

TRANSACTIONS

8824
5

1-2

32nd NATIONAL
SAFETY CONGRESS

Volume II



Street and Highway Traffic, Commercial Vehicle,
Transit, Child Education, Home and Farm Safety
Sessions

CHICAGO

October 5-7, 1943

National Safety Council, Inc.
20 North Wacker Drive, Chicago

Copyright, 1943, National Safety Council, Inc.
Printed in U.S.A.

PLAINTIFF'S EXHIBIT
NSC-87

Contents

VOLUME II

Using the Transactions.....	iii
The Council's Program	iv
Street and Highway Traffic Section	1
Commercial Vehicle Section.....	73
Transit Section	109
Child Education Section.....	137
Farm Safety	187
Home Safety	213
Index	261

The Transactions of the 32nd National Safety Congress and Exposition of the National Safety Council are published in two volumes. Volume I contains the General Subject and Industrial Section sessions, Volume II the Public Safety, Child Education, Home and Farm Safety sessions.

Volume I is distributed to all members of the Council, Volume II to members particularly interested in the sessions it contains.

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

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

Extra copies of the Transactions may be obtained at the following rates: Volume I, one to ten copies at \$2.00 each; 11 or more copies at \$1.75 each. Volume II, additional copies, 75 cents each.

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

Using the Transactions

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

The safety engineer, the progressive industrialist, and students of safety will find these volumes valuable for reference. They contain the best knowledge and the long experience of the men and women who appeared before the 32nd Annual Safety Congress.

For easy use the material has been arranged and identified; first, by the major headings of the *Table of Contents* on page 2, and by the comprehensive *Index* at the back of the book. In the body of the book each group of meetings is printed in the same order in which they appeared in the daily time schedule of the original program.

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

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

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

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

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

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

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

The Council's Program

The National Safety Council, a non-profit, cooperative association, aims at the elimination of accidents. It therefore advocates the following program of safety activities:

Creating interest in safety. People try to prevent accidents only when they are convinced that (a) accidents threaten personal happiness, industrial efficiency and economic security; (b) accidents have definite, ascertainable causes; (c) accidents can be prevented.

Finding accident causes. Accident causes are not the same in any two plants, in any two cities, in any two schools. They are not the same from one time to another. Every organization must study the causes of accidents in its own group so that prevention efforts will be effectively directed.

Maintaining interest in safety. It is the task of the newspaper, the radio, the magazine, the school, the public speaker and every other educational influence to keep reminding the worker, the driver, the pedestrian, the housewife and the school child that freedom from accidents is purchased by self-discipline plus active cooperation in the national program of accident prevention.

Engineering improvement. Many accidents occur because equipment is faulty. The porch press is unguarded, the automobile brakes are worn, the stairway is crudely built, the stop sign is obscured. We must insist that the things we buy—whether a stepladder or a stop sign, a bandsaw or a blast furnace—be safe things. And we must be willing if necessary to pay a higher price because of this built-in safety factor, realizing that it is true economy to do so.

Training for Safety. Many accidents occur because the person involved never has been

taught how to do the job in the safe way. Therefore people must be taught how to live safely. This teaching and training is a joint responsibility of industry, of schools and colleges, of governmental groups, of parents in the home, and of safety organizations.

Supervision for safety. We need good foremen in industry, alert patrol boys in our schools, diligent police officers on our streets, thoughtful parents in our homes. Supervision can greatly minimize the chances of accident, even when people attempt knowingly to take risks.

Legislation for safety. Sound legislation on traffic, on industrial matters, no public transportation, on home construction and maintenance, and on many aspects of personal conduct provides a standard to which a large majority of people are willing to conform. It also provides a basis for requiring the conformity of a small minority.

Safety organization. Every organization, regardless of its principal purposes, can and should find some place for safety in its program of activities. Accident prevention should have a large place in the activities of trade associations, chambers of commerce, service clubs, welfare organizations, educational associations and local and state governments.

Leadership. This program of activities can be effective only with the interest and cooperation of everyone—men, women and children. The National Safety Council provides national leadership through which the safety efforts of all our people may be coordinated and made effective. The Council offers fullest cooperation to all individuals, industries, organizations, communities and agencies whose purposes are in accord with its own.

Street and Highway Traffic Section

Officers 1942-1943

General Chairman—CARL J. RUTLAND, Chairman, Citizens Traffic Commission, 518 Interurban Bldg., Dallas, Texas.

First Vice-Chairman—W. GRAMAM COLE, Director of Safety, Metropolitan Life Insurance Company, 1 Madison Ave., New York, N. Y.

Second Vice-Chairman—DON F. STIVER, Superintendent, Indiana State Police, 125 State House, Indianapolis, Indiana.

Third Vice-Chairman—WALTER B. MARTIN, Secretary, Peoria Association of Commerce Safety Council, Alliance Life Bldg., Peoria, Ill.

Fourth Vice-Chairman—EARL F. CAMPBELL, Executive Director, State Highway Traffic Advisory Committee, Insurance Bldg., Olympia, Washington.

Chairman, Committee on Accident Records—WILBUR S. SMITH, Bureau of Street Traffic Research, Yale University, New Haven, Conn.

Chairman, Annual Congress Program Committee—W. K. INGRAM, Chief of Police, 222 N. Main St., South Bend, Indiana.

Members at Large—

JUDGE JOE BROWN CUMMINGS, Municipal Court, 815 Stahlman Building, Nashville, Tennessee.

PAUL F. HILL, Executive Secretary, State Highway Traffic Advisory Committee, State Capitol, Des Moines, Iowa.

INSPECTOR JOSEPH B. KENNEDY, Deputy Commissioner of Traffic, Cleveland Police Department, Cleveland, Ohio.

D. GRANT MICKLE, City Traffic Engineer, 429 Wayne St., Detroit, Michigan.

RALPH W. ROBINSON, Secretary-Manager, Greater Los Angeles Safety Council, Rm. 222, 530 W. 6th St., Los Angeles, California.

Ex-Officio, Former General Chairmen—

ROGER L. MONROSE, Professor of Highway Engineering and Highway Transport, University of Michigan, Ann Arbor, Michigan.

JUDGE HARRY H. PORTER, Chief Justice, Evanston Municipal Court, City Hall, Evanston, Ill.

Secretary—HARVEY D. BOOTH, Traffic Engineer, National Safety Council, Inc., Rm. 960, 20 N. Wacker Drive, Chicago, Ill.

Officers 1943-1944†

General Chairman—W. GRAHAM COLE, Metropolitan Life Insurance Company, 1 Madison Ave., New York 10, N. Y.

First Vice-Chairman—DON F. STIVER, Supt. Ind. State Police, Indiana State House, Indianapolis 4, Ind.

Second Vice-Chairman—D. GRANT MICKLE, Automotive Safety Foundation, 726 Jackson Pl., Washington 6, D. C.

Third Vice-Chairman—WALTER B. MARTIN, Safety Council, Peoria Assn. of Commerce, Peoria, Ill.

Chairman, Committee on Accident Records—WILLIAM M. GREENE, Connecticut Motor Vehicle Dept., State Office Bldg., Hartford, Conn.

Chairman, Annual Congress Program Committee—BURTON W. MARSH, American Automobile Assn., Pennsylvania Ave. at 17th St., Washington 6, D. C.

Members At Large—

JUDGE E. W. FRUST, Municipal Courts Bldg., Kansas City 6, Mo.

JOSEPH B. KENNEDY, Cleveland Police Dept., 2001 Payne Ave., Cleveland Ohio.

THEO. M. MATSON, 311 Strathcona Hall, New Haven 11, Conn.

JAMES A. PRYDE, P. O. Box 1165, Olympia, Wash.

RALPH W. ROBINSON, Greater Los Angeles Safety Council, 530 W. 6th St., Los Angeles, Calif.

FRED M. ROSSELAND, c/o Newark Safety Council, 24 Branford Pl., Newark, N. J.

Ex-Officio, Former General Chairmen—

JUDGE HARRY H. PORTER, Chief Justice, Evanston Municipal Court, Evanston, Ill.

CARL J. RUTLAND, Chairman Citizens Traffic Commission, 518 Interurban Bldg., Dallas, Texas.

Secretary—HARVEY D. BOOTH, Traffic Engineer, National Safety Council, Chicago 6, Ill.

†As elected by the delegates in Congress session.

TUESDAY AFTERNOON SESSION

October 5, 1943

General Session

Presiding: CARL J. RUTLAND, Chairman, Citizens Traffic Commission, Dallas, Tex.

The Challenge of Traffic Accidents in Wartime

By NED H. DEARBORN

Executive Vice-President, National Safety Council, Chicago

The war has done a strange thing to the word "total." We hear of "total" war, of "total" destruction, of "total" effort, of "total" production.

For a word that used to be so flat and colorless, so much a matter only of school sums and account books, the word "total" certainly has acquired glamour.

It is a glamour we cannot afford to ignore, for whether we like it or not, we are part of that sum, and our efforts do influence the ultimate result; not only for the immediate objective of winning the war, but for the one we more and more are coming to think about—the construction of a better post-war world.

It requires no flight of the imagination to understand that traffic accidents in wartime have a direct and serious effect upon the successful prosecution of the war. It likewise is true that something is being done about reducing these accidents—just as something must be done to correct any recognizable situation or condition which hinders an early victory.

From the peak of 40,000 deaths in the nation in 1941, traffic deaths fell to less than 29,000 in 1942. At the present rate the total this year will be in the neighborhood of 24,000, or a reduction of 40% from 1941. Lest you be heartened too much by this sizeable reduction, let me add that traffic volumes are about 32% under those two years ago. So our net gain for safety is slight indeed—but it is a gain. Our statisticians figure it represents a 5% improvement.

I have but to remind you that more and more people must be brought into the job of meeting this problem of accidents in wartime—and it is to be hoped that any measurable accomplishments toward that end now can and will be used for insuring even better control of traffic

accidents when wartime driving restraints are lifted. The total job of winning this war requires recognition of this dual aspect of the accident problem—and the further fact that something can be done about it.

The meeting of the challenge of this two-fold problem is really as simple as the fact that A is followed by B. If a man or woman is presented with the facts concerning the traffic accident situation and is sold on the idea that there is a certain process that must be followed in order to reduce the number of such accidents, it stands to reason that another convert will be added to the long list of those who are striving scientifically to prevent traffic accidents.

The Two-Fold Challenge

The first part of the two-fold challenge consists of traffic accidents in wartime.

The year that has just passed has brought a great transition in the attention to traffic safety. At the Congress a year ago we were directing all of our attention to the place of traffic safety in maintaining essential transportation and conserving manpower and material for winning the war. That problem is still with us, as important, as challenging as ever.

Traffic accidents killed 16,500 workers and injured 600,000 more during 1942.

Forty-two million man days were lost—man days that might have been spent in building airplane motors, landing barges, or gun sights. Or perhaps they were man days that would have been spent growing food, always a weapon when nations wage war. The cost of traffic accidents in 1942 has been estimated at \$1,600,000,000. That would be a sizeable contribution itself to the nation's war effort could it have been invested in war bonds.

Until the war is won we must continue our attention to transportation of employees and material, to adaptation of traffic control to wartime demands, to preventive maintenance for conserving the steadily diminishing supply of vehicles, and to other measures that are specifically adapted to war conditions.

Traffic Safety in a Post-War World

Along with the United Nations' change from defensive to offensive warfare has come rapidly increasing attention to what we shall face in traffic safety after the war.

Post-war planning programs of many kinds are claiming the attention of many organizations and many interests. None of these, however, offers greater possibility than that of planning for post-war traffic safety. The wartime challenge carries a direct challenge to get ready to combat the possibility of a sudden upsurge of accidents as wartime driving restraints and restrictions are removed.

Traffic patterns will change greatly when industry shifts from wartime to peacetime production and many employees retrace their steps back home from war production centers.

Driving restraints relaxed when war demands are again converted to peace time requirements offer a possibility of serious accident losses as free rein is given the millions of drivers now "chafing at the bit." If we would have a "safety minded" public attitude, then, much must be done about it now.

Millions of servicemen returning to civil life will cause many changes in our daily habits. There may be a serious relaxation in the public interest in traffic safety which has so laboriously been developed.

These and other changes in the industrial, commercial, occupational and financial structure are likely to bring serious problems in traffic safety if they are not foreseen and proper remedial applied.

To replace a comparison I made earlier, if 1941 traffic fatalities were suddenly returned to the norms and highways of this country, the annual accident toll would amount for nearly 20,000 deaths. This of course assumes that our 1941 enforcement program, engineering

efforts and educational programs were immediately returned to their 1941 levels but that we kept our present 5% gain for safety. Without a doubt the new problems presented at the end of the war will tend to change that 5% gain into a loss—unless we do something about it, and do it now.

We dare not wait until these changed problems are upon us before we attempt to identify them and do something about them. Rather, we must consult the accumulated experience of the past, watch carefully for all present indications of probable post-war conditions, and build up our safety defense against possible points of attack against our gains in traffic safety. Most important, we must get ready to take the offensive, so that not only will present gains be held, but infinitely greater progress be made in bringing safety to our people in their everyday lives.

The initiative that the Street and Highway Traffic Section has taken in preparing to meet the post-war traffic accident problem is commendable. It shows again the alertness of the leaders in the field of traffic safety to changing traffic conditions.

Conclusion

This Congress carries a challenge vastly different from any preceding Congress. The job we are in is far from being completed. We must continue to apply special wartime adaptations of the well-known three "E's" to the unfinished job of winning the world's greatest struggle.

The nearer we come to final victory, the nearer the time approaches for the great transition that must take place in applying the same three "E's" to another vastly changed traffic accident problem. We will need then new weapons in addition to our old ones, for attacking the post-war traffic accident problems.

The job of this Congress is to renew the inspiration and information that will continue our present struggle through to completion and also, will prepare us for the struggle after the war to conserve life and avoid suffering the loss from accidents on our streets and highways. Only to this extent can the benefits of peace, which shall have been so dearly bought, be fully realized.

The Pedestrian Accident Problem and Its Solution

By INSPECTOR EDWARD J. FLANAGAN
Cleveland Police Department, Cleveland, Ohio

In the latter part of 1937, the Greater Cleveland Safety Council took an active interest in the pedestrian accident situation and, in cooperation with the police department, embarked on an accident prevention program. The traffic division was revamped to coordinate the program. A traffic engineer was employed and assigned to the traffic division. Surveys were started and an engineering program was on its way. We had no educational program other than a splendid safety educational program which had been in effect a few years before in the public schools. There was no educational program for adults. Consequently, the Bureau of Public Relations was formed within the police department.

The purpose of this Bureau was to create better public relations between the public and the police. This bureau consisted of a captain in charge, a lieutenant, a sergeant and twelve patrolmen. Radio programs and newspaper articles emanated from the bureau, explaining the functions of the police department and pointing out how the average citizen could cooperate. The Public Relations Bureau accepted as their first task, one which is still their most important—a traffic safety educational program for adults.

Providing Enforcement

Traffic authorities and civic minded citizens were divided on the advisability of instituting an ordinance providing enforcement on pedestrians. We debated that question for a year or more. Meanwhile we carried on a pedestrian educational campaign which brought some results but we lacked enforcement with those people who remained obstinate. High police officials argued that the enforcement of a pedestrian ordinance would be difficult and make the police very unpopular and that it would defeat our public relations program.

The proponents of pedestrian enforcement finally won out and it was decided to request the city council to pass the

ordinance. We then intensified the educational program by making more use of the radio and newspapers. Stunts of all kinds were employed that provoked newspaper publicity.

A policeman permitted himself to be wrapped in bandages and disguised with dark glasses. Bearing the sign "I Was A Jaywalker" he was paraded slowly through town in a wheelchair assisted by brother officers who handed out warning cards as they moved along the avenue. This warning card served notice that after July 15th arrest would follow any jaywalking practices. The warning card carried the simplified phraseology of the Ordinance. Police officers boarded street cars and buses with a megaphone requesting passengers to refrain from jaywalking. The police sound car cruised the streets. Signs and placards appeared all over town urging people to walk with care. Crosswalks were repainted and new ones created wherever the distance between intersections was great. Stanchions of the same type as those used to mark safety zones were erected to mark crosswalks, making them easily visible to motorists. Motorists were warned through the same publicity, that failure to yield the right of way to pedestrians lawfully in the crosswalk, would result in arrest.

On the morning of July 15th, we used a picked group of officers who were considered to be the diplomats of the force, and placed them at all intersections in the downtown and main outlying business centers. They gave pedestrian summons to all jaywalkers. The summons notified them to go to the Traffic Division and pay a fine of one dollar or go to court and face trial. Crowds gathered and found great amusement watching others get tickets.

We continued this procedure for a week and then left the job to regular routine police business. Some grumbling was expected by police officials, but surprisingly the public reaction was unanimously in favor of the campaign, which has since

become a permanent phase of law enforcement work. No serious complaints have been registered to date.

We then made house to house personal delivery by police officers, of a pamphlet entitled "Are Your Feet Killing You?" Results were gratifying and we found that where 80 per cent of our traffic accidents in 1940 were pedestrians, it was reduced to 71 per cent in 1942 despite a general increase in all accidents. The year 1942 however, brought some 80,000 additional war workers to the city and we find that they have met with more than their share of accidents.

The selective educational program now includes these newcomers to our city. I have briefly discussed the pedestrian situation in so far as Cleveland is concerned but there are basic fundamentals to deal with when attempting a solution of the pedestrian accident problem. So we must seek the reason for the pedestrian accident problem. Some of these reasons are:

Unfamiliarity With Driving Problems

Recalling that 9 of every 10 adults killed afoot are non-drivers and that most pedestrian fatalities involve persons aged 50 or over who formed their habits of street use when there was no serious motor vehicle problem, it seems evident that unfamiliarity with the problems of driving is a major reason for their accidents.

Relative Invisibility of Pedestrians

The ignorance of many pedestrians of how very close an oncoming car must be at night before the driver sees them, is probably the greatest single cause of night-time accidents. The second greatest cause of night pedestrian accidents is probably the failure of the average motorist to realize that the pedestrian does not have a proper understanding on this important matter, and to adjust his driving to take account of decreased visibility at night.

Effects of Advanced Old Age

The lack of keen vision and hearing added to their less agile pace and lowered alertness of persons of advancing years make them potential accident victims. It is probable that momentary lapses of attention and unawareness of existing haz-

ards are important factors. Unwillingness to readjust walking practices to present traffic conditions is another serious factor.

Other Causes

Unsound walking practices are the predominant factor in pedestrian accidents. We find that a large number of our accidents occur when people cross against the signal. They are victims of the minute saving phobia which urges them to cross against the lights, in the middle of the block and dash from behind parked cars, that's pedestrianicide.

Lack of proper pedestrian facilities is still another factor. It is now being realized that one of the major causes why pedestrians have trouble is that street and traffic facilities have not been properly designed for them. For example, a 90 foot roadway in a secondary business district that has no raised island or refuge for pedestrians. Other examples relate to traffic control signals. A pedestrian is expected to obey a signal even though there is no signal face directly in front of him as he crosses. Most signals fail to advise pedestrians when they should no longer start to cross. At a considerable number of signalized intersections, vehicles are allowed to turn right on the red light, thus adding to the pedestrians' troubles.

Behind it all, major reasons for existing pedestrian ills are the lack of local facts and even lack of proper analysis and use of what data are available. Most communities in the United States haven't known in many respects, what their pedestrian problems were and hence have not been in position to deal with them.

Educational Aids

Major developments in pedestrian conditions in the near future will be largely through better traffic education. There are several important points which should govern such educational programs. The rules for cooperative street use need to be sold to the public. Education should, in large measure, be selective and directed toward areas of major need such as the elders, the non-drivers, the foreign born or under-privileged and against those practices which produce the most pedestrian accidents.

trian accidents. Certain basic understandings must be developed, such for example as the large difference of speed of walking and of moving cars. Each pedestrian needs to realize the many things to which a driver must give attention, so that he will understand that the driver is not looking at him all the time and may not indeed have seen him at all.

Before I conclude may I now anticipate a question which you may ask. That is: "Who put up the money for Cleveland's educational campaign?" Well, this came largely from the Greater Cleveland Safety Council. The City Club has likewise been aiding greatly. The Green Cross Drive of the Safety Council has become an institution with an annual campaign the

same as the Red Cross and operates in approximately the same manner. A dollar charge is made for the individual annual membership. The member receives a campaign button for use while the drive is on and he also receives a membership card and a Green Cross sticker to place on his windshield. We find that people are made safety conscious when they pay their dollar to become members. The proceeds are used in part for supplying materials for traffic safety education. This year we have about 45,000 members. This co-operative effort between the citizens, the police department, safety agencies and industry is the best kind of evidence that safety for the pedestrian as well as the motorist is a community concern and interest.

TUESDAY AFTERNOON SESSION

October 5, 1943

Group Session for City and State Police

Presiding: LT. C. L. LYCAN, Traffic Division, Police Department, Decatur, Ill.

The Mental Attitude of Automobile Drivers Toward Enforcement

By KARL MENNINGER, M.D.
Chief of Staff, The Menninger Clinic, Topeka, Kansas

The thoughts of the man in the car are better known than the psychology of the police officer, whose duty it is to control the sometimes feeble-minded, often illiterate and frequently accident-prone driver. An evolution has taken place in the role of the police officer and correspondingly in his social status.

Many advances have been made in the past ten years over the small town constable and the city political-appointed type of law enforcement officer. State police organizations have the advantages of recent formation, new ideals and higher standards. These standards refer to physical status, intelligence and character.

But intelligence, physique and character are not the only factors to be considered in the selection of competent police officers.

Motives and emotions are just as worthy of consideration as brains and muscle. It is important to know why a man wants to do a certain thing, for example, to become a police officer. It is important to know what concept the young applicant has of the profession he is about to join. What does he hope to do in that profession? What ideals does he have and what sacrifices is he willing to make in order to fill his uniform with competence and pride?

There are always certain secret satisfactions or at least secret hopes connected with any new project. Does the young candidate for police training aspire to this job because he wants to look important? Because he wants to bully people? Because he wants to have an excuse for

This is a paper
presented by
Mr. Menninger
as the talk he gave
at the National
Conference of
Police Chiefs
at Topeka, Kansas
in 1942. It is
being inserted
in this issue
of the Bulletin
of the
Police Chiefs
of America
for the
month of
October, 1943.

remaining away from his wife longer hours? Because he likes firearms and wants to economize on the expense of target practice? Sometimes these secret motives are of determining importance.

Actually we do not know very much about the deep personal motives that impel men to elect any profession and certainly we know little about the motives that actuate prospective police officers. This does not mean, however, that it is impossible to ascertain these motives, to study them and their relation to the successful performance of the work elected, granted a co-operative group of subjects.

From a study of 50-odd police officers of the Kansas State Highway Patrol a number of technical facts of considerable interest were learned. Some inferences were derived, partly from our study of these officers, and partly from a study of other people—persons who have been arrested, and persons who were in need of help for medical reasons.

First of all, the police officer, in choosing his profession, is electing to be a superman. He is saying that he wishes to announce himself as stronger, wiser, calmer, more law abiding and, in general, a better man than the average man. In some of these respects he can prove his point; for example, in physical tests. Frequently, although not always, he can prove his point in respect to intelligence.

But in some of these respects it is hard to prove that one is a superman, hard indeed, to be a superman. Nevertheless, a superman is exactly what a police officer has to be. Why?

Must Control Impulses

Because he has to be able to control completely his own criminal impulses! This few people can really do.

We have to remember that all of the radios, bathtubs, neckties, cosmetics and automobiles in the world—all the things that we call civilization—constitute a very thin veneer over the basic biological nature of people who drive the automobiles and use the cosmetics, listen to the radios, do the arresting, etc. Every human being, whether he is a Japanese soldier, a Gestapo thug, a quiet little groceryman, a priest, a poet, a drunken bum, a president of the WCTU, a racketeer or a police

officer, has aggressive, destructive, lawless, cruel, selfish, ruthless tendencies within him which are capable of coming to the surface under the right conditions.

I call them tendencies to indicate that while they may rarely come to full expression, they are always there. Civilization is nothing other than the development of a program for controlling these aggressive impulses. Our entire lives are spent in trying to master and refrain from expressing them, and in helping others to do likewise. We are constantly losing partial control of these tendencies and requiring help from our neighbors or our police officers or our wives.

Now and then some individual gets so confused that he begins to defend the principle that he has a right to be all the things that society and civilization have agreed to prohibit. He may call it rugged individualism, he may call it expressing himself, and he may call it taking the law into his own hands.

However, thoughtful people know that in the long run, no matter how it is glorified or justified or legalized, lawlessness does not work. And in an effort to banish it from our society and banish it from our lives, we have developed a lot of things that help.

One of these aids to the control of aggressiveness is good manners. Now and then a police officer gets the hard-boiled sergeant's idea that good manners are not very important. We know he is mistaken. After all, the customs and laws of the country are merely some rules about good manners. It simply is not good manners to take another fellow's property. It used to be, but it isn't now, and it is written down in a book so it is called a law.

Good manners help. So does education. So does religion. So does work and play. In work one has to destroy something: it is certainly better to cut weeds than to cut throats, and it takes the same kind of energy, psychological and physical. It is better to beat a golf ball around the links or to beat someone at tennis than to use up this same energy in a fist fight.

People Need Umpires

To this list of some things that help in the control of the destructive impulses,

I give a prominent place to the function of the "umpires." This is my conception of police officers of the new type—an umpire or linesman, whose primary duty is not to arrest people but to enable people to avoid the necessity of being arrested. People need policemen.

People are most comfortable when they feel there are rules and regulations regarding such things as driving, for example, which exists for a reason (the reason of safety, naturally) and from which it is not the privilege of any individual to break.

They are more comfortable when they feel that such rules and regulations are enforced by umpires who are not inverted footpads but who are friends of the driver, not of one driver but of all drivers.

If such a policeman must make arrests, he does it in a very different way from the predatory sadist, the small-man-in-big-blue pants who exploits his authority to the discomfort of an occasional offender but who in the long run encourages law-breaking.

But to have this attitude, a policeman has to be a superman. Policemen must master their own aggressive, destructive, sadistic impulses, before they can efficiently master them in others. A police officer becomes in fact a representation of the conscience. It may either be a conscience of ideals or a conscience of vengeance. The police officer has many temptations, and one of them is to use his power and authority vengefully, and hence destructively, instead of constructively. The possession of authority is a great burden. Few can bear it and still fewer can be trusted to employ it constructively.

The man who has secret inferiority feelings, the man who lacks self-respect, the man with an overstrong, vengeful conscience, the man with such a burning resentment toward the authority he has had to submit to—such a man will become a bad police officer, a man who promotes public danger rather than public safety. It is of such men that prison bullies, sadistic third-degree inflictors, concentration camp torturers and corrupt wardens are made. Such individuals, given the authority of the law, become the de-

stroyers of the law. They think that to insure respect, they must instill fear.

Every police officer has to remember that people are not only animals, they are also children. No matter how old they are, they are always in certain respects children. This is one reason why the man behind the wheel in a high powered automobile is such a different individual from that same man as a pedestrian. A child is small and weak and he knows it and he thinks when he grows up he will be big and strong, but when we grow up we find we are not very big and not so very strong compared to all the forces in the world.

Inferiority Complex

Hence, all people continue to suffer from a feeling of inferiority. If one gives such a person a 90-horsepower engine that will run many times faster than the most vicious step mother or the most irate uncle or the most vehement father—give such a grown up child a machine like this and what does he care for little blue-coated policemen or little printed signs that say "slow," or little marks in a book that say "30 miles an hour." The child in him is always tempted to forget the rules and penalties and all the realities of social existence.

But the police officer has to remember them and has to remember the child in every man and the beast in every man—even in himself. If the child or the beast in the man has become dominant, the police officer can no longer stand as a symbol, a reminder, a warning.

He must act. Empowered by his authority, he must oppose the irrational childishness or the ruthless beastliness of the driver. He must put himself on the side of the driver's better self, his adult self, his mature self. And the police officer should never forget there is such a self.

Even the worst man has his ideals. It is on the side of these ideals, on the side of this offender's intelligence, conscience, knowledge and better judgment, that the policeman must align himself. This is the part of the offender which must not be frightened by the policeman but strengthened. It needs help from the police officer in suppressing the rebellious, ebullient element of the personality.

How shall we get supermen of this type into the police profession? How can we get men who are big enough and balanced enough and perspicacious enough to carry the necessary authority without being bullies?

Need Leaders With Vision

First of all, by clearly defining for policemen, for officers, for law-enforcement officials of all kinds, the definite psychological requirements of the modern police officer. Then we can look first for leaders who have caught this vision and can impart it to others.

But these men can rise up and new men can learn the way only if systematic educational programs are provided for the training of police officers not only in marksmanship but in psychology.

A further way in which such men can be obtained is by making the monetary compensation of police officers appropriate to the real requirements of the job. It seems absurd to expect men of superior attainments to be attracted by positions which pay sub-standard salaries and offer limited opportunities for advancement. No honest man who goes into police work expects to get rich but he should expect, (although I am afraid he cannot now ex-

pect it) to have economic security, credit for creditable work and an opportunity for advancement on the basis of merit.

Toward better compensation, there is needed an increased recognition on the part of the public of the principles of safety policing which I have outlined.

But for the public to appreciate it requires that we appreciate ourselves. Nothing is more human than the plaintive wail that no one appreciates us. Every psychiatrist hears it every day from almost every patient as well as his secretary, nurses, colleagues, and to say nothing of his own complaints to his wife and his friends.

It is true that no one is fully appreciated by others but to gain even some of the recognition one deserves, it is necessary to appreciate one's self, not in a false, misleading way, but in a way of true appraisal.

When police officers come to have a high opinion of themselves, recognize that they are leaders in the community, the conscience of the community—umpires in the great game of semi-domesticated human beings trying to live peaceably with one another in a complicated world, they will inspire similar respect, support and admiration from the public at large.

TUESDAY AFTERNOON SESSION

October 5, 1943

Group Session for Traffic Court Judges and Prosecutors

Wartime Problems of the Traffic Court

By JUDGE EARLE W. FROST

Municipal Court, Kansas City, Mo., and Chairman of Committee on Traffic Courts of the National Safety Council

The all out wartime objectives of conservation of manpower, war material and transportation have been seriously threatened by the continued high general traffic toll, and particularly by certain major wartime traffic problems resulting from increased frequency of traffic violations by defense workers, members of the armed services, and juvenile and parental delinquents.

Defense Workers

Defense workers engaged in essential war work are responsible for a disproportionately large percentage of traffic violations. This may be due to the great influx of such drivers into metropolitan areas, many of whom are wholly inexperienced in city driving and unfamiliar with even standard driving regulations, and

see V.4 15700

Psychiatric Aspects of Highway Traffic Law Enforcement

KANSAS HIGHWAY PATROL

Reprint from the

"Bulletin of the Menninger Clinic
Vol. 9, No. 1, January, 1945"

PSYCHIATRIC ASPECTS OF HIGHWAY TRAFFIC LAW ENFORCEMENT*

By KARL MENNINGER, M. D.

It is a very impressive experience for one like myself, unacquainted with the extent to which the program of safety planning has been developed, to attend such a Congress and Exposition as this, filling three large hotels with a week of intensive programs. The growth of interest in the important problems associated with the general idea of "safety" is indeed enheartening.

In strolling about through these miles of booths, reading the educational placards and examining the mechanical devices for the prevention of accidents, I was struck by the fact that the emphasis seems to be so preponderantly on the side of mechanical prevention, as if the psychological factor in safety insurance were something only incidental and relatively negligible. I realize that this is partly due to the fact that the psychological factors in accident prevention are not something which lend themselves to commercial displays. But this would not explain the absence of topics on the program dealing with the psychological factors.

I shall feel the more justified, for this reason, in limiting myself exclusively to the psychological factor in this presentation, particularly as it applies to the problem of highway safety. One could discuss this from many standpoints and, hence, I must make a further selection within this selection. Many studies have been made, for example, of the psychology of automobile drivers.†

We know from such studies that drivers are often feeble-minded, often illiterate, often totally unskilled in driving, often defective in vision, sometimes physically or mentally ill, and occasionally accident-prone.‡ When arrested for violations they are occasionally belligerent, defiant, supercilious, and uncoöperative, but always scared! The psychology of the man in the car however is better known to us than the psychology of the man outside the car, the

* Presented at the thirty-second National Safety Congress and exposition, State and Highway Traffic Section, Hotel Sherman, Chicago, Illinois, October 8, 1942.

† A much shorter version of this article omitting some scientific data was published in *Public Safety*, August, 1944.

‡ One of the best of these is that of Dr. Lowell Saling, Director of the Psychopathic Clinic of the Recorder's Court of Detroit, who, with his numerous assistant physicians and psychologists, has published many articles on the subject.

§ Regarding this latter category, see the discussion of purposive accidents in the author's *Man Against Himself*, N. Y., Harcourt, Brace & Co., 1936.

police officer whose duty it is to control these sometimes feeble-minded, often illiterate and frequently accident prone drivers.

It is unnecessary for me to tell this audience that an evolution has taken place in the career and role of the policeman, and in his social status. I am not here to make invidious comparisons, but we all know that many advances have been made in the past ten years over the small town constable or the big city political appointee type of law enforcement officer. We know that the state police organizations have had the advantage of recent formation, new ideals and higher standards.

Time was when the physical requirements of the policeman were the chief considerations in his selection. I recall an amusing discovery of one of my colleagues about twenty-five years ago. He had a theory that crime could be directly related to feeble-mindedness. He tested all the prisoners in a certain large state Penitentiary and the general intelligence average was indeed low. But to check his findings, he then tested all of the guards taking care of these prisoners and also a group of policemen, and he found the average intelligence of the men in these groups to be even lower. So he gave up his theory, but he started some thinking on the part of law enforcement people.

The state police of today constitute a superior group, not only physically but in point of intelligence. Intelligence and physique, however, are not the only factors in the selection of competent police officers. In modern psychiatric thinking we are no less concerned with emotional factors and motives than with brains and muscles. We think it is important to know, for example, why a man wants to become a police officer. We think it is important to know what concept the young applicant has of the profession he is about to join, what he hopes to do, what ideals he has for himself and his profession, and what sacrifices he is willing to make in order to wear his uniform with competence and pride. Then again we know that there are always secret satisfactions or at least secret hopes connected with any new project. Does the young candidate for police training aspire to this job because he wants to look important? Because he wants to bully people? Because he wants to have an excuse for remaining away from his wife longer hours? Because he likes fire-arms and wants to economize on the expense of target practice? Sometimes these secret motives are of determining importance.

The fact of the matter is that we really do not know very much about the motives that impel men to elect any profession or field of

work. Few of us in this room today would be satisfied with his own explanation of the reasons why he chose the work he is now doing. This does not mean, however, that it is impossible to ascertain these motives and to study them and their relation to the successful performance of the work elected; granted a cooperative group of subjects.

During the past year the officers of the Kansas State Highway Patrol (an organization of which I have the honor to be a member), under the direction of Colonel Will Zurbucken, have cooperated with the medical and psychological staffs of the Menninger Clinic in a rather elaborate study. One after another of these gentlemen presented himself at our Clinic, gave us a history of his life, interviewed one of our psychiatrists, took an intelligence test and gave his reactions to a number of other technical psychological tests—the Rorschach, the B.R.L. Sorting Test, the Thematic Apperception Test, and others. As a result of these studies we were able to draw some conclusions about the personality structure of a group of police officers, all of whom had been carefully selected and carefully trained, and all of whom were functioning in a superior manner. From this study of fifty-four police officers, we learned many technical facts of considerable interest. Through the kindness of Dr. David Rapaport, Dr. Merton Gill and Mr. Roy Schafer, who made most of the studies, I can report briefly what some of these findings were, and what they showed as to the motivation of the patrolmen.

First of all, 32 of the 54 (60%) were found to be well adjusted individuals, 17 (31%) showed some maladjustment features, and only 5 (9%) were definitely maladjusted. Interesting light is shed upon the nature of their adjustments to life if we consider the degree and kind of aggressiveness of these patrolmen as revealed by one of the psychological tests (the Szondi test). In general we can say that the patrolman appears to be a man ready to be aggressive in a controlled way. Clinical investigation revealed the parallel fact that these men liked to be active and to move around. They are good fathers and husbands when at home for a short time but get restless and anxious if they stay home long. The patrolmen who are under a greater tension than the well-adjusted ones, attempt in general to inhibit these aggressions with some degree of resulting maladjustment.

For the good patrolman, curbing other people's aggressions would seem to be an outlet for his own. However, if he is so aggressive that the patrol life itself does not provide sufficient outlet for his

aggressions, he is apt to either infringe on the regulations or to inhibit his aggressions and become or remain maladjusted.

Another datum established by this investigation reflects the change in the function of the patrol in the last 20 years. Twenty-one officers (30%) were of superior (I.Q. above 119) or very superior intelligence, 18 (33%) of "bright normal" intelligence (I.Q. between 111 and 119). Fourteen (26%) of high average intelligence, (I.Q. between 101 and 110) and only one (2%) of low average intelligence as measured by the Bellevue-Wechsler Intelligence Scale. One would expect, according to the old concepts, to find that patrolmen are outstanding in their bodily coordination of movements and in manipulations, while relatively unarticulate in their verbal facility. Actually however, the opposite proves to be the case. Statistical tests indicated that the patrolmen's verbal facility and thinking are definitely superior to their manipulative coordinating performance. This shows a radical change from the concept expressed in the "arm-of-the-law," to that of the officer whose task is mainly to think and talk to avoid using force. This fact is the more striking since better than half of the men come from a rural background which in itself would favor manipulative over verbal facility.

The manifold considerations open here for selection of and training for the job of patrolmen is hereby merely touched upon. Because we believe that the cultivation of hobbies represents a constructive adjuvant to good adjustment, it is interesting to note that only eight of the fifty-four had no hobbies; fourteen of them made collections of guns, pipes or other articles; thirty were fond of hunting and fishing; ten were interested in various forms of athletics; four in farming, eight in mechanical shop work; four in music; and a number of others in such miscellaneous fields as navigation, meteorology, photography and public speaking.

The main point is that the police officer in choosing his profession asserts that he feels sufficiently in control of his own aggressions to be able to assist others to control theirs. He elects to be regarded as a superman and in reality, *has* to be one. He asserts (by implication) in applying for admission to the Highway Patrol, that he believes himself to be stronger, wiser, calmer, more law abiding, and, in general, better adjusted than the average citizen.

In the physical tests, these men must prove their point in order to be accepted. The psychological tests reported show that usually, although not always, the patrolman proves his point insofar as intelligence and life adjustment are concerned.

Now it is very difficult to be a superman at all times and in all respects and yet that is exactly what the police officer has to be and must continue to be. It is very important that he realize this and realize also the reasons why it is necessary. Hence, in The Kansas State Highway Patrol school for prospective officers held under the direction of Colonel Zurbucken and Major Rutherford, we explain it and emphasize it as an important part of the preliminary training. What I (as one of the lecturers) tell the men is something like the material of the next few paragraphs.

From time to time we have to remind ourselves that all of the radios and bathtubs and neckties and cosmetics and automobiles in the world—all the things that we call civilization, constitute a very thin veneer over the basic biological nature of the people who drive the automobiles and use the cosmetics, listen to the radios, do the arresting, etc. Every human being, whether he is a Japanese soldier, a Gestapo thug, a quiet little groceryman, a Catholic priest, a poet, a drunkard, a racketeer or a police officer, has aggressive, destructive, lawless, cruel, selfish, ruthless tendencies within him which are capable of coming to the surface under the right conditions. I call them *tendencies* in order to indicate that whether or not they ever come to full expression, they are always there. They are instinctive, they are persistent, they never die out so long as life lasts and they are capable in anyone of expansion and exploitation.

Civilization is nothing other than the development of a program for controlling these aggressive impulses. Our entire lives are spent in trying to master them and to refrain from expressing them inappropriately and in helping others to do likewise. We are constantly losing partial control of these tendencies and requiring help from our neighbors or our police officers or our wives. Now and then some individual gets so confused that he begins to defend the principle that he has a right to let them go, to do all the things that society and civilization have agreed to prohibit. He may call it "blowing his top" or "losing his head"; he may call it rugged individualism, and he may call it expressing his personality, and he may call it taking the law into his own hands. But there can be no doubt as to what it is; it is just as damning as liquor on one's breath or stolen goods in one's hands, and when such an individual has sobered down he will admit it if he is not psychotic. It is criminality.

Indeed this is the very thing that World War II is all about. For reasons that are partially understandable but totally unacceptable to us, the Germans and Japanese have renounced the attempt to

control these aggressive, destructive, cruel impulses. They have, on the other hand, glorified the expression of brutality and cruelty. They have evolved a curious doctrine of pseudomascularity according to which one is only a man if he acts like a beast.

Meanwhile most of the thoughtful people of the earth know that in the long run, no matter how it is glorified or justified or legalised, lawlessness does not work. And in an effort to banish it from our society and banish it from our own lives, we have developed a lot of things that help.

One of these is good manners. After all, the customs and laws of the country are merely some rules about good manners. It simply is not good manners to take another fellow's property. It used to be, but it isn't now, and it is written down in a book so it is called a law. It is not good manners to take the food off another man's plate. That isn't written down in the books so it isn't a law but it is the same principle. Now and then a police officer gets the hard-boiled sergeant's idea that good manners are not very important. He is mistaken.

Good manners help. So does education. So does religion. Especially, I believe, do work and play help to control the aggressiveness in us—we can work it off and play it off. In work one has to destroy something; it is certainly better to cut weeds than to cut throats, and it takes the same kind of energy, psychological and physical. It is better to beat a golf ball around the links or to beat someone at tennis than to use up this same energy in a fist fight.

Last of all, in my list of things that help to control destructive impulses, I would like to put "the umpires." This is my conception of the police officer of the new type—an umpire or linesman whose primary duty is not to arrest people but to enable people to avoid the necessity of being arrested. People need policemen. People are most comfortable when they can have the feeling that there are rules and regulations regarding such things as driving, for example, which exist for a reason (the reason of safety, naturally) and from which it is not the privilege of any individual to take exception; they are more comfortable when they feel that such rules and regulations are enforced by umpires or referees. These must be honest officials, not wolves, not bullies, not inverted footpads who want to sneak up on someone or get something on somebody, but friends of the driver, not of one driver but of all drivers. People want to feel that these policemen are persons of friendly authority like the doctors who say you may do this and you may not do that; you have been making

a mistake; it's better to do this. If such a policeman must make an arrest, he does it in a very different way from the predatory sadist, the small-man-in-big-blue-pants who exploits his authority to the discomfiture of an occasional offender but who in the long run encourages law breaking and the defiance of and disrespect for the guardians of public safety. People like this kind of supervision; a policeman who has this attitude furthers public safety and makes people love the policeman instead of fearing and hating him. Those whom we love we strive to please, not out of fear but out of that very love—call it respect, admiration or anything else you wish, but it really is love.

The police officer has many temptations, and one of them is to use his power and authority vengefully, and hence destructively, instead of constructively. The possession of authority is a great burden and there are few who can bear it, and still fewer who can be trusted to employ it only constructively. The man who has secret feelings of inferiority, the man who lacks self-respect, the man with an over-strong, vengeful conscience, the man with a burning resentment toward the authority to which he has had to submit, such men will become bad police officers, officers who promote public danger rather than public safety. It is of such men that prison bullies, sadistic third degree inflictors, concentration camp torturers and corrupt wardens are made. Such individuals, given the authority of the law, become the destroyers of the law. They think that to insure respect, they must breed fear. But, as a very wise old police officer once remarked to me, the bullying policeman is always a scared policeman. "If you are not scared yourself," he said, "you won't try to scare other people." I felt as if I had learned a great lesson from this man who had never studied any psychology in books. I told him I thought he knew more about it than I did, and he said, very modestly, "No, but I have learned a few things the hard way, and I'm glad you are telling these young fellows something they don't realize the truth of as well as I do."

The man behind the wheel of a high-powered automobile is a different individual from that same man as a pedestrian. A child is small and weak and he knows it and he thinks that when he grows up he will be big and strong, but when he does he discovers that he is not so very big after all and not so very strong, when compared to all the forces of the world. Hence all people who are not outright feeble-minded continue to suffer from a feeling of inferiority all their lives. For some of them it remains a rankling sore; they are con-

stantly impelled to deny it or refute it. Give such a person a ninety horsepower engine that will run many times faster than the most vicious stepmother or the most irate uncle or the most vehement father, give such a grownup child a machine like this and why should he care any more in his secret soul for little blue-coated policemen, or little printed signs that say "Slow!" or little marks in a book that say, "Thirty miles an hour limit"?

If the child or the beast has become dominant in a man, the police officer can no longer stand as a symbol, a reminder, a warning. He must act. Empowered by his authority, he must oppose the irrational childishness or the ruthless beastliness of the driver. He must put himself on the side of the driver's better self, his adult self, his mature self. The police officer should never forget that there is such a self. Sometimes we talk so much about the bad side of human beings that we forget to mention the good side. Even the worst man has his ideals. It is on the side of these ideals, on the side of the offender's intelligence and conscience and knowledge and better judgment, that the policeman must align himself. This is the part of the offender which must not be frightened but strengthened by the policeman. It needs help from the police officer in order to suppress the rebellious, ebullient elements of the personality.

This explains the importance, then, not only of intelligence and character in the police officer but also of technique. To be sure, certain superior personality types come by the right techniques naturally, but for most of us they have to be learned, to be thought about, to be practiced. In no other way can fear, hatred, defiance and ultimate defeat of the police officer be prevented. It is not sentimental but highly practical to insist that the public's fear of the policeman be replaced with affection and trust.

How shall we get supermen of this type into the police profession? How can we get men who are big enough and sufficiently well-balanced and perspicacious to be entrusted with the necessary authority without being bullies, to be fathers and big brothers and friends to drivers who, as we said at the beginning, are sometimes feeble-minded, sometimes illiterate, sometimes accident prone, sometimes sick, and very, very often childish and forgetful? How can we find policemen who can measure up to their own ideals and standards of such supermen?

I think we can do this—first, by clearly defining for policemen, for officers, for law enforcement officials of all kinds, the definite psychological requirements of the modern police officer, perhaps something along the lines of the foregoing.

Secondly, we can look for more leaders who have themselves caught this vision and can impart it to others—such men as August Vollmer and Neil Anderson of California, Chief O. W. Wilson formerly of Kansas, Colonel Zurbucken and his associate, Major Rutherford—men like these I am sure are not so few as they are merely inconspicuous and unknown to me personally. You, in this field, know who they are and where they are and if you give them the encouragement they deserve you will find other young men rising up to follow in their footsteps.

But these men can only rise up and new men can only be expected to learn the right ways if systematic educational programs are provided for the training of police officers not only in marksmanship but in psychology.

A fourth way in which such men can be obtained is by making the monetary compensation of police officers commensurate with the real requirements of the job. It seems absurd on the face of it to expect men of superior attainments to be attracted to positions which pay substandard salaries and offer limited opportunities for advancement. No honest man who goes into police work expects to get rich but he should expect economic security, credit for creditable work and an opportunity for advancement on the basis of merit. These things have all been said before and I am afraid they will sound very hollow to some of you who have hoped and worked for them so long. They are essentials just the same—essentials which it is in the interests of public safety to insist upon and extend.

Finally, in order to get the type of men into police work that we have described, we need increasing recognition on the part of the public of the principles of safety policing. Nothing is more human than the plaintive wail that no one appreciates us. Every psychiatrist hears it every day from almost every patient. It is quite true that no one is fully appreciated by others. But to gain the recognition that one deserves it is necessary, first of all, to appreciate oneself, not in a vain way but in a manner of true appraisal. When police officers come to have a higher opinion of themselves, recognize that they are leaders in the community (the conscience of the community, as it were), umpires in the great game of semi-domesticated human beings trying to live peaceably with one another in a complicated world, they will inspire similar respect, support and admiration from the public at large, and men of the highest type will be attracted to this brave, fine profession.

PRINTED BY KANSAS STATE PRINTING PLANT
LEONARD HOGGALL, STATE PRINTER
TOPEKA, 1948
20-4341

of whom are too irresponsible to be dealt with as automobiles.

Among the special enforcement and control problems arising out of these violations is the provision of court sessions and trial of workers to avoid conflict with work schedules. This problem requires staggered and varied traffic sessions. The sessions must be staggered to meet the different work shifts. Traffic cases must be segregated, continuances reduced to a minimum, and trials expedited.

In order to provide appropriate arrest and booking procedure to avoid delay and detention of workers, arrangements should be made between war industries and enforcement officials will permit use of ticket summonses for speeding and minor violations and offenders bonds normally required because of non-residence of workers within jurisdictional boundaries. Bonds required for more serious violations should be moderate in amount and booking procedures should be simplified. This is, of course, primarily a problem of enforcement officials.

The imposition of fines rather than sentences of confinement, and installment payment of fines in cases where defendants cannot pay their fines in full, provide the best solution to the problem of satisfying penalties without conflict with working hours.

Unsafe Drivers and Equipment

Strict attention should be given to the elimination of unsafe drivers, particularly drivers carrying other passengers for hire. If we had adequate examinations and requirements for the issuance of license, we would not have to deal with this to the extent that is necessary today because of the woefully inadequate license requirements. Until such conditions are changed, about all that can be done is to eliminate the unsafe drivers after violations have occurred by suspension or revocation of licenses.

Unsafe equipment within defense plants should be immediately eliminated or replaced on discovery. However, little, if anything, has been done to eliminate unsafe automobiles carrying the same workers to and from work. This undoubtedly has resulted in many accidents and loss of much manpower because of injuries. One of

the excuses assigned for failure to take preventive measures has been that the task is too great and might result in some instances in eliminating the transportation means of a majority of the workers.

Accordingly, again, about all that can be done to solve the problem is to impose appropriate fines and penalties in the event of violations and to impound the equipment until made safe, after violations have occurred.

A definite traffic safety educational program should be provided for workers by defense industries. Such education is particularly necessary for workers involved in major traffic violations, and the courts should utilize court room education and require compulsory traffic school attendance for such violators.

A sound analysis of the enforcement problem would indicate that war workers deserve no special consideration from the courts of law or law enforcement officials, other than the measures before stated, and that war workers must expect to pay the full penalty for traffic violations. In fact, these violations are so damaging to the war effort, resulting in the aggregate is much absenteeism and great loss of manpower that, if anything, more drastic penalties should be imposed on war workers to bring them to a realization of the seriousness of such violations.

Violations of Service Men

In cases of traffic violations of members of the military services, the question of the legal jurisdiction of civil traffic courts arises. In wartime, although both the civil and military courts have concurrent jurisdiction, the military courts have superior or paramount jurisdiction, and unless this jurisdiction is waived by the military authorities and consent given to trial in the civil court, the civil authorities can only detain members of the military services and hold them for the military authorities.

It has been established that any consent to civil trial for military personnel must be made by the commanding officer of the individual to be tried. The accused person does not have the right to select the tribunal by which he is to be tried.

Close contact and cooperation should

some of whom are too irresponsible to be trusted with an automobile.

Among the special enforcement and court problems arising out of these violations is the provision of court sessions for trial of workers to avoid conflict with work schedules. This problem requires more and varied traffic sessions. The sessions must be staggered to meet the different work shifts. Traffic cases must be segregated, continuances reduced to a minimum, and trials expedited.

In order to provide appropriate arrest and booking procedure to avoid delay and detention of workers, arrangements made between war industries and enforcement officials will permit use of ticket summonses for speeding and minor violations and eliminate bonds normally required because of non-residence of workers within jurisdictional boundaries. Bonds required for more serious violations should be moderate in amount and booking procedures should be simplified. This is, of course, primarily a problem of law enforcement officials.

The imposition of fines rather than sentences of confinement, and installment payment of fines in cases where defendants cannot pay their fines in full, provide the best solution to the problem of satisfying penalties without conflict with working hours.

Unsafe Drivers and Equipment

Strict attention should be given to the elimination of unsafe drivers, particularly drivers carrying other passengers for hire. If we had adequate examinations and requirements for the issuance of license, we would not have to deal with this to the extent that is necessary today because of the woefully inadequate license requirements. Until such conditions are changed, about all that can be done is to eliminate the unsafe drivers after violations have occurred by suspension or revocation of licenses.

Unsafe equipment within defense plants is immediately eliminated or replaced on discovery. However, little, if anything, has been done to eliminate unsafe automobiles carrying the same workers to and from work. This undoubtedly has resulted in many accidents and loss of much manpower because of injuries. One of

the excuses assigned for failure to take preventive measures has been that the task is too great and might result in some instances in eliminating the transportation means of a majority of the workers.

Accordingly, again, about all that can be done to solve the problem is to impose appropriate fines and penalties in the event of violations and to impound the equipment until made safe, after violations have occurred.

A definite traffic safety educational program should be provided for workers by defense industries. Such education is particularly necessary for workers involved in major traffic violations, and the courts should utilize court room education and require compulsory traffic school attendance for such violators.

A sound analysis of the enforcement problem would indicate that war workers deserve no special consideration from the courts of law or law enforcement officials, other than the measures before stated, and that war workers must expect to pay the full penalty for traffic violations. In fact, these violations are so damaging to the war effort, resulting in the aggregate in much absenteeism and great loss of manpower that, if anything, more drastic penalties should be imposed on war workers to bring them to a realization of the seriousness of such violations.

Violations of Service Men

In cases of traffic violations of members of the military services, the question of the legal jurisdiction of civil traffic courts arises. In wartime, although both the civil and military courts have concurrent jurisdiction, the military courts have superior or paramount jurisdiction, and unless this jurisdiction is waived by the military authorities and consent given to trial in the civil court, the civil authorities can only detain members of the military services and hold them for the military authorities.

It has been established that any consent to civil trial for military personnel must be made by the commanding officer of the individual to be tried. The accused person does not have the right to select the tribunal by which he is to be tried.

Close contact and cooperation should

be established between the civil and military law enforcement authorities. Through such cooperation, arrangements can be made for the handling and detention of military personnel so as to permit trial in the civil courts for minor offenses or to facilitate transfer to military authorities for trial. It is imperative, of course, that the civil authorities furnish military authorities complete reports on violations and competent evidence to sustain the charges. The civil authorities should insist on reports of the final disposition of cases turned over to the military to complete their records. The military courts generally can be relied upon to impose more severe punishment than civil courts, which probably accounts for the apparent desire of many members of the military service to have their traffic violations tried in the civil courts.

Juvenile and Parental Delinquency

Nationwide juvenile and parental delinquency is the latest wartime problem, and is a problem that indirectly affects traffic safety by contributing to the in-

creased frequency of accidents involving drivers and pedestrians of this type. This is the natural result of the increased number of such drivers and pedestrians on the streets and highways at night and their free use of intoxicants. Traffic courts must cooperate with other agencies to solve this problem. The manner in which these delinquents indirectly affect traffic accidents should be kept in mind in handling cases involving such individuals, whether the cases are for traffic or non-traffic violations.

Reconciling apparently opposing factors is necessary in handling traffic court problems involving war workers and members of the armed services. Both must be kept on the job. On the other hand, the ideal and practice of fair and impartial traffic law administration and all that has been accomplished in the cause of traffic safety must be preserved, and where necessary, drastic and severe measures must be applied to stop the carelessness that is seriously impairing our war effort.

TUESDAY AFTERNOON SESSION

October 5, 1943

Group Session on Public Safety Education

Round Table Discussion on Safety Education Tactics in Wartime

The first session for the public education group was a round-table lead by Leo R. Welch of New Jersey. Points discussed in this session stressed the need for reaching the groups of people who were causing accidents and yet had not been reached under previous programs.

A wartime program for safety education must be based on the following points: (a) public relations, (b) public education, (c) training, (d) local cooperation, (e) research and planning.

Discussion of films for public education dealt with the matter of whether the most horrible pictures should be shown, together with the relative merits of various films available.

There was discussion on how to make a safety talk more interesting and the matter of using stunts, dramatization and comedy were all given considerable debate. In the use of films it was agreed that students should be given an outline of the

film first in order that it may not be considered purely entertainment.

While fitting public education programs to the present times, it was emphasized that some influences will be very valuable later on. The training of military personnel, civilians, motor corps members and high school students under the pre-induction training plan had met with unusual success in several states.

Another adjunct of safety education which should not be under-estimated is the development of local cooperation. Usually it is easy to obtain and often the success of the entire program is dependent upon this assistance.

Another suggestion was that serious consideration must be given now to the possible necessity for the re-examination of drivers after the war when mental as well as physical defects will pose a definite problem to the motor vehicle administrator.

TUESDAY EVENING SESSION

October 5, 1943

Joint Session With Commercial Vehicle and Transit Sections and
Institute of Traffic Engineers

Women in Transportation

By DOROTHY SELLS

Chief, Personnel Supply Section, Division of Transport Personnel,
Office of Defense Transportation, Washington, D. C.

There are now approximately 200,000 women employed in all branches of domestic transportation—rail, water, air, motor, street car and pipeline. Though this number represents only about 8 per cent of the total employment in the transportation field, it means that the number of women engaged in this industry, which has always been strictly a man's industry, has doubled within a period of two years. More than that it means that half as many women again, and 100,000 is a conservative estimate, must be added to transportation's labor force within the next year, if the necessary war services are to be adequately maintained.

Without further words or figures it becomes obvious to you who are so well acquainted with industrial techniques and problems, that such an influx of relatively inexperienced employees into a group of highly skilled industries—industries involving the safety of millions of human beings—must cause considerable dislocation. If transportation had to absorb 200,000 green men within a short period of peace time, it would be considered a big job.

What are these pioneer women in transportation doing, you will want to know. Most of you have seen them, white or colored, driving city buses, taxi cabs, street cars and delivery trucks; selling railway, airway and bus tickets; checking parcels; loading airplanes; working on railroad tracks; cleaning passenger stations and coaches; washing and servicing trucks; even serving in dining cars. Behind the scenes in the offices of railways, airways, intercity bus lines, motor truck and local transit companies thousands of

other women are also substituting for men. Increasingly women are being employed to perform mechanical and electrical work in railroad shops, in the hangars of commercial airlines and in automotive repair and maintenance shops. Some are telegraphers and telephoners; a few are dispatchers on railroads. Others receive and send teletype messages, plot weather maps, or guide airplanes on to the landing fields. Still another considerable group of women do inspection and instrument repair work requiring fine measurements and a high degree of accuracy.

Among these and a host of other jobs which I have not specified are many involving responsibility for the lives of their fellow workers and the lives of the public, to say nothing of their own.

Now what is the impact of women transportation workers upon accidents? Does experience substantiate the common belief that women as a group are poor drivers and that in almost every occupation they are accident-prone?

I regret that I am unable to give you any conclusive figures that will settle this matter of women and accidents forever. Neither in Great Britain nor the United States is there, to my knowledge, any statistical material that answers the question either way. For one thing women have been employed for too short a time in most of the hazardous jobs to warrant definite conclusions, and for another, both the statisticians and the employers seem to shy away from this moot subject. What can be said about women and accidents must, therefore, claim no more authenticity than general impressions and specific instances.

First, what do we know concerning accidents of women workers in Great Britain, a country where a larger proportion of women has worked longer in industry than in the United States? According to the annual report of the Chief Inspector of Factories for 1941, reportable accidents (fatal and non-fatal) to adult male workers had increased 42 per cent in 1941 over 1938 while it had increased 192 per cent for adult female workers. This staggering increase in the percentage of accidents to women is mainly attributed, however, to the large increase in factory employment due to war and to a marked increase in the number of women employed in dangerous occupations and in dangerous industries. Since the hours worked by the injured persons in these years are not known, the frequency rate is not given. Consequently these figures do not tell us much. The available figures in the report do show, however, that if all the accidents were equally shared, one adult man in 25 would be liable to an accident each year at the 1938 rate and one in 20 at the 1941 rate, while the rate for women in 1938 would be one in 105 and in 1941 one in 56. That sounds more encouraging for the women. Moreover, figures showing the percentage increase in accidents to women for a few specified industries notorious as "accident producers," add weight to the conclusion that the overall figure is heavily influenced by the fact that women are participating in a much larger number of the dangerous processes in industry.

Specifically with regard to the accidents of women in transportation, I can only state that my general impression from visiting a number of companies in the different branches of transportation in Great Britain during 1942 and 1943, and interviewing the supervisors of women workers, was that the actual facts failed to warrant the statement which I frequently heard: "women have a lot of accidents." When chapter and verse were called for, it usually turned out that the accidents cited amounted to nothing worse than a bruise or a cut or other relatively minor injury.

Up to the present, a proportionately smaller number of women seems to have been employed for mechanical work by

the transportation companies of the United States than of Great Britain. Women are more largely employed as bus and street car operators here, however. This difference may perhaps account for what appears to be an opposite impression on the part of employers in the two countries concerning the liability of women to accidents. When I ask local transit companies in the United States about the accidents of their women operators, I am told almost without exception that they are certainly as free from accidents as the men drivers, and sometimes I gather that they are a little better on this score. They drive more slowly and more cautiously, at least at first, and they have an unusually keen sense of responsibility with regard to human life. Of course, there is still the question as to whether or not this will continue when they become seasoned drivers, or when it becomes necessary to let down on qualification standards for women operators.

At any rate, the written testimony of persons having first-hand experience with women motor vehicle operators tends to substantiate the general impression that so far the women have measured up to previous safety standards.

The director of motor vehicle safety for one insurance company says, for example, in a recent issue of the *Commercial Car Journal*: "As to women drivers, they apparently are fully as safe and reliable as men drivers, at least for the operation of light equipment. One over-the-road operator in California has been using women drivers on a long haul and has found them to be most efficient and they are maintaining much better time schedules with lower operating costs."

Another writer in the *Journal of American Insurance* for June, 1942, reports that women give no evidence of being more accident-prone than men, though they are more susceptible to the following types of accidents: (1) catching hair, clothing, jewelry, etc., in moving machinery; (2) falling; (3) cuts and bruises. These accidents are obviously due in most cases to failure to wear suitable work clothing or to inexperience at work. As a group, this writer says, women tend to be less reckless than men and their safety record is good.

The assistant manager of a company employing 125 women as drivers of Army vehicles from the factory to points of delivery states that his safety experience with women drivers has been especially satisfactory. Over a three-month period prior to December, 1942, the women drivers, while delivering 33 1/3 per cent of the military vehicles handled by the company, had only 8 per cent of the accidents. The men drivers, who delivered 66 2/3 per cent of the vehicles, had 92 per cent of the accidents. During the first 5 months these women delivered 2200 units for the Army, but they were not involved in a single accident necessitating more than \$50 in repairs.

Similar testimony is given by the Chief of the sales operating division of still another company using 700 drivers of light delivery trucks. He testifies that though women have a somewhat larger proportion of accidents than men, most of them result in nothing worse than dents or scratches due to failure to judge distances correctly when backing or when entering and leaving garages.

The consensus of opinion among supervisors of women bus drivers in local transit appears to be that women are as a rule safer drivers than the men now available for employment. One intercity bus company employing 300 women drivers on short runs finds that the accident frequency rate of women bus drivers is 20 per cent in excess of that for men, but the accident severity record of the women is better than that for men drivers. The women are inclined to misjudge distances when backing and making turns. On the other hand, they exercise greater caution at intersections and other dangerous places along the road, where the serious accidents usually occur.

Though there is some difference of opinion and no conclusive evidence regarding the relation between women and accidents, I think we can fairly say that women in transportation have done much better in this matter than was expected. When human life is at stake, however, doing better is not good enough. An effort must be made to eliminate all accident hazards.

When we look the problem squarely

in the face without any attempt to compare the record of the two sexes or to exculpate one sex or the other, it is clear that there are certain factors which tend to produce accidents on the part of women workers. Most of these arise out of the fact that women are inexperienced workers. Any new worker, whether a man or a woman, is subject to these same accident-producing factors, and they can be overcome for the most part by adequate training for the job coupled with careful safety instruction. It should be remembered in this connection, however, that there can be danger in over-emphasizing accident hazards. Perhaps even more than men, women are contra-suggestible, and it is possible—in fact it has happened in Great Britain and elsewhere—that too much emphasis upon what not to do causes an accident-shy person to do that very thing with unexpected and sometimes tragic results.

There is the further fact that a great many women, indeed most of those who will be employed from now on, perform two jobs—one job as house-maker and another as bread winner, which means that they are frequently weary or their minds are pre-occupied when they begin work, especially if they are married. None of these problems are impossible of solution, however; not even the last one, as our brief experience with women in transportation so far indicates.

The likelihood of accidents involving women can be further curtailed, first, by recognizing that women, like men, are individuals, each with her different aptitudes so that a suitable selection of the right woman for the right job can be made; and second by teaching new employees about the necessity for wearing suitable work clothing, about the importance of cultivating a confident and leisurely attitude towards their job and about the advantages of taking special pains to overcome inherent weaknesses.

If, in addition, the hours of women workers are kept as near to 8 per cent as possible with short rest periods where that can be arranged, or if they are employed on a part-time or a split trick basis, in order to reduce fatigue; if the driving seats in motor vehicles are so placed that no undue strain upon the body is involved;

if seats are provided in workshops as required under most state laws; if women bus drivers are given day-time runs whenever possible; if provision is made for a hot meal in the middle of the day; and if every opportunity is taken by management to build up the confidence of women workers in themselves—if these simple and ordinary human steps are taken to

help women to help the United States meet its present emergency, there is no reason that I can see why both the accident frequency and the accident severity rate for women should not decline. Taking all the good points of women into account, they might even drop a little lower than either rate yet has stood for men.

WEDNESDAY MORNING SESSION

October 6, 1943

General Subject Session on Employee Transportation Problems of Industry

(This meeting is reported under Subject Sessions in Volume I of the 1943 Congress Transactions).

WEDNESDAY MORNING SESSION

October 6, 1943

Group Session for City and State Police

Cooperation of Police With Plant Protection Organizations

By P. J. DORR

General Superintendent of Plant Protection, Mack Manufacturing Corporation, Allentown, Pa.

Although actively engaged in the manufacture of vital war materials, thousands of small plants throughout the country have been unable to meet War Department demands in providing adequate police protection for those materials or the plant and property that produce them; consequently we must look to some outside agency that is ready and available to assist us whenever an emergency should arise.

At first glance this seems simple. Most industries are heavy taxpayers, with management playing an important role in civic and local governmental affairs. But because of the present emergency and the ever increasing demands for weapons of war, management is prone to put forth an all-out effort to produce these mate-

rials, thus overlooking the many directives emanating from Washington calling for the expenditure of vast sums of money towards the guarding of the responsible facilities and their product.

Surveys of our plants by the various government agencies, including the F.B.I., were made in accordance with a well developed and coordinated plan, and the many suggestions and recommendations offered by these agencies were made in good faith and with the understanding that big and small industry would, whenever possible, abide by them. But, again we are faced with small industry which wanted to do a good job but did not have the finances nor the personnel to put it across.

Just how should we go about to secure

outside help in setting up a protection group within our property and still stay within certain budget limitations? First, we must bear in mind that big industry, employing thousands of men and women, are sufficient unto themselves, and naturally were fully prepared to meet this emergency and the many hazards that accompanied it with a well trained and disciplined force of men commonly referred to as "plant guards."

Therefore, for the moment let us concentrate on Small Industry.

Get Police Veteran

First of all it might be good policy to head this small group with a man having local police background—one that has many contacts in the police profession and is well thought of by all and sundry in the community. If no one is available, endeavor to secure a leave of absence for someone from the City or Borough officials, and at the same time ask for the redoubling of police protection in the immediate vicinity of the plant.

Now as never before, countless opportunities are continually presented, calling for full cooperation between police departments and plant protection units. All employees working in war industries must be finger-printed as a prerequisite to employment. This affords an excellent avenue for cooperation on the part of the local or state police, who will be glad to assign a man to teach the simple fundamentals of finger-printing. The F.B.I. likewise will classify and file this record, where it is always available in the event of further investigation. A regular employee can handle the printing, and very good results can be obtained without the installation of expensive equipment.

It is vitally essential that the local Chief of both police and fire departments, particularly in the larger cities, be consulted and taken into the confidence of the company. Frequent discussions covering plant problems on and off the property should be encouraged.

In the absence of police power for your men, or until such time as they can be sworn in as auxiliary military police by the Governor, ask the local authorities for more frequent and extended beat coverage. Look to them for protection from

the outside and for information about those working on the inside. Liquor joints, taverns, and so-called "danger spots" are the frequent hangout for those seeking information, and many a clever enemy agent cloaks his movements behind the guise of a good fellow, well-met. The copper on the beat knows his people. Cultivate him, gain his confidence, and above all, share that confidence with him alone.

Watch the "Joints"

Gambling joints and bawdy houses provide excellent rest havens for the weary worker, and through him valuable information often leaks out into the waiting hands of the enemy. Inquiry should be made continually through the owners of these places in order to determine if any of their patrons have attempted to secure information of a confidential nature from plant employees. Rate of production, type of material manufactured, and many other pertinent facts can be secured from men that have imbibed too freely.

Loiterers either on foot or in cars, who, without any apparent reason, are seen in the vicinity of the plant, should be turned over to the police for questioning.

Turn over all information on sabotage or suspected espionage to the F.B.I. At no time should there be an attempt to investigate or evaluate that type of activity. This is a job for specially trained officers who operate officially under the President's Proclamation.

Because of the limitation of authority vested in most plant guards, it is advisable that in the event of riot, mob violence, destruction of property, and the blocking of gates and traffic, you have a prearranged agreement with the local chief for him to dispatch men on call, and thus confine the guards to the area inside the property.

Seek out the help of a seasoned policeman to survey your traffic problems. A poor system wastes many valuable man-hours and leads to dissatisfaction, and in many instances injury, to the plant worker. Rules and regulations as prescribed by the department, and enforced later by the plant guard, will have a tendency to speed up production, make for a more efficient handling of traffic, and

eliminate the possibility of street and highway accidents.

Neighbors Can Help

Bring the Chief of Police and Fire Chief into your plants, show them the vital spots and hazardous areas, and above all, be sure that they are familiar with all entrances and exits. State police, sheriffs and their deputies, air raid, and civil defense personnel, are all good contacts to have in the event of disaster. One or two state police units to my personal knowledge are cooperating in this respect.

The neighbors can be brought into this picture. Have them report any signs of

disorder, attempts to photograph the property, or anything of a suspicious nature. They too will be glad to assist in keeping the plants in operation.

Fire brigades, air raid squadrons, first aid groups, all can be trained within your plant if proper contacts are maintained with your local and state police.

Police are ever mindful of their obligation and duty toward the protection of plants and personnel in their area, and at no time should the question of authority or jurisdiction interfere with our one purpose, and that is—safeguarding lives and property during these most troublesome times.

Building Support for the War Traffic Program

By ESTEL HACK

Manager, Louisville Safety Council, Louisville, Ky.

There never was a period in the history of this country when safe transportation meant so much to every American as it has since our nation became involved in the present world conflict.

Building support for the war traffic program is little different from building support for the peace time program, except that during times like these it is considerably more difficult.

Since Pearl Harbor, we have been sold, and rightfully so, on the idea that winning the war is our first job. We have not been convinced that the best ways for all of us to help in the war effort are first, to walk and drive safely ourselves, and secondly, to fully support our traffic safety program.

One of the principal reasons the traffic problem has not been solved with a greater degree of efficiency is that the problem of crime has been made paramount in the minds of most of our public officials, police officials, judges, and jurors, while accident prevention has been relegated to a less important place.

In some cities, for example, there has been no change in the amount of fines for major traffic violations during the war emergency. It is obvious that small fines in these days of big money mean little to the violator. He pays the pittance, goes

right out and commits the same violation over again.

We are in vital need of a renewed consciousness of the seriousness of the traffic accident problem. The terrific death and injury toll must be burned deep in the minds of all our citizens.

Leadership Needed

We often hear officials say that the traffic problem is a community responsibility. They reason, the citizens make the problem, therefore the citizens must solve it. I don't agree with that reasoning. Our citizens are not traffic experts. They don't have possession of our traffic records; consequently, they must have leadership. It is my opinion that the leadership should be furnished by the top official with the full cooperation of the local safety council.

I say it is the top official's first responsibility because he alone can select a safety-minded Director of Safety, Chief of Police, and Traffic Judge, and has the power to demand of these officials efficient performance of their respective duties. When the top official has assumed his responsibility and has appointed the right people to these key official positions, then it is the duty of the local

safety council to fully cooperate with his administration in coordinating a well balanced community-wide traffic safety program.

I can hear you say: "That's a splendid idea but how are we going to sell these top officials on their responsibility?" I'll agree that it isn't an easy task, but I say to you it must be done. I'm sure most of you will agree with me that our failure to secure the full cooperation of top officials has resulted in the death and injury of thousands of our citizens each year. Unless we find a satisfactory way to enlist the full support of these officials, we'll go right on slaughtering multitudes of men, women, and children every year in spite of all our efforts.

Go to Top Official

Now, there may be many ways of solving this vital problem, such as public pressure groups, unfavorable publicity or, if you wish, an application of political ointment. However, I am not in accord with any of these methods. My idea, and it's predicated on experience, is to appeal directly to the official and submit to him records which prove very definitely that the traffic accident problem is the greatest individual, social, and police problem facing the community. The safety council is vitally concerned and most anxious to cooperate with him and his administration in doing more about it.

Emphasize to the official that the first responsibility for a safe community rests squarely on his shoulders, and that no

other organization or individual can do the job successfully without his support; that the citizens are looking to him for leadership and the solution of all of their civic problems; that the officials under his supervision will not do a safety job unless he assumes the leadership and responsibility.

The next step would be to offer the official the suggestion that he call together a small group of his advisors and plan the safety program to be followed, which obviously will be built around the three E's, Engineering, Education, and Enforcement.

Once this procedure has been followed and the top official's full cooperation obtained, then the officials and safety council together can sell the program to the community. Then, and only then, can we hope to accomplish the desired results in traffic accident prevention, and this holds true whether it be in peacetime or wartime.

Therefore, my recommendation to every person in this audience is that if you really want to build support for the war traffic program, and you do not have the full cooperation of the top official in your community, then get together the right group of people, call on your top official and follow through with the procedure we have outlined. If you are successful in this task it will be the greatest individual step you could possibly take toward building genuine support for the war traffic program.

Military Violators of Traffic Regulations

By MAJ. MARTIN F. OEHMKE

Judge Advocate General's Dept., 6th Service Command, Chicago

The War Department you no doubt realize has great numbers of motor vehicles, to carry the enormous commerce of the war, which traverse all sections of the country, and the maintenance and operation of which requires unceasing vigilance, planning, effort and cooperation to the end of a minimum loss of or damage to persons and property. Traffic laws and regulations of all the states and their municipalities are understood and regarded as a means to that end and cooperation with all enforcement officers and agencies is a settled policy of the War Department.

Quite naturally, therefore, the responsible officers of the Army are at all times interested in the "Wartime Aspects of Traffic." For the moment, my own thought concerns the handling of military violators of traffic regulations.

Military violators usually fall into two classes: those who transgress through intention or negligence, and those who offend through ignorance. The Army, ever confronted with the problem of discipline, applies the theory of prevention in an effort to provide itself with motor vehicle operators who will not be traffic-law violators. This application is made by proper operation and maintenance of equipment and careful selection and training of prospective drivers. Commanding officers are enjoined by Army regulation, which has the force of law so far as he is concerned, to prevent improper use of vehicles which results in abuse. In the term abuse are included excessive speeds, improper use of controls, including gears and brakes, racing engine, over or improper loading, lack of or improper use of lubricants, lack of inspection, deferred maintenance, and accidents. Such abuse when due to carelessness or indifference of responsible personnel is considered cause for disciplinary action. Observe that improper or insufficient maintenance resulting in defective equipment cannot readily be made an excuse for a law violation, and that not only the driver of a vehicle but his supervising officer may be held responsible for defective equipment which may

be the actual or alleged cause of a violation.

All Drivers Trained

Prospective drivers are all subjected to prescribed courses of training before they are allowed to operate motor vehicles. A condition precedent to the training is the completion of a driver's aptitude test which includes inquiry as to general intelligence and capacity with particular reference to vision. The training covers the whole field of operation and such maintenance as does not require a mechanic. The end of the course should find the driver qualified as to mechanical knowledge, operation, which includes actual driving and handling under usual traffic conditions and knowledge of traffic regulations, road procedure, safety precautions, speed limits, and vehicle abuse. If he is so qualified, he will be provided with the Army's Motor Vehicle Operator's Permit, which, the appropriate regulation provides, will be a guarantee that the individual is a qualified driver. Such specialized training under Army discipline designated to inculcate respect for all law and order should produce a driver who will avoid infractions of traffic regulations.

Nevertheless, there are military drivers who do sometimes become traffic law violators. The Army does not distinguish such a driver from any other violator of military law and accordingly he may be punished by military authority and tribunals for such offenses as he may commit under applicable Articles of War. So he may be punished if he misuses, or wilfully, or through neglect, suffers any military property of the United States to be lost, or damaged, or wrongfully disposed of, and is required to make good the loss.

As already indicated, he will have been instructed as to the proper operation of his vehicle with regard to observance of all traffic regulations, and if he fails to obey such instructions he may be punished accordingly. For any other offenses he may commit in and about the handling and disposition of the vehicle entrusted to him he will be subject to military

discipline. This means that he may be tried by court martial for homicide, in a case where he operates his vehicle so as to cause the death of any person.

Drunkness No Excuse

The foregoing suggests that the driver is responsible for his personal conduct as well as his conduct with any vehicle entrusted to him. This he cannot escape by a plea of drunkenness. It is a rule of military as well as civil law that voluntary drunkenness, whether caused by liquor or drugs, is not an excuse for crime committed while in that condition, although it may be considered on the question of intent where intent is a necessary element of the offense. It may be noted here that military personnel may be punished for being drunk on duty, or drunk under such circumstances as to bring discredit upon the military service, and this is so in case of a drunken driver who may not have violated any traffic laws while driving. It is obvious, of course, that the Army would not knowingly permit an individual to be a driver if he is addicted to the use of alcohol or drugs.

Most of you know that Army dis-

ciplinary action against military violators of traffic laws does not prevent the prosecution of these offenders by civil authorities. The War Department expects all its drivers to observe all traffic laws, and except in unusual cases, where military necessity or expediency dictates otherwise, it will not interfere with such prosecutions. On the contrary, it may safely be assumed that military authorities will at all times cooperate with civil authorities to their general and mutual objective of the elimination of motor vehicle accidents involving military personnel, whether such accidents are due to law violations or other causes.

As a matter of cooperation, the War Department has had and now has agreements with the states of Illinois, Wisconsin, and Michigan, comprising the Sixth Service Command, for the handling of all traffic problems which are of common interest including, of course, the handling of military violators. The purpose of these agreements is to unify the efforts of all the authorities for the sake of safety in traffic. You may be assured that the War Department and its responsible officer personnel will adhere to and uphold such worthy purpose.

WEDNESDAY MORNING SESSION*

October 6, 1943

General Session for Traffic Court Judges and Prosecutors

Presiding: JUDGE HARRY H. PORTER, Chief Justice, Evanston Municipal Court, Evanston, Ill.

The Traffic Court Program of the American Bar Association, Junior Bar Conference

By JOSEPH D. CALHOUN

Retiring National Chairman, Junior Bar Conference, American Bar Association, Media, Pa.

Some of us have a primary concern over methods of highway and traffic administration. Some of us worry more about public regard for the enforcement of laws in general. All of us are vitally interested in American Welfare—the protection of our nation from external and internal dangers.

While the external dangers are today uppermost in our minds, we must remember that our ability to save ourselves depends largely on the condition of our household, and the importance of victory in World War II will be minimized if American Democracy does not strengthen itself in the confidence of its citizens. The

judicial and law enforcement systems must have public confidence, and in order to assure the retention or the regaining of that confidence, those systems must be strengthened and improved.

Education Necessary

And so, you who have been traveling with the importance of national safety, and we of the organized bar who befriend the administration of justice, find our paths intersecting at a peculiarly dangerous time in the history of our country. The young lawyers of America, as organized in the Junior Bar Section of the American Bar Association, have mobilized the resources of our organization in an effort to do something about this lurking danger of America's household. We believe that in order to have national safety, we must have not only education on safety, but we must have enforcement of the law relating to the violation of the rules of safety, and we can't have law enforcement without an effective, intelligent and comprehending judiciary.

We, as young lawyers, see in the faulty administration of the traffic courts, a source of weakness which leads to lack of public confidence in the judicial system, and a great defect in any program for law enforcement and national safety.

While the traffic laws are enforced in what is known as the inferior courts, there should be no inferior justice. The first court, and very probably the only court in which most American citizens first find themselves, is the traffic court. Approximately five or six million citizens each year come into contact with traffic courts, many of them juveniles and many of foreign birth. The impression they receive is an important one, and generally an unpleasant one. Most lawyers have nothing to do with traffic courts, and the disrespect which is bred by these experiences is, in my mind, one of the dangers I referred to in America's household.

You, of the Committee on Traffic Courts of the National Safety Council, have seen the problem also, for some time, and particularly those of you who are judges have become more and more traffic minded in the last few years. National and regional safety conventions, as well as regional and

sectional meetings devoted exclusively to consideration of traffic courts and related enforcement problems, have been held under the auspices of the National Safety Council. Most effective of these meetings have been some sectional meetings with State Bar Associations, where programs were devoted to consideration of problems facing judges and prosecutors in the handling of traffic violators, especially under wartime conditions.

Survey Undertaken and Recommendations Made

A survey was undertaken under the auspices of the National Committee on Traffic Law Enforcement, which resulted in the publication of George Warren's book on "Traffic Courts." This book is the fourth volume in the Judicial Administration series published by the National Conference of Judicial Councils, of which series Dean Roscoe Pound is the editor. George Warren, in his book, lists fifty-seven recommendations necessary to the improvement of traffic courts generally. These recommendations have been approved by four national groups within the American Bar Association, namely: the Section of the Junior Bar Conference, which I represent today, the Section on Judicial Administration, the Section on Criminal Law, and the House of Delegates. Also, this list has been approved by the International Association of Chiefs of Police, the National Conference of Judicial Councils, and your Committee of Traffic Judges and Prosecutors of the National Safety Council.

The fifty-seven recommendations may be grouped in three general classifications: first, basic changes in traffic court set-up and functioning, requiring state legislation and, in some places, Constitutional Amendments; second, changes which can be effected without legislation by some administrative authority, such as the City Council; third, changes in procedure, the equipment and physical appearance of court rooms, which can be placed into effect by the individual judge of the traffic court.

Opportune Time for Action

The safety considerations of the program are well known to you. The peace

time situation of alarming death and injury rates occasioned in motor vehicle accidents originally brought about the study. Traffic engineers and safety engineers had progressed to that point in their work where it became necessary for them to enlist the cooperation of Bar Associations, judges and prosecutors, in improving the type of enforcement of traffic regulations found in traffic courts.

Now, the peace time problem has become more aggravated under war time conditions, and despite gas rationing, the rubber shortage and reduced speed limits, the percentage of decrease in automobile accidents has not been as great as the reduction of automobile travel. It is true that the dockets of the traffic courts have greatly decreased, but what better time could there be than now when the court can place in effect, and, if necessary, experiment with the more substantial reforms contemplated by our program? Furthermore, the time is here for anticipation of the post war problems that will come with the reconversion of the automobile industry to the manufacture of automobiles.

We can properly contemplate the post war problems relating to national safety, but the war is not yet won and every automobile accident today in which a war worker is injured means man hours lost from the war effort. In addition, we are faced with a vital national transportation problem. The automobile is a necessity. Parts are scarce. Every accident means a unit of transportation lost. The Brookings Institute has published a report which indicates a minimum requirement of twenty million automobiles, trucks, buses and other motor vehicles for a successful prosecution of the war effort. Today there are only approximately twenty-four million vehicles in operation, which number is rapidly decreasing to the essential minimum of twenty million.

Cooperation of All Agencies

The concentration of war workers in already crowded traffic areas and the problem of war worker and military violator of traffic laws have raised acute difficulties to be solved, and they can only be solved by the intelligent approach of the local

judiciary and the law enforcement authorities. It has been our experience that they welcome our help and the advice which comes from a nationally organized effort.

Through the cooperation of the National Safety Council, a grant was obtained from the War Production Fund, which enabled the Junior Bar Conference to implement and apply the program as suggested in the fifty-seven recommendations of Mr. Warren's book.

As Chairman of the Junior Bar Conference, I appointed a Traffic Court Committee, which has become a standing committee of our organization, and which has done a great job in establishing a foundation for future efforts in regard to the national safety program through the Bar Associations of the United States.

James Economos, of Chicago, during the past year, served as full time secretary of that committee, and all of us were delighted when Mr. Economos was elected the new Chairman of the Junior Bar Conference, for we know that he will continue his interest and efforts for improvement of the traffic courts.

Intensive Campaign Carried On

Although the manpower of the Junior Bar Conference has been strained by the demands of military and civilian service incident to the war effort, we have, during the year, carried on an intensive promotion campaign through field contacts with the local bar units, and a number of local Bar Associations have established Traffic Court Committees. Mr. Economos has traveled considerably throughout the United States and on one occasion he and I covered ten of the southeastern states, speaking before the local bar groups in those states.

Recently a very successful regional meeting was held in the west coast, participated in by the leaders of the bar in that area, the primary purpose of our efforts this year being to educate the lawyer in the importance of his interest and concern over the problem. After all, the legislatures, the city administrations, and certainly the courts are largely controlled by the thinking of the lawyer members, and we have felt that if we can have the local leaders of the bar aroused over the

local traffic court situation, we would then have the door open to improvement and further progress. We have found that the local traffic court judges have welcomed suggestions, and in fact, most of them have been keenly interested in what is being done throughout the country in relation to their particular problem. From Nashua, New Hampshire, to Houston, Texas, the Junior Bar effort for the improvement of the traffic court has had a very real and concrete effect. We have been able to get the young lawyers, not only in those areas but in other areas of the United States, to go into the traffic courts, to compare their local court with the more or less ideal court as recommended by George Warren, and to gain the sympathetic ear of the local judge and prosecutor.

Some Important Recommendations of the "George Warren" Report

By JAMES P. ECONOMOS
Secretary, Traffic Court Committee, Junior Bar Conference,
American Bar Association, Chicago

You have been informed today that the 57 recommendations of the "George Warren" report can be divided into three main groups. It is advisable to repeat these general divisions, which are: (1) Basic changes in the traffic court set-up and functioning which require state legislation or constitutional amendments; (2) Basic changes which can be effected without legislative authority but require action only by a city council, county board, or state agency; and, (3) Basic changes in procedure, equipment and physical appearance of courtrooms, which require action only by the judge.

In addition, your attention is directed to the wartime court problems that arise out of violations of traffic laws committed by war workers and members of the armed forces. These are not touched upon in Warren's report and they developed after its completion. Fortunately, military violators have been fairly well taken care of by procedures developed by the civil and military police and naval shore patrol.

These ambassadors of traffic court reform have laid a foundation of good will upon which we must continue to build in the future, if we are to make progress in this work. We have started the ball rolling, and the judges' thinking on this subject to the ultimate improvement of public respect for law, and to a real law enforcement program.

You, as prosecutors and judges of traffic courts, as well as we younger members of the bar, hold the future solution to this great problem in our hands. Your concern is our concern, and in the days of peace, which we hope will soon come, we who continue our efforts in this regard will certainly find our reward in aroused and intelligent public cooperation.

This is not true of war workers, but the various panels and discussions at these sessions will deal further with the proposition of working out procedures to combat this problem.

Any attempt to pick out the most important recommendation would be futile because the selection must depend on the approach used in determining importance. One group would attach considerable importance to one recommendation while another would not consider it vital to their program. My selection of recommendations for discussion today is guided by the preponderance of judges attending the sessions. The judge, in one sense, is directly concerned in all 57 recommendations, nevertheless there are improvements which only he can put into effect.

Need Higher Standards

Obviously, the most important recommendation we can consider is No. 36 which reads: "There is a general need

for higher standards of decorum and courtroom procedure in traffic cases." Here the judge is directly concerned. The definition of decorum is: "Propriety of manner or conduct; dignity arising from suitableness of speech and behavior to one's own character, or to the place and occasion; decency of conduct; seemliness."

Therefore what the judge does, what he says, and what he requires of the defendants, witnesses, court clerks, bailiffs and other personnel will greatly determine the type of decorum that will prevail. If a courtroom is opened promptly at the appointed time, if all preliminary work required of the clerks is ready, if the prosecutor assigned to this court is prepared, then the judge can enter his courtroom from his chambers, wait until the formal pronouncement is made and then proceed with the business at hand. The clerk, or whoever does it, shall call his cases in a clear loud voice. The path to the judge's bench shall be easily accessible.

The judge should ask, in a courteous manner, what kind of plea the defendant wishes to make to the charge. From that point until disposition of the case, there is nothing that is more important in that entire courtroom than the trial of that case. Regardless of how minor the offense, the defendant must be made to feel that he is receiving the fairest and most impartial trial ever held in that court room or any other court room. The moment sentence is imposed, whether it be dismissal or punishment by fine or jail sentence or otherwise, that person should feel as if he had received the highest consideration. In traffic cases this is doubly important because of the safety and other educational problems involved.

Many Avenues Open

I know that this is an ideal but progress is never made unless ideals are set up for achievement. Some of you may say, you can't conduct your court in that formal manner. Some of you may say, your docket is too heavy to be so patient and so courteous. Some of you may say, you have no control over the clerk or the prosecutor. Let us grant that you are correct and I'll still say to you, "If you

want to achieve higher standards, you must work for them." There are many avenues open to you to make improvements here.

Let us go back to the defendant. He is usually standing alone in strange surroundings, apprehensive and self-conscious, and confronted with the representatives of the public, a uniformed police officer and a prosecuting attorney ready to present the evidence against him. To the court and court attaches, it may be only one of a hundred cases of that day; to the individual at the bar of justice, it is an all important case, which may have a bearing on his fate throughout his life. Let your court function in such a manner that no one can ever accuse you of high-handed injustice, lack of courtesy, and irresponsibility.

So far I've been talking about the judge's attitude, demeanor, and judicial presence. There is, however, another requirement that is essential. That is to require everyone in the courtroom to remain quiet; no unnecessary noise, no unnecessary interruptions, no hangers-on or bondsmen cluttering up the scene and no recesses to speak to friends or others desiring to see you on business. This, too, is dependent upon your attitude. You do your job properly and the others will soon fall into line. It doesn't take very long to instill these qualities if you set the example. When you go back to your courtroom, take a mental yardstick with you to measure the standards you have set up in your court. If you find deficiencies, then do something about them.

Courtroom Housekeeping

Every artisan, every worker, every practitioner of medicine, and every lawyer, must have adequate tools and a suitable place where he can apply himself to his business, trade, or profession. He selects the best tools available and the best office, bench, desk, or other place to carry on his trade, business, or profession. The judge is not so fortunate because he inherits the courtroom and the chambers from his predecessor. This brings me to Recommendation No. 6 which reads: "Physical courtroom conditions should be improved as to facilities,

arrangements, cleanliness and appearance."

What problems arise when considering this proposition? Must we think of high ceilings, marble slabs, paneled walls, fancy woodwork, massive lighting fixtures, stained windows, beautiful pictures, leather chairs, and other items of interior decoration? Is there any set architectural rule for courtrooms? I do not know. I am certain we must leave the answers to the interior decorator and the architect but we must instill them with our objectives. There is one thing all of us know and that is that all court rooms should be designed for impressiveness and be so impressive that all persons crossing their portals will automatically doff their hats, as in entering a church.

The courtroom must be a temple of justice, not only in name but also in appearance. The judge can't do much about the structural picture but he can call attention to the lawyers, the citizens, and the city fathers about the conditions and request action. The situation in Chicago's traffic courtroom was bad. Judge Gutknecht and Judge Gorman called it to the attention of Chief Justice Sheffer. He then undertook to secure improvements. Slowly but surely, improvements were made and Chicago will have one of the finest traffic courtrooms in the country.

The judge can do other important things. First, he can request that the entire courtroom be clean from top to bottom and that it remain clean all day long. If this means no smoking, then it must be "No Smoking." If it means no chewing of tobacco, then there must be "No Chewing." He can insist that the superintendent of maintenance have all approaches to the courtroom clean before court opens every day. He can insist that the clerk and bailiff also adhere to this rule. Second, the judge can rearrange or ask for a rearrangement of the facilities in the courtroom. This may mean providing counsel tables, witness stands, jury boxes, and a traffic board or table to expedite the explanation of accidents by witnesses and parties. If the place provided for the court clerk is wrong, change it.

All of the changes required to meet this recommendation usually can be accomplished by a persistent and insistent judge. Some of the judges hold court in rooms and under conditions they would never tolerate in operating their own law office. If you have a cash register in your courtroom, you can surely silence it, even if it isn't removed from the courtroom.

Location of Courtrooms

Many of you will recall Arthur T. Vanderbilt's foreword to Warren's book and the reference to courtrooms that smell. Why tolerate these conditions in the courtroom? The statement is made by George Warren that the motoring public is paying in fines and taxes for an adequate court system which it is not getting.

The location of the courtroom is a very serious problem. It should be located in the same building with the other courts and not be considered a step-child of the judicial system. In Philadelphia, every one of the courts but the traffic court is housed in modern buildings. Yet the traffic court is in the oldest police building in town; at least it seems to be the oldest. This example can be repeated many times over in this country.

Many courts trying traffic cases are known as police courts and housed in the police department building. As far as the trial of traffic cases is concerned, this is usually not advantageous either to the police or to the defendants; even though it may be as to other criminal business, as in drunk and disorderly cases. Many times the traffic court is separated from the place where the cafeteria court or violations bureau is operating. This is a mistake. They should be in the same building. As a matter of fact, wouldn't the ideal be a "traffic safety building"?

Now you have a right to ask, "Can this be a solution to all our troubles?" Does a new, clean, properly arranged, and impressively designed courtroom automatically confer superior wisdom, impartiality, and fairness upon a member of the judiciary?" Of course, the answer is, "No!" You can even go further and say the most impressively arranged courtroom cannot take away the stigma of rank injustice. However, other things being equal, you at least have set the stage

for the enactment of a scene in which justice is administered fairly and impartially with understanding and ability.

Need Specialized Training

We have written the script which is to be acted out in the courtroom and we have provided all the props necessary for this dramatic presentation. Now we must find the actor who will assume the leading role in this every-day drama dealing with the rights, liberties and privileges of a citizen. We could fill the judge's part by calling upon any lawyer to assume this role. However, we are not satisfied with just any lawyer and we must call upon lawyers with special training.

Therefore, we must be vigilant to obtain a person who will qualify with the conditions set up in Recommendation No. 14, which reads as follows: "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."

The first requirement of knowledge of traffic laws is a simple one. Any lawyer can read the traffic laws but what about traffic policing and engineering and what about safety education? This is the requirement which separates the wheat from the chaff.

Today it is very simple for any judge to find out what is being done by the police. The same is true about engineering and the same is true about safety education. All that any judge has to do is to step across the hall and into the police department. Buttonhole the chief of police and tell him you want to learn all about what his police are doing in regard to handling traffic and the activities undertaken in behalf of accident prevention.

A Few Days Study

A few days is all that is needed to get a fair realization of the different methods and procedures used by the police in this field. Your interest in their work will be flattering to them. They will show you, with great pride, the entire set-up and ask for your suggestions for improvement. Naturally, you will not be ready to make

suggestions for improvement in the police department because you don't know enough about them. This simple experience should lead you into greater research. There are plenty of books that Northwestern University Traffic Institute and the International Association of Chiefs of Police have prepared to assist you. The National Safety Council has many publications which will be useful to you.

Then there is the person with the title, "traffic engineer." Your next visit should be to his office. Sit down with him and ask him to explain the fundamental principles governing him in his work. The traffic engineer will be ready and willing to give you a clear insight into this problem. Do your utmost to understand these principles.

Next, find out what is being done by the safety council in your community. If there is no safety council, there must be a safety committee of some organization giving its attention to this problem. It may be the Parent-Teacher Association. It may be the Chamber of Commerce. But, whoever they are, be sure and contact them and find out what they are doing in their field. You will be enlightened at the progress that is being made in these fields.

After you have done all of this, then go back and read the ordinances of the City Council and state statutes pertaining to traffic laws. You cannot help but be impressed with the fact that the printed word has now taken on life and substance and become a living thing. You will not have this experience if the traffic laws are not based, wholly or substantially, upon the Uniform Motor Vehicle Code and upon the Model Traffic Ordinance. Here, again, you have another opportunity to promote improvements in the administration of justice. You will recall that Recommendations No. 1 and No. 2 deal with the subject of traffic laws. If you fulfill the requirements of Recommendation No. 14, you cannot help but do your bit to support the recommendations designed to improve the traffic laws. Your help in this respect can do much toward improving respect for the laws themselves, by assisting in the removal

of those laws which are unenforceable, unnecessary, and contain inherent defects.

Must Reach Other Judges

It is unfortunate that the judges in the audience are just the ones who do not need to listen to this kind of a discussion. Many of those who are absent also have some appreciation for the additional training required to adequately try traffic violation cases. However, there is a far greater number who have very little conception of their duty to society and to the promotion of the public's welfare. These are the judges we must reach. These are the men who must be instructed in traffic engineering and traffic policing and safety education.

Unfortunately there are too many part-time judges in this country. They cannot serve two masters and efforts should be made to consolidate the jobs so as to obtain more full-time judges. A full-time judge will do something to understand his job but a part-time judge hardly ever takes the time. It is one of the functions of your committee, just as it is the function of the Traffic Court Committee of the Junior Bar Conference, to spread, by one means or another, the necessity for this type of additional training.

When the Traffic Court Committee of the Junior Bar Conference held its first meeting in Chicago last February, it was arranged that they would meet the leaders of the National Safety Council in Chicago; visit Northwestern University's Traffic Institute, and attend a session with judges of traffic courts, prosecutors assigned to traffic courts, military police representatives, naval shore patrol representatives, traffic engineers, safety engineers, and others. These men pointed out the problems in their particular fields. Thereafter the Committee arrived at the conclusion that schools or institutes should be conducted for judges assigned to traffic courts. Not much has been done directly about this suggestion. However, the pattern for future activity designed to promote this conclusion has gradually emerged from the many conversations and discussions that Harvey Booth and I have had in the past year.

One of the objectives achieved through the promotion of regional conferences has been the increased knowledge on the part of the judges attending these conferences regarding additional training and skill required in the trial of cases involving traffic violations. We must continue this activity and plans are already being made for further regional meetings.

I want to stress again that the Junior Bar Conference believes, that the improvement in the administration of traffic courts is one of the most important problems requiring its attention. At its annual meeting here in August, the Junior Bar Conference recommended that the Section on Judicial Administration, another component of the American Bar Association, evidence its further interest in this program by the appointment of two new committees. These committees are a Committee on Traffic Courts and a Committee on Justices of the Peace. U. S. Circuit Court of Appeals Judge Orle I. Phillips, chairman of this section, has selected two state supreme court judges to take the leadership of these committees. The balance of the personnel will be made up of justices of the peace and traffic court judges.

The main idea behind this recommendation was the feeling that it was about time that the appellate court judges and judges of courts of general jurisdiction, recognize the judges of the civil and criminal courts of first instance. It takes all of them to form the judicial system. It is anticipated that, from now on, a greater appreciation of the problems confronting each will be used to the mutual advantage of both groups. The day is rapidly approaching when every judge of a traffic court will be a lawyer or a legally-trained individual.

In closing, let me assure you of one thing, that the campaign of the last year to improve the administration of justice in traffic courts will continue unabated and with renewed vigor this coming year. In paraphrasing the words of Chief of Staff General George C. Marshall, we say: "There must be no lessening of the momentum it has taken us twelve months to develop."

Panel Discussion

Presiding: JUDGE CHRIS. B. FOX, of the Oakland, California, Police Court was panel leader.

Members of the panel were: JUDGE J. J. QUILLIN, Portland, Oregon; JUDGE A. L. SENGSTOCK, Des Plaines, Illinois; JUDGE JOSEPH M. WYATT, Baltimore, Maryland, and JUDGE HARRY H. PORTER, Evanston, Illinois.

Judge Fox stated that the panel would deal with a few of the practical aspects of the recommendations, and that each question should be discussed thoroughly from the floor.

The first subject proposed by Judge Fox, aimed at making the court more impressive, was the use of an opening ceremony in municipal and police courts.

Judge Quillin reported that in Portland the following ceremony is used to open traffic court:

As the judge enters, the bailiff raps the gavel, declares the court to be in session, announces the name of the judge, and all persons in the courtroom stand. This opening ceremony is of much value in leading dignity to the court.

From the floor, the following specific practices were reported:

- Spectators in the courtroom rise and salute the flag at the opening of the court.
- Bailiff raps gavel, all stand, declares the court in session and gives the name of the judge presiding.
- In a court which has no bailiff, it was suggested that the clerk serve in his place in the opening ceremony.

Upon a showing of hands, the majority of the judges indicated that they use an opening ceremony similar to that used in Portland.

Judge Fox's next question concerned the wearing of a judicial robe.

Judge Sengstock said he does not wear one, but believes it would help in impressing the defendant and others present in the courtroom with the seriousness of the occasion. He would hesitate to wear a judicial robe unless a precedent were set by the so-called "higher courts" which he could follow.

The following suggestions were offered from the floor:

- The common use of judicial robes will come in time because it helps to dignify the judge and bring greater respect for those present in the court. However, it will be necessary for "higher courts" to adopt the procedure first.
- Wearing of a robe might make the defendant feel less at home in court and detract from the educational value of his appearance in court.
- In one municipal court represented, the judge wears a judicial robe in jury cases only. Some large cities require all municipal judges to wear robes.

The next question to the panel was: "How can the staff be trained and directed to add to the dignity of the court?"

Judge Wyatt declared it should be the right of the judge to select his own staff in order to have personal control over them. The judges of the Baltimore Traffic Court have this privilege, and the clerks are specially trained.

From the audience, five of the judges reported their court clerks were under civil service. In most of the courts the control of clerical staff is not too good, since they usually receive their job through someone else.

"How to maintain decorum in the courtroom" was Judge Fox's fourth question to the panel and group.

Judge Quillin declared it is most important for the judge to pay full attention to the case being tried, and he must not permit anything to be done which might distract his attention. He stated that quiet in the courtroom was a first essential to a good trial.

In the discussion from the floor, the following points were advanced:

- It may be necessary at times for the judge to be sharp in reprimanding persons who are not quiet in the courtroom.

- b. The presence of a telephone in the courtroom hinders courtroom decorum.
- c. In some courts there is a continuous series of documents passed across the desk of the judge. Even if the judge can sign these and concentrate on the cases being tried at the same time, it creates the impression that he is not paying attention to the case at hand. In courts where the judge must personally sign many documents, he might be able to set certain times for doing this, and if necessary, adjourn court for a short time. One judge reported signing warrants in advance in order not to have to do it one by one.

After discussion, Judge Fox called for a show of hands on several questions, which brought forth the following information:

- a. Only one judge has a telephone in court. It is on the clerk's desk in a court with a large volume of business.
- b. None of the judges permit the wearing of hats by men in the courtroom.
- c. One judge permits smoking in the courtroom.
- d. One judge permits irregular approach to the bench.
- e. No judge leaves the courtroom while a trial is in progress.
- f. No judges broadcast their court sessions on the radio.

Judge Fox requested discussion of the problem of court appearance of traffic officers, since this is a factor bearing in an important way on properly disposing of traffic cases. The following practices, aside from the majority which have officers reporting day by day, were described:

- a. In one court with an exceptionally large volume of business officers are represented by sergeants regularly assigned to court.
- b. In another court officers are assigned staggered court days and cite persons arrested to appear on those days so that the arresting officer can be present.

- c. In another city the arresting officers submit written reports.

Judge Fox stated that the physical factors are important in any court, and requested a discussion of such matters as arrangement and appurtenances needed to maintain decorum in the courtroom.

Judge Sengstock declared the layout of the court room is important, and all factors should be carefully studied from every possible angle. For example, the position of the judge is very important, and no one should be sitting on the same level as the judge.

In the discussion from the floor it was pointed out that gradual improvement is being made in courtroom arrangement and that this was making for more dignified trials.

Offsetting this, however, is the large volume of cases some courts must handle, which makes the modern facilities and arrangements of little value. As an example, several courts try cases with all those concerned standing in front of the bench. At least five courts represented stated that they have to use summary trials in order to get through. The answer, of course, is more judges where the volume is so heavy that defendants cannot be properly tried.

Judge Fox's last question was: "Should there be a prosecutor present in the traffic court?" In the discussion from the floor, the following practices were reported:

- a. A prosecutor is present in cases in which a plea of not guilty has been entered.
- b. Another court has a prosecutor present at all times.
- c. Several courts have none in continuous attendance.
- d. It was generally agreed that there should be a prosecutor present whenever the court is in session. The term "prosecutor" however, is not too popular, and another title, such as "public defender" or "public attorney" would be preferable to the term "prosecutor."

WEDNESDAY MORNING SESSION

October 6, 1943

Group Session on Public Safety Education

Presiding: R. C. SALISBURY, Director, Safety Promotion, State Department of Motor Vehicles, Madison, Wis.

A Preview of Post-War Traffic Problems

By R. C. SALISBURY

Director, Safety Division, Motor Vehicle Department, State of Wisconsin

Transportation officials must plan now on how to handle the traffic problems of the post-war era. It is certain that these problems will not take care of themselves. Thus it remains for us to consider now the future use of every possible aid in the prevention of street and highway accidents.

Some traffic experts have viewed with apprehension our soldiers' homecoming. Imagine a truck driven by a former jeep operator meeting a car driven by a former tank-man. Picture a combat flier zooming around a highway curve in his private automobile. See a dispatch-rider who raised plenty of dust on Guadalcanal stepping his motorcycle up to speeds approaching the 100 mile an hour mark "just for the fun of it."

The majority, it is reasonable to assume, will be anxious to get back to normal lives as useful citizens, willing to take their part in making the world a better and safer place in which to live.

Taught to kill the enemy, will soldiers return and become criminals because of their war-time experiences? Men trained in psychology and medical research say "No." Then should we give much credence to the belief that because a man has been in battle he must be a vicious man behind the wheel of his post-war automobile?

The Civilian Picture

On the home front in this war, civilians have felt the pinch in transportation at many points. They have been restricted in the number of miles of travel allowed. They have been limited in the number and quality of tires. They have been

urged to share rides with others to make their cars last longer. With new cars not available, used cars have been at a premium. Jalopies which once would have been considered ready for the junkpile are still being licensed. Spare parts for all types of vehicles are getting scarcer with each passing month.

When the war is ended, civilians will want to return to pre-war travel freedom as quickly as possible. As long as the war is on, they will accept certain restrictions as being necessary for the prosecution of the war, but when peace comes, there will be a demand for the lifting of these limitations. With new cars on the market and citizens flush with money earned in a period of war prosperity, highways will attract heavy tourist traffic.

For how long after the war will the presidential order for a 35-mile speed limit be maintained? In lifting this ban, should lower speed limits than those of pre-war times be advocated? Should there be a nation-wide effort to get more uniformity in speed regulations, as well as in other traffic regulations?

Will a return to normalcy mean that we must continue seeing 40,000 persons killed annually in accidents on our streets and highways? Will we seek to hold on to the gains made during war-time? When hostilities are at an end, what will be our battle cry to replace the plea, "Save manpower for warpower"? How can we best attain freedom from fear of continued peril on our roadways?

The Post-War Car

Frequently one hears a person say, "I wonder what the cars will look like after

the war." Automotive leaders seem certain that the first post-war automobiles will be the 1942 models. This would be the quickest possible means of supplying the post-war demand for cars, for it would require the least amount of time in reconversion of facilities from war work. Keen competition among manufacturers, however, in all likelihood will force rapid appearance of newer cars with sleek designs and lower operating costs within a year or two after the war.

Some designers believe plastics will predominate in future cars and that they will be air-conditioned and sound-proof, with panoramic, full-vision windshield, a periscope-type rear-view mirror and a safety, shock-absorbing crash rail all around. A rubber executive recently predicted that electronically-controlled bumpers which prevent cars from getting into collisions are within the range of possibility. Windshield wipers may not be needed on post-war cars because of new types of glass now being manufactured. Some think the bantam-type car will become more popular than it was before the war. According to one survey, we can expect that by the middle of 1944 there will be a demand for about 12,000,000 automobiles and trucks.

Undoubtedly army engineers who have made extensive use of motor vehicles in waging the present war may have some influence on future designs of vehicles. Perhaps these influences will include smaller engines, sturdier bodies, better glass and safer tires.

Have manufacturers made the modern car too comfortable? Comfort is appreciated and desirable to a degree, but is it not possible that too much plush upholstery, fancy arm rests and amazing ease of operation detract the driver's attention from full-time alertness at the wheel?

Pedestrian Education and Control

The man on foot still remains the problem child in traffic control. In our efforts to reach motorists with the message of accident prevention, we must not neglect further education of pedestrians. While we are about it, we might go on record favoring a bit of enforcement for the pedestrian. The enforcement of pedestrian

laws might make those on foot appreciate more sincerely their own responsibilities for safe conduct in crossing streets and using the highways.

Since the hardest hit groups of pedestrians are those in the child and the elderly age classifications, education in safe pedestrian practices must be directed more largely to these two specific groups. Children of school age can be reached most effectively through the schools, with the cooperation of parents, teachers, police officials and school safety patrols. The pre-school child must be under the wing of the parent. The elderly pedestrian can best be reached through newspaper articles, radio appeals and special leaflets.

Larger cities might well give thought to establishing mid-block bus stops in downtown areas where there is heaviest passenger demand. In the summer of 1943 the city of Milwaukee demonstrated with success the use of this plan for the benefit of 40,000 bus riders, with the result that exposure of these persons to moving traffic was eliminated and end-to-end runs of buses were speeded up noticeably. This plan, of course, calls for no parking of motor vehicles on such streets in the mid-block areas, but the safer, smoother movement of all traffic is assured. Busriders can board and alight from buses without touching the street: end-block safety zones thus are freed for the exclusive use of street-car riders.

Pedestrian control may be expected to become a more important part of post-war discussions relating to traffic problems.

Driver Education and Control

The smallest high school can promote this phase of Driver Education by asking the cooperation of a home supervisor (parent, other relative or neighbor) to undertake responsibility of actual driving instruction, with lessons provided each week over a period of weeks by the school authorities. (This is part of the Wisconsin plan. A copy of *Your Guide to Driver Education, 1943 Edition*, will be mailed to you upon request to Safety Division, Motor Vehicle Department, Madison, Wisconsin). The "home-supervisor"

plan of instruction also serves to re-impress on the adults the fundamentals of safe vehicle operation.

Driver education in high schools has gained momentum because of the interest in pre-induction training of youths about to be eligible for call to military service. Army pre-induction courses in this work now represent approximately 15 per cent additional classroom work because of added study in use of power winches, military map reading, motor marches, etc. Elimination of wartime, extra-curricular activities such as the Victory Corps, increased physical fitness program including training in commando tactics, etc., will leave more time for the adoption of a better driver education program in the post-war period.

Heavy school program schedules, combined with difficulty in obtaining supplemental gas rations, make actual driving instruction almost impossible at the present time. Any post-war Driver Education activities, however, must include behind-the-wheel training in order to derive the greatest benefits. Such training should be offered in all high schools, regardless of size.

In our efforts to get away from auto mechanics in order to stress development of proper attitudes in young drivers, we must not forget that the best driver is the one who knows something about what goes on under the hood of his car.

In the post-war period, driver examination procedures must be made more rigid. The time to impress a person with the importance of his driving responsibilities is at the time he applies for his license. Examiners must be thorough in testing knowledge of traffic laws, vision and actual driving ability.

Instead of "driving around the block" with the beginner, is it not worth the effort to set up driver-testing areas—proving grounds, you might call them—where all types of maneuvers required in actual driving can be tested to show whether or not an applicant has the necessary skills to operate a motor vehicle safely. Increased attention should be given, also, to the attitudes displayed by the applicant in meeting various traffic situations.

Should drivers, upon reaching the age of—say 65—be asked to submit to re-examination before being permitted to continue operating motor vehicles on public highways? Or should examination be required by law at the time of license renewal for every driver?

Solving Post-War Traffic Problems

In looking ahead to post-war traffic problems, we cannot seek any magic solution that will erase all trouble spots, nor should we expect any radical departures from the problems that confronted us before the war.

But if accidents continue to plague us in ever-increasing intensity as we return to civilian pursuits, people will want more and more "safety devices" on their cars—headlights that will automatically dim when meeting approaching cars at night, safety glass in windshields that will prove resilient when struck by the occupant of a car, body structures of such durability that no roll-over will cause any part to cave in, and other engineering aids that will help motorists to survive on the highway.

And the pedestrian will demand more sidewalks along rural highways, foot bridges and underpasses, more police officers at busy corners and more signal lights stopping all motor traffic at intervals.

We are anxious to see improvements made in anything that will help reduce accidents and make our roadways safer. We hope, however, that gains made in accident prevention during the war will not be eclipsed by a terrible devastation of life and property on our highways after the war. At the same time we must keep in mind that increased numbers of vehicles and drivers will increase traffic dangers.

Our present accident prevention programs must be continued and expanded. We must press our legislators for those laws we know can produce best results. We must demand adequate enforcement of all traffic laws. Speed restrictions and zoning particularly call for special study. And for the majority of our people—good, loyal citizens the year-around—we must have sane, sensible programs of public safety education.

WEDNESDAY AFTERNOON SESSION

October 6, 1943

General Session

Presiding: CARL J. RUTLAND, Chairman, Citizens Traffic Commission, Dallas, Tex.

Planning for Post-War Traffic Safety

By BURTON W. MARSH

Director, Traffic Engineering and Safety Department, American Automobile Association, Washington, D. C.

Every state and each local community should start immediately—I mean precisely that, immediately—to make plans for meeting the serious post-war traffic safety problems.

Putting off this essential job can mean that communities will not be ready when these problems are in their laps.

Failure would mean a skyrocketing of traffic accidents which could produce easily an all-time high total. Doing this post-war planning job will mean new loads of work on the part of the folks sitting in this room as well as of understaffed officials, and civic leaders.

This job must be accepted now. We know it is one of our homefront jobs, and certainly when we think of our friends on the battlefield we can't afford to fail.

It must be recognized that the present reductions in traffic accidents are not an indication that this problem is getting under control.

You know very well that by and large the reductions reflect two things—the reduced numbers of vehicles, and the reduced mileages of those vehicles. In other words, reduced exposure. That is a job you have to do—to sell that to the people.

To appraise this whole question we must look into the future. One of the questions is about the growth of traffic in the post-war period. With restrictions removed, traffic will increase quickly.

There is another situation which we will have to face. It is the argument which you all have heard, that aviation is going to put a terrific crimp in highway

transportation. That statement simply will not stand up under analysis.

The main field of the motor vehicle (and note I say "main") is what? It is for short trips, fifteen miles being the average before the war, and it is reasonable to expect that it will be approximately in that range after the war.

Remember, too, that highway transportation before the war accounted for at least four-fifths of all passenger miles rolled up in this country. The major importance of passenger car transportation also has been clearly demonstrated in this war.

Let's look at air travel. It is certainly going to grow, especially for long trips, not only commercial transport air travel but private transport as well. The helicopter is going to have its place in the sun, and so, too, I think, it is reasonable to anticipate the light plane.

We may even see such a thing as a combination air and highway vehicle. You can even imagine there will be an amphibian vehicle that you can roll across when the bridge is out, then drive on a highway, and in any congestion you can take it up in the air. However, as to the economics of all that I think we have our fingers crossed.

There are certain factors in air travel which indicate very clearly, it seemed to me, that it cannot be expected to take the place, to any large extent, of highway transportation.

First, takeoff and landing space. You have got to have a lot of takeoff and landing space, even with helicopters, if lots of people are going to use them.

That is a very important factor when you think of the concentration of movements and mileages in and near cities.

Consider, too, that matter of the space which must be maintained between aircraft, both horizontally and vertically, if they are to be used in large numbers. Make the contacts in your mind, if you will, between large numbers of people using aircraft, and large numbers of people moving in close, compact highway traffic streams, three and four abreast, and with short spacings, and you will see that there is an important implication there.

Then, too, remember that aircraft motors must be warmed up. You and I will get into our car and we will go ahead immediately. If the engine stalls, so what? we haven't lost much.

But if you are up in the air a few hundred feet and the plane engine should stall, it would be a vastly different story. So if you consider the time needed to warm up aircraft engines, and the time required to get yourself to the aircraft and into it, and if you add those together, I think you will readily agree that often you could have been well on the way to your destination by highway transportation in that time alone, whereas you haven't even started by air.

At the other end, of course, there would be similar time taken, because you never could land aircraft exactly where you wanted to go.

These are some of the reasons, then, why air transport cannot be expected in the near future to reduce highway transportation.

"Why did you take time to mention this?" you ask. That is one of the points you are going to have to deal with in post-war traffic and traffic safety.

Improved public transportation, if it makes the right kind of bid, can have an increased value in cities. It can cause people to continue to use it who have had to use it because of wartime restrictions.

However, even granting increased utilization, and greater importance of this form, public transportation is not likely to decrease the use of cars because of that good old fellow, John Q. Public.

There will be too many people who simply prefer to go on their way in their own private cars.

Now let us look at how much we can anticipate this traffic is going to grow:

It appears that highway transportation is destined to grow considerably. Probably the pre-war estimate of the United States Public Road Administration, that by 1960 there will be a doubling of vehicle miles of highway transportation, is not greatly out of line.

As new highway facilities are produced in this country they will attract new use. That already has been proved by the Pennsylvania Turnpike and other such roads.

We will have greatly increased traffic, and it won't be long after the war before we have it. If we agree on that, then let us look at some of the dangers and problems which are going to be confronting us. Among these dangers—there are these points. I will give them rather briefly:

First, post-war psychology with victory and release from restrictions. What is going to happen? All of us are going to want to celebrate. We are going to get up and go places. We want to be released from the restrictions and show that sense of release by doing things; and some will go so far as to want to make whoopee, and they will have money in their pockets, and they will want to make whoopee with alcoholic beverages when they are driving their cars. They will want to throw off all control, including self-control. That is a very definite danger.

Second, old and poorly maintained cars. Do you realize that at the end of this year, half of all our passenger cars will be seven years old or older, and that a quarter of them will be ten years old or older? An old car can be a safe car, but under present conditions of poor maintenance, many of those cars will not be in good condition.

Speaking of tires, one likelihood is that a lot of people will want to go places on weak and cut-up tires. Or, if you look at it the other way, maybe there will be lots of them having new synthetic tires. That will mean that perhaps they will have some of the newest synthetics which

are not yet developed to the point where they are satisfactory for high speed. There is some indication that is true.

With these cars driven by drivers some of whom have gotten out of practice, I think you will agree that there is a serious factor there. Vehicle inspection campaigns have been reduced in some places, which further accentuates this bad car condition.

Third, and again one of the most important of all; this speed limit question is going to be a highly important issue. You can't duck it. If speeds are built up to high levels with old cars in bad condition, and with tires that won't take it, and with drivers unaccustomed to heavy traffic and fast speeds, it isn't hard to visualize the results.

Fourth, road defects. Many roads are likely not to be in proper condition because of inadequate maintenance. I think you know the reasons behind that.

Fifth, relaxed controls. Controls have been relaxed and there are very real dangers that they will not be reinstituted promptly and effectively enough. State police forces? How much have they gone down? Forty to sixty per cent already.

Traffic engineering staffs are cut out entirely, or are reduced to a skeleton force. All those things mean that stop signs and traffic signals are not going to receive the attention they should. Lots of stop signs and traffic signals have been taken out, and properly so, because of war conditions. Now the question after the war of getting those back to the places, either where they were, or to the new places where they should be, is whether it will be done based upon the fact or based upon needs. Those are problems which relate to relaxed controls.

Another example of that: Driver examinations and re-examinations have been curtailed seriously in many places because of reduced staffs. Traffic judges have shown all too great a tendency, in many places, to go easy on service men and on war workers. Relaxed control is a very serious problem.

Sixth, drivers. There will be increased numbers of physically and, let us say, emotionally handicapped drivers after this war. If you consider the situation you

will recognize it immediately. Other drivers will be out of practice in heavy, fast traffic, and some new drivers who have developed in this in-between period will have never faced that at all. Their driving practices have not been tested, and this has been noticed by many judges.

Seventh, pedestrian faults. Children in all too many places again are playing in the streets. Many adults pedestrians are taking even more chances, and one reason they do so is because there is not so much traffic.

Eighth, the darkness danger: Most traffic fatalities occur during hours of darkness. Before the war, progress was made against improper headlight maintenance and use, and on improved street lighting. There is a danger that with all the wartime reductions on lighting, with dimouts and brownouts, that there will not be a quick enough relighting nor lighting improvement.

Ninth, arrested programs: Many traffic safety activities have been stopped or seriously curtailed, restarting of activities can be much harder than was expected.

There is a considerable danger of costly delays in reinstituting such activities as driver training and traffic research and traffic studies. It has pretty much gone to pot. Arrested programs are another real danger.

Tenth, financing: With heavy federal taxes there will be strong pressures brought to hold down state and local taxation. Remember, also plenty of post-war plans are going to be developed, and plenty of post-war ideas are going to be set forth which will need money.

Where is the traffic safety post-war planning situation going to be? It is going to be down in the cellar, unless you and I and the rest of us get ready some attractive and practical plans which will produce the kind of support that will warrant financing.

Next, public understanding: Basically, what can be accomplished for post-war traffic safety will be largely determined by public understanding of the need of, and by public support for, sound programs and budgets required therefor. There are two dangers:

First, that the public will have been lulled into apathy by this reduced traffic accident record.

Second, that so many other worthy post-war projections will attract the support of the public that the traffic safety program will go by the wayside unless it, too, has an appealing, practical program.

Here is another reason for starting this post-war planning job now: Deficient traffic facilities. As traffic increases, it will become more and more evident that particularly in urban and metropolitan areas many of our highway transportation facilities are not only inadequate, but they are outmoded. The same will be increasingly true of certain main arteries.

The need will have to be to have superior types of high-efficiency traffic-ways, in the cities express-ways and free ways which will be needed not only for cross-town, by-pass and loop movements, but for radial movements out of the heart of the cities.

Funds for preparing plans and specifications for these facilities are available right now—today. Money is available for that plan through federal aid on a matching basis. The danger is that not enough of this planning will be ready so that this work can start; and of course it has an important unemployment angle, too, right after the war. That is the danger.

You realize, of course, the implication that such facilities, if properly designed, can have very great traffic safety value. For instance, pedestrians are eliminated or put at separate grade in the matter of free ways. What needs to be done? Obviously, each of these problems must

be tackled vigorously, and to assure even reasonably satisfactory results, post-war planning must be started now. If the job is put off there may not be time later.

In-as-much as a panel of distinguished specialists is to follow with a discussion of these matters, it ill behooves me to detail more on just what is to be done about it. I have one general comment, and that is that for post-war safety the human element must continue to receive major emphasis and physical improvements are necessary.

Now for five suggestions which I hope may be of some practical value to you.

1—Get started now.

2—Organize a state or local post-war traffic planning committee at once.

3—Develop in written and diagrammatic form your approved post-war policies, programs, methods, financing plans, order of importance, and schedules, also assignments of responsibilities.

4—Coordinate post-war traffic and traffic safety planning with other post-war planning. See to it, too, that traffic safety values, including adequate features for pedestrian protection, are given proper emphasis.

5—Sell your post-war traffic and traffic safety policies, plans, programs and budget needs to appropriate government department heads, the executives, key legislators. For example, spread regulation proposals, plans for scientific tests for intoxication, and training programs.

The thing for us to do is to devise plans which warrant that public support, and then drive through hard to achieve that by convincing the public.

A Panel Discussion

Planning for Post-War Traffic Safety

CHAIRMAN RUTLAND: I would like now to introduce these gentlemen: Mr. Donald Blanchard, technical assistant to the general manager of the Society of Automotive Engineers in New York. He will discuss the Post-War Motor Car."

Mr. Walter Fox is manager of the Safety Division of the Syracuse Chamber of Commerce.

Mr. Maxwell Halsey is executive secretary of the Michigan State Safety Commission.

Mr. G. Donald Kennedy, now Vice President for Highways of the Automotive Safety Foundation, Washington, D. C.

Lieutenant Robert E. Raleigh, associate director of the Safety Division of the International Association of Chiefs of Police.

To start this off, I am going to call on Mr. Kennedy, to discuss highway engineering. As some of you may know, he is Vice Chairman of a special committee which was appointed by President Roosevelt to develop national inter-regional highway systems for post-war construction.

MR. KENNEDY: About the work of the Inter-regional Highway Committee, I would like to say that that Committee, after nearly two years of work, has perfected the selection of a system of inter-regional highway routes consisting of about 40,000 miles of rural highways, plus their urban extensions, which will give this country a national system of highways of a superior type.

In part it is a complete answer to the age-old question about whether this country needs superhighways, transcontinental highways, or not.

This Committee discovered that the principal highway and traffic problems lie in our cities. It had been well understood by traffic engineers and by highway planners for a long time, but it is interesting to point out that half of all highway travel in America before the war was on city streets, and that three

out of every five cars, buses and trucks on rural roads are either coming from or going to the city.

This is going to change our concept about highway construction. It is going to change the idea of building complete by-passes around cities, and in their place to penetrate the city with adequate modern highways.

Another serious problem which should be solved is off-street parking, and in general the relief of congestion and accidents that do occur on our city streets.

CHAIRMAN RUTLAND: Under wartime traffic restrictions, notably the 35-mile speed limit, do you see any indication that we should retain low speed limits in the post-war period?

MR. KENNEDY: You cannot make progress and have accident reduction by concentrating on the speed problem alone. The 35-mile wartime speed limit naturally applied mostly to our rural highway driving, since cities already had limits before the war. Rural highway deaths for 1942 were down only 5 per cent under the figures of the National Safety Council, indicating that the speed limit has not produced remarkable results. In 1942 speed was a factor in only three out of ten fatal accidents.

It seems to me that the post-war answer, therefore, lies in reasonable regulations, in continuing our program of driver education, and in enforcing sound traffic rules, plus the building of highways that will make it difficult for a driver to commit a fault.

MR. HALSEY: Mr. Kennedy, you have been talking about long-range programs, which are costly. How can we finance to create ideal traffic conditions?

MR. KENNEDY: The public already is paying the bill through gasoline taxes and special license fees and other excise taxes. The money already is in the public treasury. If we will use the funds that are collected for this purpose, and if we do not divert them but use them intelli-

gently, there will be an adequate amount of money to pay for the improvements.

Not all of the money of the post-war era is to be spent in any manner of means on these newer improvements. The great bulk of funds will continue to be spent on the type of improvements that we knew before the war, particularly the replacement of worn-out sections of our federal aid highway system, the further improvement of our rural road system, and we do need rural roads in this country if we are to maintain a balanced economy, and to generate all of the traffic that will flow on our principal routes.

Also, our city street system, our major city thoroughfares, need attention—not only the ones given over to the local express way, but the major city streets and local thoroughfares, and it is to these ends that the great bulk of money will be dedicated.

MR. BLANCHARD: Mr. Kennedy, what post-war highlights do you see in traffic engineering?

MR. KENNEDY: We will continue to make use of the well-known methods, tools and devices that have brought such satisfactory results in the past decade.

The providing of additional one-way streets, restrictions on turning movements, the providing of better signs and signals, the better use of paint and reflective devices, are just a few of the many things that can be done in traffic engineering that will bring great results in the field of safety.

CHAIRMAN RUTLAND: In Mr. Halsey's question about traffic engineering, what do you see in the status of traffic engineers, engineer divisions of highway departments? How many are there, for example, in all the states, and how many do we have?

MR. KENNEDY: The mere numerical answer to that question, Mr. Rutland, would not give a great deal of information, since each highway department has had established for nearly eight years a highway planning survey, and one of the elements of the highway planning survey has been a traffic survey. There has been developed in the forty-eight state highway departments a vast

fund of information pertaining to traffic. That information, in most instances, is being kept current. All of it is on file, and if we organize in the future with adequate traffic engineering, we do have at our disposal now the tools with which to work.

I think the number of highway departments that have a formally organized traffic engineering division is relatively small, and of course we do need, in each state, to see that the highway department does organize and maintains an active, progressive traffic engineering department.

CHAIRMAN RUTLAND: Mr. Halsey, do you know approximately how many traffic engineering divisions there are in the United States now?

MR. HALSEY: States or cities?

CHAIRMAN RUTLAND: States.

MR. HALSEY: I would guess there are about ten or fifteen that are very fully developed, and about 50 per cent of the rest of them are half developed. We still have quite a lot that are largely traffic engineering divisions in name only. There is a long way to go. We were making very rapid progress the last five years before the war.

CHAIRMAN RUTLAND: And you feel that that is an essential part of the post-war planning project?

MR. HALSEY: I certainly do, because wherever they have been adapted they have prospered and have demonstrated their value.

MR. RALEIGH: What about cities where future blueprints are not being drawn today?

MR. KENNEDY: There are many such cities, of course. The federal government already has made \$60,000,000 available for planning of post-war improvements. This money is available not only to the states but also for the first time to cities and counties.

If the public agencies do not have employees of their own, they are enabled to employ private consulting engineers; so there really is no excuse today for not preparing plans—with one possible exception, and that is the ability of that state, county or city to match planning

money. That is the requirement in the federal regulation.

MR. HALSEY: Mr. Kennedy, what will happen to the state or the city that lags behind in drawing its plans? As a practical matter, if you please, a political administrative matter, might they not be at a loss and not get their full share?

MR. KENNEDY: Do you mean in the actual building program?

MR. HALSEY: Yes.

MR. KENNEDY: Well, General Fleming has been saying repeatedly around the country, during the past few months, that in the early years of the depression the reason the federal government turned from a public works program to a work relief program was that plans were not prepared.

There were \$4,400,000,000, I believe, or thereabouts, appropriated for public works in 1933. That was made available about the middle of the year. By the end of that year it was found that work was not getting under way, and on November 15th the famous C.W.A. conference was called, and that money was diverted from public works construction to work relief.

There followed, in the ensuing years, the program that everyone is familiar with. The penalty will be, I think, not so much to individual states and cities, but the penalty to automotive transportation, for its failure in providing the plans now so that these facilities will be built when the time comes.

MR. BLANCHARD: Any statement about what is going to happen in the future necessarily is a matter of opinion. Perhaps I ought to preface my remarks by saying that the principles I express are my own, and if they have any similarity to any that may be expressed by anybody living or dead in the future, it is purely coincidental.

The end of the war probably will find us with twenty or more million vehicles on our highways—the survivors of the more than thirty million vehicles we had at the end of 1941. During the period of industrial reconversion and even after production of new vehicles is resumed, these pre-war cars and trucks will be

the dominant element in traffic. If the industry sells five or more million vehicles annually for several years after it gets back into production, it will still take years before these new vehicles predominate.

There is every reason to believe that the first post-war vehicles will be essentially the same as the 1942 models. The industry will follow this policy for the reason that it feels that providing jobs quickly for our returning fighters and for the multitudes released by munitions factories, is its No. 1 post-war responsibility. It can only fulfill this responsibility by resuming production on 1942 models, perhaps with minor modifications, and with 1942 tooling, since to take time to develop new models and to re-tool for their production, would produce an intolerable lag in re-employment. By using existing designs and tooling and given the necessary materials, it has been estimated that the industry can be back in substantial production in from three to six months from the time Washington gives it the go-ahead on the reconversion of its plants.

Consequently the traffic stream immediately after the war will be made up predominantly of the same general type of vehicles we were accustomed to before the war. There is therefore no inherent reason why in the immediate post-war period, the vehicle should introduce any new element into the traffic safety problem.

Of course, for a time during this period, the average age of vehicles in service will be above normal and war-time shortages of maintenance labor and materials may have resulted in a deterioration in the condition of the pre-war vehicles. These two factors may present a situation calling for some special attention. However, there is nothing in available accident statistics to indicate that defective equipment has ever been a major cause of accidents. Hence it may well turn out that such deterioration in equipment as may take place during the war, may not result in any major changes in the safety picture.

Frankly, I doubt that anyone can be too definite about what kind of cars the industry will produce in the post-recon-

version period, despite all the pictures which have been published showing the car of the future. It seems unlikely there will be any new models put into production immediately after the war, assuming industry is willing to delay re-employment by taking the time to re-tool before resuming volume production, which, as emphasized previously, the industry is not willing to do.

It is true that war has greatly expanded our capacity to produce light metals such as aluminum and magnesium. It has also expanded not only our capacity to produce plastics but also the variety of plastics. The war has also given the industry a chance to learn much about the fabrication of these materials. But the war has provided little opportunity for the industry to test out the application of these materials in automobile construction. Consequently, until the test and development work essential to the creation of soundly engineered automobiles can be done, the extent to which these materials will be used must be shrouded in some obscurity.

It is also true that the war needs of our air forces have greatly expanded production of high octane fuels. This has led to much talk about 100 octane motor fuels for post-war cars. According to the best information I can get, we are not going to have 100 octane motor fuel, at least during the period we are considering here. My guess is that the octane rating of premium-price motor fuel will not be above 90 and that it is more likely to be several numbers lower than this figure.

It may be that the car of the future will be much lighter. Perhaps it will have its engine in the rear. Maybe it will be a greenhouse on wheels. It may be a whole lot of things sensationally different from anything in the past.

But whatever the future may reveal it to be, the public can anticipate with confidence that:

1. Engineers will continue their intensive efforts to build more safety into the car.
2. The car of the future will be a soundly engineered job.
3. The car of the future will continue

to represent the most results per dollar of cost which the industry is capable of producing.

In conclusion, I would like to emphasize that no matter what the future of car design may bring, it is very unlikely to produce any overnight change in the traffic problem. In other words, because there are always so many millions of old vehicles on the road, the new vehicle can only have a slow and gradual effect on the overall picture.

CHAIRMAN RUTLAND: In the event we ever do have a type of car that may have higher speed limits, new plastics, different visibility, and the like, Lieutenant Raleigh, what is your slant on what we can do to keep up with them?

LIEUT. RALEIGH: This question has been raised recently by some police officials. Commissioner Gentry of Oklahoma, in particular, is wondering whether it might be possible to develop for the police a standard police car. What he has in mind is many innovations that perhaps would be desirable from the enforcement point of view, perhaps a higher speed range, and things of that nature. Would you comment on that, Mr. Blanchard?

MR. BLANCHARD: If the standard cars with minor modifications are not adequate for the police job, it would be my thought that if the police officers would specify what they want in terms of performance—not in terms of design details—that it would give the manufacturers an opportunity to see what they can do to produce that car.

MR. HALSEY: Mr. Blanchard, we hear all this wild talk about the air transport of the future, and wild talk about the shape of the car and what it is going to look like. I hear quite a few people talk about wild speeds we may have. How much can you tell us about the speed characteristics of the cars we will be getting in the post-war period?

MR. BLANCHARD: My personal opinion is that top speeds are not going to be materially higher than they are today. That will be true particularly if fuel costs go up. It is a fact that in the upper speed ranges power consumption is going up with the speed, which means

that the gasoline consumption goes up with it.

MR. FOX: Mr. Blanchard, I have a question I should like to ask you: How will this post-war car affect traffic safety?

MR. BLANCHARD: It is not conceivable to me that anything that might be done to the design of the car would present a major problem for traffic people to worry about. Any changes that do influence your problems are going to take time. In the probable event that some change in design should drastically alter the problems of the traffic authorities, the influence of that drastic change in design would not be an overnight thing; it would take time to exert influence, and during that time there would be an opportunity for both the traffic authorities and the industry, working together, to develop whatever new techniques were necessary.

MR. HALSEY: Mr. Blanchard, how strong do you think the need is for the conservation of our present cars? There has been some rather disturbing newspaper publicity which I think is confusing the American people. How strong do you think that need is?

MR. BLANCHARD: I don't think anybody would expect me to take any position other than to say that the automobile is essential to the continued operation of this country, either on a war or peace basis. I do not know what the minimum number of cars is that we can get by with, but certainly the reaction of the public to rationing, and so forth, indicates that the automobile is pretty important to them.

I do know that the industry is constantly making representations to Washington as to the needs of the motoring public for maintenance materials and maintenance labor. However, I think we should all realize that in Washington the top man who has to make the decisions has some facts about this war situation that we may not have, and he has to use his judgment as to the best overall allocation of men and materials.

CHAIRMAN RUTLAND: Several questions have come in, Mr. Blanchard, and I wonder if in your opinion people are expecting that there is going to be

any change in the visibility, the structure of the car, to give more visibility in front?

MR. BLANCHARD: I think there were certain evidences that progress was being made in that direction in some of the pre-war models. I believe the importance of it from a safety standpoint in some cases has been over-emphasized.

CHAIRMAN RUTLAND: We have looked at the future of the motor car, and we have had a brief picture of highway building. The police have to have something to do with all of this, obviously. Lieutenant Raleigh, I am wondering if the police of this country are envisioning post-war planning? In other words, isn't this a parallel movement of all forces and agencies that have responsibilities? I wonder if our police departments are preparing themselves for this impact. I wonder, too, sincerely, if they do not make their preparations for the proper assumption of responsibility, what the public is going to demand of them or someone else in doing the job. What do you think about it?

LIEUTENANT RALEIGH: Mr. Chairman, I am inclined to believe that too few police officials in the country have given very much thought to post-war traffic planning from the enforcement point of view.

That is something which most of them are just beginning to think about. The International Association of Chiefs of Police recognized that and one of the things that they are definitely planning to do in the next few months is to hold regional IACP meetings for the purpose of telling these chiefs what they must do in planning for the control of post-war traffic conditions.

I do not think there is any question but that after the war—and immediately after the war—the police are going to be faced with one of the most terrific problems they have ever had. I have been quite interested in asking many chiefs of police, in my travels around the country, this question:

"Chief, the day that peace comes people are going to relax and celebrate and drink too much, and it's going to be quite a job. What are you going to do about

it?" And without exception, every chief of police has said to me, "Brother, that day I'm going to be out of town."

On top of that, as previous speakers have indicated, there is going to be a relaxation of the restraints we are operating under today, which now are necessary. Speeds are going up; there will be a carefree attitude, a spirit of celebration on the part of our drivers, a disregard for traffic regulations, more vehicles, more tires, and it all adds up to one conclusion, that the accident rate is going to skyrocket. That is a police responsibility, to see that that does not happen.

Certainly it is one thing that every police chief today should be planning for. It is like wartime traffic control was immediately after Pearl Harbor. The term was used frequently, but there were only a few people in this country who really knew what wartime traffic control was.

MR. FOX: How will the training features of police work be handled? Are they thinking about more training for the men?

LIEUTENANT RALEIGH: Yes, I think most police chiefs and superintendents, particularly in the state group, recognize that one of the things they can do today which will help tremendously after the war is explaining their police training program.

In several states, and I think of West Virginia in particular, Superintendent Clair Hess is planning to set up a state-wide police training school. That will not be limited to the state police, but the school will be for the police of the State of West Virginia. There is a trend in that direction.

There is no question but that from a police point of view, to do an effective job now and after the war they must have trained men. They cannot do it with amateurs or auxiliaries.

CHAIRMAN RUTLAND: That prompts another question on my part: Looking at this question over a long period of time, literally we have given birth to 30,000,000 automobiles in this country, and almost overnight, I might say. During all that time, and even before, for thousands of years police work,

as I see it, has been largely that of dealing with crime, where police must be hardboiled in a sense and must deal with a very firm hand in handling criminals.

In giving birth to this automobile we have an enforcement problem, and obviously it has been dumped into the laps of the police, and the same technique and training that has been given to police for the handling of criminals cannot be the same as that today, when they deal with the average type of accident in 75 per cent of the cases.

So I wonder if the swing from a crime complex to a traffic complex has been met by our police forces. That leads up to the specific question:

Is there a fertile field for recruiting into police ranks men who are now in the military services and who may be scheduled now by police officials for return into their ranks, men who may be better qualified to absorb police training now by reason of their military experience than they would otherwise by merely picking up some little candidate because they meet physical qualifications?

LIEUTENANT RALEIGH: The answer to that is a definite "Yes." The survey made about six months ago indicated at that time that 25 per cent of the 110,000 policemen in this country had left their departments. Only 9 per cent of that 25 per cent had been taken into service through induction. I do not recall the exact percentage that have gone into the reserve or who were commissioned, but part of them; of course, have gone into defense industries. Many police departments have lost some of their best men to the armed forces.

Most police chiefs are planning to obtain their personnel after the war from the armed forces. There are several reasons for that. These men have been policemen in the past. Some of the best men have gone into service, they have received this new training in the Army which will be of value to them, and there is one other reason that perhaps some of you do not recognize:

Our Army and Navy today are training our soldiers and sailors how to kill with their hands. That, some police chiefs believe, is going to present a terrific prob-

lem to the police after the war. The killer instinct, and the fact that many thousands of these men will know how to kill with their hands, will be a very great threat after the war. So police departments today are planning already to combat that training by training their present personnel in the methods of preventing such attacks.

CHAIRMAN RUTLAND: I was not altogether thinking about those who have left police ranks and who have gone into the service and who will return. I am thinking about other men who may have been trained in certain police work in the military services, who have never had local or state police work.

The point is, are our police generally, in this country, waiting for those men to return, or are they shaping up a schedule now of recruiting? I think that is a post-war planning program for our police officials. I wonder if there is any member of the panel who has a question.

MR. BLANCHARD: Lieutenant Raleigh mentioned the possibility of a post-war crime wave of some proportion. I am wondering if, when that happens, or if that happens, public pressure will cause the police force to raid their traffic forces in order to combat that sort of thing?

LIEUTENANT RALEIGH: I believe the answer to that is probably "Yes." With the beginning of the war, almost immediately we had discontinuance of manufacture of tires, and we also had rationing. Many police chiefs and public officials in this country assumed the attitude that because of rationing and the reduction in travel, there was no more traffic problem. Of course, there was nothing any more wrong than that.

The result of that trend and that thinking on the part of some police led to transfer of men out of traffic divisions, and the dropping in some degree of their traffic enforcement programs. That is difficult to overcome. I think most police chiefs recognize the importance of traffic in their overall police problem today, but after the war (and this is the view of many police chiefs) we probably will have a very bad crime wave.

The tendency in the past always has

been to pay much more attention to that than to traffic deaths. It is one of the important things that the police should be planning for now, and that is, how to combat it, because we are also going to have this skyrocketing of traffic deaths after the war, and there are going to be more people killed in traffic accidents than through a crime wave, as has always been true in the past.

CHAIRMAN RUTLAND: If you were a police chief in the average large American city, and you were interested in post-war planning, as are our highway engineers and motor manufacturers, what would be two fundamental steps you would take in your police department in connection with a post-war planning program?

LIEUTENANT RALEIGH: Well, if I didn't have a good set-up now, I would put it in right now, because in wartime it is possible, in some departments, to get some things you could not get previously. You have got to have that to start with.

CHAIRMAN RUTLAND: What do you mean by "set-up," specifically?

LIEUTENANT RALEIGH: I mean sufficient personnel in the traffic division, the traffic division within the city police department. They must have the necessary equipment, the support of the local safety council and other community groups. In other words, they must have a standard program, the same sort of thing that has been set up in many cities.

CHAIRMAN RUTLAND: Is there anyone in the room who does not know about the standard pattern of police officials? Don't be embarrassed and don't take undue credit. In other words, I take it that everybody in the room knows about the standard pattern of police work—and yet you represent—what shall I say—fifty American cities? Well, we will just have to hope that they are making a definite post-war planning program within their own police departments. If they don't have this program, where can they get this pattern?

LIEUTENANT RALEIGH: One source, of course, is the safety division of the International Association of Chiefs of Police. They will be glad to supply

any information on that to any of you who are interested.

CHAIRMAN RUTLAND: Now we are going to pass to "Uniform Traffic Legislation." With a lot of money in this country, with a lot of travel, with grandmother in the West going to see her grandson off to the Navy in the east, our boundaries have faded into insignificance. We have moved over them every which way. We have brought our whole nation closer together. I would like to ask Mr. Halsey, in that respect, where we stand with respect to uniformity in this nation, in the traffic safety movement.

MR. HALSEY: Mr. Chairman, first I should like to make a very brief introductory statement.

Legislation has always been the backbone of almost all that has been accomplished. Our big struggle for uniform legislation is so far back that many of us have lost sight of it. Legislation controls the following types of things: Funds, the authority under which we operate, personnel, their authority, position and income, the procedures under which many of them operate. Certainly it controls the operations of the motor vehicles on the street and on the highway. So let's go back and review the importance of legislation.

I have seen in many parts of the country good men and good plans fail because of poor laws. On the other hand, I have seen what I would call second-rate men and second-rate plans do a much better job because they were backed by a good law.

What we have got to have, then, is good men, good plans properly instituted and instrumented by adequate law. We should be doing the foundation work for this immediately.

A lot of people were sour on the law because people tried to pass too many laws, and we had the old slogan, "What we ought to do is pass a law." That was a fatal approach to it.

You may not solve the safety problem with a good law, but it is equally true that you may be prevented from solving it if you do not have a good law to back it up. So let's not wait until after the war

to get at this legislation. Let's get at it now, and be set for the post-war period.

Legislation and administration are more important than mere techniques or methods, and until we can get the administrative aspects up to the technical aspects, many of our good technical developments simply will not be used. I have seen many new techniques invented, and people have tried to apply them, only to find that the administration was not ready for them. If you try a new technique and your administration is not ready for it, you will spoil the new technique.

The law, of course, is undramatic, and the temptation is to spend more time on other subjects; but the time is now ripe to go back to this rather undramatic law.

MR. BLANCHARD: I would like to ask what steps are being taken to give the states authority to limit access to these fine new highways we are going to have, particularly on minor cross streets and hot dog stands and other encroachments.

MR. HALSEY: The story is briefly this: Before the war we had twelve states that had access legislation control; a standard model act was prepared by the legislature, and five states adopted it. That gives a total of seventeen states that have some kind of legislation, but still thirty-one states do not have such legislation. The importance of controlling access cannot be overestimated, because unnecessary intersections and interference from parking and development along the roadside may well ruin anything you build.

Access can be controlled by two methods: You can do it physically by elevating or by buying an enormous right-of-way. That of course is very expensive. Or, you can do it by denying access by law, and selling off by law some of the rights which you purchase through your legal control.

If we do not do that we will get into the very annoying process by which we have rebuilt a single highway as many as ten times, and where we continually are having to by-pass the by-pass. The sad cases of hot dog stands being built before the pavement is laid, certainly is something we must avoid if we are to get our money's worth out of the huge expenditures we expect to make.

As has been pointed out, we are trying to build highways to last fifty years. The only possibility of making a highway last more than ten years, which was the earlier expectancy, is by complete insulation. If that insulation breaks down, you will short-circuit the whole game, and the only way to do that is by proper laws controlling access.

MR. FOX: Mr. Halsey, what blanket authority do traffic engineers have or what should they have in administrative functions in new construction?

MR. HALSEY: Unfortunately, not very much. Traffic engineers in general do not have sufficient direct control. In too many instances they are not authorized to take action on design. In too many instances they are not given any control over design. Certainly matters such as design are not legislative detail matters, and it would be no more foolish than to write detailed specifications into the law. Those details must be given to the agencies presumed to be competent to handle them.

Since signals and markings are another type of thing that the traffic engineer should have full control of, some of the more progressive thinkers are recommending that administrative authority be given to the extent that trained technicians actually can try out things which their surveys show are good, and run them for perhaps sixty days before public hearings.

We are going to spend millions of dollars in pouring cement. If this cement sets in the wrong shape or in the wrong place, we will have lost the chance of a lifetime. Fool-proof highways have reduced accidents as much as 75 per cent, and the elements in those fool-proof highways largely have been geometric design elements over which the city and state traffic engineers have a great deal of authority. You have got to put the traffic engineer in a position, through law, so that he can squeeze the maximum safety value out of the post-war construction dollar.

CHAIRMAN RUTLAND: And if our municipalities had blanket ordinances that delegated that authority to the traffic engineering division, then they could establish these theories depending upon the

flow of traffic or the changed conditions, and the like, and that is what is needed?

MR. HALSEY: Yes.

CHAIRMAN: There is no model ordinance in that respect as far as municipalities are concerned, is there?

MR. HALSEY: Yes, and there are many good samples. I will be glad to communicate with anybody who would like to see some of those samples.

CHAIRMAN RUTLAND: I notice, Mr. Fox, that Mr. Williams, general manager of the National Safety Council, has copies of the post-war planning program for Syracuse.

MR. FOX: Yes, that is right.

CHAIRMAN RUTLAND: Does that post-war plan have in it the provision for an ordinance that does give this blanket authority to a traffic engineer?

MR. FOX: Yes. We put in, as one of the points in our post-war plan regarding traffic safety, that the traffic engineer should be established in his position by ordinance.

CHAIRMAN RUTLAND: I see Jim Economos, Secretary of the Traffic Court Committee of the American Bar Association, who has done a lot of work on traffic legislation. Jim, do you have a question you want to ask?

MR. JAMES P. ECONOMOS (Chicago, Illinois): I agree about the necessity for uniform traffic legislation. There are two parts to it, one state and the other municipal. What I want to know is, how are we going to get it?

MR. HALSEY: I think that is largely a sales job. We simply haven't done a good merchandising job on the importance of changing the law and bringing it up-to-date. It is a hard thing to sell.

MR. ECONOMOS: Do you know of any agencies that are working on that?

MR. HALSEY: I think Public Administration Service has been doing some of that work. Almost all safety councils have been fighting for it. The Highway Users' Conference has been hard at it.

CHAIRMAN RUTLAND: Well now, that brings up another post-war plan for safety councils.

MR. HALSEY: There is nothing that

will delay various city groups getting together any more than confusing the law. You will find more arguments between judges and police officers and other people because the law simply isn't clear as to who has what authority!

MR. HALSEY: Lieutenant Raleigh, wouldn't you say the same thing would apply to police departments—this matter of authority in traffic, in some cases?

LIEUTENANT RALEIGH: Yes, definitely. The question I would like to ask is this: What plans are under way or should be established to continue the State Highway Traffic Advisory Committee?

MR. HALSEY: About ten years ago most of the administrative people came to the conclusion that in states we needed an agency to coordinate the activities of the highway department, the state police department and the motor vehicle department. That was talked of for some time, and plans were under way to do something about it, when the war arrived.

The war immediately made that situation jell, and there was established in every state in the Union what is known as the Highway Traffic Advisory Committee to the War Department. There has been developed standard legislation which will convert this Highway Traffic Advisory Committee to the War Department to a peacetime agency which will clothe itself with the proper authority so that it will become a closely knit, well organized machine to see to it that you have standard traffic safety and transportation plans in a state.

Certainly the need for that will be even greater during the post-war period. No one in this room would like to see three separate conflicting and overlapping plans in a state, one by the state highway department, one by the state highway police and the third by the highway motor vehicle plant.

Certainly public opinion will be in much better shape if plans could come back supported by three state agencies rather than by one big state agency.

Certainly we would be foolish not to capitalize on an organization in each state which will have had several years' ex-

perience in coordination, doing a post-war job.

CHAIRMAN RUTLAND: Summarizing this for just a moment, here we find a motor car with a definite plan. Here we find highway engineers with a definite plan. We have found a weakness in the police plan. There is a definite weakness in the legislative plan. We must move along on all these fronts. I think we might take a few minutes to discuss a few points with reference to public education.

I would like to ask Mr. Fox of Syracuse what he thinks about the mental attitude of these 45,000,000 drivers immediately after the war.

MR. FOX: We are going to have all these people coming back more or less contemptuous of danger. We are going to have the exhilaration of victory; we are going to have freedom from restraint; gas rationing and everything else will be over, and people will want to go somewhere and go there fast. We have got to begin laying our plans now to carry on public safety education. We ought to begin to look around and see how we are going to get those funds.

LIEUTENANT RALEIGH: Mr. Fox, what types of public safety education, in your opinion, will be most effective?

MR. FOX: We have got to realize, first of all, that selling safety is a merchandising job, just the same as selling a suit of clothes or a pair of shoes. The safety message must be made interesting. We must get away from the idea of preaching. I don't think we are going to get too much acceptance to the idea of preaching. People have been told so much about what they are to do, as far as the war effort is concerned, that I believe we must try to get our message away from that angle. I don't like the term "slogan," and I much prefer short messages that will hit people. The use of the radio, films and things of that type will go over in a bigger way. We must realize that in different communities the message may have to be directed to different types of people, and we can't always go along on the same old line. Maybe we can put up street posters for a time, and then something else the next time. In other words,

we have got to mix up our stuff. We can't be satisfied to use one slogan all the time. Does that answer your question?

MR. HALSEY: Mr. Fox, what about the timing of this program? It strikes me that you would be in a very bad spot if you let your budget run down and then found that the time when you need it most you are out of money.

MR. FOX: Timing is most important, as it is in any type of sales campaign. When the rationing ends, then is the time when we should be prepared to act. I cannot emphasize too strongly the need of continuing the present public safety education which safety councils and other groups are doing.

MR. BLANCHARD: Mr. Fox, I would like to ask what is being done at the state, county and city levels to promote safety education through official agencies, schools, and so forth?

MR. FOX: In some ways that is one of the most important things we in the public educational field of safety have to do. We have two fronts, you might say: We have the public, and we must try to interest them; but we also must interest official agencies in full-time traffic engineers and a police department which is adequately manned.

Many times a safety council can go to bat for a police department or for a traffic engineer, in order to get those things. There is one other point:

We should all realize that the schools must take a very much greater part of this load, especially as far as driver education and driver training is concerned. We ought to realize, that adult education is difficult at any time. Adult re-education is even more difficult. In other words, the drivers who have developed certain ways over periods of years will find it very difficult to be re-educated. But if we can get this education to the one or two million young people a year who become of driving age, if we can get them to know the proper techniques of driving, that is one of the most fertile fields for public safety education that we have.

MR. HALSEY: I think early education programs are the best things we have. We could launch such a program more quickly than we could in peace-

time. If we could get the preponderant number of our schools going on that program, it will become a relatively simple matter to convert and add to it. We ought to do it much more easily than if we were starting it over again.

MR. FOX: I believe that is all I have to say on the matter of public safety education. It has to have the support of good enforcement, it has to have the support of proper engineering techniques, and also legislative techniques.

CHAIRMAN RUTLAND: Thank you, Mr. Fox. We have tried to cover a lot of territory here, dealing with 30,000,000 automobiles and 130,000,000 people, equipment, enforcement, and everything else. Some very good points have been brought out.

It all tends to reflect the responsibility we have in post-war planning programs. Are there any questions?

MR. LINCOLN LIPPENCOTT (Chicago, Illinois): Mr. Fox mentioned the difficulties in reaching adults in an educational program. Has anything been done nation-wide through the Office of Civilian Defense, air raid wardens, auxiliary police, to teach them safety so they can become a part of the adult educational safety program of the community?

MR. HAROLD GRINDEN (Duluth, Minn.): I cannot speak for the nation, but I do know that in Minnesota that has been an important factor in the training of our civilian population, as far as OCD is concerned.

CHAIRMAN: Are there any other subjects? If not, we appreciate your attention to this discussion. Now, summing this up for just a second, this is a broad program. Let's present our view for just a moment and see what might happen, and how we relate to it:

First, we will have plenty of gas and tires after the war. We are going to resume some degree of a higher speed than we have had during the war.

We are going to see thousands of men on the highway. We are going to receive a release of pent-up emotions. We are going to have police who are untrained.

We are going to see a stamped, in a sense, of equipment manufacturers selling all kinds of traffic control devices, and

we will see plenty of cities gobble them up, unless they standardize on technique. We are going to see many cities, many legislatures, perhaps, if this impact is as serious as it could be and I am not predicting that it will, but there is a possibility that the first year or two after this war we will kill 50,000 people on our highways. If that does come we will see many of our public officials, many of our state legislatures, get panicky in trying to do something about it. And they are going to begin to do something, perhaps, about legislation.

They may deviate from these standards. That is why it has been brought out here today that these standards ought to be as familiar to you so that when that time comes you yourself will be in a position to say, "Here is a bible we can use as a guide in this program."

Traffic engineering and highway building men are turning out patterns. The

police pattern is not utilized to its fullest extent, neither is our public education, and neither are we adopting standard, national, uniform legislation.

I think that is a challenge to every one of us, and I don't know of a single person who is going to get more value out of grouping those responsibilities and accepting those challenges than the men in this room, because down the line someplace the public is going to want men who can do this job.

As I said a day or two ago, the American people have tasted the value and the benefits of a good crime control movement in this country; they have tasted the benefits of public health and of fire control. They have not as yet tasted the benefits of traffic control, largely because they do not know it. When they do find out about it they will demand it, and it will be my neck or yours unless we are capable of meeting that challenge.

THURSDAY MORNING SESSION

October 7, 1943

Group Session for Traffic Court Judges and Prosecutors

Presiding: JUDGE ADAM YOUNG, Municipal Court, Greensboro, N. C.

The Court's Responsibility for Safety in the Community

A Panel Discussion

Panel leader: JUDGE PERRY A. FREY, Cleveland, Ohio.

Other panel members were: JUDGE GIBSON E. GORMAN, Chicago; JUDGE HARPER E. HARR, Little Rock, Arkansas; JUDGE JOHN L. NIMLACK, Indianapolis, Indiana; and JACK DeVoe, Deputy City Attorney, Lincoln, Nebraska.

Judge Frey outlined the scope of the subject to be discussed, pointing out that from the standpoint of the number of people who annually appear in traffic courts, it could be assumed that the traffic court is the most important of all courts in the American judicial system.

The first discussion subject proposed by Judge Frey concerned the judge as a safety leader in his community.

Judge Harb declared the public looks to the judge for safety leadership, unless there is some active community safety

council providing the necessary enthusiasm and leadership. In Little Rock, for example, he helped organize the City Traffic Commission. On another occasion, earlier, he took the lead in raising funds in the community to send three traffic officers to the Northwestern University Traffic Institute, Evanston, Illinois, and encouraged organizing a modern traffic division in the Little Rock Police Department.

Judge Harb said the judge also can promote safety education through the

publication of courtroom proceedings. This will be most effective if the judge will point out to newspaper reporters assigned to the court aspects of the cases tried which have strong educational value.

From the floor, the following viewpoints were expressed:

- a. In one city, the newspaper seems to think the judge is on trial and is not cooperative, thus closing that angle of approach to the judge.
- b. One judge stated that he thought the judge had no business as a safety leader, offering as his reason that it might interfere with his judicial freedom. Judge Harb and others assured him that there was no basis for that assumption from their experience.
- c. Other judges stated that they felt the judge should take an active part in safety leadership. Several said that the judge should lead if other leadership were not available, but should remain in the background if it were.

Judge Frey's next question to the panel was: "Should the court broadcast traffic court trials?"

Judge Gorman, for the panel, stated that the broadcasting of traffic court trials started in Chicago eleven years ago. Although, theoretically, it is not a good practice, it was undertaken because of a particular need for public education. It served its purpose and has been discontinued as the public is now sufficiently educated that the advantages are outweighed by the disadvantages.

In the discussion from the floor it was suggested that instead of broadcasting actual trials, certain types of cases might be dramatized. Upon a show of hands, no judges present advocated the broadcasting from the courtroom of the actual trial of traffic cases.

The third subject discussed was that

of educating traffic violators in the courtroom.

Judge Niblack described different things which may be done in the courtroom, such as lectures, use of posters, distribution of safety literature, etc., but that the most effective education can be obtained by a discussion with the defendant regarding the unsafe acts committed. Where accidents are illustrated on a blackboard, this provides an opportunity for all in the courtroom to profit from what is said and illustrated.

From the floor it was suggested that the judge should be careful not to find himself discussing the reason for his decision.

Others suggested that the judge can make a brief opening talk to educate all those present. Frequently he is pressed for time, and this treatment may be possible when individual discussion takes too long.

The fourth subject suggested by Judge Frey was the prosecutor's job in community safety. Mr. DeVoe stated that the prosecutor can assist the judge in various activities in and out of the courtroom, and should personally participate in the community safety program. With respect to those coming to court, the prosecutor can educate the defendant as to the factors involved, point out to him his rights, and obtain all necessary information from the police department and witnesses to prepare thoroughly for trial.

In the discussion which followed, it was reported that several prosecutors have participated in police training schools and have prepared instruction for officers on evidence and its presentation in court, which contributes to the total traffic safety program in the community.

In many traffic courts, the prosecutor has no part, and it was generally agreed that the procedure as it affects prosecutors should be reorganized.

Problems in Achieving Uniform Interpretation of Uniform Traffic Laws

A Panel Discussion

Panel leader: JUDGE CHRIST HOLM, Hibbing, Minnesota.

Other panel members were: JUDGE EDWARD C. FISHER, Lincoln, Nebraska; JUDGE THOMAS H. MAHER, Detroit, Michigan; JUDGE JAMES W. HODSON, Seattle, Washington, and JUDGE EDMUND B. SMITH, Kansas City, Missouri.

The background of the subject was pointed out by Judge Holm who said "It was thought-provoking to hear Judge Frey of Cleveland say that traffic courts are today the most important courts in America. We should probably disagree with a view that one court is more important than any other because all courts are important.

"Still, motor vehicles have changed widely and profoundly human habits and activities and everyone is affected by their use and operation. An instrumentality that kills 30,000 to 40,000 people each year and cripples another million certainly needs regulation so that its use may be safe and that it does not become an instrument of destruction.

"Nearly all collisions result from the breach of some traffic law. Because some people disregard motor vehicle rules and regulations thereby menacing lives and damaging property, it is necessary to have courts deal with traffic law violations.

"How the courts function in your community may determine the length of your life or the life and well-being of someone near to you.

"Violation of a traffic law does not involve a criminal intent. And most traffic law violators are not criminals in the sense of being otherwise bad citizens. Yet, if a person while violating a traffic law kills someone, that person is just as dead as if the killing were intentional or with premeditation. The loss is just as great to the victim, his family and his community as if he were shot to death or slain with an axe.

"A good traffic court should be an educational institution. Sometimes it must punish and even punish severely to get results and deter potential violators; but punishment is not always its primary function.

"When persons violate traffic laws

thoughtlessly or even in ignorance, the influence of a wise court may inculcate in such persons a new attitude of safety and of consideration for others. This is an educational process. In a democracy we need it in all fields.

"Because traffic violators generally are otherwise good citizens, they should not, except in the most serious crimes like drunken driving, be treated as criminals.

"On the other hand, the great number of traffic violations and the fact that traffic violations can readily be classified, suggest that there be some uniformity or at least consistency in their disposition and in the penalties imposed.

"A comprehensive and forward-looking understanding of all the aspects of successful traffic law enforcement is to be expected of a traffic court, but it is also the duty of every citizen to acquaint himself with the essentials of traffic safety and lend his cooperation to the orderly solution of this new and important problem.

"Courts are generally no better than the people want them to be. And the shortcomings of courts, including such practices as 'fixing,' exist in most communities in direct ratio to the interest or indifference of their people.

"Increasingly, as people become better informed of the hazards and considerations involved in traffic, they will insist on protection of human life.

"To achieve this result, the constabulary should be efficient and vigilant, the prosecuting officials honest and reasonably aggressive and courts impartial and competent.

"A community's court may be diligent and impartial and competent and yet life and property may be inadequately protected because a prosecuting official plays politics in his work or a police department is not efficiently conducted.

"Because the court is a judicial department and its personnel presumably best qualified, it should by example urge faithfulness and diligence upon others engaged in the administration of traffic law. That chain, like any other, is only as strong as its weakest link.

"Public interest should be quick to remedy and reinforce weak places."

The first question by Judge Holm to the panel concerned the organization of courts with relation to the traffic enforcement problem under urban conditions.

Judge Maher stated "In Detroit there is a very large number of traffic cases. In order to handle these with due consideration, there are two adjuncts to the court. One is a traffic violations bureau and the other a system of referees."

Judge Hodgson, describing the organization in Seattle, said they have a traffic violations bureau, which handles a large volume of minor cases, but that most moving violations should be handled in court for proper deterrent effect.

The second discussion subject pertained to organization of courts with relation to traffic enforcement problems under rural conditions. Judge Holm pointed out how this differs from courts in larger cities as follows:

Included with rural courts are courts in small cities. The judge in this type of court has two special factors not present in larger cities. One is the effect of the judge frequently being personally acquainted with the defendant. He thus has the problem of changing his identity as far as the defendant is concerned, from a friend to a judge, when he takes the bench. The other factor is that he has sufficiently few cases so that he can usually give them detailed consideration.

The third subject was uniformity of fines, penalties and forfeitures.

Judge Smith pointed out that this is most desirable between courts in the same jurisdiction. Furthermore it is highly desirable and advisable between jurisdictions.

From the floor the following suggestions were offered:

- a. Although there should be uniform penalty schedules, there should also be flexibility to meet special conditions.

- b. The type of the possible appeal has an effect on uniformity. In many states a trial de novo is held when the appeal is heard. This, particularly a jury trial, has the effect of causing the defendant to appeal due to the common experience that an appeal court will be more lenient than the original judge. Thus, in jurisdictions where this is possible, the penalties may not be uniform as compared with other jurisdictions.

Upon a show of hands, a majority of the judges indicated they do not have definite penalty schedules in all cases. It was suggested by several, however, that it would be helpful if the committee would make a study of this subject, and find out what the average schedules are like so that all might have the same thing as a sort of guide.

Judge Holm's last question was: "What is the function of the traffic violations bureau, and how should it be set up?"

Judge Fisher said the traffic violations bureau serves a very useful purpose where the volume of cases presents a problem in regard to time available for hearing them. However, the court should hear as many cases as possible. The violations bureau can well handle most parking cases, but unless the court is seriously undermanned, the majority of other types of violations referred to the bureau should be very few, and the court should watch them carefully.

In the discussion from the floor two main points were emphasized:

- a. It is usually advisable to hear most, if not all, moving violation cases in court.
- b. The court should have complete control of the traffic violations bureau.

Upon a show of hands to several questions, the following practices were indicated:

- a. Most of the judges have complete control of their traffic violations bureaus.
- b. In some cities, police department control of the violations bureau was decreed by city ordinance.
- c. In no case did the police have the traffic violations bureau without authority.

THURSDAY MORNING SESSION

October 7, 1943

Session for Traffic Engineers and War Transportation Administrators

Presiding: HARRY E. NEAL, Chief Engineer, Division of Traffic Safety, State Highway Department, Columbus, O.

Applying ODT Policies on War Traffic Control

By T. J. SEBURN

City Traffic Engineer, Kansas City, Mo.

Early in 1942, the Office of Defense Transportation, through its Division of Local Transport submitted a proposal consisting of two general methods of using existing passenger transport vehicles to the utmost and conserving critical materials. The first of these methods involved the direct exercise of authority vested in the Director of the Office of Defense Transportation by Executive Order of December 18, 1941. The second was a statement of policy made to operators of transit vehicles and public authorities concerned with transportation and traffic control.

The above statement contained twelve points, but is not to be confused with a later statement of Policy on Wartime Traffic Control. The former included specific recommendations with regard to staggered hours, curtailment of bus service, elimination of transit stops, and similar matters, and a general statement concerning the need to shift the emphasis from automobiles to transit vehicles as the major consideration in traffic regulation and the timing of traffic control devices. The major portion was devoted to economical business policies for an industry that suddenly found its position reversed from one in which it was struggling to continue its existence to one in which it had more business than it could well handle with its existing equipment. Only the suggestion, backed up by the authority over the transit industry as vested in the Director by executive order, was necessary to put these factors into effect. They were extremely welcomed by all operators, and were equally welcomed whenever they applied, the nation over.

Item No. 10 of this statement is the one with which we are primarily interested in the balance of this discussion, since it is the one dealing with War Traffic Control. This is also the factor which was responsible for a direct appeal from the Office of Defense Transportation to all mayors to see that war transportation administrators, traffic engineers, police and other authorities take immediate action.

Traffic Light Delays

Apparently Point 10 had not met with as much success as most of the others. The appeal was in the form of a letter calling attention to an increasing number of complaints regarding time wasted by war workers and automobiles held up by traffic lights. It was accompanied by a pamphlet entitled "Fitting Traffic Control to Wartime" in which a second 12-point program was presented; this is a breakdown of point ten in the original statement of policy.

Now where does this leave us? It brings us to the point where we must consider what can best be done to meet the needs of war transportation in our design and operation of traffic control.

The first point deals with the elimination of unnecessary signals; in fact, the first six points are devoted to the subject of signals and I prefer to group these together (at least for our use), making a seven point program. This, I believe, brings the entire program into better balance, and gives more emphasis to other needy features of traffic control. However, this only demonstrates a point that we must keep in mind in "Applying ODT

Policies on War Traffic Control." Each city and each location must stand on its own merits, as determined by impartial engineering analysis, and no single blueprint can be prepared for overall use.

Many traffic engineers have inherited many traffic signals that were installed without the benefit of engineering analysis, but determined by the number and weight of the requests of neighborhood groups. A large proportion of such signals do not, and probably never did, meet the minimum requirements of traffic volume or accident hazard to justify their use. The ODT policy presents an excellent opportunity for men in this position to renovate their traffic signal systems and remove the excess baggage. In fact, one enterprising young engineer even seized upon this opportunity to get an additional appropriation of over \$30,000 to make the necessary volume studies at all signalized intersections. Needless to say, this information will be of value to his office in many ways besides the elimination of a few traffic signals. Others, no doubt, have done the same thing in varying degrees.

Flasher Operation

Point No. 2, dealing with flasher operation of traffic signals, is merely a compromise applicable at points where traffic conditions warrant the use of signals for only a few hours of the day. There are three courses open to the traffic authority under such conditions. The first, continuous fixed time signal operation is wasteful of time which in wartime is wasteful of human life on the fighting fronts. The second, complete denial of the benefit of signal control may be equally wasteful of human life and units of our transportation system on the home front. Since our objective is the conservation of our transportation system, a unit out of service because of unnecessary accident may prove as wasteful as several units delayed. The third, and reasonable, course is the use wherever possible of flashing operation which should give most of the benefits of safety without the delays incident to stop and go operation. In many cities existing equipment will permit the use of flasher operation with only minor changes.

Point No. 3 is the recommendation that signal cycles be held to the minimum needed to accommodate all necessary movements, and suggests a range of from 35 to 50 seconds. May I suggest that in addition to the saving of time and conservation of transportation equipment, those interested in safety would probably favor these shorter cycles because they create a better degree of observance. Far too many accidents have happened at traffic signals because drivers would not tolerate the long delays and went through the red light.

Points No. 4 and 5 are rather closely allied and also bear a close relationship to the matter of short cycles. They are recommendations that time allotted to the green period should be accurately adjusted to the time required to move cross traffic and that cycle lengths, or divisions of the cycle should be adjusted to fluctuations of the demand during different periods of the day. Certainly, qualified traffic authorities have recognized the need of these adjustments in the past. We have found that some streets, especially in outlying sections, have had tremendous changes in traffic pattern which had to be met by alterations in traffic control.

Continuous Movement

The final point in the allied field of traffic signal operation is the suggestion that isolated fixed time signals within one quarter mile of one another be coordinated, wherever possible, to provide for nearly continuous movement of all vehicles on a thoroughfare. This can be done in two ways, first by the use of an interconnected system under the direction of a master controller, and second, by the use of synchronous motors that will run at the same speed as long as they are served by the same source of electrical energy.

The set of principles just given relating to traffic signals represent sound traffic management as established years ago and certainly should not need a war to put them into operation.

The next two points of the program deal with traffic police and police control of traffic movements. Although I am a firm believer in cooperation between the

engineering and enforcement agencies, I do not believe such cooperation calls for a discussion of police problems at this time.

Point No. 9 recommends the removal of stop signs from all locations where they are not needed to provide for the safe and orderly control of traffic. This again falls under the same general category as the group of suggestions relating to signal operation. Nearly all cities had installed stop signs of questionable need due to pressure from neighborhood groups. Also many signs had been erected that were fully justified during the days of unlimited motor vehicle use but where need is questionable under curtailed operation. An excellent opportunity is afforded to reconsider all of these questionable locations and remove the regulation or substitute "Caution" type signs where no more control is warranted. However, we should exercise caution in such a program, and not let our patriotism get the better of our judgment. The few stops that are made at an isolated intersection where accident hazard exists would probably not compensate for the loss in transportation equipment resulting from the collision of two vehicles. And in addition, the possible loss of manpower through injury is certainly worthy of consideration.

The next point in the ODT program is one that to me is of extreme significance. In it, under the general heading of traffic regulations are grouped several factors, each of which might be worthy of an individual listing. Let us look at them individually for a moment. First, restriction of turns is mentioned as a regulation that will often facilitate the flow of traffic through an intersection. Assume a hypothetical case which is made up of the history of several individual cases on record. Intersection designations would mean nothing and the case is assumed in order to apply more possible conditions in the time allotted. Under pre-war conditions a signalized intersection had far greater than the required volume of traffic to warrant signal operation—over 17,000 vehicles in 8 hours with 34% of the volume on the minor streets—and about 80% of this movement was straight through. Approximately 6% of the ve-

hicles made left turns and this small number interrupted the flow to the extent that traffic signal operation was breaking down. Of course, elimination of these left turns cleared up the operation. This was possible because a rectangular grid section of streets permitted the left turn drivers to proceed in the direction of their destinations by using other streets in the vicinity and this small number did not impose too great a load on them. Such regulation would have been impractical otherwise and would probably have shifted the scene of the difficulty elsewhere.

Later, with the construction and opening of a large war plant in the vicinity it was found that traffic volumes increased tremendously on this grid section of adjacent streets, and analysis disclosed that one of the prohibited left turns was causing this increased volume of traffic. The turn in question was again permitted and proved to be approximately 23 percent of the total movement. This case is cited primarily for the reason that it brings in many of the factors that must be considered during the periods of change occasioned by the war.

Use of Through Streets

Next, the proper use of through streets is recommended. Such streets are protected throughout their entire length by stop signs controlling traffic at each cross street. From the standpoint of conservation of motor vehicles and tires, and to eliminate unnecessary delay and accident to war needed travel, this is perhaps one of the most effective tools in the hands of the traffic authority. Much of the potential hazard that faces the heavy travel on a war transportation route can be eliminated by the proper designation and posting as a "through street." Frequent sudden brake applications followed by rapid accelerations are thus made unnecessary and the only cost is that experienced by the much smaller number of drivers on the cross streets in making a normal service application of the brakes followed by a reasonable start into or across the major route.

The matter of vehicle parking and the attendant debate about the division of street space between the movement of

traffic and the temporary storage of vehicles is also worthy of very serious consideration. In approaching this problem it must be instantly recognized that the motor vehicle is of very doubtful value if all we can do is to ride in it, but it is also true that a half dozen vehicles parked at the curb may deprive hundreds of an additional lane of travel. Street widenings can often be instantly and economically accomplished by this simple regulation either applicable at all hours or for a few selected hours when the need is greatest. Sometimes it may be necessary to provide adequate space for the cars removed in off-street parking lots, but this is a course that probably will be followed in the future, and we may as well let wartime needs aid us in post-war planning and development.

One-Way Streets

An item that was not specifically mentioned as one of the ODT policies seems to merit some consideration. The proper use of one-way streets may serve a very needed purpose in the relief of congestion and the facilitation of war travel. It has been developed in the past that more efficient movement can be obtained when all vehicles are traveling in the same direction, especially on streets having an odd number of traffic lanes. Costly accidents are also eliminated, especially those involving pedestrians who find it much easier to cross a one-way traffic stream than one in which cars are bearing down upon them from two directions. In some cases streets have been designated as one-

way for rush periods only and sometimes the direction is reversed for different peak periods. This does not generally prove satisfactory and is extremely questionable now because a great deal of supervision is necessary and police authorities are confronted with the same manpower problem that we face.

There are two other points cited in the program as submitted by the ODT. One is the adoption of a system of war transportation routes which probably should be developed in connection with the through street system. The other is the need for economical use of traffic control equipment, and certainly no one is willing to debate the need for such conservation. Substitute materials are opening up a wide field of study and much better equipment will probably result from the shortage of some types formerly considered standard.

Finally, I would say that the application of ODT policies on war traffic control is merely a practical application of good traffic administration and that much aid can be derived from these policies by authorities who have been saddled with unnecessary or obsolete equipment, regulation or lack of regulation, and who have not had enough public support to make changes we all know are needed. That same detail in providing specific warrants for the use of the four types of traffic regulation as that devoted to the matter of traffic signals would no doubt make it even more valuable to those who have the responsibility of providing a well balanced program of traffic control.

Fact Finding Studies for Improving War Transportation

By HAROLD F. HAMMOND

Director, Traffic & Transportation Division, National Conservation Bureau,
Association of Casualty & Surety Executives, New York

During wartime, transportation problems are constantly arising. The first was tires; the next is gasoline; and the next may be a shortage of vehicles and inadequate roadways. Aggravating these war problems, there has been a shortage of transit facilities all along.

The family car, upon which the American public so largely depends for daily transportation, has not been manufactured for civilian use since February, 1942. Thus, no new vehicles are available to replace the 150,000 being scrapped each month.

To keep our present vehicles in good running order will not be an easy task. They are steadily growing older. Replacement parts are hard to find and competent mechanics are still harder to locate.

Employment at many plants has increased to such totals that transportation and parking facilities, and even the roadways themselves, are no longer capable of handling the tremendous loads.

In addition, many new plants, especially many of the larger ones, have been constructed in outlying sections, which too frequently are at considerable distance from worker residential centers, lack adequate transit service, and are not serviced or poorly serviced by major roadways. To make matters worse, manpower and building material shortages are hindering the proper maintenance of such roads.

Many traffic control devices which were adequate in peacetime have been made ineffective or inefficient by the shifting of traffic loads from one street or highway to another, accompanied by war changes in peak hour flow.

Most transit facilities are operating today at capacity load. They cannot be expected to carry much more unless further adjustments are made in working hours. And there is little hope of increasing the present size of the urban fleet of buses and street cars, since the number of buses manufactured in the

past 18 months has failed to meet even normal replacement requirements!

Gasoline shortage will continue to be a major problem for many months to come. And while some sections of the country may receive more, other sections are likely to receive even less than they are getting today.

Problems Form A Challenge

One or more of these problems exist in every community. One or more confront every war plant of any size. They form a constant challenge to local war transportation administrators and plant transportation managers.

Those persons in the communities and in the plants, who are charged with the responsibility of improving worker transportation, must constantly be on the alert if they are to keep abreast of their problems and improve war transportation facilities and conditions whenever and wherever possible. This requires constant spot checking of conditions in the field and periodic review of transportation facts; in short, constant appraisal of all transportation problems in order to determine what, where, when, and how transportation improvements may be applied.

The value of fact finding studies can best be illustrated by several actual examples:

A large aircraft plant was told by the War Manpower Commission to increase its employment of women from 30 to 60 per cent of the total within 6 months. The war plant transportation manager immediately appraised the effect this shift in employment would have from an employee transportation standpoint. Through field studies, he found that only 8 per cent of the women drove cars to and from work, as compared with 47 per cent of the men. This fact immediately revealed a new employee transportation problem. It showed that for every one hundred women employed in place of one

hundred men, there would be a loss of 39 passenger cars to the plant transportation system. To offset the anticipated loss, the plant transportation manager immediately arranged for transit facilities to be added as necessary.

Studies at another large war plant showed that it required an average of 15 minutes for employee cars to travel from the main highway in front of the plant around to the parking lot behind the plant. That 15 minutes alone was equal to the time required by the average employee to travel from his home to the front of the plant. Obviously, it produced many undesirable effects, both for the plant and for the employee. Armed with factual data showing the unsatisfactory condition, the plant transportation manager was able to convince the plant executives to make improvements. These included a new, more direct entrance to the parking lot from the front of the plant, which eliminated most of the 15-minute delay.

Studies of a major transit line serving an important outlying war establishment showed that the anticipated transit load could be handled by adding eight more transit units. But eight additional units were not available. Therefore, operational improvements had to be made in the 42 units already operating, to produce additional round trips at peak periods equivalent to the needed eight units. This objective could be accomplished by cutting the round trip time for each of the 42 units from 100 to 80 minutes. It was achieved by eliminating two-thirds of the stops, minimizing congestion at two major intersections, and establishing a new off-street loading zone, with improved fare collection methods, at the war establishment.

Types of Fact Finding Studies

Fact-finding studies to improve war transportation are generally applied on a community-wide basis or for specific large war plants. County and state-wide studies are not uncommon, however.

War transportation studies receiving special attention today may be divided into five general types: (1) war worker routes; (2) transit; (3) automobile move-

ment; (4) parking; (5) automobile maintenance.

War worker route studies include those showing: (a) the extent to which the ODT traffic control policies have been correctly applied; (b) physical condition of signs, signals, and markings; (c) locations of accidents and congestion.

The transit studies, either city-wide or for a single plant, include: (a) transit loads; (b) transit delays; (c) staggered hours; (d) the extent to which ODT transit policies have been effectively applied in the community.

Automobile movement studies applicable for either the city or plant, include: (a) vehicle occupancy and group riding; (b) speed; (c) volume; (d) origin and destination of worker traffic.

Parking studies, particularly from a war transportation standpoint, are generally confined to: (a) studies of curb parking conditions created by a large downtown war plant; and (b) analysis of the plant parking lot.

Vehicle maintenance studies, still comparatively new, are applicable on either a community-wide or single plant basis. These include studies of: (a) automobile age and maintenance; (b) maintenance facilities; (c) gasoline consumption and tire condition.

Parking Lot Studies

Plant parking lot analysis involves inspection of the physical attributes of the plant parking lot and observation of the manner in which they are used by vehicles. The mechanics of making these studies include checking off on two check sheets, items which give indications of the adequacy of the lot, especially as to design, location, and operation.

The first check sheet relates to the physical layout of the lot and contains 16 items to be checked as "true" or "false" in accordance with conditions observed. The second check sheet relates to the operation of the lot and contains seven items.

All items checked as "false" should be investigated further with a view toward correcting the condition.

Specific uses for this parking lot analysis include: (a) planning improvements

Accident Studies

The war worker route traffic accident study is conducted primarily to determine traffic accident causes and proper corrective measures at locations on plant property or on public thoroughfares used by war workers. It should be remembered that a traffic accident involving plant employees may not only rob the plant of valuable manpower, but results in temporary or permanent loss of a car that may be transporting from 2 to 5 employees.

Following the preparation of the usual collision and condition diagrams for the accident location, these questions should be considered:

- Are the accidents caused by a physical condition of the road or adjacent property, and can it be eliminated or corrected?
- Is a blind corner responsible? Can it be eliminated? If not, have adequate measures been taken to warn the motorist?
- Are the existing signs, signals, and pavement markings doing the job they were intended for? Is it possible that they are causing accidents rather than preventing them?
- Is traffic properly channelized to minimize the occurrence of accidents?
- Would the prohibition of any single traffic movement, such as prohibition of a minor left turn movement, prevent accidents?
- Can part of the traffic be diverted to other thoroughfares where the accident potentialities are not so great?

Detailed presentations of these three studies, along with eleven others, are given in the "Wartime Transportation Survey Manual" now being published by the National Conservation Bureau as a comprehensive followup on the several employee transportation conferences and employee transportation booklets which were jointly sponsored and published by the National Association of Manufacturers and the National Conservation Bureau.

Here is a special point to keep in mind

in the lot; (b) reducing delays and hazards at the lot; (c) increasing the capacity of the lot; (d) enlarging the lot to handle more cars; (e) planning new parking lots.

The automobile maintenance facilities study involves an inventory of location, hours of operation, and types of services performed by garages and service stations which might be patronized by war plant employees. It can be made for a single plant or for a group of plants.

An inventory form is used to list all data pertaining to those automobile maintenance establishments which because of geographic location are available to the plant employees.

There are two major uses for the study:

- To assist employees, especially new ones, in locating garages or service stations which are conveniently located and are open at proper hours to perform necessary automobile maintenance work. It will be helpful to prepare and post in the plant, near the lunch room or employee entrance, a large map showing the locations of all automobile maintenance establishments, numbering them to correspond to the number given each establishment on the inventory sheet.
- To provide basic data for a study of possible changes in working hours of garages to permit employees to obtain automobile maintenance not possible now because of the service establishments being closed during the hours that employees are not working.

Here is an actual example of this study in operation:

Because of the shortage of skilled help and automobile materials and parts, one large midwest war plant, employing 20,000 persons, arranged with the local automobile trade association to request the service departments of local garages to give all possible preference and priority to the servicing and repair of vehicles belonging to the war plant employees. In turn, the war plant employees were notified of this arrangement, and a list of co-operating garages was posted for their guidance.

when conducting fact-finding transportation studies:

The rapidity with which transportation problems arise and the consequent urgency for their solution will seldom permit lengthy or detailed studies. Short cuts and spot checks are therefore necessary. Shorter traffic samples and more general observations are in order. In peacetime, a speed and delay study of a major route might consist of detailed observations on each block and at each intersection, requiring days to complete. This sort of study under war conditions must generally be made in a few hours, because of limited manpower and war's demand for quick results, conditions which automatically limit the study to observations of overall speed, and only a spot checking of the major delay points on the route.

Six Important Questions

Here are six important questions for your consideration:

- (1) Do you know the bottlenecks in your local or plant transportation system, and are you taking positive steps to eliminate them?

- (2) Are you taking positive measures to correct accident locations which are robbing you of valuable workers and automobiles?
- (3) Have you estimated how many more persons in your plant or community will require transportation three and six months from now?
- (4) Have you considered how many registered automobiles in your plant or city will be out of circulation six months from now?
- (5) Have you developed a program to compensate for automobile losses: by increasing transit capacity or by group riding?
- (6) Do you maintain a detailed plan of remedial steps that should be taken if and when a sudden transportation shortage should occur in your plant or city?

Think these over carefully. The answers may help you greatly to keep workers on their jobs in the industrial plants upon which we depend for the weapons and other supplies we need for victory.

Providing Off-Street Parking and Terminal Facilities

By D. GRANT MICKLE
Automotive Safety Foundation, Washington, D. C.

We are inclined to forget that there were parking and storage problems before the day of the automobile and, therefore, blame the conditions today entirely upon the use of motor vehicles. The horse and buggy and the horse and dray required much greater storage or parking space than does the automobile or truck and their maneuverability was certainly much inferior. The contribution the motor vehicle has made to the problem is that people have become more mobile. We can gather from larger areas and, therefore, in greater numbers. Time of travel is also a factor. And finally, our general prosperity has increased so that more people can own their individual transportation. The point is, therefore, that the parking prob-

lem is not an isolated issue, but an intimate part of providing fast, cheap, convenient highway transportation service.

In a thorough study of the entire parking problem, consideration must be given to the whole urban problem of land use, decentralization, blight, and other over-all problems of the urban dilemma. However, the scope of this particular discussion is confined to means of providing off-street facilities. The two principal concerns are financing and legislation. Let us consider means of financing facilities first.

There are three general categories into which we may divide the means for providing off-street parking facilities: private, privately operated public facilities, and public facilities. The private facility

is the one providing parking space to occupants of given buildings and is either given as an inducement to rent building space or is charged for on a monthly or annual basis. The characteristic of this type of facility is that it is not open to the general use.

The second category, the privately operated public facility is today providing the largest capacity of off-street parking in the downtown districts of cities. Payment for these commercial facilities is made in several ways: (a) direct payment by motorist; (b) payment by business firms upon purchase of goods, or (c) combination of (a) and (b).

There are relatively few cities which provide the type of parking listed in the third category, namely, municipal facilities. Some cities have provided off-street parking as a free municipal service, others finance such lots through parking meter revenue and others operate them on a self-sustaining fee basis.

Temporary Use of Land

Public lots privately operated must collect fees for parking sufficient to pay the rent (generally about the amount of the taxes), operating costs, license and insurance fees, and a sufficient return to compensate the operator. Unfortunately most lots of this nature exist only until such time as the land can more profitably be used for some other purpose and, therefore, are seldom improved or beautified beyond bare essential needs. Because the lots become available through business failure or some other similar cause, they are not located or arranged in any planned manner for providing the most convenient off-street parking facility.

Municipal ownership, on the other hand, offers different opportunities for financing. The land may be city owned through tax delinquency or gift. Or it may be a parcel remaining from some previous public works project. In most cities today there are areas or fringes around the central business district which are no longer productive of income, particularly under the existing tax burdens. Moreover, it is not unlikely that examination would show in most cities that under normal times there is an excess of business floor space. Under

these conditions, it might be well for cities to take these plots of ground out of competition forever and provide landscaped open areas fringing the business district and that could be used for parking purposes. Thus, the fee for parking would not need to include high tax costs, but would be confined to improvement and operating costs. And, on the theory that the whole city would benefit, a certain part of the costs might be charged against the general tax levy.

The private parking accommodation is generally financed as a part of the business activity to which it is attached. Whether a fee is charged or not, at least a part of the cost is borne by the hotel, department store, office building or other establishment whose business directly benefits. A direct return on the investment is generally foregone because of anticipated increased business generated by the convenience of the parking facility.

Therefore, it is seen that parking can be provided through private enterprise or by action of government. In accordance with traditional American custom, it is probable that private initiative will for the most part provide adequately for the off-street parking demand. However, in order to assure proper appearance, adequate operating safeguards, and proper arrangement of lots, the profit from reasonable fees may be so limited that government operation would become necessary in the general public interest.

Municipal Experience

Interesting experiments in trying to solve the off-street parking problem through the joint effort of business men and by means of municipal operation are described in reports from Los Angeles and Kalamazoo, Michigan.

The problems faced in the Los Angeles area and some of the means for working them out were described by Mr. Huber Earl Smutz, City Planning Director for Los Angeles in a paper delivered in 1940. He stated:

"The trend toward the development of new business enterprises, each with its own off-street parking facilities combined with the ever-increasing congestion and reduction of curb parking facilities, has

had a telling effect upon old established business areas. Those businesses most vitally affected by this problem are those located in the Central Business Districts. Confronted with growing inaccessibility, business has had to make a choice between two alternatives: either move out of the congested area or stay and fight for its existence.

"The cost of fighting has been terrific in most cases and consists largely of either acquiring costly land for their own parking facilities or of validating customer's parking checks from private auto parks at tremendous outlay each year. One concern in our Central Business District paid over \$25,000 last year to auto parks for customers' parking checks which they validated, and one concern in Hollywood paid out even a larger sum. It is estimated that over \$150,000 was paid by downtown business men for validated parking checks last year.

"A limited inquiry indicates that merchants who arrange for validation of customer parking on privately owned lots pay more than twice the amount per car paid for customer parking by the merchant who owns and operates his own lot.

"A most unusual method of reducing these handicaps to the minimum has been developed in Hollywood by their Chamber of Commerce. This 'Hollywood Parking Plan,' as it is called, involves a universal validation scheme enjoyed by all merchants and parking lots who subscribe thereto.

"The Chamber of Commerce acts as a central clearing house and sells 5c parking stamps to the merchants who validate parking checks by placing stamps on the back as purchases over \$1.00 are made. The stamps are later redeemed by the Chamber of Commerce from the parking lot operators. Incidentally 62.7% of all shoppers come to Hollywood by private auto, there being off-street parking facilities for over 25,000 cars adjacent to the shopping areas.

"Although this scheme is a great improvement over the individual validation method operating in the downtown district, the Hollywood Chamber of Commerce is now working on a proposition for the acquisition by assessment district

of a large area which it is proposed be deeded to the city and then operated as a parking lot by the Chamber of Commerce on possibly a lease basis."

Kalamazoo Plan

In Kalamazoo, Michigan, a municipal parking lot of 390 car capacity was opened in the fall of 1939. The cost of purchasing the land, removing buildings, surface treating the lot and providing driveways—approximately \$60,000—was assessed against that property judged to derive the greatest benefits. In reporting upon this venture, City Manager E. S. Clark states:

"It must be understood, however, that all of the benefits do not accrue to this assessed district. In determining the district to be assessed, a study was made by our assessor with a group of twenty-five or more interested citizens. When it was definitely decided which properties should contribute to the purchase and development of the lot, then it became necessary to determine in what proportion the various properties should be assessed. With this same aid, the assessor decided that there should be three zones known as A, B, and C, knowing that zone A would receive more benefit than zone B because of its location; the same would apply to B and C when the zones were established.

"It became apparent that ground area and assessed valuation each played an important part in the attempt to arrive at an equitable assessment, because in some instances we had a high structure with a very small ground area; in other cases there was a large ground area with an inexpensive building. After considerable study, the assessor arrived at the decision to place 50 per cent on area and 50 per cent on assessed valuation after first determining the amount to be assessed against each zone.

"This parking lot was developed primarily for the business in a fast integrating area, principally because of the lack of parking accommodations. The underlying thought of the owners, as well as of the city officials, was to stop this disintegration, increase the valuation, and at the same time retard decentralization. In order to operate this parking lot to the best interest of the property owners,

who are paying the first cost of property and improvements, there was set up, by resolution of our City Commission, an advisory board to the City Manager—a committee of five property owners having property within the assessed area.

"The city and property owners, having the same purpose in mind, made certain rules for the use of the property: the greater the number of shoppers, the greater the value of the lot. (When I say shoppers, it is my thought that any individual who calls on doctor, lawyer, dentist, real estate dealer, etc., is considered to be a shopper.) This committee, with the City Manager, decided that a two-hour parking limit should be established as free, the next hour to be 10 cents and each additional hour 5 cents. We keep three attendants during the hours from 8:30 a.m. to 6 p.m., the hours between 6 p.m. and 8:30 a.m. being free.

"One year of experience indicates that the income will slightly exceed the cost of attendants. Any other expenses, such as lighting, water, or other maintenance, will have to be borne from taxes. In our case this is justified by the stabilization of property value or increased valuation. Another thing we have found is that less than 15 per cent of the users of this lot pay for parking."

Zoning Requirement

Another method seeking to provide adequate off-street parking space both in business districts and residential areas is by means of zoning legislation. A recent amendment to the Arlington County, Virginia, Zoning Ordinance provides:

"In any residential, commercial, or manufacturing district where any lot or plot is used for any one family dwelling, duplex, semi-detached dwelling, apartment house, hotel, or any other single or multiple family use, garage space or vehicle parking space shall be provided on such lot or plot, together with means of ingress and egress thereto. The garage space or vehicle parking space required shall be of sufficient area to accommodate one automobile or vehicle for each family unit or apartment contained on such lot or plot.

"In connection with every parcel of

land in a manufacturing district, on which is conducted any manufacturing use permitted in the district, there shall be provided space for all the vehicles used directly in the conducting of such use and, in addition, there shall be provided space of not less than two hundred (200) square feet for the standing of not less than one vehicle for each two persons employed or intended to be employed on such parcel of land, together with ingress and egress thereto. If such vehicle standing space is not provided on the same parcel of land on which such use is conducted, it shall be provided within a distance of not to exceed four hundred (400) feet from the main entrance to such use, and such vehicle standing space shall be deemed to be required open space on the parcel of land on which the same is located and shall not thereafter be reduced or encroached upon in any manner, except upon approval by the Board of Zoning Appeals in either of the two following circumstances only:

(a) Such space may be reduced by the amount to which other similar space, similarly situated, and subject to the same conditions as herein specified for such space in the first place, is provided for the use to which it is appurtenant.

(b) Such space may be reduced by an amount in proportion to any reduction in the number of persons which can be employed on such parcel of land."

Similar regulations apply to theaters, auditoriums, hospitals or other places where people may congregate in numbers.

For several years past the Federal Government, through the Public Roads Administration, has recognized the importance and interrelationship of terminal facilities and the general street and highway pattern.

The Defense Highway Act of 1941 provided in Section 11 for the expenditure of Federal funds when matched in statutory ratio by the States for the construction of off-street parking facilities to relieve congestion on the strategic network. A condition of Federal participation is that the State permanently prohibit parking within the roadway or street. Also, it must be determined that the Federal funds required for the parking facilities will be materially less than

those required for widening or relocation of the highway, and that substantially as great benefits will result.

Anticipated large increases in urban traffic will obviously make it impossible to handle the parking problem at the curb; hence an extensive system of parking terminals will be a necessary feature of

post-war planning and highway transportation development. Surveys, plans, acquisition of land where needed, passage of enabling legislation can be done now in preparation for post-war construction. Now is the time to start if we are to hope to rescue cities from their present plight.

Re-Routing and Re-Scheduling

By ROBERT A. MITCHELL

Transportation Director, Philadelphia Metropolitan War Transportation Committee, Philadelphia

Many decades have passed since the workman lived with his work, when the source of his livelihood was no more distant than an adjacent room, a nearby guild hall or, at most, several squares across a small village.

Progressively through the year the manufacture of goods requiring many skills, and the centralization of industrial power, have resulted in districts of industry where all employed therein could not find residence.

From this condition we find the development of purely residential areas, some nearby, some quite distant from the source of livelihood. This divorcing of the bed from the bench had its dependency entirely upon the facility of traveling between the two, and as transportation improved, the number who relied upon it increased, and distances expanded. Today most cities have very efficient mass transportation systems.

In many cities, competitive transportation is still operated on the same or adjacent streets; in others the operation and ownership is municipally vested; while in still others, corporate interests have combined the several routes into one operating structure. Whatever form of operation prevails, the obligation persists to provide a ready means of transit over convenient routes where and when required, not only for habitual daily traveling between given points, but also to provide adequate service for unusual requirements such as mass gatherings, at stadia, amusement parks, etc.

Some companies have adopted a policy of extending routes into undeveloped sub-

urban areas to incite and promote their development. Others prefer to avoid this development period, and await the demands of the populace for transportation service. Some urban routings result as a necessity from the routings of adjoining suburban areas whereby passengers are delivered to focal points along the cities' boundary requiring a network of routes throughout the city for their distribution.

In cities of large areas and densely populated centers, lengthy journeys have been reduced by construction of elevated and subway high speed routes.

The costly construction of street rail lines has of necessity limited their development to the more thickly populated districts and in recent years supplemental and feeder routes have been developed almost wholly for bus operation.

In most all cities, transportation routes, whether street car, bus or high speed, are designated and authorized by municipal or commonwealth franchises, thus protecting both the citizen and the invested interests against indiscriminate and unreliable service.

Scheduling

Some franchises stipulate the running of a car over a route each twenty four hours, to avoid charges of abandonment. So far as I know this requirement is the nearest attempt on the part of regulatory bodies to specify the amount of service to be operated—the frequency of service being the problem of the operator, within the bounds of profitable operation. Economy of operation is necessary for a transit company to live. In some cases of munici-

ipal operation this is not true and the taxpayers are called upon to make-up the deficit.

The scheduling of efficient services is controlled by four major factors: a—load demand; b—profit to the operator; c—public reaction, and d—competitive service.

A contrast of scheduling confronts the operator. Employees of commercial and industrial centers move in great numbers within a short time bracket, whereas residents of sparsely settled areas move in small numbers over many hours. The riding public however, expects service to be available when they want to ride. The result is that during the greater part of the day, the minimum of service provided is considerably more than adequate, while for a relatively short period the maximum operable service is oftentimes inadequate, and not always comfortable. In suburban areas, a 15 or 20 minute schedule dependably operated, is accepted by the riding public, whereas people in congested areas expect a 2 or 3 minute service.

The utopia of transportation officials' dreams, a pay load on every vehicle on every trip, is impossible of realization. It is only hoped the public will be satisfactorily served by a sufficiency of service that will assume a profit to the operator.

While transportation rights lie with vested authority, the voice of the public is often heard, and the fewer appeals to this body, the happier the operator. Therefore it behooves the operator to provide a service with reasonable frequency.

Frequent Service Necessary

In pre-war days, the nemesis of the public carrier was the private automobile. In numerous localities steam or electric railroads offer a more refined service at commutation rates that are seriously competitive for limited destinations. To combat these a frequency of service had to be offered that influenced rather than discouraged public transit patronage.

Frequency and adequacy of service are not necessarily synonymous but they are controllable to a certain extent by vehicles of different capacities. A seven minute headway may be quite a satisfac-

tory frequency for a 41 passenger bus but far from adequate for a 25 passenger bus.

The mechanics of scheduling depend upon:

1. The standard of service to be supplied.
2. The availability of equipment of different capacities.
3. The availability of manpower.
4. Labor's requirements for minimum day's earnings.
5. Direction and volume of travel at maximum load points along routes for week days and for Saturdays, Sundays and holidays.

For lines of heavy travel, different schedules are usually provided for week-day, Saturday and possibly several alternate schedules for Sunday. The particular Sunday schedule operated being dependent upon weather and public attractions.

Furthermore, different schedules for summer and winter are usually prepared, to provide for seasonal load fluctuations.

To maintain the standard of service provided by these schedules, constant vigilance must be exercised to promptly recognize or anticipate changes of demand. Also an adopted schedule must be closely followed else loads will be unevenly distributed. Street supervisors can do much to help; periodic passenger counts and trainmen's way bill inspections also give indications of adherence to standards. Authority should lie with the street man to short cut routes or to order into service additional unscheduled vehicles, termed "wildcats" or strippers.

These items have become common practice of street transportation operation and by their practice, service reached a high degree of efficiency.

Then came the war.

It should hardly be necessary to review here the many changes that ensued—the mighty increase in industry, the influx of workers to metropolitan centers, the housing shortage that put two or three families into single homes, the shrinkage of private passenger car usage, the round-the-clock working schedules, the dearth of new vehicles and replacement parts, the diversion of manpower from so-called

unessential to essential jobs (or for higher earnings), the circulation of surplus earnings—shoppers, travelers, etc.—all materially adding to the problems of transit operation.

New Transit Demands

The location of new industries in many cases was determined by available ground, by railroad freight facilities, and by raw material and power supply sources, rather than by availability of labor or housing or facility of transportation. The flexibility of bus operation probably lessened worries of moving labor but failed to consider a limitation to the supply of these vehicles. For outlying new plants, the private auto was expected to carry the load. (This was before rubber shortage and gasoline rationing discouraged their fullest use.) Also many workers were without autos and car pooling was not always satisfactory.

Then transit companies were called upon to provide service. Without a surplus of vehicles and unable to procure more and beset by mechanical failures and manpower shortages, the operators were faced with a serious problem. Not only were the many long established routes overtaxed by increased loads, but also the operators were required to provide new service.

ODT officials early in the war recognized the serious situation faced by transit companies and with the advice of representative transit officials developed a program containing about a dozen things that could be done with the help of local communities to alleviate the situation. One of the most effective of these was the "staggering" of working hours. Elimination of unnecessary stops, re-routing and re-scheduling were other suggestions in the program designed to increase the efficiency of the transit system. A recent ODT report states this program is conserving nearly 200 million bus miles annually and added equivalent of 14,500 street cars.

Tricks for Saving Miles

The routing and scheduling of transit equipment encompasses many tricks of the trade which are being used to make up for the lack of sufficient equipment and

manpower. A great deal of credit is due the public utility commissions who have cooperated wholeheartedly in approving these emergency changes.

1. A large percentage of the vehicles operating over long routes are being turned back before reaching the end of the line with a less frequently scheduled shuttle service provided on the lighter ends. This permits the maintenance of a more frequent schedule where the load is heavier while inconveniencing only a small percentage of the passengers. As a rule this is only done during morning and afternoon peak periods and approximately half of the vehicles are short-cut with the others going the entire distance. Approximately 1,000 vehicles and 17½ million vehicle miles annually are being saved by this procedure.

2. In larger municipalities, the peak loads on some routes do not coincide with those on others. Where this condition exists vehicles can be interchanged from one route to the other. Such relief can be obtained in many localities if they would adopt a program of "staggered" hours among the businesses and industries on certain transit routes so as to allow this interchange of equipment.

3. A well designed "staggered" hour program can do a great deal towards improving scheduling. ODT says that it has saved 3,000 vehicles and 22 million vehicle miles annually. An extremely high peak load requires the use of all available equipment for only a short period of time. If this load can be spread over a period of time long enough to allow the use of each piece of equipment at least twice, then approximately one half the number of vehicles will be able to carry the same amount of traffic. On the other hand, as around the clock "staggered" hour program which produces a heavy load approximately twenty-four hours a day (and this is the case in several cities) creates a traffic maintenance problem. The vehicles have to be in use so often that no time is found to garage them for repairs and maintenance.

The new "staggered" hour program in Philadelphia reduces the 5 P. M. peak load by 56 per cent, placing part of it at 4:30 P. M. and part of it at 5:45 P. M.

Since the average route is covered in about one hour this allows the vehicles carrying the early load to return and pick up the later load. Full compliance with this program will permit 75 vehicles to carry the passenger load now requiring 746 vehicles. Some of the 71 vehicles saved can be continued on the central district routes to reduce the load per vehicle and others can be placed on other congested routes serving war industries.

Direct Service

4. Direct service by bus and street cars to routes serving industrial areas is another effective way of providing better transportation service with the minimum use of equipment. Special bus and rail services are provided from a number of locations in the city, where workers can concentrate, to the terminal of the main route during the hours workers are going to these industries or returning home.

As an example, trolley route No. 37 from Philadelphia transports thousands of workers to and from large war plants in Chester, Penn. From its terminal in Philadelphia, special buses and trolley routes fan out to five locations in populous sections of the city to give special service for employees of these plants living in those areas.

This practice is similar to that followed for many years to provide service to the terminals of high speed rail lines and railroads.

5. Altering the interior of vehicles to enable them to accommodate more passengers has been tried. This may seem remote to routing or scheduling, but anything which changes the load factor will affect the number of vehicles and thus alter the schedule. All of you are familiar with the "standseats" tried out in the street cars in Washington, D. C. Apparently they did not meet with public approval. The capacity of subway cars in Philadelphia was considerably increased, however, by the removal and adjustment of some of the seats so as to permit more room for standees.

Conservation

The scarcity of gasoline and rubber has also necessitated certain changes in routing and scheduling. In general, this called

for the removal of all bus lines paralleling rail service or serving the same area and concentrating as much traffic as possible on rail lines which are more economical to operate. The curtailment of non-essential or duplicating services is accounting for a conservation of 58 million vehicle miles annually and more than 1,200 vehicles. This, of course decreased the headways for the rail lines assuming the increased traffic and necessitated a change in schedules.

No doubt, transit companies have inaugurated a number of plans to conserve gasoline and tires, such as more frequent and careful maintenance of tires and engine parts, more extensive training of chauffeurs, garaging of equipment nearer to the route, and the substitution of equipment.

A considerable amount of gasoline and rubber was saved in Philadelphia by the two latter methods. Sizeable lots were obtained near the terminal of bus routes and except during extreme winter weather, the buses not in use during off-peak hours were stored on these lots until they were needed. This saved running them to and from a regular car barn or garage which probably was some distance away.

The elimination of bus routes duplicating other services, produced a surplus of buses many of which were extremely old, using a great deal of gasoline and requiring extra heavy tires. The newer and lighter buses were selected from the groups and substituted for the older buses on the routes remaining in operation, thus saving considerable gasoline and rubber and reducing the maintenance problem.

Re-routing and re-scheduling are not original policies put in effect to correct transportation problems brought on by war conditions. They are the measures adopted by transit operating divisions to meet these demands, such as changes in traffic, equipment and manpower.

The actual mechanics of re-routing and re-scheduling is a job for transit officials and they need no help from the public or public officials. Our part in the program consists only of making plans for a more efficient distribution of the passenger load and seeing that these plans are supported by the public.

THURSDAY MORNING SESSION

October 7, 1943

Group Session on Public Safety Education

Traffic Education Association

The Public Safety Education group held an organization meeting on Thursday morning to form a permanent association, to be known as the "Traffic Education Association." W. Burke Smith of Connecticut presided and served as acting chairman while complete and detailed discussion was carried on and a constitution was adopted.

The declared intention of the organization was for "the advancement of traffic safety through the dissemination of factual traffic safety information, the interchange of ideas between members and the establishment of a central point of reference and union for its members."

The idea for such an association had been discussed at the public education sessions of the 1942 Congress and a temporary secretary had been appointed and asked to draw up an appropriate constitution. The association will be national in scope and will not be particularly affiliated with any organization in the field of safety.

The officers and directors of this newly formed "Traffic Education Association" are as follows:

President—W. Burke Smith, Hartford, Connecticut.

Vice President—Charles D. Vibberts, Portland, Oregon.

Secretary-Treasurer—Mrs. Ellnor Khrwan, National Safety Council, Chicago.

Directors: George Lowe, Pennsylvania; M. L. Wilkerson, New Hampshire; Barney O'Donnell, Ohio; Sidney King, Oregon; Leo Welch, New Jersey; Anne Striner, Utah; W. A. Huggins, California; Bert L. Woodcock, Iowa; and Hal Bourland, New York.

The public safety education sessions had attendance at all sessions this year far in excess of anything that had been contemplated and there is much enthusiasm for accelerated public safety education programs in the future.

THURSDAY AFTERNOON SESSION

October 7, 1943

General Session

Summary of the Section's Activities

Report Presented by HARVEY D. BOOTH
Secretary, Street and Highway Traffic Section

This report of the activity and plans of the Section and its several committees can touch only the high spots, but will acquaint you with the overall program which has been carried out during the year now ending, and also give you some indication of the work ahead.

1. An activity of importance affecting all committees is the plan for package programs to be prepared for community safety councils and other groups. Practically all committees will have an immediate job in this respect, and at the executive committee meeting this morning the

need for speed in the preparation of such materials and programs detailing step-by-step use of them was emphasized. These programs will deal with such subjects as pedestrian safety, bicycle safety, intoxication and chemical tests, traffic courts, etc.

2. Report of the Standing Committee on annual Congress Program. The present Congress is the one best report of the Committee which has functioned under Walter Martha's guidance during the past few months. Burton Marsh, your chairman for the next year, can be counted on to give you the very best possible.

3. The Standing Committee on Traffic Accident Records, furthering the work started by the Council in 1924, has been developing plans for the wider use of accident records in selective enforcement, and this project will be continued.

4. The Group Committee of City and State Police has taken the initiative in developing the program of their own group for the Congress, and they have had excellent sessions throughout the three days of the Congress. The Committee is expected to do another good job in advising on materials for the package program, as well as the regular Congress program and promotion of attendance job.

5. The Group Committee on Traffic Courts has made phenomenal growth during the year. Close and effective cooperation with the American Bar Association and various local bar groups has been a definite activity. Ten traffic court conferences or important participation in other bar conventions have been held during the past year, including meetings in Omaha, Memphis, Houston, Illinois State Bar Convention, Minneapolis, Los Angeles, San Francisco, Portland, Seattle, and Cleveland. In addition, there has been participation in several State Bar Conventions and in more than a dozen local groups and areas by Jim Economos and other officials of the Junior Bar Conference, in close cooperation with our committee. The Committee has mapped plans for a considerable number of traffic court conferences during the next year, in which they expect to have the continued cooperation of the organized bar. A comprehensive study of the participation of prosecutors in the trial of traffic cases is now under way, and a report will be

prepared from data obtained through the study.

6. The Group Committee on Traffic Safety Engineering has cooperated in the study by the Project Committee on Dim-out Traffic Safety, and in developing features of the Congress program. They will have especially important tasks next year in cooperation with the Committee on Post-War Traffic Safety Planning, since traffic planning is one of the essential functions of the traffic engineer's job.

7. The possibility of reorganizing the Group Committee on Public Safety Education is being considered. There is the possibility that this committee may be of value in coordinating promotional activities of the various committees of the Section, and the Executive Committee authorized General Chairman Graham Cole to study the functions and possibilities of the committee and determine whether or not to set up such committee for the next year.

8. The Study-Promotion Committee on Pedestrian and Bicycle Safety has been cooperating with the Armed Services on the promotion of safe walking among members of the Services on leave, and a leaflet for the Army has been printed and is being distributed in quantity to the Sixth Service Command. One of the main problems now is the tangle of pedestrian laws and a sub-committee has been authorized to deal with specific changes needed—recognizing that there can be no solution of the pedestrian accident problem without enforcement. Also authorized, was a sub-committee on promotion which will work closely with the American Automobile Association in getting adoption of the proposed uniform pedestrian ordinances when they have been prepared. Another project planned is a study of just what is happening in accidents to children in various communities. The acute shortage of batteries for bicycle lights is creating a serious problem both among war workers and students who have to use that type of transportation during the hours of darkness. The Committee has adopted a resolution calling upon the War Production Board to make more batteries available, and through channels which will insure their getting into the hands of

those who need them for essential purposes.

9. The Study-Promotion Committee on Tests for Intoxication has a very heavy program ahead, as the following schedule indicates: (a) A legislative program, with recommended bills to be prepared and adoption promoted at next sessions of various state legislatures. (b) Much emphasis will be given to public education phases of the work, with particular cooperation in developing the package program. (c) Completion of the manual on chemical tests has been delayed because some of the medical experts who had chapter assignments for the manual have entered the Armed Services, but as much as possible will be done so that it may be available soon after the war ends. (d) The Committee will also cooperate on specific projects in cooperation with the Committee on Post-War Traffic Safety Planning.

10. The Study Promotion Committee on Winter Driving Hazards has produced a number of publications on winter road maintenance. One was a booklet by that title of which 7,800 copies were distributed in the snow belt. A six-page leaflet, "If You Drive This Winter," was prepared and 226,000 copies were distributed. Wide use has been made of the radio, newspapers, and periodicals. A number of new publications are now being prepared and every attempt will be made to meet the need for safeguards against winter accident hazards which are greater now than ever before.

11. One of the most active committees of the Section was the one which the Executive Committee authorized one year ago—that on Special Enforcement Problems. More than 6,000 copies of a special report outlining various problems was prepared and distributed. There was wide promotion of newspaper and magazine publicity on special enforcement problems. Information concerning the proper use of the Manning Table and the Replacement Schedule was sent to chiefs of all state enforcement agencies and to all chiefs of police in cities over 100,000 population. Other similar projects are to be studied during the months ahead.

12. Two project committees were set up during the year, under authorization

of the Executive Committee. The one on dimout traffic safety is now preparing a final report and will be discharged, when this is done. The complete report will review dimout conditions, present accident experience before and after dimouts were inaugurated in representative areas on both coasts, discuss the general effects of dimouts on traffic accidents, and recommend to officials, drivers and pedestrians measures for preventing accidents under dimout conditions. Edgar F. Copell, State Traffic Engineer of Massachusetts, has been chairman of this project committee.

13. The other project committee was the one on post-war traffic safety planning. This was set up as an interim committee to explore the problem and see what could be developed. An excellent job was done under the leadership of W. Graham Cole, who served as chairman of the interim committee, and the Executive Committee has authorized full steam ahead on what gives promise to be one of the outstanding undertakings of the Street and Highway Traffic Section. Acting on the recommendation of the interim committee, the executive committee has authorized a special study committee on post-war traffic safety planning. This will be a programming and coordinating committee, to supplement but not duplicate the work of present committees, and to give some suggested coordination to the plans of other associations and groups which may care to cooperate with this committee of the Street and Highway Traffic Section.

14. Plans are being made for recommendations by the executive committee, on new sound-slidefilms which are needed. Films considered briefly by the executive committee are on the following subjects:

- a. A film on safe driving and walking practices, including rules of the road, pedestrian rules, etc., suitable for use in violators' schools and for general traffic safety.
- b. A film on accident records, which would promote the collection of accident reports, proper filing, and uses in selective enforcement, engineering and educational programs.
- c. A film on preventive maintenance, since it will be a long time before

new cars will be available, even should the war end immediately.

- d. A film on traffic enforcement, which would stimulate departments to higher standards, and through acquainting the public with the ramifications of traffic law enforcement obtain better public support.

More complete descriptions are to be submitted to the executive committee by letter, after which selection of three to be produced will be made.

15. Two important new policies were announced by Mr. Cole to the executive committee, which especially apply to the personnel of committees of the section. These are:

- a. No one shall serve as chairman of more than one regular committee at a time.
- b. Excessive duplication of assignment of members of the Section to several committees is to be avoided, and will probably be developed into a plan whereby no one member of the Section shall be appointed to more than two committees.

16. Consideration is being given to plans which should ultimately greatly expand the scope and usefulness of the natural groups of the Section. I refer to police and traffic courts, and possibly to engineers and public safety education groups. Briefly, a study will be made of the possibility of creating sub-sections or major divisions of the section, which would function practically autonomously under their own executive committee, with proper representation of each division on the executive committee of the section. Police and the traffic court groups are particularly interested in the possibilities which this holds out to them for greatly expanding their program and effectiveness.

17. It was repeatedly emphasized by the members of the executive committee this morning—and I should say that this was one of the most largely attended meetings the committee has ever held—that there is much work to do in the months ahead in the field of traffic safety, and everyone should go from this Congress ready and willing to do the best job ever.

THURSDAY AFTERNOON SESSION

October 7, 1943

Group Session for City and State Police

Post-War Traffic Enforcement Planning

By FOSTER M. KUNZ

Special Agent, Federal Bureau of Investigation, Department of Justice, Washington, D. C.

A Panel Discussion

The Federal Bureau of Investigation has become interested in traffic law enforcement because its officials recognized that through the National Police Academy a contribution could be made to this field. The FBI has availed itself of every opportunity to be of assistance to local law enforcement agencies, because it is realized that only through mutual cooperation and assistance will the stand-

ards of law enforcement, as a whole, be raised to the level it justifies and requires.

The National Police Academy is one of the cooperative functions instituted by the FBI to accomplish this purpose. The Academy was organized in 1935 to provide training for representatives of governmental law enforcement agencies. It is now in its twenty-third session and upon the completion of this session more

than 800 selected law enforcement officers representing every state in the union and many foreign agencies will have received training through its facilities. The need for trained enforcement officers now, as well as for the immediate post-war period, has been recognized by the Bureau and the program of the National Police Academy has been continued without any deterring effect by the war.

Some of the officers who attend are administrative officials in their respective departments. Others are high ranking officers with administrative duties. These men require the broadest type of training in all phases of law enforcement. Since traffic enforcement is one important administrative duty, it is essential that they have an understanding of the problems encountered in this branch of enforcement work.

Many of the other officers are engaged either wholly or part-time on traffic enforcement. To these men instruction in traffic safety and enforcement is particularly necessary and important because it is their every-day job.

All of those who attend the Academy are expected to conduct short courses of instruction for the other members of their departments when they return. Since traffic enforcement comprises such a large portion of present enforcement activities in many departments, it is essential that these men have a background and appreciation for this work.

In view of these facts, traffic instruction was at an early date included as a regular course in the curriculum of the National Police Academy. In the early sessions instruction was limited to that given by traffic authorities who appeared as guest lecturers before the Academy. During the last several sessions three full weeks of study have been devoted exclusively to traffic safety and enforcement. All branches of the field are covered by the regular traffic instructors who are men qualified for this task with years

of practical experience in traffic work. In addition, visiting lecturers are still called upon to discuss special phases of the work in which they specialize or are most interested.

Besides the three weeks allotted to technical traffic subjects, approximately six additional weeks are devoted to subjects which are directly applicable to traffic work and would normally be included in a school specifically for traffic safety and enforcement. Some of these subjects are administration and organization, police records, personnel problems and public relations, public speaking, photography, testimony and court room behavior, report writing and dictation, first aid, use of the Laboratory, and others.

The course attempts to promote the acceptance of traffic safety as a profession equally important to criminal and other branches of law enforcement. It aims to develop an appreciation among all officers for the problems involved in this work, and provides sufficient information on procedures and techniques to intelligently approach these problems.

Post-war plans are being made to expand the present program by first increasing the number of men to receive training and secondly extending and broadening the traffic course. Present plans are also under way to improve the course by providing charts, illustrations, and exhibits which will be used as visual aids to accompany lectures on the various subjects. Sample accident reporting and filing systems will be organized; field equipment for making surveys, special studies and accident investigations are being collected for instructional and display purposes; a sample library to include publications, books, pamphlets, etc., on traffic safety work is being compiled. With the use of these and other facilities it is believed that the course will prove to be of more interest and value to those who attend the Academy.

Commercial Vehicle Section

Officers 1942-1943

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

Vice-Chairman—JAMES G. HAYDEN, Dir. of Conservation, Associated Transport, Inc., Charlotte, N. C.

H. D. SCHNEFFER, Safety Dir., Auto Owners Insurance Co., Lansing, Mich.

W. R. SMITH, Mgr., Personnel and Insurance, Scott Bros., Inc., Philadelphia, Pa.

Secretary—RUFUS G. JASPER, Fleet Safety Eng., National Safety Council, Inc., Chicago.

Membership Committee Chairman—J. L. WENMEYER, Safety Eng., Wayne County Road Commissioners, Detroit, Mich.

Program Committee Chairman—AMOS E. NEYHART, Administrative Head, Safety Dept., The Pennsylvania State College, State College, Pa.

Executive Committee at Large—

A. C. CALDWELL, Buyer, Hale-Halsell Co., McAlester, Okla.

SLOAN CHILBERS, Safety Dir., Southwest Ice & Dairy Products Co., Oklahoma City, Okla.

H. S. COLE, Asst. Supt., The Evening Star Newspaper Co., Washington, D. C.

JOHN A. ENKLING, Dir. of Safety and Personnel, Olson Transportation Co., Green Bay, Wis.

WILLIAM L. FERGON, Safety Dir., Fred Olson & Son Motor Service Co., Chicago, Ill.

KENNETH R. FIDEL, Safety Eng., Consolidated Freightways, Inc., Portland, Oregon.

WILLIAM GRANT, Mgr., Dept. of Safety and Personnel, Pennsylvania Greyhound Lines, Cleveland, Ohio.

*R. C. HAVEN, Safety Eng., Continental Baking Co., New York, N. Y.

*T. B. JOHNSON, Mgr., Delivery Div., Marshall Field & Co., Chicago, Ill.

H. J. JONES, Traffic Mgr., Automobile Shippers, Inc., Detroit, Mich.

H. H. KELLY, Chief, Allocation Section, Div. of Motor Transport, Office of Defense Transportation, Washington, D. C.

*J. W. LOMB, Safety Eng., Atlantic Refining Co., Philadelphia, Pa.

D. M. MCCracken, Dir., Traffic and Safety Bureau, Liberty Mutual Insurance Co., Boston, Mass.

W. D. McLAIN, Safety Dir., The Mason & Dixon Lines, Inc., Kingsport, Tenn.

C. G. MORGAN, Jr., Mgr., Div. of Operations, American Trucking Associations, Inc., Washington, D. C.

W. R. SACKETT, Mgr., Personnel and Insurance, Scott Bros., Inc., Philadelphia, Pa.

ROBERT R. SUTTLE, Safety Dir., Dairyland, Inc., Bay City, Texas.

H. O. TRUSTA, Safety Dir., United Pacific Insurance Co., Tacoma, Wash.

*Past General Chairman

Officers 1943-1944†

General Chairman—W. F. BROWN, Safety Engineer, Consolidated Edison Co. of N. Y.
4 Irving Pl. New York 3, N. Y.

Vice Chairmen—JAMES G. HAYDEN, Dir. of Conservation Assd. Transport Inc. 1001 S.
Clarkson St. Charlotte, N. C.

H. D. SCHEFFER, Safety Dir., Motor Veh. Div. Auto Owners Insurance Co. 615 N.
Capitol Avenue, Lansing 3, Mich.

W. RAY SMITH, Manager, Personnel & Insurance, Scott Bros., Inc. 1000 S. Broad
St., Phila., Pa.

Secretary—JOHN A. EMBLING, Dir. of Safety and Personnel, Olson Transp. Co. Green Bay,
Wisc.

Membership Committee Chairman—J. L. WEHMEYER, Eng. of Safety & Traffic, Wayne
County Road Comm., 3800 Barlum Tower, Detroit 26, Mich.

Program Committee Chairman—AMOS E. NEYHART, Adm. Head, Inst. of Public Safety,
Pennsylvania State College, State College, Pa.

Executive Committee at Large—SLOAN CHILDERS, Safety Eng. Southwest Ice & Dairy
Prod. Co. 2807 1st Nat. Bank Bldg., Oklahoma City, Okla.

H. S. COLE, Asst. Supt. The Evening Star Newspaper Co. 1101 Penna. Ave.
Washington, D. C.

†As elected by the delegates in Congress session.

TUESDAY EVENING SESSION

October 5, 1943

Women In Transportation

Panel Discussion

(Reported under Street and Highway Traffic Section)

WEDNESDAY MORNING SESSION,

October 6, 1943

Presiding: JOHN A. EMBLING, director of Safety and Personnel, Olson Transportation Co.,
Green Bay, Wis.

Wartime Driver Training Techniques

By WILLIAM L. FRIGON

Director, Safety and Training, Fred Olson and Son Motor Service Co., Chicago

At this time, we in the trucking industry find ourselves faced with a shortage of truck drivers. At least we claim we do. For this reason, if for no other, we must unite our efforts in developing a program whereby men can be taken from non-essential industries and trained in a short period of time to become efficient operators for our motor vehicles.

Knowing we would be confronted with this problem, we at Fred Olson and Son Motor Service knew it was necessary to institute a simplified form of training program, fundamentally attempting to achieve two things: first, the reduction of accidents and, second, lowering of maintenance costs, which, if achieved, would automatically raise our productivity. One of the main things to remember in any training program is that if you wish success you have to have the backing of management, and when I say "management" I have found that does not mean the president of the company or the vice president only. It means every terminal manager, supervisor, superintendent, etc.

Developing Supervisors

We gradually formed a plan for developing drivers by using driver super-

visors. These men are former drivers with good records who are taken from the ranks and given extensive training in job instructor methods. A free service is being given by the government which is not being made use of properly. A lot of people in our business take job instructor training in this manner: Well, anybody can learn how to make an underwriter's knot after being shown a few times. That isn't what they have in mind. What they are trying to point out are the methods of teaching and that is what we should go after. In the course of the supervisors' training, they were impressed with the fact that they were to be instructors, and that they had to know a great deal about the subjects which they were going to teach. They were told that instructions given by them had to be made as effective as possible so that the students would gain the information easily, retain it and become skillful.

The instructors were given job breakdown guides. That is another place where we have gone into government training which is free to the public. We saw where they had a good point and we made use of it. This job breakdown guide is designed to save trouble by outlasting subjects and

methods of instruction which have proved effective, and by giving hints which will aid in presenting each subject in logical sequence in an easy-to-understand and effective manner. This guide was not made up of a number of rules. It contained many standard procedures and many suggested procedures. In numerous places, charts, diagrams and photographs had been inserted for the guidance of the instructor in covering a particular subject. The instructors were taught that even though they knew their subjects well, before each lesson they should assure themselves that they knew their subject by referring to the job breakdown guide and any other text when necessary.

We made it a point to establish a library. This was done after I had been down at Pennsylvania State and I had seen the nice library that Mr. Neyhart has down there. He has a lot of literature put out by the government on driver selection and training, and so on, and I saw where it could be made very useful and we established the same thing in our own place in a small way. We never could catch up with his library there.

The instructors were taught that when teaching they might occasionally get caught on a point about which they were not sure. In such a case they were instructed not to answer, but to tell the party asking the question that they did not know but they would find out, then to find out and convey the answer back to the party in question.

Brief of Plan

We have found that the plan of supervisor instructors works best when using one supervisor for not more than twenty-five drivers. As you will see later on in our plan, this gives him more flexibility in getting around to his men. This plan involves working with and testing the driver behind the wheel and in the office to determine the weakness of the driver so that corrective measures can be taken.

The method is impartial and digs into the driver's ability to handle the truck skillfully and safely. The procedure lends itself to reeducation and training of old drivers.

The routine arouses the driver's enthu-

siasm in the best of operation and adds to his interest in conservation of his equipment, which consequently tends to reduce maintenance costs and lower accident frequency. This individual training of drivers tends to raise their productivity, improves driver relations with the company, customers, union, and the general public.

The training program is devoted to both old and new employees, and includes work in the yard and on the street under the supervision of the supervisor.

Interviews and Aptitude Tests

Prospective applicants are given a brief interview by the terminal manager in order to enable him to determine whether or not the applicant comes within the requirements of state and Interstate Commerce regulations. The terminal manager is furnished a prepared list of questions on ICC regulations and mechanical knowledge to aid him in determining how much experience the applicant has had.

The physical and mental condition of drivers largely determines whether or not they are likely to become involved in accidents. It is reported that in nine out of every ten motor vehicle accidents, fatal and non-fatal, the driver and not the machine was at fault. Individuals vary widely in physical and mental abilities. There are some so poor in abilities related to safe and skillful driving that it is advisable to eliminate them as commercial vehicle drivers. Steps are taken to weed out such individuals before time and effort are expended to train them to drive our vehicles and before they have had an opportunity to illustrate their ineptitude at the cost of valuable equipment and vital manpower. Knowing that 10 per cent of all fatal traffic accidents are caused by drivers who have some physical defect, all applicants are given a battery of aptitude tests. The aptitude tests, considered to be the most significant for the selection of drivers, are as follows:

Test of visual acuity—this test is to insure that no one is selected for training who is unable to see clearly enough for the safe and efficient operation of a vehicle.

Test of side vision—this test is to determine how well the individual can see

from either side while looking straight ahead. Good side vision is particularly important in driving through intersections and passing other vehicles or objects. Poor side vision is generally indicative of more or less serious eye disorders.

Test of driver information—this test is to provide information concerning each man's knowledge of driving principles and practices. This knowledge reflects to some extent the individual's skill in the field.

Test of color vision—a comparatively simple test may be given to determine color blindness. A pile of red, yellow, green, blue and orange pieces of cord can be mixed together. The subject can be required to pick out and separate into two piles the red and green pieces. Fortunately, a person who is red-green color blind can usually distinguish between red and green colors, but they may appear to him as different shades of gray. Consequently, an individual who is red-green color blind is not greatly handicapped in his driving, particularly if he is aware of the condition and makes it a point to watch carefully the actions of other motor vehicle operators and learns the relative position of red and green traffic lights in various localities.

We are very careful in a case of that type to keep drivers who are color blind in that manner in a certain locality. We will not let that man travel from city to city. We will keep him within boundaries.

Tests of night vision—Tests indicate that the usual test of clearness of vision (visual acuity) is not necessarily an indication of how well a person can see in the dark. If a man evidences some degree of night blindness and his eyes are not diseased, he may still become an expert, all-around driver. Vitamin A tablets may correct his condition within a few days. Food, such as carrots, butter, eggs, and spinach are rich in vitamin A and can be very beneficial in curing night blindness.

Yard Exercises

The applicant is then given a series of yard exercises, which consist of tests to determine his skill in backing from various positions, parking of trucks alongside of curbs, driving alongside of curbs

to see whether or not the driver can judge distances properly, angle parking, driving through narrow alleys, proper turning of corners, backing without riding of clutch, and judging distance both backward and forward. These tests are worthless unless you set them around your own operation. We will take, for instance, backing in a narrow alley. If your city has alleys which are ten feet wide, it would be very foolish to give the man tests in an area of eleven feet width. You have to set these tests up around your own operation.

We have found that the best way to find what is needed in the operation is to go back to our accident records and check on them and from them build up our little test in the yards. Exercises of this type when used on prospective applicants should take approximately one-half hour, during which time the experienced supervisor should be able to determine from the exercises how much time is necessary to bring the prospective applicant up to our standards.

Road Tests

If the yard test is satisfactory, the applicant is given a road test, which is a route which takes one-half hour to cover and which takes in as many traffic conditions as the applicant encounters during a day's work. By this I mean driving over overpasses, making right and left turns, approaching stoplights, etc. This road test is set up on a set course, so that the supervisor who is making the test has a set score sheet alongside of him, on which he can mark off items on which the man may err. This test consists of both dense traffic and open road conditions.

The supervisor reports back to the terminal manager, giving him his findings as to the weaknesses of the man, and if it is decided that the applicant is to be employed, he is drilled on those weaknesses which were noticed by the supervisor during the original set of exercises. On the other hand, if the applicant proves to be an experienced driver, he is given a trial run either in the city or on the highway, whichever division he is to work in, at which time the supervisor accompanies him on the trip, instructing him of various hazards en route, such as bad crossings and corners, and

watches for further weaknesses in the driver. After the trial run, the supervisor has the driver report for work to what we call our vestibule school.

Vestibule School

The vestibule school, as spoken of in our program, does not consist of any specific room or spot, but covers black-board work in the office on small items, actual demonstrations in the mechanical and body shop, on the dock, and in the parking lots. For example, the shortening of voltage regulators on generators is demonstrated step by step according to the approved job instructor training method as taught by the Training Within Industry program, mainly to prepare the worker, present the operation, try out performance, and follow up.

The supervisors maintain a time table, which shows each subject which is covered by the applicant, estimating beforehand when each subject is to be completed. By subjects we mean that each individual job is broken down so that it may be taught in the four-step method, and the supervisor teaches with these breakdowns. For example, mechanical knowledge, such as ignition, is taught through the use of charts but is explained to the driver, step by step, by the supervisor. If the student covers each item without a failure, he is released for a second trial trip, and if found satisfactory, is released as a driver. The second trial trip takes place on the afternoon of the fourth day, providing there have been no delays due to weaknesses which had to be overcome. This time includes the actual time taken by the applicant for physical examinations and induction.

Follow-Up and Control

Prior to the applicant's being released for the final trip, the manager has a meeting with the new employee regarding the company's safety program and awards

and grounds for discharge. The supervisor in charge of the driver during the training period follows up the driver in question not later than one week after his being released by spending a full day with him to see whether or not the man should be brought in for further instructions. This follow-up method is continued during the first six months of employment with a follow-up check at least once in each thirty-day period, after which time he is placed in the category of an old driver and contacted once each sixty days.

In order to secure a control over the drivers on subjects taught, the supervisors have certain duties to perform for each department, the mechanical, operations and safety departments. These duties consist of checks on care of equipment by the drivers to increase conservation, riding with drivers to help increase productivity, and patrolling of streets and highways to increase efficiency by watching for delays and lost time, and to aid the driver when help is needed.

The supervisors are instructed that when observing drivers who are not complying with rules and regulations of the company, they should attempt to straighten out the matter themselves on first offenses without bringing it to the attention of the office, as they themselves are the ones who trained these men, and if they find it necessary to report the matter to the office, it is an admission of defeat on their part, due to the fact that the company's stand is that it is well to remember that all discipline and punishment are admissions of defeat. If a man must be disciplined for breaking the rules, it is because he has failed to learn those rules or has no desire to obey them. In any case, there is a failure, whether it be his failure or that of the one who is responsible for training and supervising him, it still remains a matter of defeat.

Driver Training Specialist Plan

By ROBERT I. GAYLEY

Safety Director, Supplee-Wills-Jones Milk Co., Philadelphia, Pa.

We make four complete steps in the training of a driver, and we use only one plan. All our drivers are trained by one man. We have some thirty branches. We cannot depend on the supervisor or the foremen of those branches to do the training; we must send the man to the branch as a trained driver. Our first step—and in this we are fortunate in Philadelphia—is the use of the Pennsylvania Motor Police Barracks in Philadelphia which has a rather complete clinic set-up.

We are interested mainly in that clinic in the test of eye-sight, visual acuity, depth perception and peripheral vision, color blindness, glare blindness, coordination and reaction. We all have standards. We had 20/20 vision when we started. We are down to 20/40 now, and if the war keeps on, we will probably go down below that; we have to have drivers. We required 85 per cent on side eye vision, and we are down to 70 and glad to get them. We are still insisting upon having men red and green color conscious. If they fail on the color test, we do not hire them.

The reaction and coordination test is supplementary to our own work, and we do not pay too much attention to the clinic reports on that. When a man has successfully passed the clinic test, his visual acuity is all right, his side eye vision is all right and his depth perception is normal—incidentally, they tell me that 65 per cent is normal for truck drivers and 100 per cent is normal for airplane pilots. We are down to 40 per cent on that with our men, because after making a careful study of our records, I cannot tie in many accidents that can be attributed to faulty depth perception. The test they give you on Tella binoculars is on stationary objects, and there is a lot of difference in a test of depth perception between a stationary object and a moving vehicle. So we are doing our own depth perception tests on our training field rather than using the reports that come from the state police. However, that is necessary and it is the

first step for any driver who seeks a job with our company. He must pass that test first with a satisfactory average.

Method of Training

When he has done that, we work on the theory that the only way you can train a man is with the tools that he is going to use. We don't use text books. We don't use lectures. We don't use moving pictures. We use nothing but the vehicle the man is going to operate, and we don't care whether or not he has ever driven an automobile before. In fact, in some cases we would rather have him without any previous driving experience, because then he has no bad habits.

We have a charted course through city and suburban traffic of eight and three-quarter miles. The instructor gets into the cab with the driver and does nothing on this road test except to tell the man where to turn—to make a right turn at this corner or a left turn or to park here or to go straight through, but all the operations within any block are charted on this course, and the instructor only checks off the things that the man has done wrong.

Originally we completed the full eight and three-quarters mile road test without any stop and without any talk to the driver who was being tested, but in the last year we have stopped that and stopped the course half-way through. At about four and one-half miles there is a break, and the instructor then goes over with the applicant all the mistakes he has made in that first half of the course. We found that to be better than waiting until we were entirely through and then going over it with the man, because he could not remember certain spots.

Test Grading

These tests are all weighted and the numbers are gotten from our own accident experience. If we have had a certain number of accidents because of a certain unsafe condition that score might be weighted as 5. If it has been a very

infrequent cause of accidents, the score would only be weighted as 1. Those weighted scores are all added together and if the man goes over 25, he is re-tested until he can meet that passing score of 25.

You will find on that road test a lot about the man's mental attitude, what he thinks of other motorists, what he thinks of pedestrians, what he knows of the state motor laws, and a thousand and one things that you will never find out in a class room, and you won't find out by showing him movies. You can only find out by putting him behind the wheel of the truck and letting him operate it, with no instructions from the instructor. Then you can find out what he does not know, and from his own experience show him exactly where he made the mistakes. It impresses him because he is the one who made them and not somebody else. He has been driving this truck. Nobody else has put a hand on the wheel except this applicant for a position.

When he is through with that road test, we bring him back to our training field where we have laid out fifteen tests that are exactly the operations that our drivers in the milk industry go through every day, accentuated to make them hard. We have made the limitations short. We never give a clearance of over two inches in this test, and most of the clearances are only one inch, but they are actual operations that a driver has to use. We want him to be skillful because if he is skillful he will be a safe driver. If he knows the limitations of his truck, what it will do and what it won't do under any given condition, he is not very likely to get into trouble on the highway.

Parking Operations

The field is 200 by 100. It could be made smaller if you didn't have quite that much room, but we happened to have this vacant lot and laid out the course on that particular basis. There are three operations on this side of the field which are parking operations, all done from the right side or the driver's side of the cab, and on the opposite side of the field are the same three operations all done from the blind side or the opposite side where the driver must use his mirrors.

The first thing the instructor does is to put the driver's truck in this spot, the left wheels within six inches of the curb, which is legal parking in the State of Pennsylvania, and the rear of his truck within two inches of these stanchions which represent another parked automobile; turn his steering wheel to the right as far as it will go; move the truck out slowly until the left corner of his front bumper is on a line with these two stanchions here and then add fifteen inches. In other words, fifteen inches over and above his extreme turning radius, and then moves the truck out. We insist that a driver put his truck in there with one turn of the wheel, not inching up and backing and inching up and backing. That truck can be put in there with one turn of the wheel if you will teach the driver his parking angles, what he must look for when he is backing, when he must start the cut of his wheel and every movement that he makes.

It may seem strange to you men, but any truck that can be parked, can be parked with one turn of the wheel and it can be parked legally. We teach our men to do that, and they can't move from this position until that job is done.

Backing Test

When he has completed that we move him over to the next test, which is backing. The space here is nine feet wide, plenty wide enough for any truck to get in. The guide is still on his side. These first three tests are easy, because he can hang out the cab window and see where he is. He is allowed one-inch clearance on this side, and the extreme rear of his truck cannot be over two inches from the rear. For every inch or fraction of an inch over that he is charged 1 point. Every time he pulls out because he does not think he is in the right position and starts back again, he is charged another point. Incidentally, the passing score in this field is 50.

When he has completed this test, the third test is diagonal parking, going in forward. Here again the guide is still on the driver's side. He is allowed one-inch side clearance here; two inches for the front of his truck. Those three operations are normal with our men in the delivery

of milk. They probably don't ever have to get in a one-inch clearance, but, as I said, we have accentuated this test to make it hard, because if the driver can do this, he can certainly get into a space where he has a foot clearance without hitting the car next to him.

When the driver has completed that, we have four stanchions set up in the center of the field. Because a truck with a short turning radius can do a better job than a truck with a long turning radius, we move the four stanchions to agree with the distance that we have used in the first parallel parking test. The driver starts at one end, and we ask him to weave through the stanchions forward in one motion.

When he has completed his forward motion and his truck stops; we say, "O. K., now you go through backward." He must back his truck between the four stanchions without hitting anything and without crossing over the lines that represent a 30-foot street. If he hits one of the stanchions, it costs him five points. If he goes over the line on either side, it costs him 1 point. We have had a lot of drivers who could go through this thing backward, but they couldn't go through it forward. On every other stanchion on this side you must use mirrors. One of the things we have had the most trouble with in teaching the drivers is how to use mirrors in backing. The old theory was back up until you hear the glass crash and then stop. We want these men to use the mirrors. We have spent a lot of money getting mirrors that drivers like, and I think our men are using them.

His truck is then placed with his two left wheels, front and rear on a line, and he is asked to drive his truck up 150 feet, keeping the two left wheels on that line, and stopping with the three end stanchions within two inches of his front bumper.

When he has completed this, we ask him to back this entire distance with his left wheels on the line and stop with the rear of his truck within two inches of

the set of stanchions at the end. Then we move the truck over and we put the right wheels on.

When he has completed that, we move him over to the right side of the field, for blind side parking.

Down in the corner are two little blocks. The left-hand block is double size and the right-hand block is single. It is just about wide enough to take a wheel of an automobile. We ask the driver from any distance in the field that he wants to place his truck to go down on one continuous operation and right up on those blocks and stop with his front wheels on the blocks.

Efficiency of Test

When a driver has completed this test, completed his road test, and the Pennsylvania Motor Police test, we are pretty well convinced that he can operate a truck.

This field isn't set up for tractor trailers. It could be changed around. This is only devised for our own particular needs. Some other company, operating a different type of equipment and having different driver conditions than we have, would necessarily have to change the field to suit their purpose, but it is flexible enough so that anybody who wants to adopt a plan for training or testing the skill of a driver can use a field similar to this and get results. I can only say from our own experience that it has paid us for the time and money we put into it. Our accident frequency is down about 40 per cent since we started to use this field.

We use exactly the same test for women. We started with women drivers in just a little over a year ago, and there has not been a girl driving for us who has had a vehicle accident.

I am sincere in saying that the success of this program depends almost 100 per cent on the man who is going to be the instructor. We are fortunate in having in our organization a man who has been a driver, was a master mechanic, and loves this sort of thing.

What Should the Driver Be Taught?

By AMOS E. NEYHART

Administrative Head, Institute of Public Safety, The Pennsylvania State College, State College, Pa.

As teachers we have failed miserably. We have flopped on a lot of our teaching. We have taken entirely too much for granted, and we have not studied some of these things enough to find out wherein we have been in error and then made our plans in an effort to try to do a better job. We get a little reduction and we say, "That is grand. I have just about set the world on fire, and I don't think I need to do anything from here on in." Well, I have this to say. It is a tough job and it involves 365 days of the year, every day, all day, and just keeping right at this thing.

I think in any program where you are going to teach drivers how to do specific driving acts, there is no substitute for taking them out in the car and teaching them right then and there how to do the job. It is just like the previous speakers have told you. They don't stay in the classroom and spend a lot of time talking about it. They get right out there in the vehicle and first find out what the driver doesn't know and they teach him. If there is a better plan of selective education than that, I would certainly like to know what it is.

Now how to go about it. I think there are four definite steps, and you must follow these steps without fail and stick at them until the driver knows exactly what he is to do. The first, as you know, is preparation. Certainly, we expect that a teacher is going to be prepared, but there is another part to preparation, and that is preparing the mind of the individual so that he is ready to receive and accept what you have to say.

The first step then is being prepared and getting the student in a frame of mind to accept what you have to say. The second is presentation. We usually present the material first. I am out in the car now. I talk through the entire thing before I touch anything. For instance, if I want to teach somebody to double clutch, you know they think there are a

thousand things to remember, but take it very easy, step by step and explain it so the individual hears it through his ears and then follow that with the explanation and the demonstration. Present it by actually starting out double clutching, making the shift and all so he hears and sees exactly what you are doing. After that is, of course, the application. When we are pretty sure that the driver knows exactly what he is to do with that particular driving act, we put him back of the steering wheel and have him repeat what we have just taught.

The third step is to apply what you have explained and demonstrated, under the careful guidance of the individual who is trained for that job, and then follow that, of course, with the check-up or follow through. What do we mean by that? Come back and ride with the driver and find out if he is doing it the way you want him to do it. If he isn't, right then is the time to stop and have it corrected. As you know, when you perform an act a certain way there is a tendency to repeat it in exactly that same way. If you repeat an act twice and the way you do it is wrong, it is doubly hard to change a bad driving habit into a good one. Therefore, it seems to me that it pays in time, money, effort, and everything else, to try to get the thing across to the driver the first time, so that he will perform the act correctly. Then we will not have the follow-up and have a lot of trouble trying to retrain the driver.

Those are the four steps that we use in training the drivers. Let's take an example of one bit of driving. I know of a company that has had three of their big commercial vehicles ruined within the last couple of months because of this particular driving practice. We have drivers who will go down a steep grade in very low gear and use no brake pedal. Going down the hill the r.p.m. in the engine is built up faster than it should be for that particular gear. In other words, we reverse it and say that for a

certain speed you can make the vehicle go in low gear, you should never go faster than that. When you are going down a hill in low gear and the thing starts to vibrate and to sound like a thrashing machine, the first thing we know we have a ruined engine.

I got into one place where out of 420 vehicles, 120 were in the shop because of burned-out bearings and engines ruined. Here is exactly what the drivers were doing. On cold winter days, starting the engine and going down a steep grade. In the first place, the viscosity of the oil had practically remained the same as it was when they started out. As you know, the viscosity changes with changes in temperature. The driver was not getting that film of oil around the engine. You have your cam shaft, your connecting rod, main bearings, pistons, and all of those things that should be properly oiled before you ever put that vehicle under load. Two things were bad. First starting out before the engine was warmed up, and then starting down a steep grade using a low gear when the engine was pounding. Is it any wonder that 120 vehicles out of 420 were standing up because the engines were ruined?

I would not stand in the classroom and explain that. I would take them out in the vehicle and go over the route they are going to drive and the gear combination that they should have going down a hill, that is the combination that we would teach them. For those of you who have formed the practice of going down in low gear—I really mean first in your passenger cars on steep grades—it would be a whole lot easier on your engines, if you would go down in second gear and use your brake pedal a little.

As I say again, how do we do it? We take the vehicle. We sit back of the steering wheel. We go down that steep grade, doing the double clutching shift before we start down the grade, and then we give the driver the same set-up. He does it under our guidance, and we explain to him exactly what happens when he does not do that. If he knows what happens if he does not do it and he has had the instruction on how exactly to do it and he has demonstrated that he can do it, then when we come back and

check later, we are pretty sure that is exactly how he is going to drive.

Recently the Greyhound Bus people conducted a study on Ligonier Mountain. It is about seven miles long and is really steep. They loaded that bus with pieces of metal in the same positions where they would have passengers so they would have the load, and, what do you suppose they found? That when they went down that mountain they got less build-up in tire temperature, they had less wear on the brakes and, of course, we know that there would be more passenger comfort, when they applied brake pressure all the way down the hill and never released it once while they were going down the hill. They had temperature gages and day after day they ran a study to be sure of what they were talking about. They didn't set out to find some of those things. They found out why they were blowing tires on the mountain. They found out that when the driver built up speed, then applied the brakes, a terrific friction was caused and the temperature would go up. Whereas when they applied a light pressure all the way down, varying that pressure as necessary, but not that intermittent application, called fanning the brake, that we are so used to and perhaps have been teaching, that didn't happen.

I understand from the instructor who has charge of training for the Greyhound Bus System that they now are retraining the drivers on how to brake going down mountains and that they also have selected a gear on the steep mountains that will build up an r.p.m. for that. Never a lower gear so they won't have to brake. You fellow them any time down these mountains and you will find that they always brake.

You should check very carefully on the mental, physical and emotional characteristics of the drivers. Second, check on the traffic and driving knowledge of the individual.

You heard several of the speakers tell you that they check skill in a closed area where you work with inches. That is exactly how we do it. They give traffic tests so that they get some idea as to how the driver is going to react when he is out in

If we do a good job on

1, 2 and 3 and we get together and discuss these things and we build up a certain philosophy among our drivers, we

will cover the fourth point, which is to create the right attitude on the part of the driver.

Discussion

THE CHAIRMAN: Are there any discussions or questions?

MR. J. L. WEHMEYER (Wayne County Road Commission, Detroit, Mich.): I should like to ask the first two speakers how their accident frequency rates compare.

MR. FRIGON: Our frequency is 1.7 per hundred thousand.

MR. GAYLEY: Our figures are 2.1.

MR. C. D. MORGAN (American Trucking Association): I should like to point out that the mileage of one fleet is one long haul operation, although half of that long haul is getting through the city of Chicago, whereas the other I understand is strictly a local delivery operation, and the national statistics have always shown the frequency to be much higher in a local operation because of the greater exposure to city traffic.

MR. BURT H. BROWN (Office, Chief of Ordnance, Safety and Security Branch, Chicago, Ill.): I should like to ask Mr. Gayley about how many tests or trials he gives these people out on the field test before he actually arrives at the final score.

MR. GAYLEY: We do not have any limit. We have never had to spend more than three days with any one applicant before we have either accepted him or rejected him. There is no limit on it. We are spending more time on driving today than we ever did, because we are getting the bottom of the barrel now, and if we tried to put a time limit on, we would probably lose a lot of men who can be trained if you have the patience to work with them and train them properly. Some men, of course, are beyond training. We haven't gone beyond three days. We haven't found it necessary. If at the end of three days a man can't do a successful job, we figure we probably can't do anything with him and we

let him go, but that happens in very few cases. I would say that a day and a half on the road test and on the training field is a pretty good average of the time it takes us to show these men what these trucks will do.

THE CHAIRMAN: I think possibly one question some of us are wondering about is are these applicants paid during their training period.

MR. GAYLEY: Yes, they are by our company because, as most of you gentlemen know, the big influence any company has is its sales department. These fellows are hired originally by the sales department, and after a week's schooling in the method of operating and selling and keeping their books, they are turned over to us. They are paid for the time while they are being trained a flat wage. I think it is \$30 a week, if I am not mistaken. That is what they get through the training period. They aren't paid, however, when they come back for rechecking because of an accident. A milkman works six days out of seven. He gets one day a week off. The day that he gets off is the day that we bring him back for rechecking: if he is involved in an accident. He does not get paid for that, but he does get paid for the time of the preliminary training when he is first hired.

MR. M. O. WOOD (Pabst Brewing Co., Milwaukee, Wis.): Are these trucks loaded during this test or are they empty trucks and is there any difference? Do you try to make a difference between the ease of operation in getting in and out with a loaded truck as compared with an empty truck? Also is it done day and night separately?

MR. GAYLEY: I can answer your last question first. We do not have any night operations. The milk business in Philadelphia is on a daylight schedule today and we do not have to worry too much

about night operation. The testing is done entirely on the field with an empty truck. It does not interfere with the operation of the driver of the truck if it is loaded, because they do not have to climb through the load to get out. The road test is done with a loaded truck.

MR. S. B. CARPENTER (National City Lines, Chicago, Ill.): In regard to this test, how do you arrive at your ratings on that? What basis do you use for penalizing a man 1 point or 2 points or 25 points? Is there a comparison of hazards, past experience, or how do you arrive at that?

MR. GAYLEY: Well, there was a combination of means of arriving at the scoring on this field test. The scoring on the road test, of course, as I said, is based entirely on our accident experience and it is loaded from that basis. To some extent the same method of scoring is used on the field although, as I said at the start, we tried to make this a pretty severe test, and we used close clearances and high scores on a great many to impress upon the men the necessity of being skillful. We have found out, for instance, on one test, if you remember, that running down the straight line and backing down the straight line, originally if they hit the stanchions at the extreme end we charged them only 5 points, and these drivers can think pretty fast and some of them figured going down there, "Well, hell if I hit that thing it is only going to cost me 5 points, but if I stop 12 inches away from it, it is going to cost me 12 points. So I will hit it." So we had to change that and put 25 on there if they hit it to make them use their ability to judge distance and stop within the required two inches. Does that explain it?

MR. CARPENTER: Yes, but how did you arrive at 50? You say 50 is the passing mark.

MR. GAYLEY: Yes, 50 is the mark that the instructor set up on an average taken from our better drivers after they had had two or three days of going around this course and trying at their leisure, and then we took their scores and set an average of 50 that we required men and women to make.

MR. J. C. DEAN (Hartford Accident & Indemnity Co., Knoxville, Tenn.): In other words, you used a scale to work out your normal for those individuals upon the variable group that you had in that period—a general basic average between the high and the low level? Is that right?

MR. GAYLEY: We tested about 400 of our own drivers. We have, incidentally, trained about 400 Red Cross women on this field from the Southeastern Chapter, and we use the same basis for all of them. We have probably been tough on the Red Cross, but that is what they wanted so that is the way we handled it. Women are just as skillful as men on this job we have found. It does not make any difference whether you have a man or a woman. They can still do the job.

MR. CARPENTER: Why is it harder to drive a passenger car than it is a truck?

MR. GAYLEY: You do not have any outside mirrors on passenger cars. Some of our trucks are the paneled type and have a rear window. We black that out during the test because a man is often working with his truck loaded and boxes are piled up beyond that window and he cannot see out anyhow. So we don't let him worm out of there using his rear mirrors. We make him use his outside mirror and pleasure cars do not have any outside mirrors.

Some of the officials of the company have gone through this test in their pleasure cars and it just can't be done because we black out their rear vision and say, "O.K., you do this like a truck driver does it," and it is awfully hard to do it with a pleasure car.

MR. W. A. MCGAW (Jewel Tea Co., Inc.): How tall are your stanchions and how did you arrive at them?

MR. GAYLEY: These stanchions are 4 feet 7 inches high. They are metal with a little red, wooden disk at the top, so that they are easily discernible, and the staff of the stanchion is painted a silver gray. The ideal way, of course, would be to use automobiles and to park them out there, but we cannot do that because we would have them smashed to pieces before long. These stanchions are con-

stantly being bent and broken and knocked down.

MR. McGAW: Do you feel that that height gives a better vision of them?

MR. GAYLEY: Yes, that gives the driver plenty of vision, even in the high cab over engine jobs. They can see them all right. They are 4 feet 7 inches high with this red, wooden disk. They look like a series of microphones. I have a photograph here of the field if anybody is interested. After the meeting he can look at it and see exactly what the field looks like as it is set up there in Philadelphia.

MR. WOOD: Mr. Frigon mentioned the increased life that he gets from the tires. I think that is more interesting to us than anything else right now. I should like to ask him what he has done to arrive at this saving and when does he get this 80,000 miles, after the tire has been recapped or is that the original tread, and other than to reduce your speed, what have you done to prolong the life of the tires?

MR. FRIGON: Well, that is going into something pretty lengthy. The mileage I gave this morning is based on new tires, not recaps. This is the way we made the savings: We did everything we could to make the driver tire conscious and to make him realize that that is the most essential item on the vehicle at the present time, and we went about it in this manner: We set up a program for having the drivers check their tires every Saturday for glass, stunts, and so on. This is a re-check for which they get paid and it is done after they are through with their day's work. In addition to that, they are also required to check their tires and to clean them. We allow them to take that time. A lot of companies that we have seen do not seem to want to give their drivers the time out of their eight hours' work. In other words, they do not like to see drivers checking tires and standing around air pumps instead of going to work. We have found that in the long run it pays.

To take it a little further than that, the supervisors whom we have keep the boys on their toes on tires by going around and checking them daily. In other

words, with one supervisor for every twenty-five drivers, naturally there is one man around the terminal every day and his job in the morning is to cover all the units in the terminal for any fresh scuffs, cuts or bruises and to paint these tires with the terminal color of paint. Each terminal has its own color. He then attempts to check back to see who had the unit and who caused the damage, although we do not charge the driver with the scuff, bruise or cut unless there is actual proof that he did do it.

We have found that this helps out a great deal because the drivers do not like to be put on the spot for damaging tires. We permit the drivers to turn themselves in for such cuts, scuffs or bruises. In other words, if a driver does such a thing and he notices it immediately, he is to report it to the office and we will just let it slide and we won't do anything about it. We found in our operation this was the quickest means of bringing the job of checking the tires directly to the men themselves. The way it works is the driver knows that if he does not take care of his tires and he does not report any damage which he might cause to them, his supervisor, his own boss, is going to check that unit during the twenty-four hour period and follow up on him to see why he didn't report it. So it creates the feeling that they themselves should turn themselves in. In other words, what we are trying to build up is a means of permitting the driver to take care of himself but having a control through the supervisor to see that one man does not ruin all of our tires and have it reflect on the rest of the boys.

MR. WOOD: Do you have a periodical airing and inspection?

MR. FRIGON: The tires are checked every day first of all by our city drivers. You see we have an operation where the drivers each have their own tractor. That is three drivers at the most. Two to three drivers are assigned to one tractor. That is a night operator, what we call our Steel Division, and a day operator. Then we have our small trucks in the city. The way we do that is the trailers are moving around. We have no control over the trailers. So we have the man who is going to work with that unit

check the tires on the entire unit. We find that one trailer may be checked as much as three or four times a day, that is, in an eight-hour period, not in twenty-four, but we feel that the time put in on that will help to increase the mileage. We do find that it seems to be a big headache to our tire department. They will have maybe five or six reports on the same scuff, cut or bruise before the supervisor gets around to painting it, but that is just one of the little things you have to put up with in a system of this kind. The tires are checked on all of the units before they leave the terminal, no matter what terminal they come from, and if it happens to be necessary to put an overload onto a unit, before the man can put that overload on the unit, he must report back to the terminal and get permission to do so. We do not allow a man to back over curbing, railroad tracks, or to go into any close quarters where he might have to rub his tires, without permission from the terminal and that permission isn't given. We have had cases where we have had to unload trailers and put them on smaller units to be able to make the deliveries, but we would rather do that and save the tires.

MR. DEAN: This past summer at Ohio State University we had this skill testing operating on the campus. We laid out the premises and it was exceedingly enlightening to bring out the abilities of

the different drivers whom we checked in these particular instances. It certainly did deflate the egotism of some of the birds that we get to put in back of the wheels of trucks. By so doing it brought about the philosophy that Neyhart has and the attitude of the driver toward the job that he must do. I think it is exceedingly helpful to build that attitude.

MR. WOOD: I should like to ask Professor Neyhart a question. I know that he has a course at Pennsylvania State College for traffic. What costs are there attached to that and what is the length of the course? Maybe somebody else besides myself might be interested.

PROFESSOR NEYHART: The course is one week. It is always the week following Labor Day, so that all the people with whom I work know exactly when the course is. In fact, we can tell you when it will be in 1948. It is an annual affair the week following Labor Day, and it lasts for a week. One of the interesting things about it is that some of the people who enroll bring their golf clubs and three or four books to read. We meet in the morning at eight until noon. In the afternoon to supper time. In the evening from seven to nine-thirty, through until Saturday noon. There is a \$10 registration fee for the week. I will give you one of the announcements, and then you will have a description of the course.

WEDNESDAY AFTERNOON SESSION

October 6, 1943

Presiding: W. R. SMITH, manager, Personnel and Insurance, Scott Brothers, Inc., Philadelphia.

Responsibility For Accidents

A Panel Discussion

MR. J. W. LORD: This matter of responsibility for accidents is one that interests all of us. I think there are two general schools of thought on the supervisory handling of drivers from the safety viewpoint. There is one school that takes the attitude that the driver knows how to drive, and if you want him to drive

better, your problem is one along the lines of discipline and bonuses. Pay the man a bonus if he operates 30 days without an accident. He is entitled to so much money. If he operates another month, he is entitled to it again. They take the attitude that we should avoid trying to tell this man how to drive, on the basis

that if you try to tell him how to drive and if he is involved in an accident, he will say, "Well, I did exactly what you told me to do and I don't see why I am at fault here. I was just following out instructions." They apparently fear to get into that position. In other words, they take the attitude that the man knows how to drive and that accident reduction is going to come through discipline, through bonuses and awards and that sort of thing, as a medium of getting the accident record down.

Now there is a second group who realize that in analyzing their own accidents they see situations where the driver definitely failed to do the right thing; secondly, they can't help but face the fact that in normal times we were having 30,000 to 40,000 people killed every year and 275,000 to 300,000 people seriously injured, to the extent that they got into the national records, and how many more collisions there were that were never recorded we don't know. We know it ran into millions.

In the face of that, it must be evident that there are a lot of people who really don't know how to drive. These accidents all happened with each individual driver not wanting them to happen.

When you step out of the driver field into many of the industrial fields, you find a very definite attitude that a man whom you have taken on to run this machine or power press, or whatever it may be, does not know that job, and you put him through a course of training. There is a definite effort to teach that man to do the job that you want done. When we get back into this driver situation we seem to begin to assume that if the fellow says he has been driving for ten years, then he must know how to drive and why try to give him further training?

Maybe one of our difficulties is that it is difficult to measure one's driving ability. Let's admit that the fellow who likes to bowl really knows his score, and he knows what kind of a bowler he is. A fellow who can bowl 100 knows that he is a poor bowler. The same thing goes for most of our sports. We have a ready measuring stick which can be applied to

the activity we are interested in, but when it comes to driving there isn't any such measuring stick. You might say the only measuring stick you have is your record of accidents, and what is the typical attitude toward them? In the first place, you sort of brush away that little fender touch you had. It was the other guy's fault; he ran into you. You don't keep a very accurate account of what your own score really is. We see that in our accident reports.

Sometimes groups have recognized some of these failings, and in taking on a man they have turned him over to a senior driver or maybe to two or three senior drivers. That is better than nothing, surely, but I wonder if it is entirely fair to the senior driver just to say, "Take this fellow and find out what kind of a driver he is." What effort has supervision made to teach that senior driver to analyze driving and really to give you a report on how that man handles the vehicle? I think it is easily possible to have an excellent driver who can do a good job himself but not be particularly capable of analyzing someone else's driving.

It would seem to me that from a viewpoint of responsibility for accidents there is really a training job to be done, and that is the responsibility of management. I feel that management cannot get away from the fact that it must do a training job and the problem is not going to be licked just by paying bonuses or by using discipline.

I feel that it is a pretty well established fact that we say to the driver, "If your truck is not right, don't take it out." Well, you can only carry that up to a certain limit because the typical driver is not a maintenance inspector and his ability to judge the condition of his truck is less. Sometimes there is a tendency to rely on the driver to be a maintenance inspector, with the result that conditions that should be corrected and would be picked up by maintenance inspectors are not observed by the driver.

Therefore, I think that the maintenance department very definitely has a responsibility to maintain an inspection service of the equipment and not rely on the drivers to do their inspecting for them.

That does not relieve the driver of not taking out a vehicle that he knows is in poor condition, but fundamentally I think that we have to put the finger right on the maintenance department to keep that equipment right up to snuff and that responsibility should not be transferred to the driver.

One other item that I think we might bring up now is what we mean by driver responsibility. We have various terms, "responsibility," "at fault," "avoidability," and all that sort of thing. What do we mean by them? I think we have many an accident where one party is very largely at fault, one party is really responsible for the accident, but in spite of the other fellow being at fault is that any reason your good driver has to get in that fellow's way? Granting that the other fellow commits some error in driving, that he drives into an intersection, for instance, not prepared to stop and depending on somebody else to stop, is that any reason for our driver also to go into that intersection and tangle with the fellow? We are interested in the ability of our drivers to avoid accidents, regardless of what the other fellow does, because we know that can be done. The fellow who builds up eight years or ten years or more of successful safe operation accomplishes that not because everybody else does the right thing on the road, but because he builds up a defense and is able to size up the situation that is coming and avoid a collision.

THE CHAIRMAN: Before starting this discussion, let me introduce the rest of the panel members: John A. Ebeling, Director of Safety and Personnel for the Olson Transportation Company, Green Bay, Wisconsin; Mr. C. G. Morgan, Manager of Division of Operations of the American Trucking Company, and Dwight McCracken, Director of the Traffic and Safety Bureau, Liberty Mutual Insurance Company.

MR. MORGAN: I should like to ask Mr. Lord whether or not the conception of ascertaining liability of the driver for an accident is not the reverse of our usual concept of guilt and innocence in this country. Our usual concept is that a man is innocent until he is proved

guilty. In view of the fact that the drivers of commercial vehicles are professional drivers, they are paid to drive safely and to know their business, isn't the attitude usually that if they are involved in an accident, they are guilty unless circumstances can be shown to prove innocence?

MR. LORD: I feel that there is very little relation between the legal aspect of these things and the ability to avoid these collisions at intersections. What we want to build up in the driver is his sense of responsibility to realize the extent to which he can avoid these things, not a question of whether he is guilty or not. I think we ought to leave the word "guilty" out of the thing. I think it leaves a bad taste in the driver's mouth and everybody else's.

MR. M. O. WOOD (Pabst Brewing Co., Milwaukee, Wis.): I should like to ask Mr. Lord, are you trying to avoid the term "guilty" and defending the man for negligence? If he is guilty of negligence, he is guilty, is he not?

MR. LORD: It is all right to say guilty of negligence. Usually you get down to guilty. In anybody's mind it might just be guilty of an accident. The truth is that in the typical accident usually both parties are involved, both parties are at fault to a certain extent. Either party probably could have avoided the collision, and just to say that a man is guilty begins to imply that one party is assuming the entire responsibility for the collision. I think that is rarely so. I think it usually takes two errors to get these collisions, not one. As the result of our broad analysis of accidents, it seems to us that about two out of every three could have been avoided, but there is a third one that we don't see what our driver could have done.

MR. PHELAN: I think the conversation when referring to guilty would be in the vernacular of what a claim adjuster might use in investigating an accident. I think that most transportation companies when they classify responsibility set up accident statistics and classify it as a chargeable or non-chargeable accident. If the driver of the vehicle has violated some responsibility involving driving laws, then it is considered that he is chargeable for

the accident. If not, he is not chargeable.

THE CHAIRMAN: I think that this brings us back to the importance of the difference between the group treatment of our drivers and individual treatment. We use the terms "chargeable" and "non-chargeable" and "preventable" and "avoidable." I don't think they carry much weight with the drivers as a group and probably very little as individuals, but in dealing with the driver individually, I think that you have to bring to bear all the vocabulary that you possibly can that will bring to that particular driver the real impact of what his actions have done and what the results have been. He may be guilty. He may be stupid. He may be criminal. He may be any one of those things, and I think in individual dealings with the drivers, we are inclined to deal too much in group terms. I think that to talk in such weasel terms as "chargeable" or "non-chargeable" isn't getting at the core of the thing.

I, for one, have been in safety long enough to get pretty sick of a lot of this bunk about the commercial driver being the best driver. The idea of the commercial driver being a better driver is based upon a very faulty premise. So I like to use the word "guilty" or "stupid."

MR. McCracken: I share your feeling regarding some of the difficulties that drivers get into. Being an insurance man like yourself, I think we can really be accused of having some very keen feelings about some of the accidents we have to pay on because they seem so unnecessary. On the other hand, I see a definite advantage to leaving out of our accident judging terminology anything that smacks of the courts, anything that is going to give the driver the feeling of comparing the degree of his negligence with that of the other driver. We don't want him to think that way. We want him to think in terms of "What could I have done to prevent that accident?" not about how bad the other driver was. If there was something that our commercial vehicle driver could have done to have spared himself that accident as well as his company, then that is what we want him to think of next time in a

similar situation. So we have always adhered to the use of the term "chargeable" or "avoidable" or "responsible."

I think we should keep the drivers thinking in terms of whether or not they are responsible, and the degree of their responsibility, or the fact of their responsibility, depends not on what the other fellow did at all but on what they did. Did they do everything reasonably possible to avoid the accident? When you talk to drivers that way, then you are doing them a real favor because you are getting across to them in their minds the feeling that it is up to them in the last analysis and an alibi based on what the other fellow did isn't going to do any good.

MR. LORD: I see lots of instances where a new standard of "within reason" has been set up. Take a case where you are on a narrow road, and you have to make a left turn. There are a couple of guys coming up before you. Maybe traffic is coming toward you. You want to make that left turn. You might say you are legally O.K. if you stop and make the guy behind you stop so that you can make the left turn after the other traffic is passed, but that is assuming that the fellow behind you is going to stop. Within reason, is that the thing to do?

We have quite a few pipe line terminals off main highways, and we used to get some rear-end collisions where people would come up behind our trucks waiting to make a left turn off the highway and hit them. The first attitude was "My God, what more do you want us to do?" Then the company put up signs that this was a terminal and to slow down. That didn't slow down the people on the highway one bit. Today, when drivers come up to make a left turn into a terminal, they are acutely aware of anything behind them. If there is any question about not making the turn safely, they proceed to a turn-around a quarter of a mile down the road, and come back and go into the terminal. In other words, they have a new degree of what is reasonable and that enters again into this matter of driver's responsibility for accidents. As you get more and more into the thing, you build up in the driver's mind a new degree of

what he can do to avoid these various situations.

MR. McCracken: Someone just asked me if the film, "Defensive Driving" was produced by the National Safety Council. The title is somewhat similar, but it is not the same film. I think most of you have seen "Defensive Driving." It is a fine production. This one is a different type of film. We are going to present here an accident and show you just how it happened. We are going to have a driver supervisor talk to him and find out the driver's side of the story. We are going to show the events leading up to the accident, and then we are going to stop the film and discuss it here among ourselves and decide what we would say to the driver if we were his supervisor. Then we will play the record and see if we agree with the decision on the record.

We produced this film for our own fleet use. But you will notice here it says, "United States Junior Chamber of Commerce," and you may wonder what they have to do with it. They put on safety programs in over 850 cities throughout the United States, and they have asked for this film to use in promoting the defensive driving idea among the general public. This was primarily for fleet use, but they are using it at safety meetings of the general public to get across to all drivers the idea of driving defensively.

... Showing of film ...

MR. McCracken: Now it is our job to judge that accident and decide what we would say to the driver. Who wants to give an opinion?

MR. C. A. HUBER (U. S. Naval Air Station, San Diego, Calif.): I don't think Griffin did very much to avoid that accident. He could see the car coming and according to what he told his superior he relied on the other person to slow down. We train drivers to recognize cross roads and stop signs, but we also try to train them to the point where they do not rely on them too much. If he was a well trained driver, as I presume he was from what I have seen in the picture—at least he was working for a company that is making an effort to

train their men—he certainly put a lot of faith in the other fellow, and drivers today are not being trained that way. He did nothing really to avoid the accident himself. Of course, the other fellow didn't either, but the negligence on the other person's part is no cause for him to be negligent. So I really think he is at fault. I think the picture gives that away. The picture is entitled, "Driving Defensively," and that fellow wasn't driving defensively.

MR. MORGAN: Mr. Huber says that today we are not training drivers that way. Well now, let's consider the man's record. Suppose the man has been with you ten years, and has a ten-year record of good driving. If a man who has a record of ten years of safe driving has that feeling after an accident, I think the driver's supervisor is the one who ought to be fired.

MR. WOOD: I don't want to see the fellow get fired. I think he probably should be classed as responsible for that accident because of his own omission. If he had traveled over this road several times, he knew the route very well. He knew that barn was there. He also knew the intersection, and he knew that this fellow was driving very fast and he would be obstructed from a view of this other driver because of this barn at the intersection. He admitted his guilt, or let me say carelessness, to a large degree by not slowing down and even coming to a full stop under the conditions.

THE CHAIRMAN: I think this illustrates two things. One, of course, is the very typical manner of describing accidents by drivers. Lots of rationalization. You know yourself that that accident happened in less than a second. Ten miles an hour. He went about 12 feet in a second. The other fellow went about 60 feet. He said that he saw that if he stopped he would have a bad accident, so he decided that he would pull to the right. He decided no such thing. He came up there and was panic-stricken. He forgot all the good things he had ever known about safety, and just drove up there, and when he found the car on top of him, I think that he had an emo-

tional reaction rather than an intelligible reaction. He just pulled the wheel.

I have seen many of those accident reports. I think it brings us back to our selective education again. We cannot take these fellows on because they have breasts full of safety awards. I think that a lot of good drivers are lucky drivers, and when you take them out and find out what they do, you know they are lucky. The only thing that has saved them in many cases is that the circumstances which produce an accident, the other circumstances in addition to their own faults, which go to produce an accident, just haven't met, so they did as this particular night.

I am interested in hearing what you would say to this fellow from the standpoint of education, from the standpoint of prevention. What would you say to him in this case?

MR. GAYLEY: I should like to answer that question. We have had an accident similar to that in our own organization and the words of that driver ring very familiarly in my ears. "I thought the other fellow was going to stop." There is another case of a man's trying to do two jobs. He is trying to drive his own truck and the other person's automobile. It usually results in trouble. We tell our men always to guess that the other man is going to do the wrong thing and they will probably be right 99 per cent of the time.

We would rate that as a "C" accident, contributory negligence on the part of our driver and contributory negligence on the part of the other driver. He would lose his safety button, and we would impress upon him the importance of sticking to his own job of driving his automobile and not trying to drive the other fellow's.

MR. DEAN: Mr. Chairman, I want to sum this thing up as total indifference to the knowledge of facts concerning the particular corner and lights and range of visibility. It is summed up in the two words, "total indifference," and leads to the philosophy that Neyhart spoke about this morning in the meeting. We have missed the ball by not go-

ing farther and getting at the attitude of the driver.

MR. McCRACKEN: That is right, and I think that this gentleman's remarks on what we would say to the driver would very definitely help to shape that driver's attitude, don't you?

MR. DEAN: Yes, sir.

MR. McCRACKEN: I might explain the reason we selected this accident. We wanted one in which the other driver was hopelessly at fault in the eyes of the court, because so often passenger car drivers, and quite frequently fleet drivers, are inclined to consider the other fellow, what he did, and to alibi their accident by the other fellow's actions. We wanted to take one where the other fellow was certainly doing everything wrong, and you would be surprised at how many drivers will attempt to defend their position in a case like this. I do not suppose you would be surprised either. You are all fleet supervisors or safety engineers. But the purpose here was to take that kind of situation and try to shape the driver's attitude in this presentation.

MR. HARRY M. PONTIUS (Farm Bureau Mutual Auto Ins. Co., Columbus, Ohio): What have been your drivers' decisions when you have used this in meetings?

MR. McCRACKEN: That is a very interesting question. In drivers' meetings we very seldom get a unanimous opinion, but it is always a majority that charges the driver with the accident, but most of the time there will be a small minority who have said, "Well, that driver went in at only 10 miles an hour, which was a reasonable approach speed to the intersection, one in which he could stop almost instantly and, therefore, we think he took every reasonable precaution."

However, I don't think most of us here, from the remarks so far, would agree with that. I don't offer that as my opinion. I don't agree with it either, but that is the attitude we get in some drivers' meetings in answer to your question. Usually the score is preponderately in favor of charging the driver with the accident among drivers themselves.

THE CHAIRMAN: Is there anyone

here who wouldn't consider this preventable on the part of the truck driver?

MR. PHELAN: I would say that the driver admitted his guilt by one expression that he used, when he said, "I thought." Our instructions as a rule to drivers whom we are training or whom we are about to hire is that you don't think. You are sure before you make the move. If you have to think about it, stop and think about it. I think the driver convicted himself by saying, "I thought I could go through the intersection before he reached it."

THE CHAIRMAN: Had our safety patrolmen been on the highway and observed the driver, we would have punished him even if he had not had an accident, because by acting in a manner that could have produced an accident.

MR. FREDERICK S. MOHRMAN (Chicago Park District): These trucks had been going there day in and day out, passing that particular intersection and had come that many times. They should have told the traffic engineers of that state or city, have called their attention to the fact, and either had them put up a sign, a spotlight or some other prevention measures.

MR. McCRACKEN: That is an interesting viewpoint from the Chicago Park District who have charge of traffic control measures, the erection of signs, etc. There is a lot that the fleet managers can do after the accident, if not before, in getting physical hazards corrected by calling up the city traffic engineer or the responsible traffic division. Of course, that does not enter into this particular decision since we are dealing now with the driver.

.... Film Continued.

MR. LORD: I should like to know how the group feel about whether this accident should have been handled by an accident committee, or should it have been handled by the supervisor as it was in this case?

THE CHAIRMAN: Do you who have accident committees think that this case could have been as clearly and completely and skillfully handled by a committee as it could have been, we will say, by a qualified, experienced safety director?

MR. FRIGON: Well, we have a safety trial board which consists of three drivers, the terminal manager, and the safety director. We know that many decisions are made by this board which aren't quite what we would agree on if the safety director and possibly the fleet superintendent were to work on them alone. The decisions wouldn't be the same, but we feel from the standpoint of creating better fellowship between the drivers and the safety department and maintenance department, we are ahead by having our trial board. We all agree that there are some decisions that aren't quite what they should be.

In the case of a serious accident, this board has nothing to do with whether or not we retrain that man, send him to a physician for examination, and so on. All they do is pass on the driver as to whether or not he could have avoided the accident. In a case of this type, we would have this man reexamined to see if there was anything wrong with him mentally or physically, and if there was nothing wrong with him, we would allow him to go back to work.

MR. MORGAN: If a man has a five-year safety record and has an accident of a particular type and circumstances and another fellow who has had only a year with you has exactly the same type of accident under the same circumstances, do you differentiate between them?

MR. EBELING: We do. It probably should not be that way. Probably every accident should be considered on the merits of the actual accident, but we continue to take the human being into the picture, and so far the results have been good.

MR. MORGAN: Let's say the fellow has been with you a year and his record is good. The other fellow has been with you five years and everything is good.

MR. EBELING: They both would be considered then. If a man had been with you five years and he had had a minor accident during that period and had been cautioned and reeducated, then he had an accident of that nature, you would say, "Well, he isn't a driver for us."

MR. MORGAN: We are getting away

from what we started out with. You said it would depend upon the man's past record, inferring, I thought, that if the man had been a good man, you would be sort of easy, whereas if he didn't have a long record you might be rather severe.

MR. EBELING: An old man who had been with you a long time as a highway driver you might switch over to a city driver as the result of that type of accident. We have done that in cases or given him a different type of work if he had a long-service record with us. For instance, I honestly feel that there are a good many men who aren't fit for highway, and by the same token there are men whose nervous temperament does not fit for city work. Yet as far as driving tests go, they test out as good drivers with good knowledge of how to handle equipment.

MR. MORGAN: Let me get this clear. In other words, the statement you started out with, that I wanted to question you on, led me to believe that the longer a man had been with you and had been satisfactory, the less you would be inclined to discipline him as in favor of a man who is more or less new.

MR. EBELING: That is right.

MR. MORGAN: Then don't you take the position of possibly hindering your own development of personnel, because if you are hard with a new man, he may get an improper attitude and Amos Neyhart and a lot of us think that attitude has a lot to do with it.

THE CHAIRMAN: I think I would be inclined to give up on this fellow. I think I would be inclined to try to have him discharged. My reasons for it are fairly simple. One is that I don't know anything about his term of service, but regardless of that, if he is a commercial vehicle driver, obviously he has been driving for some years, and his actions on that night at this particular time were of a kind that would make me give up on him. That is, if he has not learned in all these years to get away from the stupid methods that he used that night, we wouldn't want him around.

There is nothing wrong with him physically as far as we could determine from

the picture. No physical defects were brought to bear, and no mental or emotional defects. Everything he said about the accident made him sound like someone who had had practically no driving experience, and since an attitude of that kind is immeasurable—maybe Dr. Neyhart will disagree with that—I think that that fellow's actions are something that could not have been determined by a selective test.

MR. ARMSTRONG: Do you then in fleet operation penalize a man for one mistake, such as faulty judgment, rather than give him another chance and benefit by that mistake that he has already made—benefit because if you take on a new man he is going to make that same mistake, and this fellow may never do that again? It is just like the man, who says, "I have been doing this for thirty years and have never had an accident." I say, "Fire him quickly. He is due."

THE CHAIRMAN: That is exactly what we want.

MR. CITES: I don't agree with you. This whole thing centers around attitude as I see it. In order to create the right kind of attitude you have to have management actively participating in a safety program. Management can demonstrate and prove a sincere, active interest in safety by first providing and maintaining adequate equipment; second, through selection and training of manpower to produce a complete understanding of their responsibilities when driving; and third, to create and sustain driver interest in safety. I think that is what the whole thing centers around, gentlemen.

THE CHAIRMAN: I don't like to fire people, but over-the-road driving is something else. When a man makes a mistake of that kind, people's lives are at stake.

MR. GRANT: Well, in the case of that particular driver, you will probably have a better driver after the accident. If he had been with us ten years without an accident and he made the one mistake, it would depend a good deal upon the man. The main thing I would think you would consider would be the effect on the other drivers in discharging him.

THE CHAIRMAN: That is a matter of opinion. That is something we have

to hazard when we take steps of that kind. We either have to let them continue on the assumption that they will be better or discharge them on the assumption that they will not be any better. It is more or less a guess, I suppose, as to which works out better.

MR. McCracken: I should like to ask Professor Neyhart what action he would take as a driver trainer expert. What action would you recommend?

PROFESSOR NEYHART: I would not fire the driver. I would try to salvage him, and I believe I have good reasons. Our whole ambition, it seems to me, in all of this work is to try to make better drivers out of these people. If I were to fire that fellow, I would be saying to myself, perhaps quietly and maybe in a hushed voice, "Don't go out and make any mistakes."

I think I would be chicken-hearted there, and I would certainly want to do some retraining with that fellow. I do not mean that I would not do anything, but I would not fire him, because you get somebody else and you have to go through the same rigmarole of training and observing and trying to find out what he does wrong.

As I listened, I was very much impressed by the objective thinking that you people are doing, considering each one of these cases as individual cases. Gentlemen, you are a long way in this traffic game when you take each case and carefully analyze it and get the facts, then base what you are going to do on that.

MR. EBELING: I should like to ask a question. Would your decision be any different if this man had a previous accident record in which the same factors of carelessness were evident, and he had been called in and talked to about it?

PROFESSOR NEYHART: If I had evidence in the record that showed that that man had been taught those particular things, and in spite of that, several times he had made those mistakes, my decision would be, "Get rid of him."

THE CHAIRMAN: I agree with you 100 per cent. I think the man should have known just as well and have paid just as much attention to the rule that

he should approach an intersection more safely as that he should not drink while on duty. I don't distinguish between the two.

PROFESSOR NEYHART: Of course, we put such a strong emphasis on drinking in fleet operation, we don't even try to belittle drinking by comparing anything else to it. We say it is the worst thing there could possibly be. I think most fleets do that. That is one thing that won't be countenanced in any way. I don't think it should be.

MR. HUBER: Would it make any difference if this man were a younger man? Would you make any different decision?

THE CHAIRMAN: My decision is based upon his obvious failure to do the very fundamental things that are involved in safe operation of a vehicle.

My thinking along these lines is that in safe driving, approaching an intersection carefully and stopping is one of the very elemental things; that an experienced driver who goes through an intersection, under those circumstances, with all the preview of accidents that he has had, certainly is one terrible driver, and I wouldn't want him around any more. I wouldn't care how young he was, how old he was, how many years of safe driving he had had, I wouldn't want that fellow around any more.

MR. LORD: Gentlemen, you have learned a lot of comments here on this accident, and I am particularly interested in the remarks that Amos Neyhart made about the individuality of these things. Again I want to get back to a topic that we just touched on and got completely away from, and that is the relation between the supervisor and the driver in these cases and whether you want a committee intervening in that situation. I think it is wrong. I think the closer you can set up a relation between driver and supervisor, the better off you are going to be. I think a committee has no part in that relation between supervisor and driver, and the very trend of our thinking here this afternoon would bear that out. I should like to draw that point out a little because I know so many

organizations have committees dealing with accidents.

MR. TILNER: Mr. Chairman, we have a number of committees functioning and we have a number of programs in which we do not use the committees. I think this way in favor of a committee: The three or five drivers on the committee analyze these accidents, just as we are doing here this afternoon, and I think those drivers go away with a lot to think

about, just as we are going away from here with a lot to think about. So far as that is concerned, I think that we are getting a lot of good out of the use of committees where they are functioning properly and properly adjudicating accidents. On the other hand, we have a few committees that are careless about adjudication. They are inclined to lean in favor of the driver, and if we cannot get them to take the proper attitude, we discharge them.

THURSDAY MORNING SESSION

October 7, 1943

Presiding: H. H. KALLV, director, Division of Materials & Equipment, Office of Defense Transportation, Washington, D. C.

Saving Time and Personnel Through Better Training and Placement Methods

By J. L. RISINGER

Safety Supervisor, Socony-Vacuum Oil Co., Inc., New York

The objectives of any company are to obtain quantity and quality production, without damage to property or injury to persons, and at the least possible cost and consistent with public good will. Accidents, delays, inefficient methods, poorly trained workmen or poor selection and placement methods, are directly opposed to these objectives, whether they occur in the factory or in the operation of vehicles.

There is only one medium through which company managers and supervisors can obtain these objectives. That medium is people. If qualified people are correctly trained and their placement is correct, they tend to get quantity and quality production without damage to property or injury to persons, and at the least possible cost and consistent with public good will.

Machinery, tools and equipment and materials constitute working tools only, and must be acted upon and controlled by people through whom industrial leaders work, to get results from them. Be-

cause transportation, machinery and equipment involves the rights, safety and welfare of the public, a double responsibility for its safe operation rests upon directors or leaders of these people who activate these very essential machines. Time and efficient personnel are two of the main factors to be conserved in their operations. The company's investment is involved, with not only the machines, but the personnel that operated them. To protect this investment and fulfill our responsibility of service to the public, both the machines and the personnel must be conserved, correctly maintained and rehabilitated. Correct training and placement constitutes the chief factor in accomplishing this.

The operator is so positioned in the scheme of accident prevention and efficient operation, as to constitute the chief element involved. This is evidenced by the fact that the highest estimate gives to equipment failure, as the cause of accidents, is 19 per cent. Since the operator also is responsible for many of the fail-

ures of equipment, it is safe to say that the responsibility for from 90 to 95 per cent of the accidents rests upon the driver and those responsible for his training and placement. That he is doing a good job, with below the average systematized training as a machine operator, is a commendation to him and a challenge to his company.

Train All But Drivers

For many years industry has had training programs for all types of workmen. These programs have been accelerated by the war effort. Some companies have instituted tests, and training and placement programs for drivers, comparable to their program of training and placement of other workmen. However, in some cases at least, companies that have intensive and extensive training courses for all other types of workmen, from common labor to general managers, exclude from these courses the specific training of drivers in the operation of the very expensive machines which they operate.

Many companies would never think of placing a workman in charge of even a small machine in the shop before first testing his knowledge of the machine, his skill in its operation, feeling his limitations and his capacity to compensate for them and planning to guide him into more knowledge and skill. Yet, when these same companies need a truck driver, especially in a hurry, a few questions plus a physical examination which does not cover specifically all the points essential to meeting the problems encountered in driving is the total procedure before placing the driver in charge of a piece of equipment valued at thousands of dollars, the parts of which are difficult to replace, and the cargo of which may be explosive, combustible or human.

It is safe to say that not enough consideration is given to the facts that the correct operation of this machine not only requires knowledge of the machine, but an operator that is mentally, physically and emotionally correct and who has a thorough knowledge of traffic and driving, driving skill, correct attitude toward others on the highway and must be intelligent enough to think and act, to do the right thing in emergency.

Perhaps those who have no definite method of training and placement of drivers, as individuals and on a specific job that requires a specific test and training, have not analyzed or do not accept the fact that there is a scientific method in the procedure of operating a truck, not only equal to but more complicated than that of operating a stationary machine.

Use Scientific Methods

Those who have adopted better methods of training and placement recognize that there is a scientific method of operation of trucks and are training drivers by use of standards, stakes and marked off enclosed areas and by guided tests. The driver is being trained in the essentials, such as knowing where the wheels are, calculating distances in feet and inches from other vehicles, etc. Many standards are knocked down in this training, but no harm is done, and it is less damaging and expensive than were the units striking other vehicles or obstructions. At least, a percentage of these errors on the training course represent accidents prevented.

Those who have instituted improved methods of training and placement of drivers have found that hurry in getting the driver placed behind the steering wheel, does not save time nor conserve personnel, but waste both.

A few weeks ago a full page write-up of a truck accident appeared in a daily paper. Photographs taken at the scene, showed a very expensive trailer unit lying on its side at the street corner. Traffic was blocked. War materials were delayed. The public was frightened, property was damaged and the company's transportation system was thrown into confusion. There was no question but that it was a driver failure accident.

There was nothing extraordinary about the accident. Quite a few accidents occur at street corners. The most interesting facts were those behind the accident and known by less than a dozen people, perhaps only two or three. The driver of this unit was new to its operation. He had applied to one company for a driver job. This company gave him a test. He fell short. He was in a hurry to get behind

the wheel of a truck, so he went to another company. The other company had even a more strict test and a better systematized training and placement program. Just at this time, however, the other company needed a driver in a hurry, and although he fell short, his shortcomings were waived and he was given the job. He was to be retrained and rehabilitated later. To save time, the chance was taken. The accident was the result. Both time and personnel were lost.

This case stood out, because the tests had been given and defects waived to save time.

Training Objectives

You are no doubt familiar with the objectives sought in testing and training drivers. These are referred to here as a method of breaking down the subject into detail. Most assuredly we want to measure the driver's ability to operate a truck correctly under typical driving conditions. The object of this test, is not to eliminate the driver, but to find his defects and then eliminate them, if possible, by training or teaching him how to compensate for them. If he has defects that cannot be eliminated or compensated for, then of course he should not drive. How does this method save time and personnel? It saves time in terms of destroyed equipment, delay in delivery of cargo and mechanical time in upkeep of equipment. It saves personnel by correcting defects of drivers that might otherwise be lost.

The correction of the physical defects of drivers might be termed rehabilitation. A driver may eliminate himself by being involved in numerous accidents when, if he were tested, we might find a physical defect which, when easily corrected, he is saved. For instance, his visual acuity might be poor, but glasses would give him 20/20. His glare resistance, or night recovery, might be such as to eliminate him from night driving. He might be saved by vitamin A tablets or be taught to compensate for this weakness. He may not know that his field of vision is narrow and that he should develop an alertness in turning his head from one side to the other, to compensate for the defect. His depth perception may be poor and need

to be compensated for. A slow reaction time might need to be compensated for. Any or all of these defects, easily found by test, which can be corrected or compensated for, saves personnel. If, however, he has defects that cannot be corrected or compensated for, he is not going to be saved by permitting him to drive. He may liquidate himself.

Drivers with defects that might cause accidents at night, should be placed on day time driving. A driver's score might show him to be a good driver on short hauls, when he would be much of a hazard on long hauls. He might be susceptible to early fatigue. He might be of a nervous disposition and need training in control, or not given a job where he is operating constantly in heavy traffic.

Easy To Uncover Defects

The offending driver may not know sound driving practices. We have assumed that he does, when as a matter of fact 50 per cent do not. His mental attitude might be wrong. He may not be able to interpret signs, signals or size-up situations. There is a best way to discover these defects and to correct them. When this best method is found and adopted, and training and placement applied accordingly, much time is saved, and possibilities of personnel is conserved and the loss or destruction of personnel itself is avoided.

Questions in the forefront today are "Where are we going to get drivers?" "Can we afford to maintain a high standard of requirements?" To let down the bars would be following the path of least resistance, and adding to the difficulties. The only solution is to break the problem down, analyze its parts and apply the proper corrective measures to each. Seven parts are here mentioned:

(1) Analyze and test them. Not to kick them out, but to rehabilitate, train and place them on the highest plane of efficiency, in accordance with the capacity of each. (2) If possible correct their physical defects or instruct them how to compensate for them. (3) Make sure by test that they know sound driving practices. (4) Train them on closed area training fields and on laid out road courses in

the skill of driving and in accordance with sound driving practices. (5) Treat them as individuals and place their job on a level in the scale of importance to which it is entitled, thus influencing their attitude. (6) If a driver has defects that cannot be corrected or compensated for, switch them to jobs that do not require driving, thus possibly releasing another who can become a driver. (7) Place the old driver in accordance with his capacity.

If these seven things are looked to not only will time and personnel be saved but the accident record of old drivers will hit a new low.

Better Methods Available

Better methods of how to test, train and place drivers have been worked out and are available. Many illustrations of the results of these methods could be cited regarding old drivers. Backing accidents run as high as 39 per cent. Drivers with as many as 9 years without an accident, have been unable to make a good score on the enclosed area practice field, on backing a truck 175 feet on white lines between stakes with the four inch clearance, on either side, or on placing the trailer at the curb with a 6 inch clearance.

With scientific methods of calculation and two hours practice, they have been able to make perfect scores on these problems. It is conservative to say that were all truck drivers tested and trained for three hours in the improved method of backing, the number of these accidents would be reduced 50 per cent. Many of the old drivers will be found to need correction of eye and other physical defects. Many old drivers, probably 50 per cent, will not know sound driving practices. This is not necessarily a fault of their own. They were supposed to know and have not been taught.

Upgrade within the fleet. It will be found that the full capacity of some drivers is not being utilized, while others are placed above their capacity. A system of upgrading from straight truck to trailer, short run to long line, and from less responsible workers to drivers, will conserve personnel. The same procedure of training and testing for such transfer should be specific

and include all the phases necessary to insure that the driver can and will operate the vehicle as it should be. This is more important than for transfer of workmen in shops and other such jobs.

Transfer within the company. Many good prospective drivers will be found on less essential jobs within the company. Perhaps they can be replaced by workmen who could not qualify as drivers. A training school should be provided for these prospective drivers.

Explore the field. Don't wait for someone to come in and ask for a driver job. Look for drivers in the same manner as for a chemist, a bookkeeper or mechanic. Use women on jobs to which they are suited.

Train personnel to become drivers. Don't simply test and place or reject, but test, train and place, or train, test and place, rejecting only those that have defects that cannot be corrected or are very difficult to compensate for. Follow through after training and placement with guidance and retraining.

Raise the meaning of the job—truck driver. Accept the fact that driving a truck requires intelligence, knowledge, skill and good judgment. Place the job higher up in the scale of consideration, by bringing into it systematized training. Consider it as a scientific and skilled job. Some companies call drivers chauffeurs, others truck salesmen and others so word the job as to elevate its consideration. Why not put the job of truck driver on a requirement and training plane where the name truck driver will be considered at least on the same level as a machinist, electrician or other such job. Raise the name itself, rather than attempting to change it. Treat the job in the light of its true importance and the driver as an individual who is rendering a major service to his company. Enlist the driver in the activities of the company and the carrying on of its various purposes, and programs, as a member of a trade, profession or group, or part of a company and on a job worthy of performance, and not below the dignity of any other member.

Quit firing so many for having too many accidents and help them to prevent

them by training them now. Although the driver is charged with responsibility for all but a few accidents, he is not the only person who is responsible for these accidents. The individuals in charge of transportation are also responsible, at least in part, and sometimes totally, for all the accidents that occur to drivers and equipment, that could have been prevented by his forethought, including the testing, rehabilitating, training and placement of drivers.

Develop job pride. The individual who is proud of his job and his ability to perform it does not leave it readily nor commit acts that would jeopardize it. He also reflects an attractiveness of the job that causes others to consider a job like it, and others on the same type job to desire improvement. There are various items involved in an effective incentive and promotional program. In large companies, field days are held at picnics and other meetings. First aid contests are staged on these occasions. The display of skill enters many features. What effect do you think a contest such as the following would have upon the job pride of drivers and their desire for improvement, and upon the attitude of the audience toward truck driving? For instance, in closed area training fields, two or

more groups of drivers would select by elimination, two or three drivers to represent each group. On the day of the contest these representatives would put their vehicles through laid out test, according to previously specific rules, and the winning group would receive the cup or other award. This subject could be carried into many phases, dependent upon its breakdown and placement methods.

This war has caused men's lives to take on new values. The conclusion of the war will not change but will increase these values. The war has demonstrated that investments in training in the armed forces and industry paid dividends in time and personnel. It has become an accepted fact that any plan in which the awareness of the individual is lost will not succeed, that people are individuals and must be so treated, and that they react favorably through confidence and not blind fear. The army driver who returns to his company vehicle after the war will have been molded to this pattern, which must not only be maintained but improved. The old driver must be conserved by use of these improved methods and approach and placement of old or new drivers must meet an improved pattern based on these axioms.

Making Tires Last Longer

By WILLIAM G. KEARNEY

Manager, Mileage Contract Sales, The B. F. Goodrich Company, Akron, Ohio

For a great many years, as you know, bus tires have been sold on a rental or lease agreement to bus operators, on a vehicle mile basis. Not many years ago, 10,000 miles was superior performance, if you got it from a bus or truck tire. This method of selling by the mile was the greatest single step in two developments:

(a) It gave research, tire construction and compounding divisions of the tire industry a very definite responsibility and objective as to quality.

(b) Young engineers were trained and placed in key positions to service bus tires and gain knowledge of different

characteristics of buses—a system of tire life records—covering the complete history of a tire from the time it was placed on a bus until it was permanently removed from service. These records were analyzed as to type of failure, studied and used for improvement of tires.

Thousands of dollars were spent on these developments which paid great dividends to the motor vehicle operators. Product improvement, trained service men, improved roads and equipment, over a period of ten years showed an incredible increase in bus rental tire life—more than 138%.

You are aware that we, as a Nation, have not practiced thrift for so many years that we have almost forgotten that the word means the wise spending of money and time. This, together with the rapid growth of any young industry, like motor vehicle transportation, has probably contributed greatly to inefficiency and wastefulness and, strange as it may seem, a great many operators right now think they are doing a reasonably good job only to find out they don't know or practice the simple fundamentals of rubber conservation. I know this—through information and facts secured through "B. F. Goodrich Tire Conservation Service Department," covering surveys of many of the larger truck and bus fleets.

A good many of these surveys have come over my desk and practically all reports show that the condition of the parking areas, garages and their approaches are considerably detrimental to good tire life. In many instances they are not clean or properly organized. In the yards are numerous bricks, sharp-cornered stones and other objects embedded in the ground all of which menace tires. Often scrap material is piled very close to the driveway and vehicles have to run over these articles. This means that many operators are still poor housekeepers.

Hit-and-Miss Lubrication

Lubrication is still a "hit and miss" process. There is no lubrication record system and lubrication seems to be done on an emergency basis, rather than a systematic and scheduled basis. Dry shackles are still found on many units so that the springs cannot function properly and absorb their part of the shock. Lubricated springs are necessary to prevent considerable tire wiping. Faulty brake lubrication has been found—either by lack of lubrication or over-lubrication. In crowded buses and overloaded trucks little if any attention is paid by the drivers to load distribution. There is an unusual number of equipment units with broken springs, clips and center bolts. A number of wheel studs and nuts are missing which might not only ruin a tire but constitutes unsafe practice. There are many tires with dangerously low air pressure.

The first "Must" in effecting tire con-

servation is tire inflation. Tires will not perform without air and they will not perform 100 percent without proper air pressure. Recent experience indicates that not more than 50 percent of motor vehicle operators are properly maintaining air pressures. Air pressures should be checked when tires are cool before the vehicle has started on a run.

Air pressure within the inner tube holds the vehicle off the ground and carries the load. It absorbs normal shock. The recommended pressures have been closely ascertained by tire engineers and are based on years of experience.

Dual Mating

Accurate matching of dual tires as to outside diameter or circumference is of vital importance, because dual wheels, of course, turn at the same speed because they are locked together, and thus if a smaller tire is mounted with a larger, the larger will tend to travel faster, causing a scuffing action on the smaller tire, which results in very rapid wear.

If one tire on a pair of duals is of smaller diameter than the other, it will not carry its proper share of the load, and in addition to the scrubbing action resulting in fast tread wear, it imposes a greater share of the load on the larger tire, thus causing that tire to be overloaded, increasing the probability of tire failure.

When it is necessary to put two tires of unequal size on a set of dual wheels, the smaller tire should be put on the inside wheel. In fact, in some instances, it has been found that this results in each tire carrying a more equal share of the load than by matching tires of exactly the same outside diameter.

All of these items shown below should be checked by truck and bus operators, and should also be checked by official tire inspectors:

1. Dual tires should be of the same outside diameter or circumference, or as close to the same as possible. This can be determined only by measuring either the diameter or circumference, not by amount of tread wear shown on the tires—even two new recaps must be measured.
2. If tires are of unequal diameter put the smaller tires on the inside dual.

3. Do not match rayon and cotton tires on the same duals, because the rate of growth in these tires is likely to be different and will result in one tire carrying a larger share of the load.

Abnormal Wear

Mechanical irregularities, more common on the front end of a motor vehicle than on the rear, are often the cause of very rapid tread wear. It is known that a tire on a wheel that is $\frac{1}{4}$ inch out of alignment drags sideways 87 feet in every mile, and this creates action similar to putting the tire against a grindstone. Too much toe-in or toe-out misalignment is recognized by the feather edge which is caused on the edges of the tread design. Camber wear is recognized by the fact that it causes more rapid wear on one side of the tire than on the other. Too much camber has the effect of causing the wear to be concentrated in a small area on one side of the tire, thus resulting in much faster wear. Broken springs, loose tie rods, and bent steering arms all cause mechanical irregularities with the resulting loss of rubber.

While it is wise for drivers to examine front tires for mechanical irregularities, it also should be the responsibility of Maintenance Superintendents to consistently examine front tires inasmuch as 500 to 1,000 miles of travel with severe mechanical irregularities will cause the loss of thousands of tire miles.

Unbalance, particularly as it occurs on front wheels, results in the tire pounding at one or more spots on the tread surface, resulting in fast and uneven wear. When this condition continues, it will eventually result in spotty wear around the tread surface of the tire which often results in the tire being taken out of service long before its expected time for retirement.

Bus wheels can usually be balanced within fairly close tolerances, where equipment is not available for more complete balance, with the wheels on the vehicle. With the front end jacked up, spin the wheel, and if it always stops at one spot on the bottom, then a weight should be put opposite that spot, and so continue until the tire will naturally stop spinning at any point it may reach in

turning rather than at one point all the time.

Inspection for Retreading

When inspecting tires for retreading, the important factor is the type of service in which the tires will be used. It requires judgment based on experience to determine if a tire can be successfully retreaded.

Possibly, the two most common causes that result in rubber being wasted by retreading are—First, retreading of tires which require sectional repairs and which are to be used in service that is too severe, resulting in failure of the section or separation of the tread job and, Second, the retreading of tires that have slight tread or ply separations which are not discovered by the inspector.

While it is true that in many less abusive types of service, truck tires which require sectional repairs can be retreaded and will give many miles of service, that is not true of intercity bus or truck operations where tires are operated at high speeds or with heavy loads, or a combination of the two.

There is a second point. Causes for failure in retreaded tires from inherent undetermined separation can be located if the inspector or retreader carefully examines the tire. This condition is much more likely to be found in truck or bus tires that have been operated at high speeds or with heavy loads, or both, where heat is a considerable factor.

It is also important that the inspector consider the atmospheric temperature in the area in which the retreaded tire is to be used.

Use of Retreaded Tires

The same care should be taken of retreaded tires as of new tires. However, one precaution for tires that are recapped is frequent examination, and if there is any indication of separation developing between the recap job and the casing, the tire should be pulled out of service before casing failure occurs.

Retreaded or recapped tires can be used in most truck or bus operations. There are some exceptional instances where

tires are subjected to so much heat that it is not economical either from a monetary or a rubber-saving standpoint to attempt to use retreaded tires. This can usually be determined by past experience and careful examination of the cord body of the tire by the inspectors.

Any retreading work is dependent largely upon the quality of materials used, and especially, upon the integrity and workmanship of the retreader. For that reason, truck and bus operators should select sources for this service with care.

Damaged truck or bus tires can be repaired by the use of vulcanized sectional repairs so that they are capable of giving full service. However, due regard must be given to the type of service in which the tires are to be used, and particularly to the extent of the injuries sustained.

There is a tendency to attempt to repair tires that are beyond repair for service in which they were originally used. There are numerous cases where operators using trucks or buses in difficult service conditions should not use tires with section repairs. Most of these tires are out of balance and yet will do a reasonably good job on slow moving vehicles.

What of the Driver?

What about this man we call the driver or operator of a motor vehicle? In many cases he is quite a young chap, secured from a farm, factory, or directly from high school. You as management have put into his hands a valuable piece of equipment. Although you might give him a limited amount of training and go on the theory that recommendations, suggestions, education, is going to get the job done and you took the attitude "just tell them and they will follow" but you did

not take him far enough in your confidence to tell him the reason why 80 pounds of air should be put in the tires, if that is the recommended pressure, why he should check tires enroute, why he should govern speeds, why he should watch distribution of loads. Did you tell him that his flares must be put in a certain spot, so he knows where they are, that the lights must be on his trailer, or did most of you just gamble a valuable piece of machinery? If you did, certainly you cannot expect him to look after tires.

It seems to me that we all need hard, driving leadership to do this job. Suggestions constantly should be kept in front of the drivers and maintenance men, not only those taken from cartoons or wall hangers covering ten or twenty points of tire conservation. Just as important as the safety angle, the maintenance and handling of tires and equipment.

For over a year we have been testing various types of synthetic tires on city bus lines in Chicago, Cleveland, New York, Boston, St. Louis, Memphis and Santa Monica, and in my opinion the results have been very good. Large bus tires for inter-city buses will eventually be made of synthetic. We can expect a limited amount of tread cracking and separation but frankly a good job has been done by the industry. If we don't keep this motor vehicle transportation moving, I know of nothing which would have a greater negative effect on our war effort.

To put this new synthetic program over, we in the industry need your full cooperation and patience. I am sure you will give it to us because you, with us, are partners in the rubber business as taxpayers to a \$650,000,000 synthetic rubber program.

Prevent Wear and Tear and Reduce Critical Parts Worries

By W. J. CUMMING

Maintenance Section Chief, Office of Defense Transportation, Washington, D. C.

Under present wartime conditions, the skilled mechanic is becoming a scarce commodity and is receiving increasing recognition in all organizations using automotive vehicles. This recognition is a desirable condition, provided it carries with it a recognition of the basic fact that the owner of a truck or the operating department of a fleet of trucks must schedule the use of the vehicles so that they can be routed to the garage at periodic intervals for sufficient time to permit the maintenance work to be properly done.

Three people are responsible for the optimum use and the maximum conservation of a motor vehicle. They are 1—the owner or the operating management; 2—the driver, and 3—the mechanic.

The operating management or owner has a responsibility to see that the vehicle is not overloaded either for the size of its tires or for its mechanical construction. Just as tires obviously can be overworked, so can the mechanical parts of a truck be overworked. Both tires and the mechanical parts of a truck will absorb large amounts of overload for limited periods of time. However, such overloads do cause premature failures, and the failures may occur at a later time so that the relation to the primary cause, i.e., overloading, may not be apparent. There is no saying in the movement of freight if shipments are made in a manner which may eliminate the transporting equipment from future use. Such movements are a prerogative of the armed forces where, in the supplying of the battle line, automotive equipment may be an expendable item. Civilian trucks are not looked upon as expendable items for the duration of the war.

Preventive Maintenance

In addition to proper operation of the vehicle, the management must have a determination to see that preventive maintenance is done properly and regularly. Preventive maintenance is a much abused phrase. We like to define it as the art

of inspecting and servicing a piece of machinery so that the wear on parts is reduced to the lowest economic degree. Preventive maintenance recognizes that some degree of wear in certain parts is a normal result of normal operation of a piece of machinery. As a result any preventive maintenance program must include systematic checking, testing, tightening and adjustment of parts to compensate for wear; regular and detailed inspection of parts to determine when reconditioning is necessary and correct periodic lubrication and cleaning.

It is all very fine to tell the driver not to do this or that, and not to abuse the truck, and to report one thing immediately and to report other things at a given time in order that the truck may be properly maintained and kept on the road. But if the clutch will not release fully, how can the driver avoid clashing gears, and if the clutch grabs or the engine has a couple of weak cylinders, how can he avoid starting a heavily loaded truck with a jerk and with the possibility of twisting the drive shaft or of breaking an axle shaft?

If the steering system binds because of lack of grease, how can he avoid hitting objects or holes in the road, and how can he control his vehicle so as to get close to the curb without scraping it? If the brake lining is bad or worn off on one shoe, how can he properly stop the vehicle? If the voltage regulator is out of adjustment with the controlled voltage too high, how can he avoid burnt out lamp bulbs or an overcharged battery? If the voltage adjustment is too low, how can he avoid dead batteries and no lights?

One can go on and on with such cases to illustrate the point that what the driver does or what he reports is not the answer to proper maintenance of the vehicle. All of the defects which are mentioned can be determined by a maintenance inspector. Most of the conditions can be determined by an inspection in the shop and all of the rest can be learned by a road

test made by the maintenance inspector.

Reduce Repair Bills

If preventive maintenance is performed regularly and periodically, the operation of the vehicle can be kept in almost equivalent-to-new condition, even though normal wearing parts have attained a certain degree of wear. Preventive maintenance inspection will reveal needed remedial repairs before there is excessive wear of parts and will reduce excessive repair bills caused by neglect. The net result of a comprehensive systematic program is a vehicle which operates smoothly and satisfactorily and in a manner similar to the way it operated when new, even though the engine may have considerably less horsepower because of normal wear.

To produce the optimum maintenance results means that the individuals in charge of the operation of the automotive vehicles must insist that the vehicles are routed to the garage at regular intervals and for sufficient periods to permit good maintenance work to be done, and must insist that the maintenance work be done. This is not too difficult a program for a city bus operator who has considerable tripper service. It does, however, require a lot of will power on the part of the truck operator who always has the excuse that he has a lot of freight to move today. Due to manpower shortages, your shops may also strengthen your excuses by saying they have no help to do the work, and thus is started a vicious cycle of poor maintenance.

Your shop people know how to do the job but, unless pressed by your management, they may not be inclined to do what is necessary to get their shop into a full production basis.

We must expect to use manpower or womanpower to conserve civilian automotive equipment to the utmost, and this conservation will compel the recruiting and training of persons who are novices to the automotive servicing industry.

Maintenance Manual

After we have the truck in the shop, what is the shop to do with it? What is preventive maintenance? A committee of members of the Society of Automotive

Engineers have prepared a manual which has been published by the Office of Defense Transportation. This manual was prepared by engineers who were in charge of the operation of fleets of trucks and buses where preventive maintenance has been followed. The manual is entitled "Preventive Maintenance and Inspection Procedure." Copies of this manual will be mailed on request.

As the operations in preventive maintenance are fully detailed in this ODT-SAE manual, we will not discuss the detailed operations further. We do, however, wish to indicate who can do this preventive maintenance work. As a matter of fact, the all-around mechanic frequently does not like this type of work. He thinks it is either too petty, or it does not require the use of all of his skill, or it may be that he thinks it is too monotonous a job. Preventive maintenance is admittedly a repetition of a number of tests, checks and inspections, a considerable number of which will disclose no trouble at any given inspection, and on the balance of the items the adjustments are frequently very routine and do not require a high degree of skill.

The preventive maintenance inspector does not need to know how to disassemble, refit and reassemble any major part of the vehicle. He needs to know how to make simple external adjustments, how to determine the amount of wear that has developed in any moving part, and the allowable limits of wear for the various parts. Hence, if we teach only adjustments, limits of wear and methods of testing, we have a relatively short course of training.

There are no miracles in tune-up work. It is basically a systematic procedure for seeing that all adjustments on the vehicle are correct; and when this is done, the defects which may cause bad operation are usually obvious. When these items are reported, the skilled mechanic or shop foreman can then rapidly decide what remedial work must be done on the items which may be at fault.

Women Can Learn Job

Maintenance work can be taught to women. The experience of England is

rather enlightening on this subject. Miss Dorothy Sells of the Office of Defense Transportation, who recently made a visit to England, reports that women account for 90 per cent of the personnel employed in the reconditioning plant of Pickford, Ltd., a large motor carrier. Under the direction of eight male supervisors, 160 women do all of the maintenance and rebuilding work on this system's large fleet. The London Passenger Transport Board, which controls all local transportation in London, also uses women in its shops particularly in the maintenance and repair of buses.

Miss Sells sums up her observations as follows: "The attitude of women towards machines and tools is similar to the attitude of men towards babies. They are afraid of them at first, because they do not understand how they work and do not know what to do when anything goes wrong. This fear can soon be overcome, however, by means of proper training plus some practical experience."

In order to bring women into the shops, it is necessary that they receive a course in basic training, which will include an introduction to the use of the standard hand tools and explanation of the different types of fastening devices, and an explanation of the testing instruments which will be necessary during the later work. Then practice and instruction can be combined in the preventive maintenance work, following the operations which are outlined in the ODT-SAE Manual.

In spite of my previous statement regarding the relation between maintenance and driver abuses, there are now arising as a result of the war, certain conditions in regard to parts which need to be brought to the attention of your drivers, because the quality of the materials in the new parts is lower than that to which they have been previously accustomed. I refer to the use of the National Emergency Steels, or the NE Steels, which are now coming into general use. In general, the NE steels are either leaner alloys or are alloys which have a substitute alloying material in place of the original and more desirable alloys.

Inferior Parts Hazardous

A great many connecting rod bolts are

now of NE steels. For normal operation the substitute bolts have ample strength. The driver, however, must be cautioned to control over-speeding of the engine in going down hill or when using the engine as a brake, as the new bolts do not have the extra capacity for such overloads, and a failure of these bolts may destroy an engine.

In transmission gears, the substitution of NE steels has been quite extensive. Mr. Robert Cass, of the White Motor Company, reports that there are indications that the reduction in life as a result of normal wear may be as much as 25 per cent. Furthermore, increased care must be taken when shifting the gears, as the substitute gears appear to chip more easily than did the original alloys.

Rear axle shafts have been quite generally changed over to the NE steels. In this service the NE steel appears to have less shock carrying ability, even though the tensile strength of the NE steels equals that of the original alloy. This reduction in shock capacity means that the drivers must use additional care in starting their vehicles and must, under no circumstances, "jump" their trucks in trying to get them started under heavy loads or on hills.

Lessons of War Emergency

This war emergency should be a great lesson to us. As a result of the necessity of maintaining our vehicles for a longer period of time, we will become more interested in designs which will give fewer failures, provide greater accessibility, and permit easier and quicker adjustments. Places of attachment for testing instruments are one thing for which the present vehicles are to be severely criticized. Many of the present vehicles leave much to be desired in regard to driver comfort. These discomforts undoubtedly add to the accident hazard, as they increase the fatigue of the driver.

After this war and after the initial production on the old 1942 models is over, will come the greatest opportunity for improvement in the design of commercial vehicles. The race will then be on by the designers to produce attractive vehicles. At this time the designers may come to the users for suggestions or they may

follow the visionary designs which are illustrated almost daily in the press. Such visionary designs may result in vehicles which may be quite unsatisfactory as work-a-day business vehicles. It is, therefore, necessary that you think carefully of the details of design which will simplify maintenance problems and which will promote driver comfort.

You should be ready, when the opportunity arrives, to tell your purchasing agent specifically why you do not want a certain design—not alone from a maintenance standpoint, not alone from the driver's standpoint, not alone from the standpoint of the vehicle as a freight carrying device, but from a summary of all three viewpoints.

Transit Section

Officers 1942-1943

General Chairman—H. W. WHITCOMB, Chief, Bureau of Accident Prevention, Philadelphia Transportation Co., Philadelphia, Pa.

First Vice-Chairman—C. H. SHAMER, Safety Dir., Youngstown Municipal Railway Co., Youngstown, Ohio.

Second Vice-Chairman—N. L. YOUNG, Safety Dir., Southeastern Greyhound Lines, Lexington, Ky.

Third Vice-Chairman—W. S. BULLOCK, Gen. Supt. of Transportation, Department of Street Railways, Detroit, Mich.

Secretary—W. S. HELMER, Safety Eng., Chicago Rapid Transit Co., Chicago, Ill.

Program Committee Chairman—J. P. TERTON, Vice-Pres., Indianapolis Railways, Inc., Indianapolis, Ind.

Membership Committee Chairman—A. E. ORLSON, Asst. Dir. Saf. Education, Public Service Corporation of N. J., Newark, N. J.

News Letter Editor—J. G. DICKINSON, Supt., Accident Prevention, The Milwaukee Electric Railway & Transport Co., Milwaukee, Wis.

Members at Large—

*E. E. GROVER, Safety Dir., The Columbus & Southern Ohio Electric Co., Columbus, Ohio.

H. R. HORTON, Supt. of Instruction & Personnel, St. Louis Public Service Co., St. Louis, Mo.

M. A. KRAFT, Accident Prevention Eng., American Transit Assn., New York, N. Y.
E. J. KREN, Mgr., Accident Prevention, Philadelphia Co., Pittsburgh, Pa.

*R. A. MCARTHUR, Dir. of Personnel, Public Service Coordinated Transport, Newark, N. J.

*J. M. ORTIZ, Dir., Safety Education, Public Service Corporation of N. J., Newark, N. J.

*A. E. PARKER, Chairman, Accident Prevention Committee, Winnipeg Electric Co., Winnipeg, Canada.

*A. P. SCHENDLER, Advertising Mgr., National Pneumatic Co., Rahway, N. J.

*H. V. SCHREIBER, Safety Eng., Capital Transit Co., Washington, D. C.

H. F. WESS, Gen. Saf. Dir., West Penn System, Pittsburgh, Pa.

*Past General Chairman

Officers 1943-1944†

General Chairman—H. W. WHITCOMB, Philadelphia Transportation Co., Philadelphia, Pa.

First Vice-Chairman—C. H. SHANER, Youngstown Municipal Railway Co., Youngstown, Ohio.

Second Vice-Chairman—N. L. YOUNG, Southeastern Greyhound Lines, Lexington, Ky.

Third Vice-Chairman—WALTER S. HELMER, Chicago Rapid Transit Co., Chicago, Ill.

Secretary—J. P. TRETTOW, Indianapolis Railways, Inc., Indianapolis, Ind.

Program Committee Chairman—ARTHUR J. NAQUIN, New Orleans Public Service Corp., New Orleans, La.

Membership Committee Chairman—J. G. DICKINSON, The Milwaukee Electric Railway and Transport Co., Milwaukee, Wis.

News Letter Editor—R. M. KETCHUM, Chicago North Shore and Milwaukee R. R. Co., Highwood, Ill.

Members at Large—

*E. E. GROVER, The Columbus & Southern Ohio Electric Co., Columbus, Ohio.

H. R. HORTON, St. Louis Public Service Co., St. Louis, Mo.

M. A. KRAFT, American Transit Association, New York, N. Y.

E. J. KREEK, Philadelphia Co., Pittsburgh, Pa.

*R. A. McARTHUR, Public Service Coordinated Transport, Newark, N. J.

*J. M. OTTS, Public Service Corp. of N. J., Newark, N. J.

*A. E. PARKER, Winnipeg Electric Co., Winnipeg, Canada.

*A. P. SCHENCK, National Pneumatic Co., Rahway, N. J.

*H. V. SCHREIBER, Capital Transit Co., Washington, D. C.

J. O. SPENCER, Alabama Power Co., Birmingham, Ala.

†As elected by delegates in Congress Session

TUESDAY AFTERNOON SESSION

October 5, 1943

Presiding: H. W. WHITCOMB, chief, Bureau of Accident Prevention, Philadelphia Transportation Co., Philadelphia.

The Effect of the War on the Transit Industry

By FRED A. NOLAN

General Manager, Chicago Surface Lines

(Presented by William Pascha, Supervisor of Accident Prevention, Chicago Surface Lines)

Aside from the dollar cost of accidents, none of us can afford to lose the services of an operator of a street car or a bus for even a short period of time. It is too hard, sometimes impossible, to replace either. It goes without saying, also, that there is now an additional value to the time and effort of the people we carry

and the people traveling on the streets today. Directly or indirectly, most of them are engaged in pursuits tied in with the war effort.

In considering the effect of the war on the transit industry, I look at it in two phases: first, the immediate physical effect and second, the long range effect.

As I see it, there is little in the immediate effect that can be considered on the favorable side. For the future position of the industry, there are some influences that are favorable and some that are unfavorable.

The immediate effect; that is, the effect on our daily operations, our volume of traffic, our service, our manpower and our physical equipment, has been, on the whole, a series of headaches. While practically every trade and industry in the country has problems of a similar nature, I doubt if there is any industry that has been harder pressed to do its job than the transit industry.

Operating Under Handicaps

We are classed as an essential industry; but there are varying degrees of essentiality and in the treatment of essential industries. The war plants have done a magnificent job in converting to war manufacture. Indeed, it is a spectacular job that has no equal in the world; but, in the accomplishment of this job, every effort has been expended by the authorities involved to expedite the obtaining of materials and supplies for construction and production.

On the other hand, our industry has rated with those that must keep going, keep going at an accelerated pace, with relatively little in the way of new facilities to handle the additional business, let alone for replacements. We are, of course, not alone in this respect. Nevertheless, we are expected to handle all of the business that presents itself. We aren't in the same position as the grocer or department store or coal merchant who sells what he has and then tells the customer it is all gone. We still have to furnish rides to all passengers who present themselves.

Since the United States entered this war phase of its existence, ten million of the finest young men have been withdrawn from their normal pursuits. Some came from the schools and the colleges; but most of them came from jobs in the agricultural, industrial, trade and public service fields. Millions and millions of persons have been diverted from their peace-time jobs to the production of the implements of war. Millions of women have taken off

their aprons and left the kitchens to take a place at the bench in the shop or on the line in the factory.

Turn to Public Carriers

There are more people employed than ever before in the history of the country. Limitations on private automobiles have caused vast numbers of these people to turn to public carriers for their transportation. Women in war work, particularly, have turned to mass transportation facilities, for a large percentage of them do not have automobiles for driving to and from work. These great shifts in American life, the withdrawal of men for the armed services, the diversion of workers from peacetime to wartime pursuits, and the widespread employment of women, have affected us in two ways: first, as operators of public carriers and second, as employers of labor in an essential field. At the same time that we have been faced with the demand for more service, we have been hit by the extreme manpower shortage that has developed.

The combined effect of the increased industrial tempo and the restrictions imposed on the private automobile brought a bigger increase in traffic than most of us in the industry had anticipated. There was no uniformity to the increase although, as a general rule, percentage gains varied inversely with the size of the community. The industry, as a whole, is carrying far more passengers than in the peak years of the 1920's.

I recently noted some figures on the transit situation in the Norfolk area and, while that is probably an extreme example, it may prove interesting to repeat the data. In 1938, the system there carried 32,500,000 passengers with 80 street cars and 98 buses, a total of 178 vehicles. In 1942, the system carried 74,750,000 passengers with 122 street cars and 131 buses, a total of 253 vehicles. With only about 40% more equipment, therefore, the system carried more than twice the number of passengers. That has been no picnic for either the operators or the riding public; and all of us have experienced something akin to that situation.

Tramendous Turnover

I think there are few of us who would

maintain that the service the industry is giving today is at or close to a normal standard. It has suffered from overloading; from equipment shortages; from difficulties in getting parts and supplies for maintenance; from difficulties in getting training and keeping competent employees; from restrictions on bus mileage imposed by the Office of Defense Transportation; from changes in routings, hours of employment, working shifts, new plant locations, and a variety of similar causes.

There are none in the industry who have had clear sailing in meeting the manpower problem. We have experienced what is for us a tremendous turnover in labor. We have had to replace men who have gone to the armed forces and those attracted by large over-time payments in war plants. In addition, we have had to find new employees to man the new runs required to carry the increased load.

Our training problem has been acute, for labor turnover has been at least two or three times the ordinary experience, which requires the training of two to three times as many people. Only through an intensified training program has it been possible to hold down the accident rate.

This matter of turnover is probably our number one problem today. A measure of the difficulties involved is contained in some figures given out recently by Otto S. Beyer, director of the personnel division of the Office of Defense Transportation. He found that between January and May this year transit companies have hired 37,000 employees for a net gain of only 7,000. He reported, also, that for every man leaving the transit industry to go into military service, six have been lost for other reasons.

Must Keep Plugging

The magnitude of the training job involved in this heavy turnover is familiar to most of us. As we are unable to reduce our scale of operations, all we can do is to keep on plugging at the task of hiring and training new employees and doing our utmost to keep what we have.

It is natural that we consider the manpower problem first as it affects our trans-

portation department, the motormen, conductors, and operators. The basis for a good trainforce is the training staff; and it is only through the intense development of the training staff that we have been able to keep our safety record on the favorable side. The character of the applicants from whom we chose our employees rates below what we were encountering two or three years ago; so when we end up with well-trained men, it is not because we got as good a man to start with but because we gave him additional training.

Replacements for those leaving other departments, shops, tracks, electrical, garage and carhouse employees, have been equally difficult to get and keep; and the labor problem in some of these departments is just as serious as that in transportation.

One effect of the war has been to delay many modernization plans and a large amount of conversion of rail lines. In some instances, rail lines that already had been converted to bus operation were restored as part of the rubber and fuel conservation programs.

Plans for modernization have been held up but, even with the necessity for concentrating our energies on the problems at hand, we can still give some thought to the post-war future. Everyone anticipates marked progress in the types of private transportation to come after the war, as a result of the remarkable advances in research and production accomplishments in motors and materials that have accompanied war output. We, in this industry, must keep in mind that opportunities for modernizing our equipment will be just as plentiful as for private transportation.

New Materials Coming

Immediately after the war, an enormous capacity for the production of aluminum alloys for civilian use will be available from the plants constructed for war output. Accelerated research activities are bringing forth new plastics, new alloys, new methods of employing powdered metals in the production of castings. All of these advances in research and production will be available to us. Even though we can do little concrete about it

now, we should all be scanning the future for ways to take advantage of these opportunities.

Another effect of the war has been to give us a large number of passengers who have not been accustomed to using public carriers. It is unfortunate for the industry that they come to us at a time when the service is bound to be sub-standard, for the overcrowding and, in many cases, the enforced use of older equipment, does not give them the correct impression of the industry. We all think in terms of what we may be able to do to retain a larger portion of these new riders in the post-war period. We should be able to keep some of them but, we should not, in my opinion, bank on too much from this source. Under normal conditions, with no restrictions in the production of new equipment, we could, each in our own communities, handle any volume of regular business. But conditions are not normal and, if they were, we would not have these people looking to us for service.

There are several reasons why it is going to be difficult to keep these new customers. First, their experience with our present service and equipment has been far from ideal. Second, there is without question, a great urge among those who have stopped driving their cars to and from work to get back to their private vehicles. Third, the obtaining of new equipment in the post-war period is not going to be an overnight process; and it is probable that, long before extensive replacements and additions can be made, the public will get gas and tires, even new automobiles. Therefore, we won't have the opportunity to demonstrate the appeal of attractive normal service to many of these people before they have left us.

Bigger Problems Ahead

The problems of the first year and a half of the war period seemed difficult at the time we were meeting them; but I think that, in retrospect, they are going to look rather simple when we are meeting the problems that lie ahead of us. Although the big rise in traffic already has occurred, most of us are still experiencing increases of varying degrees in

the number of passengers we are carrying. Those of us who operate in cities of severe climatic conditions, unquestionably, are going to encounter difficult times this winter. We are continually warned that the most critical phase of civilian supply, whether it involves food, fuel, or transportation is directly ahead of us. We have fewer and fewer seasoned employees. Men with relatively little experience are called on to operate equipment under unusual load conditions. The cumulative effect of the wear and tear of long, hard operation, without adequate opportunity for normal servicing and maintenance, is taking its toll of our rolling stock.

In a recent message to the bus industry, Joseph B. Eastman, Director of the Office of Defense Transportation, warned that the military demand will continue to crowd out civilian demand. He asserted he would combat any tendency to taking risks with the breakdown of domestic transportation, for, if any of the branches of domestic transportation are strained beyond the breaking point, the war effort will suffer a grave hurt. He did say that domestic transportation can be given a degree of help without real deprivation to the military forces; but, lest that be taken to mean that our worst troubles are over and that a big supply of equipment is about to start coming our way, he warned that anything more than a small supply of new equipment to take care of replacements is not to be depended upon. He predicted a continual shortage in everything except traffic.

None of us wants critical materials at the cost of adequate guns and equipment and supplies for the men in the field. However, in the allocation of materials for the home front, the position of this industry entitles it to serious consideration.

Our real job in trying to get parts and equipment has only one purpose, insuring the smoothest possible transportation of those directly and indirectly behind the production of the sinews of war.

We will carry the people. The country can depend on that. In some cases, the service won't be as regular, nor as prompt,

nor as comfortable, as the normal standard.

The job of the industry is to insure that there is no let-up in war production due to a failure in local transportation. I think

I can say for every operator in the country that the job has been done to date, and, regardless of obstacles, we will continue to do it. No other attitude can be entertained.

Effect of the War on the Transit Industry

By JAMES A. GIBB

President of Inter-City Coach Lines Co., Lansing, Mich.

Lansing, as you know, is the capital city of Michigan with a population of approximately 90,000. East Lansing, just two miles beyond the corporate limit of Lansing, is the home of the Michigan State College, a purely residential city with approximately 6,000 inhabitants and in normal times an additional 6,000 students so it is safe to assume that we serve a community of 100,000 persons.

Under normal operations it was considered that the Bus Company had sufficient equipment, based on one coach for every 4,000 persons. Our operation includes 50 coaches, which would be one for every 2,000 inhabitants. Feature if you will, a transportation company serving two cities, one an industrial city and the other a purely residential college city. We operate on a fare of 5c with a 1c transfer, making an average fare of 47c per passenger. To indicate to you the increase in employment conditions, Lansing's Industries in 1943 showed an increase over 1942 of 52.2 per cent and over 1941—120 per cent.

In normal times, we estimated that not more than 3 per cent of factory workers rode our coaches to and from work. Now that estimate is around 10 to 12 per cent. The increase this year should be a great deal more, due to the fact that the family car is in need of repairs.

Our peak hours, as in most cities, are from 7 to 9 A. M. and 3 to 7 P. M. Fifty-one per cent of all our passengers ride in those hours. In other words, during 6 of our 19 hours of operation on the off-peak period, practically 40 per cent of our equipment is idle.

O.D.T. Program

You will recall in April, 1942, the Office of Defense Transportation issued a 12-point program that would conserve the vital war materials going into our type of equipment. Our company has complied with it's portion of that program in adopting skip stops, known to us as Victory Stops, turn back service, elimination of our Charter service and re-schedule of off-peak hours. The larger item of this program is that of staggered hours which has been complied with only by our schools and merchants. The staggering of hours by the merchants in opening their stores at 10 A.M. and closing at 6 P.M. has eliminated 2 per cent of our peak loads.

Just recently our mayor appointed as Administrator of War Transportation, a former two-term President of the Lansing Safety Council, Mr. A. J. Hager, who has made plans for a complete survey of our transportation problems and we expect that, possibly by Christmas, we will have a staggered hour program.

We have very peculiar conditions in Lansing in that all of our coaches arrive at the downtown center of Lansing. All of our local offices, including the State and Capitol buildings, start their clerical forces at 8 A.M., and one of the larger plants also starts one of their three shifts at that time. Not one of these employees would think of arriving 10 to 20 minutes early at the office but must be there within 2 or 3 minutes and so consequently we are blamed for their tardiness.

We are not supposed to have mechanical failures or be delayed by railroad

crossings and should have sufficient equipment out even though all available equipment is out at that time of day.

Labor Turnover

It is my opinion that both government and industry sold the transit industry short in not anticipating this difficulty we are now having in personnel. When I say sold short, I mean that we were not declared an essential industry soon enough. We lost a number of our men to industry due to the excessive high wage rates that they were able to offer. In some instances a sweeper was paid as high as \$1.10 per hour.

Our losses to the armed services have been very small in comparison. Our turnover from December 1, 1942 to September 18, 1943, a period of ten months, in drivers alone, has been 122 per cent and in our garage a turnover of mechanics and utility employees has been in the excess of 200 per cent and we are still faced with the problem of replacement.

The type of employee that we have had to hire in the last ten months is one who has worked at every other occupation in the city, has no apparent regard for the rulings or regulations and particularly the safety of his passengers. This is the type that is accounting for the large turnover we have had.

You wonder, no doubt, why we have not used women as drivers or utility helpers. We are not equipped to accommodate women in our present quarters and we do not believe women can handle the manual type of clutch over a period of 8 to 10 hours.

Our 50 coaches are a little less than 5 years old, of a very modern design, manufactured by the Reo Motor, Inc., of Lansing. You will agree that this is practically new equipment, but the age of this equipment is old due to the large loads we are carrying, the type of drivers we have and the lack of mechanics to service them. We used to be very proud of the appearance of our coaches and drivers, but now, we can't say the same. Even our drivers have taken on a sloppy appearance.

I mentioned the name of Reo for two reasons. It has been a very outstanding

coach, both in performance and cost and, had we not had Reo coaches, our service problem would have left a great number of our coaches out of service. We made arrangements with the factory in Lansing to do our final inspection and take care of whatever maintenance was necessary. With this assistance we have been able to keep a majority of our coaches in operation. We have been unable to make any major overhauls.

Originally, we anticipated a 7½ year life to our coaches and based our depreciation rate accordingly. To show you the amount of extra service it has been necessary to give, 10 of our coaches will be fully depreciated at the end of our 5th year of operation, which will be November 30th of this year.

Safety Record Changes

Our slogan has always been "Service with Safety" and we have lived up to that slogan until this present year. For the years of 1940-1941-1942 on our retrospective plan of insurance, we received a maximum premium return due to our very fine safety record. We distributed a portion of this premium return to our drivers, mechanics and utility men. Anticipating our present situation in November, 1942 we appointed a full-time safety director—one who had been an outstanding driver, formerly three-term union president and one with an outstanding safety record. We believe that we are the only company of comparable size having a full time safety director.

Our 1943 record is a deplorable one. We have had personal injuries, accidents that we never had before, due entirely to the inexperience and carelessness of our drivers. It is hard to say what it might have been had we not had a safety director.

Our safety director sits in on all committee meetings in the grading of accident reports. This committee is comprised of three drivers one mechanic and one company representative. Their decision is final in determining and placing the blame for accidents. At the present time we pay a smoothly award of \$4 to every driver who has had 220 hours exposure time without a chargeable acci-

dent and to our mechanics and utility men a \$2 monthly award if there have been no chargeable accidents to garage negligence. We anticipate that our new wage schedule should be attractive to a better type employee and should improve conditions that now exist.

As president of the Lansing Safety Council, I must tell you something of how safety is practiced in Lansing.

City Wins Safety Award

For the year of 1942 the National Safety Council awarded Lansing the plaque for being the safest city of comparable size in the United States. On all the arteries leading into Lansing you will find a large sign reading "America's Safest City." We went from 79th to top place in a short period of three years. The divisions of our Lansing Safety Council are made up of Plant Protection, Industrial, Commerce Vehicle, Industrial First Aid and Home Safety.

A good deal of the credit for the success of the Lansing Safety Council is due to the gentleman I mentioned previously, Mr. Hager, who was the previous two-term president of the Lansing Safety Council. The interest in Safety at the monthly meetings of our various divisions

is outstanding. This no doubt would account for the large attendance representing Lansing at this Safety Congress. We have had splendid cooperation from our local newspaper.

Just to give you some idea of the outstanding safety record in Lansing from 1939 to October 1943, I want to quote these figures for five years inclusive. The average number of fatalities in the home, public, traffic and occupation, averaged 41 per year. The Lansing Safety Council was started in November, 1939 and for the 3 following years of 1940-1941-1942 the fatalities averaged 30, a decrease of 11 and the average for the seven months of 1943, if continued for the balance of this year, will show 19.2, a decrease over the record of the previous 3 years of 10.8. This will give you an idea as to why Lansing received the award for 1942 and it is our hope and desire that we receive the same award for 1943 as "America's Safest City."

In closing, I would like to make this prediction regarding the future of City Bus Transportation. Unless materials are released for the manufacture of new coaches and for the maintenance of both coaches and individual cars, that the fall and winter of 1944 will result in a most serious breakdown to the transit industry.

TUESDAY EVENING SESSION

October 5, 1943

Women in Transportation

(Panel Discussion)

(This meeting reported in the Street & Highway Traffic Section of this volume.)

WEDNESDAY MORNING SESSION

October 6, 1943

Session On Employee Transportation Problems

(Reported under Subject Sessions in Volume I of 1943 Congress Transactions)

WEDNESDAY AFTERNOON SESSION

October 6, 1943

Presiding: H. R. Hoxton, director of Personnel, St. Louis Public Service Co., St. Louis.

Accent on Safety in War-Time Transit Training

By W. J. MACK

Sept., Surface Transportation, Philadelphia Transportation Co., Philadelphia, Pa.

During the depression years, service operated by the Philadelphia Transportation Company was progressively curtailed and few new employees were trained for platform duties. Starting in 1941 the number of passengers carried by P.T.C. increased appreciably and this growth in passenger traffic has continued up to the present time. To meet the increased service demand, it was necessary to expand the employment program and 506 men were trained and appointed during 1941 as compared with 150 men in 1940.

Past experience indicated that as the employment of new men increased, a proportionate increase in accident frequency could be expected. Such anticipated increase in accident frequency, attributable to the large number of inexperienced employees, was realized in 1941. However, we do not intend to imply that there was any extraordinary or abnormal increase in the accident rate.

Even though the 1941 accident frequency was not abnormal, it was apparent that the rapid growth in passenger traffic, which was accelerated after Pearl Harbor, and the resultant large number of new and inexperienced men that would have to be employed as service was expanded, would result in a greatly increased number of accidents.

More Serious Aspects

Under wartime conditions P.T.C. accidents took on a new and more serious aspect. Accidents that injured the company's passengers were harmful to the war effort, since they resulted in lost man hours of productive work by war workers. Accidents also result in delays to service, contributing to lateness and loss of production at war plants. It further developed, as labor and material shortages became more acute and as volume of passenger traffic necessitated operation of all available vehicles, that accidents damaging equipment removed from service vehicles essential for operation of required transportation service.

A comprehensive safety program had been in effect for a number of years. A central safety organization, known as the Bureau of Accident Prevention, was organized by the company a great many years ago. It is the responsibility of this bureau to analyze accident records and develop plans for accident prevention work. Within the transportation department a group of instructors was assigned solely to accident prevention work.

Analysis of all accident prevention work revealed the inescapable fact, that the best accident prevention measure is to insure that the employee is thoroughly skilled in the duties of his job. It was recognized that the real accident prevention job must be done during the original training period of a new employee.

The instruction department of the company, which had been developed and was organized to handle a relatively few number of student trainmen per month, had been expanded rapidly and was going to be required to expand even more rapidly. It was obvious, therefore, that complete reorganization of the instruction division was necessary and that improved methods and techniques should be developed.

Combine Subjects

To obtain maximum benefits from the newly developed instruction course, a higher degree of specialization in respect to instructors was required, together with the ability to place responsibility for any instruction function. As a consequence, investigation indicated that it would be entirely feasible and practical to combine the various instruction functions into four groups: namely, classroom, school car, revenue car, and follow-up, with instructors being definitely assigned to each group.

Classroom functions include lectures, equipment demonstrations, and examinations. The school cars are cars operated by students under the supervision of a school car instructor. Revenue cars are cars carrying passengers, operated by stu-

dents, under the supervision of a line instructor who is a regular trainman, qualified and approved for this particular work. The follow-up group of instructors is concerned primarily with reinstruction of recently appointed trainmen and accident prone trainmen.

In the fall of 1942 the reorganized instruction division was placed in operation. As use of the new methods and procedures progressed, the program was modified as experience dictated.

At the present time, the new student spends his entire first day in classroom work. On reporting to the school headquarters, he is given a rule book, a route map, and regulations covering work assignments and pay allowances. In the morning, he is given an illustrated lecture on the street car and its equipment.

Studies Equipment

Upon completion of the lecture, the student is assigned to the equipment classroom, in which is installed the actual operating and control equipment with which the student must be familiar. He is given a complete demonstration on the various types of controllers, brake valves, line breakers, switches, fuses, etc. After the demonstration, he is allowed to practice on the operation of the controllers and brake valves. Next, he is assigned to the signal room, in which is installed both actual and miniature working models of the various types of signal equipment used by the company.

The purpose of this procedure is, mainly, that the new student will be familiar with the underlying principles of the street car and its equipment together with its operating controls, prior to the actual instruction on a school vehicle.

In the afternoon of his first day, he receives lectures and demonstration on the duties of a conductor. This includes a description of the fare structure and the various forms used, together with the waybill. He is also instructed on methods used to collect and register fares.

On the following day, he reports to the depot to which he is assigned and receives instruction on a school car. During this period, he is instructed also on reading the standard timetables and is checked on

his knowledge of rules and regulations. On the succeeding five days, he receives operating instructions on all of the different type cars assigned to his depot. When he has shown the necessary progress, he is then assigned to a line instructor. Under the supervision of a line instructor, the student is allowed to motor a revenue car for a period of six days.

Final Examination

As soon as he has shown the required progress on motoring a car and has been approved by a school instructor as capable of motoring a car without aid, he is then assigned to a revenue car for three days as student conductor, being supervised by a line instructor. The student, upon being approved as a conductor by a school instructor, returns to the school headquarters for his final examination as a motorman-conductor.

During his final examination, he is checked on his knowledge of signal equipment, in the signal room; and of locating and correcting common car failures, in the equipment room. The student is, then, shown parts of a street car that have prematurely failed, due to improper operation. Similar parts are exhibited that have been scrapped due to normal wear. He is tested on his ability to register and collect fares and to fill out the various types of forms, including a waybill and the standard accident report. He is also given a questionnaire, requiring written answers, which covers the essential operating rules and regulations. The instructor corrects the questionnaire, giving proper answers to those questions which were answered improperly.

The student is, finally, given a lecture on accidents and their prevention. This lecture, fully illustrated by slides, covers the causes and probable results of practically all the common accidents, including collisions with vehicles and pedestrians, as well as the common boarding, leaving and on-board type. This lecture is given by a member of the Bureau of Accident Prevention.

Follow-Up Training

The student, upon again reporting to his depot, receives a minimum of two days of line instruction as a one-man operator.

On approval by a school instructor, the student then is appointed as a motorman-conductor-operator.

This concludes the formal instruction of a student trainman, unless it is necessary for the student to return to the school to be re-instructed, as a result of improperly performing any of his duties.

As soon as the student has been appointed, he then comes under the jurisdiction of the follow-up instructor group, which has replaced the accident prevention group. Each follow-up instructor is assigned a definite list of new men for whom he is responsible. All of the new men who have been appointed since January 1, 1942, were distributed among the follow-up instructors in such a manner that each instructor is assigned a group having relative periods of service. The definite assignment of the new men in this manner permitted placing responsibility for quality of a new man's operation on an individual instructor.

In order that the follow-up instructor and the depot personnel would be in a position to take corrective measures prior to a man having a bad accident, a new procedure was developed, permitting the detection of those men who possessed operating habits or weaknesses that eventually would cause accidents.

Plainclothes Observers

The follow-up instructor, in uniform, periodically observes the operation of each of the men assigned to him. He corrects their faults by demonstrating proper operation and checks them to make certain they are capable of complying. Since some new men do not operate a car properly when they believe they are not being observed, a few instructors in plain clothes are utilized. These men are not recognized as instructors and, consequently, are able to detect operating faults not used in the presence of the uniformed instructor. The plain-clothes instructors submit reports covering improper operation, which are utilized by the uniformed instructor, enabling him to discuss faulty operation with the trainmen involved. In this manner, improper and unsafe operating habits, which may contribute to the incurrence of accidents, are prevented from developing.

The follow-up instructor, as previously mentioned, is responsible for the quality of operation of the men assigned to him. If a man is unable or unwilling to comply with instructions given, the follow-up instructor submits a report to his superior, including details of improper and hazardous practices, which is forwarded to the depot superintendent involved. The depot superintendent may request that the man return to the headquarters school for re-instruction, after the man has been interviewed.

We have established an individual card record which lists all of the preventable accidents experienced by new men. The cards of those men having three or more preventable accidents in a 90-day period, and the cards of those men who have had car collisions, are suitably identified.

Daily Reports

The Bureau of Accident Prevention submits daily to the instruction division a list of all accidents that are preventable or that later may be considered preventable. This information is entered daily on the involved trainmen's cards.

The accident record cards, with the new entries, are reviewed each day, to determine whether or not a man is considered accident prone and requires special attention. If the accident record of a man does not improve, it is called to the attention of the depot superintendent. After having been interviewed, disciplinary action may be taken or the man may be returned to the school for reinstruction.

The follow-up men, after each ride, submit a report which is forwarded to the depot superintendent for action, if necessary. If the man has been considered accident prone, the follow-up report is attached to the man's record.

At the depot to which a follow-up instructor is assigned, a list of accidents occurring on the preceding day is available for his inspection. The follow-up instructor, therefore, is in a position to ride with those men assigned to him, who have had accidents on the previous day.

Although changes in procedure began to bear immediate results from an overall accident frequency standpoint, the actual number of accidents continued to increase.

Prior to the extraordinary increase in mileage operated, when the transit industry was stabilized, that is, operating approximately the same mileage each year, accident frequency rate was a good yardstick to measure the effect of instruction. However, when mileage began to increase rapidly, the actual number of accidents became of prime importance. In other words, even though the accident frequency rate was decreasing, the actual number of accidents was increasing. Normal published statements, available to the supervisory personnel, were based on accident frequency rates which were constantly decreasing.

It was, therefore, considered essential that the supervisory personnel be convinced of the necessity of reducing the number of accidents, in order that they could wholeheartedly contact the men for whom they were responsible and stress the need of proper operation. In addition, a detailed analysis of accidents by class, location, and routes was made, which indicated there were considerable differences in accidents between depots of comparable size and between routes having similar operating characteristics.

Individual Letters

The first step in stressing the reduction in the number of accidents was an individual letter to each depot superintendent, highlighting the data obtained from this analysis and designating the types of accidents that, proportionately, were out of line; and routes, operated from his particular depot, that were higher than average in accident frequency. A similar letter was forwarded to each street supervisor and follow-up instructor.

After the depot superintendents, street supervisory forces, and follow-up instructors had the necessary time to thoroughly digest the contents of the letter, each of the groups was given a talk on accidents in general.

During these talks, the necessity of reducing the number of accidents that resulted in injury or serious delay to war workers was stressed. Despite the excellent reduction in accident frequency, it was pointed out there was possibility of car shortage becoming acute, due to the

difficulty in securing necessary parts and materials to repair cars damaged by accidents.

At no time, during these talks, was cost mentioned, since it was considered that, under existing operating conditions, cost was incidental to the other factors involved. The general reaction to the information covered in the lecture was excellent and as a result similar information is now being distributed regularly.

Retraining Older Men

Another step in the program was the necessity of instructing the older employees on the more skillful performance of their duties. The problems of developing a procedure for such instruction were many. It was the consensus of opinion that the main problem would be in convincing the older employees of the necessity for attending instruction classes. This need, however, was substantiated by many employees who had been returned to the school headquarters for reinstruction. Some of these men had been in railroad service for many years and were resentful of the fact that it had been necessary for them to be given further instructions. They definitely entered the school with a "chip on their shoulder."

However, the illustrated lectures on equipment and accident prevention so impressed these disgruntled employees, that they admitted they had been tremendously benefited by it. They, further, were of the firm opinion that these lectures should be made available to all of the older trainmen.

As a result, a streamlined version of these lectures is now in preparation and in the near future will be delivered to all operating depots. This lecture will be given at any time of day or night that a representative group can be gathered and shall be continued to be delivered at a depot, until complete personnel coverage has been effected.

Training of Instructors

A need for training instructors was also recognized. It was not only essential that the instructor have a complete knowledge of the job of a trainman, but also possess the skill to impart such knowledge to the prospective trainman. By means of

instruction manuals, equipment demonstrations, and group meetings, we were assured that the instructor possessed the specific information covering the trainman's duties. In regard to the skill of instructing, the instructors were given the Job Instruction Training course developed by the Training Within Industry branch of the War Manpower Commission. Results of this program of instructor training have been excellent, particularly with the women students.

The need for additional manpower grew more intense throughout 1942 and during this period 1,063 trainees were instructed and appointed.

Despite the magnitude of the 1942 hiring program, induction did not keep pace with personnel needs and it was considered necessary to formulate plans for the training of women platform employees. As a consequence, the first woman reported to the school in May, 1943. At the end of August, a total of 395 women had reported for instruction and of this number 170, who, incidentally received the same training as the men, have qualified as operators and give all indications of performing all platform duties in a satisfactory manner.

During the first eight months of 1943, over 1,600 potential trainmen, trainwomen, and busmen reported to our school, an average of 200 per month. It is considered worthy of note that our instruction division, as reorganized, is smoothly handling students at the rate of 2,000 per year; whereas, its original scope embraced from 100 to 200 in a similar period. This division has been capable not only of handling this increased influx of students, but has been able to turn out better trained platform employees in considerably less time than heretofore.

Individual Interest

Individual cooperation was sought and every effort exerted to instill in each novice platform employee a personal determination to be a good operator and thus avoid accidents. This practice alone has been an important factor in the reduction of public accident frequency.

One factor in the improvement of the company's safety record has been the

decreased volume of vehicular traffic resulting from war-time restrictions. However, at the present time, we have more trolleys on the street and they are being operated in congested war plant areas. Pedestrian travel, during all hours of the day, has increased tremendously and the average passenger load has greatly increased.

It is, therefore, my opinion that these factors largely offset decreases in vehicular traffic by increasing potential accidents other than collisions with vehicles. It is noteworthy that our accident frequency rate has maintained a downward trend regardless of changes in the pleasure driving bans, indicating the basic soundness of the training program.

Available statistics indicate that the accident frequency per 100,000 car miles for the first seven months of 1943 has decreased 18 per cent under the same seven months for 1942. It should be considered that the accident frequency rate includes all public accidents. At the present time, about 30 per cent of the public accidents are considered preventable, that is, could have been avoided by proper operation. It is pointed out that during the first seven months of 1943, an all-time record low in accident frequency rate was established. Further, in accomplishing this record, a new all-time monthly low in accident frequency was reached in July.

As has been pointed out, the new training program was reaching primarily those men with less than two years of service. This group currently comprises 28 per cent of the surface rail platform personnel. It is, therefore, evident that this group is of sufficient magnitude to appreciably affect the overall accident frequency trend. Comparisons have been made in the number of accidents in which this group and the group with more than two years' service were involved. The following statistics are based on the number of accidents per man rather than on mileage.

Records Compared

Analyses of accident records of those men with less than two years' service indicate that in the first seven months of 1943 they were involved in 19 per cent

fewer accidents, per man, than for a similar group in 1942. Furthermore, in July of 1943, this group was involved in 30 per cent fewer accidents, per man, than in July of 1942.

In regard to the more experienced group of employees, that is, those with two years or more service, we find that they were involved in 13 per cent fewer accidents, per man, during the first seven months of 1943 as compared to a similar period in 1942.

Past experience has indicated that it requires approximately a two-year period before the accident frequency, per man, becomes relatively stable. Analysis of existing data shows that variance between the two groups has been rapidly decreasing under the new training program. Between January and July of this year, this variance has been decreased 47 per cent.

As a matter of interest, a comparison was made of the accident frequency of two comparable groups of trainmen and trainwomen, that is, having the same length of service and covering identical periods of time. To date, these trainwomen have been involved in 36 per cent fewer preventable accidents than the similar group of trainmen. This comparison, however, is based on limited experience and may not be conclusive.

The volume of car collisions attributed to trainmen with less than one month's service is always an item that has been one of serious concern. However, as a result of the new practices, this group of trainmen, during the first seven months of 1943, has shown a 25 per cent improvement in reduction of car collisions as compared with 1942.

Summary of Experience

I would like to summarize the accomplishments of the new training and instruction program:

1. We have reduced overall accident frequency per 100,000 car miles, 18 per cent during the first seven months of 1943 under comparable period in 1942, establish-

ing a record low in accident frequency for this seven month period.

2. We have achieved an all-time monthly low in accident frequency in July, 1943.

3. The accident frequency, per man with less than two years' service, has been reduced 19 per cent, and for those with more than two years' service 13 per cent, for the first seven months of 1943 as compared to 1942.

4. We have reduced the difference in accident frequency, per man, existing between the under-two-year group and over-two-year group by 47 per cent.

5. Trainmen with less than one month's service are currently being charged with 25 per cent fewer car collisions than for a similar period in 1942.

6. We have reduced the number of cars damaged sufficiently to require shop repair's 16 per cent since the early part of 1943.

7. We have reorganized the entire instruction division in a manner to permit handling the extraordinarily increased number of trainees and at the same time turn out, in less training time, employees capable of establishing safety records.

We, in Philadelphia, feel a certain satisfaction in the results produced in the first seven months of 1943, a satisfaction stemming from the knowledge that theories were evolving into realities, and that the correlating of formal instruction and follow-up training was essential to the attaining of desired results.

A step has been taken in the right direction; but every procedure and every practice is maintained as flexible as possible in order that changes may be made as experience dictates.

It is our opinion that transit operators, generally, have just begun to scratch the surface in regard to the full utilization of modern instruction methods and procedures. Unquestionably, a well-planned instruction program by which prospective employees or existing employees receive a more comprehensive knowledge of their jobs, including all potential hazards, produces safer employees.

Demonstration of Illustrated Safety Lectures to Student Trainmen

R. F. MAUGER

Asst. Chief, Bureau of Accident Prevention Philadelphia Transportation Co., Philadelphia, Pa.

This illustrated lecture is given to all student motormen-conductors during their final examination at the Instruction Division Headquarters. The lecture lasts for approximately one hour and embraces practically all of the causes of preventable public accidents. Although not indicated in the attached general text, a brief extemporaneous discussion of current serious accidents is included in the lecture, preferably accidents receiving newspaper publicity, which are used as "horrible examples" of the types being studied.

It is intended to keep the lecture as flexible as possible in order that emphasis can be changed from time to time.

INTRODUCTION

Once in a while we meet a fellow who fails to take safety seriously. He thinks it's the bunk. He says, "Well, maybe it's all right for the other fellow, but I can get along without it." That, of course, is a very foolish attitude, because accidents don't always happen to the other fellow, as you probably find out sooner or later.

Certainly, in your job, you cannot afford to take that attitude, because you won't get very far without plenty of safety. Safety is one of the few things these days that's free—it doesn't cost you anything. You pay only when you forget about it.

There's an old saying in our business that: "You might joke about safety, but you can't laugh off an accident," and that saying is as true today as it was many years ago when it was first made.

And what is safety? Well, in the dictionary safety is defined as: "Freedom from danger or risk."

An accident is defined like this: "Any unpleasant or unfortunate occurrence involving injury, loss, suffering or death; occurring unexpectedly and unintentionally."

But much easier definitions of Safety

and Accidents, with exactly the same meaning would be these: "Safety is care plus common sense." "An accident is a careless person going some place to happen."

And now, with those simple definitions of a very serious subject, let's go into the four chief groups of persons you will have to know a lot about in your daily job, if you are to become a safe, skillful street car operator. These four groups are: Your Passenger; The Pedestrian; The Vehicle Driver, or the "Other Fellow," and You, Yourself.

SLIDE NO. 1 (Typical Passenger Group Boarding Street Car)

The first in order are your passengers—the people who keep us in our jobs.

And just what are they like? Well, they represent almost every type of human being you ever met up with. You may doubt, sometimes, however, whether all of them are really human, because of their lack of consideration for the rights of others.

You may learn that some are inconsiderate and impatient; some are absent-minded and careless; some don't seem to give a damn about their own personal safety; or anybody else's. Some are ill in health or ill in mind. Some are very old and some act like babies. You will learn still more about them when you meet them personally, and get a real understanding of their different habits, traits and reactions.

But whether your dealings with your passengers are pleasant or not so pleasant, you must never forget that they are your responsibility, and that your chief job is to handle them safely—at all times—with no exceptions.

If you allow yourself to be thrown off-stride by some unpleasant passenger experience or remark—in other words if you

are bitten by the "bad temper bug"—then you had better get your pencil ready for an accident report.

SLIDE NO. 2 (Street Scene Showing Trolleys and Pedestrians)

Next let us consider the pedestrian. And what is a pedestrian? Well, they have been called all kinds of names by motorists and motormen and operators, but that's only one side of the picture. Your mother, your children, your friends and you, yourself, are pedestrians at some time or other. All people when walking across the street or highway become simply "pedestrians." Many of them also become the targets for some of the worst drivers in the world. As pedestrians they become an extremely vital factor in our safety problem.

Pedestrians have the same characteristics as all of us. Some are intelligent, some are not so intelligent. Some are bold and some are timid. Some are athletes, and some are cripples. Some are very young and some are very old. No two people walking across the street have the same characteristics or habits. You can never be sure what a pedestrian intends to do. If they did exactly what is expected of them, then our job regarding their safety would not be so tough. For instance, one person will start across the street and keep going in spite of anything; another may get halfway across and stop suddenly at the approach of traffic; while others after getting part way across, become scared or confused, and jump or step back-wards.

Most of you have probably driven a motor vehicle, and on occasion, have had a close call with a pedestrian. But when you are at the controls of a street car, it's a much tougher job. A pedestrian can go where he pleases, an auto has the chance to swerve—but a trolley car can't swerve a fraction of an inch—and sometimes it's just that fraction of an inch which is the difference between no accident and a very serious accident. That's why we must be constantly alert wherever the pedestrian is concerned.

SLIDE NO. 3 (The Vehicle Driver or the Other Fellow)

And now we come to the largest group of persons sharing the streets with us—the driver of the other vehicle—or the "other fellow." More than 50 per cent of all our public accidents are collisions with other vehicles, so it is very necessary that we find out all we can about this other fellow.

You will soon have your own definition of the other driver in general, but for our purpose, he can be classed as follows:

The bully or show-off type.

The careless "I-can-get-out-of-it" type.

The fellow who has had one or more too many.

The skillful driver.

In all of these types except the last, you can expect almost anything to happen when they get behind a steering wheel.

Let's look at a cartoonist's conception of a few more of these drivers. Although they are presented in a humorous way, they are very true descriptions of the types we are considering:

SLIDE NO. 4 (The Bully Type)

SLIDE NO. 5 (The Show-Off Type)

SLIDE NO. 6 (The Careless "I-Can-Get-Out-Of-It" Type)

SLIDE NO. 7 (The Fellow Who Has Had One Too Many)

Yes, the other driver does many things that can cause accidents. He uses his horn instead of his head; he scares pedestrians half to death; tries to pass everything on the street; he cuts in or pulls out recklessly without warning; he thinks he is the best driver on the road; he curses at a moment's delay; takes chances; and totally disregards the rights of other users of the street or highway.

But two wrongs never make a right. Even though you bump up against all these different types of unsafe drivers, never play ball their way. Always consider your passengers' safety, your own safety, and yes, even the safety of the driver who often seems to place no value on his own life. I'll admit that sometimes this will be a pretty hard pill for you to

swallow, but swallow it you must, because it's the best remedy for the many safety ills caused by reckless operation on the part of thousands of vehicle drivers.

SLIDE NO. 8 (Trainman Falling as He Boards Trolley)

Last, but not least, let's find out something about you, Yourself.

Experience and close study have proven that there are three human traits responsible for a great percentage of accidents. These three mental "devils" are Haste, Impatience and Anger. Here's a typical example of what I mean:

You start your day off in a normal manner at the depot. You make your report on time, are assigned a run, go to the schedule board and copy your run. But maybe you stop to pass a few wise cracks with another trainman, and before you realize it, you're just about due to pull out of the carhouse. So you dash out of the trainmen's room and head for your car to get it ready. You leap for the step but you slip and find yourself kissing the platform!

Take a look at yourself! You bruise your leg and arm, tear your trousers, and ruin a perfectly good disposition. Right here, boys, is the start of a lot of trouble—even before you get your car out on the street.

What happens? You start down the street, open your doors for several waiting passengers, and because old John Stiff-homes is a little slow in getting his last leg in the door, you become impatient at the holdup. You get going again and are lucky enough to make the traffic light at the next corner. But soon after that maybe you miss one. By this time you are not only impatient—you're hot under the collar. And then, to make matters worse, you begin to worry about your schedule.

Right here, there's a No. 1 safety rule you must learn, if you ever expect to be a safe operator, and save yourself a lot of trouble: Never sacrifice safety in the maintenance of schedules. If you allow yourself to become hasty, impatient, or angry in trying to maintain a schedule, you are putting yourself in one of the

worst possible positions as far as safe operation is concerned.

Don't ever expect to excuse yourself for having an accident by claiming that you were trying to make up time. It's your supervisor's job to see that the line is straightened out if cars are running late. You must learn right from the beginning that first, last and always, you are a public servant, with the responsibility of safeguarding your passengers, who have entrusted themselves to your care. To succeed in this responsibility you must also protect your vehicle from the careless actions of drivers of other vehicles on the streets.

If you always bear in mind that this responsibility for your passengers' safety is the most essential duty of your job, you will have learned one of the most valuable lessons in the prevention of accidents.

SLIDE NO. 9 (Operator Injured in Collision)

In addition to the fact that collisions frequently cause serious injury to passengers and damage to valuable equipment, I want to bring home to you another important point which affects your own physical and financial welfare:

If you come out of a collision with a sprained back, or a fractured ankle or leg, or a broken arm, you will be laid up for a period of many weeks. You will have to get along on the compensation payments which will be much less than your normal weekly earnings. You will, therefore, suffer financially, and so will your family or your dependents—and speaking of suffering, don't forget that you, alone, bear the pain and discomfort 100 per cent.

I am sure you will agree that from this one angle alone—your own personal safety—it will pay you to keep out of collisions by operating safely every minute you are on the job.

Preventable Accidents

We have now covered very generally the chief groups of persons who become involved in accidents with street cars. Now we will be more specific and consider the different types of accidents, their causes, and your part in their prevention.

The psychologists tell us that the habits you have already formed control the many different things you do each day. They point out that unless we did form habits, most of our time would be spent in considering every act we do during the day. While walking, for example, it is not necessary for us to think how to stand, how to start, which foot to move first, and how to stop. Once babies have learned the habit of walking, all these separate movements are automatically controlled by habit. Likewise, we learn by habit to write, speak, eat, etc. Every new act that we do, if performed frequently, soon becomes habitual.

During your course of instruction you have been learning the many correct habits of street car operation, and it is also our job to see that you do not acquire any bad habits.

We, in the Company's Bureau of Accident Prevention, whose time is devoted entirely to the prevention of public and employee accidents, classify and analyze all our public accidents under two groups—Preventable Accidents and Unpreventable Accidents.

A preventable accident is an accident for which a trainman is wholly responsible or partly responsible.

An unpreventable accident is an accident which is beyond the power of the trainman to prevent.

It must be remembered in our consideration of safety and accidents that accidents do not just happen—they are caused. Preventable accidents, then, are the accidents which trainmen either cause or contribute towards their occurrence—and unpreventable accidents are those caused by other persons, or conditions beyond our control.

Analysis in our Bureau of Accident Prevention discloses that 1 out of every 3 public accidents involving street cars and buses is preventable on the part of our trainmen.

The other two-thirds are unpreventable as far as trainmen are concerned. However, the Company does everything possible to educate the public concerning accidents on our cars and buses, on the

streets and on our property. Through the medium of Company publications, warning signs, the radio, speeches, and the newspaper, every opportunity is taken to point out the measures the public can take to avoid accidents.

Although we cannot control the large number of unpreventable accidents, it is in our power to control the preventable group—or one out of every three—which are usually the most serious and the most costly. It is this preventable group—the accidents which you can prevent and which are in most instances the result of bad habits—that we will consider during this discussion.

SLIDE NO. 10 (Trainman Making Out Accident Report)

There is no better time and place than right here and now to point out that: **"IT TAKES LESS TIME TO PREVENT AN ACCIDENT THAN TO MAKE OUT AN ACCIDENT REPORT."**

After you have had an accident, instead of going home after you finish your run, you must sit down in the trainmen's room and go to work on making out an accident report. You must furnish in detail a complete, accurate description of what actually happened, together with the names and addresses of persons injured, property damage, license numbers, etc., and of course the names and addresses of as many witnesses as possible.

All of this is necessary so that Claims Department can fix the responsibility from the standpoint of negligence. If the accident was not your fault, they want to back you up. If you were negligent they want to know it, and make adjustment as soon as possible.

SLIDE NO. 11 (Collision Passing Parked Vehicle)

All the remaining slides will illustrate the different types of preventable accidents that can be avoided by safe operation. If you have any questions or comments, don't hesitate to speak up, so that we may all think alike as we go along.

First we will discuss collisions with other vehicles. Strange as it may seem

to you—our records show that we have two preventable collisions between intersections to every one at an intersection.

The major cause for this surprising fact is: Misjudgment, haste, or impatience passing parked vehicles, or fixed objects.

And why do we have such a great number of passing collision accidents, which certainly are the easiest to prevent? Simply because we either use poor judgment or we don't take the time to make sure of safe clearance before we try to pass.

SLIDE NO. 12 (Paralleling Vehicle Entering Track Due to Parked Vehicles)

Another reason for our bad collision experience between intersections is due to lack of alertness or control when other vehicles traveling alongside of trolleys are required to enter the track area because of parked cars or other objects in their path.

You, being a trained operator, should be a defensive driver and right here is an appropriate spot to explain what is meant by "Defensive Driving."

Defensive driving means just that—being on the alert, with "your guard up," your car under control at all times, and thinking ahead so that you do not have to make a desperate effort at the last moment to avoid an accident.

Defensive driving therefore amounts to: Thinking for the other fellow, driving for the other fellow, and conceding the right of way to the other fellow, as driver or pedestrian, to prevent an accident. Even though other users of the streets and highways are careless or reckless, we still can prevent many accidents by defensive driving—always being prepared for the other fellow to do the wrong or unsafe thing at any time.

SLIDE NO. 13 (Parked Vehicle Pulling Out)

Still another cause of preventable collisions between intersections is failure to allow sufficient time when vehicles are pulling in or out of parking spaces.

We will have to admit that this type of preventable accident is one of the toughest to avoid. It requires extra alertness, de-

fensive driving, and a spirit of real sportsmanship and fair play. Remember that trolley cars are not given any special privileges on the streets, and that motorists have just as much right to share them as we do. The motorman or operator who through haste or impatience, crowds a driver attempting to enter or leave a parking space, puts himself in a position to have an accident, causes needless delay by making it more difficult for the motorist to get out of his way, and also arouses a feeling of antagonism in the other driver.

SLIDE NO. 14 (Rear End Collision with Auto—Pedestrian Stepping Out)

Another frequent type of collision between intersections as well as at intersections is the "rear-end" collision, which results from following too closely, not allowing sufficient braking distance, or just plain inattention.

There are many circumstances that require another vehicle traveling ahead of a trolley to stop suddenly, many times without warning: A pedestrian may step out from between parked autos; an animal might suddenly appear in the street; a traffic signal may change suddenly.

SLIDE NO. 15 (Rear End Collision with Auto—Parked Vehicle Starting Out)

A motorist pulling out from a parked position may cause the driver ahead of you to stop abruptly.

Rear-end collision can be avoided. "Keep alert at the front end to put an end to rear-ends" is a good slogan to follow.

SLIDE NO. 16 (Horrible Example of Right of Way at Intersection)

Although I pointed out that we have two preventable collisions between intersections to every preventable collision at an intersection, that doesn't mean that we don't have them at intersections. We have far too many, when you stop to consider that we should certainly be on guard where we know vehicular and pedestrian traffic is the heaviest. We have them, even though every possible means is provided at intersections for the safe movement of traffic in general, in the way of traffic signals, warning signs, traffic officers, painted street marking, etc.

Why do we have so many preventable collisions at intersections? We have them for a number of reasons:

First, let's consider that much-abused expression—the "right-of-way." While there are traffic regulations and laws which define the right-of-way in certain cases, experience shows that the fellow who always insists on the right-of-way is headed for an accident. In fact, the epitaph "He Had the Right-Of-Way" could be inscribed on thousands of tombstones each year as far as traffic accidents are concerned. Never forget that the green light does not guarantee you an absolute right-of-way, but only gives preference to traffic moving in certain directions. The motorman or operator who shoots through a green light and plows into the side of an auto which has passed a red light, can not be excused of responsibility for such a collision.

From the safety angle, the right-of-way is the safe way. The safe operator, the operator who never has preventable collisions at intersections, is the man who is alert, has his car under complete control, and is prepared to meet any emergency.

Maybe these few classic lines will help to impress upon you what I am driving at:

"This is the story of William Jay,
Who died maintaining the right of way.
He was right, dead right, as he sped
along,

But he's just as dead as if he'd been
wrong."

SLIDE NO. 17 (Trolley Passing Red Traffic Light)

Undoubtedly, the most flagrant violation of all our traffic laws is committed when a trolley proceeds against a red traffic light. The motorman or operator guilty of such practice deserves and receives the same penalty as other vehicle operators who violate this law. It must always be borne in mind that traffic signals are provided for the protection and safety of all users of our streets and highways.

This company will never excuse or defend your passing a red light regardless

of how far behind time you may be. This, of course, again brings up the question of schedules. I would like to repeat that safety must never be sacrificed in maintaining your schedule.

SLIDE NO. 18 ("Stop" Sign)

Here you see that four letter word spelled S-T-O-P but which some drivers read G-O or S-L-O-W.

A "Stop" sign doesn't mean slow down it means bring your car to a full, complete stop, and then continue cautiously through the intersection. The responsibility for a collision occurring within the intersection, in most cases, rests upon an operator crossing a street controlled by a "Stop" sign.

You must obey all "Stop" signs just as strictly as you obey a red light or a traffic officer's signal.

SLIDE NO. 19 (Street Scene Showing Curve Track at Intersection)

Preventable collisions at intersections are also caused by motormen and operators insisting on the right of way in curves, when other vehicles are approaching in the opposite direction.

The slide you are now observing shows a quiet street scene, with our street car about to turn left into a curve at the intersection.

SLIDE NO. 20 (Damaged Car Following Collision)

And now, you see the result of failing to exercise due care, or insisting upon the right of way, in a curve. First, look at the street car following a head-on collision with a trailer truck.

SLIDE NO. 21 (Damaged Trailer Truck)

Next, look at the trailer truck, the driver of which also felt he had the right of way.

SLIDE NO. 22 (Close-Up of Dead Man Inside Cab)

And now a close-up of the cab of the truck. The picture tells its own, tragic story. The man is dead. Here's just about the strongest argument in the world that it doesn't pay to fight for the right of way.

SLIDE NO. 23 (Collision with Rear of Moving Vehicle—In Curve)

Other preventable collisions at intersections are caused when motormen and operators fail to use sufficient care when entering a curve to turn corners, and collide with a vehicle passing the trolley car.

Even though the Company makes every effort to have the City place "Trolley Turns" signs at points where cars turn to warn motorists, the motorman or operator is not relieved of any responsibility as far as safety is concerned. Such preventable turning collisions can be avoided by having your car under control, glancing carefully to the rear, and moving cautiously into the curve.

SLIDE NO. 24 (Pocket Collision with Parked Vehicle)

In numerous instances when our trolleys turn, we are involved in "pocket" or "squeeze" accidents with trucks and passenger cars unlawfully parked or stopped in traffic too close to the intersection. Even though parking is unlawful so close to the intersection and signs are displayed to prohibit such parking or warn of a car turn, we still have the responsibility to avoid collision. Before making the turn, therefore, a trolley operator should look carefully to the side in which the turn is to be made. If a vehicle is parked too close to the corner, or one is running alongside the trolley car on the side of the turn, he should not proceed until safe clearance is assured.

SLIDE NO. 25 (Collision with Vehicle Approaching From Left)

Many serious collisions at intersections involve vehicles approaching from the left side of our vehicle. Experience shows that through habit a motorman's attention is directed most of the time to the right side of his car, as a result of door handling, prospective passengers, corner traffic light observations, etc. As his attention returns from his right side to the front, cross traffic approaching from the right naturally comes into view. But a bad habit now enters the picture, and that is when a motorman starts his car across an intersection, without first looking carefully to his left side, which is the cross-traffic lane

closest to the front of his car. In other words, the cross-traffic he sees last can be at a point of danger first.

Therefore, if we were to avoid many serious accidents at intersections, we must make a habit of looking to the left as well as to the right before starting the car.

SLIDE NO. 26 (Facing Point Switch)

This slide shows a facing point switch, with which new trainmen, in particular, often have a lot of trouble. Probably through inexperience or lack of care, new men fail to operate electric switches properly, or operate through a facing point at excessive speed, causing a split switch. Naturally, when the front or rear of a car takes a turn it is not expected to take, the operator, our passengers, and other persons or vehicles involved are totally unprepared, and a serious accident often follows.

When a motorman runs into an open switch and nothing happens he can consider himself very lucky, because such operation often results in the most serious types of accidents—collision of two street cars, or with a pedestrian, or another vehicle. Or even though nothing is contacted outside your car, there is always the possibility that you or your passengers may be seriously injured.

As you know, Transportation Department has a very strict rule in effect, requiring a motorman to bring his car to a complete stop approaching a facing point switch, so that the direction for which the switch is set can be observed safely; also, coming to a full stop prevents the car from operating through the switch at high speed, causing the car trucks to split the switch or the car to derail.

SLIDE NO. 27 (Switch Blocked With Sand)

Many other derailments are also preventable. This slide illustrates a frequent reason for derailments. You will note the switch is plugged or blocked with sand released carelessly by a trainman. If a following motorman ignores the presence of the sand and attempts to operate through the switch, he can expect a derailment or a split switch.

I cannot emphasize too strongly, that you must give all switches plenty of care and plenty of attention, or they will give you plenty of trouble.

(Miscellaneous Collisions)

Of course, there are other preventable types of collisions with vehicles. Although they do not occur as frequently as the types already discussed, they do, on occasion, result very seriously.

One of the most important types is the "head-on" collision. Although most "head-on" collisions with other vehicles are beyond our control, there are two very important things to do when a "head-on" appears inevitable: (1) Sound your gong constantly, and (2) Bring your car to a complete stop immediately.

Although we are not responsible for another driver's violation of the law in operating against traffic, we are responsible for our passengers' safety. If our car is not stopped at the time of the impact, it may be proven that we contributed nothing towards the prevention of the accident, and failed to consider the safety of our passengers.

Another important type of preventable collision which deserves special consideration at this point is a collision with emergency equipment, which by right of law can proceed against traffic lights and signals. To avoid all possibility of preventable collision with fire engines, ambulances and other emergency vehicles, obey the law which requires you to stop your car immediately upon the first sound of a bell or siren.

SLIDE NO. 28 (Collision of Two Trolleys)

We now are going to discuss the most inexcusable type of collision in our operation, and the one which has absolutely no defense from a negligence standpoint—the collision of two street cars.

Car collisions are always our fault. They result in injury to the greatest number of passengers of any single type of accident, and have also caused very serious and fatal injuries to a number of motormen. Car collisions make unfavorable headlines in the newspapers and give the public the

bad impression that our service is neither safe nor efficient; and that impression is partly true, because a collision between two of our vehicles usually means either that safe operation was lacking or that an operating rule was violated.

There is no excuse for a car collision. There are specific rules placed in your rule book solely for the purpose of preventing car collisions. If these rules and your operating instructions are learned thoroughly and strictly complied with, particularly those rules covering spacing of cars, operation in curves and switches and at an intersection, then you will be well prepared to prevent them.

SLIDE NO. 29 (Two Trolleys Stopped—Bumper to Bumper)

One common reason for car collisions is the failure of motormen and operators to obey the rules requiring them to maintain a safe braking distance behind the leader. To minimize "rear-end" car collisions at intersections, in addition to the rules in the rule book, we have in effect two Transportation regulations, which read as follows:

1. Trolleys operating on routes independent of other lines are, under no conditions to make a stop at the intersection at the same time as leader.

2. Trolleys operating on routes involving multiple lines are not to come to stop in less than 4 feet of leader.

The slide you are now studying shows a violation of the first rule quoted, since the cars have been stopped bumper to bumper. And stopping bumper to bumper very often produces more than just a bump. Sometimes the entire front end of one car is caved in, and the rear portion of the other car badly smashed. Sometimes, too, the trainmen involved in such a collision, receive more than a bump, a bruise or a cut.

SLIDE NO. 30 (Two Damaged Trolleys—Result of Rear-End Collision)

Here's an example of what I just said—a rear-end car collision. Note the extent of the damage to both cars and it is easy to visualize the serious personal injuries which can result from such an accident.

SLIDE NO. 31 (Operator Pinned in Interior Wreckage)

Here is clear proof of what may happen to any trainman who fails to operate safely. Shown directly below the fireman is the operator responsible for this rear-end collision. Crushed and pinned by the debris of the crash, he suffered from shock and injuries in this position for approximately an hour while his rescuers struggled to release him.

SLIDE NO. 32 (Damaged Interior of Trolley)

The complete destruction of the front end including all controls and wiring is clearly disclosed in this photo—another illustration of the serious consequences of a rear-end car collision.

SLIDE NO. 33 (Two Trolleys Stopped 4 Feet Apart)

This slide illustrates compliance with the rule to prevent rear-ends, or stopping car 4 feet from your leader. You must always be sure of proper spacing of your car to permit safe braking distances between you and your leader:—on a dry rail—on an bad rail—on a rail covered with dead leaves—on a grade—and any other unusual condition. Never fail to remember that the effectiveness of your brakes changes under all these varying conditions. Strict compliance with the rules and your undivided attention to your job can wipe out this worst form of preventable accident—the rear-end car collision.

SLIDE NO. 34 (Cars Clearing in Non-Clearance Curves)

Another example of a failure to comply with the rules is the motorman who attempts to pass another car in the opposite direction in a non-clearance curve.

This slide shows the point of clearance in a non-clearance curve, of two cars traveling in opposite directions.

SLIDE NO. 35 (Rear Contact in Non-Clearance Curve)

However, moving from this point of clearance in the curve we find, as illustrated by this slide, that the rear of the eastbound car will strike the center of west-bound car.

SLIDE NO. 36 (Front Contact in Non-Clearance Curve)

Further, if the two cars attempt to pass at the point shown, the front of the east-bound car will strike the side of the westbound car.

SLIDE NO. 37 (Car Collision in Non-Clearance Curve—Entering Curve)

This slide illustrates a car collision about to result as cars enter a non-clearance curve, in violation of the rules.

SLIDE NO. 38 (Car Collision in Non-Clearance Curve—Leaving Curve)

And here we see a car collision taking place at another point in a non-clearance curve.

There are many non-clearance curves on the system and we will have to live with them a long time. Always make certain you are familiar with all non-clearance curves on your route. If you are not absolutely sure of clearance—don't guess. Operate the safe way to avoid collisions, by waiting until the other car has safely cleared.

SLIDE NO. 39 (Car Collision—Tangent and Curve)

Another typical car collision set-up involving a curve is that where the operator of a car on straight track fails to allow for the rear of a car in the opposite direction taking a curve. Poor judgment or plain carelessness cause car collisions of this type, as you can see from this illustration.

And now, let's look at the results of a few more car collisions as far as damage to equipment is concerned.

SLIDE NO. 40-41-42-43 (Car Collisions—Badly Damaged Trolleys)

I am sure you will now appreciate that car collisions are the most costly to the company, not only in money paid out for injuries, but also because damaged cars rob the company of much needed equipment which is so vitally essential at this particular time when thousands of war workers in this area are relying upon us for transportation.

Wrecked equipment such as you have

just viewed is just as useless to the company as Mussolini was to Hitler.

SLIDE NO. 44 (Cut—Scarcer Than Diamonds)

Yes, street cars and buses are scarcer than diamonds at the present time, because we cannot purchase any new equipment under existing government regulations, and it is also very difficult to obtain material for repairing cars and buses damaged in collisions.

Only by preventing collisions and thereby saving our existing equipment will we be able to keep doing the big job of carrying these thousands of war workers daily.

SLIDE NO. 45 (Collision With a Pedestrian)

And now, we will discuss another serious kind of preventable collision—the collision with the pedestrian, or as we term it—a “knockdown.”

As pointed out in our previous discussion of the pedestrian, we can never be sure what he intends to do, because no two people crossing a street have exactly the same characteristics.

It's true that many pedestrian accidents in which we are involved, are unpreventable on our part. But on the other hand, we can do much to prevent certain kinds of pedestrian “knockdowns.”

Some motormen and operators place too much reliance on their warning bell, and fail to have their cars under proper control.

You must always realize that the sudden, sharp sound of the warning bell may cause a pedestrian to become confused and frightened. If this happens very often the pedestrian will do the wrong thing, and an accident results.

Therefore, you must never depend on the warning bell, alone, to keep out of an accident with a pedestrian—or other types of collisions.

SLIDE NO. 46 (Child Chasing Ball in Front of Trolley)

We must always appreciate that youngsters at play are thinking principally of their fun. They run after balls into the street, chase each other, etc., and it is

natural for them to forget their surroundings.

The best suggestion that I can offer you to prevent accidents with children on the streets is this: Be a “Defensive Driver”—always expect trouble when you see children at play. Be alert and ready for them if they suddenly race out into your path.

SLIDE NO. 47 (Children at School Zone Sign)

Surely you can appreciate the necessity for operating at slow speed with your car under full control when in the vicinity of schools and playgrounds. However, I would like to remind you that even though most schools have safety regulations and safety patrols, you must never relax in your care because you cannot be sure that school children will always follow safety instruction or obey the members of the safety patrol. Under all conditions we must “expect the unexpected” from children of school age.

SLIDE NO. 48 (Aged Pedestrian Crossing in Front of Trolley)

Always remember that the aged and infirm are easily confused. Elderly persons should always be considered living danger signals to a motorman or operator. They move slowly, and often have physical or mental infirmities which handicap them tremendously. I mean that many old folks are partly deaf or blind, and some are totally deaf. As a result, you can expect an elderly pedestrian to walk out into your path without thinking, looking, seeing or hearing.

How many times have you started across a street without first making sure that it was safe to proceed? If you never fail to bear in mind that elderly people are more absent-minded and more easily confused than the average adult, you will be in a better position to avoid a “knockdown” of this type when an elderly person is about to enter your path.

An intoxicated person needs plenty of space. When he wants to cross a street it doesn't make much difference to him whether a kiddie car or a trolley car is in his way. In fact, intoxicated people are

more uncertain in their movements than children—so give them plenty of room!

SLIDE NO. 49 (Collision With Pedestrian at Intersection)

Now let's consider some typical types of adult pedestrians: The woman shopper who goes tearing across a downtown street after wasting too much time looking for bargains; the fellow who didn't hear his alarm clock go off; the careless person who walks out from between parked cars; the individual who doesn't believe in traffic lights; the absent-minded professor, and so on.

Again, the only way to combat all these different types is by “defensive driving”—by keeping continually on your toes, so that you are prepared for the unexpected.

But it may surprise you to learn that many preventable “knockdowns” occur right at an intersection, where the pedestrian is attempting to cross in safety. Unfortunately, the motorman or operator is either watching the door, or bidding farewell to an attractive member of the fair sex; has his eyes glued on the traffic light, or is otherwise preoccupied, and starts his car before making absolutely sure it is safe to proceed. Many times the pedestrian gets almost entirely across the front of the car before being struck by the far corner.

Now if you recall, in a previous slide, I pointed out that preventable collisions at intersections are caused, sometimes, by motormen and operators starting across an intersection without first looking carefully to their left. This slide shows exactly the same set-up, and of course is a type of preventable knockdown that can and should be avoided.

The Supreme Court has laid down an unbending rule that at an intersection a motorman must have his car under complete control, so as to be able to stop in the shortest possible space. The fact that the pedestrian does not use due care at a street crossing does not relieve the motorman in this type of accident. If a trolley car at rest suddenly starts in motion and the motorman fails to see a pedestrian crossing from either his right or left; the pedestrian is struck by the car and

dies as the result of injuries received; and witnesses are produced who testify that the accident happened because the motorman failed to see the pedestrian, then the motorman would be guilty of involuntary manslaughter, which can mean up to two years in jail.

SLIDE NO. 50 (Pedestrian Crossing Rear End of Trolley)

In passing the rear of another trolley on a double track street, particularly if the other trolley is stopped, there is always a chance that a pedestrian or alighting passenger will take a short cut across the rear of the other car and appear suddenly in your path. To minimize the possibility of striking pedestrians who take such chances it is necessary that you approach the rear end of the other car with your car under control, and sound your warning bell repeatedly.

SLIDE NO. 51 (Pedestrian Carrying Umbrella Crossing in Front of Car)

It goes without saying that the danger to pedestrians increases greatly during hours of darkness. You must be doubly alert when it is raining or snowing. Umbrella weather is accident weather. Naturally, a person walking in the rain or snow is anxious to get to shelter. In his hurry he becomes careless. If he happens to be carrying an umbrella which may obstruct his vision, then the risk is even greater. Add to this unsafe footing, and you have a situation which demands the most careful operation.

To make a long story short: Pedestrians should be seen and not hit.

SLIDE NO. 52 (Motorman Talking to Passenger)

And now I would again like to call your attention to the subject of bad habits.

Our experience shows that many collisions are the result of bad operating habits. Probably the four worst bad habits are:

Talking to persons standing at the front of car.

SLIDE NO. 53 (Changing Sign—Trolley in Motion)

SLIDE NO. 54 (Making Change or Counting Transfers—Trolley in Motion)**SLIDE NO. 55 (Making Out Waybill—Trolley in Motion)**

You will certainly agree that all of these practices can distract your attention and leave you unprepared for an emergency. Collision accidents often happen in a split second, and all of these bad habits have been responsible, time and time again, for many serious accidents.

You are starting out as a new trainman. You have not yet had time to acquire any bad operating habits. Always remember that even the most skillful motorman, without any bad habits, has plenty of trouble in trying to overcome hazards caused by the bad habits of other drivers and pedestrians. If you permit bad habits to creep into your operation, then you are starting out with two strikes against you.

SLIDE NO. 56 (Conductor Assisting Motorman Passing Parked Vehicle)

Since part of your work will include assignment as a conductor, let's consider some of the good safety habits a conductor should have.

One important duty which the conductor can perform in the interest of safety is: Helping his motorman in passing parked vehicles where the clearance is questionable.

SLIDE NO. 57 (Warning Vehicle Driver When Trolley Enters Curve)

Another way in which the conductor can help to prevent accidents is by warning the driver of another vehicle when the trolley turns a corner or enters a curve.

SLIDE NO. 58 (Conductor Assisting Motorman in Backing)

Many accidents can be prevented by the conductor assisting the motorman in backing. This slide shows the conductor complying strictly with the operating rule which requires him to go to the rear of the car and signal the motorman, in order to avoid a collision with a person or vehicle to the rear.

If at any time you are the motorman,

and are working with a conductor who may have forgotten some of his safety responsibilities, don't hesitate to remind him of the part he can and should play in order to prevent accidents.

Some of the things which the conductor can do to help insure the safety of his passengers include: Warning alighting passengers to be on guard for approaching traffic; assuring himself that the car stops at a safe unloading point, and that the doors are never opened before car comes to a complete stop.

SLIDE NO. 59 (Conductor Closing Door—Wrong Way)

Alighting accidents are sometimes caused by the practice of a conductor "timing" his passengers out, or guessing the moment when passengers are clear of doors, rather than looking and assuring himself that passengers have cleared the door.

SLIDE NO. 60 (Conductor Closing Door—Right Way)

And now I believe you will appreciate that a conductor can do much to help his motorman prevent collision accidents, and to insure the safety of passengers and other users of our streets.

SLIDE NO. 61 (Boarding Passenger Struck by Door)

And now we are going to show you the different causes of preventable passenger accidents, which we group as follows: Boarding, Alighting, and On Board Accidents.

First let's consider the preventable boarding accident. Most accidents of this type are caused by carelessness or haste in handling the doors, which results in passengers being struck by the doors before they are safely inside.

Still other boarding accidents are caused by opening the front doors before the car comes to a complete stop. This bad habit invites a passenger to board a moving car, throws him off balance, and causes him to fall.

Although such an accident as illustrated may not appear to be serious, yet there is always the possibility that it may turn

out that way, particularly if the passenger has a bad heart or nerve condition, which may be aggravated.

Even though the actual injury may not be as serious as alleged, Claims Department has a case difficult to defend because of the undeniable negligence of our operator.

SLIDE NO. 62 (Starting Trolley—Passenger on Step)

Starting a car while a passenger is on the step or not entirely inside, can cause the passenger to be thrown from the car to the street—dragged—rolled under the car wheels—or into the path of vehicular traffic. This bad habit has resulted in some of the most serious passenger accidents in our experience.

Don't ever let those three little devils—Haste, Impatience or Anger—get you down. The operator who glues his eyes on a traffic light when he should be paying attention to his doors, the operator who is behind time and tries to make it up by slamming the doors on a passenger is only kidding himself, because an accident resulting from such careless operation can cause him to lose more time than he can ever hope to make up.

To avoid accidents of this type, always be sure that your passengers are safely inside and doors closed before starting your car.

SLIDE NO. 63 (Premature Opened Doors—Alighting)

Falling accidents involving passengers alighting are often caused by an operator or conductor throwing his doors open long before the car comes to a complete stop. This bad habit invites a passenger to step down from a moving vehicle; which very often results in a serious fall.

To avoid preventable accidents of this kind, you must make it a habit to never open your doors until your car is at a complete stop.

SLIDE NO. 64 (Passenger Falling Inside)

Most preventable passenger accidents occur "on board" or inside the car.

The cause of such accidents is usually rough starts and stops—the sign of a poor operator—because a skillful operator always makes it a habit to make smooth starts and stops, and takes pride in his ability to do so.

There is one important difference between operating a street car and driving a truck or automobile. A truck carries a commodity which can be called a dead load. A passenger auto carries a continually seated load. But a trolley car carries a live load of passengers—seated, standing and moving. That's the reason why skillful and smooth operation is so essential if passenger accidents are to be avoided.

The motorman who brags about being able to stop "on a dime" is not telling the whole story. He might add that stops of this kind can start filling up a hospital with injured passengers.

SLIDE NO. 65 (Passenger Thrown to Floor—Rough Operation)

And let me say right here that the operator who believes fast starts and quick stops are necessary to maintain a schedule is all wrong. You have been told by your instructors, men with years of experience, that you can make smooth starts and stops, and still be on schedule. I would like to add that failure to follow the advice of your instructors will prove costly to you as well as to the Company.

If you learn right in the beginning that some of our passengers are bowled over as easily as ten pins, then you will better appreciate the need for smooth operation to prevent passenger injury.

SLIDE NO. 66 (Standing Passenger Thrown in Curve)

Another cause of falling accidents inside the car is the result of rounding curves at excessive speed, and also running into an open switch, as previously mentioned. There is, of course, no possible excuse in railroading for such a failure. It only serves to emphasize the fact that the motorman or operator is not following the fundamental instructions taught in his training period, or is not giving the job the strict attention required.

CONCLUSION

Let me repeat once more that your greatest responsibility is to carry your passengers safely. If you fail to meet this responsibility, the Company attempts to make you realize its importance through disciplinary action. Discipline is not a penalty to deprive you or your family. It is a standard railroading measure to insure strict compliance with all rules and operating requirements, because you have not only your own but the lives of many others in your hands.

I have said some rather unkind things about some of our passengers, pedestrians and other drivers. But I would like to remind you that they are all Americans. They are gravely concerned in the war with the Axis. All of them, directly or

indirectly, are engaged in some activity which will help us win the war. Certainly you will soon be doing your part—a very important part—by transporting daily thousands of war workers in the Philadelphia area.

One slight collision can cause a loss of thousands of work hours along war production lines, by preventing workers from getting to their jobs on time.

One serious injury to a valuable, skilled worker can and has deprived our armed forces of vital arms and equipment.

It is our patriotic duty—every moment we are on the job—through safe and efficient operation—so that our Country's war program is not hindered by our failure to prevent needless accidents and injury.

Child Education Section

Officers 1942-1943

General Chairman—MARY MAY WYMAN, Louisville Public Schools, Louisville, Ky.

Vice-Chairman—GORDON C. GRAHAM, Detroit Board of Education, Detroit, Mich.

Secretary—MARIAN TELFORD, National Safety Council, Inc., Chicago, Ill.

Teacher Education for Safety Committee Chairman—HERBERT J. STACK, New York University, New York, N. Y.

Teaching Aids in Safety Education Committee Chairman—GEORGE W. SILVERWOOD, Green Bay Public Schools, Green Bay Wis.

Program Committee Chairman—MAE HEATHERSHAW, Kirkwood and Monroe Schools, Des Moines, Iowa.

Correlation of Safety Programs for Schools and Colleges Committee Chairman—HOWARD G. DAMFORD, Madison Public Schools, Madison, Wis.

Curriculum Planning for Safety Committee Chairman—GEORGE H. REAVIS, Cincinnati Public Schools, Cincinnati, Ohio.

Officers 1943-1944 †

General Chairman—MARY MAY WYMAN, Louisville Public Schools, Louisville, Ky.

Vice-Chairman—GORDON C. GRAHAM, Detroit Board of Education, Detroit, Mich.

Chairman, Committee on Teacher Education for Safety—HERBERT J. STACK, New York University, New York, N. Y.

Chairman, Committee on Congress Program—MAE HEATHERSHAW, Kirkwood Monroe Schools, Des Moines, Iowa.

Chairman, Committee on Curriculum Planning for Safety—GEORGE H. REAVIS, Asst. Supt. of Schools, Cincinnati, Ohio.

Secretary—MARIAN TELFORD, National Safety Council, Inc., Chicago, Ill.

†As elected by the delegates in Congress session

TUESDAY AFTERNOON SESSION

October 5, 1943

Presiding: DR. ALBERT M. ROWLAND, President, State Teachers College, Shippensburg, Pa.

Teacher Education for Safety

A Panel Discussion

CHAIRMAN ROWLAND: This particular session of the Child Education Section has to do primarily with the problem of teacher education in safety. About a year ago, President West of the American Association of Teachers Colleges, and the Executive Vice President of the National Safety Council, Mr. Dearborn, met and got into conversation about this problem of training teachers in the field of safety education. It seemed as though the efforts that were being made to establish safety education in schools could be furthered substantially by putting into the teacher education institutions some specific program of safety education. Not that these institutions were neglecting safety education, but it was being done sporadically and without any special coordinated plan. It was decided that a conference would be held here in Chicago to see whether we could set up the beginnings, at least, of a cooperative effort by the National Safety Council and the American Association of Teachers Colleges, out of which might ultimately evolve a coordinated program of teacher education in the field of safety.

As a result of this conference, we brought forth a program and a plan by which the National Safety Council, through four of its staff—its special staff—visited about fifty of the state teachers colleges of the country and carried with them the tentative draft of a questionnaire.

President Paul V. Sangren, President of the Western Michigan College of Education, is the Chairman of the Subcommittee of the Standards and Surveys Committee of the American Association of Teachers Colleges, charged with the specific responsibility of carrying on this particular project and of keeping in contact with the National Safety Council

and pushing through to a satisfactory conclusion the questionnaire and the results from it, and we hope ultimately a program of safety education in these institutions.

The other members of this committee are President Baker, of the State Teachers College at Milwaukee, and Miss Marian Telford, the chief of this Section and a member of the staff of the National Safety Council.

MR. PAUL V. SANGREN: I am a little bit embarrassed by the fact that it will be impossible on this occasion to give to the group any conclusions that are significant so far as teacher education is concerned, in this field of safety. I think that will be clearer as I proceed.

If we have it in our minds that we are conducting a study—we haven't conducted a study, but we are conducting a study, the results of which have not yet been assembled, the conclusions of which have not yet been reached, then I think you will understand that our primary purpose in reporting at this time is to stimulate interest in the responsibility of teacher educators in preparing teachers in the field of safety.

I haven't any notion that I would say anything new if I would say to you that safety must be an educative process. Even the use of safety devices involves in the last analysis an educative process. It doesn't matter whether we think of safety in the industrial sense or safety in the sense of traffic controls or whether we think of safety in the home or safety in the school—in the last analysis, it all becomes an educative process.

It is for that reason that we feel that to behave safely means that the children must have been through processes of learning which will enable them to be-

have safety, and that it is the business of the school to provide teachers who themselves are teachers of safety. So by a very direct source of reasoning, it seems to me that it is clear that inasmuch as teacher training institutions have the responsibility for the preparation of teachers, then it must be the responsibility of teacher training institutions to train their teachers, too, in the realm of safety, or safety education.

At any rate, it was with that thought in mind that I know this project was first undertaken. If it hadn't been the definite conviction of the National Safety Council officials and of the officials of the American Association of Teachers Colleges that this was the case, then I am satisfied that neither of us would have been willing to undertake the work that is obviously ahead of us.

I think I ought to take, too, a minute or two to tell you what the American Association of Teachers Colleges is, and what it stands for, because I am not quite sure just who constitutes the audience today.

The American Association of Teachers Colleges is an association with a membership of about 180 institutions of collegiate rank throughout the United States. The essential purpose of the Association is to improve or to bring about means for the improvement of teacher education throughout the entire country, not only in the institutions that are members of the Association, but in all institutions preparing teachers.

As the Chairman has told you, the Association has a Committee on Standards and Surveys. This Committee has two primary purposes: first, to conduct research and studies designed to assemble the important information on the status of programs of teacher education throughout the country; and designed, likewise, to provide materials by means of which the Association can recommend to its members means of improving their programs.

Let me repeat that this Committee is designed to conduct research and studies on the basis of which new suggestions and standards for improvement might be incorporated in the programs of teacher education, and particularly among the members of the Association itself.

Let me say, in this connection, that the first conclusion of the committee was that the only satisfactory method for determining the status of safety education in teachers colleges was the questionnaire method. One of the steps to help us in the preparation of the questionnaire, was to have a series of visits of members of the staff of the National Safety Council into teachers colleges.

In order to prepare a satisfactory background, four members of the staff of the National Safety Council were selected to make visits to fifty institutions, or teachers colleges, throughout the United States, during the past summer. The purpose of these visits was, first of all, to obtain help in the formulation of the questionnaire. Secondly, to stimulate, if possible, some additional interest, incidentally, among members of the faculty and among administrators in the teachers colleges, and in certain instances, if the opportunity presented itself, to present some of the important facts of safety education to summer session students.

Two or three points, it seems to me, are outstanding. First of all, it is clear that there is a great variety in practices and procedures in the field of safety education in teachers colleges. Secondly, I think I am going to be bold enough to say—although no one of the staff has dared to so report yet—that they found relatively little organized effort in safety education.

In the first place, they found that all teachers colleges, all administrators, and all faculty members, although limited in their information and knowledge about safety education, were interested in seeing what could be done to promote a program—a better program of safety education in the schools. Here, again, it became apparent that the teacher training institutions, while lagging behind the demands of society, are anxious to catch up.

Now, I say that with reasonable reservation. I don't mean to say there has been neglect of all safety education in teachers colleges, but I mean to say that we have not a typical example of the way in which industry, for example, has shown us the way, and that we hope to profit by what we now find.

As a result of that study, we may have information that is valuable not only for the general formulation of standards and suggestions for teachers colleges and for all teacher educators, but that we may have from it some very good suggestions with regard to the method of presenting the material to prospective teachers.

It would seem to me that our principal need now is for work and for continued cooperative interest by those people who are willing and anxious to prepare teachers in the best way possible for a modern society. If we may have that kind of cooperation—and I think we may expect it—perhaps a year from now, when this Congress meets again, we can present to it a report which shows more fully, not only what has been discovered about teacher education as it affects safety, but some definite suggestions and standards which have been proposed for the membership of the American Association of Teachers Colleges and for the use of all teacher educating institutions.

It seems to me that in a sense it represents one of the most hopeful projects which has been launched by the American Association of Teachers Colleges, if not by the National Safety Council. It represents a very hopeful project, because it is based upon a program of long-time study

which is designed to get at the facts, first, and after they have been assembled, to then assemble the conclusions and suggestions for improvement. It represents a type of study in which it is not our purpose to philosophize about what ought to be, but to have some direct answers to questions with the hope and expectation that we will be able to make a direct contribution not only to teacher education but to all of safety education in all of its areas.

CHAIRMAN ROWLAND: And now we come from the general to the particular. It is appropriate that having seen this broad picture of something that is planned and going to be done in this field, we now come to a concrete experience with the problem of teacher education.

Dean Bond, of the Kansas City Teachers College—a part of the Kansas City public school system—has been keenly interested in the field of safety education for many years, and is the head of that division of the public school system of Kansas City, which has an enviable record for its program of safety education. Dean Bond this summer had a workshop, a part of whose activities was concerned with the field of teacher education, so he is going to be able to talk to us very concretely regarding that experience.

Safety Aspects of the Kansas City Workshop in Elementary and Secondary Education

By J. C. BOND

Dean, Kansas City Teachers College, Kansas City, Mo.

For the past two years, under the leadership of Dr. Herold C. Hunt, Superintendent of Schools and Mr. Roscoe V. Shores, Assistant Superintendent in Charge of Instruction, a general plan of curriculum evaluation, revision, and construction has been in process of organization, initiation, and operation in some twelve different areas.

Safety education is included in a number of these areas, since a plan of integration in natural situations is used in preference to a separate course of study

separate units with definite time allocations. In the development of democratic procedures, the city school administration offers opportunity for wide participation on a voluntary basis in the program of curriculum evaluation and revision and, at the present time, some four hundred teachers, supervisors, and administrators are so engaged.

In order that members of the school staff might have an opportunity to concentrate on various school problems during the summer months, Northwestern

University was invited to conduct a Workshop in Kansas City, under the leadership of Dr. E. T. McSwain of the School of Education.

The workshop, as a technique in teacher education, is an outgrowth of the eight year experiment of the relation of school and college conducted by the Progressive Education Association. Teachers co-operating in the experiment felt the need for guidance on specific problems which the usual summer session course did not provide. Originally, workshops were limited to college and university campuses with students coming from various sections of the country. As the workshop idea developed and expanded, however, there seemed to be definite advantages in taking the workshop to a city school system, where all students are members of the same staff and share common problems.

The purposes of the Kansas City Workshop as stated in the official report are:

1. To discover and to develop values and techniques in co-operative planning, study, and evaluation.
2. To provide opportunity for teachers and administrators to work on problems in the fields of teaching needs on a basis of interest.
3. To provide opportunity for teachers to work personally with specialists in various teaching fields.
4. To offer experiences in practical arts, in school, and community relations, and in creative expression studies.
5. To participate in and to help develop a varied program in democratic living.

One of the characteristics of the workshop is that the old distinction between professor and student is, to a large extent, dissolved. The teachers are referred to as staff members, while the students are referred to as participants.

The Workshop offered an excellent opportunity for all to concentrate on problems of their choice. To illustrate, one group of teachers chose to work in the science area and developed a basic outline for a new course in human science which is required of all high school seniors. Provisions were made for safety education by using a check list of safety

practices to be included as an integral part of the course. The present indications are that this plan will be followed in developing the curriculum in other areas.

But there was more than an opportunity for work; it was an experience in democratic living in all phases of the program. Committed to the belief that teachers are better able to develop democratic ideals and practices in pupils by actually living democracy themselves, the workshop was so organized and carried out that the use of democratic practices and techniques by the staff and the participants was basic in its operation. Every member accepted responsibility for participation in the planning, in the execution, and in the evaluation of group or special projects.

The staff and the participants worked and lived together in small and large groups in which there was much interaction from 8:30 A.M. to 3:00 P.M. daily. A carefully planned but flexible program provided time for assemblies and various group meetings in selected areas. The major areas represented were Science, Social Studies, Language Arts, Community Resources, Evaluation, Child Development, Health and Safety, and Arts and Crafts. These areas were broken down into the following interest groups for participants:

1. Democratic education and changing social pattern.
2. Arts and crafts.
3. Teacher-pupil planning.
4. Teacher-parent planning.
5. How children learn.
6. Evaluation.
7. Community resources.
8. Post-war planning.
9. Science.

A permanent staff of nine members served as consultants in the various areas and seven visiting specialists were on the campus, each for one week. In addition, many expert consultants from various professions in the city were used.

The workshop day was divided into five blocks of time, the large interest group meeting at 8:30 or 1:30. 10 to 11:30 was

reserved for work in the art room, individual conferences, small group meetings, and individual problem work. From 11:30 to 12:30 the group lunched together. Each lunch period had some entertainment, music and a speech by one of the visitors or some humorous stunt by staff members and participants. 12:30 to 1:30 was a free period devoted to social recreation, games, reading, music, movies, conversation or art. The remainder of the day was given over to large group interests and an evaluation of progress.

The visiting consultants were considered an integral part of the staff, participating in all activities and in the staff meeting. One of these visiting specialists was Miss Vivian Weedon, Curriculum Consultant, School and College Division, of the National Safety Council. The cooperation of the National Safety Council in furnishing her services was secured by Mr. George M. Burns, Director of the Kansas City Safety Council. The following description will serve to high light her activities in the workshop for which she set up the following objectives:

1. To help the participants uncover and formulate their own safety teaching problems; to give aid in the solution of these problems.

2. To stimulate each participant to evaluate his or her safety teaching practices in the light of the philosophy of education which was emerging as a result of participation in the workshop.

To inform participants concerning sources of help in safety education.

At a luncheon meeting early in the week, the safety consultant addressed the entire group, speaking on safety as the common denominator in all teaching and expressing the desire that teachers, in all areas and at all levels, talk with her about their problems and share with her the results of their safety teaching experiences.

Miss Weedon held many individual and group conferences, excerpts from her report are illustrative. In the Community Resources group some of the questions were as follows:

1. Are we expecting too much of children in the safety patrol? Is it fair to ask

them to work in extreme weather? Are they taking too much time away from classes?

2. How can equipment, especially coats, be obtained for the patrols? Discussion showed that some of the patrols had been equipped by the parent-teacher association, some by philanthropic citizens, and others by industries for advertising purposes.

3. Should the school be expected to furnish the equipment for the patrols?

4. Should the children be rewarded for their services in the school program?

5. Are we exploiting our children?

6. What is the function of the school safety patrol?

In the evaluation group: How can safety be taught without creating fear? How can we evaluate a safety program? From the child development group: Where to start? With interest or need? Is there danger of making children too accident conscious? Do we have too much protection in the safety program? Is it possible that there is not enough self reliance?

From an individual conference Miss Weedon reports the following: "A teacher mentioned that she had charge of the safety patrol but could get no cooperation from principal or other faculty members. She was advised to give up the safety patrol until she could be assured of co-operation from the faculty."

Probably the most interesting development of the entire week grew out of an individual conference. One of the teachers was extremely disturbed about a home safety and fire prevention check list which was employed each year. The lists were distributed, the parents asked to sign a statement that the house had been inspected and the signed slip returned to the school. If 100 per cent of the pupils turned their slips in, the school received a reward.

The teacher objected to this scheme on the following grounds: she disapproved of the contest motivation; she felt that the project was teaching the pupils to be dishonest, as the slips would often be sent home in the morning and be returned in the afternoon when time for the inspect-

ing simply had not been available in the limited lunch hour; and that the entire project was counter to the philosophy of education which the workshop participants were developing co-operatively. All objections seemed sound.

When questioned as to whether this was an individual problem or a general one, she replied she thought it was general. Her judgment was verified. An announcement that a meeting to discuss the problem was to be held, brought twenty teachers and principals. All were in agreement that the home safety checklist project was bad.

The difficulty, however, was that so one had the correct information about the project. Some thought it was sponsored by one agency, some by another; some thought one prize was given, some another.

Unfortunately, this question did not arise until the day the safety representative was to leave town. She therefore made two recommendations: (1) That a committee be appointed to find out the facts in the case. (2) That an educationally sound proposal be drafted as a substitute and presented to the sponsoring agency. The committee was appointed and a staff member agreed to take over after the safety representative had left town.

A report from the staff member indicates that the fact finding committee discovered that the superintendent was already studying the home safety check list, so further action by the Workshop group was unnecessary.

This incident is important, because it is typical of the practical, every-day problems which arise under the Workshop technique.

From personal observations and discussions with various groups, staff members, and visiting consultants, I am of the opinion that the Workshop contained the following implications for Safety Education:

1.—Democratic procedure, practices, and techniques should be applied in developing a safety program.

The present world conflict has directed attention sharply to an evaluation of democracy as a way of life and to the

practices and techniques necessary for its development. One may well question whether pupils in the classroom have an opportunity to develop democratic ideals and practices when teachers and parents, who are responsible for leadership, set up objectives with pupil participation or acceptance. The safety program or any program for that matter, which has definite opportunity for the pupil to participate in its planning, execution, and evaluation in natural situations under adult guidance, not only develops democratic ideals and practices, but also assures a much higher degree of acceptance and achievement. Democratic ideals and the democratic way of life are best achieved when those who are responsible for leadership use democratic practices and techniques.

Pupils, teachers, parents, police officers, safety council officials, and other consultants should participate in the planning, in the operation, and finally in the evaluation of the safety program. Teachers report that the most frequent violators of school safety practices are parents and other adults. A few years ago, the director of the Kansas City Council almost lost his audience at a P.T.A. meeting which he was to address on "Safety," when he announced that a police officer was tagging all cars parked in the prohibited zone around the school building. He restored order only when he assured them that he was joking. Safety is "caught" as well as "taught." Sharing responsibility for any program encourages a greater degree of acceptance and achievement.

2.—Community resources, both real and personal, should be used constantly in a program of safety education.

Community resources are assuming a more important place in education. Vicarious experience for pupils is gradually being replaced by those which are real and vital. The community is an extension of the school room. School life can in no way be separated from the life of the community, if education is an adjustment to and an understanding of the social order in which one lives.

The Safety Council, the Police Department, the Fire Department, and various

services of government, the parent-teacher association, industrial plants, the lawyer, the merchant, the doctor, the safety engineer, all form a part of community resources which can play a vital part in the education of boys and girls. It is through an understanding of the interrelation and interaction of all these resources that the pupils develop an intelligent and sympathetic understanding and interest in community problems including safety. Every phase of community life has its contribution to make.

In Kansas City, and no doubt in many cities, the police department plays an important role in safety in the schools. Attractive motion pictures have been made showing how accidents happen. Officers have been trained to present them to different age groups in an intelligent way. The pictures are popular and effective with students and have been shown in a large number of schools. There are many community resources available for safety education which can be utilized by those who have the initiative and the vision.

3.—Safety education should be an integral part of basic education in the development of boys and girls.

During the past twenty years, the schools have made an excellent record in safety education but they have not adequately met the challenge of the machine age. The success of the school safety program has stimulated safety in industry, in recreation, and in transportation but leaves much to be desired. The community looks to the school for the development of all of those habits, attitudes, and ideals which are essential to successful living. Safety is as important in the development of pupils as reading or arithmetic. There are many indications that safety is emerging as an integral part of basic education. Whether it will do so under the impact of 90,000 preventable deaths annually or under the leadership of educators remains to be seen.

4.—The success of the school safety program should be evaluated periodically. Emphasis should be given to the teaching program accordingly. Questions raised in various discussion groups indicate a desire for measuring the effective-

ness of the safety program. While it is not possible to use the same measuring devices that are used in other fundamental subjects, it is possible, from available surveys and reports, to determine points of emphasis in the teaching program. According to "Accident Facts" 1943 edition, published by the National Safety Council, accidents tend to increase from school entrance to the seventh grade, when a decline begins and continues through the junior years of high school. At this level the student is as safe as he was in the second grade. Apparently, at this time in life, he has either exhausted all of the opportunities for accidents and settled down to a sedate young manhood or has developed the agility and judgment of superman. Thirty-seven per cent of all school accidents happen in the gymnasium and fifty per cent of playground accidents occur in unorganized play. Of all accidents to school children, 56 per cent are non-school and forty-four per cent are of school jurisdiction. These facts are significant in education and point the way to emphasize in school organization and teaching. One may well ask: "Why so many accidents in unorganized play? Why so many accidents in the gymnasium?" The effectiveness of the safety program can be determined and stimulated by evaluation.

Conclusion

In conclusion, may I summarize by pointing out that safety is a way of living which can be developed effectively and efficiently by recognizing it as an integral part of basic education; and by using community resources and democratic procedures in its planning, in its operation, and in its evaluation.

Kansas City is deeply appreciative of the fine opportunity it has had in the development of safety education. Personally, I wish to express my thanks to Dr. E. T. McSwain of Northwestern University, Mr. George Burns, Director of the Kansas City Safety Council, and Miss Vivian Weedon of the National Safety Council for materials used in preparing this discussion.

May we all practice safety for more glorious adventure, not merely to escape death. (Dean Bond's speech was broadcast.)

Teacher Education For Safety

Radio broadcast of a Panel Discussion

RADIO ANNOUNCER: From the Child Education Section of the Thirty-second National Safety Congress now in session at the Sherman Hotel, we bring you a panel discussion on Post War Prospects—The Future of Teachers Education for Safety, with Albert L. Rowland, President of the State Teachers College at Shippensburg, Penn., as chairman of the meeting. Participants in the discussion include Frank E. Baker, President of the State Teachers College, Milwaukee; Robert G. Buzzard, President of Eastern Illinois State Teachers College, Charleston, Illinois; Zenas R. Clark, Administrative Assistant, Wilmington Public School, Wilmington, Delaware; and Herbert J. Stack, Director of the Center for Safety Education, New York University.

And now our Chairman, Dr. Rowland.

CHAIRMAN ROWLAND: Ladies and Gentlemen: The purpose of this panel is to discuss Post War Prospects in Teacher Education for Safety. More and more are the schools of the country assuming further responsibility for the welfare of their children. No longer are the Three R's adequate as a school program, and many schools have already embarked upon all sorts of agencies and purposes that are beyond the limits of the traditional curriculum. A notable one of those is that of safety education, and it is appropriate that we should be discussing this matter at the time of the National Safety Congress here in Chicago.

Gentlemen of the Panel, the subject is before you for discussion.

DR. BAKER: It seems to me that the development of safety education in the post war world must take place in terms of the purposes of safety education, and I want to mention two that I think are important. In the first place, I think we need to develop in the minds of children a concept of the importance of the healthy body as the base for a well-adjusted and healthy personality. I think it certainly isn't impossible, but it is difficult, for a person with a maimed and

unhealthy body to maintain a healthy and well-adjusted spirit. From the standpoint of the individual, therefore, it is important to develop in him a concept of its importance to his own happiness and his own welfare.

Then, second, the social purpose. I think there are not many things as Naziism and Fascism that we wish to destroy, but I think we shouldn't refuse to imitate them because of their origin. I think there is one thing that we could borrow from Nazi philosophy, and that is the responsibility of the individual to present to society a healthy and whole body. That he owes it to society to preserve his body whole and healthy as a useful and very valuable thing to society.

Those two purposes, it seems to me, are very important and fundamental in determining the course of safety education in the post war world.

CHAIRMAN ROWLAND: It is obvious that children want to have healthy bodies, and doubtless would like to contribute their healthy bodies to a social purpose. However, how can we make them conscious of the necessity for learning how to care for their bodies in the midst of other pulls and controls that are so overwhelming and so interesting? They dash out into the street to rescue a ball that has rolled in the path of an automobile, and the result is fatal. How can we get them to see that running after that ball is secondary to the danger that is incurred in doing so?

MR. CLARK: I think the answer lies in the teacher. I am the one representative on this panel of a public school system. The rest of the gentlemen represent teacher training institutions. Consequently, I want to put the problem up to these men. What type of teachers are you going to give us? Are you going to give us teachers who are sensitized to the safety problem and to the methods of instruction? Are they going to be willing to integrate safety with their courses of study where it applies, and where it is necessary to teach a safety lesson as an

object lesson, are they going to have the necessary techniques?

I am speaking now of your new teachers. What about the teachers who are now in service? Are you going to be able to help the teacher in a six-room school back in the hills or down you, to give her the necessary materials and inspiration? She may not be able to come to summer school every summer.

What is the in-service program that you can give us?

We in the public schools are consumers of your product. Is your product going to be the type of product that we want and can use effectively?

CHAIRMAN ROWLAND: Mr. Buzzard, Mr. Clark puts us on the spot here. He is the only one, he says, who is concerned with the practical administration of a public school system, whereas we are all in the higher realms of teachers colleges, where we are theorists, presumably and not practical people. What is your answer to that?

MR. BUZZARD: The teacher training institutions can follow one or both of two avenues to accomplish this training. We can either do it incidentally in the training of these new teachers, particularly as we have them doing their practice work, by insisting that there be certain units of instruction, and so on, that have definite safety value, and just presume they incorporate those in their teaching when they get out; or, we can have a required course in our department of education called Safety Education for the Public Schools, in which we pull directly to their attention the various items of safety education, discussing the terms, techniques, and so on.

Either of these two things, are influencing only the people who are on the campus now. But he asks about this bigger group of people who are out in service, and bluntly, what are we going to do for them out in the highways and the byways? Well, again, we have that problem of trying to decide what we are going to do for the teacher in service, and this survey of the American Association of Teachers Colleges should bring out

in its findings some of the things that are being done.

We are experimenting a little bit this year. We took a social science teacher this year that we thought was still impressionable—by that I mean that he could see something else besides social science, or perhaps interpret it in its broader sense—and we said to him, "You want to help teachers in service?" And, of course, being a member of a teachers college faculty, he would say, "Yes." We said, "We are going to let you go out into a certain community where a group of teachers want help, and discuss with them this problem of safety education; why it ought to be a part of public school training; how we ought to organize our instruction in it; and then, what materials we shall use."

We are having a lot of fun. I don't know just what the result is going to be, Mr. Clark, but there are going to be at least twenty-three or-four teachers who are going to know something about it.

But I would like to take a crack at our first speaker, if you don't mind. We are trying to view safety education as a part of the big lesson which this war is teaching us in the use of everything that is usable. I suppose you can call that conservation of human resources. We are trying to train our youth through our schools so they will be good citizens and have certain abilities to support themselves, and so on, and safety education is just another way of eliminating human waste and human expense. Perhaps that is why I leaned toward the department of social science when I wanted to start this work, since industrial arts is out now, and you can't wish it on someone who is mechanically inclined. After all, the crux of the thing is to prevent accidents, and therefore human injury, and all the things that it costs—prevent those things in a community that endanger the welfare of all of you.

I don't know whether I have answered you, Mr. Clark, at all, but I have tried to show you that these people in the teachers colleges realize that there are two ways of doing it, and some of us are trying to work one of them out at least, because we are, too, rather new in this business.

CHAIRMAN ROWLAND: Mr. Stack, you know more about safety education than anybody else on this panel, probably more than most people in the country today, because of your unique interest in it and because of the long time that you have given to its study. What answer would you give to Mr. Clark's question?

MR. STACK: I think, first of all, that I would like to state some very specific things that I think we can do. When the war is over, we will have some ten million men and women coming back from the Army. Of these millions, many will be teachers. I have a feeling that many of these people, instead of going directly back into their teaching positions, will be available to go into graduate work so that they can get further training. Just as the young men and the young women are flooding our colleges in the Army and Navy programs. I feel that there will be a period, after the war, in which we will have large numbers of men and women out of the armed forces and out of civilian life back on our college campuses. I have a feeling that there is need, first of all, for the training of safety specialists, men and women who are to take charge of safety education programs in the schools. This will mean, therefore, men and women working for their master's degrees and working for their doctor's degrees. We are also proposing for the post-war work, the awarding of ten to twenty fellowships and thirty or forty scholarships in this field so that they will be available for the homecoming soldiers and the sailors.

I therefore have a feeling that our work in general in this panel is divided essentially into two parts: what to do for the teacher who is working on a bachelor's degree, and then, again, what more to do for those that are going to major in safety, for those that are going on to take master's and doctor's degrees. Therefore we would propose that various universities that are giving master's and doctor's degrees make available, for certain people who wish to specialize in safety, types of courses that will be best fitted to their needs; a physical education major, for example—special courses in the prevention of athletic accidents; an

industrial arts major, with a special course in the prevention of accidents in industrial arts; and other types of special courses.

For the teacher in the teachers college, or in the normal school, the question of whether or not it will be best to give this instruction through a single course or through integration in other courses is going to depend largely on this experimental work.

CHAIRMAN ROWLAND: You still are farther away, however, from Mr. Clark's question, when you step up into the higher levels of graduate work, and although it is obvious that we will need leadership of the type, and it will be necessary to provide special training for that leadership, I am concerned particularly with the rank and file of our teachers and of our teacher supply. Are they going to be animated with a desire to carry on safety education, and are they going to be equipped by training and experience to do pioneer work? There will be a certain inertia on the part of administrative officials and school boards that will make it difficult for many teachers to launch upon a program of safety education, even though they are trained to do so and desire to do so.

How can we in some way meet that problem—at least get a beginning through the new graduates of the teachers colleges, this new group that are coming in to take the place of those that are leaving the profession? How can they be given the point of view and the opportunity to put safety education in the schools?

MR. BUZZARD: Haven't we got to put into the minds of those people who govern our elementary and high schools a feeling that safety of children, as well as adults, is a thing of prime importance, right along with some of these other things that we are using as public education tools?

MR. CLARK: Many of our teachers now want their degrees, and the colleges say they must have certain courses. They will work towards that degree with the recognition in the salary schedule before they will take a particular course which would not necessarily give them the necessary number of point hours in an area. The problem there becomes one of ad-

justment on the part of the degree-granting institution to recognize those things.

CHAIRMAN ROWLAND: Mr. Baker, you know the answer to that. Go ahead.

MR. BAKER: "No, I don't know the answer to that. But I am sure that we must develop in teachers this ability to teach their children in safety education through experiences in safety. I agree entirely with President Buzzard. I agree with him entirely, that safety education must be incidental, at least at the present status of research. I think Mr. Stack made a very excellent point, that we need much research in safety education. Until we get it, I think it has got to be incidental and integrated with other courses, and we need much research to find out how we can integrate it and make it a by-product of our courses in economics and sociology, play and physical education, hygiene and health. Through those courses and in their actual experiences in the classroom, on the playground, and in recreation, we must develop the practice of safety.

I agree with President Buzzard entirely that at the present status of research, it needs to be incidental, and I would like to mention another point here. During the visit of Miss Weedon to our college, she and I had a battle royal as to whether we should develop in the children the habit of doing things that are safe, or whether it should be a matter of rational consideration. I took the standpoint that we should develop in them such habitual actions that they would act in a way that is conducive to safety, while she seemed to think that in most cases the choices should be rational choices, that is, the choice of the action that is on the side of safety. Then I called in one of our psychologists, and he took her side. Nevertheless, the battle was unsettled, and I think that is a very important point that might receive some consideration.

CHAIRMAN ROWLAND: I would like to hear the panel discuss that point. Mr. Stack, what is your answer to that?

MR. STACK: You mean on the best way of teaching safety?

CHAIRMAN ROWLAND: Yes; whether safety education is a matter of habit, should be set up as a habit-de-

veloping experience for the child, or whether there should be a specific, rational approach to safety, so that the child can reason out why he takes care of himself, and why he doesn't.

MR. STACK: I have always taken the point of view that in the early elementary school, children learned, or needed to know how to do certain things, and to do things in the proper way largely from a point of view of habit. But when we come to the late elementary school or the early junior high school, we should approach more of the reasoning process, for the reason that in many of the life situations in which children may find themselves, there is an element of hazard, and it is difficult to teach it, and therefore they have to learn to rationalize that new situation, and make the proper judgment to meet the hazard.

So I would say that in the early elementary school, many things can be taught from the standpoint of habit, and in the later elementary school, junior and senior high school, more of a rationalization may be applied.

CHAIRMAN ROWLAND: Well, what would you think of that, President Baker? That is cutting across your theory, isn't it?

MR. BAKER: Conduct that is safe I think of as being a matter of habit, and I think of it partly as character. For instance, if a person approaches me, I don't want him to stop to think whether he is going to shake hands with me, or the degree of warmth that he is going to show in greeting me. I want that to be a matter of habit, and I think that safety, as a part of conduct, should be largely habit. Now, in developing those habits, there needs to be rational consideration, but I think they should be carried over to the place where they get into the realm of habitual action. Now, I am not a psychologist, and I bow to the respect of the young man that was called in and disagreed with me. But nevertheless, I still hold my opinion.

CHAIRMAN ROWLAND: Well, if it is a matter of habit, and if this great army of young men who are coming back to us from the war front are going to be, according to Mr. Stack, teachers, in many

instances, to what extent will their habit of destruction, of disregard for personal danger, and of complete disregard for property values, be a hindrance to their developing the right kind of leadership for safety education?

MR. STACK: Strangely enough, Mr. Chairman, if one goes through the Army training manuals provided by the Army, one will find that one of the most important things that is taught to the soldier all the time is to seek cover, to seek safety, to find ways of protection, self-protection. While it is true that one of the outcomes of the Army is death and destruction and the like, nevertheless, in the training of the fighting man, he is not taught recklessness, he is rather taught to protect himself, to seek shelter, to be able to run fast and move quickly and go through all of the other required things, to develop skills in the protection of himself and protection of his comrades.

CHAIRMAN ROWLAND: Well, that certainly is a very adequate answer to my question. Is any other member of the panel concerned with taking issue with that?

MR. BAKER: Isn't it true, Mr. Stack, that the Army would want the man to drop to the ground, habitually, when he heard the whiz or the rumble overhead? Would you want him to stop to make rational consideration as to whether he would drop flat, on his side, or how?

MR. STACK: One of the most amazing things is to see the discipline that is being taught to our Army men. Now, while I am not reporting for the Army, nevertheless, I think, as we look over the manuals and the methods that are being used to teach these things, they are teaching men the disciplined army quickly seeks cover, the disciplined driver of army vehicles takes all kinds of precautions, far more precautions to camouflage his vehicle, to get his vehicle in hiding, and to drive his vehicle much safer than we do in civilian life. Therefore the Army and the Navy are great exponents of the "safety movement."

MR. BUZZARD: I am glad that Mr. Stack brought that out, because one of the surprises that these ex-service people are going to bring back to us will be their

demand for carefulness with all of the things that we have at home. This destruction and destructive intent that you mentioned isn't in their thinking about the things back home, and they are coming back with demands that such things as safety for children, safe living in the community, and safety of that type, have attention.

Now, I thought I would get a rise out of the situation when Mr. Stack talked, but he stopped too soon. I was wanting him to evaluate safety education on the high school level as perhaps one of those very necessary things in the building of a new secondary school curriculum. Remember, the great mass of people will still be only high school graduates, and the new world in which they are going to live has to be one in which they function, and perhaps they will function better if they can take care of themselves and if they know some of the things that we have taught them. I was hoping he would say that safety education deserved, oh, a direct fraction of public high school training—and by that I mean half a semester, or even a semester, or perhaps even a year, when combined with something else. Someone has to teach it. That's his job, of course—to get teachers for that.

CHAIRMAN ROWLAND: Yes, I think that is a very good point, and I wish Mr. Stack had gone on to develop that. However, our purpose here is to consider the problem of safety education for teachers. It is our hope and belief that if we can reach the source of education, which is undoubtedly the teacher, we can have a greater influence than if we attempt only to reach the periphery by sporadic programs with children.

Now, to what extent is Mr. Clark correct in his feeling that we will be, in the teacher education institutions, too prone to be academic and theoretical rather than practical in the instruction that we give to the prospective teacher? I realize at once that we have raised two questions here. There are two groups of teachers—those who are now in the service, and who have been prepared, presumably, according to existing programs; and those who are to be inducted into the teaching service, who are going into the service initially without any previous ex-

perience, and we have to do something about both groups. But the groups are not as diverse as they seem, and what is good for one is usually good for the other.

So is it true that we are in danger of becoming impractical and theoretical in this matter, and how can we be practical and immediate in the instruction which we give?

MR. CLARK: What I wanted and asked for was a teacher who was sensitive to the needs of safety and had sufficient background and training to do the job properly. And then I wanted information as to how you gentlemen plan to give me that teacher.

CHAIRMAN ROWLAND: Well, I think that is a very reasonable question, and it is obvious that this teacher must be a person who is sensitive to the values of safety education, and cognizant of the devices and techniques by which it may be taught. That, of course, is our problem, and I suppose to attempt to answer that question would be asking too much of this panel. Merely to raise the question is provocative and should be helpful.

Have we exhausted this war situation? We are talking about the post-war world. To what extent is the war going to color the post-war world as it affects teacher education in the field of safety? Mr. Stack has already given us some very valuable comment to that point. Are there any other comments?

MR. BAKER: Mr. Clark, I think, has introduced a very important word here, and that is "sensitivity." One of the marks of an educated person is sensitivity to his environment, and I think it is very important that we develop in them this sensitivity.

We have to go back to the purposes of safety education, to develop their emotional feeling, first, of the importance to themselves of their own health and safety, and the wholeness of their bodies, and second, the emotional feeling of the importance of the individual, the healthy and whole individual to society. One of the very great obligations resting upon the teacher, is to help people have their emotions go in the right direction. There is a decidedly emotional side there that I

think we need to develop more than we have.

MR. BUZZARD: Now I am getting tuned in with Dr. Baker's thinking. He was stressing that it is the sound and healthy body. All right, let's emotionalize just a little bit. I wonder if he is meaning, then, that the teacher in the classroom must become emotional in the field of safety education, as to whether our school room and our school building is a safe one for us, and to try to develop in these children who want to keep a whole and healthy body, emotional attitudes toward the home. Is my home a safe one for me? That is, where are the hazards in this school, the safety hazards? Where are they in the home? I don't know of any better place to emotionalize than whether we consider home and school safe for children.

MR. BAKER: I think the sensitivity to a safe environment comes in there. In spite of the fact that we have in the state of Wisconsin a very rigid law in regard to safety, we found just a short time ago a very hazardous situation in one of our buildings, that had existed there all these years. All the inspectors and all of us together had never seen it, and it didn't come out until we had an accident—not a serious one, but it might have been a serious accident.

I think we need to give a great deal of attention, and the public needs to spend some money on creating safe conditions in all schools and all public buildings and helping in the homes, and in developing a sensitivity to the detection of hazardous situations.

MR. STACK: I wonder if I could add just one thing here that I think would be quite useful. You know, it is rather interesting to find that only twenty per cent of the boys, when they came into the Navy, could swim. The percentage in the Army is around about eighteen per cent. I believe one very specific thing that teachers colleges can do now, and after the war, is to teach more of their teachers to swim—water safety—and first aid and protection, so that one of the requirements for graduation from a four-year college would be an ability to swim and protect oneself in the water, so that those

teachers would then go out into the public schools of the nation and try to get children to aspire to learn how to swim. Then we wouldn't have to have the Army having to teach our boys to swim.

MR. BAKER: Would you, then, set up the specific requirement that no candidate would be graduated from a teachers college unless he or she could pass a satisfactory test in swimming?

MR. STACK: Provided, of course, that there would be some exceptions for physical reasons.

MR. BAKER: We have such a requirement in our college, but inasmuch as it is not part of the state curriculum, and there is no legal sanction for it, we can't enforce it. There are very few that try to get around it, but there should be some exceptions for emotional states, should there not?

MR. STACK: That's right—physical conditions. But I think it would be a very fine thing to have every teacher that graduated from four-year college able to pass a swimming test.

CHAIRMAN ROWLAND: Well, we require every student that graduates at Shippensburg to be a swimmer, and we make exceptions only where there is actual lameness or physical disability. And we can prevent any teacher's obtaining a certificate to teach who has not met this requirement and is physically capable of doing so.

I am interested, however, in another aspect of this thing. If you are only interested in safety, then perhaps the safest thing would be to keep everybody out of the water, and then they would never drown, and they would never have any need for learning to swim. Keep every child off the street in such a way that he never is subject to the possibility of being injured by a motor vehicle. So provide our buildings with safety devices that he is entirely beyond the reach of getting into danger of any sort.

Now, it is obvious that the obligation of the community, of the authorities of a community, and of course of a school system and of a school, is to make the situation as safe for the children as possible. But I am wondering whether we

are not in danger of doing something to the character of the individual, when we make him super-conscious of his own personal safety. I may not have anything by the tail here at all, but it seems as though the thing to do is to get all the children so concerned emotionally and intellectually with their own personal safety, that they will go to any length in order to avoid any danger. Now, it seems to me that there are times when that can be a very anti-social kind of behavior, and I should not like to think that we are taking the children of America and giving them an attitude of mind which will be such that they will risk anything, including the lives of their school mates, in order to avoid any personal danger. What is the answer to that?

MR. BAKER: I don't think your assumption follows from what has been said here.

CHAIRMAN ROWLAND: No, I don't think it does. But there is an implication in it on that side, and I would like to see where that leads.

MR. BAKER: The Army believes in safety, but the Army sets up these hazards that they make the boys go through, the obstacle courses which carry with them very great hazards, but they try to have them do it in a way that will be safe.

CHAIRMAN ROWLAND: Which is the primary motive—or to accomplish the purpose that they set out to accomplish?

MR. BAKER: To accomplish the purpose in a safe way.

CHAIRMAN ROWLAND: If possible, but if not possible, accomplish it in an unsafe way. Isn't that true?

MR. BAKER: In the Army, it would have to be so.

CHAIRMAN ROWLAND: And in civilian life, to some extent, too.

MR. CLARK: We have a motto in our schools that we use frequently, which states that "the safe way is more fun." That seems to be able to carry over to the children the idea of having a good time without taking the crazy, wild risk.

CHAIRMAN ROWLAND: Well, that's all right, if you want to put it on

a fun basis. But is the safe way always the right way? the righteous way? the way that you should take, when you consider yourself as a social being, responsible for the folks with whom you live? I am afraid that there will be a good many heroic actions that would be checked if we carried this so far as to make everyone primarily emotionally concerned with his own safety.

MR. BUZZARD: I know the graduates of five Illinois teachers colleges that would stand on the bank and watch the person out in the water drown because they have not been trained to swim. So I suppose that would be an emotional breakdown.

CHAIRMAN ROWLAND: Well, perhaps so. Of course, it wouldn't do much good for them to jump in if they couldn't swim. But on the other hand, it would be a gesture, it would be a fine social gesture, even if they all drown.

MR. STACK: I have the feeling that because of the wide influence of the life and the philosophy of Albert W. Whitney there isn't a great deal of danger of our getting super-super-conscious right now. Whitney's philosophy was that of safety for more adventure. He would argue that we should have more swimming, more hiking, more camping, more, let us say, hazardous things, more things to do, more worlds to conquer, but all that we would try to do would be to prevent those stupid things happening that would prevent us from getting that final goal; in other words, that our soldiers would do away with certain stupid things, so that they could win the final objective.

CHAIRMAN ROWLAND: Well, I like that very much. It isn't that we should flee from the evils that are in the world, but we should attack them and try to make them less evil. I think we all agree with that.

But I think, nevertheless, it is exceedingly important that we keep in mind in this habituating and emotionalizing our children to a feeling of safety, that there are things that are of higher importance than saving your own skin, and there are times when the right thing to do is to risk and not to save. Now, just how to steer the course so that you do

develop a habit of avoiding these stupid things that Mr. Stack mentions, and yet at the same time preserve that courage, that determination to go ahead and do the thing that you want to do if you are convinced it is right, even though it involves some risk—just how to reconcile those two extremes is unquestionably going to be one of our problems in the teaching of safety education to teachers and through teachers to children.

MR. BAKER: I would like to come back, Dr. Rowland, to swimming. Is that a primary requirement for a good teacher? I believe in it as much as anyone else. But in our state we have no law and no curricular authority to make the requirement, and our Board of Regents, when the question came before the Board—and it was brought before the Board by a student from our college—argued that it wasn't a primary and fundamental requirement or qualification of a good teacher, that there had been many great teachers who couldn't swim, and that there would be many in the future, and therefore, we were making what is, after all, a minor requirement, and bringing it up to the level of a major requirement, which we had no right to do, no legal authority and no justification in any established curriculum.

CHAIRMAN ROWLAND: I don't know that I would press that point too far. It just happens that we have the belief that there isn't anybody who is physically normal who cannot learn to swim. We had an instance of a young woman who said she could not learn to swim, was afraid of the water. Her parents brought pressure, with the understanding that she could not learn to swim, and therefore it was unfair to compel her to do so. But we went right ahead and dumped her into three feet of water, where she was perfectly safe, and insisted that she take certain instruction there, and eventually she learned to swim. There was nothing whatever the matter with her, and there wasn't any reason why she couldn't learn to swim. It was just an obsession she had which was shared by her parents.

MR. BUZZARD: Shall I follow the same line of thinking, then, and say that

all teachers shall be taught to drive an automobile safely?

CHAIRMAN ROWLAND: Well, I think that would be a very reasonable requirement, because that is an experience that is as likely to be theirs as the experience of keeping themselves alive in the water.

MR. BUZZARD: Then that justifies driver training in the high school, doesn't it?

CHAIRMAN ROWLAND: I would think so.

MR. BAKER: Dr. Rowland, you seem, by inference, at least, to say that the only thing that would disqualify a girl in becoming a good swimmer was physical. Do I understand by that that you would not grant that there are psychological conditions that prevent a person from learning to swim?

CHAIRMAN ROWLAND: Yes, that would be my position. I may be inaccurate, but I would say most certainly so. I realize that there are people that have a phobia for water, but I think that that is something that can be corrected if tactfully handled and they were given every opportunity to slowly and gradually release themselves from that inhibition. Yes, I would say so.

MR. BAKER: I should like to hear the opinion of a psychologist.

CHAIRMAN ROWLAND: Yes. Do we have any psychologists present who could give us some light on this?

MISS MARY MAY WYMAN (Superintendent, Health and Safety Education, Louisville Public Schools, Louisville, Ky.): I want to raise this point. I am one of these people who work with teachers who have graduated from the teacher training institutions, and I would like the teaching training schools to keep in mind that what we need are teachers who have had experience in recognizing the safety problems in their community.

I furthermore would like to say that there are a lot of places in this country where people do not have the opportunity to swim, and I am very much afraid that if we put emphasis on swimming we will do exactly what a great many schools

did with driver training: they will think that swimming is the whole program in safety education, just as we have gone through cycles of having the school boy patrol the whole problem in safety education, or having driver training the whole answer to safety education, when those three phases are only parts of the whole problem.

CHAIRMAN ROWLAND: Miss Wyman is concerned that the schools for teachers shall prepare teachers to meet the problems in their own communities, and therefore too much emphasis upon swimming is, in her judgment, an over-emphasis of a minor position—and we bow to that. That is unquestionably true.

Is there any psychologist concealed in the audience who could tell us whether there is such an animal as a person who has a phobia for water that is of such a deep-seated character that it affects him fundamentally and makes him incapable of, for instance, learning to swim?

MR. BAKER: Mr. Stack may not be a psychologist, but I would like to ask his opinion on that problem.

MR. STACK: I think the opinion of the American summer camps, which teach such a large number of children to swim all over the country, is that the number of people that belong in that class would be exceedingly small. Most boys and girls who go to camp learn to swim, if not the first year, the second year, and most of the people that will be disqualified from learning to swim would be not the emotional cases, but the cardiac cases or other cases where they are not physically fit.

MR. BUZZARD: Wasn't Miss Wyman asking for the development of this sensitivity on the part of the teacher about which Dr. Baker spoke, and wasn't she saying that was the major problem for teacher training?

CHAIRMAN ROWLAND: You mean sensitivity to what, Mr. Buzzard?

MR. BUZZARD: To the fact that there is a need for safety education, and that there are certain materials which can be integrated into elementary and high school practices, subject matter, that will gain this end, or help gain the end.

CHAIRMAN ROWLAND: I think that is true. But she was particularly pleading, as I understand it, for teachers who would go into their communities and recognize the peculiar situations that existed there, and adapt themselves to those needs.

MR. BUZZARD: Well, we try to train teachers to adjust themselves to the new community. That is one of the parts of the new educational philosophy. That ability ought to be to examine the community and the particular place of teaching, and recognize whether or not it has situations that can be used to teach safety.

CHAIRMAN ROWLAND: Oh, yes, that is perfectly true. On the other hand, we send out teachers to be missionaries into communities that are Godforsaken and that need not be so much adapted to, as to be lifted out of their own slough of dependency.

CHAIRMAN ROWLAND: A question has just come in from the audience. It is:

"If I wanted to get a master's or doctor's degree in safety, so I could become a better teacher, where could I get some training?"

Well, I would say at New York University, under Mr. Stack. But I am going to ask Mr. Stack to answer that.

MR. STACK: There are a number of universities throughout the country that are giving a great deal of work, under normal conditions, in the field of safety. New York University happens to be just one of these. The University of Illinois, University of California—quite a number of other universities are giving certain major courses in this field.

MR. STACK: I would just like to add one more thing to the question which was originally asked here and wasn't completely answered. I would like to suggest that in addition to the provision on the part of teachers colleges for summer instruction, either integrated with the existing subjects or through demonstration schools, that each of the teachers colleges provide opportunities throughout the year for the introduction of safety in one-day institutes, in conferences, in regional areas throughout the state, so

that these teachers from the hinterlands who are not apt to come in to the college may have advantage of that work.

As a matter of interest, there now are some fourteen states in which, during the next five or six months, there will be certain kinds of institutes held. Actually, these happen to be in the pre-induction field, where we are interested in trying to get the high schools, particularly, to get young people ready for the Army. But there is no reason why the teachers college could not be a center of short training courses, or one-day institutes, so as to still further influence these teachers in the service.

CHAIRMAN ROWLAND: I pause at this time to invite the audience again to ask questions or to make comment.

MR. DONALD CARROLL (Board of Education, Pittsburgh, Pa.): I am very much interested in your statement as to the possibility of children becoming oversensitized to the safety problem. I just wonder, if that were a problem, could that not be avoided by putting the safety education on a positive rather than a negative basis. By that I mean, "Cross on the green light; don't cross on the red light."

CHAIRMAN ROWLAND: In other words, emphasize the green, rather than the red.

MR. CARROLL: Positive. "Do this," instead of "Don't do this."

MR. A. N. ZECHIEL (Traffic Safety Association, Detroit, Mich.): I am very frank to admit, as one member of the audience, that I am afraid I have been marooned on this life raft, floating around this swimming pool, and I would like to ask someone on the panel to summarize very briefly, three, four, five, or six points that have been made this afternoon, relative to the future of safety education in teachers colleges. I have got about two or three listed, coming chiefly from the contributions of Dr. Stack. I think many of us could profit if we would have such a summary. There are four representatives on the panel from teachers colleges. Are you willing to go out on a limb and predict what will be the future of safety education in teachers colleges?

CHAIRMAN ROWLAND: There are

some presidents of teachers colleges here who have taken up a good deal of your time, and maybe one or another of them might be able to answer Mr. Zechiel's question. Mr. Baker, would you like to have a go at that?

MR. BAKER: It seems to me our problem comes right back, largely, to this question as to whether or not there are to be separate courses in safety education, or whether education in safety is to be largely incidental. I have agreed with President Buzzard that in the present status of research in safety, it needs to be largely incidental. My reason for saying that is that after all, education is largely an intellectual matter, and I haven't been able to see that there are sufficient materials of an intellectual nature to make courses in safety education as such. At present that is not belittling the importance of safety education in the present status of research in safety education, I should say that it is now and it will be for some time, largely incidental.

CHAIRMAN ROWLAND: Would you agree with that, President Buzzard?

MR. BUZZARD: In presenting to the public schools, yes. But in the training of your teachers, you have to develop the so-called sensitivity to the problem. You have to help her discover the materials to use, the kind of incidents or starting points, and I can see very well, in the department of education in a teachers college, a course in the materials and methods of safety education.

Now, that gives the teacher who wants an elective a chance to strengthen herself in this field. I don't think it need be required of every teacher, but it certainly would give opportunity for those who would find an interest in this sort of thing, and feed toward a smaller group who would become the teachers in that field particularly.

I honestly think that if we are going to consider human welfare enough in these post-war years, there can be a place for a course in safety education as a part of teacher training.

CHAIRMAN ROWLAND: Well, as the third teachers college president on this panel, I would like to take a middle

ground between these two gentlemen. I believe that there is much safety that will be taught incidentally, and that it will be a point of view and an emotional attitude, much as has been discussed heretofore in the panel. But I also believe that there will have to be courses, specific courses, just as Dr. Buzzard has said, to provide the materials and the techniques by which teachers can present to their children, and be conscious of what can be done with children, to develop an attitude toward safety, and I think that the post-war world is going to produce a concern, just as Dr. Buzzard has just said, for human welfare, which will dominate not only safety, but many other departments of our teacher education curriculum, and indeed, of the work of our schools* in general.

MR. DONALD G. ALTER (Eastern Illinois State Teachers College, Charleston, Ill.): May I say just a word, please? I happen to be the impressionable young man that Dr. Buzzard was talking about, and I have now taught a safety education course on extension four times. That is my entire experience with safety education. I teach a class in Robinson, Ill., and I have thirty-one students. The requirement for passing this course is that every teacher in that course set up a safety program in her school, and it seems to me that that is one way to get at the problem. If we could have the teachers in the school, under direct instruction—each one of them—do it as a requirement for passing the course, then you know that there is a safety program of some sort or other, at least, going on in that many schools.

MR. CLARK: I like that idea of in-service teacher training, and that answers part of the question which I asked: Are you ready to supply help in the in-service teacher training? Now, as a matter of information here, I think we have overlooked one source, two sources of help in our planning of our courses. One is our host, the National Safety Council. I can speak from experience that if I have ever had difficulty or wanted some help, I have always gotten every bit of help that was available, and very promptly. The other source, to those of us in the East, at least, is through Dr. Stack, at

New York Center. They are both most generous with their help and assistance. I am speaking now as a public school man.

MR. PAUL V. SANGREN: It seems to me there are two other possibilities in teacher training in service that have been overlooked. One is the training school itself. It seems to me that if in the training school itself, to which every student teacher is exposed in the pre-service period, we have a good program of safety education, we have a very good source of education for the teacher. In the second place, it seems to me that in the safety practices in the college as a whole, we have example and practice that can improve the prospective teacher.

MR. BAKER: I would like to ask this young gentleman from President Buzzard's school, if in this course that he gives, inasmuch as it is a professional program for the teacher, isn't the safety, after all, incidental to the professional program?

MR. ALTER: It is a course in safety education, that is, teaching teachers to teach safety in their schools.

MRS. NICHOLSON (Safety Chairman, National Congress of Parents and Teachers, Utah): I would like to take you

out in the West. I wonder if it is unique in this, that every teacher in Utah, to be a certificated teacher, must have had two hours credit in safety education. One other thing. In regard to many of our older teachers, then, who have not had this training, they must return to the summer school to get it, and in this summer school, in our agricultural college, one teacher starting the course said, "I can't understand our having to learn anything about safety, when we can learn all we want to know about it in the Readers Digest." But after having gone through the course, she readily admitted that there was a lot to this teaching of safety.

MISS WYMAN: Kentucky requires it for teacher certification, but I am sorry to say that the schools give only the minimum required by the law.

CHAIRMAN ROWLAND: It is too late to get into a discussion of the validity and propriety of state legislatures' imposing curriculums on the schools and courses of study. But nevertheless, it does give an impulse to a new movement when it has such legal and statutory backing. However, the best way to do this is to have it come out of a felt need, and be administered by an educational group who are really convinced of its worth.

WEDNESDAY MORNING SESSION

October 6, 1943

Techniques For Improving Safety Education

Presiding: GORDON C. GRAHAM, supervisor of Safety Education, Detroit Public Schools, Detroit.

Safety Education Survey: Detroit Public Schools

By WARREN E. BOW

Superintendent of Schools and President of Wayne University, Detroit, Mich.

For almost a quarter of a century, safety education has been an integral part of the curricula of the Detroit public schools. A pioneer in the field of safety, Detroit conceived and established a broad program of safety instruction in 1919. During the period since, many changes have been made in the school program to make the teaching of safety more effective. Modifi-

cations have been made in the curricula, courses of study prepared, and other forms of action taken in order to improve our safety instruction.

The achievements of the Detroit public schools since organized safety instruction began there are worthy of commendation. Our schools have made great strides in accident prevention. In the early days

the ratio of traffic accidents to children and adults was almost one to two. At the present time it is nearer one child fatality to seventeen adults fatally injured. We in Detroit feel justly proud of this record.

Need for Expansion of Program

Gratifying, however, as is this resultant outcome, Detroit is not complacent with respect to improving its safety education program. The splendid progress noted herein was a strong motivating factor in the decision to undertake, last spring, a survey of our safety education program. Furthermore, in a report to the Trustees and Board of Directors of the Traffic Safety Association of Detroit, Mr. Sidney Williams, General Manager of the National Safety Council, recommended that a survey of our traffic safety education program be conducted.

The administrative and supervisory staffs felt the need of further improvement in our safety instruction. This feeling arose partly from an awareness that the gains in child safety were not matched by comparable gains in reduced traffic fatalities to adults. For, during the past decade, the traffic accident rate in Detroit has exceeded the average for cities of more than 500,000 population, according to the annual report of the Traffic Safety Association of Detroit. Failure of the safety instruction to transfer over from school into adult behavior seemed to indicate clearly that our traffic safety education program may not be fully effective.

Another factor that worked for improvement in the safety program was the desire to conserve manpower for war use. Since thousands of industrial employees are recruited from the schools, a primary obligation of education is to prepare both youth and adults for work in war industries. It is clear that this preparation must take into consideration the safe practices as well as the industrial skills involved in performing a job.

Survey Conducted

Accordingly, we requested the National Safety Council to conduct a survey of safety education in the Detroit public schools and to make any recommendations which they consider will increase the ef-

iciency of this work. The Council kindly accepted our invitation and assigned in March a staff consisting of several educational and safety specialists to make this survey. On the staff were Dr. Vivian Weedon, curriculum consultant; Mr. Leslie R. Silvernale, field representative; and Dr. Wayne F. Hughes, specialist in vocational and shop safety. We made available to the survey staff the facilities and resources, both in personnel and materials, needed to conduct this investigation.

This survey was city-wide in scope but was limited to safety education in all school classifications—the elementary, intermediate, and high schools. It did not cover the adult education programs and the special schools, nor Wayne University except as its services contributed to the above-mentioned divisions through teacher education.

The exclusion of school plant inspection from the survey does not mean that the survey staff regarded inspection as unimportant. Quite the contrary, "the constant provision of an environment in which learning activities can take place, threatened only by hazards intrinsic to that particular activity, is the prime responsibility of any school," the survey report points out. The report, furthermore, states: "Example is an important learning technique and . . . there is, therefore, a close relationship between a safe building and safety education." The limitations of time and the techniques employed made the exclusion of plant inspection necessary.

Program In Use

It seems desirable, in the interest of the accomplishments of this survey, to present an overview of Detroit's safety education program in order to understand fully the problem which faced the survey staff.

As has already been implied, safety instruction occurs at all levels of the Detroit school system. Safety is in all the curricula from the kindergarten through the twelfth grade. All areas of safety—home, play, school, recreational, occupational, and traffic are stressed.

In the elementary school curriculum, all

subjects and fields of study make a definite contribution to the total safety program. In kindergarten, the child learns safe ways in the use of materials and in living with others. He learns to stop, look, and listen. In the science program, pupils learn the need of preventing fires and of handling combustible and dangerous materials properly; while in the social science courses, the problems of transportation are more natural. The safe use of materials, tools, and equipment in the shop classes is normative to the vocational and art fields; whereas, the teaching of safe ways to run, bat, catch, and swim as these activities relate to youth, is associated with health education.

The emphasis in the different subjects varies with the individual school. In one it may be the auditorium which carries on the major part of the program of direct safety instruction; in another, the home-rooms; in another, the social studies; and in still another, the vocational education classes. However, the great opportunity for the unification of safety teaching is offered in the homeroom. In Detroit, the pupils spend half of each day in the homeroom where instruction is given in English, reading, arithmetic, handwriting, and spelling. Emphasis there is on socialization with provisions for meeting individual needs. The other half of the pupils' time is spent in activities which can be carried on more successfully in special types of rooms under the direction of teachers especially trained to give such guidance. These activities include art, music, literature, social studies, health education, auditorium, library, and the practical arts.

An important development is the establishment of Safety Centers in ten of our elementary schools. These schools represent a cross section of the city. Here new materials will be tried, new methods will be employed and research will be undertaken which ultimately will be passed on to other schools in the city. This work is underway at the present time.

With respect to the secondary schools, similar observations may be made; but the particular point of emphasis here is that their program has, in recent months, undergone certain changes in order to "gear" their entire instruction program to

the war effort. In the tenth grade as a part of the "physical fitness" health instruction program, attention is given to the following categories: planning a safe society, safety in physical education and athletics, safety in traffic, safety at home and at school, and civilian safety in time of war.

First aid obviously has been an important part of the safety program, especially since the outbreak of the war. All twelfth grade students take First Aid training under the expert instruction of health education teachers especially qualified for this work. A unit of safety instruction consisting of ten lessons is included in the civic course. But, in general, in all of the senior high school subject matter areas, such as science, home economics and industrial arts, the safety activities carried on represent an expansion of the work begun in the elementary school.

The safety curriculum in our schools consists of a vast number of real safety experiences which pupils have who live in a large industrial city. Activities of various types, in addition to reading about the different areas of safety, are used so that pupils arrive at safety understandings and practices through meeting real safety situations.

The classroom work is only a part of the larger whole of safety instruction. Widespread activity, as the Safety Patrol in the elementary schools, makes pupils active agents in promoting safety in the community. In such ways pupils are learning not only the correct habits of traffic safety; but are, in addition, learning to work co-operatively with their fellow citizens and are extending their thinking about safety problems to many of the issues and questions discussed by the adult members of the community.

Survey Techniques

Upon its acceptance of our invitation to examine the safety education program of the Detroit public schools, the National Safety Council submitted a plan of their survey procedure. The technique employed was of the self-survey type. In this connection, it may be of interest to note that, as the survey staff report states:

"The task of the survey was to a large extent one of uncovering and validating recommendations made by members of the Detroit public school staff."

With a view, therefore, to sharing with other school systems the results of this survey, it seems highly desirable to describe briefly the methods the survey staff used.

As a preliminary step all courses of study used in the Detroit public schools were sent to the National Safety Council for examination. For example, we sent them a copy each of "A Teacher's Guide for Safety Education in the Elementary Schools," "Safety Handbook," and courses of study in the vocational subjects, health education, reading, social studies, language, music and art. These data included those materials which have no particular reference to safety as well as those which contain specific safety information and suggestions or procedures for the teaching of safety.

In order to acquaint the survey staff with the setup in Detroit, a map indicating the location of all of our schools had also been forwarded so that later a cross section of our schools might be selected for further study. Circulars of information relating to the secondary school subjects were forwarded. Title of all text books whether or not they related to safety had also been sent. The textbooks themselves were available at the Chicago office which made it unnecessary for us to send copies of the textbooks which are used in Detroit. Not only did we supply them with the instructional materials, but we also supplied the survey staff with sample forms which are used for reporting school accidents to our administrative and instructional heads.

The major techniques used in the survey were:

1. **Data Reports**—Information relating to each school was collected so that all known features or characteristics would be known to the persons making the survey. Such information was included as the number of special and part-time teachers, number of janitors and engineers, type of community served, the predominant nationality, the range of the mental scores

of pupils and the average daily attendance. This information was compiled by the central office and was given to the survey technicians as soon as it was completed.

2. **Questionnaires to Principals**—In Detroit, as in other communities, each school has its unique problem. Schools are located near super highways, others are not; obviously, the traffic problem is different in one area than in another. In other schools the problem of teaching home safety is different than in others. This is exemplified by the fact that some homes have different equipment than others. In some areas of the city, little or no electrical equipment is available; in others, there are many kinds of gadgets and electrical apparatus.

Principals were asked to state, rather specifically, what program of safety instruction they were carrying on, what the difficulties were which they were encountering, and how safety instruction could be incorporated into the program to make it most effective.

3. **Group Interviews**—Two afternoon meetings were held each day when teachers were called together in groups of one hundred or more. They replied in writing to an evaluation form which asked their opinion regarding available teaching materials, needed materials, instructional objectives, and suggestions as to how the program could be improved.

4. **Administrative Interviews**—Persons responsible for major instructional or administrative areas were interviewed so that they could state the ways in which safety was being related to their own subject matter areas or administrative divisions. During these interviews, each one had an opportunity to state how he thought safety instruction could be improved in the Detroit schools.

5. **Visits to Schools**—Three visitors from the National Safety Council spent two weeks visiting the Detroit schools. In order that they might become acquainted with our Detroit schools, each visitor spent a half day in each school. They observed at first hand the program in the schools, talked with the principal, teachers, and pupils and gleaned ideas from

each person with whom they talked. Thus, the teachers in these buildings were visited individually right while they were on the scene of action. These specialists visited 20 schools and talked with approximately 300 teachers besides large numbers of pupils and the 20 principals in the schools.

Results of the Survey

The Detroit public schools have profited greatly and will continue to profit from this safety survey. Its value, however, is not limited to Detroit, for it will make a real contribution to the improvement of safety education throughout the United States.

In order, therefore, that we may be of maximum service in furthering the cause of safety education generally, it seems desirable to devote the remainder of this discussion to (1) a broad interpretation of the educational policies, procedures and principles which in the light of the National Safety Council's survey seem necessary to a realization of the aims of safety education in all school systems; and (2) to an examination of the specific recommendations for the Detroit public schools.

It is important to point out that the survey staff regarded safety education as a component unit in comprehensive school programs which begin with the elementary school and extend upward through the secondary school levels to the professional training program in the university. Safety should not be treated as an isolated field of study but as a part of the pupils' total education.

Comprehensive Planning Necessary

Long-term comprehensive planning by school systems is urged as an important factor in organizing and progressing toward an effective safety education program. Society has the right to determine what its aims may be, but only educators are qualified to say how these aims may be accomplished.

It is the responsibility of the school (and, incidentally, a self-protective device for the school) to forecast coming social change and prepare to meet community demand.

This means that the major responsibility

for safety in the community rests with the administrators and teachers of the public schools. They must make the safety problems of the community their problems. They, therefore, must develop a broad and deep interest in safety with a view to building a program of safety education in terms of the welfare of all the citizens.

In planning safety instruction the school system should be regarded as a unit. Yet, sufficient flexibility in the safety education program should be provided to enable individual schools to meet community needs.

Safety program planning should be in terms of the total curriculum. Safety possesses the quality of being everywhere present at the same time which makes it essential that safety education tie in with all educative experiences.

Teachers Must Be Informed

It is important that school systems formulate and provide to teachers a clearly written statement of objectives defined in terms of pupil behavior, and derive in their safety learning and testing activities from these objectives. Mere statement of safety aims offers no satisfactory assurance that a school system will progress favorably toward a realization of any given goals.

Safety education can and will be improved only as the individual teacher becomes conscious of the changes he (or she) is trying to effect in the boys and girls under his (or her) guidance, and plans his (or her) learning activities in accordance with these objectives.

Statements of objectives should be the product of cooperative endeavor on the part of the educational staff as a whole. This is essential to complete teacher understanding and acceptance of the aims of any safety education program.

In another place, the report states: "The Detroit plan in using testing instruments prepared by a committee of teachers is a decided step in the right direction."

Safety instruction should be conceived and developed in terms of both school and eventual life activities. All areas of safety should receive emphasis and the emphasis should be in proportion to the importance

of each area in the lives of the pupils and graduates of the school system concerned. It is recommended in the survey that the accident statistics for the twenty-four-hour-a-day life of all the pupils while in school and of a representative sampling of graduates be used as a basis for the school safety instruction program.

From the standpoint of the various fields of study, safety should be regarded as a functional and an integral part of the learning process in all subjects in the school curricula.

Fitting Safety Education Into the Curricula

This brings us to the next point which is that safety education cuts across all fields of study and the safety learning activities developed should be those that are intrinsic to the subject matter concerned. In planning a program of safety instruction, all subjects should be carefully examined to determine the maximum contribution each can make to the total safety education program.

There are two philosophical approaches to the organization and installation of the safety education program which school systems should consider carefully. One approach favors complete dispersal of safety education activities throughout the school curricula, while the other advocates a highly centralized organization and direction of safety instruction. The survey staff advocated neither extreme but favored provision for sufficient unification in order to give professional leadership and guidance to the teaching staffs.

As in all other fields of study, provision should be made for taking advantage of all types of supplementary teaching materials, such as movies, slides, posters, and other visual aids.

Since growth in safety behavior depends on the active interest of the individual pupil, it is essential that pupils be given a certain amount of opportunity to develop the safety rules and regulations which contribute to the security and happiness of society. Particularly in those safety activities associated with school life does student participation seem desirable and educationally appropriate.

In this connection, we are pleased to note that the survey staff discovered in the Detroit public schools "splendid examples of both formal and informal self-governing procedures" and heard "several instances of outstanding philosophical viewpoints among the administrative, supervisory, and teaching staffs."

One highly important precaution is prominent in this survey, namely, the avoidance of settling into a stereotype pattern in safety education activities. The matter of protecting school children against possible hazards in the school environment may well illustrate this point. The danger here is that the form rather than the spirit of any given safety regulation or safety teaching procedure may predominate, with the result that pupils gain on real experiences in selecting those activities which will yield them most in safety understandings and habits. It should be noted, however, that this danger of becoming frozen into a fixed mold is common to all fields of study and is not unique to safety education.

Summary of Findings Concerning the Detroit Public Schools

As would be expected from so thorough and scientific a survey as the National Safety Council conducted in the Detroit public schools, elements both of weakness and strength were discovered in our safety education program.

In summarizing our strengths, we note with great pride that the report makes this significant observation:

"The survey staff wishes to record the belief that the teaching and administrative staffs of the Detroit public school systems are superior in their grasp of safety education problems and in the seriousness with which they regard this problem. Intelligence and seriousness were reflected in the personal contacts."

Strengths

Great tribute is due the survey for its interest in investigating our program with a view to determining first its strong features. The following favorable conclusions were evident:

1. Safety is definitely incorporated in

all divisions of the Detroit school system and is in all the school curricula.

2. The safety instruction program is directed by a central unifying agency which has been set up for the entire school systems.

3. A feature of the Detroit public schools is the splendid cooperative relations between the Traffic Safety Association of Detroit, the Detroit Automobile Club, and other community and local governmental agencies or groups active in promoting safety.

4. There are "splendid evidences of sound philosophy among the Detroit staff members" with respect to student participation in the safety curriculum. Again, the report stated:

"Incidentally, the finest example of informal student self-government in a classroom ever witnessed by one of the observers appeared in a Detroit public school classroom of extremely low socio-economic level and of about 90 per cent Negro enrollment."

5. "A splendid job apparently is being done in teaching acceptable traffic safety practices to the public. This conclusion is based on observation of pupil practices at unprotected intersections."

Weaknesses

With respect to the weaknesses, the survey pointed out five ways in which the Detroit public schools may improve their safety education program. These are as follows:

1. The Detroit public schools need to take increased leadership in all safety education activities of boys and girls carried on in the community.

2. Care needs to be taken to avoid, in the safety education program, an over-emphasis on protection rather than an emphasis on education in safety behavior.

3. There seems to be a need for supplying classroom teachers with sufficient up-to-date supplementary materials, such as visual aids and reference books.

4. Despite war conditions and the limitations imposed on the educational staff,

there appears to be a need for continuing demonstration centers, teacher conferences, and other supervisory devices.

5. Although splendid examples of student participation in safety activities were observed by the survey staff, there appears to be room for an extension of this development in the next five years. Especially in those student activities of which safety is a normal part should increased opportunity be afforded students to formulate safety rules and regulations that concern them.

The limitations of time and space do not permit as complete a discussion of this survey as its contents justify and warrant. In due course of time, however, individuals and groups interested will be afforded an opportunity, through releases to both lay and professional organizations, to make analyses and evaluations for their own needs and purposes. Furthermore, as the various individuals concerned make a study of these releases they will discover even more implications for safety education improvement not yet discussed.

In conclusion, we express appreciation and gratitude to the National Safety Council and the survey staff for its splendid contribution to the safety education program of the Detroit public schools. During their visit in Detroit the members of the survey staff exhibited a most commendable and scientific attitude toward their work. In their contacts with our staffs they unquestionably contributed a great deal to them professionally because of their broad experience with other teachers and school systems throughout the United States.

Moreover, the National Safety Council through its survey has rendered a notable service to our school system generally. The splendid relationships between the survey staff and the members of our educational personnel have had a stimulatory and constructive influence upon all departments of the Detroit public schools.

Certainly this safety survey will make the Detroit public schools more effective in their services to the community of which they are a part.

The Community as an Energizing Group

By H. F. WILLIAMS, JR.

Field Representative, Central Region, National Safety Council, Inc., Chicago

I was told recently by a school superintendent that almost always the patron comes in with a complaint, only rarely with a word of approval and almost never with a constructive idea. This summation seemed a little cynical but I asked several other educators and they agreed.

You don't get a demand for school safety patrols until a pupil is run down by an automobile, nor for supervised playgrounds until a boy or girl falls off a trapeze apparatus, nor for driver education until a car loaded with high school boys and girls is smashed up. Then you get a howl of protest and the caustic observation that the schools aren't doing their job. The idea seems to be that educators can create curricula, hire additional instructors, purchase expensive apparatus and completely set up a new program entirely on their own initiative.

The complainants rarely offer their assistance to the school administration to create the democratic basis for the improvements they propose. Yet the very democracy for which we are fighting today requires that the people themselves must determine the direction of education. If the people want the schools to train citizens to prevent accidents, the people must support safety education in very practical ways. In the final analysis, the people must want safety education enough to pay for it.

People Must Determine Objectives

Charles Horton Cooley wrote in his classic *Human Nature and the Social Order* to the effect that, even in a democracy, the people are not competent to pass on technical questions of social administration nor to choose the direct administrators. These questions must be decided by the people's representatives, in the opinion of Dr. Cooley. He taught that the people are competent to decide—that it is imperative for them to decide—the objectives, trusting trained leaders to work out the means of reaching these objectives.

While I do not recall that Cooley was writing particularly about education, much less safety education, it seems to me as a layman that he very well expressed the ideal balance between the school administration and the school patrons. The democratic process requires that the majority determine the objectives of education, expressing themselves in an orderly manner to the board of education who are the people's representatives. This is not only the people's right; it is their duty as citizens.

Many individuals and groups are not willing to leave school policy to the people and practices to the educators. These persons and organizations form temporary alliances to become pressure groups.

Suppose Town "X" has an enlightened school board, an aggressive administration and well trained teachers. Naturally this town will have an excellent program of safety education. Accident facts will be carefully recorded and analyzed; school plants will be frequently inspected for hazards; each school will have its own Junior Safety Council with active committees including safety patrols; safety instruction will be thoroughly integrated in appropriate courses of instruction; school buses will be maintained safely and will be operated by drivers trained in safe operation; safety training will be a natural part of vocational education and home economics. All this can be done and has been done by good school systems with no prodding whatever from the people.

Public Support Needed

But, if the president of the school board is defeated for reelection and a new school superintendent succeeds the superintendent I have described, other changes will follow. There may be a few who are not in sympathy with the safety program and, in a desire to distinguish itself from the previous administration, the new administration may try to throw out the entire safety program. It might be able to do this simply because there is no well

organized body of public opinion supporting the program.

Suppose, on the other hand, that the school safety program had been strongly supported from the beginning by the "X" Safety Council, a non-profit, non-political and non-sectarian organization composed of influential citizens. The Safety Council had, in fact, actively participated in the program by organizing Junior Safety Councils, furnishing Sam Browne belts, ponchos and badges to the school safety patrols and teaching aids to the schools. Wouldn't a reactionary administration have great difficulty in eliminating safety education with such an institution actively supporting the program?

In this city, representatives of the community are acting neither as a pressure group to force changes nor even as energizers to instill vim into the administration, but rather as stabilizers, insuring the continuity of a type of education that is needed by every boy and girl. There are many cities in which the local safety council functions in the constructive way that I have outlined.

Other community forces, besides the safety councils, can be successfully utilized to promote school safety. I mentioned the safety council first because most of these other agencies work through it.

For example, the Street Railway Co. of Cleveland was experiencing considerable expense and inconvenience because of unsafe and rowdy behavior by school children. The Cleveland Safety Council became interested and persuaded the utilities company to finance a motion picture on safe use of street cars and busses. All junior and senior high school student council presidents and faculty sponsors were invited to a luncheon at which the plan was discussed and approved. The home rooms of each school then submitted subjects to the school student council. Then a community-wide committee of student council officers and sponsors drew from these selected subjects to make a single list. Each school council developed a movie scenario, and all scenarios were merged into one. More than 500 pupils participated in this project

which consumed most of a school year. They became tremendously interested in courtesy and safety on public conveyances and a definite improvement in conduct resulted.

Newspapers, Radio May Help

The daily newspaper may be useful through publication of school safety news and features. Radio stations, which are inveterate users of children's programs, will often prefer a well supervised program sponsored jointly by the schools and the safety council than to air some of the more questionable types of shows.

Certainly the police department can be exceedingly useful to the school authorities in supplying expert advice on traffic controls such as marking crosswalks, enforcing no-parking rules near these crossings and in arresting motorists who drive recklessly in school zones. Police authorities can advise school officials on safety patrols and provide data on pedestrian, bicycle and automobile safety. Many police departments assign selected officers to work directly with school children on traffic safety.

Similarly, the local fire department can assist the schools' fire safety program both with technical advice and through meetings, both during fire prevention week and the annual clean-up campaign.

While the safety council is not an indispensable part of such cooperative activities, it often is exceedingly helpful in developing the plans. There's one function, however, in which the safety council is virtually indispensable—as a buffer between a progressive school administration and pressure groups with commercial motives or individuals with peculiar ideas on safety education.

School Safety Committee

The device used is the school safety committee of the safety council. All that is necessary is a fixed policy by the board of education to refer all proposals affecting the school's safety program to this committee. The committee, which is comprised of both school officials and citizens, studies the problem and submits an advisory recommendation to the school board—a neat way of taking the pressure

off the school authorities for undesirable promotions and providing clearance for projects that are worthwhile.

I have tried to show that a community safety council can be a constructive asset to a school safety program. There is no idea that the schools are handing over part of their educational responsibilities to outside agencies. I have talked with safety council managers who have worked effectively with school authorities for several years and I have never found one who professed to know a single thing about what should be taught in the schools, how it should be taught nor who should teach it. Their idea is to let the

school authorities determine these questions. The function of the safety council is to support the professional educators and to oppose those who seek to interfere with the schools' prerogatives.

If you do have a good safety council, you are to be congratulated. If your safety council is weak in school safety, or if you have no safety council at all, you might reverse the procedure. I suggest that the schools become the energizer, operating on the community to see to it that a strong community safety organization is started. The National Safety Council will, through its field services, help your leaders organize such a group.

WEDNESDAY AFTERNOON SESSION

October 6, 1943

Presiding: MARY MAY WYMAN, supervisor, Health and Safety Education, Louisville Public Schools, Louisville, Ky.

"Latch-Key" Children

By BETH MULLER

Field Consultant in Child Welfare, Chicago Bureau, U. S. Children's Bureau, Washington, D. C.

"Latch-key" children (the term that indicates "nobody at home") have captured the interest of the public, an interest stimulated by the headlines of the newspapers. These tell of the tragedies and the difficulties, physical, mental, social, and spiritual, that can beset children who are deprived of the normal safeguards and supports which are ordinarily provided within their own family groups.

If the mother, the homemaker, must be employed outside of the home, these safeguards are weakened and the community frequently becomes aware of the fact that something is wrong. The problems are not new but are those which have been faced by social agencies and by others working directly for the welfare of families and children over a long period of years. The war has, however, intensified and multiplied these problems to serious proportions and has brought them before the public eye to an unprecedented degree.

We cannot deal with this question from the point of view of physical safety alone, important as that is, even though this is a meeting of the National Safety Congress with this session devoted primarily to the educational approach to safety. Having had innumerable constructive opportunities of working with educators and with leaders in the promotion of safety, child-welfare workers feel justified in assuming that you have a broad concern over what happens to children in all phases of their development.

Let us consider, therefore, some of the basic philosophies of our way of life. The first one is that home life is the foundation of our American culture, and, consequently, in war as in peace, a mother's greatest service is to her own children in her own home. The War Manpower Commission has made this one of its policies and has urged that mothers not be recruited for the labor force until all other sources of manpower have been

exhausted. A second philosophy is that children, all children, have certain fundamental needs and that it is the nation's responsibility to see that every child is provided the care he needs, either through his own home or through other resources to supplement the home.

We must, therefore, be realistic and face the fact that there are families in which mothers are employed and that in a democracy mothers must be allowed the right to make this choice. In most instances women decide to work for economic reasons, although some work for patriotic or personal reasons, or because of the great pressure for workers in war industrial areas already too crowded for any more people to come in.

It is estimated that from 1,200,000 to 1,700,000 women with children will have taken jobs by the end of 1943. The number of children affected may run as high as 3,000,000. Can we say that these children, already handicapped by the absence of the mother from the home, shall be further penalized by public disregard and neglect of their needs? It is from this group that the so-called "latch-key" children come.

Shift for Themselves

Adequate and sound private arrangements are made for a number of these children by their parents. For others, use is made of community facilities established for their care. Others, particularly those of school age, are sometimes left to shift for themselves. Only recently a mother came to talk about some plan for care of her 3-year-old son. When asked if she had any other children, she said, "Oh, yes, I have a 9-year-old girl, but she can take care of herself." But can she? Educators in safety, as well as others have a real opportunity and responsibility to help bring to the attention of parents the dangers of such an assumption and of haphazard arrangements.

What are some of the hazards faced by the inexperienced and sometimes enthusiastic child or adolescent in trying to "take care of herself"? First there are the ever-present possibilities of accidents. A recent study has been made in Detroit which shows that more of these occur in homes than anywhere else. All of us

could probably cite cases of children burned to death in the absence of parents. There are lesser burns, falls, cuts, bruises, and the possibility of infections through neglected injuries. The electric fan, egg beater, or stairway can become implements of destruction. Children's eyesight can be destroyed in a careless moment. Escaping gas may not be noticed until too late. Choking may become a serious matter when there is nobody near to help.

Some of these same factors may operate outside the home where there are traffic hazards. A child was drowned not long ago while both parents were at work. There have been flagrant cases of over-exposure to both extremes of heat and of cold. One boy was seriously hurt the other day while playing in the basement of a condemned building which collapsed. Unsupervised children hover around scenes of neighborhood construction or run to participate in any unusual street disturbance.

Then there are the physical and emotional effects of improper rest, over-excitation, over-stimulation, and over-excitement; and of ill chosen, badly prepared, or inadequate food. In the spring, several of us watched a group of school children from 6 to 10, whose mothers were working, select their lunches from a concession. One child had a cold drink, candy, and two kinds of cake by the time he had spent his quarter.

Disproportionate responsibilities may be placed on too young shoulders. One worker tells of a girl of 10 who was responsible for herself and for a brother of 7. The parents left home at 6:30 while the children were sleeping. They prepared their own breakfast and got themselves off to school. At noon they returned home and prepared their own lunch. On Saturday the worker said they "could do anything their idle fancy willed." Other children, locked out of their homes hang around the streets and pick up a bite to eat anywhere.

Delinquency Dangers

Much is being said, too, about the dangers of delinquency for unsupervised children of all ages. Gangs of the wrong kind spring up in which undesirable associations are cultivated. Boys and girls

frequent pool rooms, railroad and bus stations, and go to the unsupervised parks and playgrounds at night. Sex irregularities and exploitation can too easily occur. Children seek illegal employment for which they are neither equipped nor physically strong enough. Such socially unacceptable behavior can occur when some children are disturbed and anxious because of the break-down of their family security.

These, then, are some of the hazards faced by children in these days of war pressures. Is anything being done about them? Yes, a great deal is being done and a great deal more can be done.

It seems wise to pause here to clear a misconception that may have been given, that working parents are in general careless or unconcerned about the welfare of their children. Most of them are deeply concerned and are seeking satisfactory plans for their children. Some have already found such plans; some do not know where to go for help. That leaves only a comparatively small number of parents who are deliberately careless about providing adequate care. Unfortunately, too, it is frequently the parents whose children are getting into the most trouble in the community, who realize the danger least. Some communities are better equipped than others for giving service and that makes a difference in what parents can do about protecting their children.

Because this is a section on education and safety, let us see how the educators can participate in the program for the protection of children. There seem to be two major ways in which this can be done. First, it is important that school people be well informed on what is being done in the community and on what the resources are for child care and protection, so that they can refer children and parents to the proper places for getting help and consultation in their problems. Some of the resources may be within the school system itself. Second, teachers may be of direct service in certain aspects of the program.

There are State committees on care of children in wartime in at least 46 of the States (and in the District of Columbia and Hawaii). These committees are or-

ganized by the State Defense Councils and are made up of representatives from agencies concerned with health, education, welfare, employment, labor, industry, and other groups and individuals concerned with the welfare of children and with war production. They plan for meeting the State-wide needs and stimulating the organization of similar committees in local communities, which work out, promote, and put into action, community-wide plans for children for their own areas.

Cleveland Plan

Cleveland has such a local committee and it was originally set up under the children's council of the Welfare Federation. Essential parts of the service as already existing or put into effect by the committee are:

New day-care centers for preschool and for school-age children, some under school auspices and some under welfare auspices. These are financed, some with help from Lanham funds and some entirely from city resources and from parents.

Foster homes, carefully studied, licensed, and supervised under the child-welfare program for the care of children under 2, and for children of other ages for whom group care is not advisable or is not available.

A counseling service provided by skilled and understanding social workers for information and consultation to parents. This service is used by parents in developing sound plans based on the needs of their particular children. Parents participate in the planning and in the cost of care for their own children.

Communities are attempting, too, to provide homemakers to care for slightly ill children in their own homes, if the mother's work is essential.

The teachers can find out through their local committees where the families can be referred for consultation and information. If there is no community organization, and needs seem apparent, teachers can possibly be instrumental in stimulating action by calling the matter to the attention of local school heads or welfare departments.

Now as to the second area of participation: teachers may be of direct service in a number of ways.

They may give actual class instruction and practice in safety measures for children who have added responsibilities for themselves and for younger children in these war times.

They may give much help in the fundamentals of good nutrition and food selection that will help both children and parents in these busy days of added war pressures and responsibilities. They may find it necessary to arrange for some opportunity for wise sex instruction for children who need it and whose own parents may not be able to meet the situation. They can encourage the back-to-school campaign for employed children, and can make school so interesting and challenging that children will want to be there rather than on the streets.

They can be alert to any indication of disturbances in children, particularly those from war affected families, and can refer

to the child-welfare agencies on any problems needing social skill and planning.

They can realize that any before or after school program provided for the care of children of working mothers should be a complete and colorful change from the regular school day.

They can capitalize on the urge of children and adolescents to be useful and important in the war effort—an urge with a real appeal to children whose mothers are also in the war effort.

Let us then realize that the protection of the children of working mothers is a community-wide job that calls for the best thinking and effort of all of us in an organized fashion. These children and their rights as children now, and as the adults of the future, are a part of what we are fighting for. The goal is a vital one: For every child, the care he needs.

Practical Air Raid Precautions for the Schools

By DAVID B. BRADY

Coordinator of School War Activities, Rochester Public Schools
Rochester, N. Y.

While Pearl Harbor shocked the nation, to many civil authorities in the East the shock next day was more intense. An alarm, spread by police teletype and telephone, reached Rochester just before eleven that day after. It read, "Enemy planes reported approaching Atlantic Coast. Get ready!"

Fortunately, word came promptly that the approaching planes had been identified as friendly. The few bad minutes, however, had their value. Among other things it called the attention of civil authorities everywhere that there must be an immediate program to safeguard school children. School authorities had long realized the need, but in the absence of guiding principles there was little confidence felt in the steps taken. There was need for an authoritative word. Within a week, a proclamation "Emergency Instructions for Schools Until Further Notice" came from the Office of Civilian Defense, Washington. When the Air Raid Warning signal sounds it directed the schools to:

"Have each class leave its room in order as in a fire drill. Conduct classes to the air raid shelter. Do not permit any pupils to leave the building. Do not send pupils home."

In the press, by radio, and through the schools this word went to parents. Though inclined to question at first, many parents, because of its official character, accepted the national order as a better judgment than their own.

Disagreement on System

School authorities did not agree that the greatest safety of school children could best be achieved by any such universal system. School buildings differed. What about the schools located in or near military targets? It was natural, therefore, that modified plans were adopted or contemplated. Many East Coast cities had already perfected plans for dismissing pupils to their homes. Others did not believe they could go counter to the national order. For almost a year the New York

City schools had canvassed the subject from every angle. They practiced both dismissal and shelter drills. The positive order, however, was that in case of actual alarm all children must be kept in school. On the west coast, San Francisco planned to dismiss children, allowing twenty minutes for all to reach their home or the home of their friends. Portland, Oregon allowed fifteen minutes. Los Angeles, on the other hand, planned to keep all pupils in school. In Rochester we discussed plans for dismissal drills. Without further word from civil or military authorities, however, we did not believe we could depart from the national order.

The problem was not confined to school people. On February 5, 1942, General John F. O'Ryan, New York State Director of Civilian Protection, wrote to all Defense Councils of the state, and I quote in part from his letter:

"My information is that the Federal Office of Civilian Defense sent direct to some or all of our local Councils a poster or printed notice entitled, 'What School Teachers and Pupils Should Do During An Air Raid', labeled, 'Official', and also 'Emergency Instructions For Schools Until Further Notice.'"

"This placard contains instructions which are contrary to the policies of this office. Its receipt by local Councils has aroused protests, believed to be justified."

On March 15, 1943, the New York State Office of Civilian Protection issued Bulletin 5, "Schools and School Children." Another, "Protection of School Children and School Property" came at about the same time from OCD. Neither, we felt, was authority for dismissing pupils.

Seek Solution

At about that time I remember visiting one of our newer buildings with Acting Superintendent of School Buildings, Walter M. Nugent, and Deputy State Director of Civilian Protection, General Arthur S. Conklin. On February 2, I had written General O'Ryan, General Conklin's superior, about this type building, as follows:

"We have been proud of our day-light schools here in Rochester. These are one story buildings with abundant windows and skylights to admit sunlight and air. Ideal as we have found them for school purposes, there seems to be no place in such a structure that could be considered air raid shelter. I am sure you can understand our concern."

We have asked General Conklin whether, in his opinion, we should hold pupils in such a building during an air raid. All could get home within twenty minutes, most of them in five to eight minutes. He said it was our decision to make. If we thought it best to send pupils home, we had authority to do so.

We pointed out that no public statement had ever set aside the original order of OCD. If we were to develop dismissal drills, we would be in conflict with the order which all parents had accepted.

Underlying all this, however, we knew that parents would accept the action of the schools, parents most always do. In a confused world we did not wish to add to the confusion unless forced to it by attack conditions. Then, urgency might justify acting upon our own authority in terms of our combined best judgment.

From February to September, 1942 we received no further word from Civilian Protection authorities, federal or state. But, in September, General William N. Haskell, successor to General O'Ryan as State Director of Civilian Protection, issued the Memorandum, "Protection of School Children During Air Raids." It was the definite word we had awaited.

It mandated the dismissal of pupils, on receipt of the Yellow warning, from all but the safest schools. It gave a basis for classifying school buildings. If the army sent out an initial Blue or Red signal, all pupils must remain. We had but two building which could be used as shelter for all pupils at such times under this classification, viz, "Large structurally framed buildings several stories in height, located in an area without important military targets . . ."

This, in brief, is the background of the ARP precautions planned by the Ro-

chester, New York, Public Schools. We have considered Rochester as a likely target despite our distance inland. At one time we were classified by the Army as the third city in the East most likely to be attacked. Our peace time products are used by the military of the world. Their value to our Army and Navy may well convince the enemy of our strategic importance. Located on the great northern arc from Norway, we are convenient to an attack aimed at the hydro-electric power plants at Niagara Falls and lake cities. We cannot conceal ourselves night or day. We are clearly marked by the Lake, the Genesee River, and the Barge Canal.

It was, therefore, with a keen sense of need that we set upon a solution to protect our youth. From the beginning, the plan represents the contribution of teachers, principals, engineer-janitors, engineers of the Department of Buildings, and administration. Parents, and particularly pupils, have played their part. It represents also, the best that we have found in the programs submitted for our use by other cities. The assistance of Civilian Protection Authorities of the State, and especially those locally, has been most helpful, not only in evaluation of our practices, but in working with us on their detail. Responsibility to organize the program was delegated to the writer.

The Air Raid Drill—General

Our basis of action is the warning signal received and the promptness with which it reaches the individual school unit. It will indicate to the principal the type of drill to be ordered.

Warning messages come to the Board of Education by direct line from the Control Center. Tie-lines have been installed from our switchboard to ten key, or as we call them, nucleus schools, located in the several telephone exchange districts of the city. The first step in relaying the warning to these ten nucleus schools can be taken by our operators over our own lines. It takes less than two minutes. The nucleus schools send out the calls to schools in their own telephone exchange districts, no school being responsible for more than four calls. All fifty-three units of the pub-

lic school system can be reached within from five to six minutes of the time a message is received from Control Center.

Dismissal Drill

When the Yellow, or confidential warning, is transmitted to us, the operators at the Central Office relay it to the nucleus schools, adding the time at which it was received as: "Raid Practice Yellow, 10:32." The word "Practice" will be omitted in an actual raid. If the individual school receives this Yellow warning message within ten minutes of the time given, the principal is mandated to order a dismissal drill.

If more than the ten minutes has expired, his mandate is to hold a shelter drill on receipt of the Blue warning. In so far as we can obtain information from the Army, the Yellow warning message will usually precede the first Blue by ten to fifteen minutes. This length of time, together with the time of the Blue period, should permit those pupils dismissed to reach their homes or the shelter areas designated by their parents to be satisfactory.

High Schools

When the Raid Practice Yellow message is received in time, the principal or clerk in the school sounds the air raid signal, followed immediately by the fire alarm signal. This combined signal orders a dismissal drill. In the high schools, this means that all pupils except those from without the school district are dismissed. Each high school has worked out this dismissal plan in terms of the method of storing pupils wraps. Some schools store outer clothing in wardrobes attached adjacent to the homeroom, others use lockers located in corridors or locker rooms. All pupils obtain their wraps before leaving the building.

The schools make no attempt to escort or direct high school pupils to their homes. After they once leave the building they are under the supervision of the Warden Service. Pupils do proceed homeward with unusual dispatch. In the few instances where wardens have reported failure, the school authorities later have applied their own techniques on an individual basis to avoid repetition.

Civilian Protection authorities have commented upon, the fine cooperation from these older pupils. Many of them lose no time for they feel definitely their responsibility to mother and to younger children who might be enroute home from the elementary school. Observance of proper conduct during air raids is a matter of morale. It has been built up by the high school principals and their staffs through assembly programs, educational films on air raids, and discussion and promotion by many groups representing student government and activities.

Elementary Schools

In the elementary schools, the dismissal drill signal means that all pupils in grade 4 and above secure their wraps and proceed homeward as do high school pupils. The pupils in the kindergarten and grades 1 through 3 report to stations in the school set up for each neighborhood area. A teacher is in charge of each area. When wraps have been put on and attendance checked, the pupils from each area leave the building and proceed homeward under teacher guidance. Those living nearest the school are taken home first. Those at a distance continue on, and the teacher does not return to the school until all pupil charges have either reached home or have taken shelter in those homes designated by their parents as the desired shelter areas.

How each school works out the dismissal of these younger pupils is determined by the nature of the physical building and the type of school district. Procedures used must be approved by the central ARP committee.

Machinery is set up in each school to inform the area teacher of absentees in her group. The teacher knows how many of her group actually should report to the area station. Principals have used great ingenuity in devising plans for this constant check of attendance.

In each school there are a few children who are not dismissed because of permanent physical disability, distance from home, no suitable alternative shelter approved by parent, or the occasional child who may have become ill during the day. The number of pupils who remain in each building at the time of the dismissal drill

must be a matter of record in the War Activities Central Office. At the time of a city-wide drill, any marked deviation from this number must be reported immediately.

If, for some reason, a school has not been dismissed because of a warning message received too late, or any other condition which in the opinion of the principal would make dismissal unwise, this fact also must be reported to the War Activities Office. When a dismissal drill is held the War Activities Office reports to the Rochester Control Center any schools that have not been dismissed. The Control Center already has on file a statement of the number of pupils normally housed in a school building and the number remaining after a dismissal drill. It is important that Civilian Protection authorities, and in particular the Fire Department, know the conditions existing in each school building at such times. Obviously, if the pupils have been dismissed, a school presents a very different challenge to the Fire Department and other units of the Citizens' Defense Corps than when pupils remain in the building.

The Chief in charge of the Fire Department knows through years of routine check-up the hazards involved in all types of school buildings. He knows the type of construction, the approximate date of erection, the presence or lack of stair fire towers, and so forth.

In the winter time, the heavy clothing of pupils slows up the dismissal drill as would be expected, but almost every school district and in almost all areas of the districts, pupils reach home before the sounding of the public Red alarm. Area teachers, however, are instructed that, should the Red alarm overtake them, they are to seek the nearest shelter and remain there with the pupils until the sounding of the second Blue, at which time they will continue homeward.

Our plan has been set up in terms of getting children to their homes or shelter within twenty minutes from the time the warning message is received in the schools. Teachers have been equipped with arm bands of the Auxiliary Citizens' Defense Corps which permits them to return to

the building, should they so desire, even during the Red period. Teachers believe that these arm bands have been very helpful. In our early dismissal drills, motorists did not stop readily to permit groups to pass. They did not realize that the teacher and group of pupils were involved in a serious program to insure their safety. Almost all recognize the official character of an arm band and no trouble in this connection has been reported since bands were issued.

Shelter Drill—All Schools

If the first warning message received is a Blue, a Red, or a tardy Yellow, or if for some reason in the opinion of the principal a dismissal drill should not be held, the principal, deputy, or clerk sounds the air raid signal. If it is not followed by the fire alarm, it means shelter drill within the school building. (This was the only type drill used city-wide prior to September, 1942. We held trial dismissal drills, however, in practically all elementary schools.)

Each building has been studied by engineers of the Department of Buildings and shelter areas defined. Blueprints have been prepared for each building showing the areas to be used as shelter. The Superintendent of Schools has written a letter to each principal further defining these shelter areas. Written acknowledgment has been made, by the principal, of these directions and blueprint. No other areas may be used without special reason.

Shelter drills in each school have been observed by the same central committee. Drills must conform to the instructions and blueprint and those outlined in the ARP Bulletin of the War Activities Office. This bulletin will be discussed below.

Review of drills by the same central committee provided unity. At the same time it permitted the principal to refer questions and problems to the committee while in his school. Frequently, it was necessary for the central committee to return to individual schools several times before satisfactory drills had been achieved.

The school corridors prove generally most suitable as shelter areas. Wherever possible, first floor areas were used, away

from doors, windows, stairways, and boiler rooms. Interior windows in shelter areas and glass in fire and smoke screen doors have all been treated to reduce shatter. A patented substance has been applied on the inside of the pane, and cheese cloth attached. When dry, our Department of Buildings believes this provides good protection from shatter. Outside windows adjacent to shelter areas have been covered by one inch plywood.

Pupils, before leaving their rooms for the school shelter, secure their wraps. Frequently in the lower grades they bring their toys and games, in the upper grades, books. Group singing serves to pass the time.

Teachers frequently hold a story hour or read. Each school has a committee to provide a program during the shelter period. Directions provide that pupils must have facilities for sitting down if they desire. It is often necessary to take turns. Each teacher, as a building warden, is responsible for a particular section and group of pupils.

At the outset confusion was natural, but little developed. What there was, has been handled wisely. By going into a school and sounding the air raid signal, one gets an appreciation of the amount of work that has been done by teachers and pupils by seeing the order and precision with which a drill is carried out. A short period of waiting, and then, unbelievably, pupils move according to signal. There is no running, just steady movement at a safe tempo. The pupils know. It's all part of their war-time job.

Neighborhood Shelter—Crowded Schools

In a few buildings it has been necessary to use second floor corridors. In others, basement areas, when suitable, have been approved. In all but two schools it has been possible to house pupils in their own buildings.

In these two, for a time, we sheltered them in neighboring churches. The church properties, at best, did not provide as suitable shelter areas as did the school. It was just a question of too many pupils for the areas available within the school.

Civilian Protection authorities visited

these properties with our ARP committee, and agreed that they were not suitable air raid shelter. There was too much glass, stairways were too narrow, and number of exits limited. The pupils were returned to their own buildings.

It has been necessary in one of these schools to use several classrooms. Windows in these classrooms will be specially treated. Drop curtains used in industrial plants for air raid protection will be installed. In case of actual attack, pupils in these rooms will barricade themselves behind tables, desks, and plywood barricades.

Though in one of these crowded schools more than half of the pupils could reach home in five minutes or less, Civilian Protection authorities would not approve their dismissal in the event a Raid Practice Red warning was received first. Of course, we should have but one plan for an initial Blue or Red, both surprise attack signals.

Fighting Incendiaries

The Corporation Counsel of Rochester has advised us against organizing pupil or teacher groups within the schools for the purpose of fighting incendiary bombs.

Previously, we had planned to use teachers and boys from the high schools as protective groups to be moved to the elementary schools; a teacher and three boys to constitute a squad. Elementary teachers would be busy during shelter drill with their pupil charges, and could not be asked to assume other duties. While teachers, pupils, and engineer-janitors had already been trained, the discussions with the city legal authorities have convinced us of the wisdom of abandoning this plan.

Legally, the function of organizing protective groups is the responsibility of the Rochester Office of Civilian Protection. So organized members are protected against injury by the War Security Program for Civilian Defense Corps members. The Air Warden Service of the city, with the cooperation of the school authorities, this fall will recruit this staff for the schools among high school teachers and engineer-janitors.

No one under eighteen years of age may be a member of the United States Citizens' Defense Corps, except as a mes-

senger. To use school children under this age, contrary to the national practice, is to invite serious criticism in case a child is injured.

As the Board of Education is the agency in Rochester for training members of the Defense Corps, we shall be in a favorable position to assist the Office of Civilian Protection in carrying out the protection of the schools. We must be certain that every necessary step is taken to protect the school children. No opinion can usurp or relieve us from our responsibility in this connection.

Each school had, under our earlier plan, been supplied with buckets of sand, long handled shovels, and stirrup pumps. These were to be used by the teacher and pupil squad. The use of sand has been abandoned in keeping with national instructions. The stirrup pumps and the 160 pump tanks loaned to the schools this summer by the OCD will be available for teachers and engineer-janitors under the new plan.

ARP Bulletin For The Schools

A bulletin has been prepared by the ARP Committee. This bulletin is the authoritative order to principals and members of the staff on all known problems. We thought we had simplified our procedures when, last November, we boiled down all our material into one bulletin comprising one hundred seven different directives. Since then, due to the change in the air raid warning system and other problems that have arisen, we have added thirty-seven. It defines the air raid signals; for example, shelter and dismissal. It outlines the communication system and the instructions to be followed by telephone operators, clerks, principals, and others.

A large section is devoted to the physical buildings. It tells the engineer-janitor, for example, what to do during an air raid practice drill and what additional steps should be taken if the word practice is omitted from the warning and a real air raid is to be expected. Such things as shutting off the steam valves under attack conditions and drawing off the live steam from the pipes so that pupils in shelter areas would not be exposed to this addi-

tional danger from broken radiators and pipes.

The bulletin tells what to do about corridor doors. (These remain closed except for those few that are open necessarily to provide suitable ventilation.)

Electric power is never turned off at the main switch. Lights are ordered to be turned on in the shelter areas at all times pupils are present.

One of the newer sections of the bulletin provides instructions as to what kind of shelter teachers should seek if they were enroute home with pupils. This same series of items is of value to the pupils generally in stressing the kind of shelter they should seek, because we all realize that the air raid might strike at a time when the pupil was not in school. Pupils should be informed as fully as possible as to what they are to do when at home or at play when the air raid signal sounds. This particular phase of the bulletin is based upon an article written by James M. Landis, National Director of Civilian Protection, which appeared in the June issue of the *American Magazine* this year.

While war gas has not been used by the enemy, we have devoted several numbers to directions as to how teachers and pupils may identify war gas and protect themselves from it. The latest word on fighting anti-personnel incendiaries is also included.

One section relates to children enroute to and from school in school buses. We transport a number of physically handicapped children, and at times, normal children. When a bus with physically handicapped children is overtaken by the Red signal, arrangements have been made for these bus drivers to call Police Headquarters and ask escort to the designated point in the area to which these pupils should be taken. Buses with normal children pull to the side of the road, and pupils take shelter.

A considerable portion of the bulletin is devoted to precautions provided for after-school groups, either school-sponsored or privately-sponsored. As we have a large night school program, it is necessary that we maintain an after-school-hour communication system. Until recently this was

necessary on a twenty-four hour basis, and at present until 12:30 a. m. each week-day.

All the Schools of the City

While the above refers to the public schools, what about the other schools of the city? In January, 1942, the Director of Civilian Protection requested Superintendent James M. Splanning to organize the Schools Defense Committee of Rochester. All schools, parochial, private, and those of higher grades, it was suggested, should be included in such a committee. Practically all schools sent representatives to the organization meeting.

At the outset, the value of a unified program applying to all schools was realized. In devising air raid signals, in defining shelter areas and setting up shelter and dismissal drills, a plan of action was adopted to be used in all schools insofar as the schools were alike. Very few exceptions to the general plan have been necessary. The value of presenting the community with the same program in all schools of the city should not be minimized.

The soundness of this point of view has been demonstrated by the fact that the criticisms of the plan made by parents have been based upon different procedures followed in some of the neighboring county and town schools. These have been eliminated as the county and town schools adapted their procedures to Memorandum 23 issued by General Haskell and discussed above. There was a short time lag, however, which caused parents to question what we were doing when children, perhaps just across the street, though outside of the city limits, would be asked to do something else.

The Committee is represented, by the writer, on the Advisory Staff of the Director of Civilian Protection with the responsibility of bringing to the Committee current information and presenting problems and plans to the Advisory Group for recommendation. One of the problems on which there has been a difference of opinion has been the question of tagging the pupils. The Medical representatives on the Schools' Defense Com-

mittee have recommended that tags be available for pupils to be used in time of emergency.

The public schools have provided these tags for pupils. They are kept up to date by the homeroom teachers and are ready for distribution to pupils at such time as the Superintendent of Schools shall issue the order. Critical materials being unavailable, a fiber tag one and one-half inches in diameter was recommended by the committee. The tags contain the name and home address of the pupil and the name of the school attended. During the early dismissal drills these tags were issued to the pupils in kindergarten through grade 3 as an additional precaution. Later they were returned to the homeroom teacher.

During the summer months, elementary school children take home their tags with the instruction to keep them in a safe place and not to wear them until directed to do so by the Superintendent over the radio or by newspaper announcement. In the fall they will bring back the tags. Surprisingly few of them disappeared last year.

Though this is our plan today, there undoubtedly will be changes and additions. Throughout the country there are varying methods for providing for the safety of school children. It is easy to explain why. We, for example, in New York State are mandated to dismiss on the sounding of the Yellow warning. In the second OCD bulletin issued early in 1942 and the third issued February, 1943, we find the following: The school air raid alarm "should not be sounded on the Yellow, which is a preliminary caution..." Obviously, such procedure would rule out any plan for the dismissal drill according to our understanding.

Conclusion

Have all our efforts been in vain simply because the raids haven't come? Before we conclude this, it would be well to realize that the fact that we all have had plans may have been the factor that caused the enemy to forego the raids that are well within his power to execute. He knows of our plans in civilian protection,

federal, state, city and town. We cannot underestimate the value of the F.B.I. despite the fact that we have had no such outbreaks of sabotage as in World War I. Let us not, either, underestimate the value of our planning, likewise, as a preventive measure.

Like almost everything we do there are values that transcend the immediate goals. Discounting any other value, even the necessity of our ARP planning, I believe we have gained a greater sense of our combined ability to work together, which is just another way of saying democracy. We are more alert in the schools than we ever were. We notice visitors about the buildings and want to know why they are there. We are better equipped to meet emergency. The First Aid training of our teachers is but one field in which we are better able to serve others, in and out of school. Teachers and pupils have been brought closer together by this war than by any other single means.

We know more about our school buildings than we ever did, and are more conscious of the inadequacies of many of them. Many of the civil authorities have a first hand acquaintance with the buildings and doubtless will better understand our needs in the future when we discuss remodeling or abandonment. This war is bound to have its effect upon school construction. We have been emphasizing increased light, air, use of lighter materials. The school architect of tomorrow will weigh other values, as well, as he plans elementary schools for twenty to twenty-five years, high schools for fifty to seventy-five years in the future.

Millions of Americans know our schools better today than ever before. The Rationing Program gave us the best "Know Your School Weeks," we ever had. As they came to the schools, parents could not be unmindful of our ability to plan. The signs erected denoting air raid protective measures did not go unnoticed.

One returned Pacific flyer spoke for them all when he said to the principal after visiting his children's school, "You know, out there I used to worry about Ted and Joan while they were at school.

I know what the enemy does to schools and hospitals. When I go back I am going to feel much better knowing how you have worked things out for us."

Yes, it has been a big job. It has cost us a great deal. But it has been worth it, even if we never have an air raid. Let's hope we don't.

THURSDAY MORNING SESSION

October 7, 1943

Safety Training

(Reported under Subject Sessions in Volume I of 1943 Congress Transactions)

THURSDAY AFTERNOON SESSION

October 7, 1943

The Secondary School Adjusts to the War—Physical Fitness

Presiding: FRANCIS L. BACON, superintendent, Evanston Township High School, Evanston, Ill.

By A. H. FRITZLAFF

Director of Physical Education, Chicago Public Schools

The Victory Corps Program includes five divisions. One of the requirements in all of these divisions is participation in the program of physical fitness. In order to more clearly understand possible safety measures to be practiced in connection with this program, we must first understand the program itself.

The program is outlined in a pamphlet entitled "Physical Fitness Through Physical Education for the Victory Corps." The manual suggests activities for both boys and girls with information on the method of procedure, a program of testing and measuring results, and a brief statement of basic philosophy in the operation of the program in order to secure the desired result, viz., strong, healthy young people, ready to take their place in the armed forces, in industry, in agriculture, or in community service on the home front.

We must realize that there is more involved in total fitness than physical fitness

and more involved in physical fitness than merely exercises. However, this particular manual considers the activity program. The term physical fitnesses is used because most people at this time interpret physical fitness to mean strong, healthy bodies and a will or determination to succeed.

The first phase of fitness then would be the removal of strains and drains. We cannot build on a weak foundation. We mean, of course, medical and dental examinations and correction of remediable defects.

Two Phases of Fitness

Next, a few facts on physical fitness. There are really two phases to this problem:

1. The development of proper body conditioning, endurance and stamina, and the development of skill or coordination.
2. The development of the determination to win.

The first, the development of body conditioning, we can do best probably through vigorous, graded exercise while sports give us our greatest opportunity to develop the second, the determination to win. Our boys and girls need both phases—strong, powerful bodies and the determination developed through vigorous, contact type sports to succeed or win in order to be physically fit.

We also must keep in mind a basic fact in the development of our physical education programs into physical fitness wartime programs. Muscles are developed only when the exercise is carried on beyond the point of fatigue but not to the point of exhaustion; e.g., if we were to chin ourselves nine times daily for a period of time, there would be little development beyond that point. We must make an effort to increase the nine to ten and so on before there is an increase in the muscle itself.

We must select among our sports those of the vigorous, contact type to develop the determination to win, such as football, basketball, not shuffleboard or tiddly-winks.

Many Muscles Neglected

We have found that our young people lack development in various body parts. Let us talk particularly of the boys and what is applicable to them is, of course, applicable to the girls' situation, modified, of course, because of sex. We have found the boys very weak in:

1. The arms and shoulder girdle. Many of them cannot chin themselves. Therefore, we need development of the muscles of the arms and shoulders through chinning, doing push-ups and exercises of this type.
2. In the midriff or abdominal region. The exercises of the abdomen are particularly important and are extremely weak in the average boy. Sit-ups or exercises of this type are necessary, and finally,
3. The legs. This has been blamed, of course, upon our riding in motor vehicles and not using the legs particularly in the urban areas. Running and jumping are, of course, the type of exercise needed to develop the legs.

In addition to the need in the three body parts listed, there is a general need in the field of swimming. This is a skill that many of our young people lack. I could paint a very sorry picture of the plight of our armed forces in various battle areas, due to the inability to swim to save themselves or others. Swimming is a "big must" in our fitness program.

Variety of Activities

We are endeavoring to develop strength, endurance, stamina and bodily coordination through a wide variety of activities: Aquatics.

Gymnastics:

Marching and running.
Chinning exercises.
Grass drills.
Response drills.
Ranger exercises.
Apparatus work.
Tumbling.

Combative exercises:

Hand to hand combat.
Group games.

Individual sports:

Track and field.
Hiking.
Skating.
Rope skipping.
Cycling.

Team Games:

Basketball.
Football.
Field hockey.
Speed ball.
Soccer.

Activities for Girls

Aquatics.

Gymnastics:

Conditioning exercises.
Apparatus.
Tumbling.

Locomotor and axial gymnastics.

Sports and games:

Soccer.
Field ball.
Speed ball.
Field hockey.
Basketball.
Volley ball.

Individual sports:

Hiking.
Skating.
Cycling.

With this picture as a background, we turn to safety precautions or measures which must be followed in order to prevent accidents and possibly fatal consequences instead of the development of healthy, rugged individuals.

The program is geared to the healthy child. The first step, therefore, would be the elimination of those unfit to carry on the vigorous exercises by means of medical and dental examinations and correction of remediable defects, thus enabling us to carry on the normal program. However, in many communities there is a scarcity of doctors and dentists. Physicians have told us that in their offices with their stethoscopes they cannot definitely determine that this boy should be excluded from the program and this other boy completely approved for participation. In addition to the preliminary examination of the doctor, therefore, there is constant need of inspection and observation on the part of the physical education teacher. The ability of the individual to "take it" and his ability to properly respond to exercise would show up best during the exercise period.

Must Take Chance

We seem to have a sort of paradox to start with:

- (a) No development without greater effort beyond the point of fatigue.
- (b) The need of preliminary examination and correction.
- (c) Fewer doctors and dentists.
- (d) Cost of correction.
- (e) To some extent, the inability of physical education instructors to inspect and eliminate those unable to carry on.

Shall we just then take it easy and go slow, make no mistakes and be absolutely safe? The answer is "No." In a vigorous training period, we must take some chances. We need physically fit young people. The armed forces tell us that six to eight weeks would be saved if the boys

sent to them were in good physical condition. Further, that the boys in military service may be affected by the fact that they cannot take it when they enter the service. It is further unfair to our young people who are the ones who will win this war not to give them the best possible opportunity to return by giving them a strong, healthy body.

Testing Program

To repeat, we will then expect examinations by doctors and dentists, if possible, correction of defects, and elimination, wherever possible, of those unfit. We will expect the physical education teacher to inspect and observe particularly the condition of their pupils at all times, excluding temporarily those who cannot keep up with the normal progress of the class. If pupils are absent from school because of illness, they must be gradually returned to the program. Finally, periods of violent or all-out effort must be properly prepared for and should not be too frequent.

The Victory Corps Manual also provides a testing program. It is in this testing program that we will find the pupil over-exercising most; e.g., he is tempted to exceed his teammates and achieve the high objectives laid down in the manual.

With reference to accidents, we must expect them in a program as broad as this Victory Physical Fitness program. If we are too careful, there will be little or no development. Witness the football player who tries to stay out and not get hurt. He invariably is the one injured. The boy whose body is properly developed to take it, who is protected by adequate equipment, then drives in, is seldom the one injured. Accidents occurring must be true accidents and not occur through lack of foresight.

In the various phases of the program, equipment is necessary. For example, one feature of the program is running the obstacle course. The obstacle course provided, of course, includes hurdles, jumps, walls to scale, etc. During the periods, the work suggested includes work on ropes, rings, parallel bars, horizontal bars and tumbling, presupposing the use of mats for indoor work.

Use Safe Equipment

Whenever equipment is used, it must be properly constructed and maintained. Too frequently we have found local schools permitting the boys in the manual training courses to build the obstacles for their obstacle courses, erecting ropes, etc. without due consideration for safety.

Another phase of safety should be provided in proper baths following periods of exercise. Too frequently we find our program being carried to a high tempo with the instructor leaving little or no time for the bath and for the most important part of the bath—the drying after the shower. We must prevent chilling.

It is possible for young people in good physical condition to work outdoors in cold weather in gymnasium suits but they must be kept busy and not given an opportunity to cool off and chill.

A few words concerning the swimming program. As most of the work of our armed forces will be over water, it is imperative that every one learn to swim and swim well, not fast, but to swim for endurance. We must teach the ability to float for a long time, to be able to swim for long periods while fully clothed.

In order to reach the point of endurance, they must again exert themselves beyond the point of fatigue. Here, again, periodic inspection and supervision throughout the program by the teacher of physical education is important so that the individual's condition is being continually checked.

Health Education Manual

In addition to the Physical Fitness Through Physical Education manual for the Victory Corps, a manual entitled "Physical Fitness Through Health Education" has been developed. This manual is just off the press. It is suggested that the health education program run hand in hand with the physical activity program.

Some emphasis has been given to safety measures in the health education manual; e.g.

1. Prevention of Accidents.
2. Emergency care.
3. Motor vehicle accidents as they relate to wartime conditions.
4. Safety in school under wartime conditions.
5. Industrial and farm safety.
6. Emergency care.
7. Health requirements in industry and agriculture.

In general, then, we can see that the set-up of the tempo in our physical fitness program increases the number of times per week for participants in class activity, increases the intramural and interscholastic competition for boys.

We must also provide examinations and corrections, if possible and inspection and supervision at all times. Our equipment also should be constructed and maintained properly. We will then have a stronger, healthier group of young people ready to carry on on the military, industrial, agricultural or home front.

Safety Education and the Victory Corps

By MAJOR HAROLD W. KENT
Infantry, War Dept. Liaison, U. S. Office of Education

We are fighting a powerful enemy on a dozen major fronts in this war. For almost a generation this enemy has been preparing its manpower, its production and its home life to make ready. In this same generation our Nation has been gearing its manpower, its production and its home life to a world at peace. We were living in a comatose state blissfully following our individual pursuits, safeguarded, so we thought, by a pair of oceans.

But we find now that we need power greater than the enemy's to win this war and of all our needs manpower is the most important. Manpower to fly the planes, to drive the tanks, to cultivate the soil, to turn the lathes, but withal, a manpower charged with a deep respect for the need of life saving and limb saving as a vital resource to the war effort. This manpower flows in large part from the secondary schools.

It is a basic responsibility of the secondary school to supply to the Services, to industry, to agriculture and to community life, young men and young women with sound minds and sound bodies. They must be properly motivated to take their rightful place in the war effort. They must develop a consciousness of safety.

Safety has become so important to the modern world and is fraught with so many complexities that it has transcended the power of the home to handle it alone. The school must assume the main responsibility for developing attitudes in our young people: attitudes toward safety that will proportionately advance the success of the war effort.

High School Victory Corps

In the Army we have much "thinking and waiting time." In the high school action and life are continuous and the intrusion or adaptation or simply the application of safety education, no matter what the capsule, is almost in the light of a pressure on the curriculum. I grant at once that safety education is a vital,

strategic pressure, but in these busy days in the secondary school it is a pressure just the same. As ever increasing flow of needs has been presented to the high school principals from various sources creating some bewilderment as to the priority.

The U. S. Office of Education set up the Wartime Commission to coordinate these needs of federal agencies, both public and quasi-public, through the state departments of education to the principals of the secondary schools of the Nation. The Commission promptly established a smaller administrative unit called the National Policy Committee which in turn organized the High School Victory Corps. The High School Victory Corps is divided into five divisions. Three of them represent the Service: Air, Land and Sea. The other two represent Production and Community Enterprise.

Secondary schools are developing adequate measures to inculcate proper attitudes towards safety and skills in handling safety in these areas. The military services have remarkable safety records. At ports of embarkation there are two hours lost per 10,000 hours of scheduled labor from all types of accidents. The causes of accidents in military life are not too dissimilar from those in civilian life. Automobile accidents rank first in both cases. Our military vehicles are not especially comfortable modes of transportation. They are pretty strong, they are sturdy but you know that not only the jeeps but the prime-movers are driven over deserts, through swamps, jungles and every other conceivable type of terrain. This simply makes the problem worse. Driving and riding in military automotive equipment commands vigilance as regards the problem of safety.

Oddly enough, falls are an important cause of accidents in military life as well as civilian. It will interest you to know that the greatest cause of accidents at ports of embarkation is due to "bumping into objects." The same things which

you teach in the elementary and high school about common sense safety are applicable to military life as well.

The modern soldier, sailor or marine is a specialist. Nine men out of ten in the Army are required to operate a lathe, repair automobiles, send or receive code, act as telephone linemen and perform as many as 650 different jobs. The same rules of shop and industrial safety apply to all these servicemen as they do to civilians. The basic training of every man and woman in all the armed services includes instruction and practice in first-aid.

In the Production Service Division of the Victory Corps we find that there are many threats to young workers because of their inexperience. Here again the development of genuine safety attitudes and practices among these high-school students assures to that same proportionate degree an effective and safe production as the students start for the factory and the bench.

The Community Service Division of the Victory Corps is no different from the typical community life as related to the high school and the home except that experiences are intensified because of the war effort. Practices involved in the collection of salvage, in the physical movements within the community to attend bond rallies or railroad station sendoffs of inductees and a thousand and one other activities; all imply the need for a consideration of safety stepped up to the same degree of importance as that involved in the activity itself.

That briefly is the picture of the five divisions. Suppose we review the three major areas where secondary schools can be of service.

Increased Hazards

Many factors have intensified accident frequency in war industries. Production pressure is terrific. It results in fatigue and a kind of a careless attitude which tend to make the worker take a chance. Supervisory personnel has almost an overload of responsibility. Many supervisors are new at their jobs. New equipment and new techniques of production have exposed workers to many accidents and health hazards, many of which hold

a threat to young workers because of their inexperience or special susceptibility to various types of industrial diseases.

The development of sound health and safety attitudes and practices among high-school students during the training period is the only adequate preparation.

A small rotating safety committee can be appointed in each school shop to study safety problems and make recommendations for improvement. The committee might study the safety problems concerned with the industry for which they are training. It might make a special study of safety clothing. It might study the frequency and severity rate of accidents and study preventive measures for them. It might consider the different occupations where physically handicapped workers can safely work. It might study the reasons for good morale in the shop. It might study the hazardous occupations standards set up at both the state and federal level.

Farm hazards naturally will vary according to geographic area, nature of the crop, method of farming and the particular process in which the worker is engaged. According to data compiled by the Children's Bureau from many sources, the chief causes of serious injury among farm workers as a whole are: "Tractors and other farm machinery, livestock; falls from ladders or trees or from hay mows; sprains, strains, hernias, and back injuries caused by improper and awkward methods of lifting heavy objects; improper use of farm tools; careless use of gasoline and kerosene; climatic or weather conditions, infections caused by neglect of minor injuries; and many others."

Individual Safety Problems

High-school boys and girls engaged in farm work have a unique responsibility in the prevention of accidents. Unlike industry, where safety rules and regulations are usually followed under careful plant supervision, safe work on the farm is largely an individual matter. Even in the wartime farm program, in which groups of young people work together under supervision, the responsibility for accident prevention rests primarily on the individual.

School training procedures might include the following: The student might spend several weekends on the farm where he will eventually work. He should study the safety hazards on that farm. He should have a knowledge of first-aid especially adapted to farm accidents. Constant exercise of intelligence and common sense is demanded.

Pre-induction Driver Education has two angles. Probably one soldier out of four, from the very nature of his job, must be able to drive a piece of automotive equipment. Actual driving skill can be acquired in a short time. The ability to drive a jeep, a half-track, a tank destroyer, a tank or a duck or a prime mover is a skill which our high-school boys can master with facility. The difficult achievement in pre-induction driver education, as in all safety education, is the development of proper attitudes.

Developing Proper Attitudes

Attitudes are not gained in a short time. They are mental processes which must first be built up as habits and patterns of action. Albert W. Whitney of the National Conservation Bureau has said, "... school authorities have three distinct responsibilities with respect to safety: first, the general responsibility of all schools to develop an attitude of mind which will fit the student for safe living; second, to safeguard the student in his work; third, and more specifically, to educate young people to become safe workers..."

Attitudes also are developed through home and community leadership as well as the school. Proper attitudes in safety education are a concern of school boards and of safety councils as well as matter for dinner-table discussion and school formalizing. There is no season on safety education.

Attitudes are not developed through curricular units. Attitudes are something

of the spirit. They are motivating forces. Attitudes must be inculcated through the will and skill of good teachers. The teachers may be found in automobile associations as well as schools. They may be found in homes as well as military establishments. Everyone who has been fired with a crusading zeal for safety, whether on the highway, in the factory, aboard ship, in the air or in a military establishment on land, knows that the ever-widening circle of his own influence as it meets and merges with the widening circles of other safety crusaders will, through alert and eternal watchfulness, ultimately blanket our secondary schools with these proper attitudes.

Before I close I am going to tell you a little story. In the *New Yorker* not so long ago there was a story about an Army Air Forces man who was stationed at a field in Connecticut. He was only 19 but he had been piloting a P.47 for six months. A P.47 costs you about \$150,000 in War Bonds. It will fly 500 miles an hour. Recently, so the story goes, while mooching about the streets of Hartford, the hero of this story saw a 1934 Chevrolet, price \$40, speed possibly 35 miles an hour. The dealer, however, explained that the State laws prohibited the young man from owning a car. He wasn't 21. He also had to have the written authority of his parents to own the car. So the young man wired his parents. A prompt reply of considerable force and length came from his mother, "Certainly not, neither your father nor I believe you old enough to own a car in which you would probably go tearing around the countryside and maybe break your neck." So when our hero goes to the hangar now, he walks. Then he gets into his P.47 and flies off to Chicago, Richmond, or Portland and is back in time for lunch, apparently reconciled, partly at least, to the fact that in another two years the State of Connecticut stands ready to trust him to drive an automobile on its highways.

Pre-Induction Driver Education

By MILTON D. KRAMER

Assistant Director, New York University War Training Center, and
Consultant to the Quartermaster General, U. S. Army

Our Army was not always the motorized force which it is today. Purchase of the first motor vehicle by the United States War Department was in 1903; today, four decades later, the Army owns one motor vehicle for each seven men and has a standing requirement for at least 2,000,000 trained drivers.

In 1916, the Army owned 89 cars and trucks. When General Pershing went into Mexico that same year, the War Department bought 108 more and organized its first truck companies, four in number. They were dispatched south from the border to make contact with the Yanks, and these trucks carried supplies through to Pershing's men until the close of the campaign.

The following year, America declared war on Germany. Profiting by the Mexican incident, trucks and cars for transport were purchased and assigned to most of the services. Despite the growing use of motor vehicles in 1917 and 1918, the foot soldier and horse-drawn artillery were still setting the pace at which the armies moved; all fighting in World War I was waged over small areas, mostly confined to one country. But motorization has changed the speed of war. This was amply demonstrated when panzer divisions swept through central Europe, and again, last year, when the British drove the Axis from El Alamein to Tunis, a distance of 1,500 miles in 90 days.

Yank Drivers Prove Worth

Supplies in war must be brought up at a speed consistent with the forward movement of the tank and motorized divisions. On the Axis side, rail transportation has met supply transportation requirements, hauling supplies to advanced bases just as in the previous war. More recently, however, heavy bombing raids have severely disrupted the rail systems and the Nazis have had to rely more on their weakening motor transport system.

But as for the Allies, our supply system

overseas is dependent largely on motor transportation. Its difficulties have become an old story to the Yank drivers after 20 months in Australia, North Africa, Italy and other war theaters. Under unbelievable difficulties, these American drivers have hauled cargoes for the United Nations day and night, for hundreds of miles, over rough roads, sometimes no roads at all, often under bombardment from planes and artillery, and over bad roads choked with troops. For these achievements, our drivers have already won many decorations, not only for meritorious work, but for bravery as well.

The responsibilities of these men are to keep their trucks operating and moving, and to see that their cargoes arrive safely at their destinations and on time. The drivers now operating trucks, staff cars and jeeps on the war fronts received their training in the Army's motor training divisions, at various replacement training centers. The problem of obtaining really competent motor vehicle operators has increased as more and more are needed while fewer and fewer are available from the ranks of new inductees.

Rigid Standards Set

The Army requires much of its drivers. They must be physically fit because of the rigors of their work. They must have a thorough knowledge of good driving because of the unusual conditions under which they must work. They must learn disciplined movements because Army vehicles operate to a large extent in convoys. They must be self-disciplined and dependable. Above all, they must have more than a casual knowledge of preventive maintenance and emergency repair. Their vehicles are under heavy strain and repair services are hard to maintain in the field. In Tunisia, and again in Sicily, our crying need was for motor maintenance of the First and Second Echelons. We must crowd all our training into a few short weeks. In a

limited period we must prepare them for overseas service. And in that time, we can't give them sufficient driver training.

To meet the needs of the Army, 63 out of 100 men who are inducted have had to be given specialist training of one kind or another. Unfortunately, this number of specialists has not been obtained through the normal process of induction. Consequently, the Army has had to engage in extensive training programs, spending much time in teaching fundamentals, so that it could have available the specialized help required for engaging successfully in mechanized war.

In order to help the Army meet its pre-induction training needs, the public schools of the nation have been called upon for assistance. By providing courses in certain fundamentals, schools can prepare the way for the Army to develop specialized skills. Fundamental training given in the public schools can thus materially shorten the time required for the Army to turn out a thoroughly trained soldier. Schools are kept advised about Army needs by Army Service Forces of the War Department, through the United States Office of Education. The training courses that have been recommended such as fundamentals of shop-work, radio, auto mechanics, and so forth, are designed to equip youngsters with fundamental understandings, so that at training centers Army instructors can build upon these fundamental understandings and develop in less time, soldiers who are thoroughly competent for mechanized and motorized war.

Ask Schools to Help

Driver education is one of the Army needs that has been suggested for inclusion in the schools. This instruction is outlined for administrators and teachers in "Quartermaster Pre-Induction Driver Education Instructor Manual," which has been approved by Army Service Forces and the United States Office of Education. The pre-induction driver education program was announced in a brochure titled: "How Your School Can Help the Army Train Its Drivers."

It may seem strange to some people that the Army has a need for pre-trained

drivers. Before the war broke out, this country had about forty million licensed motor vehicle operators. One would think that from this source, Army needs could be very easily met without requesting that schools offer such a course. This, however, is not the case. The fact of the matter is that one out of every four men in our 8,000,000-man Army is required to drive a motor vehicle of one kind or another! The American Army requires 2,000,000 drivers! Our military drivers must be extremely self-reliant, dependable, self-disciplined, and expert. Civilian drivers who have been inducted cannot meet these specifications. The Army has found it necessary to re-train the civilian drivers who entered the service. Despite our pool of 40,000,000 drivers, the Army faces a problem in providing sufficient competent vehicle operators for battle purposes. This is mainly because our civilian drivers received little or no driver training in the schools.

Civilian Drivers Not Trained

It is true that our American civilian drivers are flashy, and rather skilled in the purely manipulative aspects of driving. But, too many of them have failed to demonstrate a basic understanding of traffic rules, vehicle preventive maintenance, car construction, and advanced driver abilities. The shortcomings of the average civilian driver have necessitated the time-consuming driver training program of the Army. Schools, therefore, can make an extremely effective contribution to Army motor transport by providing the fundamentals of driver education in the public schools whenever it is possible for them to do so.

The course that has been suggested for inclusion in the schools does not require the use of a motor vehicle, special equipment, or gasoline, oil, and rubber. It compares with a ground school course in aviation. It is a classroom course consisting of ten units of instruction that are designed to provide fundamental understandings. This instruction, while it is taught in the classroom, can be made effective and practical through the use of student projects, training aids, visual aids, and by the utilization of effective teaching procedures. Some of the units of

instruction are: the role of the motor vehicle of America at war; vehicle construction; vehicle preventive maintenance; road rules and traffic regulations; principles of difficult driving; convoy operations; map making and map reading; and others.

A pre-induction driver course is really a peace-time, civilian driver education course with certain new contents added that relates to the military aspects of driving. For this reason, there should be no great difficulty in introducing the course into the high school. Many high schools in your states are now offering, or were offering driver education courses before the war began. It is easy to modify the peace-time driver education course so that it meets pre-induction needs.

Convert to War Courses

Much progress has already been made in this field. Before the war broke out, nearly 5,000 high schools in this country were offering driver education classroom courses. The records show that over twenty state departments of public instruction have issued peace-time driver education courses of study. Many schools in the various states have converted these courses to a wartime basis by modifying content. In recent months, some of your states have already adopted plans and programs for state-wide pre-induction driver education in schools. Some of these states are Michigan, North Carolina, Utah, Iowa, New Jersey and others.

Some motor vehicle, police, and highway departments have made a most essen-

tial contribution to driver education. It has been this help, rendered to the state education departments, that has resulted in the development and extension of this work. But much more remains to be done. As in the past, this valuable assistance should be given to the respective state education departments, since they alone are authorized to determine policies for public school systems.

There is a steadily increasing need for more and better trained civilian drivers. For the youth who cannot meet the military physical standards, necessarily placed high because of the rigorous life he must lead, there will be a place in industry. There is a growing demand also for both young men and women to operate essential civilian vehicles.

And the time will come again when millions of young drivers will once again take to the highways. Only through education and training will our society have any assurance that its drivers will be efficient. It is regrettable, but still a fact, that the most dangerous motor vehicle operators are the teen-age drivers. This instruction, therefore, will also have the inevitable effect of reducing the severe traffic fatalities which take such a heavy toll of our manpower and equipment.

All of us have a common purpose—to end this war victoriously and as quickly as possible. Successful promotion of this program by state education departments in cooperation with other agencies, will not only aid in bringing about victory but will provide better and safer motoring conditions when peace arrives once more.

Farm Safety Section

TUESDAY AFTERNOON SESSION

October 5, 1943

Presiding: HARRY M. PONTIUS, safety director, Ohio Farm Bureau and Farm Bureau Insurance Companies, Columbus, O., and chairman, Farm and Home Accident and Fire Prevention Committee, Ohio State Safety Council.

CHAIRMAN PONTIUS: We have made considerable progress since that day about four years ago when a small group of us met in the National Safety Council office to talk about a farm and home safety program. The chairman of that meeting that day is the first speaker on our program. That man impressed all of those of us who were present with his sincere interest in safety generally and in farm safety particularly. He brought to us a wealth of experience of safety in other lines and I think that one reason why we have been able to make such progress as we have in the short time that the farm safety program has been under way has been due to the fact that leaders like our next speaker, who have had that background and experience in other fields, have so generously brought that to our group and helped us to get started off on the right foot.

It is with a lot of pleasure that I present to you our first speaker, Mr. Harold L. Miner, Manager of Safety and Fire Prevention, E. I. du Pont de Nemours & Co. of Wilmington Delaware, and Chairman of Farm Safety of the National Safety Council.

MR. HAROLD L. MINER: Since the last National Safety Congress another year of war has made an ever increasing demand upon the nation's farmers for production, together with a more and more serious shortage of farm labor.

Not only has the American farmer and his family become extremely burdened with an enormous demand for production, he has also been forced to face many of the complexities of an essential war industry; namely, the difficulty of obtaining materials and equipment has been no less a problem than that of obtaining experienced or properly trained help, and the necessity for unusually long hours of work has been responsible for more than normal fatigue.

Because of these extraordinary conditions, I should like to emphasize the importance of intensifying our efforts to prevent farm accidents. If we are to effectively eliminate these accidents, or at least reduce them, we must go much farther than just asking the farmers to do their work safely. It is up to us to study all of the forces and conditions which may be the direct or indirect causes of personal injuries, to analyze them and bring about the adoption and application of constructive, practical measures to more completely safeguard the farm worker.

The measures adopted to provide farmers with adequate help should have as much bearing on the prevention of injuries as on increasing their capacity to produce vitally needed food products. Likewise, advice on production methods, and the use, care, and maintenance of machines, tools, appliances and buildings, offered by advisory and educational agencies should unquestionably decrease the occurrence of accidents. The value of such advice will depend upon how carefully the problem has been thought out. Needless to say, these methods must be brought within the range of our influence.

The enormous proportions of the task make it necessary that we rely upon each other for a cooperative sharing of this responsibility. I should like to pay high tribute to the many national, state and community organizations, to the press, the radio, and other agencies which have already cooperated by adopting programs of activity in keeping with their respective aims. It has already been demonstrated by many of these interests, some of which are represented here today, that a nation-wide program of rural accident prevention is entirely practical and feasible.

I realize, as you do, that it is a tremendous undertaking; one offering a challenge, which I am confident can be

met by united action, correlated and coordinated through the National Safety Council.

CHAIRMAN PONTIUS: Thank you, Mr. Miner.

One of the important steps in a movement such as that which we are engaged in is to occasionally take stock in what is being done, what has been done and what is planned to be done.

Farm safety work is being carried on by many various groups. The job is tremendous, the need is tremendous, and it will only be through the united effort of all of the groups that are interested directly or indirectly in agricultural welfare that we can hope to accomplish the objectives which we are aiming at. It is helpful for us to know what other groups have done. It is of value to know something about other folks' plans for the future. And this session was designed with those objectives in view. We are meeting together here to hear reports from various groups, exchange ideas, ask questions, discuss the program in general, and out of it all to guide the course of the farm safety movement in our country.

Some eight or nine groups have been listed to give reports. That is not all that should be reported here this afternoon. In fact, we expect a report from every group represented at this meeting.

We will hear about the safety activities of the Society of Agricultural Engineers first, and we are fortunate to have Mr. V. S. Peterson, Chairman of the Safety Committee of the American Society of Agricultural Engineers, with us to report for that group—Mr. Peterson.

MR. V. S. PETERSON (Chairman, Safety Committee, American Society of Agricultural Engineers): Mr. Chairman, ladies and gentlemen: Some years back when I was active in 4-H Club work in the State of Pennsylvania, I handled a fire prevention project. One of the questions which I frequently asked of the boys and girls attending meetings was: "What is a fire hazard?" At one meeting the answer came back: "A fire hazard is something firemen use to fight fires with." That got a good laugh out of the audience.

Later, after I had thought about that answer for a while I concluded that the boy had something there because, after all, the most effective means of fighting fires is by removal of fire hazards.

The removal of accident hazards, whether they be mechanical, structural, animal or human behavior is the only means of accident prevention. But before hazards can be removed it is essential that individuals have some idea of what constitutes a hazard, otherwise they are going to do nothing about them. The individual has to see the hazard. He has to know it is there and he has to know what it is likely to cause.

Getting farm people to recognize hazards requires education, education of everyone on the farm, whether he be owner, or worker; man, woman or child.

After the individual learns to recognize hazards, we are not going to get anywhere unless he is stimulated into action leading to hazard removal.

The report which I am giving this afternoon is split in two parts. One is an indication of the things which the membership of the Society is doing and the other is the functions and operations of the Farm Safety Committee.

The first part of the report is based upon statements received from 21 states. In the 21 states 1,857 meetings were held under the direction of agricultural engineers with 80,494 people attending.

The agricultural engineers prepared or were helpful in the preparation of 61 news items, most of these having statewide distribution. They gave 45 radio talks. They prepared more than 16 special publications. There were 1,724 local leaders trained. Eleven engineers reported that they were active in state organizations, one of them being chairman of the State Farm Safety Committee. Two engineers are state committee chairmen and one is state secretary.

That gives you, in general, the picture of the activities of the general membership of the Society.

Regarding that questionnaire—it got out rather late. So our report represents replies from less than half the states.

So far as the Farm Safety Committee

of the Society is concerned, its responsibilities are:

First, assume responsibility for, in some cases compiling and in other cases checking from the engineering standpoint, information on farm safety practices, whether issued by the ASAE or other organizations.

Second, establish and promote safety standards for the design and construction of farm equipment and structures.

Third, foster farm safety educational programs through the extension services, schools, industry and other organizations with which agricultural engineers work.

CHAIRMAN PONTIOUS: Thank you, Pete. I think we should get great encouragement from this report that Mr. Peterson has brought.

The next report is from a somewhat similar group, the Farm Equipment Institute, represented by the secretary of their safety committee, Mr. Frank Zink.

MR. FRANK J. ZINK (Chicago, Ill.): For a great many years the individual engineering departments of farm machine manufacturers have recognized the need of safety provisions in farm equipment design. These men have been charged with the responsibility of providing safety features by sales executives who want the safest possible equipment to offer prospective customers in a highly competitive market.

For the last half dozen years the safety activities of the individual companies have been augmented by the activity of an industry-wide Committee on Farm Safety composed of leaders in the field, men who have the broadest type of experience as well as many years activity. This committee acts as a steering group as well as educational and promotional body for a second committee much larger in size. The second committee known as the Safety Engineering Committee is composed of the chief engineers and their alternates representing each of the firms having any active interest in participating in the committee program. Currently the committee numbers approximately 50 men divided into two groups representing tractors and implements.

These men direct their attention to all phases of farm equipment safety. The

work consists of: First, the collection of suitable data on which to base a rational engineering approach to the solution of the problems of safer farm equipment operation. Second, safer design practices with special attention given to the objective of protecting an operator against his own carelessness. Third, the development of recommendations for the safe operation of equipment to be carried on safety signs, in service manuals, in special safety publications, and through the educational programs of company field organizations and dealers.

The findings of these two committees to date indicate that safer operation of farm equipment will accrue principally through education. It is necessary, however, to supplement the educational efforts with engineering improvements. Realizing this, the Safety Engineering Committee, drawing upon the standard of the American Society of Agricultural Engineers, has evolved universal power take-off line shields. Drawing on the same ASAE standards, work is about complete for power take-off and drawbar hitch point dimensions to be the same on all tractors and power take-off implements. Such an arrangement involving many models of tractors and a great many more models of power take-off driven implements is a major accomplishment calling for much detailed work to be done in the engineering departments.

The committees, within recent months, have made exhaustive studies of the durability of safety signs. Also, some considerable attention has been given to the location of safety signs. Elements of danger in farm machines, being functional with the work performed by those machines, has led to the location of safety signs at the danger points. However, since farm machines are long-lived, safety signs have a tendency to be worn out before the machine is likewise worn out. To correct this, the committee has just adopted a porcelain enamel sign, one which will last as long as the machine.

Other work of this committee has included recommended tractor seat location and tractor seat adjustment. Such location and adjustment permits of variation in physical differences of operators and for location of control levers of drawn implements. Both of these features are

felt to be engineering contributions to safety of farm equipment operation.

Another item of engineering study has been the speed of tractor belt pulleys. A standard speed will preclude the necessity of an operator changing pulleys, which sometimes results in leaving projecting keys on pulley shafts and a source of danger. The fact that a pulley can be installed at the factory, using best known safety practices for pulley hubs and keys, should add considerably to safer operation.

The work of the safety committees of the industry is just now pointing the way toward a possible safety education program to be carried out by the farm equipment industry. Although such a program is not new, it may be possible to expand the educational phases of existing programs so that the farm equipment dealer can do even a better job of educating his customers in safety. To do this, a third safety committee of the Farm Equipment Institute has been organized to put into practice the results of the work of the engineers. To some degree the war has complicated the organization of such a program, but it is recognized that there is an even greater need for such a program during war time.

In conclusion, the farm equipment industry recognizes safe operation of farm equipment as a challenge. It recognizes that unsafe farm equipment is a direct liability both to users and the industry. It is deeply conscious, through the efforts of safety committees, of the service it can render in the educational field. Machinery manufacturers recognize that since they introduce equipment to the users, they have the first opportunity for education in safe operation. The farm equipment industry also recognizes its limitations as an educational body because many farm equipment users rely wholly on second-hand machinery obtained from neighboring farmers. We in the industry would like, therefore, to couple our work with the safety work of any and all organizations interested in the job of making agriculture a safer occupation.

CHAIRMAN PONTIOUS: If you have any questions, let's have them while Mr. Zink is up here in a good position to answer.

MR. ASHER FRANK (Florida Safety Council): Mr. Zink, do the dealers tell the buyers about the safe operation of machines?

MR. FRANK J. ZINK: We hope they do, although many dealers do not have the time. They feel after a sale is made they should rush away and make another sale.

We hope to put in their hands material which will make safety teaching very easy.

CHAIRMAN PONTIOUS: Quite frequently we get questions regarding the guarding of machines. One such question is: "Why don't they fix mowing machines so they throw out a gear when the operator gets off his seat?"

If we were to make the rounds of the exhibits at this congress I suspect that we would find a safety device for protecting punch press operators which consists of a strap fastened to each wrist connected to two ropes that run up to the machine. When the machine begins to operate, his hands are pulled clear.

When we consider the lengths to which industry has gone to prevent accidents, we realize how far we have to go in the field of farm safety.

Our next report is from one of the outstanding groups in the field of agriculture, the National Committee on Boys' and Girls' Club Work. Mr. G. L. Noble, the Managing Director, will present the report—Mr. Noble.

MR. G. L. NOBLE: Mr. Chairman, ladies and gentlemen: My part of this report is going to be very brief, just a little background on what the 4-H Clubs have done.

The work was first developed in the states in a small way, then in a larger way, and finally two of the states—Minnesota, led by Mr. Erickson, who is here, and Kansas—developed very complete programs. At that time a committee of state club leaders decided that sufficient progress had been made to inaugurate a national program. So about a year ago we found a gentleman in the hospital with a broken leg. He had been kicked by one of his pure-bred cows. He happened to have enough money to offer the awards

for a National 4-H Club Farm Safety Contest.

The contest has been under way since the first of January, 1943, and we can't tell you now exactly how many 4-H Club members have taken part. We do have an estimate from the United States Department of Agriculture that nearly 400,000 4-H Club members have removed hazards around their farm homes.

I am not going to give the objectives of the 4-H Club safety contest, but I want to introduce a young man, an outstanding 4-H Club member from Dodge City, Kansas, who has done a considerable amount of safety work this year on his home farm and with his club. He will tell you what he has done. So I take pleasure in introducing Floyd Rickter.

MR. FLOYD RICKTER (Dodge City, Kansas): Thank you, Mr. Noble, and fellow safety workers. Our own 4-H Safety Club planned its initial meeting in January, 1942, and it had the help of all the local leaders and the two extension agents in Ford County.

Our 4-H Safety Club was organized in January, 1942. It was decided that to be eligible to participate a boy or girl must be between the ages of 14 and 20 inclusive. Members were required to pass the drivers test as conducted by the Highway Patrol. Each member pledged himself to do five things to make his home safer. Members also were to cooperate in reporting road hazards to the Township Board.

During the first year, the club completed the following group projects: Gave a fire prevention program; had a panel discussion on farm and home safety; painted gasoline barrels red at every farm home in the community; put up dead end signs on dangerous road crossings; exhibited a home safety booth at the county fair; and entered the state safety contest.

In addition every member made a report on the condition of his home from a safety standpoint.

The club joined the scrap drive, the rubber drive, and the waste paper drive.

We were instructed in how to make first aid kits out of material we bought at the dime store and packed in baking powder cans.

When gasoline rationing took effect, we conducted a safety drivers' school to induce members to learn how to save gasoline and the vitally needed rubber. At the same time, we had to pass our annual automobile operator's test, which consists of actual driving tests combined with a written examination. Every member of the club passed the test with a high score.

At the close of the year, a note book was prepared recording our work, for which each member wrote a story of his individual work. The highlights of this report appeared as a feature story in our local daily paper. Already, we had begun to make people a little more safety conscious.

As we continued our work we took over a vacant school house and remodeled it into a club house. Repair work was done on the floor and the stove pipes to make them safe. We elected a safety leader to give talks at our regular 4-H meetings.

By now safety bulletins have been distributed to every home in the community. Signs appeared at the driveways of each member's home. On one side is the inscription, "A 4-H Leader Lives Here." On the other side of the sign is the word "Stop," warning motorists to stop, look and listen, before going onto the highway.

We prepared a safety demonstration for the county fair this year which consisted of actually showing how to drive safely, the correct signals to use, etc. It was the first demonstration of its kind to be given at the county fair. Our safety booth was exhibited at the State Fair and won a red ribbon.

We have already worked out plans for 1944. They include plans to carry on an old nail campaign; that is, collect old nails, which would cause flat tires, and turn them over as scrap to war benefits; to have a drivers' contest for new members; exhibit posters in business houses in towns near our community, and many others.

So far, we are the only 4-H Safety Club in the county but we hope to help organize others in the near future.

I would like to show you the award that was made to our club on Everett Mitchell's broadcast Sunday noon. This

was presented to me in behalf of the National Safety Council by Mr. Stanley Kershaw. We are very proud of this award and it will have a prominent place in our club house as long as it stands.

CHAIRMAN PONTIOUS: We thank Mr. Noble and Mr. Rickter for their excellent reports.

MR. V. S. PETERSON: I was just wondering what you were doing, Floyd, in regard to the operation of farm machinery and live stock.

MR. FLOYD RICKTER: I missed that in my report. I didn't mention that that comes under the job of the safety leader who is elected to give talks at our monthly club meetings. One of the things that was mentioned in connection with running machinery was not to take the radiator cap off of an over-heated motor.

CHAIRMAN PONTIOUS: Back in 1920 when the first county agricultural agent started to work in my home county he said he didn't come to bring any new practices to Henry County. He came there to make the best practices of the best farmers the general practice of all the farmers in the county. It just occurred to me while Mr. Rickter was making that fine report of the job they are doing in his club that if we could just make the practices of that best club the general practices of all the clubs in our country, what progress we would make in this field of farm safety. More power to you, Floyd.

We will go on to the next organization listed to report, the National Fire Waste Council. Mr. Rush W. Carter, Chairman of the Agricultural Committee, will report. He is a well-known figure in the field of farm fire prevention and I know he will bring us a good report from his group—Mr. Carter.

MR. RUSH W. CARTER: Mr. Chairman, ladies and gentlemen: I have really come to talk about one phase of safety only and for that reason I will make my report as brief as possible.

The Agricultural Committee of the National Fire Waste Council was formed eighteen years ago to combat the menace of fire, which at that time was exacting a

staggering toll, in both life and property, from the American farmer.

Up to that time no organized effort had been made to promote fire prevention in strictly rural areas, nor was there much, if any, fire prevention material dealing with the many special hazards of the average farm. It was the founders' objective to fill that need to the limited extent of the committee's ability.

The Agricultural Committee is a publicity organization with but one objective—namely, the prevention and control of rural fires.

In this capacity it collaborated with the Farm Fire Protection Committee of the N.F.P.A. to publish in 1932 a 160-page book dealing exclusively with the prevention and control of farm fires. We have in many other specific, as well as general, programs relentlessly pursued our original objective. To do this as effectively as possible we have constantly sought to maintain a membership that would give us many contacts with the farmer as it is possible to obtain. We now have—and have had almost from the first—representatives of the rural press, radio, agricultural colleges, the Department of Agriculture, youth organizations such as the 4-H Clubs, Future Farmers, and Rural Scouts as members of our committee. Insurance organizations, state fire marshals, the National Board of Fire Underwriters, N.F.P.A., Underwriters Laboratories, fire control equipment manufacturers, the Red Cross, and numerous other organizations are members and have for years continued to support our efforts to reduce rural fires.

Without laying claim for all the credit, we do take pleasure in observing that the waste of property due to rural fires in 1942 was just about half of what it was in 1925, when our committee was organized; and we are sure an even more impressive record has been made insofar as personal injuries and loss of life from burning is concerned. Naturally, any progress at all of this latter score is of inestimable value, for while you can measure the worth of a building or piece of property, no one can foretell what undeveloped capabilities rest in the tiny hand of a child.

Since 1925 many other agencies have

joined in the fight. This is particularly true of the last few years when conservation of national wealth has become the watchword of the hour. This added weight has pushed the rural fire toll lower and lower year after year.

Our problem is to see that this trend is maintained after the war is over, when there is considerable likelihood that the ranks of conservationists may be thinner. It is with this thought in mind that we of the Agricultural Committee are endeavoring to plan for postwar years in an attempt to maintain the favorable course we have traveled in the field of rural fire prevention and control these past few years. In this work the National Safety Council is admirably fitted to play a very important part.

CHAIRMAN PONTIOUS: Thank you, Mr. Carter.

The next group to report is the United States Department of Agriculture. One of the finest working relations exists between the United States Department of Agriculture and the National Safety Council, working hand in hand in attempting to solve this tremendous agricultural problem. Dr. Reuben Brigham, Assistant Director of the Extension Service of the U. S. Department of Agriculture, is here to tell of the activities of the department—Dr. Brigham.

MR. REUBEN BRIGHAM (Washington, D. C.): I was impressed with one thing Mr. Noble said about the necessity of getting kicked into action. The man was kicked by his cow and got his leg broken before he did anything about it. That is one way of eliminating the hazard.

I was interested in what Rickard had to say about rusty nails. That has been a crusade in our own family. Our two oldest boys, when they were younger, were always getting into difficulty. When one did a thing, the other fellow did it before long, and one afternoon we took them both to the local hospital because they both stepped on rusty nails. So the tradition went through that part of the country that they both managed to step on rusty nails the same afternoon and both went to the hospital together.

I wish the Secretary of Agriculture could have been here this afternoon to

listen to this discussion and I know that he would like very much to have been here, Mr. Pontious, and I was authorized to extend his greetings and appreciation to this group.

Safety Work in the Department

The Department of Agriculture has stressed farm safety as one of the musts of its wartime educational work. Fortunately, the Department had experience in safety work prior to the war, both among its own personnel and among farm people reached by subject matter programs. The Department started this work among its own personnel in 1937. An accident reporting system was put into operation in January 1938. The purpose was to obtain complete, current, first-hand information on accidents and their causes. Individual safety programs were established in each bureau. A safety specialist from the Office of Personnel worked with each bureau in an advisory capacity. Reports of the U. S. Employees' Compensation Commission show that the total cost of compensation and allowances for injuries occurring to personnel of the Department was reduced from \$725,010 in 1936 to \$366,166 in 1942.

It is interesting to note that, from the inception of this program the number of accidents in the entire Department decreased materially until June 1942. During that month the curve rose above that of June 1941, making the first increase in the accident rate over a similar period in 5 years. Loss of trained personnel, the necessary replacement of skilled workers with unskilled help, and the constant acceleration of the Department's war effort were the primary causes of this increase.

For the first 6 months of 1943, the monthly frequency has fluctuated above and below the figures for the corresponding months of 1942. But the average has been 35 percent higher for the whole period. To meet this admittedly serious situation a number of bureaus have reorganized their safety programs. One bureau has reinstated a full-time safety officer, and others now are considering plans for strengthening their safety work.

Fatalities from vehicle accidents still represent the highest percentage of all accidental deaths among Department personnel. This is true in spite of gasoline

rationing, reduced speed limits, and greatly curtailed use of Government vehicles. However, the reduction of vehicle fatalities from 56 percent of the total in 1941 to 36 percent in 1942 was due largely to reduced speed and less driving. This reduction can be maintained by continuing reduced speed limits. The percentage is still higher than the low of 28 percent in 1939. During the calendar year 1942 there were 19 fatal injuries among regular employees of the Department, and 1,937 non-fatal injuries.

The Department is meeting this challenge realistically. Increased stress is being placed upon supervision. Pertinent educational material is being prepared constantly, and this is adapted by the various bureaus to meet specific needs.

Safety on the Farm

Every resource at the command of the Department of Agriculture has been thrown into gear to make the more than 6 million farmers of the nation safety-conscious. Field forces of the Department whose job it is to make contact with farm people stress safety as a factor to increase wartime production. In carrying on their safety program they cooperate with both public and private agencies in getting the message across to people on the farm. They have cooperated closely with the many agencies represented on the National Safety Council.

Among the departmental agencies active in the safety program are the Forest Service, the Farm Security Administration, the Rural Electrification Administration, the Agricultural Adjustment Agency, the Soil Conservation Service, and the Federal-State cooperative Extension Service. The Agricultural Research Administration, through its various bureaus, has provided information to safeguard farm people from a wide range of accidents and health hazards.

When the U. S. Crop Corps was started, to encourage city people to help with the planting and harvesting of farm crops, it was evident that these new workers would have to be educated in safety. One of the safety precautions taken was the designing of a comfortable and safe uniform for members of the Women's Land Army. This was done by the Bureau of Human Nutrition and Home Eco-

nomics in cooperation with the Extension Service.

During 1942 State extension services assisted 854,000 families in the removal of fire and accident hazards by publishing and distributing safety leaflets featuring hazard check lists.

Extension's neighborhood leader system, with a man and a woman neighborhood leader for practically every rural community, is a communication system that can reach almost every farm family in the country with urgent wartime information, such as farm safety, in the space of a few days' time. Many states are using this system in their accident and fire prevention work.

4-H Clubs

Progress in accident and fire prevention in rural America owes a great deal to the enthusiastic efforts of boys and girls from farms and villages. Many of these boys and girls, 1,700,000 as a matter of fact, are members of 4-H Clubs. Just recently I had the pleasure of going over some preliminary 1942-43 reports from State club leaders. I noted that 400,000 members took part in removing farm and home accident hazards, and 450,000 members participated in fire-prevention activities.

This year an added boost has been given to safety work by club members, in the form of county, state, and national recognition of outstanding accomplishments in this field.

4-H safety activities are broad gauge. They include safe handling of livestock, removing fire hazards from farm buildings, farm machinery safety, care in the use of farm tools and so on.

In summing up the work of 4-H, I want to give you a down-to-earth incident that occurred near Auburn in the State of New Hampshire. One Saturday afternoon, some 3 miles from the village, local firemen were fighting a stiff blaze that was threatening a nearby home. When the alarm sounded the 13 members of the Happy Hearts Club were holding a meeting. But, meeting or no meeting, away they scooted to the fire. Most of them were lucky enough to get rides. In no time at all they were filling water pails and carrying them to the men

on the fire line, where they filled the portable water tanks. Yes, the fire was put out, the house was saved, but I have never heard whether or not that 4-H Club resumed club business on that Saturday afternoon.

Farm Labor

This year, even more than in 1942, farmers received help in planting and harvesting their crops from emergency workers who filled the gap left in the farm front by those who had gone into the armed services, shipyards, munitions plants, and airplane factories. Many of these volunteer workers of the U. S. Crop Corps, which includes the Victory Farm Volunteers and the Women's Land Army, did not have previous farm experience. Accordingly, the Department and the State extension services, in cooperation with other agencies concerned, placed considerable stress on safety as an integral part of the program. Workers new to country life were given information, and in some cases, definite instructions on how to live safely in a different environment from what they were accustomed to. It was all practical.

Fire Control

In the broad field of farm safety, the prevention and control of farm fires is of considerable importance.

Early in 1942, Secretary Wickard, at the request of the Office of Civilian Defense, asked the Extension Service to organize rural America so that farmers and other rural people would be able to more effectively control fires. All State Extension Services were asked to make fire-hazard surveys and organize farm fire-fighting companies. Since that time 10,000 companies have been organized, with a total membership of around 100,000. This organizational work is still proceeding vigorously, along with intensive educational campaigns.

This year county agents in every county in the nation were supplied by the National Fire Protection Association with a kit of informational materials for use in connection with Fire Prevention Week.

In the more forested areas of rural America there is another volunteer organization of fire fighters to help protect that sector from destructive fires. This

group, the Forest Fire Fighters Service, under the guidance of State and Federal foresters, has 185,000 enrolled. It is a splendid example of cooperation between forester, farmer, and civilian defense. Many farmers are members of this organization, which operates where forest fires are definitely a community problem.

Through combined efforts of all those concerned with fire prevention in rural America, agencies and individuals, the farm fire loss for the nation was reduced from 90 million dollars in 1941 to 80 million in 1942, a reduction of about 11 percent.

As the Department looks forward to 1944 you can be assured that it will intensify in every way practicable its work in accident prevention and in fire prevention and control. As Secretary Wickard declared in a radio address this past summer on the National Radio Forum: "The Department of Agriculture is greatly interested in farm safety work and in reducing to a minimum the huge annual toll from preventable farm accidents. We are glad to cooperate with the National Safety Council in its program of accident prevention."

CHAIRMAN PONTIOUS: Are there any questions you would like to ask Dr. Brigham before he sits down? If not, we thank you for that excellent report from one of the important departments of our federal government.

There is another governmental department that is interested in farm accidents, especially now as a result at this time of the farm labor problem. That department is the Children's Bureau of the United States Department of Labor. We have with us Miss Miriam Noll, Specialist in Accident Statistics, who will bring us a report of the activities of that bureau—Miss Noll.

MISS MIRIAM NOLL (Washington, D. C.): The Children's Bureau of the Department of Labor is interested in the youth of the country who are being called to do farm work. The Children's Bureau has cooperated with various organizations in preparing recommendations on the subject of protection against accidents for young farm workers. A safety check list has been published.

Many of the youths working on farms have been living in camps. Others have been travelling from their homes in the cities to the farms each day. Still others have lived at their place of employment.

The bulk of our information on safety came from various organizations, such as the National Safety Council. Mr. Kershaw, for example, was a member of our subcommittee on young workers in wartime agriculture. At his instigation the subcommittee, which included as members other persons attending this meeting, had prepared three farm safety leaflets for use in the farm labor training program.

I am wondering if any members of this group know how many of the leaflets were used in the programs for training youth to work on farms this season.

MR. STANLEY KERSHAW: 500,000 leaflets were sent out.

MR. REUBEN BRIGHAM: We sent them to the county extension agents. Our people are conscientious about distributing material so I am sure that the booklets were used.

CHAIRMAN PONTIOUS: We will now hear from an organization which needs no introduction to a group of agricultural safety people. I refer to the American Red Cross. Mr. Richard Thrush, Assistant Director of First Aid, Water Safety, will tell us about the Red Cross program.

MR. RICHARD THRUSH: My talk will be quite informal. I feel very much at home here. I must have been a charter member of this group and it is always interesting to see the old faces back and a few additions as well.

One thing that we are concerned about in the Red Cross always is the nature of the farm safety problem. We are still wondering, as all of you are, just where these accidents take place, why they take place, and how they take place. If we have more information of that kind, we might be able to attack the problem a little bit more intelligently than we are.

We of the Red Cross are convinced that we can serve best by giving our traditional courses of instruction. Down through the years we have arranged for

systematic instruction in first aid and in water safety and now these past few years in home and farm accident prevention. It is our purpose to strengthen our courses, make them more definite and effective. We are in the process of enlarging both the quantity and the quality of the instructional material on both home and farm accident prevention.

We have passed through a period of publicity consisting of the distribution of as high as 15,000,000 check lists. We feel that something was accomplished. But there is something more definite that can be done and that is the thing that we are interested in now. Therefore we are stressing the giving of definite courses of instruction leading to certification.

CHAIRMAN PONTIOUS: It might be of interest to you to know that in the State of Ohio the Future Farmers of America came to the rescue of the Statistical Committee of our Farm and Home Group by conducting an accident study. The FFA study gave us the first picture that we have had of the farm accident situation in the State of Ohio. Our Committee on Contests and Awards presented a certificate to each of the chapters that participated in that program of accident reporting.

MR. A. W. TENNEY (Washington, D. C.): Members of the Future Farmers of America are interested in safety and are trying to do something about it. This is proven by their record of the past year. The National F.F.A. Program of Work for 1942-43 included recommendations pertaining to the guarding and protecting of life and property. Twenty-two State Associations reported safety programs in operation during the past 12 months. A total of 84,467 members participated in programs to control fires and perform other similar conservation activities. A total of 3,914 chapters participated in the fire control program.

F.F.A. participations in safety activities have been varied in nature due to an effort on the part of local chapters to help solve some of the safety problems in their communities. In forest areas many F.F.A. chapters have organized fire fighting crews, made and obtained essential equipment and have rendered outstanding service in the control of forest fires. In

areas where accidents due to improper use of farm machines are prevalent, F.F.A. chapters have made surveys of these accidents and have conducted educational programs to help avoid them.

It is impractical here to give a detailed report of safety activities of the Future Farmers of America. A few of the more common activities of these farm boys are as follows:

1. Sponsored first aid classes.
2. Conducted first aid demonstrations at chapter meetings.
3. Sponsored "Farm Safety Poster Contests."
4. Compiled and analyzed lists of farm accidents in the community.
5. Held farm safety quiz contests.
6. Made collections of "farm accident" clippings.
7. Presented radio programs on safety.
8. Showed movies and slidefilms on safety.
9. Prepared lists of hazards eliminated.
10. Sponsored farm hazard elimination contests.
11. Prepared safety floats for parades.
12. Sponsored livestock loss prevention campaigns.
13. Assisted in training city boys and girls to work on farms. Safety measures were included in this instruction.
14. Safety programs were put into operation in vocational agriculture and home farm shops.
15. Sponsored community clean-up campaigns thus making the community safer from fire and other hazards.
16. Participated in civilian defense activities.

Although no attempt has been made to obtain a detailed report of local chapter participation in safety activities, the many reports that have come to us show that Future Farmers are working together with other interested groups and individuals in helping to make the farm, the home, and the community safer places in which to live and work.

MR. STANLEY KERSHAW: Our Public Information Division has been working with the Future Farmers of America on a plan to make awards to outstanding Future Farmer groups all over the country similar to the award which was made to Mr. Richter's 4-H Club.

If comments received are any criterion, the most important contribution that the National Board of Fire Underwriters made, during the past year, to the welfare of the nation's farms and farm homes was the revision and republication of the 60-page pamphlet entitled, "Safeguarding the Farm Against Fire." Approximately 50,000 copies of this booklet have been distributed along with a "Farm Fire Questionnaire," designed to enable farm residents to measure the degree of their safety from fire.

That the booklet serves a widespread need has been attested by letters from dairymen's associations, state granges, county extension agents, 4-H clubs, and other groups interested in protecting lives and farm property against danger of fire.

The booklet treats with all phases of fire prevention on the farm. It suggests building new farm homes in such a way as to minimize the danger of the spread of fire; gives advice on the selection and proper installation of lightning rods and on the installation and use of various electrical devices used on the farm; tells how to reduce hazards growing out of the use of petroleum and its products; tells how to cure hay so as to reduce the likelihood of spontaneous combustion after it is stored in a mow; and, also, how to detect if the hay is heating dangerously. There also are chapters on general good house-keeping on the farm and on rural fire fighting.

During the year, copies of "Safeguarding the Home Against Fire" were distributed at numerous rural schools throughout the country along with copies of the home inspection blank. Since "Safeguarding the Home Against Fire" was first published years ago, approximately 1,500,000 copies of it have been distributed.

Fire Prevention Week, which is being observed this year during the period October 3-9, annually gives the National Board

an opportunity to intensify its efforts to help the entire nation, rural as well as urban, to recognize fire hazards and to control them. In this work it has the valued cooperation of such other organizations as the National Fire Waste Council, the National Fire Protection Association, 4-H clubs, Boy and Girl Scouts, Junior and Senior Chambers of Commerce and, during the past two years, that of the Office of Civilian Defense. During Fire Prevention Week and, in fact, throughout the year, millions of pieces of fire prevention literature are distributed. Much of this is of a character that makes it applicable to conditions found in the country as well as in the city. However, bulletins are issued frequently on subjects of particular interest to specific groups.

The most recent one of this nature was one dealing with the hazards confronting housewives in connection with the oven method of canning vegetables and fruits. Naturally, the bulletins could not be sent to every farmer's wife or every city gardener; but, in an effort to bring it to the attention of as many home canners as possible, widespread publicity was given to the bulletin.

These are only the high spots of the National Board's fire prevention work which is helpful to the rural dweller as well as to the city resident.

The Women's Bureau is interested in the welfare of the wage-earning woman whether she is in a torpedo factory or a turnip patch. Today because of the critical need for farm labor there are hundreds of women learning for the first time how to wield a hoe, plant a straight row, how to make friends and influence animals.

Since women have not been generally considered a source of supply for farm work in this country, most farmers, except perhaps truck farmers in some areas, are without knowledge of the capacity of many women to work as paid farm hands, or the preparations that must be made for their employment. Simple statements of what women have done successfully, and of how the problems of fitting women into farm jobs and providing suitable living standards can be solved do much to persuade the farmer to utilize this source

of labor. The Women's Bureau is supplying this information to various agencies responsible for recruiting and organizing women for farm work.

Our Bureau has made studies of women in farm work, seeking in particular the safety and welfare standards which should be maintained. A bulletin, "Guides for Wartime Use of Women on Farms" was issued last year.

Many of our publications and studies concerning women in industry have sections in there which also are applicable to the woman farm hand. For example, our bulletin on lifting weights, certainly applies to the farm woman as does our bulletin on "Recreation and Housing for Women War Workers," and many others.

The Women's Bureau is working closely with the officials of the Women's Land Army, which have charge of women's recruitment and placement. At the request of Florence Hall, Director of the Women's Land Army, our Bureau prepared data for the physical examinations of women enlisted for agricultural work and also prepared printed material, advising women farm workers on health, safety, and other problems connected with their work. Material prepared for the Women's Land Army in addition to the physical examination includes suggestions on:

- (1) What to do to get into condition for farm work.
- (2) How to use muscles correctly when bending, lifting, hoeing, etc.
- (3) Lifting heavy objects—How much weight can a woman lift?
- (4) Safe working habits for prevention of accidents.
 - (a) Conservation of strength.
 - (b) Learning to use muscles correctly.
 - (c) Wearing suitable clothing.
 - (d) Proper use of tools and machinery.
 - (e) Learning how to treat animals.
- (5) Treatment for sunburn, sunstroke, and heat exhaustion.
- (6) How to care for blisters, cuts, bee stings, insect bites, and poison ivy.
- (7) Amount of water to drink and equivalent salt requirements.

- (8) Care of the feet.
- (9) How to get the most out of a few minutes rest.

The problems concerning women farm workers which the Women's Bureau is studying include:

- (1) Type of work done; advisable adjustments to fit farm jobs for women's best work; occupational hazards involved.
- (2) Essential physical characteristics of workers, such as age and health, for each type of job; training required to perform tasks in different occupations; training of supervisors.
- (3) Hours, of work, rest periods, and so forth, bringing about best production.
- (4) Housing and food standards; cost for unit groups.
- (5) Supervision of women living on individual farms.
- (6) Transportation to and from farm.
- (7) Problems when living in farm home.
- (8) Wages paid for different types of work and cost of living under various housing conditions.
- (9) Attitude of farmers toward women workers and attitude of women toward agricultural employment as a result of the 1943 experience.

It is believed that the data obtained by investigating these subjects will not only disclose the problems which must be met but will indicate the methods of meeting such problems.

MR. T. A. ERICKSON: Wouldn't it be well to give a little thought to the farmers' organizations, the Farm Bureau, the Grange, the Farmers' Union, and various other groups? Practically all now have a safety program, probably as the result of the program sponsored by the National Safety Council.

Our committee has been very much interested in the past year in the reports from the Grange. The national master wrote to us that practically every local Grange conducts one meeting or more devoted to farm safety. I don't know whether that is true with the Farmers' Union and Farm Bureaus.

I would like to raise one thought: I have been very much interested in listening to the reports this afternoon, but so far we have been thinking largely of folks who are leaders of this work, not the farm people themselves. We have been making plans; we have been preparing courses of study; we have published a lot of fine safety literature. Don't you think that one of the big problems we have now is to get the farm people themselves to work in behalf of farm safety?

I think we all got a kick from Floyd Rickter's 4-H Club report. I think we should have had the same kind of participation by the Future Farmers of America and by the rural schools.

What can we do to get the farm people themselves working on this thing? What is the yeast for the dough? I would like to suggest thought on that matter.

CHAIRMAN PONTIOUS: I think, Mr. Erickson, that you have raised a fine point.

MR. H. G. FESTER: I am the manager of the Ontario Safety League of Ontario, Canada. In the Province of Ontario we have no farm safety program. That is why I am here.

Four years ago, we succeeded in impressing upon the Ministry of Education in our Province the advantages of having safety education made compulsory in all the schools of the Province.

About two years ago I received a letter from a school teacher in a rural area which said, "I want some literature dealing with farm safety." She said further, "I was born and raised in town. My father was a plumber. I know nothing about the hazards on a farm."

"I think a great many rural school teachers are similarly situated."

"Have you a program set up that a rural school teacher can use to teach children safety on the farm?"

We did not have anything and I had to frankly tell her that. I knew as little about the subject as she did, even though I was born and raised on a farm. You see I spent about eight years on a farm and about 50 years in the city, so I knew very little about farms. Consequently I couldn't help her.

Since then I have been doing my best with the assistance of the National Safety Council to formulate some sort of a program for the rural people.

CHAIRMAN PONTIOUS: I have reached the conclusion that we can do two things with adults in behalf of safety. While we may not be able to get him to change his habits, we can get him to correct some of the physical hazards—to put new steps out in the granary. We can get him to light a stairway, to buy a new ladder and to put a guard around the opening in the hay loft. We also can create in him a demand for safety education for his son and daughter.

Incidentally, the Ohio State Department of Education is preparing some courses in safety. They are not ready yet, but if you write to the Department I am sure they will be glad to send them to you when they are finished.

MR. G. L. NOBLE: I hurried along in my talk earlier this afternoon and would like to add that we have some literature on the 4-H safety program to which you are welcome. I think we have copies for every one here.

The awards or incentives that are offered in the 4-H safety contest are silver pins. Ten pins may be awarded in each County, provided fifteen boys and girls have taken part and reported on the project. To get a pin a member has to find twelve hazards in his home or on his home farm and tell what he did to eliminate them.

State winners get a \$100.00 war bond. National winners are awarded trips to the 4-H Club Congress and \$200.00 scholarships.

The national contest is copied directly from the Minnesota plan which was originated ten years ago.

CHAIRMAN PONTIOUS: Thank you, Mr. Noble. Is there any other discussion on this subject?

MISS MOWARD (Women's Bureau of the Department of Labor): I am wondering about the extent to which the National Safety Council is interested in the problem of training women farm workers.

CHAIRMAN PONTIOUS: "Stan," do you want to answer that question?

MR. STANLEY KERSHAW: It seems to me that this is an opportune time to clarify the position of the National Safety Council with respect to all of their work.

In the first place, we have an enormous job ahead of us, as most every one has pointed out, but the job can be boiled down to a very simple proposition. We need only to create a real concern for safety on the part of all the people who work with farm problems—the agricultural engineers, the livestock specialists, the home economists, etc. Then in the course of their work these specialists will find the solution to the problems, whether they be engineering or human.

The function of the National Safety Council with regard to all this is to bring the whole problem to some sort of a focus and to help unify and coordinate the activities of all the people who become interested in the job.

We long since concluded that it would be impossible for the National Safety Council or any single organization for that matter, to do the job by direct methods. We have concluded that the best thing to do is to win the cooperation of the many agencies which are concerned with farm and farm home problems and persuade them in so far as possible to integrate elements of safety to their own programs.

I want to express the appreciation of the National Safety Council and particularly those of us on the staff who have been trying to carry the ball, so to speak, to you folks, for the fine cooperation you have given us.

I think it is marvelous and I think we can all—I don't mean the National Safety Council, I mean you folks, because all of you are part of this movement just as much as we are—I think we can be very grateful for the progress we have made this past year.

CHAIRMAN PONTIOUS: We have been hearing from national groups exclusively and there are a couple of state groups we want to hear from. I will ask Professor Lehmann, Professor of Agricultural Engineering from Illinois, to say a few words.

PROFESSOR LEHMANN: Mr.

Brigham spoke about how the Department of Agriculture is organized to reach farmers, right down to the individual farm. The state of Illinois is no different from others. The organization is built up around twenty-five to thirty thousand people who serve as neighborhood leaders. We prepared a piece of literature that went out through the neighborhood leaders. It was entitled "Stop Fires Before They Start!"

MR. RICKARDS (of New York): About five years ago we were asked by the State 4-H leader at Cornell to help with their health program. They weren't doing very good work so we reorganized the program entirely. Their chief activity had been to have each club select its healthiest boy and girl to enter in the County contest. The best two in the County went to the State contest, and the two that won the State contest were sent to Chicago for the National contest. The contest idea was all right but it turned out to be more of a beauty contest than anything else. The winners were the boy and girl with the greatest brawn.

We changed the program into a contest to find the boy and the girl who accomplished most during the year in attaining better health. Under the new plan a rather puny youngster might, by applying the rules of health, become the winner.

This new program started and it has been very successful.

The New York Home and Farm Safety Committee is divided into twelve working committees, and one of them, the one you are interested in, is the agricultural safety committee. Professor Reilly of Cornell is the Chairman of that committee, and he is doing some remarkable work. He has twenty safety engineers working with him.

We have also prepared a farm safety booklet copied very largely from the Kansas Manual, although we introduced some original features.

CHAIRMAN PONTIOUS: We should like to hear from Bill Graham, who is Secretary of the Indiana Farm and Home Committee.

MR. W. F. GRAHAM (of Indiana): We have only lately started in Indiana, last January in fact. Our Indiana Farm

and Home Safety Committee was formed at a meeting of those interested in safety during our farm and home week. We had a mass meeting with approximately 800 people present. Mr. Larry Brandon, vice-president of the Indiana Farm Bureau, is chairman of our committee. I happen to be Secretary-Treasurer.

We are trying to organize county committees. The County Agricultural Agent, the County Director of Civilian Defense and the County Superintendent of Schools are enlisting representatives of the various local groups to form a county committee. To date ninety counties are organized in Indiana, and they are waiting for something to happen. They want us to push them. We think we will need a full time man to stimulate activities in the counties. Right now we are trying to find funds to hire such a man.

Meanwhile we have suggested several things for county groups to do. One of them is the distribution of posters, and I am happy to report that in one County two separate posters have been printed and distributed. One of the posters was for display in the barn and the other for posting in the house.

Another thing that we are promoting is a contest among the Counties. It isn't as successful as it should be. We call it the "Safety S Award." Awards are made according to a point system. Each farm resident who does one specific thing in behalf of safety—for instance, building a safety bull pen or putting a rail on the cellar stairs—is credited with a pre-determined number of points. At our next January conference we hope to have a sort of an "Achievement Day" at which these people will be given credit and recognition for their work.

MR. RICKARDS: May I call attention to one weak spot in the safety program. We do not have many statistics on non-fatal accidents.

Our State Health Department has a vital statistics department. We get the fatalities, but I know of no state in the Union that has absolute figures for the non-fatal accidents, the accidents that take men off the job.

We are at work on that and I hope before the end of the year we will have some valuable figures. We are conduct-

ing an accident survey through the Home Bureaus. We are supplying the Home Bureaus with accident report blanks which will be filled out by members of the organization.

CHAIRMAN PONTIOUS: There is just one more report. The Soil Conservation Service has been carrying on a very active safety program for years. Mr. Wetzel, director of the safety and health section of the S.C.S. will tell us about their program.

MR. WETZEL (of Washington, D.C.): We have had an employee safety program for seven years and we found that our experience in that field provided excellent material to use in carrying on our farm safety program.

The Soil Conservation Service has six thousand employees in daily contact with farmers. Their job is to work out a conservation plan with the farmer. They talk to the individual farmer, making twenty thousand individual contacts a

day. A year or so ago we inaugurated a three months training course for all our field employees, during which course we trained them thoroughly in farm hazards. We instructed them in the detection and correction of hazards and asked them to point out the hazards on the farm. Our employees really became enthusiastic. They carried the program into our soil conservation districts, covering two-thirds of the counties in the United States.

We have had a little trouble in getting training material for our employees. We have used Mr. Erickson's bulletin. I don't know how many copies he gave us.

We have prepared several pamphlets and several posters ourselves. We are counting on preparing one poster each month. Fortunately we have printing facilities available and all we need are ideas.

... The meeting adjourned at five fifteen o'clock ...

WEDNESDAY MORNING SESSION

October 6, 1943

Presiding: V. S. PETERSON, Ames, Ia.; chairman, Safety Committee, American Society of Agricultural Engineers.

MR. T. A. ERICKSON (Chairman, Farm Safety Advisory Committee, National Safety Council): In view of the fact that Mr. Peterson will be delayed for a short time, I believe we should start the discussion without further delay. We have a very interesting program outlined this morning. It is a round table discussion of a number of important problems in farm safety work. I feel that during the session today we ought to get in just as many definite suggestions as possible so that we have some specific things to carry back home and put into action. I hope everyone will participate in the discussion of these topics.

Let's begin with topic number three: What methods can be used to reach farm families most effectively? Mr. Graham, will you open this discussion?

MR. W. F. GRAHAM: I am with the Ex-

tension Department at Purdue University. For the last year I have been the secretary-treasurer of our Indiana Farm and Home Safety Committee which was organized last January during Farm and Home Week at Lafayette.

I think that the best way to reach farm people is through county organizations which are set up and ready to work in Indiana. The thing we are very much concerned about is how to provide the county organizations with programs. We think that a combination of things is necessary. We have to have promotion of this safety idea through a lot of different avenues: newspaper publicity, meetings, contests and the schools.

The point I would like to make in my opening remarks is the fact that the way to reach the farmer is with local activities

involving farmers. You can talk to people and preach to them all your life, but if you can't get them to do something themselves, they are not going to take hold of it very hard.

One of the projects we are trying to stress in Indiana (we haven't got it going too well yet) is a safety award contest. This is the plan: Neighborhood leaders check the hazards on farms in their neighborhoods. A little later they check again to see what has been done to remove the hazards. Points are allowed for farmers who build safe bull pens or put railings on stairs or who remove the rubbish from their basements. All of those points allotted in a county are accumulated. The county with the greatest number of points is awarded an "S" award.

CHAIRMAN ERICKSON: We are very glad to have had Mr. Graham of Indiana open the discussion. I wish he could have gone a little more into detail, telling what Indiana did. I had a letter from the director of extension work, who told some of the things they were doing in Indiana to get every farm family in the state to do something in safety work, and they have done a great deal more than Mr. Graham has said to put that program across. However, I presume he didn't tell all the things so that you would have a chance.

What ideas have you folks as to how to get this information that the National Safety Council, your own state and your own organization have, out to the people?

MR. S. H. KERSHAW: (National Safety Council): I would like to ask a question, Mr. Erickson.

I don't know how many folks are here who have close contacts with newspapers, but I would like to ask what we might do to get the newspaper people to get more complete descriptions of farm accidents so that the account of the accidents would include rather full information about how the injuries occurred.

It seems to me that there isn't a more useful contribution the rural papers could make to the cause of farm safety than to spread information on the causes of individual accidents.

CHAIRMAN ERICKSON: How many of you folks are doing something as suggested

by Mr. Kershaw? Will you raise your hands? (Four) Tell us something about it. We discussed that a little yesterday. What can we do to get more of these real things into the press?

MR. HARRY M. PONTIOUS (Ohio Farm Bureau and Farm Bureau Insurance Companies, Columbus, O.): Mr. Chairman, we started off with our state farm and home safety mobilization in Ohio last year by contacting the newspapers to get them to run safety material. Most of the large city papers ran a feature page on farm and home safety. We prepared some material for them and supplied pictures. We found that material in most forms was used a great deal by rural weeklies.

MR. B. R. RICKARDS (New York State Department of Health, Albany, N. Y.): Mr. Chairman, if you want the local paper to give local color—and local color is very essential—first of all give the general facts you want them to print and then encourage them to add specific local information. At the bottom of your news release give them an idea of what to add. For example, in health work, which is the same as safety work, if you are releasing information on an outbreak of polio or any infectious disease, it is well to suggest at the end of the story that the editor put in the number of cases and the number of deaths in their community. A safety story can be handled the same way. Ask the editor to put in the number and kinds of accidents that have happened in his community.

We have found the National Safety Council mats of great value in New York.

MR. BERNARD LUNDY (National Safety Council): A chain which sometimes is the weakest but can be the strongest is the country weekly editor himself. I think a number of us have seen cases of weekly editors who got interested in safety and who pushed farm safety aggressively. I think the problem we face is selling every individual editor in our area, whether it be state or county, on the importance of farm safety.

I think the Council's Farm Safety Division might well produce a small leaflet for distribution to country editors on the importance of farm safety, the cause and effect relationship, the fact that accidents need not happen. If you get the individual editor

sold on the principle that accidents need not happen, I think he will treat farm accident stories differently.

MR. H. G. FESTER (Ontario Safety League, Toronto, Ontario): I am an old newspaper man, and I know that even the editor of a small country paper wants something that has real news value. He wants it in as few words as possible, and he prefers to have you write it in the form in which he can publish it.

I will give you an illustration of a safety story with news value. I once made the statement in the City of Toronto that women were better motor car drivers than men. You know what a contentious subject that is. I backed it up by statistics from the provincial motor vehicle branch. I pointed out that women drove 19 per cent of the cars of the province, that they consumed 10 per cent of the gas and were only involved in 4 per cent of the accidents. That story was published so widely that I received two letters of protest from England from a fellow at the head of an insurance company.

Something that is just a bit controversial, if you can insert it, enhances the news value of a story. It should be something that will make people perk up and think. Even if it reacts to arouse opposition, it doesn't make any difference, just so you get them talking about this thing.

MR. ERNEST EVANS (American Red Cross): I want to say something about an activity we conducted at the Kansas State Teachers College at Pittsburg, where I taught for a number of years. We ran in thirty-two of the Kansas papers a little block item called "What is your safety I. Q.?" Most of these were prepared by students in the safety class. We found that the newspapers were very much interested in using this material.

If we are going to really get across a farm safety program, we are going to begin right with the individual farmer, analyze what he does, where he goes, and then use his interests as the instruments through which to promote the program.

CHAIRMAN ERICKSON: We probably should not take any more time for this topic. I would like to suggest, however, that you think further about it.

We have our Chairman here, and I am very glad to introduce Mr. Peterson.

... Mr. V. S. Peterson assumed the chair...

CHAIRMAN PETERSON: Thank you, Mr. Erickson.

Yesterday afternoon Mr. Pontious, in his closing remarks, brought out the thought that the safety program in this country, during the next year, would be helped much more by this group which we have assembled here than it would be if we had an audience of 5,000 farmers, because we have here a group of individuals who we might call multipliers. Those of us who are working in this farm and home safety field are interested in the development of leaders and leadership, because that is what those leaders represent, the multipliers which are necessary to carry the information from the leading agency, the National Safety Council, on out to the home and the farms where it will be applied.

We have with us this morning a guest, and of this man I can say that safety comes from his heart. He is President of the American Society of Agricultural Engineers. He has been invited to discuss with you Job Instructor Training.

The principles of Job Instructor Training have been carried out, to a certain extent, in some of the work in farm safety which has been conducted in the past. It is given in one of your movies and also in one of the releases which you prepared for the U. S. Department of Agriculture.

MR. KERSHAW: That is right.

CHAIRMAN PETERSON: So, it is my pleasure this morning to introduce Mr. A. W. Turner, President of the American Society of Agricultural Engineers, who will explain Job Instructor Training.

MR. A. W. TURNER: I want to say, first, that to me safety can be divided up, or has four main factors. I don't know if they have been discussed here or not.

The first one is the physical condition of the person. That no doubt has been discussed many times.

Second are mechanical hazards—conditions that are accident breeders. I think particularly of leaving a guard away from the hay chute, because my father-in-law is in his seventh year as a cripple from going through a hay chute. He knew about the

condition, but never took the time to put a guard on it. One night it was dark and he was in a hurry and tired. He stepped into the chute and went through.

Third is the matter of judgment which I will define by example. I have been somewhat disturbed this last year by reading in the newspapers about boys nine, ten or twelve years old operating tractors and doing many other jobs, working from sun-up until sun-down. Is it good judgment to permit a boy to do that? Is it good judgment on the part of newspapers to give recognition to such unwise practices? If a person is not permitted to drive a car or truck on the highway, he should not be permitted to operate a tractor or other farm equipment. The farm equipment industry does not contend that farm machinery is any easier to operate than an automobile. It may even be more difficult, because the operator is required to do two or three things at a time. Farm equipment must operate on uneven ground. Machines have a high center of gravity. Tractors have individual wheel-brakes. The operator must look at the ground ahead and look behind at the job that has been done.

Frankly, I want to go on record as being opposed to young children doing that kind of job. If they do, we are going to have mounting farm accidents, and the equipment is going to get the blame. If we are going to have to have extra child labor, and maybe we are, we had better relax the laws regarding child labor in factories where they can work short hours and under close supervision. It is a lot safer to work in a factory than out in the back of a forty-acre lot.

The fourth and last point is the matter of education. The statement has been made that safety is being taught as part of the regular home economics course in some schools, that you are now tying up safety education as part of the regular training program. How can you separate them? Can you first teach a person to do a job and then teach him how to do it safely? I don't think you can. The whole job is a matter of habit formation.

If I had the time, I would have you all take a piece of paper and tell me definitely how you drive a car, from the time you get in the seat until you are in high gear. I think you would have quite a job to think

of all the jobs that the eye does, that the fingers, hands, and feet do. The reason is that you don't think about each thing you do. A bundle of habits automatically do the job. I hope no one taught you how to drive a car and then came along later and said, "Now I am going to teach you how to drive safely."

If you separate safety and job training, you naturally breed an awkward worker. He first thinks about how to do the job, maybe how to do it quickly; next he tries to do it safely. He has one set of habits over here and another set of habits over there, and they war against each other. As a result he is clumsy and neither fast nor safe.

The only person, as I see it, who can train a new hired hand to do farm work safely—I don't care if it is operating equipment, repairing a building, putting up electric wires, changing fuses, or what-have-you—is the farmer.

I do not think you can put up enough posters around the place to make people act safely. I have some safety books at my office. I am going to read them when I get a little time, but as long as they are there on my desk, I do not think they are doing me any good whatever. If someone can put the message from the booklets in my mind so I habitually act in accordance with the safety principles, then I think I will be a safe worker.

The J.I.T. program is based entirely on the point of forming a habit for each specific job. I think if we take the time to train workers properly in specific jobs the accident situation will drop down pretty fast.

The first principle of J.I.T. is that telling is not teaching. After all, language is only a matter of printing pictures. I can, for instance, test out certain words here that would register one way with some people and another way with others. Unless the person you are telling gets the same picture in his mind that you have, you have not taught him anything.

I have a friend who has a fairly good estate. One of his evergreen trees wasn't getting along very well, so he called his boy and said, "Bob, I want you to get the hose and fix up the evergreen tree."

A little later he went back and said, "Bob, you heard what I said?"

"Yes."

"What are you going to do?"

"Well, I don't know. What tree did you have reference to?"

"Oh, I'm sorry. I meant the one out by the corner of the house."

"You said, 'fix it up.' What do you mean 'fix'?"

"Well, what I want you to do is to stir the ground, clean out the grass, put on a little top dressing, and water it."

"Oh," he said, "that's different."

It was clear to the father all along as to what he wanted done, but it left a poor picture in the boy's mind. Such vague information might, in another instance, have been cause for an accident.

The Job Instructor Training technique is broken down into four simple steps. The first is to prepare the worker. We could put a lot of time on that, if we wanted to, to get the worker in the proper frame of mind, to drive away any fear. You get the person's complete attention on the job. You find out what he knows about it, but do not take too much for granted. Get him interested in learning the correct method.

The second step is to present the job, tell, show, illustrate and question. Telling won't do it; showing won't do it. But it is a combination of telling and showing that does the trick. Take up just one point at a time. I wonder how often we like to skip over a point to find a short cut. If it does not make any difference to the operation of the job, all right, but we do not dare to omit any step in job instruction. It is necessary to break the job down and take it up step by step and stress the key points.

Step three is what is new in J.I.T., and perhaps it is all that is new. It is where the instructor turns right around and says, "Well, you can do this all right now, can't you?"

"I think I can."

"Let's be sure about it. I am going to be the new worker; you are going to be the farmer, and you teach me."

That is when both student and teacher learn how well the lesson has taken hold. We know that teachers have to work a lot harder than the person who is being taught. The teacher has to know all the answers and

all the techniques. So, when the farmer turns the tables and has the beginner become his teacher, the beginner has to think the job through pretty carefully. That is the chance for the farmer to catch the mistaken points. Never turn a person loose on the job until you have complete confidence he is going to do the job right.

The fourth point is to follow up. Put the new worker on his own, advising him what to do in emergencies. Then check back from time to time to see that he is working correctly.

In conclusion I would like to call your attention to the statement at the bottom of the J.I.T. instruction card: "If the worker hasn't learned, the instructor hasn't taught."

CHAIRMAN PETERSON: Mr. Spanton, do you have any remarks you wish to make in regard to the application of the J.I.T. principle in your work?

MR. W. T. SPANTON (Director of Vocational Agriculture, U. S. Office of Education): We certainly appreciate the help that Mr. Turner and his organization have been giving us during the last few years, not only the assistance on mechanical problems but also the work they have been doing in connection with the J.I.T. Program.

I might also say at this time that our organization appreciates the splendid cooperation we have received from the National Safety Council in connection with our war training program. In that program this year we had 65,000 courses throughout the country. You people will probably be interested in knowing that most of those courses were in three fields. One was in the overall care and repair of farm machinery and equipment. The other was in the production and processing of food for family use and the other was in farm labor training. In all three of the courses, safety played a very prominent part.

In our food processing course, we found there were any number of places where safety needed to be stressed, particularly when we got into the use of big retorts and pressure cookers. One experience I am going to mention. Under this program we are permitted to use a certain percentage of the funds that have been appropriated for this program toward the purchase of equipment. Many of the communities over the country

were very much interested in purchasing food processing equipment, including pressure cookers, and more particularly these large retorts for handling as much as 133 quarts at a time.

We discovered there were very few companies around the country that had been manufacturing large retorts, but we managed to get two retorts. We had engineers make detailed specifications of them, which we supplied to the states for their trade and industrial classes, where they were able to make them. Some manufacturers got hold of the specifications and made some retorts for sale.

The State Labor Department in one state and the safety department in another state got hold of one or two retorts, examined them, tested them. In one case they said the retorts would stand only twelve ounces of pressure. In another state, one of the retorts had actually been tested in the laboratory with up to sixty pounds of pressure.

In every instance we insisted that the states follow the directions of their safety people. That is one thing we have insisted upon all the way through the food canning course, the farm machinery course and the farm labor training program.

During the last summer thousands of boys and, in some instances, girls went out to work on farms. We have had the responsibility for training those groups. We have been stressing the importance of training those young people in safety.

In connection with our experience in the training of youth who go out on the farms, we felt that our greatest responsibility was not so much in training the workers as it was in dealing with the farmers. We reasoned that the workers were going to be called upon to do dozens and dozens of jobs that might not have occurred to the instructor. Therefore, the big job is with the farmer, to really acquaint him with the fact that he must teach the boys and girls correct practices to insure their safety.

MISS MIRIAM NOLL (Children's Bureau, U. S. Department of Labor): We have neglected some of the hazards in the use of these young workers who are going to be taken out on the farm each day. The hazards I refer to are the hazards of transporting the

workers to the farms, which J.I.T. would hardly cover.

We have found in the last two seasons that a large number of serious accidents have occurred in trucks. Not enough attention has been paid to the safety of the trucks which are used to transport emergency farm help. That may come back to the farmer, because the farmer himself is the owner and usually the operator of those trucks.

It seems to me that the transportation hazards should be brought out in the training programs, in some way or other, so they are taken care of either by the farmer or by the supervisor who is going to take the youngsters in charge or by whoever is sponsoring these programs.

It is important to prevent these accidents because if the workers are hurt, the farmer, the sponsor of the program or someone might be sued for a large amount of money. I don't know whether J.I.T. is going to come into that, but somewhere that sort of safety instruction needs to be given, doesn't it?

MR. TURNER: I would like to answer that and classify it under one of the other four sections—under judgment. What judgment was used in selecting the driver? Was he qualified? Someone must have had some judgment about the equipment going on the highway.

MISS NOLL: May I ask if the children are taught how to behave in trucks and buses? That is one important thing. Sometimes they jump off the truck when it is moving.

CHAIRMAN PETERSON: Are there any further questions? If not, Mr. Turner, again we thank you.

Mr. Noble, I wonder if you would be willing to open the discussion on question No. 1: "How can more safety information be integrated into programs and publications not strictly on safety?"

MR. NOBLE: Mr. Chairman, I can tell you, very briefly, what we do in our organization. In the first place, we use newspapers, supplying mats in many cases, and we use the radio frequently. That just about covers our efforts to reach the public, particularly 4-H Club members, with safety information. We also carry a little in our own magazine.

CHAIRMAN PETERSON: Your work with the boys and girls, then, as far as the

club work itself is actually concerned, is strictly safety instead of being integrated with the subject matter of other projects and activities, or is it handled in both ways?

MR. NOBLE: It is handled in both ways.

CHAIRMAN PETERSON: I wonder if there is somebody else who would be willing to offer some remarks in that regard?

Professor Lehmann, what have you been doing in Illinois?

E. W. LEHMANN, (Head, Dept. of Agr. Engineering "U" of Ill.): We have been working with the State Labor Committee. The committee has prepared special material for both the worker and the farmer. In the publication for the worker there is one section devoted exclusively to safety. In the one directed at the farmer an attempt is made to make him feel his responsibility for the safety of youth employed on his farm.

We have assisted in the preparation of materials for vocational agricultural teachers. We have two men stationed at the college working with the college, the extension service and the vocational agricultural group. Their efforts are devoted to the preparation of instructional materials. They have been playing up the idea of the safety feature.

CHAIRMAN PETERSON: As I understand it, the subject matter is not strictly safety material; it may be on any subject, but you work the safety in at the point where it belongs.

PROFESSOR LEHMANN: Yes.

CHAIRMAN PETERSON: Which I understand is part of the job instruction training program. The safety information is worked into the training on how to do the job. That is something which needs more consideration. The various agencies which are disseminating information should consider the safety features involved and be sure that they are incorporated in the subject matter material.

PROFESSOR LEHMANN: I do believe there is a definite need for subject material that is more or less of a specialized character. The farmer has all sorts of jobs. The man who is working in the field of livestock or dairying might well have some specialized safety suggestions brought to his attention, and the implement dealer might well have suggestions that relate just to implements.

MR. T. A. ERICKSON: Some of you may have seen a little bulletin containing quizzes on safety we of General Mills have gotten out. I sent a copy to the editor of Child Magazine, and she wrote to ask if she could use the copy in the next issue of the magazine. They used two pages of the quizzes on their Little Citizen's Page. Some of the most interesting correspondence that I have ever had in my life has come as a result of that article. We are still getting letters from little folks, all the way from eight years up to twenty and older, asking for this bulletin or for the other quizzes. Some of the letters are very interesting. They are written by children, in their own way. I have sent quite a few of the letters back to the editor of Child Magazine.

As I read the letters from the children, I thought of the effectiveness of material that appeals to the young people.

MISS NOLL: I wonder if a great deal has been done in integrating material on health and safety, so that the safety is brought out in every article or every bit of publicity that deals with health?

CHAIRMAN PETERSON: Who would like to answer that question? What has been done on the integration of safety and health?

MR. NOBLE: Mr. Rickards has had some experience.

MR. RICKARDS: We have had a radio program for twenty-one years. We started in with WGY a month after they established their station. For eleven years we carried a five-minute health talk which took in all phases of health. Then we decided to change to health dramas. We used our own staff. We tried using a professional staff but they were thinking of their art, not what we wanted to get across.

I have found that whenever you ask a radio station manager if you can have what is called a spot announcement, they are tickled to death to give it to you, and they will give it to you four, five, six and eight times a day. A spot announcement must be fifty words or less, never more. If you are going to have a safety meeting, write up something of forty or fifty words about the meeting, and arrange with the station to have this broadcast.

By the way, I have in my briefcase copies of "Doctors Fight Accidents," a book-

let that is being sent to every practicing physician in New York State, with a letter signed by the Chairman of the Health and Safety Committee of the State Medical Society. I also have an accident survey blank which we are using for a special study of non-fatal accidents.

In addition, I have with me the proof of our Farm Safety Manual and the Safety Manual for Public Health Nurses. I only have the one copy of each proof, so I cannot give them away.

CHAIRMAN PETERSON: Will those be available for distribution outside of the state?

MR. RICKARDS: Not in quantity.

CHAIRMAN PETERSON: Individual copies?

MR. RICKARDS: I can make arrangements with the printer to supply anybody at regular cost; that is, the same price they cost us.

CHAIRMAN PETERSON: That would be in quantities. What about individual copies?

MR. RICKARDS: I will send individual copies to anybody.

CHAIRMAN PETERSON: Anybody who is interested should get in touch with you?

MR. RICKARDS: Yes. We are not copy-righting them. We will be very glad if anybody wants to copy them. If they want to add a line giving us credit, we will appreciate that, of course.

MR. RICHARD W. THRUSH (American Red Cross): I am always a little bit concerned about the matter of integration. I think all of us firmly believe in integration and in a close relationship of any instruction with the work in hand. At the same time, we need to be careful that in any integration the thing we are striving for isn't lost through that very process of integration, so to speak. So that, after all, there is a great deal to be said and a great deal to be learned out of experience on the side of definite courses, courses that may be given, courses that instructors can be trained to give. Certainly, any such courses should be so designed that they are directed to life situations and to the work in hand, whatever the job may

be. With a child, such training should be in relationship to the life of the child and the activities of the child, and with an adult, connected with the work and with the activities of the individual.

It is easy to have materials printed. The big problem is to get them used. I question whether there is any more satisfactory way to get those materials used than to have definite, specified courses set up for that purpose.

CHAIRMAN PETERSON: I have picked out topics 5, 7 and 8 as a group which I thought might merit some further, brief discussion. No. 5 is: "What channels can be developed for obtaining information on farm safe practices?"

I am going to leave it up to the group as to whether or not we discuss any particular topic. Those interested in discussing that question hold up your hands. If there is no interest in discussing it, we will pass to the next one—No. 7: "What kind of safety contests can be used effectively?" Mr. Erickson, I think you have something to offer on this subject.

MR. ERICKSON: I have only a word or two in connection with it. I would like to say that, in my experience, and especially with the 4-H Clubs, we have found that the contest is the most effective way of putting across safety work with young people. In fact, it was the way we began the work. The very first thing we did was to pick a few, rather important things in farm home life and suggest to the county extension agents and to the local 4-H leaders that they build contests around them. I am not going to go into detail at all, but we, of course, set up prizes and awards and had a very definite program.

One type of contest that we have emphasized all the way through is the demonstration contest, where we get a boy or a girl to demonstrate some simple practice or some simple thing that they have done. The boys and girls put on the demonstrations at local events and county fairs.

We had a couple of boys who put on a demonstration on how to make a safe bull pen. (You know that herd sires cause a lot of accidents). This demonstration was worked up by the county agents. The boys showed how they had constructed bull pens, and safe practices in handling bulls.

We have also carried on an exhibit con-

test during the ten or eleven years since we began the work in the state of Minnesota.

One of the most effective things we have done is to conduct a reporting contest, encouraging the 4-H boys and girls to send news items to the local paper.

The award in our safety contest in Minnesota is a gold watch donated by one of the twin city newspapers. For eleven years they have given a gold watch to the boy or girl who reported the most extensive activities in the field of safety. The poster-making contest in Minnesota is supported by the Farm Bureau.

Incidentally, we have tried to connect all of our health work in the 4-H Club program every place we could with accident prevention.

I think you appreciate that we can make a contest out of everything. We say that girls can make a game out of baking bread just as well as boys can make a game out of getting out and kicking a ball full of air around a football field. We can make a game out of everything, and that is what we have attempted to do all the way through 4-H Club work.

MRS. NICHOLSON: Could some of these demonstrations and contests be put on at the regular parent-teacher meetings in the local community?

MR. ERICKSON: Yes, I believe they can. It has been my privilege to be in the advisory committee of the Parent-Teacher Association for a great many years.

CHAIRMAN PETERSON: Is there any further discussion on that particular question?

MR. RICKARDS: I believe it is very essential to tie up not only health and safety but to tie into it the war manpower motive at the present time.

MR. PONTIUS: I agree with that heartily, but I want to throw in a word of caution. I have been greatly concerned during this emergency with the stress that has been put on safety in the war emergency. I have been greatly concerned because in too many cases the safety movement seems to stand in people's minds only as a means of winning the war. We are going to have a safety problem after the war is over. So I think we can, in our big program, use that as an additional need for an intensified effort right

now, but let's not make that too paramount in this problem, because we are going to need it after the war is over, almost as badly as we need it now.

CHAIRMAN PETERSON: We will pass on to question No. 8: "What can be done to give recruited farm help more safety training?"

I would like to call upon Mr. Brigham to open the discussion.

MR. REUBEN BRIGHAM (Extension Service U. S. Dept. of Agriculture): Mr. Chairman, I have been very much interested in the discussion we had earlier on the question of J.I.T. training. We have all, of course, in extension service and in the vocational field heard a great deal about it.

I was glad that Dr. Spanton brought up the question of encouraging farmers to give more thought to preparing these workers that come from the city to work on the farms. I think that needs to be stressed.

We are ending one year's experience with labor that has not been accustomed to farm work. Whenever you enter into a new experience on as widespread a scale as we have this year, there is going to be a lot of discussion out on the farms, and there is going to be a lot of gossip in the cities about, "the experience we had last summer when we went out and tried to pick apples," or do something of the sort. We are faced right now with the problem of making the most of the interest that has been aroused and the experience that has been gained.

We have tried to build our extension work on the basis of experience and the demonstration of that experience to others who have had less opportunity to try out the new method or the new procedure.

In the farm manpower mobilization and training program we are trying to substitute translation of the experience of others for actual experience.

I think we need to pool our efforts with Mr. Turner's organization (Am. Society of Agricultural Engineers) and with all the other organizations represented here, in working out the best methods of stimulating interest and of instruction. I know nothing could be of more value to our neighborhood leaders as the season approaches, than to have an actual discussion and demonstration of the nature that Mr. Turner talked

about. Nothing will be more convincing to any group than to have two people get up and go through the J.I.T. process. Incidentally, I think that we need a simple type of demonstration that can be used in almost any group and without too much preparation.

On the question of integrating safety with everything, I think Mr. Turner struck the keynote there. You don't want to be constantly thinking of safety as something apart; it is an integral part. You go right down the line with it. This particular pamphlet is an example. It shows the steps in handling the fruit ladder. If you have done much work in picking fruit with a step-ladder, you know that it is the easiest thing in the world to upset the ladder and possibly break an arm or crack a rib. This pamphlet was published by Washington State College.

MR. KERSHAW: I would like to ask Mr. Turner if he knows of any source of supply of visual aids, such as film strips or motion pictures, which could be utilized for the purpose of illustrating training techniques, or whether the Society of Agricultural Engineers has discovered that it cannot be as well presented with visual aids.

MR. TURNER: I understood that the extension services were preparing a slide film on job instruction methods. I do not know whether they have or not. I do know that one or two of the industrial firms have prepared films, but I think that a film is a

very poor second best. There is nothing like making the demonstration alive, and it is advisable not to have to follow through on a canned talk because, as you know, we do not all have the same rate of uptake.

MR. BRIGHAM: I quite agree with Mr. Turner. However, we have prepared some material along the line Mr. Kershaw mentioned. I do not know how soon it will be released.

CHAIRMAN PETERSON: I am going to take advantage of this opportunity to introduce Mr. Van Vlack, Extension Agricultural Engineer from Iowa State College, and also Chairman of the Extension Committee of the American Society of Agricultural Engineers.

I think, perhaps, I heard one of the best illustrations of the application of the principles which were discussed in question No. 1: "How can more safety information be integrated into programs and publications not strictly on safety?" in a program which Mr. Van Vlack's office put on over radio station WOI.

They were talking about preparing the corn picker, for the corn picking season. As part of the program there was the information in regard to safe operation and handling of the picker. I thought they did a nice job of integrating that with the information on getting the picker ready to do the job. They brought out that the operator had to be in condition himself.

Home Safety Section

WEDNESDAY AFTERNOON SESSION

October 6, 1943

Presiding: DR. DONALD B. ARMSTRONG, Third Vice-President, Metropolitan Life Insurance Co., New York City.

MR. A. V. ROHWEDER, Vice-President for Home and Farm Safety, National Safety Council: As Vice-President for Home and Farm Safety of the National Safety Council I have had the good fortune, in selecting as chairmen of the two divisions, men who can do a better job than the Vice-President can do.

In the case of the chairman of the Home Section I refer, of course, to Dr. Donald B. Armstrong, who is Third Vice-President of the Metropolitan Life Insurance Company and an author of a great many books that affect and directly point out the fundamentals of Home Safety. He is the President of the American Museum of Safety, which organization was one of the prime movers in the cause of accident prevention throughout this country. All of us who have been associated with him in many of his endeavors have appreciated the fine job that he has done. To have him take the time and to put the effort forth that he has in connection with this Home program has made possible the groundwork for a real national attack on the Home Safety problem.

We have tried for a long time, you know, to branch out in the National Safety Council from the set program of service for membership or for moneys paid to the Council directly back to the individual organization. In other words, some thirty years ago when the Council was formed it was our idea when we paid our membership that we were going to get so many posters and so much material for so much money. It was a group of fellows in the railroad business, the metal business, etc. who banded together with that idea in mind. That went along until a few years ago, when, in reality, the slogan of "Universal Safety" was picked up and in the Home Division it was made a definite part of the program and given recognition by the National Safety Council as a real integral part of the Council's activities.

Now I don't know whether you realize or follow just what I was trying to point out there.

The men in the traffic field said: "We are contributing funds that make possible carrying on this work. We are interested in what we can get out of it to stop accidents on streets and highways." And the industrial groups used to say, when the executive committee was asked to explain where the money went: "Why we are spending money on this, that and the other thing."

Under the leadership of Ned Dearborn and Will Cameron prior to him and certainly through the interest that Colonel Stillwell, President of the Council, had in trying to do something about that large number of people who make up a third of our accidental death total; this recognition was given and with the recognition went along the fact that we will try to do something and we will do it by backing it up with dollars and cents. We will do it by coordinating the program. That is the important phase and the reason that you have the type of program today that has been laid out for you by your chairman.

The National Safety Council, as an organization, is nothing more than a clearing house. No matter how many people you might employ as staff people, they can't reach the 130,000,000 people in the homes and on the farms and in industry, etc., in this country. They can reach a great mass of those people through the agencies that are already developed and already working with people in homes, in various phases of their activities. The same is true in the Farm group. I am not going to try to make a talk or to take anything away from what I know Dr. Armstrong will tell you but I wanted to say publicly to him and to you here that we appreciate, Dr. Armstrong, your giving your time and your unusual talent and ability to this Home Safety Program.

THE CHAIRMAN: Ladies and Gentlemen: I am certain that some of you will recognize a number of elements of exaggeration in the very generous remarks which the preceding speaker made about your chairman for the meeting this afternoon.

I will say this for him, however, when we have a program as lengthy and as full of promising material as we have before us this afternoon, you are fortunate in one respect—your chairman was wise enough to look up the meaning of the word "preside". I suppose it can be traced back in various ways but I believe one legitimate origin would be that it comes from "praesidere", which literally translated means "was the first to sit down." I will recognize that as one of my obligations in presiding.

Mr. Rohweder has said the function of the National Safety Council in the Home Safety field is to develop programs along several important lines—the stimulation of local and state organizations, the development of educational devices and materials, the carrying on, at least in prospect, of a certain amount of research in this field, perhaps an interest in the development of pertinent legislation. But from the point of view of this meeting today its chief function, I believe, is that of coordination, of acting as a clearing house for the great number of agencies, individuals and interests wishing to contribute to the solution of the Home Safety program. That is our function this afternoon, as I see it, to try to bring before us for the information of all of us and for the information of the country the principal interests and activities of a number of agencies, some of which are actively represented upon the advisory committee on Home Safety Council and others of which have been working for many years with the Council in this and other fields.

Now I have before me a list of agencies alphabetically arranged. I shall call on them in that order.

The first is the American Gas Association. We will hear from Mr. Cecil L. Hightower, Chairman of the Accident Prevention Committee, from Shoreport, Indiana.

MR. HIGHTOWER: The gas industry, like other great industries supplying services essential to the health and welfare of the American public, is vitally interested in the promotion of safety in the home.

Gas is a safe fuel as shown by its daily use in the hands of more than 18,500,000 consumers. Such hazards as are inherent in the use of a gaseous fuel have been minimized through years of continuous improvement

of appliances and service by the gas companies as well as manufacturers. Since 1925, a new impetus has been given to gas appliance safety through the adoption of the American Gas Association Laboratory testing program, leading to the approval and certification of gas appliances and accessories under the auspices of the American Standards Association Requirements.

The gas appliance manufacturers have played a significant role in this story for they have cooperated wholeheartedly with the principle of a national testing agency administered by the gas industry to see that appliances are safe. In fact, they have spent more than 4,000,000 dollars in testing and inspection fees alone to comply with national requirements for safety, not counting the cost to them to redesign equipment to meet the required standards.

The American Gas Association Testing Laboratory was established in 1925, and began its work with testing of gas ranges. Today, these Laboratories are the largest and best-equipped of their kind in the world. Located conveniently at Cleveland and Los Angeles, they have been actively engaged in the testing and development of gas appliances with the result that unsafe and improperly designed gas equipment has practically been eliminated from the market. Today, more than 95% of all gas appliances produced and sold in the United States and Canada bear the Laboratories' Seal of Approval indicating that they have successfully passed hundreds of rigid tests based on safety but not omitting efficiency, durability, and construction. These activities have been an important factor in the creation of complete confidence of the consumer in gas and gas service.

The American Gas Association Laboratory Approval Requirements Committee includes representatives of the American Home Economics Association; U. S. Bureau of Home Economics; National Bureau of Standards; U. S. Bureau of Mines; U. S. Public Health Service; American Institute of Architects; Master Plumbers Association; National Association of Heating, Piping and Air Conditioning Contractors; Associated Factory Mutual Fire Insurance Companies, as well as other interested governmental agencies and national organizations and manufacturer and gas company members of the American Gas

Association. The requirements, after approval by the American Standards Association, are issued under the classification Z21. The Laboratory Requirements Committee has also issued a number of "requirements" for the installation of gas equipment and accessories. Among these, the A. G. A. Requirements and Recommended Practice For House Piping and Appliance Installation is generally used as a basic code for the home use of gas. A practically identical publication has been issued by the National Fire Protection Association as Pamphlet No. 54 entitled "Recommended Good Practice Requirements of the National Board of Fire Underwriters For The Installation, Maintenance And Use of Piping And Fittings For City Gas".

The results of this extensive program are effectively demonstrated by the records of the Bureau of Census of accidental fatalities due to gas. These have been reduced during the period of the Laboratories' existence by more than 50% so that the danger of accidental fatality from gas is not much more than the chance of being hit by lightning. In addition to the national testing laboratory, many gas utilities also have their own testing agencies for the purpose of making certain that the particular appliances which they plan to sell in their community are properly adapted for the local conditions which may be encountered due to the type of gas served, the existence of local ordinances, elevation above sea level, and certain other factors. Such gas company laboratories may enforce requirements above and beyond those which are nationally recognized as necessary. In their efforts to safeguard the home, every gas company has a speedy system for the immediate handling of any gas leaks reported from the consumer premises. The operation of this system, using highly skilled men and most modern equipment, has been an important contributing factor in the prevention of accidents. The efficiency of gas company service departments and the widespread employment of Home Service girls have emphasized the correct care and use of domestic gas equipment. These two have been effective in keeping home accidents at an absolute minimum.

Anyone not familiar with gas equipment might think of the various hazards connected with gas in about the following manner:

First in his mind would be the question of

automatic gas appliances' failing due to the accidental blowing out of the gas pilot. In the past, this may have been important but it has been eliminated today. All automatic gas appliances are required to have effective devices which will prevent the escape of unburned gas. These generally take the form of safety pilots which may be mechanical or electrical in their operation. They operate within approved, narrow-time limits in the event of the pilot flame failure, whatever the cause may be.

A second popular type of hazard has, in the past, been frequently noted in the daily newspapers when a pot of coffee boiled over while someone fell asleep. Many Gas ranges built since 1935 have been provided with automatic top-flash lighters. These will light any top burner just as soon as the gas cock is turned on, and if the gas flame is extinguished by boiling over, it will instantly relight from the flash pilot. Moreover, many of the modern burner types are so designed that boiling over will not affect them nor can they be extinguished by draft from an open door or window. Insurance companies have sometimes published pictures of the disastrous results of domestic hot water boiler explosions due to uncontrolled overheating by a coal fire. The gas industry is fortunate in having an excellent record in this connection since the flexible control of gas by means of a thermostat has effectively prevented such trouble. Furthermore, the increase in use of temperature relief valves has overcome the possibility that the thermostat might, in some way, become inoperative.

Hazards from gas leaking from house piping are considered practically non-existent today. There is adequate control over this matter by the larger municipalities in the program of licensing plumbers and gas fitters and by gas companies, in any event, because every utility in the United States has rigid rules regarding the manner in which gas may be turned on by their fitters at the meter.

It may also be of interest to examine the fire record of gas because, contrary to casual thought, gas ranks low as a fire cause. The 1941 list of fire causes published by The National Fire Protection Association shows that gas and gas appliances were twenty-fifth out of a list of twenty-nine principal causes and were responsible for 3500 fires resulting in

a cost of \$1,250,000 out of a total of 736,000 fires with total damages of \$325,000,000.

Alert to its war-time responsibilities to the public, the gas industry has prepared specific data and information not only for the protection of gas utility plants and personnel but for the general public as well. You are probably familiar with the releases which have been made advising the general public what to do in the event of an air raid, but you may not be familiar with the detailed instructions which have been issued to all Air Raid Wardens through the Office of Civilian Defense. This information, based on authentic experiences under actual war-time conditions in several of the European nations, gives assurance that the gas industry will continue to live up to its safety record even if we should be subject to the terrible destruction of attack from above. Fortunately, this seems unlikely at this moment, and it may, therefore, be more appropriate to mention what the gas industry has done to keep gas equipment serviceable throughout the duration. The shortage of new equipment has made this an imperative problem especially as there was a potential hazard from old and obsolete equipment which normally would be replaced but which now must be kept in operation. It is almost needless to say that the industry recognized this problem very promptly and has taken a number of practical steps ranging from physical repair to the wide distribution of booklets like "Uncle Sam Wants It To Last," and "Keep 'Em Cooking," covering hotel and restaurant equipment.

For the future, the gas industry is continuing to stress safe appliances and safe installation through a three-fold program involving the manufacturers, the utility companies, and the Testing Laboratory. Each year requirements are made more stringent and more comprehensive with the end in view that accidents must be prevented at all costs.

THE CHAIRMAN: We hope, before this meeting is over, to have an opportunity for you to ask questions of the speakers.

The next organization is the American Home Economics Association which has a perfectly obvious interest in Home Safety. We shall hear from Miss Karen Fladoes, National Chairman of Home Safety, Home Economics Women in Business, representing

the Peoples Gas, Light and Coke Company of Chicago.

MISS KAREN FLADOES (Chicago, Illinois): I told Mr. Kershaw that I would have no report to make today because our program is in the process of development. I would like to tell you something about the system of Home Economics Women in Business and something about the way our work can tie so directly into the Home Safety program. There are something like over 700 Home Economics trained women in the business field dealing with food and clothing and equipment utilities. In that 700 there are more than 150 Home Economics women in Home Service Departments and Utilities, directly contributing to Home Safety through teaching women the proper use and care of equipment of all kinds, lighting, small electric appliances, large electrical and gas appliances.

In the clothing and textile field we may run into more hazards in that field from now on than before, perhaps because there will probably be more dry cleaning at home with the difficulties of having it done outside, and in the care and preservation of food.

I might also mention that we have found this summer, particularly with so much home canning going on in homes, that there have been many hazards in home canning but many of these terrific hazards could have been avoided very easily, it seems to me, if we could get every one to follow directions, because this matter of Home Safety is like religion: "It doesn't apply to me, it applies to the person next to me," or "You need religion worse than I do," when we are talked to about Home Safety.

Contributing to Home Safety programs is not at all new in the Home Economics in Business, but a definite program for the over-all picture is; it is in the process of development and we hope to have something to report next time. (Applause)

THE CHAIRMAN: We next come to the organization that has been active in this field for many, many years. I refer to the American Red Cross, whose representative most of you know and have worked with in this and other ways over a long period of time. We are fortunate in having with us Mr. Richard W. Thrush, Assistant National Director from Washington, D. C.

MR. THRUSH: In making this report for the First Aid, Water Safety and Accident Prevention Service of the American Red Cross, it might be well to indicate at the very outset that the trends of the year have done considerable to establish in our minds an increasing appreciation for the part our organization may and can play in this great enterprise for safer homes. Naturally, and that certainly applies equally to all of us who are today working together on this task, we are humbled by the tremendous responsibility that is placed upon us. By the same token, we are impelled to make something of a sensible appraisal of what we are best fitted to do and how we can best contribute to the common cause.

As most of you know, our organization out of an experience extending as a matter of reported record as far back as 1910, is committed to the belief that in these efforts looking to positive action and a change of habits and attitudes into right directions, the best results, so far as we are concerned, are obtained through education under qualified leadership. It is for that reason that our emphasis has always been, and now is, upon definite courses under qualified instructors, and leading to the issuance of Red Cross certificates. In making this statement there is no thought of separating the fundamental purposes and the traditional procedures of one part of our combined service from that of the other two. While first aid, water safety and accident prevention as such have each their distinct places in the general pattern, they are all three bound together by the one purpose of contributing to the safety and the personal security of the individual man, woman or child. It is scarcely necessary to explain to you, all of whom in one way or another, have a share in the volunteer work of the Red Cross, how by the very nature of its national set-up, its chapters, and its membership plan, the Red Cross is peculiarly fitted for reaching great numbers of people with its specific courses. This is especially so because of the long established policy of placing emphasis upon cooperating with these parallel and companion organizations, as well as with industry and the governmental agencies, including the armed forces, in training for them their own leadership for intimate work within their own groups. Truly this

interwoven relationship has been a source of great strength and effectiveness.

In the fiscal year which closed with the end of June, more than thirty-seven hundred instructor training courses were conducted by the First Aid, Water Safety and Accident Prevention Service in this country. One hundred sixty-eight of these courses were held for the qualifying of accident prevention instructors, an average of exactly eighteen instructors being qualified in each of the hundred sixty-eight courses. By the end of the year six thousand, eight hundred fifty-nine certificates had been issued for the completion of home accident prevention courses. The giving of courses in home accident prevention is now well under way and going forward with increasing momentum, both as to volume of production and as to quantity and quality of authoritative materials made available. And we promise to be doing better by you in the months immediately ahead.

It is well to recall that the Red Cross has been passing through a promotional stage in home accident prevention for nearly a decade now, with ten million and more check lists sent into homes year after year, and much publicity and wide distribution of printed materials. These efforts have been valuable, just as were the first aid cars that toured the railroads of the country, or the hundreds of life saving demonstrations put on to arouse interest in the earlier days. But we are happy to say that while we are not forgetting the values that lie in promotion and publicity, we have reached the point where accident prevention as a Red Cross project is taking its rightful place through certificated courses along with the other phases of the program.

In speaking of these other phases of the program we must not forget that it is conservatively estimated that there is today one currently trained first aid person in every third home throughout the entire United States. Nor does one need to look farther than the swimming places for an example of how systematic instruction has increased both the sportsmanship and the safety of a recreation which has come to be almost universal among us and which is, after all, quite closely related to our home life.

Actually we do not regard accident prevention in the home as a circumscribed field; anything that has to do so importantly with the basic unit of society is wide in its im-

plications and in its effects, and by the same reasoning can be approached from many different ways. Each organization represented here today has its own opportunities and its own responsibilities. It is the purpose of the Red Cross to continue to serve through its channels and its normal relationships as best it may. We want to go on record, too, as saying that we appreciate the opportunity afforded through the National Safety Victory Congress to stand shoulder to shoulder in this combined attack.

THE CHAIRMAN: Another organization on the list is the American Public Health Association. Their representative is your Chairman, who has been asked to say a few words.

DR. ARMSTRONG: There is as yet little to report, as the A.P.H.A.'s activities have not yet been actively launched. The Association does, however, thoroughly recognize the part that it and its constituent agencies, particularly the state and local departments of health should play in the several phases of the safety movement, in cooperation with, and under the guidance of the established and more experienced agencies in this field.

The Association is officially represented upon the Home Safety Advisory Committee of the National Safety Council by Dr. Edward S. Rogers, Assistant Commissioner in the New York State Department of Health. At this meeting the Association is represented by Dr. Donald B. Armstrong of the Metropolitan Life Insurance Company.

The Association has created a special committee on the prevention of accidents, as a sub-committee of its Standing Committee on Administrative Practice. This committee will hold its first meeting at the annual convention of the American Public Health Association in New York City on October 13th. Not having met, the activities of the Association through this committee can be forecast only in general terms. Its functions, however, seem to encompass:

1. A study of what state and local health departments and other public health agencies are now doing in the safety field, thereby accumulating a body of information that is not at present available.

2. The use of this information, by way of example and otherwise, to stimulate more active participation on the part of local health

agencies, in various phases of the safety movement. For example, the important pioneer activities of the New York State Department of Health in the Home and farm safety field, under the guidance of the National Safety Council, should furnish a stimulus for competitive interest and activity elsewhere.

3. The utilization of this committee as a sensitive point of contact, with the entire safety field, and particularly through cross-representation with the National Safety Council.

At the start at least, it is assumed that this A.P.H.A. committee will confine its interest primarily to the field of home accidents, it being here that the educational experience and technique of health departments, and especially of field health representatives, such as public health nurses, can be used most obviously to the advantage of the American family in the home, where persuasive rather than compulsory or legislative instruments are apt to be most pertinent. Health departments are also beginning to manifest an interest in farm safety in the farm home as well as on the farm generally. Certain health departments, particularly official state organizations, are also becoming increasingly equipped to take an active interest and responsibility in the industrial health field and in the control of industrial accidents and disease. Finally, after the war at least, there may develop new ways in which health departments, through the application of its epidemiological procedures, may find ways to contribute to the great work long ago initiated by the safety movement, in the control of street and public accidents.

The membership of the A.P.H.A. Subcommittee on Accident Prevention is at present as follows:

Dr. Donald B. Armstrong, Chairman, Third Vice-President, Metropolitan Life Insurance Co.

Dr. Edward S. Rogers, Assistant Commissioner, New York State Department of Health.

Mr. Stanley Kershaw, Home and Farm Safety Section, National Safety Council.

Mr. Tom Burke, Greater New York Safety Council (Secretary of the National Organization of Local Safety Council Secretaries).

Miss Ruth Kahl, Industrial Hygiene Nurse, U. S. Public Health Service.

Dr. E. L. Stebbins, Commissioner of Health, New York City.

Dr. D. A. Dukelow, Director, Public Health Education, Minnesota Dept. of Health, University of Minnesota, Minneapolis, Minn.

Dr. W. W. Bauer, Director, Bureau of Health Education, American Medical Association.

Meeting with this committee at its first conference in New York will also be Dr. Henry F. Vaughan, the Chairman of the Administrative Practice Committee of the A.P.H.A. and Dean of the School of Preventive Medicine at the University of Michigan; Mr. W. Graham Cole, Director of the Safety Section of the Metropolitan Life Insurance Company, as well as Dr. Reginald M. Atwater, the Executive Secretary of the A.P.H.A.

D. B. ARMSTRONG, M.D., Chairman
Sub-committee on Accident Prevention
of the A.P.H.A.

CHAIRMAN: The next organization is the Boy Scouts of America, represented by Mr. Lew Hall.

MR. HALL: Since the National Safety Council meeting of 1942, the Boy Scouts of America has continued its promotion of *home* and *farm* and other types of safety which are related to its program, as energetically as was possible with the handicap of a greatly depleted personnel. The majority of our 544 Councils have had a turnover of Scoutmasters, ranging from 65 to 80 per cent. In addition to this, our professional personnel, in common with other organizations, has been greatly affected by the War. This condition is now becoming stabilized, and we anticipate a very considerable expansion of all parts of our program in the next year.

The National professional staff of the Health and Safety Service, which ranges over the entire country, has increased its activities during the last twelve months to a very considerable extent. The function of these men as they visit Councils is to study the Local Committee's Health and Safety plans, to suggest ways of improving it and promoting better relationships with other or-

ganizations interested in similar activities. Each Local Council has its own Health and Safety Committee, which, while primarily concerned with the protection and education of Scouts, is, because Service to others is part of the Scout Program, also concerned with the reduction of community accidents.

One feature which our professional staff is active in developing and in which we believe the National Safety Council would do well to study and duplicate, is the development of demonstration teams of boys to give exhibitions in safety skills to public groups as well as Scout Troops. These teams often demonstrate skills related to farm and home safety (including first aid) to luncheon clubs, church groups, state, county and community fairs, lodges, American Legion and Veterans of Foreign Wars meetings, and conventions. To be more specific, the demonstrations consist of such things as: safety in falling, the proper marking of stairways to prevent falls and the method of walking down stairs to avoid falls, use of axe, firearm safety, how to sharpen knives and axes, and personal and general first aid.

It would be impossible for us to give you even an approximate idea of the work done by our organization in this field, as records are not kept except by the 544 Councils concerned. We can say, however, that in addition to their work and that of our field staff a great deal of safety material has been disseminated through our National and Regional Offices. Six times a year we issue a *Health and Safety Magazine*, and twelve times a year we have one or more safety articles in our *National Scouting Magazine*.

During the last year twelve National Training Schools for Scout Executives have been conducted. Each of these schools has two days given over to safety, health, Emergency Service and Pre-Ranger Training.

The carry over of safety instruction from one activity to another seems to be quite well established; for example, the effect of teaching first aid on accident prevention and the increased precautions taken with kitchen cutlery as a result of experience with edged tools in manual training courses. Safety seems to be as much a product of thoughtfulness as it is of technique; however, as the teaching of techniques is a great stimulator of safety thinking, it is increasingly desirable that much more attention be given to the

actual carrying on of safety training projects, and that emphasis on the spoken and written word be discounted. In connection with the great need for increasing instruction on the technique of safety, it is urged that the National Safety Council implement the recommendation made to it two years ago by the findings committee that it develop a practical training program for instructors who, in turn, will become teachers of community groups. The importance of such instruction courses for teachers can hardly be over-estimated. Failure to conduct such courses is one very weak link in a program admirably conceived.

It would not be fair to complete this report without adding two points: the first to tell you that the Boy Scouts of America has developed during the past ten months a program of safety training which potentially is as great a life saving effort as any instituted by any organization. We call it the Pre-Ranger Training Course. It comprises the 15 things most important for men to know before entering the Armed Service of our Country; things that cannot be acquired in a brief training period, but which need a long, slow period of preparation and all of which have long been a part of the Scouting Program. Men who have acquired these skills have a tremendously increased chance of living through the War and returning home to enjoy the benefits of freedom secured by their efforts. Specifically, these activities are—physical fitness, long distance hiking with packs, the use of the axe, the practical use of the rope, stalking, wartime aquatics, orientation, night travel and mapping, observation and identification, concealment and cover, firearms safety, wilderness sanitation, personal first aid and cooking.

To Stanley Kershaw and the Home and Farm Safety Staff of the National Safety Council, to Arthur Rohweder, Vice President of the National Safety Council for Home Safety and Harold Minor, Vice President for Farm Safety, we wish to express the sincere appreciation and congratulations of our organization. The work which has been done by the Council as a result of the energetic efforts of these men has been of tremendous importance. We have no doubt that plans are now under consideration for an expansion of the program which will bring to the Country more definite leadership on the part

of the Council and a new training program. These are two of the greatest.

A fine start has been made, and we say to all of those organizations that are active, including our own, "Let's get busy and do it better next year." To those who are as yet asleep, let's urge a great awakening and an effort proportionate to their possibilities. This is everybody's job.

THE CHAIRMAN: Mr. Hall's inspiring presentation gives us an excellent idea of what the Boy Scouts are doing. He also has given us several concrete suggestions which I am certain the administration will wish to take advantage of.

The next organization is that of the Camp Fire Girls. Their representative is, I believe, Mrs. Elaine Grable, Executive Secretary of the Chicago Council of Camp Fire Girls—Mrs. Grable.

MRS. GRABLE: With the advent of the war, Camp Fire Girls drew up an over-all program for the duration called "Service for Victory." Under a five-point plan two points include safety activities: Home Service for Victory and Preparedness for Victory. Girls repair household equipment and take the Red Cross courses in Home Nursing and First Aid for Juniors. They have made themselves familiar with the emergency regulations issued by their local OCD and have helped to prepare their homes against possible emergency. They have checked their homes for safety hazards, such as unprotected wiring, slippery rugs, oily rags, badly placed furniture, obstacles on steps, incomplete medicine chests, and overloaded attics and cellars.

Safety has always been an essential part of the Camp Fire Girls program, but more than that, we have wanted to make the subject appealing to youngsters, to make it seem an adventure. The sceptics once registered a point when they called safety "negative." Therefore, we decided to present our projects in a positive way, not full of "don'ts" but full of "do's."

Our first project along this line was called "Skillful Living." We urged the girls to "Be modern. Be up to date. Learn how to use the shiny new tools of today, and learn how to use them skillfully." Visits were made to airports and coastguard stations, where the youngsters learned about weather

signals and flying devices. They went to dairies and learned the regulations and precautions for the cleanliness of milk. They attended soil conservation demonstrations and learned about the control of soil erosion. They studied forest fire prevention, city water systems, food markets, safety regulations for their towns, gas and electric devices, and the provisions made in their cities for sanitation and the prevention of disease. In each instance the girls' object was not only to learn what safety measures had already been taken but how they could be of further help.

After these visits they were given individual tasks in accident prevention, tasks that ranged all the way from constructing closets in their homes to making fire extinguishers and electric fuse charts for their homes. The enthusiastic response to this project from our members gave us the go-ahead signal on future techniques for disseminating knowledge of safety.

Our Annual Project for 1943 has been "Serve by Saving," in which a mythical little character known as Vickie V-Home has been the safety leader. To be a member of Vickie V-Home's Victory Vanguard, Camp Fire Girls have had to see that their homes met the V-Home requirements put forth by the OCD in observing air raid precautions; caring for, repairing, or making new household equipment; caring for younger children; many have taken the Camp Fire Girls Baby Care and Child Care Courses.

For senior Camp Fire Horizon Club Girls we prepared a three part Child Care Course, in which older girls are learning to act as Child Care Aides (with due regard to safety measures); a Farm Aides Course; and a Hospital Aides Course. In the July issue of McCall's Magazine several pages were devoted to the work of Grand Rapids Horizon Club Girls in hospitals. All these projects are national in scope.

"Serve by Sharing," our Annual Project for 1944, is now being distributed. And in this, Susie Savehealth will be the safety leader. To be members of her Posture Platoon, girls must make nutrition charts; earn honors in Health Craft, First Aid, and Home Nursing and take the American Red Cross Junior Course in First Aid or Home Nursing.

Newspapers throughout the country this year printed stories about two Camp Fire Girls who made practical application of their knowledge of safety techniques. One was the story of Marianne Lynch of Atlanta, Georgia, who saved her baby sister's life when she accidentally drank poison.

The other was the story of fourteen-year-old Carolyn Nelson of Denver, Colorado, who rescued a twelve-year-old boy from drowning after he had fallen from his bicycle into a lake. Carolyn received our organization's national life-saving award.

Camp Fire Girls are learning not only how to be competent and responsible citizens but are communicating their knowledge of skillful living to their families and communities.

THE CHAIRMAN: Miss Gladys Ward, representing the American Home Economics Association, will tell us about the activities of the American Home Economics Association.

MISS WARD: It is a great privilege for me to represent the American Home Economics Association and at the headquarters in Washington they very kindly did as I suggested, sent out a questionnaire with regard to just what the different state associations were doing in this work.

You might be interested to know that ever so many of them sent back a report: "We are not having any state meetings this year, thus complying with the government's request for restriction of travel." However, there are a number of states that have active Home Safety work in connection with their individual state associations. I should like to mention a few of these states that have quite active work in Home Safety. Of course we know Nebraska has for a long time; New York has; and last spring Virginia appointed a farm and home safety committee to take charge of the work. In Montana, ever since Miss Brandon was President of the National Association, she has been interested in Home Safety and they are conducting a very active program.

Although no longer President of the Association, she is still active in the State of Montana. Then, of course, we know that Minnesota has long been in. Mr. Erickson has fathered and mothered the work there. I happen to know a little bit more about our Illinois State Homes program because we

begin about twelve years ago, in a very modest way, until now this year we are carrying some phase of safety education in two-thirds of the state—I mean actively carrying it, not just talking about it. We have enrolled over 5,000 farm and small town families to do two things. The first thing they promised they would do would be to make their own homes safer and the second thing they promised to do was to report any home accident which they had during the period from July 1st to December 1st, and to me it is very interesting indeed because of the fine results that we are getting.

For example, at a meeting a mother came to me and said: "Miss Ward, some of our neighbors that had unsafe stairways have repaired their stairway since they signed that enrollment card." I think when we can get personal participation such as that—that is they felt they had an obligation to perform to make those changes, something that would make their homes safe, I think even though perhaps everybody doesn't do it, that pressure, that individual initiative, is a very valuable by-product and I want to end this very brief report by paying tribute again to the National Safety Council and especially to Mr. Kershaw, who is at all times very helpful in giving advice and in also suggesting literature, posters, and other means of making safety really live. He has done a very fine job.

THE CHAIRMAN: Thank you, Miss Ward.

We come now to the Federal Public Housing Authority. Mr. J. Felton Leach, National Housing Agency, Washington, D. C., is the speaker.

MR. LEACH: You may think that I am straying from the subject of "Home Safety" but I want to give you the picture of our safety program from the beginning. I expect to get a lot of help from this Safety Congress which will be of benefit to our safety program in the Federal Public Housing Authority.

As most of you probably know, the Federal Public Housing Authority is concerned at present with the building of housing facilities for war workers. These houses are necessarily of a temporary nature designed to house workers near industrial areas, Army and Navy establishments, etc., for the dura-

tion. The great influx of workers to fill the demands for labor in the industries producing war goods made it absolutely necessary that housing be provided in the shortest possible time to house these workers.

Commissioner Eumerich of the Federal Public Housing Authority has stated the policy that fire prevention and safety inspections are to be made at all housing projects and that each of the ten regional directors shall employ a qualified fire and safety engineer as a member of his staff to carry out this work.

As of August 31, there were 563,808 war housing units under development and management by the Federal Public Housing Authority. These units are distributed in 1919 projects and 498 different war localities and new dwellings are coming in at the rate of 1000 a day. We also have about 132,000 units in the low-rent housing projects which were built or at least started before the war.

In view of the restrictions in supplies of vital material and, therefore, the necessity for using substitutes, it is impossible to avoid the increasing use of materials that are undesirable from the fire hazard standpoint.

The great haste in which the job of new housing must be done and the difficulty of obtaining skilled labor also contribute to the problem. Added to these factors is that of the great variety of types of tenants who flock in to occupy the houses, many of whom have little conception of the care that is needed on their part to make their new homes safe for themselves and their neighbors.

You can, therefore, appreciate to some extent the magnitude of the safety program in public war housing. You can appreciate also the dire need for competent fire and safety engineers to effectively carry out this program. Now added to these factors is the fact that the Army and Navy and the war industries have absorbed practically all the available supply of these men and you can see that we have a vital personnel problem as well.

The Job of the Fire and Safety Engineer

The Regional Fire and Safety Engineers are concerned with projects from the planning stage through the actual development and into management.

Plans and specifications are studied so that corrections in design and additional safety

features within our war condition limitations may be included before the actual construction is started. We feel that this is the most important part of our work because fire and safety hazards are much easier to correct on plans than in the finished building. In studying these plans and specifications the safety engineers consider all possible angles from the fire prevention and safety standpoint; from fire resistency of construction, fire falls, exits, to porches and hand rails. While projects are still in the planning stage, we have been able to make the homes more safe by additional clearances of heating appliances, the removal of flammable shelves from above cook stoves, the provision of pressure relief valves on water heaters, back draft diverters for gas water heaters, changing location of windows above cook stoves and various other items. Water supplies for fire-fighting, distribution of hydrants and street lighting also are given price consideration in the planning stage.

Initial Inspection

After construction has started on the project, the Regional Fire and Safety Engineer makes an inspection to see that the plans are being followed and to discover any additional hazards which may be corrected during construction. During this visit he is concerned also with street and ground safety. He is able at this time to determine an approximate vehicular speed limit to be set at the project.

Hazardous conditions which may be present on the project grounds, such as deep ditches, steps at embankments, low places in sidewalks which may accumulate ice in winter time, and other bad walkway conditions are also considered during this inspection. The police protection facilities are investigated for adequacy, and recommendations for watchmen or additional policing are made at this time. The fire protection facilities are also investigated and recommendations are made if additional facilities are needed. In some instances, we have had to install complete fire and police departments where projects are located in isolated areas. We try at all times to work our projects into the local community protection facilities because we have no desire to get into the fire and police department business. Our policy is to work with local protection agencies if available, and where the protection facilities

are badly over-burdened because of our projects, we have been able to give some assistance through other governmental agencies so that the facilities may be brought up to the standard we consider necessary.

Reinspection

As soon as possible after occupancy the Regional Fire and Safety Engineer makes another inspection. On this trip he instructs the management and maintenance staff in various things that they can do to prevent fires and accidents.

Other inspections are then made at specified intervals. Our most hazardous occupancy buildings, such as war apartments and dormitories are inspected at approximately 60 day intervals, and other project developments are inspected at least once a year or more often if the Fire and Safety Engineer finds it necessary to do so for the purpose of maintaining information as to safety conditions.

As you will note from the foregoing, we have interested ourselves in the structural and mechanical features more than in an actual home safety campaign. I believe it can be readily seen that this was necessary because of the large number of projects and the rapidity with which we have built them. The enormous work load is readily apparent and to maintain the present standard plus an adequate, within-the-home safety campaign would take a considerable number of men. As I have stated before, we have been unable to fill our jobs at present much less have sufficient manpower to carry on a very extensive home safety educational program. However, as a step in that direction we have begun to issue a series of posters starting with the most common and serious hazards—"smoking in bed"—and other forms of tenant carelessness. It is hoped that these posters will, in a somewhat dramatic fashion bring about tenant cooperation in all forms of safety.

As stated before, I expect to take a lot of ideas back with me which will be used, and I shall certainly appreciate suggestions from any of you.

THE CHAIRMAN: We have already heard from several organizations directly interested in the women's field. We will hear from several others.

We come now to another organization of

very great importance in the women's field, an outstanding pioneer, the General Federation of Women's Clubs, and I believe the program is to be presented by Mrs. Byron, the Treasurer of the Illinois Federation.

MRS. BYRON: The General Federation of Women's Clubs combined in this administration the Public and Home Safety Committees. There have been four programs printed—I. Public Safety. II. Home Safety. III. Conservation and Safety. IV. An Additional Home Safety Program.

The General Federation of Women's Clubs—the largest women's organization in the world—wants to aid the all out War Program of this country by the saving of human life. They want to keep America strong by protecting the family at home, at work, at play and on the street and highways.

It is our aim to arouse public interest in Home Safety by the appointment of a Chairman for each State Federation. She in turn projects the program that is best suited for her State and the communities therein. We urge the cooperation with already existing Safety Organizations and we encourage self-inspection of homes and the use of home safety check lists. We urge the cooperation with school programs and a home "Clean Up Week."

It would be well if a study were made of the existing laws pertaining to Home Safety; and that each homemaker take an intensive course in first aid.

Today, with the shortage of doctors, and the home anything but the safe place it was once called, it is well to consider, possibly, that the home should be the first line of defense. Military fronts are matters for military judgment; the home front is everybody's business. Responsibility for the numerous off-the-job accidents rests on the shoulders of the women in this war emergency. We are becoming increasingly aware of our abilities as well as our responsibilities. The present serious manpower shortage can be greatly alleviated by the reduction of lost time due to home accidents. The hand of every American woman should be on the job every day.

Clubwomen realize that the war has brought many extra duties to them but none that is so important as home planning to promote safety. The cause of an accident

often is comparatively simple—so simple in fact—that the remedy often takes nothing but a bit of common sense.

It would be well if the clubwomen of the country gave some consideration to the study of what is being done for the "Latchkey Children"—the children whose parents work and who are left to their own devices a good part of the time. They often become victims of carelessness somewhere along the line.

The housing problem in war-boom areas does present a definite challenge to the clubwomen.

The infant mortality rate has always been alarmingly high. Many new babies are coming into the world with fathers in the service and young mothers anxious to get back to work. This has created another problem. It might be well to give mothers and prospective mothers an opportunity for a course in safety as it relates to the new little life.

When we realize, that according to certain statistics, the home accidents are more numerous than any other class, it should give the clubwoman food for thought because the home is her territory and she should ask herself daily "What can I do about it?" There are no laws governing our homes as far as accident prevention is concerned.

When we realize that the two ages in which the highest accident rate is recorded are from five to fourteen—the active child—and from twenty-five to sixty-four—the adult in the productive age group—our program needs adjusting—and with serious consideration relative to those two periods in the life span.

Today, with the teen-age worker becoming a valuable asset in industry, he should be protected at home as never before. He is going into industry without any previous training or background and creating new serious accident problems with which the home may have to cope.

Today the United States Government is the country's largest employer. These are not all white collar workers—for nearly fifty per cent of them are engaged in the manual trades and are exposed to accidents and health hazards in their industrial occupation. It should be an added responsibility of the homemaker that they are free from home hazards. If a serious accident happens to a worker's wife or child he is likely to

be shaken and worried and thus be ripe for an accident on the job. This is one of the things that we can preach and try to teach but there is no way that we can compel home safety.

Home Safety should have a very definite place in the Post-War plans of the General Federation.

THE CHAIRMAN: I will revert to another age group. Next on the list is the Girl Scouts, represented, I believe, by Mrs. Jabez Pratt, Regional Chairman.

MRS. PRATT: In the fall of 1939 shortly after the three-year promotion period began, Home Safety was given a fine start through the adoption of the phrase, "Half a Million Future Homemakers" as the theme of the National Convention. During this period the half million has almost reached the three quarter million mark and the number of those who have become safety-minded has shown a parallel increase. From the records of the ten to fourteen year age group we find that Home Safety badge figures have risen from 2,181 to 5,092, an increase of 133 per cent. All of the age groups fell in line with this emphasis and the records of both the younger and older girls show similar trends toward an increased personal responsibility in doing their share to make home a safe place to live in.

Cooperation with others, individuals and organizations, has proved the key to success in the development of this field. First in the home itself as a mother-daughter project where with the aid of check lists home hazards were detected and corrected together. At the point of correction the men of the family, father and brothers, were often brought into the picture also and in this way home safety became an adventure in family cooperation. Locally Home Safety projects offer a valuable opportunity to cooperate with the fire departments in Fire Prevention Week and with local branches of the safety council or safety groups of the Chamber of Commerce. For example:

In Baltimore, Maryland, the local branch of the Safety Council prepared a manual to help the Girl Scout leaders present the Home Safety badge more effectively to their girls. Forty-eight kodachrome slides were made of the girls carrying on various home activities. These illustrated both the right and

wrong way of doing things and were used to bring home the need for care, observation, and accuracy. A teaching kit including the slides, demonstration materials, home inspection forms, and reference books was prepared for each consultant. Throughout the course an attempt was made to convince the Girl Scouts of the fact that "Safety is an essential feature of skillful living and that injuries can easily be avoided by applying simple common sense principles in our everyday life."

In Westfield, New Jersey, one troop took Health and Safety as a project for Girl Scout Week and every afternoon in two windows of the Public Service building they demonstrated safe and unsafe practices in the home. Posters made for the windows illustrated the points they planned to cover, such as right and wrong ways to iron, to cook, and to clean.

In Bayon, Puerto Rico, Troop No. 40 had "Improvement of the Home" as one of its favorite projects, taking note of what was needed to better and beautify their homes. A committee composed of vocational teachers worked out a plan of activities that could be used as school projects and the children were allowed to bring furniture from home for repair under the instruction of the regular teachers. A week for Home Improvement was set aside in the school year and contests for home care and improvement were held through the cooperation of the visiting teacher who helped in assembling the information necessary to carry on such a project.

In Hartford, Connecticut, the girls made scrapbooks from newspaper clippings of accidents as they were written up in the daily press, noting after each one what safety precautions might have been used to prevent the accident. They carried on this project for six months while they were working on First Aid and it did much to make them conscious of safety measures and the need for them in their own households.

In Columbus, Ohio, the Girl Scouts worked with the Chamber of Commerce in the reporting of home accidents. Forms "for use in reporting every accident, regardless of how minor in nature, occurring in the home or on the premises around the home" were distributed to the troops.

That this meant a serious obligation to these children was shown by one returned

by a twelve year old. Carefully filling out each question as follows:

Who Was Injured:

Name—Mrs. Jones—female—white—my mother.

When Did Accident Occur:

Date—May 18, 1940; Time—7:30 a. m.

Where Did Accident Occur:

Kitchen—at the sink.

How Did Accident Occur:

Washing dishes—

Describe Accident in Detail: Teapot was chipped in the spout—victim ran finger across chipped piece—made a clean cut.

What Kind of Injury Resulted:

Cut—From what: teapot tip. What part of body: finger tip.

Miscellaneous Information:

Did injured person require medical attention.....Yes
Did injured person go to hospital.....No
Did injured person die.....No
If recovery, length of time incapacitated.....5 minutes

Reported by:

Joy Smith—aged 12 years
Girl Scout Troop No. 1.

Date of report: May 18, 1940.

Use This Space for Additional Information:

I had just had a course in First Aid for my Girl Scout badge. The cut bled freely and I applied gauze to stop the bleeding at the proper time and place. Then I applied iodine and let dry. Then I put a dressing on for a short time to give the wound a chance to heal. THEN I THREW AWAY THE TEAPOT!

THE CHAIRMAN: Thank you, Mrs. Pratt.

Is Christopher Brooks here, the Associate Editor of Good Housekeeping Institute?

MR. BROOKS: For more than 25 years Good Housekeeping has been publishing articles designed to teach its 10,000,000 readers how to prevent accidents by following safe practices in their homes. Besides running feature articles about accident prevention, it is part of our editorial formula to

point out hazards, and emphasize safe practices whenever they are part of cooking, laundering, care of the house, or any other homemaking subject. For example, in February of this year we published the first of several articles on home canning which warned against home-canning methods that we feel are unsafe and unsatisfactory. Of course, we knew that women would not be canning in February. But we also knew that millions of women who had never canned before, were planning to can this year because of the food emergency. We wanted to give these beginners early and ample warning.

For more than 40 years Good Housekeeping has maintained special facilities for making technical and actual-use investigations of household appliances, foods, cosmetics, clothing, and nearly all other kinds of consumers' goods. Our laboratories, kitchens, laundries, and other workshops employ more than 60 people, including chemists, engineers, home economists, and other trained workers.

In making our product investigations, safety in design, construction, and performance is the first thing we look for. If a product does not have this essential requirement, we talk it over with the manufacturer, and make specific recommendations for the product's improvement. As a result, we have been instrumental in making safer many products that are used in millions of homes.

Good Housekeeping does not accept the advertising of products that we feel have unnecessary hazards. Among these are such things as flammable cleaning fluids and poisonous insecticides. But there are products whose hazards are less obvious, and whose advertising we also have refused to the tune of many thousands of dollars.

Early this year we turned down the advertising of a well known line of home-canning supplies. We had no quarrel with these products. Our investigations had shown them to be good. But the manufacturer's instruction booklet recommended a method of home canning that we have found is unsafe and unsatisfactory—the oven-canning method. We told this manufacturer we could not advertise his product unless he revised his instruction booklet. He refused to do this, on the ground that our stand was far too conservative in view of the great food emergency which demanded that all food-conserv-

ing facilities be used. Later, after the home-canning season had opened and accident reports began to trickle in, this manufacturer took prominent space in every newspaper in the country, warning people not to can by the oven method with his products because of the hazards involved. Next year we expect to carry this manufacturer's advertising again, but with a new instruction book.

THE CHAIRMAN: We have heard from the Federal Public Housing Authority. We now have on our program the National Board of Fire Underwriters. Mr. T. Alfred Fleming is the Director of Conservation. Mr. Fleming also represents this organization on the Home Safety Advisory Committee.

MR. T. ALFRED FLEMING (New York, N. Y.): Mr. Chairman, Ladies and Gentlemen: We are interested, naturally, in all types of safety, but particularly in fire prevention. We have embarked on a system of education, realizing that unless you inform the homeowner about different hazards in the home you are not going to have the cooperation. This was done a good many years ago in the development of a book entitled "Safeguarding the Home Against Fire." Millions of copies have been used. The latest copy is out this last year and millions of copies have been given out. It has been given free of cost in individual cases but I think there is a four cent charge in quantities. That doesn't begin to pay for the cost of the book.

Later we developed another book, on safeguarding the farm against fire, which came out this year. It is going to all farm owners.

Then we have a book on home safety that gets to the high school student. Of course we have a great deal of literature on fire prevention that we couldn't begin to mention because of its variety. We have used millions of copies.

What we do tell you is to educate the public in the new hazards as they come out. A good many years ago it was the National Board of Fire Underwriters that developed and organized the Underwriters Laboratory. Practically ninety per cent of all the gadgets and tools and appliances you use in the home, very much of the material you use in the construction of the home in order to make it safe, carries the stamp of approval of the Underwriters Laboratory.

One other feature and I am done. A good many years ago we developed a blank for a system of home inspection. The call for that blank was so great that it had to be reproduced. I am sure over twenty-five types and millions of copies have been distributed in connection with this present fire prevention program in which all the large national organizations are particularly interested. Already millions of copies having that home inspection blank are being published. They have to do with the inspection of homes to eliminate the fire hazards in those homes.

THE CHAIRMAN: You filled in your time very well, Mr. Fleming.

I shall now ask Mr. Percy Bugbee, General Manager of the National Fire Protection Association, to give us his three-minute report on that organization.

MR. PERCY BUGBEE: Mr. Chairman, Ladies and Gentlemen: Our association, like Mr. Fleming's, is interested in a particular phase of home safety, that of fire prevention, but it is an important phase. Thousands of women and children are burned death in homes every year. A major loss of life from fire occurs in homes. There are about a thousand home fires every day in this country, and so, of course, it is a major part of this home safety problem.

There are various ways that this home fire protection problem has been attacked. I think one of the most effective is the one that Fleming mentioned—the use of school children in home inspection work. I think perhaps more effort and thought and concrete results have been secured in the fire field in actual home inspections by children than perhaps in other safety fields but that has been going on quite a long time and is very widespread around the country. It seems to be an effective way of getting the simple causes of home fires reduced or eliminated. Most all of our home fires are due to those very simple things.

Another method we have been trying to promote is to get the paid fire departments and the volunteer fire departments throughout the country to make at least once a year and preferably twice a year a simple home inspection of every house in their community to point out fire hazards to the home owners. That has had an amazing growth. It started a few years ago and now hundreds

of cities are following that practice with very good effect.

We have a very large amount of literature on home fire prevention that has been distributed very widely and we have had very excellent cooperation from the organizations, some of which have spoken today.

The Boy Scouts and the Girl Scouts and the Camp Fire Girls, the 4-H Club organizations, have been extremely helpful and practical about their fire prevention programs and we are very grateful to them for it.

A couple of years ago we were very much interested in getting the Federation of Women's Clubs to adopt a resolution and set up a practical plan for home fire prevention which they recommended to all clubs so that we for the first time felt that we were making headway in a field that up to that time we were disturbed about, as we had not been able to get the women's organizations to help us.

Now we are encouraged to believe that they recognize that this kind of work is important and desirable and that we will make greater headway in the future. One thing that I think Mr. Fleming might have said but perhaps his modesty prevented him was that his organization and New York University have recently produced a very excellent text book on home fire prevention and material for schools.

Thirteen states out of the 48 now require a certain amount of fire prevention education. We don't think that legislation is particularly the answer but there is a lot of fire prevention education going on in our school system and of course we have prepared, as have other organizations, procedures and plans for those texts and courses. Our association is deeply interested in this division of the National Safety Council and is anxious to provide any of the groups who are concerned with the fire end of this problem with all the help that we can. Thank you very much.

THE CHAIRMAN: The third link in the chain of agencies in this fire prevention field from which the National Safety Council benefits through cooperation is the Underwriters Laboratories. I believe Mr. Sydney V. James is here. Mr. James, we are glad to hear from you at this time.

MR. SYDNEY V. JAMES (Chicago,

Illinois): Mr. Chairman, Ladies and Gentlemen: As Mr. Fleming has told you, we are with the National Board of Underwriters. The problems of safety involved education as well as mechanical equipment. Our field is the testing of equipment, materials, devices of all sorts which enter into industrial, commercial, as well as the home occupancy.

Speaking particularly regarding the home, our problems have involved testing equipment and devices relating not only to fire but to accident and to theft. Confining it still more narrowly to the home accident problem, we have investigated and approved many devices which are in daily use in the home, not only as items of necessary equipment for preparation of meals and for enjoyment of radio programs but also items applicable to the maintenance of homes. One of those, a typical thing, which illustrates this phase of our activities, is a floor treatment material. Recently we have had opportunity to test many things such as floor waxes and similar materials to be applied to floors which do not only preserve their condition but also to render them safe.

Another phase which we had the good fortune to investigate and which we were able to raise to a higher standard is typified by the washing machine wringer. You all know of the many and very serious accidents caused by such devices. Through the cooperation of manufacturers who meet with us and who were willing to specify a higher standard of safety requirements for such devices we were enabled to develop a testing program to work out these requirements on a definite basis. The manufacturer submitted the equipment and we found greatly improved conditions. We believe, as a result of that program, which of course like many others of our programs, is in abeyance during the war emergency, but which will be revived at the end of that time, it will contribute to the improvement of home safety conditions.

I might give you quite a catalogue of the materials and equipment that enter into these different phases but time won't permit and probably it would not be sufficiently interesting. You know we are a professional organization. We are like the doctor and the lawyer. We have to wait for our client to come to us and bring his device or ma-

terial or equipment to us so that we can test it. So there are many lines that we have not entered due to the fact that sufficient interest has not yet developed on the part of those manufacturers to bring what they have to us. That, in general, is our field.

THE CHAIRMAN: Thank you, sir.

We come now to the National Congress of Parents and Teachers. Mrs. L. W. Hughes is First Vice-President.

MRS. L. W. HUGHES (Chicago, Illinois): Mr. Chairman, it is a privilege to represent the National Congress of Parents and Teachers with its membership of 2,685,000, organized into 28,000 local units. The safety program is a very important part of our work. We are concerned with the fact that in our latest information 30,000 people were killed in home accidents and the thing that is so terrible to think of is that recent statistics tell us that based on former records and statistics from 2,500 to 3,000 children under one year of age will die of accidents in this country. That makes it a vital problem to the parents and teachers of America for we put a great deal of stress upon our safety program.

In the first place we issue a safety manual. We have just authorized the issuance of a new manual which will be out in a few months for the use of our units. Two or three of these manuals go to every local unit of America, to every one of the 28,000. They will use this for study programs in all of those little communities, large and small, of America. This tells them—starts off with safety at home. A graph shows that of all the home accidents—16,600 of them are occasioned by falls. Then the next lot is by burns—5,700. That of all the accidents, two out of three fatal home accidents are occasioned by falls and burns. Then it shows the location of home accidents. They know what the greatest casualties are, that on the stairs twenty-three per cent of the accidents happened, and so on down the list.

It is a very valuable, a very concrete presentation of the subject. It shows what kind of fatal accidents occur in the home, why do home accidents occur. Then it treats falls, fires, and how the Parent Teacher Associations can aid in the prevention of home accidents. So we think that is very valuable and in the new manual we are to have defi-

nite study courses. The Parent Teachers Associations, in their separate communities, cooperate in "Clean-Up Week" and they remove a great many fire hazards. They also cooperate in "Fire Prevention Week." Our national monthly publication is promoting safety even more than in the past; every month there is to be some article, something to do with safety in this magazine.

Our latest publication, "Community Life in a Democracy," devotes one chapter to safety, Chapter 15—"The Community Watches Its Step," by Frank W. Hubbard, Director of Research.

So we feel, Mr. Chairman, that the National Congress is making a very fine effort to put the safety program over, not only for the home but for the school and the community.

THE CHAIRMAN: Thank you very much.

We will now hear from Mrs. George W. Jaqua of the National Council of Women.

Mrs. Jaqua, how would you like to take about three minutes to tell us about the National Council of Women and then perhaps another two minutes to say a little something about the Home Safety program of the Office of Civilian Defense in Indiana?

MRS. JAQUA: The National Council of Women of the U. S. Inc., founded in 1888, is an association of autonomous women's organizations, whose individual membership numbers approximately five million, through which is made possible an interchange of ideas and factual information on a nationwide scale. The Council acts as a clearing-house and as an information and service bureau for its membership which is composed of national, state and local groups.

The Council Board and executive officers are so conscious of the message of the National Safety Council, that each individual carries it wherever she happens to be, speaking for its projects and aims, and endorsing its programs.

Not all of this personal contact can be recorded in detail because it is a continuous operation and, we believe, an effective means of dissemination of the Safety Council's objectives. However, to record some of the channels through which we have been able to assist in arousing women to the realization of their responsibility in the campaign

to prevent accidents, may we list the following:

1. The distribution of National Safety Council material to member organizations of the National Council of Women and to representative civic leaders throughout the United States.

2. Assistance in the formation of a Women's Advisory Committee.

3. Preparation of material on safety for inclusion in organization bulletins.

4. The National Association of Colored Women, at the request of the National Council of Women, is establishing state safety committees within its organization.

5. In an effort to dramatize safety education, the National Council of Women has recommended to local leaders that they urge the formation of safety councils or committees in their home towns if one does not already exist; that industrial women be appealed to to interest themselves in the safety committees now operating in all plants; that local OGD offices or war councils be urged to emphasize safety.

6. Contacts have been made by us for the Safety Council's representative with such organizations as Midshift Movies, the New Haven Railroad, etc., to promote the incorporation of the safety message into those organizations' own educational material.

7. Contacts made by us for the Safety Council's representative to present projects to Good Housekeeping Magazine and the American Women's Voluntary Services.

8. Suggested "safety" as the theme of the Annual Meeting of the May Wright Sewall Indiana Council.

9. Was instrumental in the publication of a safety message in the press release (clip sheet) issued by the National Kindergarten Association to editors throughout the United States.

This is a partial summary to indicate the type of promotional procedure the National Council of Women has undertaken for the National Safety Council. May we assure you of our continued support whenever the opportunity arises. We hope that these contacts have furthered your cause.

Now, for the Indiana State Defense Council:

Last year the manpower needs aroused the thought in the minds of the Executive Committee of the Indiana State Defense Council that home accidents played a large part in creating those manpower needs. We also felt that it offered a direct problem to a defense council within a state, if it were to be adequate to the charge laid upon it. So we brought that idea to Chicago to the National Safety Council and found a welcome response from Mr. Kershaw and he, with his assistants, worked out with us a state-wide program. It was largely a shot in the dark. One speaker said yesterday "It was one of the arrows we shot in the air." As yet, we do not know where it fell. We don't know with what repercussions it fell, but we are confident that we did spade work in arousing interest, in varying degrees at least, in developing a consciousness in minds where it probably never existed before, that there is a problem of Home Safety, that it is of particular interest in these war times.

Now our methods, to be very brief, settled upon a campaign, a regular procedure. It started by a proclamation of the Governor, with press releases, radio programs, magazine articles for organization publications, and manuals for training of the block worker, because in the Civilian Defense organization we felt our neighborhood groups, under the Agricultural Division and the Block System, were a natural medium through which we might reach the individual homes. In order to make that effective we developed with the National Safety Council a manual of introduction and instruction to these block workers before they took the check lists. We distributed in Indiana more than half a million check lists. We thought we would have these signed with the pledge sheet but you find various reactions to that. Some want to do it and others do not. They do not want to give a household's name on a pledge, so you left it to your individual locality as to their request in this matter.

Consequently our findings are not completely tabulated. They cannot be. We believe in certain follow-up procedures, but those programs all will take time.

We hope to find out where our arrow fell and we hope that it fell with good results.

We feel that we had a challenge to do a job and at least we have started. We have

been the inspiration for other groups being organized within our state.

The year before, in connection with the work of the Fire Underwriters, we did work on a similar program regarding safety in homes and we printed and distributed the cross-section of a house, which I believe some of these organizations are familiar with, pointing out the fire hazards. We also included that in our state manual. Mr. Bugbee knows something about that.

This shows what a State Defense Council can do if you utilize its organization channels and its organization units.

THE CHAIRMAN: Thank you.

Miss Celia Howard, National Chairman on Policies and Procedure, will report for the National Federation of Business and Professional Women's Clubs.

MISS HOWARD: Among the 16 programs designed for use by the 1700 clubs in the National Federation of Business and Professional Women's Clubs, Inc. for the club year 1943-44 is one entitled "Accidents—Enemies of Efficiency." This program is set up so that the chairman of this meeting not only has the needed information on accidents with which to introduce this subject, but several plans—any of which, if followed, will make for interesting and instructive discussion.

"It is not enough to have a meeting about the safety campaign and ask someone to come and talk to you about it" runs the advice accompanying these meeting plans. "If you are actually concerned with accidents and their prevention, you will set the meeting up as a clinic for self-examination, diagnosis and the formulation of some course of preventive action. Such a clinic should examine at least four phases of the accident problem; in industry, on the streets and the highways, in the office and in the home."

Then follows the description of the various types of meetings which might be staged, a list of questions for discussion and a bibliography giving further sources of information.

Reports now coming in from clubs show that the program on safety is being selected by the majority of clubs as one which is of special interest to our membership. Following the advice given to the program chairman, we do not feel that one meeting is

enough and, therefore, in our official magazine, **INDEPENDENT WOMAN**, which goes to some 73,000 members, there will be reminders throughout the year in the shape of articles, safety cartoons or other "follow-up" information which will keep this question of "safety" and its part in the war effort constantly before an audience of women who work in some 400 occupations in this country.

Special outlines on office, industrial, home and traffic safety, issued by the National Safety Council, are being listed in our official magazine, and requests for these and other safety information testify to the growing interest in the subject.

In this effort to make "safety" an important part of the Federation's "Winning the War and Winning the Peace" program, we have been greatly helped through consultations of our professional staff with Mrs. Ann Barnard, the Director of the Women's Division of the National Safety Council.

I do not believe I could close this "report digest" in a more fitting way than by acknowledging this indebtedness and the very real help the services of the National Safety Council have been to us and to our membership.

THE CHAIRMAN: We had a brief reference concerning the activity of the American Public Health Association.

We now come to another organization in the public health field, the National Organization for Public Health Nursing. Mrs. J. H. Pratt, of the Girl Scouts, presented the prepared Ms. of Miss Heide Henriksen, Industrial Nurse Consultant of the National Organization for Public Health Nursing.

MRS. PRATT: The Industrial Nursing Section of the National Organization for Public Health Nursing supports industrial nurses in all phases of their program, one of which is the extension of the accident prevention program to include the home as well as the plant.

The industrial nurse knows it is the total number of days lost that are significant in production, not merely the days lost because of occupational disability. Therefore she joins hands with other safety-minded workers in programs to reduce accidents wherever they occur. She has many opportunities for participation, directly and indirectly. One nurse,

after studying the report of the sick benefit association which provided family benefits, asked permission to talk to the women's auxiliary of the union twice a year, preceding each period of semi-annual house cleaning, because of the high incidence of injuries associated with house cleaning. Another nurse offered to equip and inspect first aid kits before the opening of each fishing and hunting season, just for the opportunity to emphasize the need of being careful. This service opened the way for discussion of first aid kits for the home and the need for prevention of accidents in the home. These are examples that could be multiplied many times—of how industrial nurses stress home safety. They have opportunities through individual contacts, group conferences and visual education devices to promote a home safety program, and more and more nurses are making this a part of their routine service.

THE CHAIRMAN: Thank you. Every one feels the great opportunity which the nurse has for home instruction in this field and it is gratifying to know that the National organization as well as the State and Local groups of nurses are increasingly alive to this opportunity.

Because a speaker on our program has to leave before we might reach her in the ordinary course of this series of reports, I shall go next to the representative for the Woman's Home Companion, Miss Katharine Clayberger, Associate Editor, from New York City. We shall be glad to hear from her at this time.

MISS KATHARINE CLAYBERGER: Mr. Chairman, Ladies and Gentlemen: We have been stressing the care for the young baby in the home. I was very much interested, in going through some old issues of our magazine, to see that in 1890 there appeared a little article headed "Boxing the Baby." That title rather startled me until I found out it was the forerunner of the baby pen. One of our readers had developed the thought of taking a box and padding it with blankets and keeping the baby safe out of the way. That is interesting, now that we have the baby pens.

Two articles appeared this year in the Companion touched on Home Safety, one in June entitled: "Does This Ever Happen In Your Home?" and one in January, entitled "Have You A Little Hazard In Your

Home?" Another article was "Your Home Of Tomorrow." Another one which came out in September was "This Is Your War Work," pointing out what members of the community can do in looking after women. Another one was "Do You Know How To Fix It?" looking after electric wiring, etc. And in November we are going to have two articles: "How To Mend an Electric Wire" and "Keeping Well By Keeping Fit," and in knowing how to keep well and fit many hazards are avoided.

In addition to this material we are also very happy to work along with the New York State Home and Farm Advisory Committee, with Mr. Rickards and Mrs. Hendriksen and Mrs. Barnard, in charge of the Women's Activities for the National Safety Council of New York City.

I have been happy to serve on the advisory committees and shall be happy to give whatever help and support I can in extending this program to every woman. Thank you very much.

THE CHAIRMAN: The next is the American Women's Volunteer Services. We shall be glad to hear from Mrs. Barnard. I might also say, as most of you know, that Mrs. Barnard is on the staff of the National Safety Council, in charge of the relation with woman's organizations.

MRS. BARNARD: Ladies and Gentlemen: Miss Grace Allen Bangs, who is the chairman for the Home Volunteer Services, and Miss Katharine Devine, who is in the Safety Section of the Metropolitan Life Insurance Company, because of transportation difficulties were unable to attend and they wanted me to say a word for them.

They have a well organized safety plan in which an able committee worked and was carefully edited by the A. W. V. S. Committee and the National Safety Council. This was sent out early in July to all units urging the making of a detailed committee report and what type of program was most suitable to the local unit on the local level. The response has been good and the follow-up is now being done. We hope this will reach 325,000 members.

So we will be able to report better later.

THE CHAIRMAN: Thank you.

Next we have the Sporting Arms and

Ammunition Manufacturing Institute. Mr. C. S. Bedell is Acting Secretary.

MR. BEDELL: The Sporting Arms and Ammunition Manufacturers' Institute has always recognized a responsibility to the public in that its members offer merchandise which can, if improperly used, cause injury or death. Therefore, when the Institute was organized in 1926 it adopted a policy of eliminating, wherever possible, inherent sources of danger in the use of arms and ammunition products.

Through the instrumentality of its Technical Committee, many safety measures were recommended and adopted within the industry itself, such as:

Marking of chamber lengths on shotgun barrels. Marking of corresponding shot shell lengths on cartons, and in some cases on the tubes, of shot shells. Warning notices on shot shell cartons containing special-purpose ammunition developing higher pressures. Warning notices against insertion of smaller-gauge shot shells in chambers of larger-gauge guns. Warning notices on appropriate shot shell cartons against use of ammunition in obsolete arms. Warning notices on cartons of .22 caliber cartridges against possible danger to others at extreme ranges. Establishment of proof-load standards for testing of shotgun chambers at pressures greatly in excess of normal. Warning against use of smokeless powder in Damascus or twist steel barrels.

Development of special alloy steels and other metals affording greater inherent safety in the construction of firearms, has been utilized in the designing of thoroughly modern weapons to accommodate extra-high-velocity rifle cartridges. To insure against possible chambering and firing in existing arms too weak structurally to handle them, these ultra-modern rifle cartridges are designed specifically to prevent their fitting in any other known rifle chamber.

Two other Committees of the Institute, those dealing with Simplified Practice and Promotional Activities, co-operate with the Technical Committee in their respective fields. The Committee on Simplified Practice acts to discontinue throughout the industry any cartridge whose ballistic performance, from the standpoint of safety or otherwise, is unsatisfactory. The Committee on Promotional Activities carries on through

the sales organizations of the Member Companies such organizational action as is necessary to insure proper information and instruction of field personnel.

But the Institute recognized that these steps to put its own house in order were only a necessary preliminary in its fight to prevent hunting accidents. There were increasing reports of such accidents. While investigation proved this apparent accident increase to be due largely to more efficient reporting services by State Game Departments, it was also revealed that increased hunting in certain concentrated areas had caused some actual increase in accidents.

It was further revealed that supervised shooting sports such as skeet, trapshooting, and rifle shooting had continued to increase with a negligible number of accidents. This proved conclusively that proper education and instruction of children and youths (heavily stressed in supervised shooting) could prevent accidents, and indicated the advisability of educational efforts in this direction by the Institute aimed at the shooting public.

Accordingly, the Institute created a Committee for the Prevention of Accidents with Firearms, composed of representatives of every phase of activity of the arms and ammunitions industry. This Committee has worked both independently and in cooperation with State Game Departments and governing associations of shooting sports and conservation and other organizations concerned with safety problems. The time allotted me is too short to describe all the preventive steps taken by the Committee but I will recount a few of its major efforts and accomplishments.

(1.) Ten Commandments of Safety

The first material released was a terse set of rules entitled "The Ten Commandments of Safety" which covered rules considered basic in the safe handling and use of sporting firearms. Copies of the "Ten Commandments" have been included in every carton shipped by any gun manufacturer, irrespective of whether it contained a new or repaired gun. Since 1939, over 3,050,000 have been distributed by Member gun manufacturers.

Over 5,500,000 copies have also been distributed by State Game Departments, bring-

ing total leaflet distribution to over 8,550,000, while at least 18 states have printed the "Ten Commandments" on their licenses or in their various publications released at or about the opening of the hunting season. The 4H Clubs also distributed over a quarter of million copies in leaflet form.

(2.) Poster Program

Supplementing distribution of the small leaflet, over 15,000 copies of a large cardboard poster containing these same "Ten Commandments" have been supplied by the Institute and distributed by various sources, including the Boy Scouts of America, the National Rifle Association, and by Company Members of the Institute among gun clubs and various places where hunters congregate.

With the active cooperation of the Milwaukee Chapter of the Izaak Walton League, 5,600 cloth posters, size 17x22, were used in a test campaign in Wisconsin in 1940. These posters were erected and 50,000 of the rules in leaflet form distributed throughout deer hunting sections of the state, with the help of the Conservation Department, sportsmen's clubs, hardware stores and others. Both fatal and non-fatal accidents were materially reduced that year and the Milwaukee Chapter of the Izaak Walton League expressed its belief that this decrease was due at least in part to the test campaign.

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

In the two years these art posters have been in use (and in which a total of 74,000 have been distributed) reported non-fatal accidents from the six states named have dropped 8.4% despite much stricter laws requiring the reporting of shooting accidents. Fatal accidents have dropped 18%.

In 1943, the program is again being expanded to include, in addition to the big game posters, distribution of new three-color posters aimed at the hunter of small game. These are being distributed in Illinois, Indiana, Michigan, Minnesota, Oklahoma and Pennsylvania. In all, a total of 92,000 posters are being distributed this Fall.

(3.) Safety Motion Picture

In 1942, the Institute released a motion

picture to promote safety in the use of shooting firearms. This film "The Making of a Shooter" was photographed in full color and produced in both sound and silent versions. To avoid all semblance of lecturing, the subject was approached from an inspirational angle. The lessons in safety were incorporated in an interesting plot, narrating the experiences of a typical teen-age American boy who attended the various national trap, skeet and rifle shoots, and who hunted in the field, absorbing instruction bit by bit.

This film has been distributed through the various State Game Departments and many organizations and groups interested in sport and safety. As a result, despite gas rationing, which has materially reduced meetings, especially in suburban and rural areas, distributors' reports show that the picture was exhibited to over a half a million people in the first year.

These reports show distribution by various organizations and groups as follows:

Name	No. of Films Assigned	Total Audience
State Game Departments	67	417,475
Boy Scouts	13	14,640
4H Clubs	6	11,246
Ft. Leonard Wood	1	16,500
Pensacola Naval Air Station	1	6,700
Institute Members	8	2,992
National Safety Council	2	1,865
Marathon County (Wis.) Safety Council	1	6,119
National Rifle Assn.	6	949
Reserve Library (25 films on hand)		28,507
		505,993

Reports show that while only approximately 37% of the audience reported to date is children, newly awakened interest by the schools of the country is pushing this percentage upward rapidly.

(4.) Institute Radio Program

During the 1940 hunting season the Institute sponsored a radio program over ten mid-western and southern radio stations, called "Shooting Adventures of Famous People", designed to increase shooting and game restoration. Safe handling of guns came in for direct attention in several of the broadcasts.

Throughout the series, listeners were urged to join sportsmen's and gun clubs, through which they could avail themselves of expert supervision and instruction in the safe handling of sporting firearms. This program was very well received and undoubtedly was helpful to the cause of safety.

(5) *Handbooks of Rifle and Shotgun Shooting*

Two Institute booklets "Handbook on Small Bore Rifle Shooting" and "Handbook on Shotgun Shooting", while primarily designed as aids to improved shooting, have heavily stressed safe gun handling. More than 330,000 of these books have been distributed. We are convinced that they have contributed materially to the cause of safety.

(6) *Publicity*

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

Throughout the program, the Institute has solicited and utilized the advice and the cooperation of such organizations as the National Safety Council, the Boy Scouts of America, the various State Game Departments, the National Rifle Association and many others. It plans to continue this policy.

It believes that, with the full and continued cooperation of other groups vitally interested in the prevention of hunting accidents, such accidents can be kept at a minimum.

THE CHAIRMAN: Our next speaker is Mr. Curtis Billings, the Secretary of the "Off-The-Job Accident Program of the National Safety Council."

Mr. Billings, I think it is rather interesting that we generally, from an industrial point of view, classify home accidents as "Off-The-Job Accidents." I rather expect a good many women in the home probably would not admit that they are off the job, Mr. Billings. We would be very glad to hear from you.

MR. CURTIS BILLINGS: I am quite sure I can make this very brief. The main fact, the only fact, is that the Home Safety

efforts of all the organizations represented here and many others are being assisted a great deal by American industry. Moreover, this fact is a new phenomenon. It wasn't true until about six months ago. At that time the National Safety Council launched its Off-The-Job Safety Program. The program, as I will indicate in a minute, has been well accepted and widely used by industry, because absenteeism has been such a grave problem.

The program that the Council developed for use by industry is entirely educational. Home safety is heavily emphasized.

We prepared a series of a dozen posters for use on bulletin boards to remind the men and women of the danger of off-the-job accidents and the seriousness of them in war time, on the streets, in cars, as pedestrians, at home, and in other public places which are mainly recreational. They are placed on 200,000 bulletin boards all over the country. We prepared a couple of sound-slide films, one on Home Safety. Three hundred copies of these films are being shown, mainly to industrial workers, to influence them to take it easy in their cars and to be otherwise safe off the job.

We prepared six highly illustrated leaflets for distribution by plants directly to workers. There is very little reading matter—mostly pictures. Two of the six are devoted to Home Safety and two others devote some space to Home Safety. A million and a half were distributed to workers by industrial concerns. We prepared a series of thirty single column cartoons and feature articles for use in plant publications. Of the thirty articles sixteen were devoted to Home Safety. And these small cartoons and feature articles are appearing in more than a thousand plant publications throughout the country. Many of them have huge circulation.

I am confident that we can say that millions of war workers and others are being reached directly through this one medium alone.

And then we published a little leaflet entitled "Plant Meetings on Off-The-Job Safety," so that industrial concerns had safety organizations and regular scheduled meetings, devoting a meeting or two to "Off-The-Job Safety." We were surprised and gratified that 10,000 of these have been requested or published by industrial concerns

and are being used. That means that there are many meetings, hundreds and hundreds of them, every month through industrial concerns, through which the men and women are discussing problems of safety outside the plant—that is, in the home and on the street and in other public places.

I said this is a war time phenomenon and it is. We hope that we can so establish "Off-The-Job Safety" in the routine and regular procedure of industrial concerns that "Off-The-Job Safety" will become a permanent part of the safety program of American industry. I thank you.

THE CHAIRMAN: Thank you.

May I ask whether there are representatives here of other organizations active in Home Safety and Home Accident Prevention? We do not presume that this list is by any means a complete one and it may well be that there are other organizations represented here. If you have no report to make we should be glad to have you stand up and give your name and organization.

MRS. JAMES DOWNING: Mr. Chairman, ladies and gentlemen: I represent the Women's Home Safety Division of the Automobile Club of Michigan and also am chairman of the Women's Safety Committee of Detroit. It has been gratifying to listen to the reports of this meeting. I have sent out four hundred letters, including a portion of the President's proclamation, to presidents of Women's Organizations in the City of Detroit, and about 3,000 messages of a little different character to Girl Service Squads throughout the State of Michigan. From time to time we send communications pertaining to the particular hazard of the year.

Also we have radio programs and send notices to papers, etc. We have done a great deal in the publicity line. We have tried very hard in our effort to bring this message to the women of Detroit to arouse them actively to the need of accident prevention in the home so that not only their homes will be safe but they may prevent absenteeism during the war.

THE CHAIRMAN: I think this meeting is rather unique in the history of the National Safety Council and in the history of the Home Safety Movement. Consequently we are anxious to get the record complete. Are there any other organizations?

MISS ESTELLE WINGLER: (Chicago, Illinois): Dr. Armstrong and members of the National Safety Council: It is a special privilege to listen in. I am just one of the Safety chairmen of the South Side of Chicago, that has to do with the under-privileged children. It is very difficult to reach them. I tried this spring to have home accident prevention classes. I had the very active sponsorship of the Chicago Park District, who gave us Douglas Park and Harrison Park to have meetings there. I tried to approach all our parishes, the Parent Teachers Group, and I didn't get anybody to come and take the regular American Red Cross nine hour home accident prevention course.

May I at this time suggest that the only way in which I believe it is possible in Chicago and elsewhere to interest these people is through the excellent Civilian Defense Home groups. They can organize and help in giving regular classes, utilizing the many instructors available today all over America trained by the American Red Cross.

MISS HERMAN C. ANDERSON: (President of the Women's Home Division, Hennepin County, Minneapolis, Minn.):

We have heard about the work in Indiana so I am interested in Miss Jaqua's report and we have cooperated with the schools by putting out pamphlets during "Fire Prevention Week." We are going to have a safety contest, patterning it after Indiana, and we have taken the safety course under the Red Cross and we are going to organize more classes for that.

THE CHAIRMAN: Thank you.

Who else would like to add to the report? Are there any other organizations that would like to be recorded? If not, we still have a few minutes. Are there any particular questions you would like to ask of any of the speakers who are still with us? I suspect we have lost a few. I do think we have held on to our audience pretty well, considering the barrage to which they have been exposed. It is a barrage, however, of very useful information.

We have held on to the audience so well that I am reminding a little of the police official who had been invited to address the prisoners up at Sing Sing Prison along the Hudson River.

He didn't know how to address them. He

thought of calling them "Fellow Convicts," but he realized that wasn't right. Then he thought of calling them "Fellow Citizens," but that didn't seem right. So he said: "Well, anyway, gentlemen, I am delighted to see so many of you here."

I want to congratulate those who presented the reports to the audience today. I think they manifested a high degree of skill in adapting their detailed programs to a very short compass of time. Also I think we have had presented here a remarkable volume of information about a great variety of activities by a large number of agencies, representing practically all phases of American life.

The records of this meeting should be extremely valuable for reading, for review and for study, and, incidentally, I think we have all been impressed by the fact that there is a growing realization of the importance of the home accident problem. We have entirely too many home accidents. They cannot be prevented by compulsion or by legislation. They have to be approached by persuasion and by education.

Those are the devices peculiar to and essential in democracy. It is my impression that today in this meeting we have seen a manifestation of democracy, if not in action then in preparation for more effective action to follow.

Thank you very much.

MRS. BARNARD: I have just persuaded Sister Mary Carmelyn to say a few words.

SISTER MARY CARMELYN (Mundelein College, Chicago, Illinois): We have just started our program. We are organizing, and plan to make the students conscious of the need for safety. We have been very fortunate in getting from the American Red Cross all the courses that they have to offer and it was through them that we became interested in the safety program.

Our program was launched during Accident Prevention Week. As yet we don't know what we are doing but we have gotten started and are trying to function.

On next Tuesday we have our first assembly to acquaint the students with the activities of the Safety Council and we hope, after that, we will have much cooperation from the student body. They seemed to be interested and the girls we have appointed as heads of the departments are very interested.

After this year we hope to have something to report. We started too late to have any election. We haven't much to offer but maybe next year we will have more.

MR. STANLEY KERSHAW: This has been a fine meeting. I should like to add just this one remark, if I may. You know folks we have been thinking of home safety as just a necessity, requiring a steady going program. I would like to tell you that it is really fast becoming an emergency, a national emergency.

For instance, Dr. Sherwood, of a large hospital in Milwaukee, the other day said to me: "Mr. Kershaw, we have just got to stop these home accidents. Our hospitals are becoming so loaded with broken hip cases and other serious disabling accidents that we simply can't handle them." He said: "We can't get anesthetists for love or money, which means we are limited in the amount of surgical work and we are fast approaching a condition where we will have horrible cases because we can't give them proper treatment." That means these home accidents are not only robbing us of our manpower but robbing us of our hospital facilities and the time of our doctors and the surgical materials, etc. It is a very serious matter.

THE CHAIRMAN: If there are no further questions the meeting is adjourned.

THURSDAY MORNING SESSION

October 7, 1943

Presiding: ROGER WILLIAMS, Assistant Director, The State Insurance Fund, New York City.

CHAIRMAN WILLIAMS: I appreciate the privilege of acting as your presiding officer this morning, because I expect a very generous contribution from the audience itself. That is the purpose of this meeting.

I extend the Council's welcome to you and especially express appreciation for your interest in home safety. I know that you must be interested as individuals or representing your organizations in home safety or you would not be here.

Before going on, I want to extend my personal appreciation, and I am sure I speak for the audience in thanking Mr. Kershaw and the staff of the Council for their magnificent and voluminous job. They have gone into all parts of the country and been extremely helpful in a personal way to each organization. I believe the results will speak for themselves.

I was especially gratified at yesterday's session to note the tremendous growth in interest and participation by so many logical organizations. We need that, and yet we need more than that, a continuing, year-round program on the part of everyone, in order to get the results that we so greatly desire.

So, this morning's session will be in the nature of a seminar to exchange personal experiences, so that we all may benefit out of the experience of individual organizations. We are here to help each other.

In home safety, too, the same principles apply, those same three E's—engineering, education and enforcement, but applied more specifically to our own methods. Industry knows a great deal about the application of those three E's, but admits, as evidenced by the attendance at this convention, there is much yet to be done to obtain satisfactory results.

Now, in our own field it is going to be necessary for each organization to apply those same principles in its own sphere. Then if we get good results locally in individual groups and in the community, we will get good national results, but we won't

have good national results until we have good local results.

Getting back to the industrial experience again, I think that we have to plan to organize the family as it is done in a plant or a department of a plant.

It has often been said that a man's home is his castle, but I am sure we all agree that he is not the boss in the home. The woman is the ruler of the home, castle or hovel, and we must look to her to be the industrial supervisor, the overseer, the one with authority to make things right.

Now, supervisor and in her normal capacity as a mother, it is quite proper for her to call on the father to correct the hazards that are found. It is quite proper for her to assign the various children their turn in making home inspections with one of the adult members of the family.

It is quite proper that after dinner or at any other appropriate time, as a family group, they can function as a safety committee to discuss the hazards that have been found, the methods of correction, and ultimately to develop rules of safe conduct and good order in the home.

That has been the experience in industry. Out of that accumulated activity come the results that have been obtained.

That won't be accomplished in a short period of time, nor can it be accomplished by an annual activity. It must be integrated into the normal family activities, so that the logical parts of it are done each day.

I believe that, through the work of these group organizations and the work being done in the schools through the parent-teacher organizations, we will increase the number of older children who will act as supervisors in part and as the leaders, to set the example to the younger ones coming into the family group and coming into this home safety group activity.

I am sure we all realize that we must be specific in our presentation, whether it be to an organization or to the family.

We can't go to local organizations or to families and say, "We want your cooperation in safety." It is too big an order. We have to go to them with a specific activity that fits into that family activity.

I am saying these things not because we have accomplished them in New York; we haven't. Our record for the first six months of this year shows an increase of about 20 per cent in home fatalities. The bulk of that increase results from asphyxiation, undoubtedly attributable to the fuel shortage. It is attributable, too, to the fact that, unfortunately, there is no proper instructor in a home. The family moves into a flat heated by a coal stove. They have never had occasion to run a coal fire, which is their means of cooking and their means of heating. They know nothing about ventilation, or the control of drafts. There is no instructor there to teach them. They have to learn by bitter experience.

With the oil stove and these other things, there is a similar lack of information. So, we have these asphyxiations which will continue so long as that condition continues, until we can reach them with proper education.

The same is true of the other equipment around any home. There is not proper instruction.

I am reminded of the philosophy the Chinese have with respect to the reading of a compass. They accept the north, south, east and west, but they have a fifth, which I think is very good, and that is where you are. I think that in our discussions, when we are talking about these steps to be taken, we want to be sure where we are. We have certain records but, unfortunately, and that will always be so, they are records of failures. There is much to be desired with respect to those records.

They will indicate, in a general way, our gain or our loss, but we need much better records. As we get better records, we are going to increase the extent of our losses, because I think that we are not getting reports on all the cases that occur.

DR. DONALD B. ARMSTRONG: Mr. Chairman, Mr. Burke, Ladies and Gentlemen: I confess that I cannot boast of having found any secret formula for the solution of this problem.

The National Safety Council figures point out that one-sixth of all fatal home accidents occur to children under five years of age. Now, if you take the deaths from home accidents in certain age groups, certain younger age groups beginning at the level of twenty-four years and go down, the rate from 24 to age 15, per hundred thousand, for fatal accidents last year was 53. Going still further down, from 14 to 5, the death rate from home accidents was 29 per hundred thousand. Then, coming to the lowest age group, 4 to zero, the rate was 68 per hundred thousand.

So that in all the younger age groups, the highest fatality rates from home accidents are to be found in the zero to 4 age group.

Then when you look at the character of these accidents, we may find some clues to the important points of emphasis in attempts at control.

Twenty-four per cent of these fatal accidents among infants and very young children result from burns—burns from lack of screens in front of fires, burns from hot fluids, especially hot fluids tipped off stoves. We might adopt as one of our slogans for home safety campaigns, "Let's make mother pan-handle conscious." That would accomplish a good deal, if it could be done.

Sixteen per cent die from suffocation. One-half of all the suffocation accidents in the home occur in the first year of life—suffocation from too many bedclothes, or carelessly handled bedclothes in cribs, suffocation from pillows, blankets, and so on.

Another type of suffocation accident results from children's playing with very small articles—marbles, jacks, and so on—that they get into their mouths, and then into the larynx and choke to death; toys, carelessly constructed toys that come apart, small parts come off and get into the throat.

Then comes poisons, 9 per cent—poisons from toddlers able to reach carelessly handled or placed bottles of poison, and then poisons from lead toys, poisons from lead paint used in painting cribs, where the children teeth upon the edges of the cribs and thereby acquire a lead intoxication. Those are certain examples of poisons in the home.

Falls might be mentioned—falls off tables, off bath tables, down stairs that are improperly protected by screens or gates, and so on.

I suppose that we must continue, as effectively as possible, to use the various group approaches that we have, particularly to mothers through parent-teacher associations, mothers' classes for one purpose or another, mothers who gather at child health stations to receive guidance in the health and direction of their children, church groups, mothers employed in industry.

There is another opportunity for the transmission of a message to mothers through the off-the-job accident campaign. Classes could be held, perhaps, by the Red Cross, not necessarily aimed primarily at home accidents but where some reference to home accidents might be incorporated in home nursing classes, and similar first aid classes and other classes where mothers and parents are involved. But all of that, of course, we are doing.

I do think we could give more attention, finally, to a specific approach to the mother or the father by all the routine home contacts that ordinary opportunities afford.

If we were a totalitarian, autocratic, dictatorial country and wanted to control home accidents, I suppose we would select a group of home inspectors who would be told to go into the home and told just what to tell the parents to do. But we are not that kind of country. Therefore, we have to depend upon our educational opportunities and our normal contacts.

Now, we have a good many of them. Nurses, home demonstration agents, home visiting teachers, insurance agents, gas inspectors, meter inspectors, all kinds of people go into homes.

If we can sensitize those people more than we have to their opportunity to see hazards; and tactfully, intelligently point them out—there, I believe, is a leverage that we have not yet by any means exploited to the full. Of course it is a necessary American procedure, necessarily dependent upon the use of an educational contact. It would be, I think, a manifestation, further, of democracy in action. In any event, the problem is a very large one. It is not only a war emergency but will always continue to be a peacetime obligation of all of us interested in curbing this very serious problem.

MR. BERNARD LUNDY (National Safety Council): We have been working on

a publication on infant safety for several months. We have had the advice of about twelve authorities on infant care—pediatricians, newspaper columnists, etc.

We are now revising the material and will publish it soon.

One suggested method of distribution is that the local safety councils watch the newspapers for announcement of birth certificates issued, and that this material then be sent by the local council to the parents of the child whose birth was registered.

As to youngsters in the home, we have conducted a so-called home accident program in the City of Milwaukee for a period of about twenty years. We never knew where we were going or how we were arriving.

We have seen the automobile registrations go up year after year and our automobile fatalities go down, down, down. But while we were concentrating on this traffic accident situation and bringing it down, in spite of the increased exposure and in spite of the fact we are the most congested city in our class, we are forty-four square miles with a very high registration, we have seen the home accidents mount year after year, until a few years ago we decided that something must be attempted on home accidents. So we started in a meager way. We couldn't get much help anywhere.

We have attempted to induce every woman's club in the city, to establish a home safety committee. We have organized a good many men's clubs. We have circularized, through the library, a book mark once a year, about 90,000 of them. Every book that goes out of the library and into the home carries a book mark with a home safety message on it.

We have used various types of home inspection blanks through school children, and woman's clubs.

We find a great lack of proper literature. We have tried to get out what we could, with our limited budget. I think we spend two or three thousand dollars a year on home safety—mostly on printed material. We have done about all of the things that are known. But in spite of that fact, our home accidents are still increasing way beyond our traffic accident situation. We have used our fire department, in its voluntary home inspections, for many years. We have

tried to single out specific instances, such as burns in youngsters, falls in older people. We have tried to attack them. We have had marvelous cooperation with the press; we have had marvelous radio cooperation. We used radio panel discussions. We have used about every means. But in spite of all these activities our home fatalities continue to increase.

MR. T. ALFRED FLEMING (National Board of Fire Underwriters, New York, N. Y.): We have gained a great deal by using case histories in our informational material. It is one thing to tell a story and exhort people, but if you can give a few, two or three actual examples that you can verify, you are going to impress the mothers a good deal more than in any other way.

Let me give you two examples. One of an insurance inspector, who is in safety work in the City of Minneapolis, and whose wife ought to know something about safety. She had a party in the afternoon, with five women as guests. She prepared a dinner, got the tea wagon with the coffee pot all steaming. She rolled it over beside the table where she could use it. She went in to call her guests to the table.

A little tot, who was two and one-half years old, simply tripped over the cord and pulled the entire coffee pot over on her, with the result that she lasted about twenty-four hours and it was all over.

Secondly: Last winter, when we had very little heat, a mother in Pennsylvania took her child out to the kitchen, which was warmer in the morning. She put the high-chair there, raised up the lid and put the child in. Naturally, she put the child as near the stove as possible, where she had one of those pans with a handle. The high chair tray was turned up, so she could put the child in, and she didn't put it down. It flopped down itself, hit the end of one of those pans, and all that boiling water came right over on the child.

Those are pretty horrible examples but there are lots of them. I find if you can just simply give the mother a little idea of what is really taking place, something you can verify, you are going to get home the message a good deal better.

MR. HOBAN (National Association of

Housing Officials): I simply had a suggestion relating to the last speaker's remarks.

In my own experience with children, it means very little to them to say, "Well, now every day a child is killed somewhere because he ran into the street" and so forth.

He says, "Well, I don't believe it," and so forth.

Then the next day maybe you get the paper and there it is "So-and-so, two and one-half years old, killed," but it is never featured in a way so that it is really called to the attention of parents or children.

I wonder what the potentialities are of getting the agreement of the press for a certain period of time to somehow feature the daily accidents that get about an inch and one-half or two inches in the paper, maybe treating them not simply in a rhetorical fashion but in such a fashion that a moral can be drawn, maybe an illustration. Maybe we will have to get pretty gruesome in some of the presentations and use plenty of pictures; I don't mean the kind of pictures the cheap press uses, the sensational, the crying mother, that sort of thing, but I mean trying to bring out the essentials of what caused the accident. It was the unloaded gun, it was running out in the street, that sort of thing.

I think there we have an unexploited source where we could capitalize on the terrible experiences of the type that have been reported by the previous speaker.

CHAIRMAN WILLIAMS: Thank you.

I felt that Mr. Fleming's remarks were leading us logically to the topic "What makes effective home safety publicity?" on which there will probably be considerable discussion.

We are fortunate in having Mr. Burke, Executive Vice President of the Greater New York Safety Council, who had done a great deal of this work for the National Safety Council and, unfortunately for us in New York, is returning to the National Safety Council to do that work generally for local councils. Our loss is a gain, in which we will share too, because he will still be available to us as a local council.

MR. TOM A. BURKE: Thank you, Mr. Williams. Ladies and Gentlemen: I can only tell you some of the things we have done

down in New York City in the past year or so. When we hear about the statistics, the constantly mounting rise in home deaths and accidents, we wonder whether or not we haven't just been wasting our time. It is a very natural thought.

However, I can't help but feel that, in a limited sense perhaps, we are on the right track down there and eventually we will see some results.

I liked very much the suggestion that was just made here for a little daily feature to emphasize this problem. I believe we can sell that idea to the New York Times in the near future.

We had a very serious traffic problem there with the dim-out. You who live in New York know what that means. When you cross the streets of New York at night you had just better keep your fingers crossed because it is a perilous adventure. We succeeded in interesting the New York Times in carrying a little box feature, with a little, semi-humorous cartoon at the top of it, and the heading "Death in the dim-out."

They started that little feature last January, and it is still going strong, almost a year now. The city editor of the New York Times told me recently about the very fine reaction they have from that little series, not only in New York but from other papers all other the country who show an interest, and it has led him to believe they are just going to continue it, at least until the lights are once again shining on Broadway.

The best approach, it seems to me, to this problem is through something direct in the home. Dr. Armstrong made a very interesting point there. We can't go into the homes and tell them, "You must do this and this and this and this."

This isn't the age of regimentation, at least in the homes, and I hope it never will be. We have used the inspection sheet plan in New York. About a year ago we used it in 700,000 homes. We have hopes of using it in a million homes in the coming winter months. The approach is being made, of course, through the school children, who carry the inspection blank home to the mother, asking the mother, "Will you help me check our house and see how safe it is?" The inspection list, made in the popular

quiz style, appeals to the children and very often to the mother, too.

This is the age of quizzes, you know, in newspapers, on the radio, and so forth. We got back 525,000 out of our 700,000 we sent out—525,000 signed certificates.

New York is a pretty big city, and 700,000 homes isn't all of New York, by a long ways, but I hope that during the next few months we will be able to carry that into at least 1,000,000 homes, and perhaps in another year, that is our far-sighted objective here, at least in another year, perhaps 2,000,000 homes.

I would regard that as one of the best ways of really doing something about this matter because where an inspection is really made, that home isn't bothered with accidents unless there is something very unusual. It usually means that you have eradicated the home hazards; that, plus the necessary educational work, means that you are not going to have any troubles about home accidents.

Newspapers are another best bet, as we might call it, in this business of promoting publicity. About a year ago we got out a little series called "The right-wrong series," primarily for the New York City foreign language press. We have more than fifty foreign language newspapers, to which no approach, or appeal, had ever been made before.

We were able to get the complete list of papers and editors, write to them personally and send them this little series, again coming back to the fact that the picture tells the story, a series of twelve right-wrong, showing the incorrect procedure and the safe procedure side by side. These proved very popular and were run in some twenty-eight foreign publications. They didn't appeal so much to the big metropolitan papers, and yet three of our metropolitan papers used one or more illustrations from that series. With those three papers alone we were able to reach a circulation of perhaps a million and a half readers.

The mere fact that three of the metropolitan papers would take this up, plus twenty-six out of fifty of the foreign publications, indicated that this series was quite worth while. Unfortunately, we are out of print on it now. I don't want to print any more of

them until we get some new ideas and perhaps some new figures to work on.

Feature articles are always good, of course. We have found there that ever so often, if we send a little personal note out to the seven or eight leading woman's page editors in New York City, the letter usually produces results in a more or less limited way, a personal letter to each of the woman's page editors. If she doesn't handle the matter herself, she will turn it over to someone on her staff.

We have been rather fortunate in keeping the home safety idea before the people in that way down there. We have thirty-five or forty suburban papers, and it is safe to say that four-fifths of the material that we send out on home safety or anything else, as long as it pertains to safety finds a spot, usually a generous spot, in a suburban press.

The circulation of the average suburban paper is perhaps limited, but when you add up thirty-five suburban papers you have quite a circulation and you reach a lot of people who may not read the city paper. So, we must not underestimate the value of the suburban group, we who are in the larger cities, because there is a real field, I think, for safety education, and I believe it appeals even more to the suburban editor because he is really closer to the homes of his area than the big city editor is.

Of course, we keep the radio going all the time. We get out a weekly service, with at least two short, snappy, concise articles written in the radio technique.

We have found the chart idea rather effective. By the way, this is good anywhere. You can use it if you will get your home accident statistics and your traffic accident statistics and your industrial accident statistics, occupational, and you put them in charts. You will find that your home accident chart is way, way up, towering above all the rest of them, like a city skyscraper set across from a five-story building. It makes a very dramatic chart. We have used that most effectively in a great many meetings, a great many places in New York City, and it never fails to attract attention. I am quite sure that the levels will be just about the same wherever you try it out. It is a pretty good idea.

I have another chart that is being pre-

pared this week. I wrote back to National for the national trends on home accident statistics. I wanted to see just how we were going in New York City. It was rather startling, because I believe the figure was 7 per cent. We found in New York State it was 16 per cent and in New York City 20 per cent. There is a very dramatic chart right there that will probably be featured in the New York Times and the Herald-Tribune next Sunday. I have already talked with them about it, because so few people realize how tremendously important this home accident problem is. If you can get it down in some sort of a dramatic chart, the papers will run it. If just those two papers run it, we will get this before millions of people in New York City.

Selfishly, we have another reason for wanting to do it next Sunday because on Monday we have our one-day Women's Home Safety Conference at the Hotel Pennsylvania.

The use of pamphlets is extremely important. In our city we have quite a problem because, when we try to give pamphlets to everyone in New York City, or if we tried that, we would go broke very quickly.

We do have a little, four-page affair called "Safe homes save manpower." That has been very popular down there. Of course, we have splendid cooperation from all of the various insurance groups. We can call on them for any help in the home safety pamphlet idea and in any printed material that we want. They are always very, very glad to help us out.

MRS. HERMAN ANDERSON (Hennepin County Safety Council, Minneapolis, Minn.): We have our Women's Division meeting once a month. Everyone in that club has taken a safety course that was given by the Red Cross. We are trying to reach the average housewife. We put a pamphlet in the school during Fire Prevention Week. They had a pamphlet going into the schools on fire prevention. We were allowed to put in a pamphlet on safety in connection with that, so it went into the school at the same time.

We are going to have a home safety engineering contest patterned after Indiana.

CHAIRMAN WILLIAMS: I don't think anyone can say what activity is most effective. We can't ever judge which specific thing is

entitled to the greatest credit. We know that the combination of all gives us an effective, all-around educational program.

Is there anyone in the audience who would like to speak on a specific type of publicity that has been found effective?

MR. C. S. BEDELL (Sporting Arms and Ammunition Manufacturers Institute, New York, N. Y.): Yesterday I spoke of some posters that had been used by the Sporting Arms and Ammunition Institute in approximately eight of the states in which we have a large shooting population.

We have had a series of six posters, each one of them aimed to combat some of the causes of fatalities that have been discovered through our research.

As a result of the use of 162,000 of those posters in these eight states, over a three-year period, we have noted in these states a decrease of 18 per cent in hunting fatalities. We don't mean to give credit to these posters for that decrease. But in each case the ones who have put on systematic accident prevention programs have been unanimous that this has been a very important part of the work.

I just advance that as showing the value of illustrations in combatting accidents, at least in the sporting arms industry.

CHAIRMAN WILLIAMS: Thank you very much. I think it is not only a good example of an effective illustration but it is a good example of the seasonal topics that have to be presented.

I think education has to be keyed to the seasonal or the personal activities, to make it effective, and it will have a cumulative benefit.

Is there anyone else who would like to speak specifically on this topic, before we move to the next one?

MR. C. C. FRASER (Dupont, Martinsville, Va.): I am on a committee in our plant that steers the safety program for the plant.

In connection with home injuries, we have always felt that we were groping. We have never felt that we had something that really clicked and actually showed results by reducing home injuries to the extent that people lost less time because somebody got hurt at home. In an industry, the wage-earner can be hurt and he will lose time, or

any one of the members of his family may get hurt and he will have to take time off for the hospital or time off for this, that or the other thing, or his car was needed because the neighbor's child got hurt.

We have never felt that we accomplished a great deal in the literature which is sent to us, which we distribute. We tried to cook up a few ideas of our own. But in everything we have done we have sort of felt as though we were beating around the point. In some way or another we wish somebody would help us.

I wonder if the various agencies, insurance companies, and so forth, are taking full advantage of the opportunity to use industry, as well as newspapers, schools and so forth. Are they taking all the advantage they should or could? Do they realize the willingness and the extreme desire on the part of industry to do everything they can to help out?

CHAIRMAN WILLIAMS: Thank you. I think that all of you should know, if you don't know it, that the Council has an off-the-job accident prevention program, and home safety is a part of that. That has been keyed for use through industrial organizations.

MR. FRASER: I can cover that in a specific example. We have a policy that, after an employee has been with us for ninety days, we send him a letter addressed to his home. We say, in effect, "You have been a good safe worker on the job. It is the home injuries that worry us. Please look around your home and see what you can do to improve its safety, for everyone's benefit."

This letter, on a duPont letterhead, might go to a shipworker who is working nights. His wife says, "Is John laid off?"

She wakes him. John wakes up, opens the letter, looks it over and says, "So what? Call me at six."

Maybe the letter will get seen and maybe it won't. We have sometimes thought that that letter didn't accomplish everything it should.

Regarding specific examples, photographs and so forth, obviously there are certain examples which you do not dare show. You can't show "This is the truck that killed a child" and what-not. Any degree of that

sort of smacks of a testimonial that Mrs. Jones had shooting pains up her back until she took Dr. X's pills. But sometimes people who almost had an injury, a lucky escape, will voluntarily tell in what manner they avoided that injury. But when someone has actually had an injury, he is not too interested in telling you about it.

CHAIRMAN WILLIAMS: Of course, the patent medicine business has been a very profitable one.

MRS. L. K. NICHOLSON (Salt Lake City, Utah): I would like to answer Mr. Fraser's question. Before coming to this conference, I called the Remington Arms Industrial plant in Utah. Of course, you know we have a lot of war industries out there. I asked what the parent-teacher's organization could do to help the plants, because we know that, when an accident happens to Johnny in the home, the delayed worker is probably on the way to an accident himself because of distraught feelings.

I called the safety engineer of that large plant out there and asked what an organization of our type could do. He said that the only thing he could suggest was that we have one of the men from that plant come to the parent-teacher organizations, because we are a cross-section contacting almost all parents, to tell them of the program of the plant and how we could cooperate and help in preventing accidents in a plant.

CHAIRMAN WILLIAMS: I think that is a very good comment. We are doing it through the plant into the home, but it might expedite the work of these women's organizations if they had a practical speaker from industry itself to ask for their help. We don't dare tell them how to do it, but we can tell them we have a problem and ask them to help us work it out.

MR. FRASER: I am sure industry would be more than willing to cooperate.

MRS. JAMES N. DOWNEY (Director, Women's Safety Division, Automobile Club of Michigan, Detroit, Mich.): Mr. Chairman and Members of the Home Safety Division of the National Safety Council: Speaking of publicity, I want to call attention to what we in Michigan consider a very serious home hazard. It has not received the publicity it should, and I am hoping it will receive more publicity from this meeting.

We are deeply indebted, indeed, to several of the large insurance companies for the very fine material they send out on home safety. This hazard I wish to talk about this morning is really the result of a war activity—our Victory gardens—in other words, a canning hazard.

In Michigan we have had some very serious accidents resulting from oven canning of Victory garden products.

Now, most of the women do not know much about chemistry. They don't realize that the steam must have a vent. One of the canning companies has sent out very fine directions on how to oven can, but another one has neglected to tell the proper way of oven canning. In other words, most of the housewives screw tops of the jars down tight. That, of course, results in an explosion.

I just want to cite one story to you that I know all about. A teacher, in fact a demonstrator from a public utility company in a small town near Detroit, came home to can her own tomatoes. She heard a terrific explosion after she had left her cans in the oven; came back. Her walls and her floor had tomato decorations and shattered glass imbedded all over the walls and ceiling and floor, which might have resulted in a very serious accident to her, had she remained in the room.

Another accident: a woman who had canned beans was in the kitchen when the oven door flew out and glass cut her arm to the extent of needing ten stitches in the arm.

I don't think we have been giving enough publicity to this hazard in our home, and we ought to have more instructions on it, more publicity.

We did get the editors of the women's pages of the two leading newspapers in Detroit to carry feature articles on the top page for two or three days concerning this hazard. I do hope we get more publicity that may be included in some of this home safety instruction that the companies are sending out.

I wonder if we could get the statistics compiled this year, perhaps by the National Safety Council, about how many accidents have occurred because of oven canning.

I would advise almost everybody, unless they are expert, to do open kettle canning.

CHAIRMAN WILLIAMS: Thank you. That was very valuable.

MISS GLADYS J. WARD (American Home Economics Association): May I say the Federal Government's Bureau of Animal Nutrition and Home Economics has put out special information with regard to the hazards of oven canning. That information was released this summer.

I think that women everywhere should realize that the Federal Government has taken the stand for two reasons: one is the great hazard and, secondly, for non-acid vegetables, such as corn and any vegetable that is non-acid, the destruction of spores is not obtained through oven canning.

Beans, by the way, represent one of those non-acid vegetables. So that it is a double hazard. At the University of Illinois, and other state universities, extensive bacteriological research has been done in the destruction of spores that resist temperatures such as you get in the oven. So it seems to me one large function of an organization such as this is that you can broadcast that type of information which was released this summer.

CHAIRMAN WILLIAMS: Wouldn't you like to recommend that each of these women's organizations ask to be put on the mailing list of the appropriate agency in Washington?

MISS WARD: Yes, I think that is an excellent idea. You should address it to the Bureau of Animal Nutrition and Home Economics, Department of Agriculture, Washington, D. C.

MR. RAY SEIDEL (Rochester Chamber of Commerce, Rochester, N. Y.): Miss Munson of the Gas and Electric Home Service Department called me and said they were having over 100 calls a day from people wanting to know why the jars were exploding, and so forth. They had been trying to tell them, but they thought if it came from a different source maybe it would help.

The Safety Council was able to get a pretty good idea in the paper that had a pretty good splurge about it. A lot of calls that they got following that were in regard to the article. In other words, it did definitely prove that accidents were cut down and people had become interested in how to prevent those things.

CHAIRMAN WILLIAMS: That is very interesting, to know that a specific topic did meet the eye of so many people at an appropriate time. I think if anyone else wants to discuss this topic, there will be opportunity as we come to some of the other subjects.

I would like to have Dr. Corbett take a few more minutes. He is the Executive Secretary of the Milwaukee Safety Commission. I would like to have him indicate, out of their experience, to which he referred briefly, what kind of home safety literature is needed and the potential sources of supply. I think Miss Ward's comments had some relation to that but there are other agencies, no doubt.

DR. CORBETT: Mr. Williams, Members of the Section: I don't know that there is much left for me to say, following Tom Burke. He is an old-time publicity man, and anything I know I learned from him about twenty-six or twenty-seven years ago. (I'm not telling how old you are, Tom.)

I also learned a good deal from Mrs. Downey of Detroit a few years back. I have had her in Milwaukee two or three times to teach us something about safety.

The example brought out by Mrs. Downey on this canning situation shows the need, I believe, for more literature on that phase of home safety as well as other phases.

In that connection, we had Bernard Lundy up in Milwaukee a couple of weeks ago as an expert on home safety, in consultation with various organizations there, in our home safety program. It so happened he was talking to one of the newspapermen. That night this man went home and told his wife about this canning situation. Just as he was talking about it, he was called to the telephone. About the time he picked up the receiver he heard an explosion. The jars were exploding in the oven and, I guess, blew the door off the oven, and so forth.

The following day, the wife of the director of our big radio station was doing some canning that night and they had an explosion. He suffered severely. That brought out the point from Lundy, "Let's make a survey and see what is occurring."

We called our emergency hospitals, and they had very meager records because most of the accidents of this type do not require hospitalization.

We contacted the utility companies and

found that we were having a great deal of this type of home accident, with the result that Lundy was gracious enough to write two or three very well-done articles which our papers used and our radios also used. They pounded away on it two or three days, and I think we practically licked this proposition as far as we possibly could with our meager efforts. But this is just an instance of the type of home fatality that does require more literature and that does require more instruction.

It is something, as Mrs. Downey says, that is facing us today due to the Victory garden situation.

I liked Tom Burke's right-and-wrong methods. We use that a great deal in all of our publicity activities in Milwaukee.

I believe very firmly in this: Instead of trying to plow 360 acres, let's plow one acre and plow it thoroughly. We have done that in all our traffic work. We need better literature and more literature on burns, and we need better means of getting it to the people.

We use, of course, the foreign language press, and we also use foreign language-radio broadcasts. We have a large Polish population. We have found that those things pay.

I don't think we are taking the most effective means of using our women's organizations in our home safety program. They are all asking for material. Practically every woman's organization, or man's either, as far as that is concerned, want to know what they may do.

Mr. Fraser talked about the letter from industry. Many of our large industries are sending letters periodically, through the United States mails, to their employees. Some of them with twenty-five and thirty thousand employees are doing it in our locality.

I was talking to the safety director of the Allis-Chalmers Corporation recently.

I said, "Why don't you inject into the letter some home safety literature or material, or some sort of an enclosure?"

He said, "Well, where can we get this material? We will only be too glad to do it."

With the result that we are furnishing it to them. So probably the next letter that goes out will reach his twenty or thirty

thousand employees, and it will have some specific home safety comments.

Another effective means we have used in reaching the home has been a letter from our mayor, just a little, one-page broadcast from the mayor of the city to each and every worker. It is handed to the man with his pay as he leaves the plant.

We made surveys in the vicinity of these plants to see how many of them were actually taking them home or crumpling them up and throwing them away. It was astonishing to find that we found very few around the plant. They actually took them home.

I think we distributed about 120,000 messages from the mayor, and it really meant something. It was the first time these people had ever received anything of that nature.

I feel we do need more literature and better literature, a more descriptive type of literature on such things as burns and suffocations and on poisonings.

Very few people know anything about lead poisoning such as Dr. Armstrong mentioned earlier, in toys and paint, and so forth. It is surprising how many of your intelligent people know very little, if anything, about the wax and polishes on their floors.

We find in our city, where we have accurate records and accurate statistics on home accidents for a period of twenty-five years, or twenty years at least, these home accidents are not in the poorly housed sections of the city. We find they are among the richest people. We find a surprisingly large number on the Gold Coast.

We are currently spotting our home fatalities over a period of ten or twelve years, and it is interesting to find they are on the Gold Coast one year, and then they go down to the poorer housed section, and then come back again. I don't know the reason for it. We are going to analyze that. I hope to be able to tell why we have more in the Gold Coast section one year and the poorly housed section the next.

We have used about every method that is known, of education, through milk bottles, gas bills and water bills. The water bills in our city are all delivered by a police officer. All of our city mail is delivered by police officers, so our police officers ring the doorbells periodically during the year, with some sort of a bill, a tax bill or water bill, or

whatever it is. On our water bills currently we have a home safety message. On our gas bills and on our other utility bills we have some safety messages throughout the year.

Our street cars and buses carry home safety messages throughout the year. Now, of course, we are getting more material. "You can Protect your Home" and the National Safety Council's "Safe at Home." I would like to be able to put this into every home.

But home safety, like every other business, needs money, and we lack that vitamin called C, namely cash. I hope we will be able to reach it in some manner. I hope, before a year, we can have this little booklet in every home in our city. We are going to send it, plus special literature, to every mother in the city through birth records, due to the fact we have so many suffocations. Our home accident surveys bring those things out.

I think I have taken enough time, but I want to stress this, that we have literature today, more than we had a few years ago. I can remember when we didn't have any. I think we have to make better use of it, and we have to develop it, but in the development I think we should stick to the right and wrong method. I don't like, "Don't do this and don't do that." Point out the correct and incorrect. We have followed that method in our traffic education in Milwaukee for a number of years, and I feel that it has paid. I think the record speaks for itself. We have never told our people "Don't do this and don't do that." We have tried to point out the correct and incorrect way of using the streets as automobile drivers.

CHAIRMAN WILLIAMS: Thank you very much, Dr. Corbett.

MRS. FLORENCE STONE (Indianapolis, Ind.): Would there be any chance of getting a copy of your accident survey, your records on home accidents?

DR. CORBETT: Yes ma'am, you may have copies of anything by addressing the Safety Commission in the City Hall, Milwaukee.

CHAIRMAN WILLIAMS: I couldn't help, as Dr. Corbett was speaking, wondering if maybe the number of accidents on the Gold Coast isn't going to be much greater now

because of the wages that people are earning there. They are moving from one income group to another. The people who used to be the cash customers are so hard pressed to pay their taxes, they are probably going to be in the other bracket.

Mr. Fleming, you had something in mind a little while ago. It probably fits in with this.

MR. FLEMING: I wanted to make a remark regarding the home canning situation. The oven method is not the only one that is subject to question. In addition to what has been suggested, I might say the National Board of Fire Underwriters has gone into that matter pretty deeply and, in connection with its bulletin service, has issued a bulletin which is available to any person who calls for it or writes for it, on home canning.

This bulletin service is a service particularly for fire chiefs of the country, which investigates, first of all, if a hazard of any kind comes up, industrial, home or otherwise. We investigate it thoroughly, then issue a bulletin on it immediately so that the fire chief and the newspapers will have the information first.

That home canning bulletin was issued in September.

MRS. L. K. NICHOLSON (Salt Lake City, Utah): I am the National Chairman of the Safety Committee of Parents and Teachers. It might be interesting for you to know that the National Congress made a survey of home accidents in this nation by picking out 100 families in every state to check-list their own home. We are now preparing a bulletin on home safety, stressing home safety with these check lists, with regular programs for parent-teacher meetings on home safety and also on study groups for parents.

That will be delivered to 28,000 local parent-teacher organizations in this nation.

MR. STONE: When?

MRS. NICHOLSON: We expect to have it ready, with the printing situation as it is, by January.

CHAIRMAN WILLIAMS: Wouldn't it be well for us all to consider the necessity of sending in to Mr. Keishaw, at the Council office, copies of anything of that kind that we find is worth developing, and especially if

we find it effective after use? I know that the Council, as a clearinghouse, then would bring that to the attention of the other organizations, not only simplifying the work we do individually but making our own efforts more effective.

They just gave me a paper of one of the nearby cities which has an article on the front page about gas fumes killing a mother and two children. I took a quick look at it because it brings out some of the things that we know are our problem. Here is a family who moved into a new home just a week ago, all happy about it. It was a modern home, tight windows, and so on.

The father leaves at six o'clock in the morning to go to work and gets back at seven o'clock at night. The mother was home, but she was down in the laundry doing some work and the gas burner exhausted all oxygen not only in the basement but in the house, apparently.

There is a second one here, of a baby falling from his high-chair Wednesday morning and being killed. That is not a great distance to fall. The soldier father is on his way home for the funeral.

That is just in one issue. I don't know whether we ought to assume that this literature isn't effective, because of the type of people that we are trying to reach. Certainly, we are not all morons. Unfortunately, these accidents are not repetitive enough in the individual home.

Who would like to speak again with respect to this topic of the literature and its availability?

MR. HOBAN: Being an association executive like Mr. Kershaw, I want to add, when you are sending in copies to Mr. Kershaw please tell him specifically on what basis they are available because you waste more letters writing back and forth. People write in asking for stuff that is for sale and quantities are not available. If you can tell him the basis on which you are distributing, I know it will help a great deal.

MR. B. R. RICKARDS: Speaking of morons, perhaps it might be advisable to call attention to the fact that you have morons in the home as well as in the factory and you have to reach them, and in some way get something to those people who haven't enough back of the forehead to have a good sized

headache. Just how are you going to do it? They are the people who are, shall I say, accident-unconscious. They keep on having accidents.

You will see instances in the paper of where So-and-so had an accident of a certain type and would say that they are very unfortunate people, that within the last six months they also got a broken leg, or what-not.

I will give you just one illustration which I think may bring out why they have accidents. I had a clipping the other day about a small child who had taken a drink of kerosene, a young toddler around the kitchen. The child was taken to the hospital and died because of drinking this fluid.

The mother was questioned, when there was a chance, and asked how it was that a child got hold of this kerosene.

She said, "He got hold of the can of kerosene back of the kitchen stove."

"Why was the can of kerosene back of the kitchen stove?"

"Because I had just used it to light a fire."

There is a real reason why that family had a series of accidents.

At the risk of reiteration, I want to again suggest the radio flash. You know, we have these people, when they get up in the morning, before they start breakfast, turn on the radio, and they turn it off after they get to bed at night. If you can get to the radio stations—and you always can, I want to reiterate they are very glad usually to give you a radio flash, which means forty to fifty words, or less, repeated during the day. Possibly these accident-unconscious people, if they hear it often enough, that accidents are caused by having kerosene cans on the floor, or the handles sticking out, or canning in the oven, and so forth and so on, it may eventually percolate through.

CHAIRMAN WILLIAMS: I would like to thank you, Mr. Rickards.

I would like to add one thing to Dr. Corbett's remarks about the community tying in more closely with some of the women's organizations. I would like to give you this thought, as a possibility at the community level. If you can work with local union officials—I think many of us would like to have attended the session this morning on

labor and safety but I don't mind missing it so much because I know, despite the assurances of policy by national or state executives of the union, the local makes its own decisions. If it is possible in a community, where you know these people intimately, to get the local unions to include in their program a reasonable amount of home safety, it certainly can do no harm.

I was glad to hear from Dr. Corbett the extent of the cooperation they are getting from the municipal authorities, which is extremely valuable and necessary.

I would like to move on, if we may, to the fourth topic: Home safety visits. Why, how and by whom? and to present to you Mr. Percy Bugbee, the Managing Director of the National Fire Protection Association, who I am sure can help us a great deal on that subject.

MR. PERCY BUGBEE: Mr. Williams, Ladies and Gentlemen: I think Mr. Kershaw asked me to talk about this a little because there has been developed in the fire field, particularly, a successful form of home visit, and perhaps that is not the case with other forms of accident prevention work in the home.

I know it is very difficult to devise any scheme to get people to visit homes and get results. This particular thing which I referred to very briefly yesterday in my remarks is a plan that is operating very widely now throughout the United States, through the municipal fire departments. There you have a body of men that can get around. I think, perhaps, the best way to explain this procedure is to mention just one illustration.

Providence, Rhode Island, has done this very successfully now for quite a long time. They had 77,000 homes to inspect for fire hazards.

The chief got his men together and explained what he wanted to do, and they volunteered to do the job on their off time, over a period of weeks.

The men went out in pairs and made the rounds of all those homes. They got very excellent newspaper publicity and support before the campaign was started. One very gratifying and rather interesting thing was this: that the people were told that their homes were going to get a brief inspection

for fire hazards. The municipal incinerator immediately began to get about ten times more rubbish and other material than they had ever had before. This was before the campaign started.

There were a lot of housewives, apparently, who didn't like the idea of the fireman coming in and finding a very dirty cellar or attic in their house.

One interesting thing was that, while this campaign was going on in September, they discovered and got out of the basements of homes something like 2,000 Christmas trees that were left there from the previous Christmas. I think they got something like 5,000 old mattresses. They got a great collection of material out of this campaign. The effect of it was that they cut their dwelling losses the first year more than 50 per cent, number of dwelling fires, and they have shown a very substantial reduction ever since.

This particular campaign was carried on without any extra cost to the taxpayers or to anybody, because the firemen are doing the job and are willing to take their time. It has a double effect, because the fire departments have found that it is one of the best good-will propositions they have had.

When they go to the city council to get money for new equipment, or get additional pay, they have a sympathetic public back of them because they have done this extra service. So, it has been a very satisfactory sort of thing.

We have been campaigning for the last fifteen or twenty years to get more and more departments to do that kind of work, and it is being done very widely now throughout the country and has a very material effect in reducing loss of life and fires in homes.

That, I think, is what Mr. Kershaw wanted to get across, that a plan for home visits in our field at least has been worked out and seems to be extremely effective.

That may encourage you to think of other ways and means of getting home visits, to reduce home accidents in other ways.

CHAIRMAN WILLIAMS: Thank you very much, Mr. Bugbee. I know in our community the fire chief is very anxious to do that but feels that there must be a public request before he can do it.

I would like to make sure that people here take advantage of your suggestion, to get

that public response through their own membership, if necessary, to get it started.

MR. BUGBEE: I meant to mention that. It is a good point. You can't legally go into anybody's home, in most cases. There are a few states where it can be done legally, but in most states it isn't practicable under the law. So, this home inspection plan is purely on a voluntary basis.

The fireman rings the bell and asks permission of the home owner to make the inspection. In this Providence case I was telling you about, they had something like one-quarter of one per cent refusals the first year. So that that really isn't an obstacle. You can get into the homes if you have the right build-up and the right publicity and a man in uniform who is properly trained to make the proper approach to do the job.

CHAIRMAN WILLIAMS: Thank you very much, Mr. Bugbee.

MR. FLEMING: I think Mr. Bugbee might have added to that explanation these two thoughts: that, first of all, it built up the community interest to such an extent, they were phoning to the fire department continuously, asking for that inspection. So that the people wanted it and they look for it every year.

As Mr. Bugbee has stated, it has been copied all over the country. The second thing, and the most important is this, those firemen worked in twos. They never sent one fireman alone, for the protection of the home owner, for the protection of anything that might be said of the fire department, and they explained the reasons for certain things. That is the big thing in the whole business.

MISS MARION NEPRUD (Federal Public Housing Authority, Chicago, Ill.): I would like to ask what use volunteers are put to in this. We don't have volunteer firemen in many communities. If they are going out in twos, why not a trained volunteer fireman with a volunteer? Couldn't you get more distribution that way?

MR. FLEMING: We have here a representative of the Boy Scouts. All over this country, in a great many towns and cities, Boy Scouts have taken on that job. They are first trained by the fire department. After a proper publicity campaign, they go in twos to the home, and they explain just as a fireman would.

CHIEF JOHNSTON (Milwaukee, Wis.): When we do this home inspection work, we have the proper newspaper publicity before we start. We also inform the public that we are keeping no records, although we do keep records of the regular inspection work that we are obliged to do by law. That is another way of putting the people at rest, so that they won't think that demands will be made that they correct something. We ask them to do that as a good-will thing and to eliminate the hazards for their own safety.

If they think you are keeping records on their homes, they are more backward in allowing you to enter to make such an inspection.

Unless they ask that we inspect the attics, we have kept the home inspections to the basements and haven't extended the inspection to the attic part of the house. Of course, many of the attics are a catch-all for old rubbish, fixtures, furniture, and things like that, that will never be used. They are hoarded up there in the belief that some day they might be of use.

When the air raid warden proposition came up a part of their job was to inspect the homes in their block. We assisted them in going out prior to their attempt at inspecting, and took over part of their work. So it helped along in that way.

CHAIRMAN WILLIAMS: Thank you very much. I think, without further discussion on this particular topic, we will take the next one because it is very closely related, or can be.

I am going to ask Mr. Christopher Brooks, Associate Editor of Good Housekeeping Institute, to talk about: "What effective methods are being used to assure the safe maintenance of homes, household furnishings and appliances?"

I would like him to add to that anything he may be able to, with respect to the procedures of instructing people in the use of these appliances.

MR. CHRISTOPHER BROOKS: I don't profess to know all the answers to this question because I am not a technical man. I am pinch-hitting here for our technical director.

It seems to me that the maintenance of household appliances is largely a professional job. It is not something that should be left to the housekeeper or to the consumer in general.

It is all right to instruct them in how to repair an appliance cord or to change a fuse or a washer in a faucet, but when it comes to kitchen ranges and refrigeration and vacuum cleaners and appliances of that type, they are getting into deep water. If they attempt to monkey around with them, your accident rate is going to go up rather than down.

I think the best thing safety people can do on this problem is to find sources of information and direct people toward them.

There are a number of publications of this kind which may be of interest to you. There is, for example, a collection of booklets we just received the day I left New York, published by a magazine called "The Electrical Dealer," a trade paper published right here in Chicago.

This series is not intended for the consumers but for service men, to instruct them in the various repairs that have to be made because of the wartime emergency, lack of parts and what-not. But it shows that the appliance industry itself is fully aware of the situation and is willing to supply information to anybody.

There are some consumer booklets put out by various appliance manufacturers; for example, a whole series of little things put out by General Electric, one called "Your Washer." This deals with the correct use of a washing machine and the care a woman can give to it that will tend to maintain it in good shape.

But each one of these emphasizes that, if you have any real trouble with your washer, to call in a service man because that is the safe thing to do.

There is a set of bulletins put out by the government on ironing equipment, how to make it last longer—your electric range, your gas or electric range, your washing machine, your refrigerator. Here again the emphasis is on proper use.

CHAIRMAN WILLIAMS: Which agency publishes those books? The government is so big now we have to know which bureau publishes those.

MR. BROOKS: This is put out by the OPA and the Bureau of Home Economics jointly. It is for sale by the Superintendent of Documents.

MR. BROOKS: Here is the source, the

Superintendent of Documents, \$1 per hundred copies.

Another example is "Wartime Suggestions", a booklet put out by Frigidaire, again emphasizing proper use and care, and suggesting the service men when real repairs are needed.

MR. FESTER: Try and get them!

MR. BROOKS: That is a problem, too, but there are still a few of them around.

Here is another list, some more by General Electric, Westinghouse. Then, the manufacturers are publicizing these booklets. Recent advertisements by such manufacturers suggest that consumers send for this booklet on the proper use and care of appliances.

There is one on "How to keep your refrigerator happy" by Frigidaire; one on "The care of heating equipment" by the Holland Furnace Company, which offers a booklet here on "How to get the most from your heating system." There's one by Hoover, which suggests that people register their cleaners for free inspection to prevent their going out of service; in other words, to have their cleaners regularly inspected free.

There is another one by a range manufacturer, which suggests various methods of care, which should prevent breakdowns. Here is one by Universal Appliance, and so on. There are any number of them. You can pick up any magazine and many newspapers today and find similar ads.

The magazines themselves have done a similar job in publicizing maintenance. I have shown you samples from our magazine, but you can take any woman's magazine and find similar articles.

One is "You can fix it yourself" which goes into minor repairs like fuses, electric cords, faucet washers, and so on. One is on refrigerators, "Don't let it break down", and it tells the things we know will keep the refrigerator in good use and safe use.

Talking about canning, there is one we had, one of several, which emphasized that oven canning was not a desirable method. This one goes back to 1941, before Pearl Harbor. It is called, "How are you going to get along during the war emergency if you can't buy new equipment?"

This one was inspired by Leon Henderson. I don't know whether you remember the talk

he gave before the National Manufacturers Association back in July, 1941, when he told them that the honeymoon was over. I happened to be there at the time, with another of our editors, and heard that talk. We realized that appliances were going to be in a tight spot, and we wrote that article then. It was a little ahead of time but, nevertheless, we thought it would do some good.

CHAIRMAN WILLIAMS: Thank you very much, Mr. Brooks.

I think this illustrates the fact that equipment manufacturers are more generally including instructions with the new equipment, but one of our worst problems, of course, is to get adequate instruction for the people who move in, and the instructions are not there because it is no longer new equipment. That is a serious problem.

MR. BROOKS: I would like to point this out, there is no new equipment. If you move into an apartment and you have a Frigidaire or electric range, you can call your local utility and get information from them, or directly from the manufacturer if you find his name plate.

CHAIRMAN WILLIAMS: It is up to the individual to make the effort.

MR. BROOKS: The local utilities are, in most cases, very helpful. They all have their home service departments, their home economics workers and their repair departments.

CHAIRMAN WILLIAMS: I think that is one reason the attic is such a valuable place right now. I understand you can get a better price for an old piano or sewing machine or any type of victrola, than the price of a new one a few years back. I guess the attics are pretty well filled. It would be a good time to empty them out while they can get good prices for them.

Is there anyone else who would like to add something specifically to the general topic of either the home safety visits or other effective methods in connection with the safe maintenance or instruction in the use of equipment?

MRS. ANDERSON: It occurred to me the Victory Aides are such a wonderful organization. I wish after the war or during the war we could make them Victory and Safety Aides. That is a wonderful method

of reaching the home. It seems to me this is a matter of good housekeeping and education. Our problem in Minneapolis is to get the education to the housewife. That is a tremendous force.

I wish the National Safety Council could advise us on how we could get the cooperation. We are trying locally to get something done in Minneapolis in connection with Civilian Defense. It has been tried, I think, in local spots. But if the National Safety Council were interested in it, it would be a tremendous help to the effect of having them cooperate with us.

We have had three unusual accidents in Minneapolis, two fatal, one not. Three children made a foxhole and crawled in. It was in a better part of Minneapolis. Two were suffocated and died and the third one was rescued.

Then we had an infant suffocate with a patented crib blanket. I understand that one hundred babies over the United States were smothered that same way. If that garment hadn't been put out, that death wouldn't have resulted. They had to learn through sad experience.

The other was a matter of architecture. There was a sharp cornice on which a woman hit her elbow, she lost the use of her arm.

CHAIRMAN WILLIAMS: I think it would be a good idea for Mr. Kershaw to make comments on what the National Safety Council can do with respect to these organizations, and what other sections have done that relate to the points brought up here this morning.

MR. KERSHAW: There are a lot of new and unusual angles to home safety that have not thus far been discussed.

Before going into those, however, I want to revert to a problem suggested earlier.

I am sure Mr. Bugbee and Mr. Fleming would agree that too many home fires which trap people in parts of the house from which there are no exits, have hidden causes.

One of such will be dehydrators. I was amazed, recently a meeting of home economics people discussing dehydration. They were demonstrating a wooden cabinet, built locally; with five or six wood framed glass trays in the upper part of the cabinet. The lower part of the cabinet was a unit which

alid in, consisting of an electric fan and a plywood baffleboard directly behind that with five 200-watt bulbs, and a cheap thermostat to keep the temperature at 150 degrees.

Some fruits and vegetables take eight or nine hours to dehydrate in certain parts of the country where the humidity is high. They said that very often they would load up the trays, start the fan, turn on the lights, of course, which turn on coincidentally with the fan, and then go to bed—almost a perfect setting for a serious fire.

Suppose, for instance, that inexpensive thermostat were to stick and burn out the motor. The motor is exposed to the heat inside the cabinet anyway. The motor itself would be sufficient to start a fire.

Then suppose the motor burned out and the electric lights kept on burning (they radiate tremendous heat). There would be no air circulating, and these lights are very close to the fiberboard sides of the cabinet.

I really think we need to do something about dehydrators, especially if they will be widely used. We have had descriptions from the Agricultural Department and other sources of dehydrators made of wood, that you slip into a gas oven, where they are a natural condition for fire, if the burner is not regulated properly; for wooden dehydrators to be used on the burners, and even for dehydrators that are for use on oil stoves—just the most marvelous opportunity to set serious fires.

That is one very important subject I think we should think about. There are many others. We have just been discussing the maintenance of household appliances, furnishings, and so forth.

I think there is a wonderful opportunity now to do a very fine thing for many boys coming back from the front, crippled and maimed but who can still work with their hands.

It was suggested recently that, in war plant communities, we establish areas; in each of which make one house a demonstration home, in charge of a competent home economics specialist.

A card record of all the people in that area would be kept. They would be invited to come down to receive demonstrations not just on safety, but on how to do household tasks right—meaning most easily, efficiently

and safely. Perhaps we are missing an awfully good bet in not seeing if we can't find ways of financing the construction of special community demonstration homes in large cities.

Public utility companies, real estate people, many interests in a community should want such a development. We might even construct the home of the future which so many organizations are working on at the present time. That in itself is a tremendously interesting subject.

We spoke of literature a little while ago. We don't get to see all the literature we should that is being published. We try to encourage people to send it to us. I am very thankful to Mr. Hoban for his kind remarks that he made a little while ago. I wish you would please keep us in mind and send us everything you see that you think we would be interested in.

After all, the National Safety Council is a clearinghouse of information. We are working with a limited budget, as all organizations generally do have to.

In trying to produce literature for general use we experimented with little inexpensive safety guides, four by six inches, the idea was for use at meetings, for study material, or for publications to lift. But I guess our market for material of that kind hasn't developed yet.

We are open to suggestions on just how the Council can best serve you folks with materials of various kinds. I hope you will come forward with such suggestions.

I am not going to take any more time after this, so I am going to take enough now to say that we in the Council, who really represent you folks in this sort of coordinated effort, are very grateful for the fine work of the organizations you represent and to you as individuals for the marvelous cooperation you have been giving us.

You know, about two years ago and prior to that, we had had Home Safety meetings at our National Safety Congresses. I remember the first one that I really attended in an official capacity was a larger meeting than this. After about the second speech there was a sudden rustle in the audience: the wives of the delegates who had come to attend the industrial meetings decided it was time to go home and get dressed for the banquet. When they left, there were three people in the audience who were really intensely inter-

ested in promoting home safety. I think it is just amazing the way you folks have come to the fore in this work during the past year, and we have evidence of it in the fine meeting here today.

CHAIRMAN WILLIAMS: Thank you, Mr. Kershaw.

I would like to call upon Mrs. Stone of the Indianapolis Chamber of Commerce to tell us the possibilities of interesting the "grand age" group in accident prevention.

MRS. STONE: I have just a very brief report here of the Oak Hill Grandmothers' Safety Club of Indianapolis. When we started our home safety drive in Indianapolis last spring, Mrs. Balz, our chairman, received a letter from Mrs. C. L. Lance, 1934 Holladay:

"Am sending notice published in our community paper two years ago. The News (that is our biggest paper in Indianapolis) refused it because there was not a safety drive on at the time. It sounds very peculiar to me. We keep our drive on all the time. We have twenty-eight grandchildren in our club, have been organized six years, and not an accident or anything serious in the home. I am sure our club will be glad to help in your good work."

Here is one of the bulletins they put out:

"The Oak Hill Grandmothers' Club is sponsoring a safety drive for all children and grandchildren. As we are in the midst of our spring cleaning, let us not forget to be very careful and cautious about anything that would be disastrous to any child. Let us remember never to put hot water upon the floor, keep all fire-arms and matches out of reach, also put acids and poisons where small children cannot reach them. If we will each do our bit, we can make Indianapolis a much better and safer place in which to live and rear our children. Help save our children, save our babies, says the Oak Hill Grandmothers' Club." Isn't that concrete?

This is enough to indicate to you what a fine independent effort is going on, that they haven't had an accident since they were organized.

CHAIRMAN WILLIAMS: I think that is very interesting. It was the first one I ever heard of. It might be an interesting way to develop their interest through groups of

that kind. Can we have more information about that ultimately?

MRS. STONE: I will get it.

MR. KERSHAW: I think we ought to.

CHAIRMAN WILLIAMS: I would like to call on Miss Neprud, representative of the Federal Public Housing Authority, to tell us about: What kind of effective safety program can be set up in housing developments and what can be done about war boom hovels?

MISS MARION NEPRUD: I hope Mr. Kershaw wasn't referring to some of the temporary housing, when that subject was decided upon. After meeting here yesterday and attending many of the other meetings during the National Safety Congress, I was impressed by the fact that perhaps we in Federal Public Housing really shouldn't worry at all the residents of our war housing projects in normal communities, or even in war boom communities because of all the agencies represented here that we can turn to, to get assistance. We are really carrying out the objective we have in mind when we try to house war workers in a normal fashion, so that they are accepted as normal members of the community in which they live. As was mentioned earlier, we can't regiment people into safety, and expect to find happy, contented families in public housing communities, whether they are low income projects or our war housing communities. We are aiming to work through all the agencies that are equipped to work in their communities where they know the particular needs of that war boom community.

However, we do have what we call a "must" program, not for the residents but for our staff all along the way from the Washington office to regional offices, down to our project level.

That "must" in our program, was explained to you partially yesterday, by Mr. Leach of our Federal Public Housing staff in Washington, our fire and safety engineer who, in turn, comes out here to see our fire and safety engineer in this region, which covers the six states in this area, Kenneth Hall, who, in turn, must make inspections on all the projects in the region and report the results to the regional office and to the Washington office.

Another "must" that we have written into our program is that, after that fire and safety engineer has made his inspection he meet not only with the housing manager, and the maintenance superintendent but with all the members of a project staff, management and maintenance. He must go over his report, tell them what he found, and then remain long enough, perhaps, to initiate a training program, first of all, for our staff, and see to it that not only will the staff assume their responsibilities and duties as far as fire safety and accident prevention is concerned, but that they find some way of passing on that information to the residents of our communities.

Mr. Kershaw kindly came over to our first training session for maintenance superintendents in this region.

We had only twelve or fifteen superintendents—a small number—but Mr. Kershaw took the time to come over and discuss how the National Safety Council could cooperate with us.

As Dr. Rice, the State Commissioner of Health in the State of Indiana, remarked when he attended a similar conference in Indianapolis, when I apologized for the smallness of the group, "But, Miss Neprud, don't you realize that through these few people that you have here we are reaching hundreds and thousands of citizens of these war boom communities and war residences?"

We have a great deal to do. Perhaps you have all attended the early morning classes which have been held over at the Sherman Hotel on what they call packaged training. We can talk a great deal about the weather but we don't do anything about it, Mark Twain said. We talk about safety, and we are all trying to do something definite and practical about it. But I think the heart of the whole situation, as far as we are concerned is how we are going to pass that information on to other people, how to prepare our own workers, how to present the material, how to know that they know, and will try it out, and how we are going to follow up.

Our fire and safety engineer and our management supervisors who go into the field are being instructed to follow up on this procedure so that we know exactly what is being done.

If things haven't been done as a result of

the first visit, as a result of the second visit, done because there is, as I say, a definite "must" in our program.

We work in cooperation with agencies, and we try to enlist the support of the residents themselves. Nine times out of ten, they rather than paid members of a staff take the initiative. That is the healthy situation.

We are very much concerned with off-the-job safety, and we wish to work with the industries in the communities where our war projects are located, so that we, perhaps, can work with those people in their leisure time activities.

We work closely with the National Association of Housing Officials, which is our professional organization and which can do a great deal to reach our staff members in what I call our voluntary approach. We may have our "musts" but they, again, can get their inspiration and stimulation from another organization.

CHAIRMAN WILLIAMS: That is a very fine report. I think it gives us a great deal of assurance of the future of new housing, that may set the precedent for community projects.

I noticed in the report of activities on Home and Farm Safety that the Council is working with the necessary group in connection with postwar planning project in Syracuse, New York. If these folks will take care of the new housing to the extent that they apparently intend to, and the rest of us can take care of the existing families, we ought to cover the ground pretty well.

I would like to make available a short period of general discussion, if there are any questions or further contributions, if Mr. Hoben or anyone else would like to say something before we close.

MR. HOBEN: First, I owe my apologies for not appearing yesterday as scheduled on the program.

I would like to expand just a little on what Miss Neprud has said. She very frankly admitted that in the housing owned and operated by the Federal Government—the bulk of the war housing—there is direct supervisory control down through the staff, but that they try to switch over to the voluntary approach through voluntary, democratic type, tenant organization, mothers' clubs, fathers' clubs, tenant councils.

I want to make a few remarks about the normal pattern. The normal pattern of public low-rent housing in this country is not, as you know, federal ownership and operation. It is local ownership and operation by local public agencies, where there is no network of supervision from the top down, as we have in the present war housing situation.

At this point association and, its management divisions, composed of the people actually on the ground, running these large developments, has a great opportunity to stimulate this voluntary cooperation.

It is for management and the employees of management always to stand aside, make available the resources and lend encouragement to the tenants but never to assume the direct leadership. Once you do, for instance, start tenants' clubs and you do all the work, and you allow an employee to be an officer, then, if anything goes wrong, "the management told us to do it." They come running to the management for financial assistance. It is not their own baby, and it dies. It acts as a boomerang, and the management is subject to criticism for any trouble they have had. That is a little background. That is the way we have to approach the management work.

There are two very important aspects to it. One is safety in the existing dwelling, and the other, which I think is very important, is the application of management experience to new design.

With the terrific postwar construction coming up, we will have the opportunity actually to control, through our public agencies, design and maintenance of housing units that will be built in the next fifteen or twenty years.

There the managers must be in position to incorporate into the new design the experience they are gaining in the thousands of units now occupied by the war workers or the low-income families.

We are trying to build up on the national level, as one professional organization with another, some plan of cooperation with the National Safety Council, so we can feed material directly to the managers on the job. They, in turn, can feed materials to the interested associations.

Two years ago we turned out what we call a tenant's homemaking library, distributed

to managers who are members of the association, to turn over to leaders in the tenants' group.

The whole approach was to the homemaker herself or himself, very carefully assembled lists on major subjects, child care; safety had six or seven items carefully selected, through the guidance of the National Safety Council and the National Board of Fire Underwriters. That was as far as management went.

That was probably put in the tenant council headquarters, and from there on they would pick it up. We followed it up last month with a revised list, not making the publications available but telling them what was available. The basis is to stand aside, having given the leadership, and try to get a sound, democratic, self-starting program in the large housing developments.

CHAIRMAN WILLIAMS: M. Hoben.

I wanted to mention another thing to which I referred earlier, and that is, if we can get reliable records. Mr. Dearborn has said that the National Safety Council would like to work out the necessary rules and regulations for a National Home Safety Contest which would probably stimulate a good deal of community interest, if there would be that possibility of national recognition.

I want to thank this audience sincerely for the splendid work they have done in connection with the session this morning. I can't remember a similar meeting where there has been such willing participation and such adequate participation from the group. It is a fine tribute to your personal interest and willingness to help.

I want particularly to thank the individual discussion leaders.

I want to remind you again that it is very desirable to keep Mr. Kershaw informed as to what you do that you find effective, so that it can be available more generally to other organizations.

Finally, no matter what you do, which may seem unsuccessful, it is worth doing. We can't put our fingers on any one single activity or organization that is going to stop home accidents. It is only the accumulated benefits of all that will give us results, and our individual activities must be sustained. We are dealing with human behavior. It takes a long time to register.

I would like to conclude by a favorite illustration of mine, of that problem. I come into the Grand Central Station in New York every day, and the level of the car from which you get off is the level of the station platform. There is just a little gap of about eight inches to allow for the roll of the car.

The brakeman and conductor stand on the platform regularly saying "Watch your step."

So, for the fun of it, I stopped and said to one of the brakemen, "How long has the railroad been doing this business of reminding everyone to watch their step?"

He said, "I have been with them twenty-two years, and I think they were doing it before then."

I said, "It seems like a lot of ridiculous nonsense to me. I don't know why you keep it up because you have been doing it every day. There is the same gang on this train

every morning. They have all heard you. Why do you keep it up?"

He said, "Mister, you got to, because nobody pays any attention to you. Take this morning—and it was stormy—I went all through the train, reminding everyone not to forget their rubbers and umbrellas. I bet I can pick up four pairs of rubbers and two umbrellas. Nobody pays any attention to you. They don't want to be reminded. Yet if you stand on the platform and watch the people getting off the car, you can't help but notice, because they have heard it so long and so consistently, it is second nature for them to glance down as they step off. I haven't heard of anyone stepping in the little gap."

They may not realize it or be conscious of it, but the mental guard which we are all trying to create through education is functioning.

That is all we can hope to accomplish ultimately. Thank you all very much.

Safety Exposition Exhibitors

EXHIBITION HALL—SHERMAN HOTEL

Alphabetical List of Exhibitors of Industrial Safety Equipment

American Abrasive Metals Co., Irvington, N. J.
Safety Flooring, Treads, Abrasive Paints.
American-LaPrance-Foamite Corp., Elmira, N. Y.
Fire Protection Equipment.
American Optical Co., Southbridge, Mass.
Industrial Safety Goggles, Welding Helmets, Respirators, Safety Clothing.
Ampco Metal, Inc., Milwaukee, Wis.
Beryllium Non-Sparking Safety Tools.
Barrett-Crowson Co., Chicago, Ill.
Mechanical Handling Equipment.
Bauch & Lomb Optical Co., Rochester, N. Y.
Safety Goggles and Safety Goggle Lenses.
Benjamin Electric Manufacturing Co., Des Plaines, Ill.
Industrial Lighting Equipment, Safety Guards for Punch Presses.
Bradley Washmountain Co., Milwaukee, Wis.
Washroom Equipment.
R. H. Burke Co., Chicago, Ill.
Safety Belts and Allied Equipment for Construction and Maintenance Work.
E. D. Ballard Co., San Francisco, Calif.
Personal Protective Equipment.
Burroughs Wellcome & Co. (U. S. A.), Inc., New York City, N. Y.
First Aid Equipment.
Carbimulphol Co., Dallas, Texas
Antiseptics and Burn Treatments.
Cardox Corp., Chicago, Ill.
Fire Extinguishing Systems.
Chicago Eye Shield Co., Chicago, Ill.
Head and Eye Protective Equipment.
H. Childs & Co., Inc., Pittsburgh, Pa.
Industrial Safety Shoes.
Columbus McKinnon Chain Corp., Tonawanda, N. Y.
Steel Sling Chains and Safety Hoists.
C-O-Two Fire Equipment Co., Newark, N. J.
Carbon Dioxide Portable Fire Extinguishers and Systems.
Davis Emergency Equipment Co., Inc., Newark, N. J.
Industrial Safety Equipment.
Dockson Corp., Detroit, Mich.
Head and Eye Protective Equipment.

- C. B. Dolge Co., Westport, Conn.
Fungicides, Disinfectants, Hand Cleanser.
- Dugas Engineering Corp., Marinette, Wis.
Fire Extinguishing Equipment.
- Duo-Safety Ladder Corp., Oshkosh, Wis.
Fire and Safety Ladders, Ladder Shoes.
- E. I. DuPont de Nemours & Co., Inc., Wilmington, Del.
Hand Protective Cream, Neoprene Products, Rayon Yarn.
- Elliot Service Co., New York City, N. Y.
Production Posters, Foremanship Development Material.
- Finnell System, Inc., Elkhart, Indiana
Electric Floor Maintenance Systems and Treatments.
- The General Detroit Corp., Detroit, Mich.
Fire Extinguishers and Allied Products.
- Hild Floor Machine Co., Chicago, Ill.
Floor Cleaning and Maintenance Equipment.
- Holcomb Safety Garment Co., Chicago, Ill.
Industrial Safety Clothing.
- Hynson, Westcott & Dunning, Inc., Baltimore, Md.
Mercurochrome, First Aid Antiseptics.
- Industrial Gloves Co., Danville, Ill.
Industrial Safety Clothing.
- Insto-Gas Corp., Detroit, Mich.
Torches and Furnaces Using Bottled Propane Gas.
- International Shoe Co., St. Louis, Mo.
Industrial Safety Shoes.
- C. Walker Jones Co., East Germantown, Philadelphia, Pa.
Industrial Safety Clothing, Fire Blankets.
- Junkin Safety Appliance Co., Louisville, Ky.
Safety Devices for Punch Presses.
- Justits Manufacturing Co., Chicago, Ill.
Safety Cans, Electric Safety Lanterns.
- Karel First Aid Supply Co., Chicago, Ill.
Industrial First Aid Supplies, Hospital Equipment.
- Keystone View Co., Meadville, Pa.
Industrial Visual Testing Equipment.
- Walter Kidde & Co., New York City, N. Y.
Carbon Dioxide Fire Extinguishing Equipment.
- Kimball Safety Products Co., Cleveland, Ohio
Industrial Safety Clothing and Goggles.
- Walter G. Legge Co., New York City, N. Y.
Non-Slip Floor Polishes and Treatments.
- Lehigh Safety Shoe Co., Inc., Allentown, Pa.
Industrial Safety Footwear.

- Lightfoot Scholtz Co., New York City, N. Y.
Powdered Hand Soap for Industrial Washrooms.
- Loren Manufacturing Co., Indianapolis, Ind.
Compressed Air Spray and Blow Guns.
- Marks & Fuller, Inc., Rochester, N. Y.
Identification Cameras and Equipment.
- Thom McAn Safety Shoe Co., New York City, N. Y.
Industrial Safety Shoes.
- B. F. McDonald Co., Los Angeles, Calif.
Industrial Safety Equipment.
- Medical Supply Co., Chicago, Ill.
First Aid Kits and Refills.
- Metropolitan Life Insurance Co., New York City, N. Y.
Life, Health, Accident, Annuities and Group Insurance.
- Milburn Co., Detroit, Mich.
Products for Industrial Skin Protection.
- Mine Safety Appliances Co., Pittsburgh, Pa.
Industrial Safety Equipment.
- National Safety Council, Inc., Chicago, Ill.
Services and Material for Safety Education.
- Oxox Co., Inc., San Francisco, Calif.
Athlete's Foot Preventive.
- G. H. Packwood Manufacturing Co., St. Louis, Mo.
Skin Cleansers for Industrial Use.
- Patent Scaffolding Co., Chicago, Ill.
Safety Ladders, Scaffolding and Work Stands.
- Phister Manufacturing Co., Cincinnati, Ohio.
Maintained Air Pressure Carbon Tetrachloride Fire Extinguishers.
- Protecto-Seal Co., Chicago, Ill.
Safety Devices for Hazardous Liquids.
- Pulmonan Safety Equipment Corp., Brooklyn, N. Y.
Industrial Safety Equipment.
- Pyrene Manufacturing Co., Newark, N. J.
Portable Fire Extinguishers and Extinguishing Systems.
- Ross Manufacturing Co., Denver, Colo.
Safety Belts and Harnesses, Ladder Shoes.
- Safety Clothing & Equipment Co., Cleveland, Ohio.
Industrial Safety Equipment.
- Safety Engineering, New York City, N. Y.
Publishers Safety Engineering Magazine.
- Safety First Shoe Co., Holliston, Mass.
Industrial Safety Shoes.
- W. H. Salisbury & Co., Chicago, Ill.
Linemen's Rubber Protective Equipment.
- A. Schrader's Son, Brooklyn, N. Y.
Pneumatic Safety Control Devices.

Sellstrom Manufacturing Co., Chicago, Ill.
Face and Eye Protective Equipment.
A. Smith & Son, Inc., Philadelphia, Pa.
Hospital and Ambulance Stretchers.
Spencer Turbine Co., Hartford, Conn.
Vacuum Cleaning and Dust Collecting Equipment.
Standard Safety Equipment Co., Chicago, Ill.
Personal Protective Equipment.
Steel Scaffolding Co., Evansville, Ind.
Steel Scaffolding.
Stonehouse Signs, Inc., Denver, Colo.
Accident Prevention Signs.
Strand Manufacturing Co., Chicago, Ill.
Safety Guards for Punch Presses.
The Strauss Co., Pittsburgh, Pa.
Safety Belts and Hats.
Sury Manufacturing Co., Chicago, Ill.
Safety Equipment.
Trimont Manufacturing Co., Boston, Mass.
Forged Steel Safety Tools.
United States Army, Washington, D. C.
Wahlert Products Corp., Brooklyn, N. Y.
Industrial Safety and Fire Equipment.
Waverly Petroleum Products Co., Philadelphia, Pa.
Oil and Grease Absorbents.
West Disinfecting Co., Long Island City, N. Y.
Skin Protective and Plant Sanitation Products.
F. H. Wheeler Manufacturing Co., Chicago, Ill.
Industrial Safety Clothing.
Willson Products, Inc., Reading, Pa.
Personal Protective Equipment.

Index

A

Accident Statistics: Accident on Safety in War-Time
Transit Training (Mach), 117-122.
Air Raids, See National Defense.
American Association of Teachers Colleges:
Teacher Education for Safety. Panel Discus-
sion, 139-140.
American Bar Association: The Traffic Court Pro-
gram of the Junior Bar Conference (Cal-
kous), 21-24.
American Gas Association: Report of Safety Ac-
tivities, 215-217.
American Home Economics Association: Report of
Safety Activities, 217, 222-223.
American National Red Cross: Report of Safety
Activities, 197, 218-219.
American Public Health Association: Report of
Safety Activities, 219-220.
American Women's Volunteer Services: Report of
Safety Activities, 223.

B

Bates, See Child Safety; Infant Safety.
Bond, J. C.: Safety Aspects of the Kansas City
Workshop in Elementary and Secondary Edu-
cation, 140-144.
Booth, H. D.: Summary of Activities of Street
and Highway Traffic Section, 68-71.
Bow, W. E.: Safety Education Survey: Detroit
Public Schools, 156-162.
Boy Scouts of America: Report of Safety Activi-
ties, 220-221.
Brody, J. B.: Practical Air Raid Precautions for
the Schools, 168-174.
Bucka, See Drivers and Driving; Transit Industry.

C

Calkous, J. D.: The Traffic Court Program of the
American Bar Association, Junior Bar Con-
ference, 21-24.
Camp Fire Girls: Report of Safety Activities,
221-222.
Child Education: Pre-Induction Driver Education
(Kramer), 183-185.
Safety Aspects of the Kansas City Workshop in
Elementary and Secondary Education (Bond),
140-144.
Safety Education Survey: Detroit Public
Schools, 156-162.
Teacher Education for Safety. Panel Discus-
sion, 139-140, 145-154.
See Also Child Safety.
Child Education Section: Minutes 137-145.
Officers, 137.
Child Safety: Child Labor on the Farm. Discus-
sion, 206.
The Community as an Energizing Group (Wil-
liams), 163-165.
"Latch-Key" Children (Muller), 165-168.
Practical Air Raid Precautions for the Schools
(Brody), 168-174.
Safety Education and the Victory Corps (Kent),
180-182.
The Secondary School Adjunct to the War-
Physical Fitness (Fritzsche), 176-179.
See Also Child Education; Infant Safety.

Child Welfare: "Latch-Key" Children (Muller),
165-168.
City and State Police Group Session, 7-10, 16-21,
71-72.
Commercial Drivers, See Drivers and Driving.
Commercial Vehicle Section: Joint Session with
Street and Highway Traffic and Transit Sec-
tions and Institute of Traffic Engineers, 13-16.
Minutes, 73-107.
Officers, 73-74.
Community Safety, See Public Safety.
Community Safety Councils: The Community as
an Energizing Group (Williams), 163-165.
Conservation of Materials: How to Lessen Tire
Wear on Commercial Vehicles. Discussion,
86-87.
Making Tires Last Longer (Kearney), 100-103.
Prevent Wear and Tear and Reduce Critical
Parts Worries (Cumming), 104-107.
Contexts: A-E Clubs Farm Safety Contest—1942,
191-192, 201, 210-211.
Indiana Farm "Safety S Award," 202, 204.
Courts, See Enforcement.
Cumming, W. J.: Prevent Wear and Tear and
Reduce Critical Parts Worries, 104-107.

D

Dearborn, N. H.: The Challenge of Traffic Acci-
dents in Wartime, 3-4.
Derr, P. J.: Cooperation of Police With Plant
Protection Organizations, 16-18.
Drivers and Driving: Driver Training Specialist
Plan (Gayley), 79-81, 84-87.
The Mental Attitude of Automobile Drivers
Toward Enforcement (Menninger), 7-10.
Pre-Induction Driver Education (Kramer), 183-
185.
Prevent Wear and Tear and Reduce Critical
Parts Worries (Cumming), 104-107.
A Preview of Post-War Traffic Problems (Sah-
bert), 31-33.
Responsibility for Accidents. Panel Discussion,
87-96.
Saving Time and Personnel Through Better
Training and Placement Methods (Hinsinger),
96-100.
Wartime Driver Training Techniques (Frigon),
75-78, 84-87.
Why Should the Drivers Be Taught? (Neyhart),
32-37.
Women in Transportation (Sells), 13-16.
See Also Enforcement; Traffic.

E

Economus, J. P.: Some Important Recommenda-
tions of the "George Warren" Report, 24-30.
Electric Railways, See Transit Industry.
Employers, See Drivers and Driving; Off-the-Job
Safety; Training.
Enforcement: The Court's Responsibility for Safety
in the Community. Panel Discussion, 49-50.
The Mental Attitude of Automobile Drivers
Toward Enforcement (Menninger), 7-10.

Recommendations of the "George Warren" Report (Calhoun), 22-23.
 Post-War Traffic Enforcement Planning (Kuna), 71-72.
 Problems in Achieving Uniform Interpretation of Uniform Traffic Laws. Panel Discussion, 51-52.
 Some Important Recommendations of the "George Warren" Report (Economics), 24-30.
 The Traffic Court Program of the American Bar Association. Junior Bar Conference (Calhoun), 21-24.
 Wartime Problems of the Traffic Court (Frost), 10-12.
 See Also Police.
 Engineering: Planning for Post-War Traffic Safety. Panel Discussion, 38-40.

P

Farm Equipment Institute: Report of Activities of Safety Committee, 190-191.
 Farm Safety: Child Labor on the Farm. Discussion, 206.
 Farm Safety Activities of Organizations, Co-operating with the Farm Safety Division, 188-203.
 How to Integrate Farm Safety Information Into Non-Safety Programs and Publications. Discussion, 208-210.
 How to Reach Farm Families Most Effectively. Discussion, 203-205.
 Job Instructor Training. Discussion, 205-208, 211-212.
 Recruited Help and Their Training. Discussion, 206-208, 211-212.
 Visual Aids for Illustrating Farm Training Techniques. Discussion, 212.
 Farm Safety Section: Minutes, 187-212.
 Officers, 187.
 Reports of Activities of Cooperating Organizations, 188-203.
 Federal Public Housing Agency: Report of Safety Activities, 223-224.
 Flanagan, E. J.: The Pedestrian Accident Problem and Its Solution, 5-7.
 4-H Clubs: 1943 Farm Safety Contest Report, 191-192, 201, 210-211.
 Report of Safety Activities of 4-H Club of Dodge City, Kansas, 192-193.
 Frigon, W. J.: Wartime Driver Training Techniques, 75-78, 84-87.
 Frost, Judge H. W.: Wartime Problems of the Traffic Court, 10-12.
 Future Farmers of America: Report of Safety Activities, 197-198.

G

Gaylor, R. I.: Driver Training Specialist Plan, 79-81, 84-87.
 General Federation of Women's Clubs: Report of Safety Activities, 225-226.
 George Warren Report. See Enforcement.
 Gibb, J. A.: Effect of the War on the Transit Industry, 116-116.
 Girl Scouts of America: Report of Safety Activities, 226-227.
 Good Housekeeping Institute: Report of Safety Activities, 227-228.

H

Hack, Estel: Building Support for the War Traffic Program, 18-19.
 Hammond, H. F.: Fact Finding Studies for Improving War Transportation, 57-60.
 Home Safety: Home Cleaning Hazards. Discussion, 246-247.
 Home Safety Visits: Discussion, 251-252.
 Methods for the Safe Maintenance of Homes, Household Furnishings and Appliances. Discussion, 252-255.
 Reports of Activities of Organizations Cooperating with the Home Safety Division, 214-238.
 What Kind of Effective Safety Program Can Be Set Up in Housing Developments? Discussion, 242-247.
 What Kind of Home Safety Literature Is Needed? Discussion, 247-251.
 What Makes Effective Home Safety Publicity? Discussion, 242-247.
 Home Safety Section: Minutes, 213-259.
 Officers, 213.
 Reports of Activities of Cooperating Organizations, 214-238.

I

Infant Safety: Home Accidents to Babies. Discussion, 240-242.
 Institute of Traffic Engineers: Joint Session With Street and Highway Traffic, Commercial Vehicle and Transit Sections, 13-16.

K

Keeney, W. G.: Making Tires Last Longer, 100-101.
 Kent, Maj. H. W.: Safety Education and the Victory Corps, 180-183.
 Kremer, M. D.: Pre-Induction Driver Education, 185-185.
 Kuna, F. M.: Post-War Traffic Enforcement Planning, 71-72.

L

"Latch-Key" Children. See Child Welfare.

M

Mack, W. J.: Accent on Safety in War-Time Transit Training, 117-122.
 Magazine Activities. See Publicity.
 Maintenance. See Motor Vehicles.
 Marsh, S. W.: Planning for Post-War Traffic Safety, 34-37.
 Messer, R. P.: Demonstration of Illustrated Safety Lectures to Student Trainmen, 123-134.
 Menninger, Dr. Kert: The Mental Attitude of Automobile Drivers Toward Enforcement, 7-10.
 Michle, D. G.: Providing Off-Street Parking and Terminal Facilities, 60-64.
 Mitchell, R. A.: Re-Routing and Re-Scheduling, 64-67.

P

Motor Vehicles: How to Lessen Tire Wear on Commercial Vehicles. Discussion, 86-87.
 Making Tires Last Longer (Keeney), 100-101.
 Planning for Post-War Traffic Safety. Panel Discussion, 40-42.
 Prevent War and Tear and Reduce Critical Parts Worries (Cumming), 104-107.
 Muller, Beth: "Latch Key" Children, 165-168.

N

National Board of Fire Underwriters: Report of Safety Activities, 194-199, 228.
 National Congress of Parents and Teachers: Report of Safety Activities, 230.
 National Council of Women of the U. S. Inc.: Report of Safety Activities, 230-232.
 National Defense: Accent on Safety in War-Time Transit Training (Mack), 117-122.
 Applying ODT Policies on War Traffic Control (Cybers), 53-54.
 Building Support for the War Traffic Program (Hack), 18-19.
 The Challenge of Traffic Accidents in Wartime (Dearborn), 14.
 Cooperation of Police With Plant Protection Organizations (Dorr), 16-18.
 Effect of the War on the Transit Industry (Gibb), 116-116.
 The Effect of the War on the Transit Industry (Nolan), 116-114.
 Fact Finding Studies for Improving War Transportation (Hammond), 57-60.
 Military Violators of Traffic Regulations (Orsham), 20-21.
 Practical Air Raid Precautions for the Schools (Brady), 168-174.
 Pre-Induction Driver Education (Kremer), 183-185.
 Re-Routing and Re-Scheduling (Mitchell), 64-67.
 Safety Education and the Victory Corps (Kent), 180-182.
 Safety Education Tactics in Wartime. Discussion, 12.
 The Secondary School Adjusts to the War—Physical Fitness (Pristaf), 176-179.
 Wartime Problems of the Traffic Court (Frost), 10-12.
 National Federation of Business and Professional Women's Clubs: Report of Safety Activities, 223.
 National Fire Protection Association: Report of Safety Activities, 228-229.
 National Fire Wives Council: Report of Agricultural Committee Activities, 193-194.
 National Organization for Public Health Nursing: Report of Safety Activities, 232-233.
 Newspapers. See Publicity.
 Neyhart, A. E.: Why Should the Driver Be Taught? 83-87.
 Nolan, F. A.: The Effect of the War on the Transit Industry, 110-114.

O

Orsham, Maj. M. F.: Military Violators of Traffic Regulations, 20-21.
 Off-the-Job Safety: Home Safety Publicity to Combat Off-the-Job Accidents. Discussion, 245-246.
 Off-the-Job Accident Program of the N.S.C., 236-237.

S

Parking: Parking Lot Studies (Hammond), 58-59.
 Providing Off-Street Parking and Terminal Facilities (Michle), 60-64.
 Pedestrians: The Pedestrian Accident Problem and Its Solution (Flanagan), 5-7.
 A Preview of Post-War Traffic Problems (Salisbury), 31-33.
 Personal Factors: The Mental Attitude of Automobile Drivers Toward Enforcement (Menninger), 7-10.
 Physical Education: The Secondary School Adjusts to the War—Physical Fitness (Pristaf), 176-179.
 Plant Protection: Cooperation of Police With Plant Protection Organizations (Dorr), 16-18.
 Police: Cooperation of Police With Plant Protection Organizations (Dorr), 16-18.
 The Mental Attitude of Automobile Drivers Toward Enforcement (Menninger), 7-10.
 Planning for Post-War Traffic Safety. Panel Discussion, 42-44.
 See Also Enforcement.
 Post-War Planning: The Challenge of Traffic Accidents in Wartime (Dearborn), 14.
 Planning for Post-War Traffic Safety (Morah), 34-37.
 Planning for Post-War Traffic Safety. Panel Discussion, 38-40.
 Post-War Traffic Enforcement Planning (Kuna), 71-72.
 A Preview of Post-War Traffic Problems (Salisbury), 31-33.
 Teacher Education for Safety. Panel Discussion, 145-156.
 Pristaf, A. H.: The Secondary School Adjusts to the War—Physical Fitness, 176-179.
 Psychology. See Personal Factors.
 Public Safety: The Community as an Energizing Group (Williams), 163-165.
 The Court's Responsibility for Safety in the Community. Panel Discussion, 49-50.
 Public Safety Education. Panel Discussion, 47-48.
 Safety Education Tactics in Wartime. Discussion, 12.
 See Also Pedestrians: Traffic.
 Public Safety Education. Group Session, 12, 31-33, 68.
 Publicity: How to Integrate Farm Safety Information Into Non-Safety Programs and Publications. Discussion, 208-210.
 How to Reach Farm Families Most Effectively. Discussion, 204-205.
 Publicity Regarding Maintenance of Homes and Household Appliances. Discussion, 252-255.
 Safety Publicity of the Woman's Home Companion, 233.
 What Kind of Home Safety Literature Is Needed? Discussion, 247-251.
 What Makes Effective Home Safety Publicity? Discussion, 242-247.
 Responsibility: Responsibility for Accidents. Panel Discussion, 67-68.
 Rinsinger, J. L.: Saving Time and Personnel Through Better Training and Placement Methods, 96-100.
 Salisbury, R. C.: A Preview of Post-War Traffic Problems, 31-33.

School Safety. See Child Education; Child Safety.
 Seburn, T. J. Applying ODT Policies on War Traffic Control. 53-54.
 Sells, Dorothy. Women in Transportation, 13-16.
 Society of Agricultural Engineers: Report of Safety Activities, 189-190.
 Sporting Arms and Ammunition Manufacturing Institute: Report of Safety Activities, 233-236.
 Street and Highway Traffic Section: Joint Session With Commercial Vehicle and Transit Sections and Institute of Traffic Engineers, 13-16.
 Minutes, 1-72.
 Officers, 1-2.
 Summary of Activities (Booth), 66-71.
 Street Cars. See Transit Industry.

T

Tests. See Drivers and Driving; Training.
 Tires. See Motor Vehicles.
 Traffic: Applying ODT Policies on War Traffic Control (Seburn), 53-54.
 Building Support for the War Traffic Program (Hock), 18-19.
 The Challenge of Traffic Accidents in Wartime (Dearborn), 3-4.
 Fact Finding Studies for Improving War Transportation (Hammond), 37-40.
 Military Violators of Traffic Regulation (Orshaker), 20-21.
 Need for Uniform Traffic Legislation. Panel Discussion, 45-47.
 Planning for Post-War Traffic Safety (Morsh), 34-37.
 Planning for Post-War Traffic Safety. Panel Discussion, 38-49.
 A Preview of Post-War Traffic Problems (Salisbury), 31-33.
 Problems in Achieving Uniform Interpretation of Uniform Traffic Laws. Panel Discussion, 51-52.
 Providing Off-Street Parking and Terminal Facilities (Hickie), 60-64.
 Wartime Problems of the Traffic Court (Frost), 10-12.
 See Also Drivers and Driving; Enforcement; Parking; Pedestrians.
 Traffic Court Judges and Prosecutors Group Session, 10-12, 21-30, 49-52.
 Traffic Education Association: Formation, 68.
 Traffic Engineers. See Engineering.
 Traffic Engineers and War Transportation Administrators Session, 53-67.
 Training: Accent on Safety in War-Time Transit Training (Mack), 117-122.
 Demonstration of Illustrated Safety Lectures to Student Trainmen (Manger), 123-126.
 Driver Education and Control (Salisbury), 32-33.
 Driver Training Specialist Plan (Gayley), 79-81, 84-87.
 Job Instructor Training: Discussion, 205-208, 211-212.

Pre-Induction Driver Education (Kramer), 183-185.
 Saving Time and Personnel Through Better Training and Placement Methods (Risinger), 96-100.
 Wartime Driver Training Techniques (Frigon), 75-78, 84-87.
 Why Should the Driver Be Taught? (Neyhart), 82-87.
 See Also Child Education; Physical Education.
 Transit Industry: Accent on Safety in War-Time Transit Training (Mack), 117-122.
 Demonstration of Illustrated Safety Lectures to Student Trainmen (Manger), 123-126.
 Effect of the War on the Transit Industry (Gibb), 114-116.
 The Effect of the War on the Transit Industry (Nolan), 110-114.
 Re-Routing and Re-Scheduling (Mitchell), 64-67.
 Women in Transportation (Sells), 13-16.
 Transit Section: Joint Session With Street and Highway Traffic and Commercial Vehicle Sections and Institute of Traffic Engineers, 13-16.
 Minutes, 109-156.
 Officers, 109-118.

U

Underwriters' Laboratories: Report of Safety Activities, 229-230.
 United States Department of Agriculture: Report of Safety Activities, 194-196.
 United States Department of Labor, Children's Bureau: Report of Safety Activities, 196-197.
 United States Department of Labor, Women's Bureau: Report of Safety Activities, 199-200.
 United States Military Services. See National Defense.

V

Victory Corps Program. See National Defense.
 Visual Education: Demonstration of Illustrated Safety Lectures to Student Trainmen (Manger), 123-126.
 Visual Aids for Illustrating Farm Training Techniques. Discussion, 212.

W

Warren, George. Report. See Enforcement.
 Williams, H. E., Jr.: The Community as an Energizing Group, 163-165.
 Women in Industry. See Child Welfare; Drivers and Driving; Transit Industry; United States Department of Labor, Women's Bureau.

