches above floor level.
9. Using straight stair runs whenever possible, with risers and treads meeting acceptable safety standards.
10. Constructing continuous hand rails for each stair run, designed to prevent children from squeezing through.
11. Providing non-slip floor surfacing.
12. Installing bathtubs with flat, anti-skid bottoms.
13. Providing grab bars in combination with soap dishes for bathtubs and shower stalls.
14. Locating utility closets for storing

medicine out of reach of small children, and wherever possible providing a lock.

15. Locating cooking stoves at least one foot from jambs of windows. Ranges with open flame burners should be located so that flames will not be subject to drafts or in the path of blowing curtains.

16. Selecting a type of range with oven and broiler raised to a level which minimizes dangers of stooping and lifting heavy hot objects.

17. Avoiding low types of hot plates on which skirts may catch fire.

18. Locating electric ice boxes and other electrical equipment far enough from the sink so that their handles cannot be grasped conveniently while touching faucets or sink.

19. Providing adequate and convenient shelving, most of which can be reached without climbing on chairs or ladders, and avoiding shelving above cooking ranges.

20. Locating electrical switches and pull cords in bathrooms and kitchens away from plumbing appliances to minimize the possibility of simultaneously grasping two fixtures which may, in the case of a faulty electrical connection, complete an electrical circuit and produce a shock or burn.

21. Providing adequate lighting in all rooms with switches placed so as to enable persons to turn on lights before entering.

22. Providing adequate lighting for dwelling unit stairways so as to minimize shadows during descent, with three-way switches located both at the bottom and top of stairways.

23. Designing all electrical work in accordance with the National Electrical Code and using only those materials approved by the Underwriters' Laboratories, Inc.

The factors which I have just enumerated are indicative of the consideration engineers and architects concerned with the development of USHA-aided projects are giving to the improvement of safety in the home.

After every reasonable effort is made in designing a project to eliminate safety hazards, it then becomes the responsibility of the housing manager to reduce hazards through safe maintenance and operation. However, we realize that only part of the hazards may be met through the direct action of management. The others are due to human factors beyond direct control. Tenants engaged in the activities of daily life

in their own homes are subject to a wide range of hazards. The only control is through the tenants themselves. For this reason management can make only an indirect approach, and this can best be done through a program of *safety education*.

As a part of its community relations program, the United States Housing Authority is concerned with the stimulation of safety education activities in local housing projects. These activities have developed differently in various localities.

Some project managers have incorporated home safety hints and suggestions in handbooks prepared for and distributed to new tenants as they move into their new homes. In a few cases, mimeographed bulletins have been used to supplement handbooks.

Local chapters of the American Red Cross have been very cooperative and helpful in supplying teachers and educational materials for first-aid and safety courses in a number of our projects. Social and recreational rooms provided in community buildings and in other parts of the projects have been used for class purposes. These courses have been conducted primarily for project tenants, although some have been designed for

project maintenance personnel.

Project newspapers sponsored by tenant organizations or by other tenant groups have been instrumental in spreading information on home safety. Very few of these publications, however, have emphasized this type of material.

One of the problems peculiar to low-cost housing is the presence of a large proportion of new tenants who are unfamiliar with the use of stoves, refrigerators, and other equipment provided in their new homes. Recognizing this problem, the management staffs of most projects have provided individual instruction or group instruction on the safe use of equipment. This instruction is usually provided when the family moves in or soon after.

Aware of the need for a well-planned program of safety education, the United States Housing Authority has been working with the New York University Center for Safety Education on the development of safety education materials and a course outline which will be made available to local housing authorities some time in the future. The major portion of this material will be concerned with home safety.

National Congress of Parents and Teachers

By MARIAN TELFORD

National Chairman, Committee on Safety; Director, Traffic Safety Education Project, National Congress of Parents and Teachers; Director, Education Division, National Safety Council

The National Safety Committee of the National Congress of Parents and Teachers was organized approximately twenty-eight years ago. Since its inception the Committee has assembled information on the home accident problem. It has distributed home safety tests, home inspection blanks, and other materials. As early as 1928 it devoted one part of a three-part survey to home accidents. School and community hazards were also surveyed at the same time.

Two phases of the present program will be discussed in this brief report.

Earlier this fall the National Board of Managers of the National Congress voted to include the subject "Housing" on the National Study Program. Perhaps there are

some people who think of housing in terms of the Federal Housing Authority. We propose to make a study of the general subject. The work of the particular governmental agency in this field will be incidental.

We conducted last year a family accident survey. Five thousand families containing at least one individual holding a membership in a local Parent-Teacher Association participated in a three-month study of home accidents. The purpose of the study was to determine how the accident problem, widely recognized as a tremendous social problem, actually affects the families of representative Parent-Teacher members. Every state in the union participated in this study.

Parent-teacher leaders feel they can now

concentrate their safety efforts on specific problems known to be the problems of the families represented by memberships in local parent-teacher associations.

For example, the survey showed that among parent-teacher families home accidents alone exceed in number automobile, bicycle, public and occupational accidents combined. Falls and burns were the most common type of home accidents reported.

Public accidents—accidents occurring in public places but not involving automobiles—ranked second in importance on the basis of frequency. School and city playground, roads and highways, public parks, yes, even church basements were the locations of these accidents!

Automobile accidents were reported only about one-third as frequently as public accidents, about one-sixth as often as injuries occurring at home. However, accidents resulting from the careless use of automobiles were far more serious than those of any other type. The only fatalities reported during the three-month period resulted from automobile accidents.

Almost as many families were affected by injuries occurring to individuals at work as were involved in automobile accidents. The relative importance of the occupational accident problem came as a surprise to state and national parent-teacher leaders. The long established safety program of the National Congress of Parents and Teachers has rarely, if ever, included any reference to techniques of occupational accident prevention. This apparent gap in the program is now under consideration.

Reports received during the survey have been reviewed from many angles. Following tabulation by major classification of accident types—home, public (not motor vehicle),

motor vehicle and occupational—reports were scrutinized for additional information of value in the development of a safety program. When did the accident occur? Who was injured? These and other questions were asked.

About 75 per cent of the accidents reported occurred between noon and 8 o'clock in the evening. Bicycle accidents were concentrated in an even shorter period, two-thirds of these having happened between 3 o'clock in the afternoon and 7:30 in the evening. Saturday and Sunday were free from occupational accidents, but with this single exception accidents were reported with about the same degree of frequency throughout the entire week.

The age and sex of individuals injured throws further light on the problem. Infants, youth, middle-aged and the aged—all of these suffered in home accidents, with burns appearing to be particularly hazardous to infants and falls to the aged. Youth of approximately high school and college age were involved in the majority of public-not-motor vehicle accidents, while their younger brothers and sisters of elementary and high school age were injured while riding bicycles. Boys and men were injured far more frequently than women and girls, except in those accidents occurring at home.

Additional sources of data, such as reports of health, motor vehicle and police departments, are being utilized by parent-teacher leaders in planning future programs.

We have been interested in the widespread expression of interest in this survey. Requests for copies of the materials used have been received from seven national organizations, 31 states and groups of various kinds, and five Central and South American countries.

The home safety activities and materials of the Camp Fire Girls were described by Mrs. W. T. Grable, Executive Secretary, Chicago Council, Camp Fire Girls, Inc.

A similar presentation in regard to the activities and materials of the Girl Scouts was made by Rosabel Burch, Program Division, Girl Scouts, Inc., New York City.

Demonstration Meeting, Home Safety Committee, Minnesota Safety Council

Presiding, A. V. ROHWEDER, Superintendent of Safety and Welfare, Duluth, Missabe and Iron Range Railway Co., Duluth, Minn.; Vice-President for Home Safety, National Safety Council.

Home Safety Panel

The home safety panel was presented by members of the Home Safety Section of the Minnesota Safety Council Panel participants were:

Mrs. H. W. Brodt, Home and Community Chairman, Minn. Farm Bureau Federation, Fairmont; William H. Brown, Director of Safety, Northern States Power Co., Minneapolis; R. A. Jakoubek, Field Representative, American Red Cross, St. Louis, Mo.; C. H. Zealand, Executive Secretary, Minnesota Safety Council, St. Paul; Dr. R. M. Burns, Chairman, Radio Committee, Minnesota State Medical Assn., St. Paul; Mrs. Ada LaPachek, Chairman, Worthington Safety Council, Worthington; Frank C. Berry, Executive Manager, Hennepin County Safety Council, Minneapolis; Theodore F. Wold, Director, Hotel & Restaurant Insp. Div., Minnesota Department of Health, St. Paul; Ralph A. Rohweder, Assistant Secretary, Minnesota Safety Council, St. Paul (Panel leader).

MR. RALPH ROHWEDER: A most logical starting place for this exposition of the Minnesota Home Safety Program is an explanation of the principles that guide our activities.

MR. ZEALAND: The basic procedure in the prevention of home accidents is the same as for other safety work in that we attempt to guide activities by the lessons of accident experience. First, we systematically record the individual facts about single accidents. We summarize these facts and discover that hundreds and thousands of accidents are the product of relatively few dangerous acts, a few improper designs. We then effect changes in techniques, policies and designs by every means at hand, through every interested agency.

MR. WOLD: There are two parts to the accident investigation job being done by the Minnesota Department of Health.

The first is a follow up inquiry into fatal accidents. Our Bureau of Vital Statistics queries the attending physician or informant listed on the death certificate of every home or farm accident victim. For brevity, special forms, identified by color, are used for each type of accident.

The second part of our accident investigation work is comprised of sampling

studies of non-fatal injuries. We have started this type of investigation in Olmsted County, the location of the famed Mayo Clinic. There, every accidental injury treated by a physician is reported to the district health officer. The health officer sends a detailed accident report form to the victim to learn causal facts. During the first two months of operation 227 home and farm accidents were reported in this county of only 35,500 population. If the experience in Olmsted County is typical, there are 72,000 home and farm accident victims treated every year by Minnesota physicians.

MR. ROHWEDER: And at that rate there would be 4,461,000 home and farm accident victims treated by physicians every year in the United States. The facts uncovered in accident studies take many forms. One of the most obvious uses is a list of hazards for use in "self-inspection" campaigns.

MRS. BRODT: Until recently, nearly every organization working for safer homes in Minnesota had its own home hazards check list. Inevitably some homes were checked again and again while others were completely missed. The forms varied as to points covered. Few made definite suggestions for the elimination of listed hazards. So we combined and refined the best points of the various forms, added new ones, and produced a new home inspection form for housewives. It is available to every organization in Minnesota.

MR. ROHWEDER: I have noticed that a number of the questions in any check list concern gas and electric appliances and their fittings. It seems to me that a direct approach is through the manufacturers and suppliers of these materials.

MR. BROWN: Gas and electricity are really safe servants because the suppliers of these forms of energy take elaborate precautions in their distribution. The voltage of your house circuit, for instance, represents a balance between safety on one hand and transmission efficiency on the other. For another example, odorless natural gas is highly perturbed to inform customers of leaks. Minor service work is afforded free by the utility companies. For instance, ranges will be properly adjusted to prevent the freeing of carbon monoxide.

In Minnesota several companies are supplying educational safety material to schools, scout troops and other organizations. Meter readers offer occasional safety suggestions.

DR. BURNS: Additional cooperation must come from builders. Perfectly safe heating plants are possible. At least a part of the auto garage hazard can be eliminated in design. And these are not the only accident possibilities that can be eliminated by an engineering approach. The United States Housing Authority and the American Public Health Association have publications containing standards of safe design for builders. The Safety Council is attempting to supply educational material of this sort to every architect, contractor, building tradesman, building supply man, realtor and home buyer. A brief list of safety pointers for builders and buyers is in preparation.

MR. BROWN: The enforcement of safety standards for housing units and furnishings is accomplished in three ways. The first is governmental regulation. The most important things to remember about coded regulations are that they must be liberal to encourage building; their specifications must be flexible to allow for technical progress; and adequate provision must be made for administration. The last point can be strengthened by a question. How many of you even know what agency or agencies administer housing regulations in your community?

A second variety of regulation is imposed by financing agencies that refuse a loan upon any structure not meeting their specifications. Home loan executives in Minneapolis inform me that safety and utility are parallel considerations in their inspection program.

The third type of enforcement is the type administered by testing and approving agencies which owe most of their power to public respect. One such agency is the Underwriters' Laboratories.

MR. WOLD: The Hotel and Restaurant Inspection Division of the Minnesota Department of Health has authority to require certain types of fire escape installations on hotels, lodging houses, and resorts. In some cases it is necessary that our Division obtain the cooperation of the State Fire Marshal's office in enforcing compliance with proper fire escape regulations, such as in combination hotel and apartment houses,

where part of the building is subject to our regulations and the balance under other law enforcement agencies. The State Industrial Commission can inspect hotels and apartment houses for the safety of employees. Nevertheless, for all this authority, the only city in Minnesota in which every dwelling is regularly inspected is St. Paul—and St. Paul, which is one of the oldest cities, having many apartment houses, hotels, and multiple dwellings, by its nature highly susceptible to fires, has the seventh best safety record in the country.

MR. BERRY: Even without official home inspection, Minneapolis won an award in the U. S. Chamber of Commerce Fire Waste Contest last year, and we are now working for home inspection. Many of our home safety activities are conducted by volunteer groups. The Minneapolis Boy Scouts distribute safety literature and maintain hydrants free of snow. The Girl Scouts conduct a home hazard removal project. The Campfire Girls learn how to live safely as part of "living efficiently." A playground organization, "The Knights of Safety," provides safety training primarily through an advancement program.

MRS. BRODT: Minnesota clubs incorporate both safety projects and safety activities in their program. Altogether, 35,250 club members representing every county in the state took safety last year. That is, three-fourths of the total 4-H membership. Typical of their activities were the 45 safety demonstrations at last year's state fair and the more than 200 safety demonstrations at county fairs.

MR. JAKOUBEK: The Campfire Girls during the past year have nationally celebrated and worked out their birthday project entitled "Skillful Living." The Minnesota girls selected two activities: "Safety Through Home Handicraft Projects" and "Safety Through Knowledge of Contributing Municipal Agencies." Under the first heading the girls studied and rectified hazardous conditions around their homes by a direct contribution of such things as safe knife holders, hot pads, securing rugs and many other handicraft projects too numerous to mention. They also studied, under the direction of experts from public service agencies, the proper care and use of electrical appliances, gas equipment and water facilities. Knowledge of fuse boxes, gas shut-offs and similar points were discussed

and proper usage demonstrated and practiced. The girls also arranged for exhibits, talks and demonstrations to adult groups.

In the second classification of effort toward "Skillful Living," the girls surveyed, under guidance and in groups, various public service agencies to learn first hand about the manufacture and use of the products of these agencies.

Boy Scouts developed their contribution toward the safety of Minnesota primarily through the merit badge program. Nearly 3,000 awards of this nature were issued in the past year on topics covering or closely allied to safety.

Added to this effort were numerous public service activities. The sale of 30,000 "GO-FOR-SAFETY" emblems to the citizens of Minnesota to awaken and create interest in safety was one. Distribution of Red Cross Home and Farm Accident Prevention posters and Fire Prevention Week posters was another. A home check list for individual home inventory of hazards and a check of hazards at troop meeting places developed much interest among the boys. Parades and demonstrations carried the boys' efforts to the attention of adults, and many fathers received valuable information from their sons when the boys conducted a firearms safety program for luncheon and social groups composed of men.

The Girl Scouts work on projects related to their homes and environments and create exhibits and displays.

MRS. LAPACHEK: The Family Accident Survey of the National Congress of Parents and Teachers was a home safety activity. P. T. A. meetings everywhere in Minnesota are often devoted to safety. Lately the demand has been particularly for home safety speakers, home safety movies and home safety literature.

The Federated Women's Clubs are promoting home safety. In Redwood Falls every club devotes 15 minutes of every meeting to home safety. In Duluth, a club conducts a home safety snapshot contest. The Federation's State Fair booth was partly devoted to home safety. The Federation's convention program includes home safety.

The American Legion Auxiliary devoted a convention session to home safety.

The Minnesota Home Economics Association devoted convention time to home safety.

Two safety sessions are in the Minnesota Education Association's convention calendar.

The Public Health Nurses' Conference at the University last spring took place amid home safety posters, literature and exhibits.

MR. JAKOUBEK: The 89 Minnesota Red Cross Chapters during the past year have pushed forward in home safety through a number of channels. Forty-eight chapters have organized to bring to the public, through the Red Cross Home and Farm Accident Prevention Program, home check lists, group discussions, teachers' manuals, posters, plays, radio and news publicity as well as direct contact on localized and special hazards.

Through First Aid, 75 per cent of which has direct bearing on accident prevention, Minnesota's Red Cross Chapters instructed 10,740 persons in 1939-1940.

DR. BURNS: In the schools a committee of home economics teachers has met and discussed means of injecting principles of safety into home economics courses. They decided that three operations were necessary: (1) Revision of present curriculum outlines; (2) Supplying pertinent material; and (3) Convincing and training teachers.

With the University of Minnesota, Minnesota Department of Education and the Minnesota Education Association doing the theorizing and the St. Paul schools the experimenting a revised home economics curriculum will be devised.

MRS. BRODT: The women's division of the Minnesota Farm Bureau has adopted a safety program. Incidental to this every home and community chairman has received safety material including a copy of "Safety for Minnesota Homes" which is essentially a program outline. The result, briefly, is this: 33,565 farm women, representing that number of farm families, are engaged in safety work.

MR. ZEALAND: The Minnesota Inter-community Home Safety Contest serves two purposes. It arouses civic concern for the home accident problem and it serves to develop standards of community activity for the prevention of these mishaps.

The contest is a matching of home accident records by population rates and community home accident prevention efforts. Towns and cities compete in 4 groups according to population.

ADJOURNMENT

Safety Exposition Exhibitors

EXHIBITION HALL—STEVENS HOTEL

Alphabetical List of Exhibitors of Public Safety Equipment

- Arntzen, Inc., Chicago, Ill.
Emergency Ambulances and Stretcher Equipment.
- Bear Mfg. Co., Rock Island, Ill.
Vehicle Inspection Equipment.
- The Bridgeport Device Co., Bridgeport, Conn.
Gray Tom Traction Splints.
- Eagle Signal Corp., Moline, Ill.
Traffic Signals and Controllers.
- Eastman Kodak Co., Rochester, N. Y.
Cameras for Police Use.
- Employers Mutual Liability Insurance Co., Wausau, Wis.
Workmen's Compensation. Fire and Casualty Insurance.
- The General Fire Truck Corp., Detroit, Mich.
Fire Extinguishers and Allied Products.
- Harley-Davidson Motor Co., Milwaukee, Wis.
Police Motorcycles, Servi-Cars and Accessories.
- Henney Motor Co., Freeport, Ill.
Ambulances.
- Hoof Products Co., Chicago, Ill.
Motor Vehicle Speed Control Governors and Brake Eyes.
- Indian Motorcycle Co., Springfield, Mass.
Police Motorcycles and Equipment.
- International Business Machines Corp., New York, N. Y.
Accounting Machines and Systems for Municipalities.
- International Chain & Manufacturing Co., York, Pa.
Lug-Reinforced Tire Chains.
- Lumbermen's Mutual Casualty Co., Chicago, Ill.
Automobile, Compensation and General Casualty Insurance.
- Medical Specialties Co., Indianapolis, Ind.
The Harger Drunkometer.
- Metropolitan Life Insurance Co., New York, N. Y.
Life, Health, Accident, Pension and Group Insurance.
- The National Conservation Bureau, New York, N. Y.
The Accident Control Program of the Stock Casualty Insurance Companies.
- The National Safety Council, Inc., Chicago, Ill.
Posters, Bureau of Information, Research and Education Division.
- Sarra, Inc., Chicago, Ill.
Slide Films, Photosound.

- E. D. Sawyer, Chicago, Ill.
Yielding Cable Barrier Gates.
Stonehouse Signs, Inc., Denver, Colo.
Accident Prevention Signs, Reflecting Signs
- Talking Sales Pictures, Inc., Chicago, Ill.
Film Strips, Slide Films, Sound Movies.
Traffic Eye, Inc., Indianapolis, Ind.
Vehicle Speed Control Devices.
- U. S. Junior Chamber of Commerce, Chicago, Ill.
Educational Campaign for Traffic Safety Lighting.
- Weaver Mfg. Co., Springfield, Ill.
Vehicle Inspection Equipment.
Weisbach Traffic Signal Co., Chicago, Ill.
Power and Battery Operated Flashing Traffic Signals.

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