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NATIONAL SAFETY NEWS

The Eye IS A WONDERFUL ORGAN BUT Sensitive

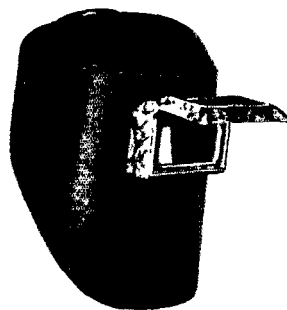
THE small cost of correct eye protection for welders puts Willson-Weld glass within the reach of all. The welder using a Willson goggle, helmet or handshield equipped with Willson-Weld glass is assured of adequate protection against eye ailments aggravated by dangerous light rays. The manufacturer or company owners are bound to enjoy, no matter how many or how few welders in their plant, a minimum of lost time and compensation expense.

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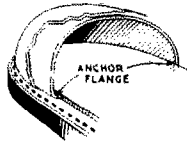
WILLSON PRODUCTS

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APRIL, 1936

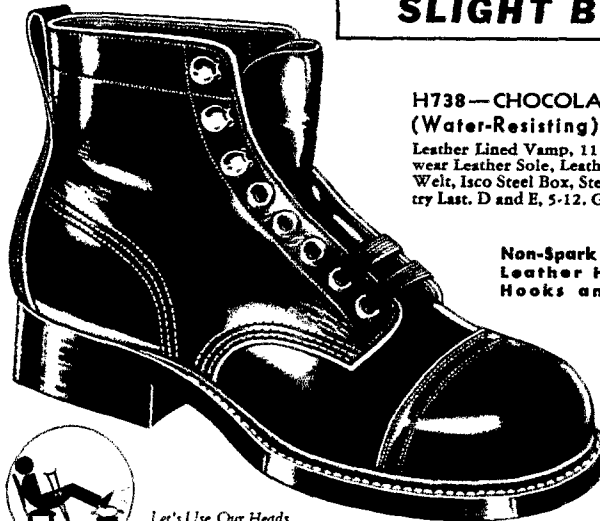
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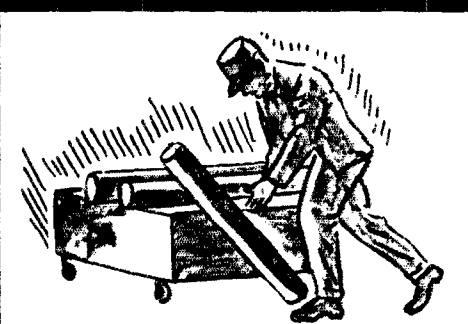
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alone**

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And how prodigiously this infant has grown! Today it literally stands alone. So cordially has it been received into the family that its circulation is just double what its most enthusiastic sponsors hoped for.

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●

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National Safety Council, Inc.

20 North Wacker Drive

Chicago, Ill.

NATIONAL SAFETY NEWS

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 LAMPS...**

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General Electric manufactures lamps for home lighting and decoration, automobiles, flashlights, photography, stores, offices and factories, street lighting and signs. Also Sunlight lamps.

NATIONAL SAFETY NEWS

Published monthly in the interest of accident prevention and industrial health

Volume 33

APRIL, 1936

Number 4

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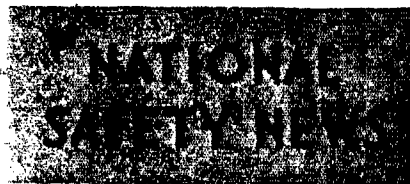
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APRIL, 1936



Published by National Safety Council, Inc.

Before Good Housekeeping

BACK in the days when the front office was replete with frock coats, side whiskers and dignity, cleanliness in the shop was an unappreciated virtue; it was even considered effeminate.

Men carried the grime of the foundry to their homes. Shower baths at the plant were unknown. Too often a crusted basin of cold water and a bar of yellow laundry soap comprised the shop's wash-up facilities. If the shop was really progressive, a roller towel as dingy as its surroundings was added to the equipment. Tobacco juice and cobwebs were approved first aid remedies. Dark, dirty factory buildings were reflected in unkempt homes. The Saturday night bath and the Sunday morning shave were traditions.

If this picture seems overdrawn, let us quote from "Engineering Achievements," the yearbook of the Westinghouse Electric and Manufacturing Company, a description of a typical plant of 1881:

"Our shops were dark and dingy, poorly ventilated, poorly heated, and generally unsanitary. Heating was accomplished through the medium of egg stoves, coal or coke fired, and not too liberally distributed through the shops. In the shop, light was furnished by tallow candles and coal oil lamps; in the offices, the only illumination was by kerosene wick-fed lamps with glass chimneys—hot, smelly and poorly adapted for lighting purposes. The incandescent carbon filament lamp was not yet in use."

For the improvement in industrial housekeeping we must not overlook the credit due to better illumination. The carbon arc lamp, the carbon filament incandescent lamp and the modern mazda have all made their contributions to progress. Conditions which were tolerated under the dim kerosene lamps showed up in all their repulsiveness when the electric lights were turned on.

Advertising has played its part also. Manufacturers of plumbing, paint, dust collecting equipment, soap and cleaning compounds have helped to raise the hygienic and esthetic standards for both factory and home. The advertising man, the printer, the engraver and the photographer have all improved their technique since the days of the brown derby and the handlebar mustache.

Nor is it inappropriate to add that the vehicles carrying the advertising have increased their appeal. Trade and technical publications are serving their fields much more effectively, and they have played an important part in raising standards of taste, comfort and hygiene.

Many states have outlawed the roller towel and the communal drinking cup, but high standards are still far from universal. Clean factories, clean homes and clean communities have a measurable value in improving the health and increasing the productiveness of the workers, and there are other values that cannot be estimated in dollars alone.

Modern Times

IT IS called "Modern Times", but the only modern thing about Charlie Chaplin's latest picture is its setting.

It has an underlying theme as old as humanity itself—

the struggle of men to earn a living in a fiercely competitive society. The men who riot at the factory gates are moved by the same impulses as the medieval peasants who burned the chateaux of the lords, and the embattled artisans who stormed the Bastille. The same drama has been reenacted in different settings throughout the ages.

"Modern Times" is as starkly grim as any communist propaganda. Without the rough house comedy it would be too strong for popular consumption.

There is a wistfulness about Charlie in his struggle with machinery and regimentation. His part is that of a dreamer unable to adapt himself to a practical world. His antics amid a fantastic mass of gears and flywheels, which is supposed to represent modern industry, draw many a laugh, but the picture is likely to prove depressing. Underneath the slapstick pantomime is a rather biting insight.

The indictment of modern times is not that they are worse than previous ages. Even a superficial reading of history will dispel that idea. But it is disappointing to observe the slowness of our progress in the social sciences in contrast to our advances in the mechanical arts. A too intensive worship of efficiency sometimes blinds us to essential human values.

The Twenty-fifth Congress

THE Twenty-fifth Annual Safety Congress will go to Atlantic City at the invitation of the leaders of New Jersey's public and business life. The cordiality of the invitation and the local preparations that have been under way for several years indicate that this year's Congress will be a memorable event in Safety history.

Not since 1928 has a Congress been held on the Atlantic Coast where a large proportion of the Council's membership is located. Atlantic City has been the scene of many of the country's largest conventions and its hotels offer exceptional accommodations for both guests and meetings.

While the hotels offer several thousand rooms at a wide variety of prices, the selection will become more limited as the Congress week approaches. A list of conveniently located hotels and their rates will be found on page 29 of this issue.

The date: October 5 to 9, 1936.

In This Issue

"CAPABLE supervisors and loyal, able men are the sparks which keep a business alive," says C. H. Murray. Training develops these men and their leaders, and the American Rolling Mill Company's methods of training go far beyond mere technical job requirements. (Page 10).

The negative appeal has its place in safety work and here is quite a convincing case for its judicious use. Dr. Alvhh R. Lauer, who makes psychology understandable and palatable for the layman, gives a few sound "don'ts" for fleet superintendents. Any safety man may adopt them. (Page 12).

Standards of housekeeping must be high in a chemical plant, both for safety of workers and to maintain the quality of the product. (Page 15).

APRIL, 1936

A parade used to be one of the favorite methods of arousing interest in a no-accident campaign.

The most scientific

Employee Training

EMLOYEE training may be described as the most scientific kind of accident prevention work. It supplies the all-important element that was lacking in the safety programs of previous years.

Let us glance quickly at the history of modern accident prevention work. Many older men will remember that industrial plants were not always as safe and well maintained as they are today, though they are still far from being safe enough.

With the opening of the present century, the small workshops began to disappear. In their place rose great factories. Our present age of mass production came on us quickly with many perplexing problems. One of these was the prevention of injuries to human beings. So serious did it become that it actually threatened the progress of industrial America.

In 1912 certain forward looking leaders of industry decided to organize a council for the exchange of accident prevention experience. The influence of that organization, the National Safety Council, is felt not only in industry but in the streets and in the homes. It is a splendid organization doing a splendid work.

Thus far there have been three distinct periods in the development of accident prevention work.

The first of these might well be called the "mechanical safety era." Accident prevention consisted mainly of designing and installing guards for machinery. It was largely a child of the drafting room. Guards helped a lot, but they could not prevent all accidents.

Then came the realization that accident prevention had a human side, as well as a mechanical side. In this second period, we tried to appeal to men's emotions. We held old-fashioned camp meetings, and the "demon accident" was hauled over the coals in Carrie Nation style. The plight of the injured and

their dependents was vividly pictured to the workers as we pleaded with them to avoid getting hurt.

Next we attempted to prevent accidents with signs and slogans. Plants were gaily decorated with colorful signs, and while the varnish was fresh, their action was positive. But when novelty dulled, they were just another crop of safety signs. "Watch Your Step", "Safety First", "Don't Get Hurt", became familiar expressions in every plant.

Then came the safety campaign—the no accident month. Parades were held, headed by goats purporting to belong to Old Man Accident. Workers carried amusing signs threatening bodily injury to this fictitious character. More camp meetings were held. What was the result? An accident early in the month was bound to be attended by a breakdown in morale, and anything might happen. We were not upon sound footing. We did a splendid job of advertising the virtues of accident prevention but we neglected to train men in *how* to prevent accidents.

It is not my intention to speak slightly of what was accomplished in these earlier periods. In the steel industry, accident severity was reduced considerably. We had to crawl before we could walk, and the experience we gained in our first efforts has been the foundation of this present chapter in accident pre-



By

C. H. MURRAY

Assistant to the President, The American Rolling Mill Co., Middletown, Ohio

NATIONAL SAFETY NEWS

kind of safety work

THOUGHTS ON TRAINING

Capable supervisors and loyal, able men are the sparks which keep a business alive.

There never was a system or a machine which could think.

An accident really is a mistake coming to light.

In the long run every foreman is an assistant to the president.

Do we fully realize how important this thing called "the job" is to the average man?

The supervisor is the only person who can maintain a steady flow of ideas from the men. To do so he must receive those ideas with enthusiasm; he must investigate them with care, and always give full credit to the maker.

One of the finest things you can do for a man is to help him help himself.

vention work. This is the day of employee-training—of training men to do their jobs right and encouraging them to think. There is no better or more permanent safeguard than a thinking man.

I am not speaking of employee training in relation to accident prevention alone. Its influence is even greater than that. I am referring to the economic benefits which industry needs so badly as companies grow larger and competition keener.

The 1936 model of a business is a very complicated thing. Inventive genius has created marvelous machinery and smooth-running conveyors which obey the touch of a push button. Management has delegated responsibilities, created countless departments, and established wonderful systems of business control which reveal at a glance the day's sales, the day's production, the number of accidents, the costs, and all the other important factors which enter into the conduct of a business.

On the face of it, the successful management of a modern business seems as simple as consulting a railroad timetable. But it isn't at all. Business needs both

organization and management. The control of the system lies in the brains of men. There never was a system or a machine which could think. You can't wind up a business as you do an alarm clock. Capable supervisors and loyal, able men are the sparks that keep the business alive. Remove these, and you soon have a broken-down structure—just another rusting, crumbling monument to an industrial failure. By increasing individual skill, by winning the interest and cooperation of men, by building teamwork between individuals, employee training prevents accidents to costs, to quality of product, and to service, as well as to human beings.

After all, just what is an accident? Something that happened when you didn't think it was going to happen. Really it is a mistake coming to light. An injury is the result of an accident. Accidents reveal the foreman's shortcomings as a manager.

Accidents do not always injure people. There are probably thirty accidents to equipment or to material for every one which even slightly injures a human being. Statistics will show in our industry that there are on the average 300 minor injuries to one lost time injury. You may wonder, "Well, what about that?" The facts are that any of those 30 accidents which didn't scratch a man, or any of those 300 minor injuries might have taken a human life. Strange things happen every day. One man may fall 30 feet and escape with a few bruises; another may slip on a grease spot on the floor and break a leg; still another man may fall six feet and break his neck. After the accident happens, you can't control the severity of an injury. To prevent injuries we must prevent accidents.

If industry expects to continue to improve its safety record on a broad scale—and it must continue to improve because accidents of all kinds represent a major source of useless costs—it must become still more active and more practical in training employees.

In speaking of employee training there is sometimes a tendency to think in



Learning the details of their jobs in an Armco training class.

(Please turn to page 50)

A Plea for the NEGATIVE

And a few "don'ts" for the traffic
superintendent and safety director

By ALVHH R. LAUER, Ph.D.

Associate Professor of Psychology, Iowa State College

WHEN is it necessary to say *don't*? Negative training, long continued, is supposed to be undesirable, but under certain conditions it may be more effective than positive instruction. You can't warn a man to lay off liquor without putting a "don't" in somewhere. Sometimes safety programs are not scientifically sound, and in such cases the razing of existing methods is as important as the development of new ones. This is the excuse for a negative approach in this article.

Often you have heard the remark, "But it worked, and that is proof enough for me." Grandmother's asafetida bag was supposed to have protected some of us from chickenpox, mumps and other contagious diseases, but doctors no longer believe in charms and magic. They resort to vaccines.

An alleged way to remove warts is to rub a bean on the wart, then throw the bean over one's right shoulder into a well. When the bean decays, the wart will supposedly disappear. Another method is to use an electric needle. Snake oil may go through sole leather but it is doubtful whether it penetrates the human tissue and effects the cures that the producers claim. Similarly, certain items in a safety program may appear to achieve the desired results, when in actuality they merely salve the surface of the trouble.

Now let us look at a few *don'ts* which a traffic superintendent would do well to study carefully:

1. Don't try to scare your men into safe driving practices.
2. Don't treat accidents as a pestilence.
3. Don't expect your driving accidents to clear up without a careful diagnosis.
4. Don't use methods of diagnosis which are not recognized and well standardized.
5. Don't stop with a diagnosis.
6. Don't expect one simple measurement to give you the picture of a driver's potentialities.

7. Don't consider any driver so nearly perfect that he will not have an accident.

8. Don't preach safety and practice recklessness.

9. Don't expect results without a continued scientific and systematic effort to analyze causes of accidents, and inaugurate remedial measures.

Men who have accidents are "safety sick". They may be chronically afflicted, or they may be only acutely ill. You would not expect a man on sick leave to regain his health more rapidly by a bawling out. This would only make him more nervous and retard his recovery. There is no reason to believe that men can be scared into safety habits.

Articles like "And Sudden Death," by J. C. Furnas, which appeared in the August, 1935 *Reader's Digest* may have a place in creating a safety conscious public, but a relatively small one. If continued for any length of time this type of treatment would tend to callous the group mind. The latter, of course, is merely the sum-total of individual minds making up that group. The gross effect of such articles continued over a long period would be the same as the effect that war has upon the attitudes toward horrors which accompany it.

"Our army advanced 10 kilometers with a loss of but 500 men." So runs the bulletin. It might have been 5,000. Yes, only 500 men!



Alvhh R. Lauer

Think of but one! Mangled, torn to shreds, buried in pieces—not all his own! Letters from little sister requesting a German shoulder strap and prattling on about the folks at home. A souvenir for his mother bought at the little



Don't expect one simple measurement to give you the picture of the driver's potentialities.

French shop but not sent. Pocket paraphernalia, photograph of his sweetheart—all scattered on the hillside. Yet the bulletin from headquarters comments glibly on the mere sum of 500 men killed in action.

Why? Largely because of being calloused by repeated experiences of such horrors. One experience might have a desired effect as a shock stimulus. If repeated, a reaction might set in and bring about a hardened attitude. Newspaper articles depicting accident horrors, or posters designed to evoke fear, should be used sparingly.

Conversely, however, there are those who may think that calling a man's weaknesses to his attention may predispose him to accidents by auto-suggestion. There may be isolated cases where some such effect would take place. This hardly can be classified as "scaring" the driver. If such scientific advice is bad then most medical practice would be open to question. According to this line of reasoning, a man suffering from a serious disease had better risk dying of his malady than be frightened to the point of committing suicide by obtaining medical attention and being apprised of his condition. It suffices to say that in medicine the good effects so far outnumber the bad that the latter, if they exist,

NATIONAL SAFETY NEWS

must be tolerated. Medical advice need not be of "scare-head" variety. Psychological advice is much less so.

Don't treat accidents as a pestilence. Too often safety education is handled as the health officer treats the measles—by simply placing up a sign, "Measles, Stay Out." How often have you read the warnings, "Dangerous Curve", "Danger, Stay Out", "Poison"? The railroads have most successfully met the danger of low bridges or underpasses by suspending rope guards on either side of the bridge. The trainman on top of the box-car gets a forewarning in the way of a mild rap from the ropes as he passes.

Warnings of this specific, timely type will get the idea across in a concrete way. They are more effective than general warning signs, which are too much in evidence. It is not to be inferred that general warning signs are without value; merely that they should be supplemented by specific, terse, and pointed markers which cannot be misconstrued or overlooked.

This is only half the argument. A man should not be told merely to avoid something he does not understand well, but he should be trained to follow a course of action which will lead to safety in the performance of duties. Let us illustrate:

Prof. R. A. Moyer of our Engineering School has shown by road tests that tire side-slip is at a minimum when the coefficient of friction is at the maximum. The average driver, on taking a corner, will most likely use his brakes when he feels the back wheels slipping sidewise. Actually he should accelerate slightly to keep his wheels rolling with no retardation or acceleration. This will greatly reduce skid. The practice is followed by most expert drivers. Ignorance of the principle or failure to allow for it is known to be the cause of many skidding accidents of ordinary drivers. It illustrates the idea that teaching men to get out of dangerous places is at least as important as keeping them from getting in.

Don't expect your driving accidents to clear up without a careful diagnosis. "Trouble-shooters" must know where the trouble is located before they can fix it. Linemen must have more training than merely, "Keep the line from being grounded." This is too general. Yet the same men read posters every morning which warn them to "Drive Safely", and "Save a Life".

A diagnosis of traffic accidents requires a careful study. The following

outline indicates a partial list of factors to be studied:

1. How many accidents do we have per 1,000 miles driven?
2. How do these accidents take place?
3. When do they take place?
4. Which types of vehicles are most frequently involved in accidents?
5. Who was driving these vehicles at the time of the accident?
6. What are the relative hazards of our driving territory as compared to other companies, or the general public?
7. What type of accidents do "repeaters" have?
8. Why do these men have accidents? (You will find a few of your drivers having most of the accidents.)

Now you are ready for a more detailed diagnosis. A psychophysical examination of the drivers who have accidents will answer most of the points related to the eighth question.

Don't use methods of diagnosis which are not recognized and well standardized.

Safety engineers are rapidly coming to realize the need for other measures of accident-proneness than the crude observational methods used in the past. The demand cannot be adequately filled. Enthusiastic organizations are selecting spectacular devices designed to measure certain "so-called" defects responsible for accidents. A word of warning should be interjected here. *There is no one cause of accidents.* There are no two, three, or four causes. *There are numerous causes.* A test of reaction time used alone is about as indicative of accident-proneness as pulse rate is diagnostic of one's

need of medical attention; or as the number of turns of the engine before starting is an index to the value of an automobile. Any single item, though it may be very important, is only one of numerous factors involved and must be interpreted in light of other conditions in force at the moment.

Another source of danger is the adoption of some makeshift device which has not been standardized. A measurement is only valuable when it can be repeated with very similar results and when it is known to measure what it purports to measure. Many times common-sense theory is wrong. Diseases were formerly held to be due to humors in the blood. By bleeding a man such humors could be reduced and health restored. So reasoned the medical profession of two centuries ago. It looked like the thing to do; a dictate of common-sense. Now we do the opposite. Science has shown that man needs more blood in emergencies rather than less blood. The amateur mechanic overgreases your car wheels. His theory is that, 'if one dose is good, two doses are better'. Sounds reasonable, but ruins your brakes.

The most reasonable way to learn a driver's traits, it would seem, would be to ride with him and observe his driving. Experimental studies have shown, however, that the "watched driver becomes the careful driver". Unless the driver is so obviously inexperienced as to be

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You can't persuade a man to lay off liquor without using a few "don'ts."



The Managing Director's Page

After 25 Years

FREDERICK A. KEPPEL, president of the Carnegie Foundation in New York, recently said that "I could have told you a great deal better, or at any rate a great deal more confidently, twenty-five years ago that I can tonight. I won't even ask what is science, or what is research; I shall merely point out that we are faced by an endless series of problems arising from the application to human welfare."

Dr. Keppel was speaking of education but his remarks apply with equal force to any phase of human activity. At the end of any quarter century of his experience, any human being would like to withdraw his early opinions and revise his recommendations.

Nothing could be more evident than the oft-repeated experience that safety is a live and growing thing. We never reach the end of its implications, nor do we yet know about the precise methods of teaching it and following through on the one best method.

A week or two ago I was startled when the manager of a large industrial plant told me that he had learned a new and startling fact about safety in his plant. And this after twenty-five years of really marvelous application of the best known safety principles. This company had been winning national and local awards for superlative safety records for years. It was at the top of its class.

"Here is the perfect safety plant," was the onlooker's impression. "It has done a consistently good job; its records prove it. Others should follow in its footsteps."

But as the manager started his new year and talked about the record of the Smith Manufacturing Company, he suddenly came to realize that none of his foremen was definitely interested in the whole plant. Their jobs depended on the individual performance of their own departments. They lived and fought for their own departments. This revelation led to a new statement of the plant's safety problem. The manager said to each one of his foremen: "Don't think of the Smith Manufacturing plant's total record; think and work for your own department's safety. If you will make a perfect record in your foreman's department, as the other foremen will do likewise, we can assure and continue our plant record on a scale that has never been achieved before."

How natural and consistent with human living was this change in responsibility. Accomplishment of any kind is by units of service. It is all very well to talk about community safety, or a certain corporation's annual record, but after all the community will have a good safety record just insofar as each household, and each individual in the household, can be persuaded to look after its own backyard. The time may come when the local governmental authorities will inspect homes and demand protection for children and parents but,

as in the case of the foreman, there will never be genuine safety until the individual looks after his own bailiwick.

Emphasis must be placed more directly on the units. Foremen must be told that the success of the entire plant will mean their success, and they must have an interest in the total plant's performance; but, after all, there are few foremen who can greatly affect the plant policies. Too many factors beyond their understanding or influence are involved. The average foreman must be made to understand that the plant's total safety record depends on his individual performance in his own department.

M. J. Amers.

INTERESTING ITEMS

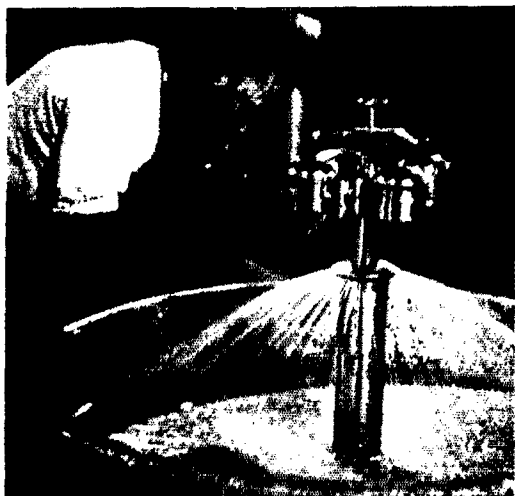
During March the National Safety Council employed eight new field representatives and conducted an intensive training course in its headquarters. Twelve out-of-town speakers contributed to this program. These highly capable representatives have been assigned to eight territorial districts and will work with public officials, civic groups and business leaders in organizing and promoting local and national interests in traffic safety problems. From time to time information will be given to the members of the Council on activities in the field.

* * *

Probably every member and cooperator has read the story in the March issue NATIONAL SAFETY NEWS—"Safe till Tomorrow?"—which provided an outline of a program to organize automobile owners and users among industrial employees for the promotion of safer driving. This plan ties up with our challenge to all citizens to bring about a reduction in traffic accidents of 35 per cent by the end of 1940. The article referred to will be reprinted in pamphlet form and made available to members in the hope that they can carry out the automobile club plan recommended.

* * *

"The early bird gets the best hotel accommodations." Don't fail to watch for announcements in this and other issues of the NATIONAL SAFETY NEWS on the 25th Annual Safety Congress and Exposition—Atlantic City, October 5-9. There are dozens of hotels at Atlantic City and a list of some of them is presented in this issue of the NATIONAL SAFETY NEWS.



Modern facilities encourage a thorough job of washing up.

Good Housekeeping in a Chemical Plant

By CARMAN T. FISH

TWO items which are indispensable in the safety program of a chemical company are good housekeeping and protective clothing. While the chemical industry does not stand alone in its need for high standards of housekeeping, the precautions which are desirable in other establishments become vital when the materials to be processed are toxic or combustible.

So we find plant and personal cleanliness occupying a prominent place in the safety activities of the Monsanto Chemical Company. This company, with headquarters in St. Louis, Mo., operates a large number of plants located at many points in the United States and in England. The products of these plants range from food preservatives to commercial acids and other heavy industrial chemicals. A complete list would be almost as extensive as the U. S. Pharmacopoeia. Some of the products are toxic

and some are harmless, but cleanliness of both plant and product is essential in maintaining the quality of the product, as well as the health and safety of the worker.

At the entrance to the employment department of the St. Louis plant is a sign which notifies prospective employees that this is a chemical plant and that conditions of employment specify observance of all safety rules, including the wearing of any protective clothing required for the job. In selecting a sign for this purpose the company found that none of the ten thousand stock messages available carried the exact meaning, so a sign was made to order.

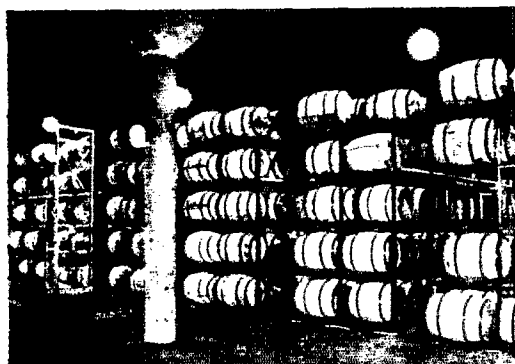
Methods of maintaining good housekeeping vary with Monsanto plants due to differences in operations, equipment and physical arrangements. The plants at St. Louis and at Monsanto, Illinois, use no porters or janitors in operating departments. These departments depend upon their own employees to maintain the high standards of cleanliness and order. Other plants in the United States and abroad employ modifications of this system which seem best adapted to their individual requirements.

The system employed at Monsanto, Illinois, has attracted considerable attention. The entire plant, which totals 35 acres, is divided into five housekeeping areas. These five areas are subdivided into smaller areas including buildings or manufacturing departments. These latter subdivisions are still further subdivided and assigned to individual workmen. Someone is responsible for the housekeeping in every square foot of ground and floor space. There isn't any "no man's land."

Each of the five major areas has a supervisor. His duties are primarily to observe housekeeping conditions in the area assigned to him and to call the attention of the subdivision supervisors to any shortcomings in housekeeping. So far as order and cleanliness in their respective areas are concerned, the five area supervisors represent the management.

The area supervisor has the authority and responsibility for ordering corrective work done in the area under his own

Racks aid housekeeping and provide safe storage for barrels.



Flowers and paint add a touch of freshness and color to the plant.





Wholesome meals amid cheerful surroundings in the plant cafeteria.

direct operating supervision. Outside his own area, his duty is to point out defects and suggest improvements. It is also his duty to report to the plant management any cases of lack of cooperation or failure to carry out instructions in the matter of general housekeeping.

In operating departments and elsewhere throughout the plant are posted charts which show the major areas and subdivision and the men to whom supervision is assigned. In the departments are charts showing the area assigned to each worker. Thus every man in the plant knows his responsibilities. No inspections are held, as the system operates on the theory that inspection is constant. The system can best be judged by the results, and it has maintained high standards of housekeeping under difficult conditions.

At the Everett, Massachusetts, works of the Merrimac subsidiary a modification of this plan is used. The yard is divided into sections and a man assigned to each section with the responsibility of maintaining order at all times. Department superintendents, foremen and men are responsible for housekeeping in their respective departments. Periodic inspections are made by a committee of three, the safety engineer acting as chairman. The other members are taken from disinterested departments in the office. This gives some of the office personnel an opportunity to become better acquainted with the plant and assures a variety of viewpoints as to what conditions should be. Following the inspection the departments are rated as "Excellent," "Good," "Fair," or "Poor,"

according to the committee's findings. These ratings are posted on the plant bulletin boards.

Ally No. 1 in the campaign to keep the chemical plant clean is the hose. Floors of the various departments are flushed several times a day. To avoid any serious slipping hazard, some floors are made of rather coarse concrete; others are of finer grain with carborundum imbedded in the finishing coat. This provides a floor which is easy to keep clean but will not become slippery because of dampness. As additional protection against slipping, the use of safety shoes with non-slip soles and heels is encouraged. These, incidentally, are supplied to employees at cost.

During the past winter, snow and ice caused considerable difficulty in the passageways between plants. During several weeks of the most severe weather the St.



Protection for the eyes is stressed in all departments.

Louis plant used a ton of salt a day to keep the pavements between buildings free from ice.

Another aid to cleanliness and appearance, as well as protection for wood and metal surfaces, is the liberal use of paint. As with the porter and janitor service, the painting is done by the employees of each department.

In a chemical plant each color has a definite meaning, indicating the nature of the material carried in pipes or stored in tanks. A color code for piping is used, and the decorative effect is reminiscent of Chicago's vivid Century of Progress.

Any employee around the St. Louis plant who is wearing a suit of tan coveralls is at once recognized as a worker in a department where toxic materials are handled. The men in this group have special locker and shower rooms. They receive a complete change of clothing every day, provided by the company and laundered without charge to the employee. Their street clothes are kept in separate locker compartments. Workers in these departments receive milk twice a day.

In non-toxic departments men wear working clothes of the same color but with separate coats and trousers. These are provided and laundered by the company at a nominal weekly charge. In the finishing departments where the utmost refinements of cleanliness are desirable, white uniforms are provided. Men in the mechanical departments wear the traditional blue overalls.

In the washrooms, newer types of equipment have been added as the plant grew. Included among the up to date facilities for personal cleanliness are circular wash fountains with dispensers for powdered soap. Some of the newer lockers have slanting tops which cannot be used as storage space and which do not collect dust.

To overcome the hazard of slipping in the showers, mats of rubber with interwoven cord have been provided. Anti-septic solutions for the prevention of ringworm of the feet (athlete's foot) have not been used because of the difficulty of getting the men to use the treatment regularly. Shower compartments are disinfected twice a day with steam and this method has been quite effective in preventing parasitic infections.

All employees are given medical examination on employment and periodical examinations are given at intervals, ranging from monthly in the toxic departments to annually in departments

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Welding Wisdom

Precautions that mean Safety in Oxy-Acetylene Welding and Cutting

By JAMES I. BANASH

*Consulting Engineer, The Linde Air Products Company;
Past President, National Safety Council*

OXY-ACETYLENE welding and cutting equipment is designed for safe use under the wide variety of operating conditions that exist in modern plant and field work. Manufacturers have provided all parts of the equipment with adequate safety devices. They have constantly emphasized the precautions and safe practices that must be observed by all operators of welding and cutting equipment. Intelligent use of the equipment follows naturally from an understanding of the properties of

the materials used and the function of the various parts.

Although the information necessary to a thorough understanding is not difficult to acquire, it is important that all oxy-acetylene operations should be under the supervision of trained and qualified men.

It is the purpose of this article to review some of the fundamental principles that govern the proper handling of oxy-acetylene welding and cutting equipment.

Precautions to be observed in handling

The use of gloves and other suitable clothing should be required of any operator doing heavy cutting work.

and using oxygen follow naturally from a few familiar facts regarding oxygen supplied for welding and cutting:

1. Pressure in a full cylinder of oxygen is 2,000 lb. per sq. in. at 70 deg. F.
2. Pressure within the cylinder increases as the temperature rises, and decreases as the temperature falls.
3. Oxygen will not burn, but it supports and accelerates combustion.

Because of the fact that oxygen under pressure may react violently with oil or grease, particular care should be exercised to see that oxygen cylinders and valves are kept from contact with oil at all times.

Never use an oxygen cylinder as a roller or support for work even though it may be considered empty.

When oxygen cylinders are in actual use, the opportunities for contact with oil and grease are multiplied and special care must be taken to avoid such contact. Do not handle cylinders or operate valves or touch any oxygen equipment with oily hands or gloves. Do not place cylinders where oil or grease may drop on them.

It is always good practice to mount cylinders on a truck or support them in some way so that they cannot be accidentally knocked over. They should be kept well away from the actual welding or cutting operation.

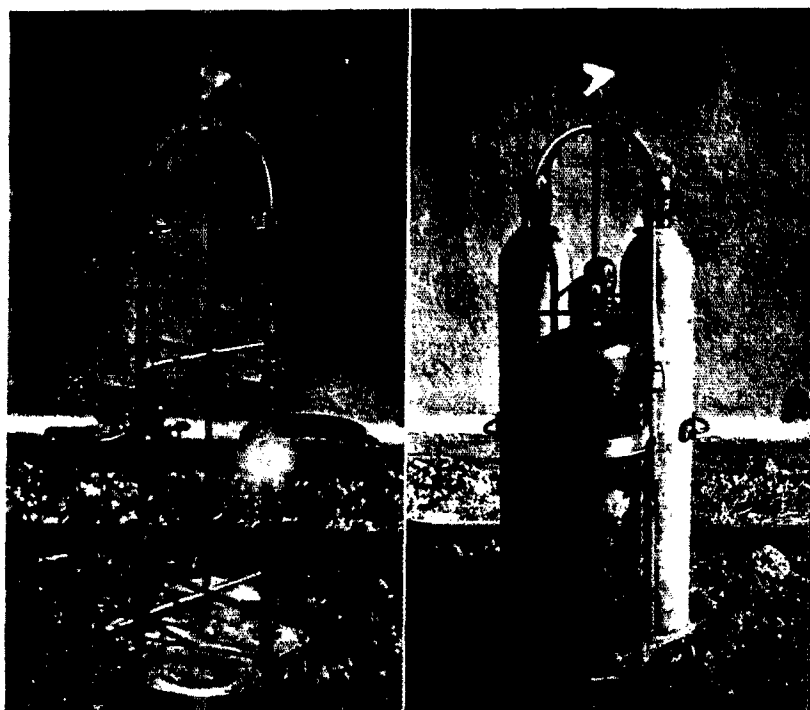
Never use oxygen from a cylinder without first attaching a regulator to the cylinder valve. The cylinder valve should be closed when work is finished and when the cylinder is empty.

Because oil or grease in the presence of oxygen under pressure may ignite violently, oxygen must never be confused with compressed air or used as a pressure imposing medium. A serious accident may easily result if oxygen is used as a substitute for compressed air. Never use oxygen in pneumatic tools, to start internal combustion engines, to blow out pipe lines, to "dust" clothing or work, or for head pressure in a tank of any kind.

Acetylene

Acetylene will burn, and will, like all other combustible gases, when mixed with air in certain proportions, explode if ignited.

At pressures over 15 lb. per sq. in., acetylene may decompose violently if subjected to heat or shock. This action



This device was developed by the Bath Iron Works Corporation to facilitate the handling of oxygen and acetylene cylinders.

is an inherent property of acetylene itself, and is quite distinct from the formation of explosive mixtures of acetylene and air.

It is obvious that acetylene cylinders should be carefully handled, as knocks or falls may damage valves or fuse plugs or possibly the cylinder itself. Cylinders should be placed in properly designed cradles or platform carriers whenever moved by crane or derrick.

Never use acetylene from a cylinder for welding and cutting without first attaching a pressure reducing regulator to the cylinder valve. Acetylene regulators should never be adjusted to deliver gas at a pressure greater than 15 lb. per square inch.

With acetylene cylinders always use the special T-wrench for opening the cylinder valve. Open the valve slowly $1\frac{1}{2}$ turns only, and leave the wrench in position while the cylinder is in use, so that the valve may be closed quickly if necessary.

After the regulator is attached to the valve of an acetylene cylinder and the cylinder valve is opened, it is advisable to test for leaks at all connections by applying soapy water. In case of a leak around the valve stem, close the valve and tighten the gland nut.

Never under any circumstances attempt to transfer acetylene from one cylinder to another.

Wherever it seems necessary to couple acetylene cylinders in order to supply sufficient acetylene for a very heavy job or for a system of shop piping, always consult the acetylene manufacturer. Such coupling devices must be of a type listed as Standard by Underwriters' Laboratories Inc. and installed in accordance with the rules of the National Board of Fire Underwriters.

Hose

Always use high grade hose made especially for welding and cutting. Ord-



When cutting, it is advisable to have the work done over floors of dirt, concrete or steel.

nary pneumatic hose and metal covered hose should not be used.

As a general rule, unnecessarily long lengths of hose are to be avoided. Where they must be used, extra precautions should be taken to keep the hose from becoming kinked or tangled. Hose should be placed so that it will not be trampled on, run over, or exposed to flying sparks, hot slag and hot objects. Contact with oil or grease is also to be avoided, as these materials will deteriorate rubber and constitute a hazard with oxygen.

Goggles

One of the most important general safety rules is that properly designed goggles should be worn at all times while welding or cutting is being done. Eye protection is essential for several reasons. The bright flame and particularly the strong glare from the molten metal are sufficient to cause serious injury. Flying sparks or bits of hot metal that may be spattered about may cause serious trouble if they should happen to strike unprotected eyes.

Blowpipes

Welding and cutting blowpipes are sturdy pieces of equipment. With reasonable care in handling they will give years of continuous service.

Proper results can be obtained only by using the proper sized head, tip or nozzle, and the gas pressures as recommended in the manufacturer's chart for the work at hand. Always follow the manufacturer's directions for lighting the blowpipe, and make sure that the regulators are adjusted to the proper pressure. When a new cylinder has been connected to the equipment, the blowpipe valve should be left open long enough to expel air before lighting. For lighting oxy-acetylene blowpipes, always use a friction lighter.

Tips or welding heads should always be tight, and the welding heads should seat properly.

Blowpipes should be inspected at frequent intervals by a competent operator. Replacements should be made only with standard parts; major repairs should be made by the manufacturer.

Regulators

In using oxygen and acetylene from cylinders, each cylinder must always be equipped with a suitable regulator. Regulators are necessary for two reasons:

First, to reduce the cylinder pressure down to the relatively lower working (Please turn to page 48)

No Motors Menace Their Play

Back yard playgrounds in Flint have been highly successful in keeping children off the streets

"**S**AY, Al, haven't you noticed something lately?" a bus driver queried as his companion pulled alongside.

"Why, no," Al replied. "What is it?"

"There don't seem to be hardly any kids playing in the streets any more. What's happened to 'em?"

"Now that you mention it, it's certainly a fact. I guess it's this safety play yard movement. Swell idea, too," said Al.

Al was right. A safety play yard movement in Flint was keeping the children off the streets in that city of 165,000 population.

Flint is the world's second city in the production of automobiles. Ninety-five per cent of its industry is devoted to the manufacture of motor vehicles and automotive parts. It is strictly an automobile community. Therefore the traffic problems are manifold, because there is almost one automobile to every family in Flint. To be exact, the ratio of families

a car is .81. Total car registration is 35,250.

Everywhere, accidents to children reach their highest toll during the summer, when schools are closed and youngsters play in the streets. Realizing that the total would be reduced if children could be kept off thoroughfares during the long vacation period, public-spirited citizens of Flint started a movement in 1934 to create and encourage establishment of back-yard playgrounds. There were only forty such yards established that year, but the accident toll dropped 50 per cent below the 1933 figure, and the number of child deaths was reduced to 66 per cent.

Encouraged by the success of the initial activity, Flint conducted in the summer of this year probably the greatest child safety playground movement yet launched in the United States. Now it promises to be a permanent safety program in that city.

A total of 1,234 registered back-yard

safety playgrounds was established, exclusive of the regular civic playgrounds. Accidents to children were fewer by an estimated 25 per cent than in 1934. The average attendance of small children at the back-yard play lots was 6,500 daily, and the weekly attendance at the larger supervised civic playgrounds jumped from 23,700 in 1934 to 54,152 in 1935.

The back-yard playground idea is only comparatively new. While Seattle adopted it before Flint, the latter city perhaps was the first community to forward the plan in an elaborate way, and sustain it in a highly organized manner.



The insignia used in Flint while promoting the safety play yard movement.



One of the backyard playgrounds where children can enjoy their games free from the menace of motor vehicle traffic.

The safety play yard movement in Flint was organized and actively managed by Wilson S. Isherwood. Mr. Isherwood, who is the general sales manager of the AC Spark Plug division of General Motors, is also president of the Flint Automobile Club, and a leading advocate of safety measures.

"As a rule, the success of a safety plan lies in appointing one institution to assume all responsibility to carry out an objective. This responsibility was given to the local automobile club," said Mr. Isherwood in describing the safety playground movement.

"Upon assuming this responsibility, we enlisted as cooperating agencies the Parent - Teacher Association, the Flint Police Department, *The Daily Journal*, the Junior League, the Junior Chamber of Commerce, the Boy Scouts and other members of the Flint Council of Recreational Agencies."

The name "Safety Play Movement" was selected and an emblem was adopted. This emblem consisted of a shield with the words "Safety Play Yard for Every Child."

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Safety Takes the Field

Council representatives to assist states and cities in campaign to reduce traffic accidents

BELIEVING that there is a definite formula for preventing traffic accidents, and that the solution of the problem lies in the proper application of tried and proved methods, rather than in a search for a panacea, the National Safety Council has dispatched eight specially trained field representatives into various parts of the United States to work directly with officials and civic bodies in carrying out the Council's campaign to reduce automobile accidents 35 per cent or more by the end of 1940.

The "formula" is based on the successful experience of several cities and states which have realized sizable reductions in their traffic death rates through planned prevention programs.

The field men will work directly with organizations already engaged in safety work or, if no such organization is now functioning, with the body or group best fitted to do the work.

Expansion of the Council's public safety program to permit the use of field men was made possible through a generous grant from the automobile industry. No dues from industrial members are being used to finance this work.

Paul F. Stricker, of Chicago, a graduate of Cornell and a veteran in the safety field, has been made director of field service, which forms a part of the Council's public safety program. From 1923 to 1925 Mr. Stricker was manager of the Baltimore Safety Council, the first person to hold that office; from 1925 to

1928 he was a field representative of the National Safety Council and from 1928 to 1929 was director of the Territorial Councils Division of the National Safety Council. He became director of the Safety Department of the Nashville Chamber of Commerce in 1932, and in 1934 he was made safety director for the CWA in Tennessee, and later director of safety for the TVA. Prior to joining the National Safety Council staff in March he was safety engineer in the U. S. Department of Labor.

The country has been divided into eight districts.

District No. 1, embracing New York, Massachusetts, Connecticut, Rhode Island, Maine, New Hampshire and Vermont, has been assigned to James Stanard Baker, Chicago, who has been prominent in safety work for many years. A graduate of the University of Wisconsin, he has been with the National Safety Council since 1928, as assistant traffic engineer, fleet engineer and Secretary of the Committee on the Driver. He has conducted surveys of traffic courts, administration of drivers' license laws, driver education and driver fatigue.

The field secretary for District No. 2, comprising New Jersey, Pennsylvania, Delaware, Maryland and Virginia, is Adam H. Lintz, of Lakewood, Ohio. Mr. Lintz is a graduate of the Case School of Applied Science. He has been active in safety work since 1914, when he was named safety engineer for the Pittsburgh

Field representatives of the National Safety Council and others who are taking an active part in the drive against traffic accidents. Rear row, left to right: Lloyd A. Blanchard; Norman Damon, Automobile Manufacturers Assn.; W. H. Cameron; Mrs. Edward Hammett, General Federation of Women's Clubs; Lew Wallace, Motor Vehicle Commissioner, Iowa; J. B. Gibson, vice-president, NSC; Sidney J. Williams; Ben R. Stroup.

At left of table: A. H. Lintz; Gordon C. Graham; Ralph W. Robinson; Charles E. Babcock. At right: Albert W. Whitney, vice-president, NSC; Paul F. Stricker; H. C. Seehausen; J. S. Baker.

District of the American Steel & Wire Co. During most of the war period he served as a government safety engineer at the Norfolk Navy Yard, and in 1918 he became Assistant Chief Safety Engineer to the U. S. Shipping Board in Philadelphia. From 1919 to 1926 he was Secretary-Manager of the Cleveland Safety Council. In January, 1934, he became one of three CWA Regional Safety Directors for the state of Ohio, holding this position until July, 1935, when he was named assistant to the National Director of Safety for the WPA.

In charge of District No. 3 will be Ben R. Stroup, of South Carolina. The district embraces North Carolina, South Carolina, Georgia, Florida, Tennessee, Alabama, Mississippi and Louisiana. Mr. Stroup is a graduate of Citadel. He has been engaged in traffic work since October, 1921, when he joined the South Carolina Highway Department, working through nearly every branch of this work and finally becoming director of the Motor Vehicle Division of that state.

District No. 4, including Michigan, Indiana, Ohio, Kentucky and West Virginia, has been assigned to Gordon C.

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Gasoline Fires in Garages

By J. T. O'BRIEN

Assistant Safety Director, Jersey Central Power & Light Co.,
Asbury Park, N. J.

Experience shows the need for effective fire protection
and greater care in handling flammable liquids

R EPORTS on 673 garage fires occurring during the eight-year period from 1921 to 1928 indicate the seriousness of the fire hazard and the need for more careful application of well-known precautions. While these reports do not include many of the small fires which are occurring daily in garage property, the record includes a sufficiently broad selection of serious garage fires to indicate the more important causes.

In the 673 fires recorded there were 32 fatalities, and of these 25 were caused by the ignition of gasoline or gasoline vapor, classified as follows:

	No. of Deaths
Gasoline vapor in contact with open flame	13
Explosion—exact cause unknown	4
Gasoline ignited by carelessly thrown match	3
Explosion caused by welding unvented tank	2
Gasoline spilled on clothing ignited by cigaret	1
Nozzle of sprayer struck ignition wire, causing spark which ignited gasoline vapor	1

Gasoline tank overflowed and gasoline ignited from ash pit, flashing back and cutting off escape

Total

Analysis of the same 673 fires shows that in 151 cases gasoline was a contributory cause. Of these, three involved the servicing of automobiles, 47 resulted from cleaning with gasoline, 30 involved gasoline storage and filling, six resulted from unsafe practices in welding, 46 were due to ignition of flammable liquids or vapors from other causes, and 19 were attributed to mechanics' torches.

These records indicate that more fires and explosions in garages have resulted from cleaning with gasoline than from any other one cause. There are a number of cleaning materials which are much safer than gasoline and which give satisfactory results for all ordinary requirements.

There are also many cleaning powders sold under trade names, and the use of any of these will do away entirely with the fire and explosion hazard in cleaning

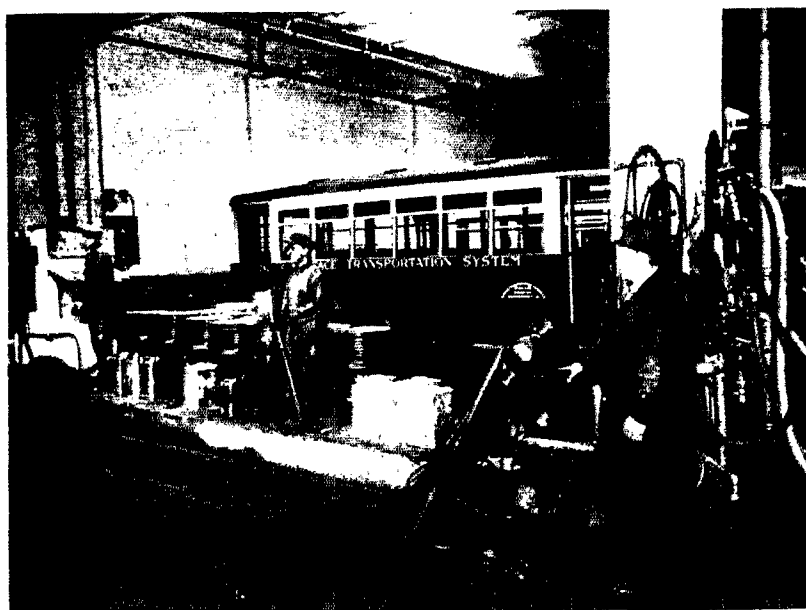


Small hand extinguishers are indispensable in small garages and useful in larger garages to supplement the protection afforded by the larger units. (Illustrations courtesy Walter Kidde & Co., Inc.)

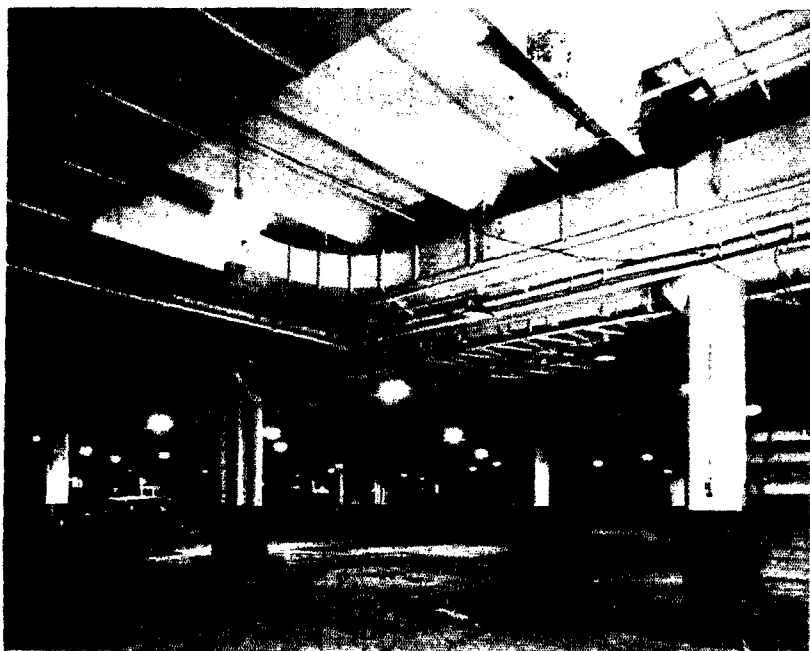
operations. The active substance of most of these powders is tri-sodium phosphate, which can be purchased in quantities at moderate cost. For use it is mixed with water in the proportion of about one handful of phosphate to a pail of water. It is most effective when the water is hot. A washing solution of this kind does not always remove bad spots, but in such cases use of kerosene or other safe cleaning liquids in small quantities is recommended.

Kerosene is much less volatile than gasoline and, therefore, preferable for cleaning. There are also numerous special cleaning liquids approved by Underwriters' Laboratories and most of these fall in three classes. The first of these, which includes liquids containing a large proportion of carbon tetrachloride, is the safest, being classed as noncombustible and nonflammable. The second, which includes Stoddard solvent and similar cleaners, is in a class with kerosene. The third is classed between ethyl alcohol and kerosene. Most of these are more expensive than kerosene, but they cut grease more rapidly. It is recommended that only cleaning liquids approved by Underwriters' Laboratories be used.

A noncombustible agent which is sometimes used is a mixture of gasoline and carbon tetrachloride by volume, the proportions varying with the flash points of the various grades of gasoline or naphtha. This mixture, however, is relatively high in cost and there is the danger of toxic effect when it is used indoors. Care must also be taken to make sure that evaporation does not leave a flammable compound, as carbon tetrachloride



The wheeled type of carbon dioxide extinguisher is used extensively in the larger garages.



Interior view of the loading ramp for Radio City, New York. Carbon dioxide is piped from a remote cylinder bank and discharged through hose reel stations, one of which is shown at the upper right of the above picture. Note also the ventilation equipment.

evaporates at a lower temperature than gasoline.

The analysis shows that other frequent causes of gasoline fires and explosions are short circuits in electric extension cords, static electricity, lanterns, smoking, and sparks from electric drills. All sources of ignition should either be eliminated so far as practicable by installing approved vapor-proof electrical devices and proper maintenance of equipment or they should be kept at a safe distance from locations where gasoline vapors may exist. Where it is necessary to keep a small supply of gasoline outside of the regular storage, it should always be in approved safety cans.

The recommendations listed in this article are summarized from the N.F.P.A. standards of good practice.

Repair Pits and Trestles

Elevated trestles or hoists are preferable for this service. If pits are used, they should be continuously ventilated by a system independent of the main garage ventilating system. Such pits should be cleaned at least daily and no accumulation of oil and grease permitted. Permanent illumination should be provided but supplementary lighting is permissible if properly guarded portable lamps attached to approved extension cords are used.

When pits are constructed with one end open to an outside wall, either di-

rectly or through a transverse pit, at the same or lower level, natural ventilation may be permitted, provided the floor level of the pit is above the natural outside grade, with air inlets at the pit floor level opposite each pit. There should also be a ventilating duct at the closed end of each pit. These ducts should extend to the outside air and be equipped with an approved suction creating device.

In addition, vapor-proof globes should be installed over all lights and the use of electrically-driven tools and grease guns should be avoided in the pit.

It has been common practice in many garages to use gasoline or other flammable liquids for cleaning floors, machinery and auto parts. It is hardly necessary to add that this is extremely hazardous practice. Preference should be given to systems for cleaning and washing which utilize compressed air, steam, water pressure or nonflammable cleaning compounds.

Cleaning vats or systems utilizing nonflammable liquids which must be heated for effective removal of grease and oil from automobile parts, are permissible only within the storage section if specifically approved for use where flammable vapors may be present.

Washing operations involving the use of flammable liquids should be carried on in a separate room or section cut off from the storage section of the

garage by two-hour fire partitions. Such rooms shall be adequately ventilated. The floor of such room or compartment should be fixed to an oil separator or trap discharging to the sewer.

In most cities the storage of flammable liquids is governed by state or municipal ordinances, most of which are based on the suggested ordinance of the N.F.P.A. Lubricating oils, grease and waste shall be stored in a well-ventilated oil room separated from the garage operating section by fire partitions.

Reservoirs of motor vehicles should be filled outside the garage. Where this is not feasible, inside filling operations may be permitted, provided only approved portable buggies and approved inside discharge systems are used. In all cases, filling should be by hose.

When insurance features are involved, reference should be made to the regulations of the National Board of Fire Underwriters for the installation of containers for storing and handling flammable liquids.

Where underground tanks containing different flammable liquids are located close to each other (for example, gasoline and fuel oil) the fill pipe from each tank should be painted a distinctive color or otherwise marked conspicuously to indicate the contents of the tank to which it connects.

Typical Fires

A few fires typical of those which have occurred in garages will illustrate the hazards involved.

1. One of these fires involved the death of two men, both experienced employees, although the property damage was negligible. The accident occurred in a bus storage and repair garage.

Witnesses reported having heard a muffled explosion and noticed a sheet of flame which apparently originated under an automobile that was being greased. After the explosion the man who had been greasing the car was found dead with the clothing practically all burned from his body. The other employee who had been cleaning the runway died the following day.

The automobile, which was apparently directly over the source of the explosion, was undamaged, and its gasoline supply system remained intact. The only property damage was slight damage to the grease gun.

An examination of the fluid used for cleaning the pit showed it to be Oakite solution.

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NATIONAL SAFETY NEWS

Is Safety Profitable?

- - Ask Milwaukee

One thousand dollars spent for the safety of municipal employees saves the city \$30,000 in accident costs

By C. F. SCHEER



Members of the Milwaukee Safety Commission's sub-committee take off their coats and dig into the work at hand. They are, left to right, Paul Johanning, Lester Lee, William Franklin, George Haislmaier, Joseph Malloy, Edward Gerlach, Edison Kleinstein, Alvin J. Horn and Alfred R. Gandrey.

“WANTED—An American city to invest \$1,000 a year, with a guaranteed annual return of \$30,000.”

How many municipalities would turn down an offer that promised a return of 3,000 per cent, and actually carried out this promise in hard cash? Not many, if the proposition were stated in such explicit terms. Yet thousands of communities are overlooking just such a profitable arrangement, simply because it bears the name “safety” rather than “investment.”

In the city of Milwaukee, a community of about three-quarters of a million, the methodical, analytically-minded city fathers saw long ago what most communities to this day have failed to see — that money invested in safety brings an immense return, not only in human lives preserved, but also in dollars and cents. First the theory was applied to public safety.

Mayor Dan W. Hoan, now rounding out his 25th year as chief executive of Wisconsin's leading city, organized the Milwaukee Safety Commission twenty years ago — the first municipal public safety body in the United States. Since that time untold human misery and countless thousands in property losses have been spared through the public safety program which has made Milwaukee the safest of America's larger cities.

In the fall of 1932 the Milwaukee
APRIL, 1936

Board of Estimates met to draft a budget for the following year. That, if one cares to remember, was about the time that the “outgo” of most cities was so far in advance of the income that no one ever expected the latter to catch up. Milwaukee was not without its problems, and when the customary budget was being drafted, the Board of Estimates picked every item to pieces to see whether it could be scaled down or eliminated.

Indicts Costly Mishaps

City Attorney Max Raskin pointed to an outlay of \$90,000 for compensation payments and medical expenses in city employees' injury cases, an expenditure which had been taken as a matter of course in years past.

“Here's where we can cut!” he exclaimed. “We've got to reduce our compensation costs.”

“How?” the board echoed.

“Well,” said Mr. Raskin, “we know accidents can be prevented. We've proved it through the work of the Safety Commission in public safety. Why not apply the same idea to city employees on an industrial basis?”

It had the ring of a sound idea, and before the Board adjourned, it had appropriated \$1,000 for the experiment. And for the first time in American history a municipality started to adapt safety measures to public employees.

The proposition was laid before the Safety Commission, and, with Assistant City Attorney Alfred R. Gandrey taking a leading part, an investigation into city employee accidents was begun. To the astonishment of those concerned, the departmental data on these accidents were so meager as to be valueless. Very often, in the case of a minor accident where the employee lost little or no time from his job, a departmental head knew absolutely nothing of the injury. Nor did anyone know how many accidents occurred in each department throughout a given year, or what the average cost of an accident was.

Apparently it was a fertile field for safety education and safety work, and the Safety Commission lost no time. Immediately a sub-committee was organized to plan and direct a safety program for municipal employees. Every city department was represented on the sub-committee, though not by department chiefs. The original personnel, still in

office, includes Paul Johanning, Department of Public Works; Lester Lee, City FERA Projects; William Franklin, Bridges and Buildings Bureau; George Haismaier, Bureau of Sewers; Joseph Malloy, City Service Commission; Edward Gerlach, Garbage Collection Department; Edison Kleinstuber, Fire and Police Alarm System; Alvin J. Horn, School Administration; and Alfred Gandrey, Assistant City Attorney.

A lecture course to promote safety consciousness on the job was the first step. Eight speakers addressed meetings of department heads on such subjects as the use of hand tools, piling stock, carbon dioxide, and the use of machinery. An industrial poster service was started, and the posters were put to work on 90 boards. Periodic special bulletins, explaining hazards peculiar to certain departments, supplemented the posters. Personal interviews were held with accident victims or with accident-prone employees.

Positive Records

But most important of all, a simple, effective system of recording accidents was instituted.

Now every accident, regardless of how minor, is reported to the office of the City Attorney on a detailed form. Monthly records are maintained, listing first the number of the injury case, then the name of the employee involved, the city department to be charged with the accident, the nature of the injury, how it occurred, and the cost of compensation, cost of medical treatment, and wages paid during the time lost from the job.

At the end of the month these entries are transferred, in somewhat less detailed form, to large annual record sheets, the size of newspaper pages. Thus a complete picture of the municipal accident situation is always available.

Each month reports are sent to all department heads, city officials, and aldermen. These reports list each department and bureau, together with the number of injuries charged to that department for the month, and the comparative figure for the same month of the previous year. This phase of the reporting system strikes close to home. Department heads are able to compare their statistics with those of another department employing the same number of persons and doing somewhat similar work. Thus safety competition arises, and department heads make it a point to keep posted on all accidents which occur and all bulletins issued by the Safety Commission's sub-committee.

Aldermen, too, take a personal interest in the accident figures and thus exert a valuable force in the program.

With this program established, the sub-committee did not consider its work completed. Instead, it found that it could fulfill a very important function by perpetuating itself.

At the end of each month the sub-committee analyzes the current accident reports. In some cases little or nothing can be done to correct the accident cause. For example, as long as persons continue to violate city ordinances, police officers are likely to incur scratches or contusions in making arrests. And as long as fires continue to break out, a certain number of firemen will be injured by falling debris or overcome by fumes. But there are many cases about which the committee can and does do something.

An outstanding example is the poison ivy trouble experienced at one time by park workers. In addition to putting poison ivy warning posters on display where all park workers might see them, the committee arranged meetings in the parks, where the employees were shown actual samples of the noxious plant and told how to distinguish it from harmless weeds.

In another type of accident several teamsters in the waste collection service had been injured. Because of the frequent stops necessary in this work, it was illogical for the teamsters to keep climbing from the ground to the wagon seat and back again. They had, instead, walked beside the wagon, grasping the reins to guide the horses. The trouble occurred when the horses became frightened, dashing away and jerking the teamster against the wagon or beneath the wheels. The sub-committee puzzled over this for a long time. Then the solution occurred. The reins could be lengthened. This would enable the driver to remain on the ground, but walk *behind* the wagon, thus avoiding any possibility of injury beneath the wheels.

Under this diagnostic method of attack, accidents have been dropping off rapidly.

Recently the sub-committee sent "Safety Suggestion Cards" to every city employee. These contained spaces in which hazards peculiar to the individual departments might be listed, together with the employee's suggestion for a remedy. Many worth-while ideas have been received in this manner. As an outgrowth of the "Safety Suggestion Card," the city building inspector is working on a plan to standardize the location of water meters in every new home built.

and to make these locations easily accessible to the meter reader. Gradually it is planned also to re-locate the meters in the older homes, so that fewer city employees will be injured by having to venture into unlighted, dangerous corners.

Another example is the effort to standardize waste containers to eliminate hazards in the waste collection service. Under this program all make-shift receptacles and all battered, leaky containers will be condemned.

Some of the safety suggestions are used as a basis for appropriation requests to the Board of Estimates.

First aid work is in progress, and the sub-committee intends that every city employee be instructed in the fundamentals of this procedure. In 1935 ten men qualified as instructors in the standard Red Cross first aid course. These instructors will disseminate first aid knowledge throughout the staff of city employees.

While this is a comprehensive program, it is still far from ideal, in the eyes of B. L. Corbett, executive secretary of the Milwaukee Safety Commission, through whose hands most of the detailed administrative work passes. Now emphasis is placed on establishing safety consciousness. Eventually it is hoped to broaden the work, incorporating periodic physical examinations and other factors which have proved valuable in an industrial safety program.

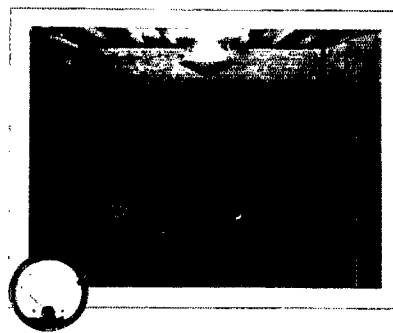
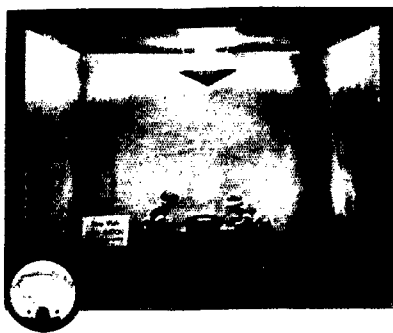
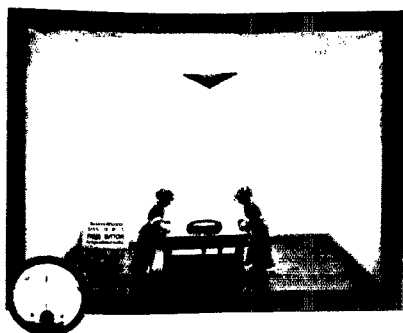
Proves Its Worth

But even if it has not been perfected, Milwaukee's safety program for city employees has accomplished a worth-while task during the three years of its existence. First of all, it has reduced human suffering in great part. Secondly, where the municipal budget for employee accidents formerly mounted to \$90,000 a year in round numbers, it now rests at about \$60,000—a return of \$30,000 on an investment of \$1,000.

When it is considered that some 10,000 employees, ranging from police officers and pick-and-shovel workers, to school teachers and librarians, are affected, it may readily be seen that Milwaukee has accomplished a great deal with a nominal sum of money. Furthermore, the city has pioneered the way to a sound method of budget cutting.

"Doc" Corbett agrees that the faith placed in the program by the city fathers has been vindicated.

"Any city could use a safety engineer to advantage," he says, "and he would save the city time and again the amount of his salary."



The Sight-Meter Tells the Story

Tests Show Paint's Value as an Aid to Lighting

INCREASING the amount of illumination does not necessarily insure good lighting in factory, office or home. Illumination engineers have pointed out that strong light in a dark, dingy shop does not produce good seeing conditions. Light, to meet the fundamentals of good seeing must comprise (1) an adequate source; (2) a suitable reflecting surface, and (3) sufficient diffusion to avoid glare. In industry, walls and ceilings constitute the principal reflecting surfaces. They must also contribute in diffusing or spreading light.

The familiar automobile headlight at night as opposed to that same headlight seen in the daytime will probably remain a classical illustration of the relationship of light to its background. Against a bright and diffused daylight it presents no discomfort, but at night it is a source of severe glare. This condition is to a degree duplicated in many industries. Where it exists, operators' movements are always slower and less sure. Ample illumination has the effect of magnifying an object, and moving parts appear to be moving more slowly where light is good. Note also how much more confidently you drive at night on the white concrete highway where the flood of light is reflected and distributed by the white surface.

In tests conducted in the Sherwin-Williams Laboratories, the camera has caught a most interesting story showing the values of light reflection. The sight meter confirms what the camera recorded.

With the same amount of illumination, the intensity of light recorded by the sight meter ranged from one to 22½ foot candles.

In the unpainted room, due to the low reflection value of the walls and ceiling, the sight meter registered only one foot candle.

In the dirty room, which had been painted at one time, the surfaces had become so soiled that they reflected but little light. The reading was only four foot candles.

In the room painted white for maximum light reflection, the meter jumped to 22½ foot candles.

Translated to the industrial plant, these pictures emphasize the value of the proper use of white paint and its relation to reducing eye strain with its attendant ill health and lowered output. They also point out how shadows, glare and too low light levels may be avoided by adequate light reflection.

Paint has other definite functions in industry besides illumination in the promotion of safety. Severe moisture conditions and wet, slippery floors present definite hazards to employees moving about. These hazards are greatly reduced in a clean, sanitary plant where paint is utilized to control moisture, dirt, darkness and disorder. Employees in a well painted plant keep it clean and keep it in order.

Feeding of calenders in paper mills, and passing paper over the driers have been the cause of frequent accidents. So much so that progressive mills have tackled these and other hazardous operations from two angles. They have increased the level of illumination, and also adopted color effects. The moving parts are given a color contrasting with the pastel shades used on the machines.

In many plants, red is applied to all dangerous moving parts, and operating levers are given an identifying color to promote sure and safe movements of machine operators. Huge power presses in automobile and other plants use red on the bottom of press rams and red on belt guards. Many plants use red on conveyor trucks, dangerous chemical containers, crane lifts and other dangerous and moving items. High visibility for crane hooks and plant trucks leads many wide-awake operating divisions to use a bright orange on these surfaces.

Another outstanding function of paint is the promotion of safety in marking aisles, storage zones and passageways where overhead cranes might cause accidents. Orange is used where overhead cranes present a hazard. White is used for other safety aisles. It is interesting to observe the respect workers have for

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REFLECTION VALUES OF PAINT COLORS

	Per Cent
White	89
Ivory	82
Canary Yellow	77
Cream	77
Caen Stone	76
Orchid	67
Cream Gray	66
Ivory Tan	66
Sky Blue	65
Buff	63
Pale Green	59
Shell Pink	55
Bright Sage	52
Silver Gray	46
Olive Tan	43
Forest Green	22
Cocoanut Brown	16
Black	2

Safety Council Launched at New York Conference

By ROGER WILLIAMS

Chairman, General Conference Committee, Seventh Annual Greater New York Safety Conference

ONE of the most gratifying reports of the Seventh Annual Greater New York Safety Conference was that of the attendance committee. More than 6,000 representatives of industry and institutions in and around New York were present—the largest attendance yet recorded. The first of the conferences had an attendance of only 700.

Another forward-looking step was taken at the Conference this year when the Greater New York Safety Council, Inc., was presented to the public. This Council will be able to coordinate, develop and finance a broader program, to reach more individuals in the area, continuing the campaign of education and prevention. Campaigns such as that of the New York Police Department will be able to accomplish even more when supported by such a Council. The public will have an opportunity to enlist in this organization, attend future Conferences organized and managed by it, and receive the services it will be prepared to render.

The major theme of the Conference this year was expressed in the title of the first session, "Safety Marches On."

Our slogan, "It's Intelligent to Be Safe," was launched in our pre-conference publicity, and it caught the public fancy immediately. The second day after its release the New York Sun ran an editorial entitled, "Popular Game," in which it described the antics of the "gutter-stander," a person who, oblivious of danger, disregards traffic lights, moves into the gutter and stands poised for an opportunity to dart out. He causes cars to stop suddenly to keep from running him down, thereby causing rear-end collisions. Within a few days after the publication of the Sun's editorial a number of letters appeared in the columns of this newspaper, praising the Sun for calling attention to traffic disrupters of this nature. Each writer announced that he or she would take care not to be a gutter-stander. It was interesting to note that every writer in some way used our slogan, "It's Intelligent to Be Safe."

As in past years, the Conference this year was conducted under the sponsorship of the Metropolitan Chapter of the American Society of Safety Engineers, Engineering Section, N. S. C., and more than 80 other cooperating organizations, such as the American Red Cross, Automobile Club, the Board of Education of the City of New York, the Boy and Girl Scouts, nurses associations, Camp Fire Girls, Boys' Club, welfare bodies, police departments, industrial and engineering associations, and parent-teacher associations.

Characterizing the motorist as a modern Dr. Jekyll and Mr. Hyde, Dr. Ralph W. Sockman, minister of Christ Church in New York, who delivered the keynote address of the Conference, said, "The motor car and improved roads give human beings a chance to escape from daily routine, and the quiet gentleman of the office becomes the speed maniac of the highway. An auto-intoxication prevails which often plays havoc with sound judgment and consideration for others.

"We have made better progress in perfecting the horsepower of our machines than in developing the manpower for their control. As a result we have silent motors and lawless mobs, smoothly running cars and accident-marked roads. It is time that we began applying the genius of America to the development and safeguarding of the human factors of work and travel."

Shock Psychology

Counseling against the shock psychology which has marked accident stories of recent months, Dr. Sockman pointed out that people can be awakened by fright, but that they cannot be kept in a healthy state of wakefulness by that method.

"A frightened driver," he said, "is almost as dangerous as a reckless one. We must develop carefulness without timidity, and confidence without rashness. This requires a program of safety education—sane, persistent and universal.

"It requires intelligence. The leaders of this Conference were wise in choosing for their slogan, 'It's Intelligent to Be Safe.' The one thing that the modern young person dislikes above all others is to be thought 'dumb.' It is excellent strategy to picture safety as a matter of intelligence rather than of morals or policy. We must keep Dr. Jekyll *in* control and Mr. Hyde *under* control."

Dr. Miller McClintock, director of the Bureau of Street Traffic Research at Harvard University, pointed out that streets not only govern the trade efficiency and the safety of individuals in a community, but that they also serve as the community's greatest recreational asset, opening the way to travel and excursions.

A Profitable Investment

Lew R. Palmer, conservation engineer for the Equitable Life Assurance Society, spoke on "Street and Highway Safety—A Community Problem," describing the work of the National Traffic Safety Contest.

"In 1934," he said, "the insurance companies paid out more than \$400,000,000 on 101,000 accidental deaths and the accompanying injuries (not including the millions paid for property damage). The figure would have exceeded \$600,000,000 had not more than 54,000 lives been saved during that year through the cumulative effect of organized accident prevention effort, largely brought about by the National Safety Council and our affiliated Councils. This annual saving of more than \$200,000,000 indicates that safety is one of the best investments that insurance companies can make."

Despite the publicity competition offered by one of the most distressing elevator strikes ever experienced in New York, the Conference won space on the front page when Captain William M. Kent, commanding officer of the Safety Bureau of the New York Police Department, made the statement that "an antiquated code of traffic regulations, designed for the horse-and-buggy days, is being revised in substantial harmony with recommended uniform standards to comply with modern conditions, and this should prove a valuable contribution to better conditions on streets and highways of New York City."

He explained that speed limits would be raised from fifteen miles an hour in congested areas to 25, and from 20 in outlying districts to 30 miles an hour. He added that "express" streets are being planned.

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NATIONAL SAFETY NEWS

Water and Fatigue

Provision for replenishing the body's water supply becomes increasingly important as summer approaches

THE importance of water can be better realized when it is recalled that water constitutes two-thirds of the weight of the human body. In view of this it is essential not only that sufficient water be absorbed, but also that this water be pure.

Impure water can cause many serious diseases such as dysentery, diarrhoea, typhoid and cholera. If the water supply is pure but the method of dispensing is not sanitary, diseases such as colds, influenza and diphtheria may be transmitted from one person to another.

In most industrial plants and offices the problem of purity is not particularly troublesome, since the sanitary quality of city water is generally reliable. In



Many offices, stores and factories are modernizing their drinking fountains.

General Electric Co.



This fountain with a guarded jet which cannot be touched with the lips provides water at regulated temperature. Artificial cooling is usually more economical than leaving a tap running.

Frigidaire Corp.

small towns, however, where there is no official water analysis, or where the plant has an independent water supply, it is advisable to analyze the water periodically. If the plant itself has not the means for such an analysis, samples may be sent to laboratories, to universities or to city or state health departments. These laboratories will give instructions as to the proper method of taking samples and the type of container to use.

In plants where the plumbing is old it is also advisable to provide for analysis of the drinking water.

While city water is generally free from contamination, it may contain sediment, and for this reason some plants have provided their cooling systems with filters. Where this practice is followed the filter should be cleaned frequently.

If the quality of the drinking water is questionable, provisions should be made for boiling or distilling it. The resultant flat taste can be offset by bubbling air through the water.

Since modern water-cooling equipment permits convenient use of bottled water, a ready solution to the purity problem is offered those whose drinking water requirements are not too great.

But assurance of the purity of the water is not enough. The temperature, too, must be right if the employee is expected to use the water provided. For example, a perspiring workman, offered his choice between a glass of luke-warm, sanitary bottled water and one of cool water of doubtful quality, would invariably choose the latter.

In the summer time the problem of temperature is particularly pressing. Water that is too cool may cause painful

cramps, while water that is insufficiently cool will fail to give the relief from fatigue that a worker desires. Generally speaking, water should not be cooler than 45 degrees F., and 50 degrees is the preferable temperature for both office and factory workers.

How may this ideal temperature be maintained? Some plants have attempted to cope with the problem by letting the water run at the bubblers, but this method is likely to prove far too costly in the long run, particularly where there are many outlets. The ideal arrangement is to have individual coolers at each outlet. This will assure proper temperature of the water upon delivery at the nozzle. A system found practical in large industrial plants where there are numerous outlets is a circulatory system operated from a central cooler. In a system of this sort it is important to make sure that fountains are not located on dead-end pipes, for such connections will permit water to collect near the fountain and become warm. It is well to remember also that ice should never come in direct contact with the supply of drinking water.

Equally important with purity and temperature is accessibility. Unless enough outlets are provided, one of two things will happen. Either the employees will not drink enough water, or they will drink at the expense of time lost from their jobs. This is a matter of dollars and cents in plant efficiency, for unless water is accessible, there may be a loss either through fatigue or through wasted time.

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Evanston's Safety Record Wins Another Grand Prize

Milwaukee is again winner in Group I of National Traffic Safety Contest

FOR the second time since the National Traffic Safety Contest was launched four years ago the city of Evanston, Ill., a suburb of Chicago, has won a clear title to the grand prize.

The award was announced following a meeting in New York of a committee of judges composed of Thomas H. Mac Donald, chief of the U. S. Bureau of Public Roads, Washington, chairman; Harold S. Buttenheim, editor, *American City Magazine*, New York; Dr. Miller McClintock, director, Bureau of Street Traffic Research, Harvard University, Cambridge, Mass.; and Dr. C. H. Watson, president of the National Safety Council.

Working in close cooperation with the National Safety Council, Evanston has consistently remained near the top in the contest activities.

In 1932 Pittsburgh and Evanston were tied for the grand prize. The award was won by Evanston in 1933, by Milwaukee in 1934, and again by Evanston in the past year.

In addition to the grand prize, awards were made in six divisions of the contest.

Milwaukee won first place in the Group I classification, for cities of more than 500,000 population. New York placed second in this group and Chicago third. San Francisco and Detroit were given honorable mention.

Providence, R. I., was the winner in Group II, cities between 250,000 and 500,000 population. St. Paul, Minn., was second, and Seattle, Wash., third. Jersey City, Denver and Birmingham, Ala., won honorable mention.

Syracuse, N. Y., placed first in Group III, cities between 100,000 and 250,000 population. Lynn, Mass., won second place, and Spokane, Wash., third. Honorable mention was given Utica, N. Y.; Duluth, Minn.; Fall River, Mass.; Somerville, Mass.; and Wilmington, Del.

In Group IV, cities between 50,000 and 100,000 population, Evanston won first place. Allentown, Pa., was second, and Holyoke, Mass., was third. Cities winning honorable mention were Greensboro, N. C.; Oak Park, Ill.; Binghamton, N. Y.; Brockton, Mass.; and Atlantic City, N. J.

Superior, Wis., placed first in Group

V, cities between 25,000 and 50,000 population. Tucson, Ariz., placed second, and Central Falls, R. I., was third. Honorable mention cities were Oshkosh, Wis.; Everett, Mass.; Elgin, Ill.; Joliet, Ill.; Stamford, Conn.; Pensacola, Fla.; Hackensack, N. J.; Plainfield, N. J.; and Parkersburg, W. Va.

Swissvale, Pa., was first in Group VI, cities between 10,000 and 25,000 population. Second in this group was Roselle, N. J., and third, Pampa, Texas. Cities in this classification which received honorable mention included Massena, N. Y.; Grand Island, Nebr.; Brainerd, Minn.; La Grange, Ill.; Austin, Minn.; Fairmont, W. Va.; Mt. Lebanon, Pa.; Ossining, N. Y.; Ventura, Calif.; Fairhaven, Mass.; Rochester, Minn.; Hibbing, Minn.; Beatrice, Neb.; South Orange, N. J.; Astoria, Oregon; and Pekin, Ill.

STATES as well as municipalities were judged in the traffic contest, Illinois winning first place in the Class A group. New Jersey and Massachusetts were given honorable mention. In Group AA Minnesota placed first, honorable mention going to Georgia and West Virginia. Delaware was first in Group AAA, Arizona and Nebraska winning honorable mention.

A total of 801 municipalities and 33 states took part in the contest, the purpose of which was to bring suitable recognition to communities which made constructive strides in overcoming their traffic accident problems and to the states in which these cities were located.

In determining the winners the element of chance was largely removed by an unusually thorough system of grading. Many items were studied in determining the amount of work done by the participating communities. The motor vehicle death rate was considered, and also the reduction in this rate compared with the average of the three preceding years. A maximum of 50 points was allowed for this item.

Other factors involved in the judging of the contest were accident reporting, for which five points were the maximum allowed; traffic engineering, a maximum of ten points; traffic law enforcement,

fifteen points; child safety, ten points; and public education, ten points.

Thus two types of accomplishment in safety work were recognized in making the awards; first, a low death rate from motor vehicle accidents and a reduction in the death rate from the previous year's mark; and second, activities designed to place a further curb on the traffic mortality. The latter item included the enactment of regulations, the establishment of administrative machinery and the promotion of educational activities.

The bi-lateral nature of the contest not only places a premium on a splendid statistical record, but also offers recognition for activity which will affect the future safety standards of a community.

This Sign Promises Highway Courtesy



FOUR large display trucks recently purchased by the Caterpillar Tractor Company, Peoria, Illinois, to carry its exhibit material around the national circuit of distributor's schools carry reassuring messages to motorists on the highway. At the rear of each truck, in bold lettering, is the following:

"Caterpillar equipment builds and maintains roads. Sound horn—Half of this one is yours."

Members of the training department crews who man the bright yellow trucks have received detailed instructions relative to safe driving. Schedules have been arranged to cut night driving to a minimum. Fast driving is taboo.

In the accompanying picture, M. E. (Cap) Jenks, member of the training department, is pointing to the guarantee of highway hospitality on the truck.

NATIONAL SAFETY NEWS

On to Atlantic City

The Scene of the Twenty-fifth Annual
Safety Congress—October 5-9, 1936

ATLANTIC CITY has been chosen for the Congress city of 1936. Because of this famous resort's popularity as a convention city, a compromise on dates had to be arranged, and finally the week of October 5 to 9 was decided upon.

The Congress comes to Atlantic City at the whole-hearted invitation of the leading organizations and industries of New Jersey and many of the leaders in business and public life, including Governor Harold G. Hoffman.

* * *

Atlantic City's hotel facilities will be ample for all the needs of the Congress. Sessions will be held in the Convention Hall and the Ambassador, Chelsea and Ritz-Carlton Hotels.

* * *

One of the developments of the 1935 Congress was the unusual number of employee delegates in attendance. Unfortunately, employers did not let Council headquarters know in time how many

would be present, and the Congress committees were not able to arrange any special programs for the employee delegates. This year's plan will include them. After the Congress, a report will be made to member companies telling of the number of worker delegates in attendance, the interest shown, etc.

Even before the time and place of this year's Congress was announced, Philadelphia Works of the General Electric Company announced in the Philadelphia Works News that two employees would be sent as delegates.

Every employee in the plant has an opportunity to be selected for this honor. The conditions that will determine the eligibility of the candidates are: That the employee himself be free from accidents and by thought and action show his interest in the promotion of safety for the benefit of others.

To assist the employee in submitting safety ideas, a memo book is being placed at the foreman's desk in each department. Any suggestions which are to be offered may be written in these books

at any time during the day. These books have no connection with the regular suggestion system of the company but are designed exclusively for the expression of thoughts by employees. After the suggestion has been written in the book, the foreman will send one copy of the suggestion to the Personnel Department for record and follow-up purposes.

Safety Takes the Field

(Continued from page 20)

Graham, of Detroit, who attended the University of Michigan, and immediately afterward became engaged in personnel and industrial safety work for the Ryerson Steel Corporation, Chicago. From 1925 to 1926 he was safety engineer for the Packard Motor Car Company; from 1926 to 1928, safety engineer for the Detroit Industrial Safety Council; and since that time safety engineer for the Detroit Board of Education.

District No. 5, which includes Illinois, Iowa and Wisconsin, is under the supervision of Mr. Stricker who will make his headquarters at the office of the National Safety Council in Chicago.

Field secretary for District No. 6, Nebraska, Kansas, Missouri, Arkansas, Oklahoma and Texas, is Lloyd A. Blanchard, of Belmont, Mass. From 1919 to 1924 Mr. Blanchard was in charge of employment and safety at the National Equipment Co., Springfield, Mass.; from 1925 to 1929, manager of the Springfield Safety Council; and from 1929 to 1935 was head of the state-wide highway safety program as executive secretary of the Massachusetts Governor's Committee on Street and Highway Safety.

Charles E. Babcock, of Minnesota, is in charge of District No. 7, embracing Minnesota, South Dakota, North Dakota, Montana, Wyoming, Utah, Colorado, Arizona and New Mexico. Mr. Babcock was formerly highway commissioner of Minnesota and past-president of the American Road Builders' Assn.

Included in District No. 8 are Washington, Oregon, Idaho, Nevada and California. This area has been assigned to Ralph W. Robinson, of San Francisco, who served as executive secretary of the San Francisco Traffic Survey Committee from 1926 to 1931. This organization brought about many major improvements in San Francisco's system of traffic control. During this period, Mr. Robinson was also identified with various state-wide programs to reduce traffic accidents. More recently he served as western field auditor of the Traffic Audit Bureau, Inc., of New York.

HOTELS AND RATES*

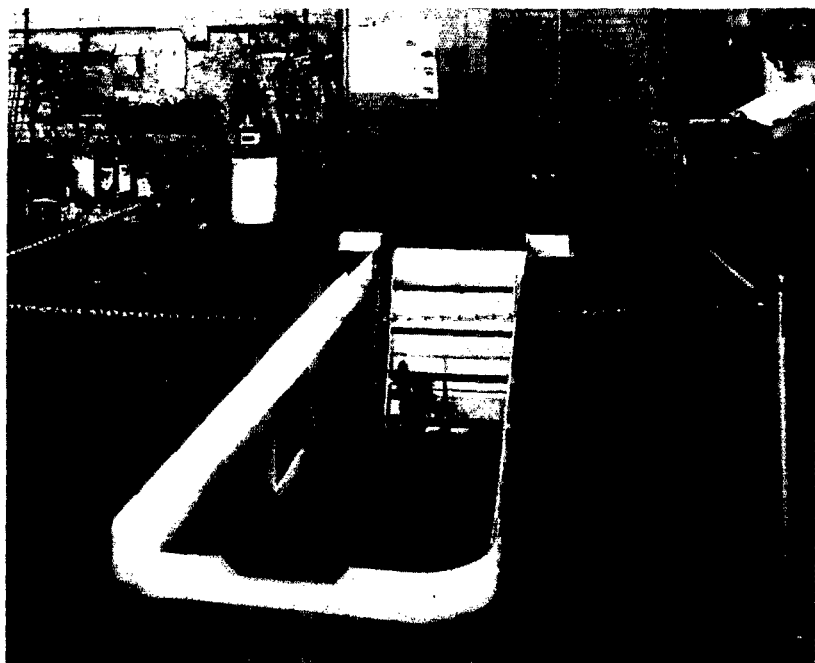
Hotel	Single	Double	
AMBASSADOR	\$3.00 to \$6.00	\$6.00 to \$10.00	All double rooms with twin beds. 2 Room Suite—\$12.00 and up.
CHELSEA	3.00 to 6.00	5.00 to 8.00	2 Room Suite—\$6.00 and up. \$2.50 single and \$4.00 double rooms without bath.
RITZ-CARLTON	3.00 to 5.00	6.00 to 10.00	2 Room Suite—\$10.00 and up. 1 to 4 persons.
Traymore	4.00 to 10.00	6.00 to 12.00	3rd person in double room, \$2.00 daily.
Shelburne	4.00 to 6.00	6.00 to 8.00	2 Room Suite—\$8.00 and up. 1 to 4 persons.
Dennis	4.00 to 6.00	6.00 to 10.00	
Brighton	4.00 to 5.00	6.00 to 8.00	Adjoining parlor, same rate as "single" room.
Chalfonte- Haddon Hall ..	3.00 to 8.00	5.00 to 10.00	All double rooms with twin beds. Two rooms with connecting bath, \$8.00 for 3 persons; \$10.00 for 4 persons.
Claridge	4.00 to 6.00	6.00 to 8.00	10 large rooms—3 or 4 persons— \$2.00 per person.
Knickerbocker ..	3.00 to 4.00	5.00 to 7.00	
New Belmont	2.50 to 3.00	4.00 to 6.00	Practically all rooms with twin beds.
Seaside	3.00 to 4.00	5.00 to 6.00	2 Room Suite—4 persons—\$2.00 per person.
Jefferson	3.00 to 3.50	5.00 to 6.00	2 Room Suite—4 persons—\$3.00 per person.
Madison	3.50 to 4.00	5.00 to 7.00	2 Room Suite—2 persons @ \$3.00 per person; 4 persons @ \$2.00 per person.
Monticello		5.00	
Colton Manor	3.00 to 5.00	5.00 to 8.00	
Morton	3.00 to 4.00	5.00 to 6.00	
Franklin Inn	2.50 to 3.00	4.00 to 5.00	2 Room Suite—\$8.00 and up.
Richfield	2.00 to 3.00	4.00 to 6.00	
Ludy	3.00 to 4.00	5.00 to 7.00	
Grossman's	2.50 to 3.50	4.00 to 6.00	
Lafayette	3.00 to 4.00	5.00 to 7.00	

*All rooms with bath unless otherwise specified. Listed hotels located on the Boardwalk or within the adjoining city blocks.

Rooms at lower rates, and at other than listed hotels, may be obtained by writing directly to F. M. AMSTUTZ, Secretary, Atlantic City Safety Council, Board of Education Bldg., Atlantic City, N. J.

THE SAFETY EXCHANGE

—"A ROUND TABLE IN PRINT"—



Drain Pit Thoroughly Guarded

Thoroughly protected by mechanical safeguards is this automobile drain pit. Chains attached to stalwart iron posts prevent persons from falling into the open pit.

Beyond the steps, at the bottom of the pit, is an electric fan which draws fresh air into the pit whenever the latter is in

use. It circulates the air constantly, displacing carbon monoxide gas which may settle to the bottom of the pit.

Note the metal toeboards around the pit to prevent objects from falling into it while men are at work. The article and photograph were received from Clay Bartlett, transportation superintendent, Appalachian Electric Power Company, Charleston, W. Va.

Fireproof Container for Oil Filters and Blotter Presses

To avoid the fire hazard caused by keeping blotters in cardboard cartons, a container with a separate compartment for rags has been developed. It is divided into two compartments, the top for oily rags, and the bottom, which has a door similar to a range oven, for a stock of blotter paper. This compartment assists the operator as he has one place for both rags and blotter paper. This device was developed by J. G. Wilson, of the West

Penn Power Company, Pittsburgh, who will be glad to furnish details to anyone interested.

Safety Light for Crane Repairmen

To indicate that the main switch on the crane is out, a switch is located in the switchbox to control an indicating light. When the main switch is thrown, a lever automatically makes contact to throw on this light and warn repairmen.

The ideas presented here have proved helpful. If you have developed some useful device or method send in a description, with illustration, if possible. These devices are home-made and are not available commercially

Serviceable Tool Rack from Scrap Lumber

This portable tool rack was made from scrap lumber. It holds the tools firmly, and permits the easy selection of the right tools.



Beq Pardon

Through an oversight the Consolidated Gas Company of New York was credited with devising a man-hole cover lifting hook illustrated in the Safety Exchange of the March issue of the NATIONAL SAFETY NEWS. The New York Edison Company perfected the device and should have been so credited.

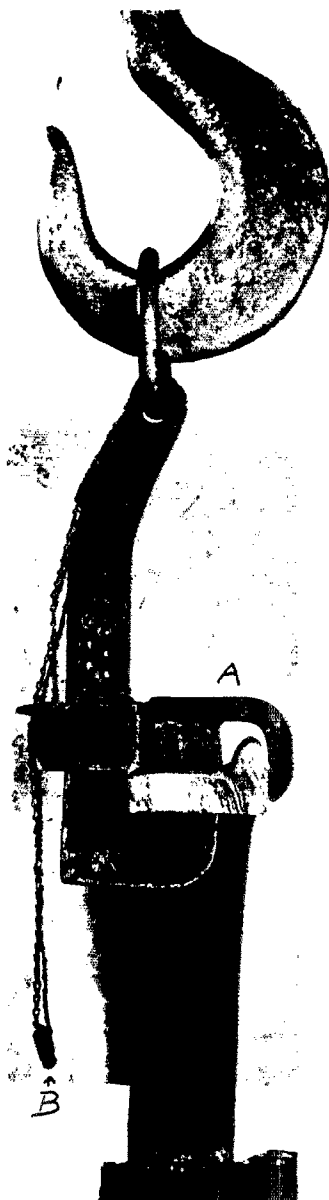
NATIONAL SAFETY NEWS

Life of Hose Lines Easily Prolonged

Here is a simple method of prolonging the life of hoses and feed lines. Pieces of old hose, of slightly larger dimensions than the one being protected, are cut off in widths of $1\frac{1}{2}$ inch or more. These pieces are placed over the hose at points where the hose might come in contact with the ground or some other object and be subject to wear. The protecting pieces may be either slipped over the end or cut lengthwise and placed around the hose in the desired position.

Special Crane Hook for Locomotive Tires

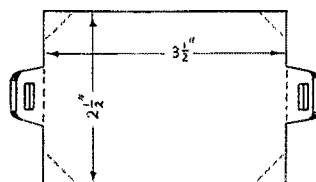
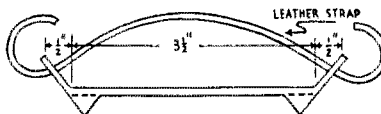
This ingenious device for handling train wheel tires safely is used by the



Chicago and North Western Railway. It operates as follows: When the crank hook is lowered, the latch "A" fits over the flange of the tire, while the rest of the tire fits into the slot. When the crane is lifted, pressure exerted by the tire against the device holds the tire in place. A pull on handle "B" will release the latch; however, when tires are stacked close together it may be necessary to lift latch by hand.

Safety Cleats of Simple Construction

This cleat is made of one piece of metal $3\frac{1}{2}$ inches wide and $2\frac{1}{2}$ inches long. The corners are bent down about



$\frac{1}{4}$ inch below the sole and heel of the footwear, and the strap lugs turned up about $\frac{1}{2}$ inch.

The cleat is strapped onto the foot with a strip of lace leather passed through the lug to loop over the instep, cross over the instep, and tie around the ankle. The cleat gives good protection against slipping and is inexpensive and simple to make. The Pittsburgh Coal Company developed this device.

Equipment Safeguards Street Workers at Night

To protect workers and to prevent automobiles backing into excavations or uncovered man-holes, Hamlin & Company, of New York City, calls attention to this equipment. It consists of four single standards of $1\frac{1}{4}$ inch pipe, each welded to a base composed of pieces of pipe welded in the shape of a cross. A small fork is welded at the top to hold a lamp. Lamps are used in groups of four to outline the job. To provide illumination as well as warning signals, three of the lamps are red and one is white. Drop lights are provided on separate extension cords, so they can be taken into any opening.

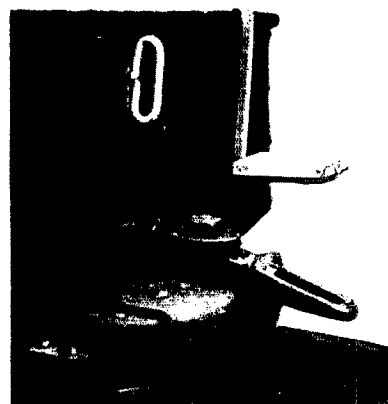
All the equipment is weatherproof, and where gases are likely to be encountered the lights are equipped with



vapor-proof fixtures. The standards shown are about six feet, six inches high, and the lamp when hanging from the fork is about six feet above the ground. This takes the glare out of the worker's eyes, and is at a good height to be observed by traffic.

Hand Hold and Portable Seat for Mine Car

To lessen the hazard of riding the rear car of a mine train is the purpose of the iron hand hold and portable brakeman's seat shown in the accompanying illustration. The hand hold is stationary while the seat, which hooks over the top, can be easily removed. The photograph was furnished by the United States Bureau of Mines.



THE SAFETY LIBRARY

By MARY M. WELLS  LIBRARIAN, N. S. C.

Silicosis

ANTHRACO-SILICOSIS AMONG HARD COAL MINERS. By J. J. Bloomfield and others. Published by the U. S. Public Health Service, 1936. For sale by the Superintendent of Documents, Washington, D. C. Price 25c. Pamphlet. (Public Health Bulletin No. 221)

Mortality from respiratory diseases was found to be much greater among anthracite workers than among the general adult male population of the country. The data indicated that underground work in the absence of dust did not predispose to fatal attacks of respiratory disease.

SILICOSIS AS AFFECTING MINING WORKMEN AND OPERATIONS. By D. Harrington. Published by the U. S. Bureau of Mines, Washington, D. C., 1936. Free. (I.C. 6867)

The author says "Stop the Dust" should be not only the slogan but also one of the major health and safety efforts of mining employers and employees, including those working in all kinds of dry mines. Ventilation is one of the most effective alleviating agencies, and the use of water is a close second."

Mines and Mining

COAL MINE EXPLOSIONS AND FIRES IN THE U. S. DURING THE FISCAL YEAR ENDED JUNE 30, 1935. By D. Harrington and W. J. Fene. Published by U. S. Bureau of Mines, Washington, D. C., 1936. Free. (I.C. 6870)

In the 20-year period preceding 1929, mine explosions and fires took an average toll of about 285 lives annually in the U. S. Since then the number of fatalities from these causes has been reduced to an average of 128. The fiscal year 1934 established an all-time low record—only 34 fatalities from explosions and fires compared with 65 in 1935.

Explosives

HOW TO USE PERMISSIBLE EXPLOSIVES PROPERLY. By D. Harrington and S. P. Howell. Published by U. S. Bureau of Mines, Washington, D. C., 1936. Free. (I.C. 6871)

Ethyl Gasoline

AN APPRAISAL OF THE LEAD HAZARDS ASSOCIATED WITH THE DISTRIBUTION AND USE OF GASOLINE CONTAINING TETRAETHYL LEAD. II: THE OCCUPATIONAL LEAD EXPOSURE OF FILLING STATION ATTENDANTS AND GARAGE MECHANICS. By Robert A. Kehoe, Frederick Thamann, and Jacob Cholak. In *Journal of Industrial Hygiene and Toxicology*, January, 1936, p. 42-68.

Among the conclusions reached in the present study is that the lead exposure associated with the handling and dispensing of gasoline containing tetraethyl lead at service stations of the prevailing type in the U. S. is negligible.

AN INVESTIGATION OF THE MORBIFIC PROPERTIES OF ETHYL GASOLINE. By Dr. Gerhard Lind. In *Journal of Industrial Hygiene and Toxicology*, January, 1936, p. 37-41.

The result reported may be considered as an expression that the use of tetraethyl lead as an admixture with motor gasoline in quantities hitherto used presents no danger of lead poisoning.

Foremen

BIBLIOGRAPHY ON FOREMAN IMPROVEMENT. Revised, 1935. *Vocational Education Bulletin No. 128 of the Office of Education.* For Sale by the Superintendent of Documents, Washington, D. C. Price 5c. (Pamphlet)

A selected and annotated list of references, including books, pamphlets, and magazine articles.

PERIODICAL REFERENCES

Accident Statistics

TREND IN FREQUENCY AND SEVERITY OF COMPENSATED INJURIES TO LEGS AND FEET. In *New York State Department of Labor, Industrial Bulletin*, February, 1936, p. 43-45.

Compensated injuries to legs and feet are discussed in this study, which is the fourth in a series of studies of trends in frequency and severity of different kinds of injuries. Eye injuries; injuries to head, neck and face with the exclusion of eyes; and injuries to arms, hands and

fingers were treated in preceding issues of the *Industrial Bulletin*.

Dusts

AN ELECTROSTATIC DUST COUNT SAMPLER. By E. C. Barnes and G. W. Penney. In *Journal of Industrial Hygiene and Toxicology*, March, 1936, p. 167-172.

An electrostatic dust count sampler and its portable power supply are described in detail.

Fire Protection

CROSBY-FISKE-FOSTER HANDBOOK OF FIRE PROTECTION. EIGHTH ED., 1935. Robert S. Moulton, general editor. Published by the National Fire Protection Association, 60 Batterymarch St., Boston, Mass., 1936. Price \$4.50. (Book)

This is a complete revision of the seventh edition, published in 1924, with detailed treatment of the numerous new developments in the fire protection field during the past eleven years. Like the preceding editions, beginning with the first book published in 1896, the present edition aims to provide in compact form the essential information on fire prevention and fire protection that time has crystallized into good practice.

Welding

THE TOXICOLOGY OF OXY-ACETYLENE WELDING. By Z. T. Wirtschafter and E. D. Schwartz. In *Journal of Industrial Hygiene and Toxicology*, March, 1936, p. 158-162.

Asked and Answered

SAFE SOLVENTS

QUESTION: We use benzol or trichlorethylene as solvents to dissolve tar, paint and grease in felt, the method being a spotting process. Both of the above solvents involve a fire and health hazard. Can you advise us of any absolutely safe solvent for the above purposes that we can use instead of the solvents we are now using?

ANSWER: Some dry cleaning establishments use carbon tetrachloride for spotting operations similar to those you mention. Others use a
(Please turn to page 66)

NATIONAL SAFETY NEWS

INDUSTRIAL HEALTH

A Non-Technical Symposium for Physicians and Laymen

What's in Your First Aid Kits?

By MURRAY D. SMITH

Davis Emergency Equipment Company

FIRST aid is the immediate temporary treatment given in case of accident or sudden illness *before* the services of a physician can be secured. It has definite limitations which the trained first aider always respects.

There is obviously a difference between first aid as administered in a dispensary by a trained attendant, such as a nurse, and that administered on the job by a fellow worker or foreman with a limited practical knowledge of the subject. Contrast the requirements of a public utility truck crew or the few men in a petroleum company's retail service station with those of the nurse working with tables, chairs, hot and cold running water available, and you will realize that an entirely different type of first-aid dressing and container is necessary for the plant dispensary than for men in the field.

Curiously enough, the industry in which the idea of the unit system of individual dressings originated has not made extensive use of it. It is interesting to recall how and why the unit system was devised.

In the early 1920's a young engineer just out of school was employed as an erection engineer by a construction company. He worked on several of the steel buildings which were the beginning of New York's present uptown skyline. Twenty years ago safety work had not reached its present state of development and the accident rate among steel workers was high. Not only were fatalities numerous, but also, judging by today's standards, the number of non-fatal injuries was excessive. Fractures, burns, deep wounds and other serious injuries

required treatment on the spot.

The engineer of this story was always the first aid man wherever he was employed. After countless rolls of gauze had unrolled and become contaminated before they could be applied as compresses, and numerous bottles of iodine had been dropped on the floor and broken, he became more and more impressed with the inadequacy of the surgical dressing type of first aid kit for first aid under conditions found on the job.

So he devoted a great deal of thought to the subject and his wife used up a great deal of cotton and spent much time at the sewing machine in developing a system patterned after the army first-aid kit. It consisted of individual dressings prepared for use in such a way that there would be no contamination, no waste and no half-used materials to be returned to the box in a condition which would invite infection if they were used again. When this type of dressing was placed on the market some fifteen years ago it was not the building industry but the public utility companies which gave it an enthusiastic welcome.

Studying Industry's Needs

In its original form the unit system was adequate to take care of most of the injuries usually encountered. Manufacturers of first aid supplies have since studied the needs of the various industries and have developed products especially designed for those operations where the facilities of a well equipped first aid room are not always available immediately.

The exhibits which have been held at the annual safety congresses and at regional conferences have shown the great

variety of first-aid equipment now on the market. Kits range from the pocket variety with a few simple supplies to the larger boxes to be carried on trucks. Their contents can be planned to suit the requirements of the job and the preferences of the company in selecting a first aid antiseptic or a burn dressing.

Many companies call for special items, such as washes for creosote burns and effervescent phosphate of soda. In some parts of the country men working in isolated locations carry the facilities for treating snake bite. In fact, any recognized first aid remedy which can be entrusted to the layman is now obtainable from the manufacturers and distributors of first aid equipment. Any assortment of dressings and remedies can be secured in a container designed to meet the purchaser's requirements. Heavy duty, weatherproof and waterproof boxes are supplied where the conditions on the job demand them. Many companies order kits in large quantities with their own name and emblem lithographed on the boxes. Instruction sheets are furnished with many kits.

The unit system is now practically the only type used by the public utility industry. The petroleum industry, a leader in both safety and first aid work, has found it ideal for use on trucks, barges, service stations, bulk plants, compressor stations, and even at terminals and refineries.

Among the most important purposes of first aid are the reduction of suffering and lost time to the victim and the reduction of compensation and medical costs to the company. The unit system of individual dressings aids in this objective by providing equipment that can be handled easily and effectively by even untrained personnel.

First Aid Stirs Plant-Wide Interest

Sixty-two employees of the American Rolling Mill Company, Middletown, Ohio, completed a first aid training course given by the Bureau of Mines last fall, and in turn they have given first aid training to 3,176 employees of the company since October 7, 1935.

Abstract of a paper read at the Seventh Annual Greater New York Safety Conference.

APRIL, 1936

PHENOL (Carbolic Acid)

Industrial Data Sheet D-Chem. 3

A. Problem

1. What are the hazards of phenol and what precautions are necessary in its use?

B. Hazards

2. The principal hazards are the possibilities of burns and of poisoning by contact with or by swallowing the chemical in solid or liquid form.

C. Discussion

3. Phenol when pure is a white crystalline mass with a creosote odor. It is also known as carbolic acid, phenyl hydrate and hydroxy-benzene. It is a product of coal tar distillation and is also produced synthetically by fusing sodium benzene sulphonate with caustic soda and then neutralizing with hydrochloric acid. It is soluble in all proportions in alcohol, ether, glacial acetic acid and glycerine. It liquefies on the addition of 14 to 15 per cent of water and thus becomes the No. 4 carbolic acid of commerce. Phenol in a solid state burns with difficulty, giving off a heavy smoke. In water solution it involves no fire hazard. It melts at about 40 degrees Centigrade (104 degrees Fahrenheit). Phenol is used in medicine and surgery as an antiseptic and disinfectant; in the manufacture of picric acid, dyes and other pharmaceutical products; and with formaldehyde in many condensation products such as bakelite, condensite and neradol. Mixed with other materials, it is sometimes used for paint and varnish removers. Many cases of accidental poisoning occur annually through the swallowing by mistake of phenol for other drugs or alcoholic fluids, and its improper use by uninformed persons as an antiseptic for cuts and other wounds.

Symptoms

4. Phenol is readily absorbed by the body through the mucous membranes, abraded skin, wounds, or even through the intact skin. When absorbed through the skin, the symptoms appear rapidly. In severe cases there is great muscular weakness, then loss of consciousness and death from respiratory failure, sometimes preceded by muscular twitchings or convulsions. Less severe poisoning causes headache, dizziness, some excitement and mild delirium, clammy sweat, irregular respiration and weak pulse.

5. Phenol in contact with the skin causes local tingling and numbness or even complete loss of feeling. The skin becomes wrinkled and soft with the color changing from a white stain to brown. The effect is not a direct corrosive action but rather a local gangrene. Bodily contact with a dilute solution may result in severe eczema.

6. When phenol is taken by the mouth in a more or less concentrated form, it causes severe burns of the mouth, throat and stomach. Vomiting may or may not occur afterward, but the victim may become pale, covered with a cold sweat and may collapse with fatal results unless medical treatment is administered at once.

First Aid

7. When phenol comes in contact with the skin, it should at once be washed off with grain alcohol, oil dressings should be applied to prevent penetration of the phenol into the tissues, and a physician should be secured without delay.

8. If phenol solution should be splashed into the eye, the eye should be flushed immediately with plenty of clean fresh

water and the services of a physician secured without delay.

9. If phenol has been swallowed, a diluted solution of mustard water should be given as an emetic, and the services of a physician promptly obtained. Pending arrival of the physician, milk, flaxseed tea or white of egg may be given to allay inflammation, and the patient should be kept warm. No oils or alcohol should be given internally except under the physician's direction.

Precautions

10. In processes where the hands or other parts of the body may be exposed to splashes and spills of phenol, employees should be provided with and required to wear rubber frame goggles, rubber aprons, boots and gloves. (See Note X)

11. As a precaution against possible absorption through the skin, clothes which have been wet with liquid phenol should be changed for dry garments at once.

12. All jugs, bottles, carboys or other receptacles in which phenol is stored or kept should be kept tightly closed and labelled "PHENOL (CARBOLIC ACID) — POISON", with skull and cross-bones.

13. Food should not be kept nor eaten near phenol nor in the workroom where it is used.

14. A supply of grain alcohol should be kept near at hand in the workroom so that in case phenol is splashed or spilled on a worker, it may be washed off immediately.

NOTE X: For detailed information on goggles, aprons, boots and gloves, see Safe Practices Pamphlet No. 14, "Goggles," and No. 16, "Protective Clothing."

National Safety Council, Inc.

20 North Wacker Drive

Chicago, Illinois

NATIONAL SAFETY NEWS

After a thorough investigation of the evidence for and against at the close of the last period of acceptance, the Council on Pharmacy and Chemistry of the American Medical Association has again reaccepted (1935)

MERCUROCHROME, H. W. & D.

(Dibrom-oxymercuri-fluorescein-sodium)



PROMPT care is important in preventing infected wounds. Even minor wounds may become infected when antiseptic treatment is delayed.

Mercurochrome, H. W. & D.

(Dibrom-oxymercuri-fluorescein-sodium)

is non-irritating and exerts bactericidal and bacteriostatic action in wounds. Industrial injuries are reported more promptly when Mercurochrome is the clinic antiseptic, because treatment is not painful. Be prepared with Mercurochrome for the first aid care of all minor wounds. In more serious cases, a physician should be consulted.

HYNSON, WESTCOTT & DUNNING, INC.

THE ACCIDENT BAROMETER

Prepared by the Statistical Bureau, National Safety Council

ACCIDENTAL DEATHS totaled approximately 7,750 in January, or 0.7 per cent more than occurred in January 1935. The advance may be wholly attributed to the increase of 6.7 per cent in motor vehicle fatalities, for home deaths showed practically no change and the other public fatalities decreased sharply. The increase in occupational deaths did not exceed 100, according to present reports, or only half as much as the decrease in other public fatalities. From December to January the accident death total took a seasonal drop of approximately 1,350, due largely to fewer motor vehicle fatalities.

OCCUPATIONAL ACCIDENTAL DEATHS for January are estimated at 1,300, an increase of 100 over January 1935. There was some increase in employment during the year, but at present no definite statement can be made as to how much this increase offsets the advance in fatalities. Inter-plant contests of community safety councils show an unusual drop in accidents during January, compared with the same month last year. The frequency rate per million man-hours fell from 15.40 to 9.76, or nearly 37 per cent, while the severity rate per thousand man-hours decreased from 1.16 to 0.39, or 66 per cent. There was also a decline in the frequency rate recorded for the six sectional contests conducted by the National Safety Council, from 11.01 to 10.14, or 8 per cent. Deaths reported during February to Industrial Commissions in 20 states totaled 550. This is an advance of 9 per cent over the number reported in February, 1935.

COAL MINE ACCIDENTS occurring in January resulted in 109 deaths, according to reports received by the U. S. Bureau of Mines. Accident reports for January, 1935, covered 122 deaths. However, part of this improvement will be absorbed by fatalities from January accidents occurring subsequent to receipt

THESE items summarize briefly the monthly reports collected by the National Safety Council to show current accident trends. Certain reports are analyzed more fully in other monthly publications of the Council, devoted to industrial, traffic, commercial vehicle, home, and school safety. In addition, the Council's annual statistical report "Accident Facts," contains detailed information on all types of accidents.

All Accidental Deaths

January

1936	7,750
1935	7,700
1934	7,866

(U. S. Census Bureau total for 1934; National Safety Council estimates for 1935 and 1936.)

of the reports, according to the Bureau. Deaths from falls of roof and coal declined from 63 to 47, while haulage accident fatalities increased from 11 to 31.

STEAM RAILROAD ACCIDENT fatalities in the first eleven months of 1935 numbered 4,668, compared with 4,491 for the same period of 1934, an increase of 3.9 per cent. Non-fatal injuries, on the other hand, decreased from 26,024 to 25,360, or 2.6 per cent. During the same months traffic, as measured by locomotive miles, increased 1.4 per cent. The largest advance in deaths, amounting to 6.0 per cent, was for highway grade crossing accidents. These fatalities numbered 1,460 in the eleven months. Deaths of employees on duty totaled 386, compared with 370 in the same period of 1934. Deaths of passengers on trains decreased from 27 to 18, and of travelers not on trains from 8 to 7.

MOTOR VEHICLE DEATHS for January are estimated at 2,630, an increase over January 1935 of 6.7 per cent. This advance appears to be confined to rural areas, for city reports now available (covering more than 41,000,000 population) show a decrease in deaths of 6.3 per cent. There is no information at present on the amount of gasoline consumed in January, but in December consumption was 7.2 per cent above December, 1934. If January had the same increase in consumption as December, the death rate based on gasoline consumed would show practically no change from January, 1935. It is interesting to note that although the January death total is high, it still represents a drop of about 1,000 deaths from December. This reduction is seasonal in nature.

COMMERCIAL VEHICLE FLEETS participating in the National Fleet Safety Contest had an average of 3.37 accidents per 100,000 vehicle miles during Janu-

ary, a slight increase over the January 1935 average of 3.32. This advance was due to a rise in the truck fleet rate from 4.71 to 4.91. Both passenger cars and buses recorded small decreases. However, a comparison of January rates with the averages from July to January shows increases in the rates for each type of fleet. The bus rate went up from 1.15 to 1.90; the passenger car rate, from 1.49 to 2.45; and the truck rate, from 3.24 to 4.91. According to records of past years, these advances were largely due to more hazardous driving conditions which the drivers were compelled to meet. When the July - January rates are compared with those of a year ago, it is noted that this year's rates are still 6 per cent lower than last year's despite the January increase.

PUBLIC (NOT MOTOR VEHICLE) deaths occurring in January are estimated at 900 compared with 1,100 for January 1935, a drop of 18 per cent. According to available information, there were considerable decreases in deaths from railroad accidents, not involving motor vehicles, and from miscellaneous other public accidents. On the other hand, deaths from falls occurred with about the same frequency as in January, 1935. The decrease appears to be shared by all age groups.

HOME ACCIDENT FATALITIES in January totaled approximately 3,100, or the same number as estimated for January, 1935. There were small decreases in deaths from falls and from burns, scalds and explosions. These were balanced by increases in asphyxiations and in miscellaneous unclassified home deaths. Decreases were recorded for persons in the age groups 25 to 64 and 65 and over, which were offset by small increases in the younger age groups.

Looking Ahead . . .

The total number of accidental deaths in April will probably be about the same as in March, but there will be changes for certain classes of accidents. Motor vehicle fatalities may increase by as much as 5 per cent. Drownings will increase nearly 200, in the absence of any unusual factors. Fatal burns usually show a drop of about the same amount at this time of year. Falls may decrease slightly if the month follows the normal trend, although the records of some earlier years show minor increases.

NATIONAL SAFETY NEWS

ACCO

THERE IS NO SAFER "BY-WORD" WHEN BUYING CHAIN

Chain may look alike but there is a difference—a difference in link design, materials, method of manufacture and testing. All these affect the safety factor.

Acco is safe, honest, dependable chain. It is used throughout industry. It is made in all sizes, in a wide variety of patterns for practically every conceivable purpose for which chain is or can be used.

For instance, the H B Dredge Chain illustrated can be had from as small as $\frac{3}{8}$ inches up to a size that will withstand a breaking test of 348,000 pounds.

The double sling chain, also illustrated, is made in sizes to safely handle working loads of from 3,800 pounds to 94,000 at 45 degrees.

These are typical of the wide range in sizes and safe load working characteristics of all Acco Chain. When you buy, use the "by-word"—Acco.

AMERICAN CHAIN COMPANY, Inc.

Bridgeport, Connecticut

World's Largest Manufacturer of
Welded and Weldless Chain

IN BUSINESS
FOR YOUR SAFETY



AMERICAN *Welded* CHAIN

H. B.
DREDGE
CHAIN

TYPE D
SLING CHAIN

HEALING

that CUTS THROUGH —THE LINE— OF PRODUCTION

Rapid drops in accident curves of American Mutual workmen's compensation policyholders—such as the combined experience of a group-sample of 500 firms graphed next to this column—never result from chance. Four features of our safety engineering can benefit even such plants as yours, already geared to safety.

"PRODUCTION-SAFETY." Studying your plant, we see more than the high-spots of hazards and safeguards—our engineers trace the continuous red wound of danger all down the line of production. Then they work with you to replace it, as far as possible, with the green thread of safety.

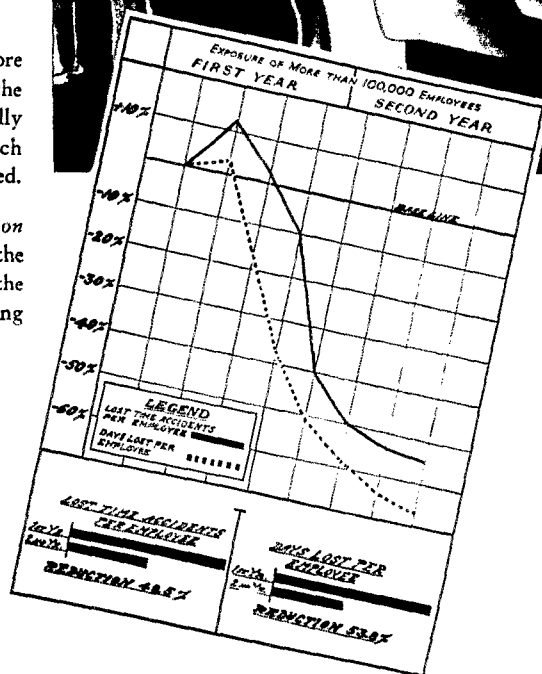
PLOTTING THE CURVE OF THE FUTURE. We are concerned more with your safety *future* than your accident *past*. But tracing back the *causes* of accidents is one way to find the clue to the future. Equally revealing are the habits and attitudes of workers themselves. From such evidence, the future can be predicted—an unhealthy trend can be changed.

SAFE MEN AT SAFE MACHINES. Full effectiveness of guards on machines depends on the understanding and cooperation of the men *at* the machines. Our engineers work with this in view, not by laying down the law from outside, but by sharing their diversified experience and helping from within.

COOPERATION DIVORCED FROM THE TIME CLOCK. Bound by no routine schedule fixed at the start of the year—our engineers give the amount of service that will be really effective in your particular situation.

**"WE WORK TO MAKE
ALL WORK SAFE"**

The chart shows the accident frequency and severity experience of 500 firms (widely varied in industry and location) during two years' safety work with American Mutual. The two graphs below show number of accidents and days lost during the second year in contrast to the first.



AMERICAN MUTUAL

Assets: \$23,809,545.32; Liabilities: \$19,424,978.69; Surplus to policyholders: \$4,384,566.63. As of December 31, 1935

NATIONAL SAFETY NEWS



und ANGER

Three Kinds of Profits Open to You

From American Mutual safety work, come marked lowerings of accident rates and insurance costs. Also, the prevention of uninsurable indirect accident costs (time lost, spoiled work, poor morale, etc.) means as you well know still greater savings to your firm.

From claim work, using modern medical science to restore injured men to their former usefulness, comes the saving of valued employees and the shortening of benefit payment periods.

Third is the opportunity to our policyholders to share in our savings. Twenty per cent or more of their insurance costs have been returned each year since 1887. Oldest of American casualty companies, our dividend record is sustained by highly selective underwriting and conservative New England management.



Workmen's Compensation, Automobile, Fidelity Bonds, Elevator, Burglary and other forms of Casualty Insurance written by American Mutual. Fire Insurance written by our associate, Allied American Mutual Fire Insurance Company.

AMERICAN MUTUAL
MAGAZINE



American Mutual Liability Insurance Co.,
Dept. 29, 142 Berkeley St., Boston, Mass.

Please send me the next 4 issues of the *American Mutual Magazine*, a mine of valuable information on how industrial accidents are prevented.

Name _____ Title _____

Company _____ St. and No. _____

City _____ State _____

Expiration date of your present policy, if you recall it _____

LIABILITY INSURANCE COMPANY

BRANCHES IN 53 OF THE COUNTRY'S PRINCIPAL CITIES

APRIL, 1936

THE BULLETIN BOARD

A page for those who maintain the Show Windows of Safety

Conducted by STAN KERSHAW

A New Approach

BY POPULAR demand the National Safety Council now offers fleet members a new and unusual type of poster. This poster, No. 5747, is shown in miniature on page 43.

Heretofore many posters prepared for vehicle drivers have been urgent reminders of things familiar to most of them. Such posters will always be a necessity, because violations of well-known and understood safe practices cause many serious accidents. By sheer force of repetition these warnings and admonitions can give drivers that safety consciousness that will cause them automatically to make the right decision in emergencies, just as a person at a cigar counter invariably asks for a particularly well advertised brand of cigarette if there is any doubt in his mind as to which to buy.

But there are other effective ways of

QUALITY VS. QUANTITY

THE results obtained by safety posters depend not so much on how MANY are used, but on how WELL they are used.

Even though five million or more safety posters are used in the United States each year, it is safe to say that in the great war on accidents the poster is one of the most neglected weapons.

Safety posters of good design, prepared to meet practically every requirement, are available. But many a good poster, poorly used, is like a fine weapon poorly aimed. Neither fulfills its purpose.

A poster plastered on a wall with no thought as to advantageous location or accessibility for reading is at once handicapped.

People naturally want to be safe, but it is not natural for them to go out of their way to learn how.

Get full value out of your posters by placing them where they cannot escape attention. Emphasize them with good lighting. Set a good example for your employees and prove the old axiom that "Any job worth doing at all is worth doing well."

awakening safety consciousness and giving instruction with posters. This new one does it by describing an interesting highway accident problem and telling how it can be handled with safety when confronted under actual driving conditions.

Here is a poster that is suited to many different uses. It is excellent for bulletin board use if the boards are located where drivers will have the time to study the details of the problem. However, the most effective way of making it work is to make copies available on request, to distribute folded copies to individual drivers when they report for duty, or to mail them to the drivers' homes.

Some companies have inserted specially selected posters in loose-leaf binders and have placed several volumes thus prepared in waiting rooms where drivers can examine them at their leisure. Poster No. 5747 is particularly well adapted to this use.

Still another important use may be found in driver training schools. Here again copies distributed to individual drivers will facilitate study and discussion.

Be sure you make the most of this new kind of poster.

Try This on Your Men

HENRY J. ROESCH, Briggs Manufacturing Company, Detroit, tried this scheme to see whether men were reading safety posters, and how well they could remember the current posters.

As the men were standing in line at noon to buy sandwiches and coffee, he buttonholed a number of them at random and asked them this question:

"Can you tell me, without turning around to look, what picture the safety bulletin board has on it, what it is about, and what slogan appears with it?"

Only a few could recall the picture, and no one could recall the slogan.

See what reaction your men have when you try this on them. Perhaps your board needs dressing up. Perhaps you need added interest to draw the men's attention to the posters.

If your men from time to time, as you make this test, do not know what posters are on the board, you may take it as a signal to pep up the displays.

(Condensed from "Factory Management and Maintenance," Nov., 1935.)

Safety Sweepstakes Promote Caution

A safety campaign, based on the competition of a horse race, was used by the Briggs Manufacturing Company to create interest in safety. Miniature race tracks were placed in each of the five plants. Each plant was represented by a brilliantly colored horse.

A study was made of each division, and a fair handicap given for the type of work and working conditions.

The horses were lined up at the starting post the first day of the contest and moved forward one space every no-accident day in the division. (Five lost-time accidents in a single plant in one day would mean that the horse representing that plant had to stand still for five days.)

The boards used as race tracks were made of 18-gage steel and framed in wood. Nine hundred and sixty holes were drilled around the race track and behind them a sheet of 1/4 inch cork was fastened. The horses were die-stamped, painted in three colors, and mounted on hinged back pins stuck through the holes into the cork background. The overall size of the boards was approximately 5 by 8 feet.

(Condensed from "Factory Management and Maintenance," Nov., 1935.)

If a home-made poster gives an accurate account of an accident, either by pictures or by words, most of the workmen will absorb the lesson, and one or more of them will be likely to discover a method by which the accident could have been avoided, and will point it out to his companions.

Safety work is more than advertising, but advertising and publicity is essential to the success of any campaign to reduce accidents.

NATIONAL SAFETY NEWS



SPRINGTIME
IS CLEAN UP TIME

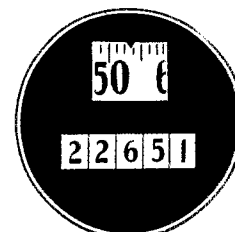
Congratulations
to the man who
always keeps his
workplace clean
and orderly

NATIONAL SAFETY COUNCIL

**LITTLE
MISTAKES
CAN
MAKE
BIG
ACCIDENTS**

NATIONAL SAFETY COUNCIL

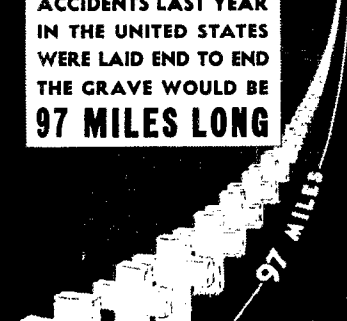
The **HIGHER** The
SPEED



The **WORSE** The
ACCIDENT

NATIONAL SAFETY COUNCIL

IF THE BODIES OF ALL
THE PEOPLE KILLED IN
ACCIDENTS LAST YEAR
IN THE UNITED STATES
WERE LAID END TO END
THE GRAVE WOULD BE
97 MILES LONG



97 MILES

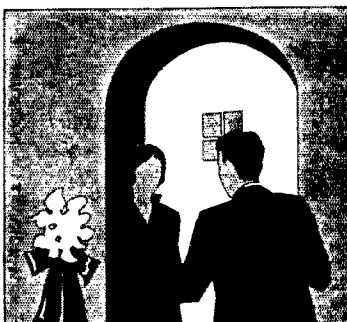
The height of the average person is
5' 2". How many people were killed?

NATIONAL SAFETY COUNCIL

every time you
take the wheel
of your car give
a thought to
your part in the
great campaign
to
stop accidents

**LET'S REDUCE TRAFFIC
ACCIDENTS 35% by the
end of 1940 THEREBY
SAVING 38,000 LIVES**

NATIONAL SAFETY COUNCIL



I'M SORRY
will never restore
the victim of
reckless driving

NATIONAL SAFETY COUNCIL

**BE
ALERT!**

**DON'T
GET HURT**

NATIONAL SAFETY COUNCIL

a
MAN!
is no
SAFER
than his most
CARELESS
ACT

NATIONAL SAFETY COUNCIL

*Don't
Run!*



WALK
It's Safer

NATIONAL SAFETY COUNCIL

YOUR SAFETY

Depends on **HOW CAREFUL**
Not **YOU ARE**
How **LUCKY**

NATIONAL SAFETY COUNCIL

"and please keep our daddy safe"



NATIONAL SAFETY COUNCIL

**A WOUND
NEGLECTED
MAY BE
A WOUND
INFECTED**



NATIONAL SAFETY COUNCIL

Large Size No. 1172

**DON'T JUMP ON A
MOVING ELEVATOR!**



NATIONAL SAFETY COUNCIL

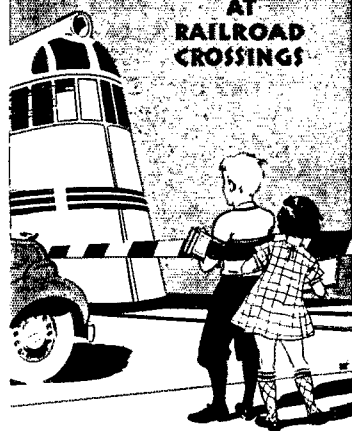
*The GOLDEN RULE
of Traffic*

**DRIVE AS
YOU WOULD
HAVE OTHERS
DRIVE**



NATIONAL SAFETY COUNCIL

**BE CAREFUL
AT
RAILROAD
CROSSINGS**



NATIONAL SAFETY COUNCIL

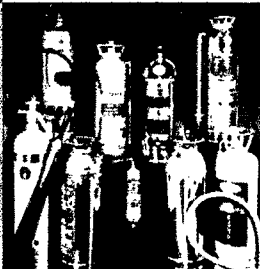
DEATH

awaits
THE MAN

**NEVER UNDERCUT
THE BANK**

NATIONAL SAFETY COUNCIL

Know the location of
the **Fire**
Extinguishers
in your department



Find out how to use them

NATIONAL SAFETY COUNCIL

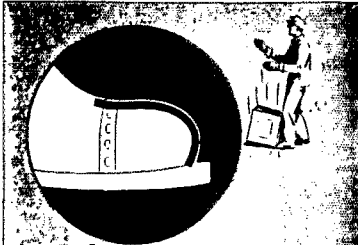
**APRIL SHOWERS
MAY Bring Flowers**



Take Extra Care
of Your Health
in **WET WEATHER**

NATIONAL SAFETY COUNCIL

WHAT IS A SAFETY SHOE ?



It is one with a reinforced toe to withstand heavy blows and pressure

IT PAYS TO WEAR THEM
NATIONAL SAFETY COUNCIL

IF YOU SUFFER FROM SICKNESS AND OTHER AILMENTS GET GOOD MEDICAL ADVICE

You Gamble With Your Future When You Don't Guard YOUR HEALTH

NATIONAL SAFETY COUNCIL



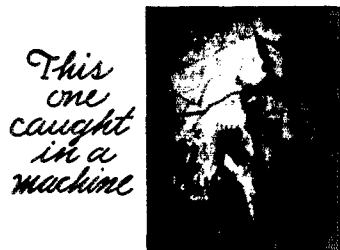
CONSIDER THESE

When you work with hot metal, molten metal, or other heat-producing materials, you are exposed to the danger of burns. Burns can be very painful and may result in permanent disfigurement or even death. To protect yourself, wear proper protective clothing and equipment. This includes heat-reflective clothing, face shields, and gloves. Always follow safety rules and instructions.

NATIONAL SAFETY COUNCIL

GLOVES

ARE FINE PROTECTION & YOUR HANDS EXCEPT WHEN WORKING AT MACHINES



NATIONAL SAFETY COUNCIL



How Much Would You Take For Your RIGHT HAND

NATIONAL SAFETY COUNCIL

THE SAFE WAY



EVERY MAN SEATED NO LEGS HANGING OVER EDGE OF TRUCK TO BE CRUSHED

NATIONAL SAFETY COUNCIL

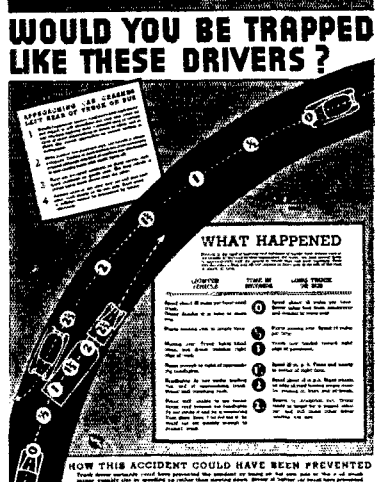
In the Hospital ARE YOU GOING TO WONDER

Why DID I TAKE THAT CHANCE?

NATIONAL SAFETY COUNCIL



NATIONAL SAFETY COUNCIL



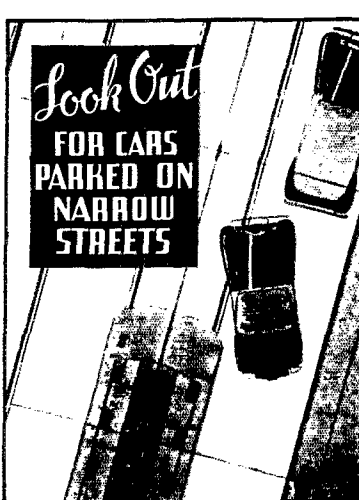
NATIONAL SAFETY COUNCIL

Don't forget
*The best immediate
 treatment for—*
CHEMICAL BURNS
Wash away the chemical
 with lots of—
Water



NATIONAL SAFETY COUNCIL

Look Out
**FOR CARS
 PARKED ON
 NARROW
 STREETS**



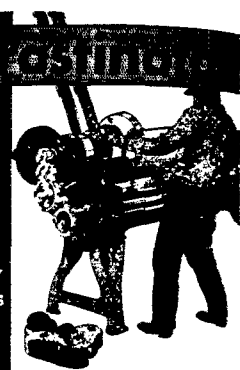
NATIONAL SAFETY COUNCIL

PROHIBITION

One who puts off until tomorrow the things he should do now.

for example:

- PUTTING GUARDS BACK in PLACE



NATIONAL SAFETY COUNCIL

*The BIGGER you are
 the HARDER YOU FALL*



**WATCH OUT
 FOR TRIPPERS!**

NATIONAL SAFETY COUNCIL



**HE STOPS HIS MACHINE
 BEFORE REACHING...
 INTO IT—DO YOU?**

NATIONAL SAFETY COUNCIL

**WE ARE INTERESTED IN
 YOUR SAFETY AFTER THE
 WHISTLE BLOWS**

Because—

We don't want to see you suffer the hardships of an accident.

We don't want you to lose time from work, any more than you want to.

86% of all disabling accidents occur outside of industry.



NATIONAL SAFETY COUNCIL

WHAT EVERY SAFE KITE FLYER KNOWS

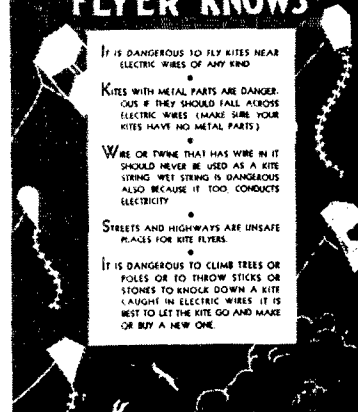
It is DANGEROUS TO FLY KITES NEAR ELECTRIC WIRES OF ANY KIND.

KITES WITH METAL PARTS ARE DANGEROUS IF THEY SHOULD FALL ACROSS ELECTRIC WIRES (HARDLY SURE YOUR KITES HAVE NO METAL PARTS).

WIRE OR TWINE THAT HAS WIRE IN IT SHOULD NEVER BE USED AS A KITE STRING. WET STRING IS DANGEROUS ALSO BECAUSE IT TOO CONDUCTS ELECTRICITY.

STREETS AND HIGHWAYS ARE UNSAFE PLACES FOR KITE FLYERS.

IT IS DANGEROUS TO CLIMB TREES OR POLES OR TO THROW STICKS OR STONES TO KNOCK DOWN A KITE CAUGHT IN ELECTRIC WIRES. IT IS BEST TO LET THE KITE GO AND MAKE OR BUY A NEW ONE.



NATIONAL SAFETY COUNCIL

**AFTER ALL!
 Who Pays for ACCIDENTS?**



NATIONAL SAFETY COUNCIL

**ONE OF THE THINGS
 GOOD MECHANICS DO**

**Always Put
 Handles on
 Files Before
 Using Them**



NATIONAL SAFETY COUNCIL



ONE FELLOW
WE COULD DO
WITHOUT

The PRACTICAL JOKER

He gets a great kick
out of the tricks he
pulls on the other fellow.
His pranks often result
in serious injury. -
A rattlesnake gives
you a warning - but
not this fellow.....
Stay clear of him.

NATIONAL SAFETY COUNCIL

TEST for GAS

before
firing
shot



NATIONAL SAFETY COUNCIL



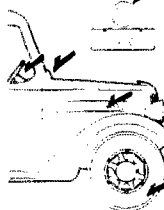
NEVER ROLL PIPE TOWARD YOUR FEET

NATIONAL SAFETY COUNCIL

EVERY DAY BEFORE STARTING OUT

CHECK

these safety
items



- Stop light
- Windshield
Wipers
- Horn
- Lights
- Equipment
- Brakes
- Tires

NATIONAL SAFETY COUNCIL

WOULD YOU

*trade one of
your good
eyes for*
ONE of THESE



NATIONAL SAFETY COUNCIL

It MAY INTEREST
YOU TO KNOW

that most of the injuries in
machine shops result from-

MISHANDLING MATERIALS

FLYING OBJECTS

MISUSE OF HAND TOOLS

STRIKING AGAINST OBJECTS

FALLS

FALLING OBJECTS

Let this list remind you
when to be extra cautious

NATIONAL SAFETY COUNCIL

An Inch Away from
An Accident



Then an
Accident

NATIONAL SAFETY COUNCIL

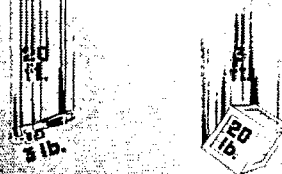
WHEN PRIZE-FIGHTERS LOWER THEIR GUARDS THEY USUALLY GET SOCKED



WHEN YOU FAIL
TO USE GUARDS ON
MACHINES YOU'RE
LIABLE TO GO OUT
FOR A LONG COUNT

NATIONAL SAFETY COUNCIL

A 3 pound
object falling
20 feet will hit
as hard as a 20
pound object
falling 3 feet



DON'T LEAVE OBJECTS WHERE THEY
CAN FALL AND INJURE SOMEONE

NATIONAL SAFETY COUNCIL

**USE
A
GOOD
LADDER
OR
STAY
ON
THE
GROUND**

NATIONAL SAFETY COUNCIL



**THE SHORTEST
PATH TO
GROUND MAY
BE THROUGH
YOUR BODY
KEEP
YOURSELF
PROTECTED**

NATIONAL SAFETY COUNCIL

Every Good

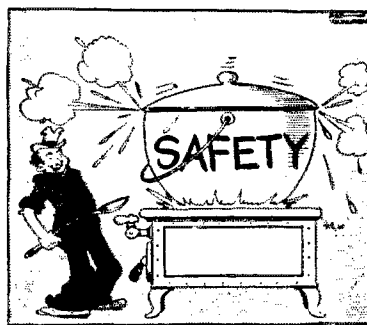
**SAFETY
RECORD**

is a

CHALLENGE

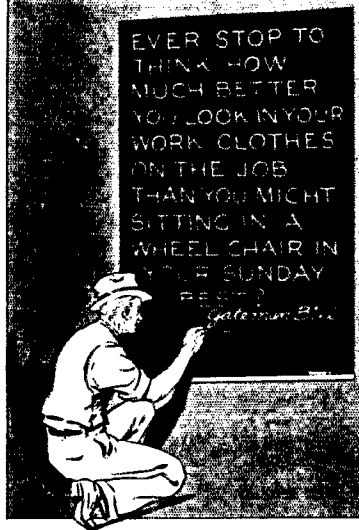
**FOR A
BETTER ONE**

NATIONAL SAFETY COUNCIL



**WHEN YOU BOIL
IT DOWN IT JUST
MEANS
BEING CAREFUL**

NATIONAL SAFETY COUNCIL



**EVER STOP TO
THINK HOW
MUCH BETTER
YOU LOOK IN YOUR
WORK CLOTHES
ON THE JOB
THAN YOU MIGHT
SITTING IN A
WHEEL CHAIR IN
YOUR SUNDAY
BEST DRESS**

NATIONAL SAFETY COUNCIL

**Some Occupational
Accident Facts**



OCCUPATIONAL ACCIDENTS COST \$620,000,000 LAST YEAR!

**ONE OUT OF
EVERY 6 CUTS
AND LACERATIONS
BECAME INFECTED!**

**IF YOU SUFFER A DISABLING
(lost time) INJURY IN AN OCCUPATIONAL ACCIDENT**

THERE'S ONE CHANCE IN 88 YOU'LL BE KILLED
ONE CHANCE IN 1800 YOU'LL BE COMPLETELY DISABLED
THE REST OF YOUR LIFE
ONE CHANCE IN 23 YOU'LL BE PARTIALLY DISABLED THE
REST OF YOUR LIFE

WHY TAKE A CHANCE?

NATIONAL SAFETY COUNCIL



*When you
cut corners
you're in the
other fellows
right-o-way!*

HE MAY TAKE IT!

NATIONAL SAFETY COUNCIL

**What you
forget for a
moment you
may remember
for a lifetime**

**REMEMBER
SAFETY**

NATIONAL SAFETY COUNCIL



SAFETY LIGHTING

NATIONAL SAFETY COUNCIL

S L I P S
DO COUNT.



**KEEP FLOORS
CLEAN!!**

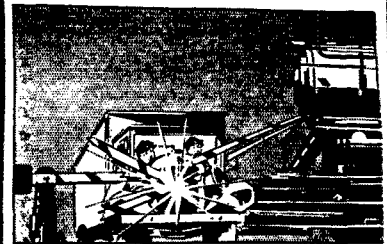
NATIONAL SAFETY COUNCIL

**A
THOUGHT
FOR TODAY**

(AND EVERY DAY)



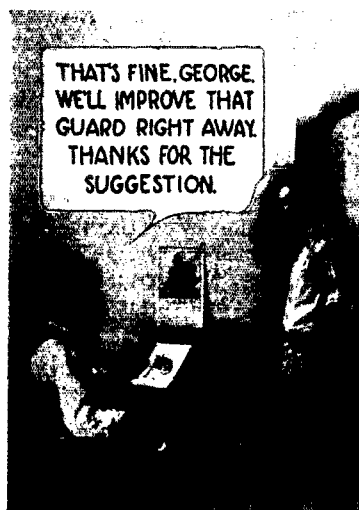
*It's not only the
knowledge of
SAFETY
but the practice
that
counts*



**IT'S...Poor
Judgment to
take Chances with
FAULTY BRAKES**

NATIONAL SAFETY COUNCIL

THAT'S FINE, GEORGE.
WE'LL IMPROVE THAT
GUARD RIGHT AWAY.
THANKS FOR THE
SUGGESTION.



NATIONAL SAFETY COUNCIL

... Help the new
employee! Teach him
the safety tricks of
the trade. You may
save a life or prevent a
serious injury. The new
man will appreciate
your friendly interest.

NATIONAL SAFETY COUNCIL

**W
O
R
K
S
A
F
E
L
Y**



FOR THEIR SAKE

NATIONAL SAFETY COUNCIL



When someone near
and dear meets with
a serious accident
or there is a death
in your family,....
your thoughts and
actions are likely to
be confused.....

At such a time be
extra cautious lest
you meet with an
accident and make
serious trouble all
the more serious.

NATIONAL SAFETY COUNCIL

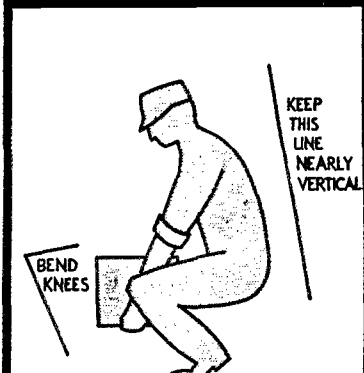
**Good
housekeeping**

Does not mean
cleaning up once
a week or once
a month-

*It means keeping
things cleaned up
all the time.*

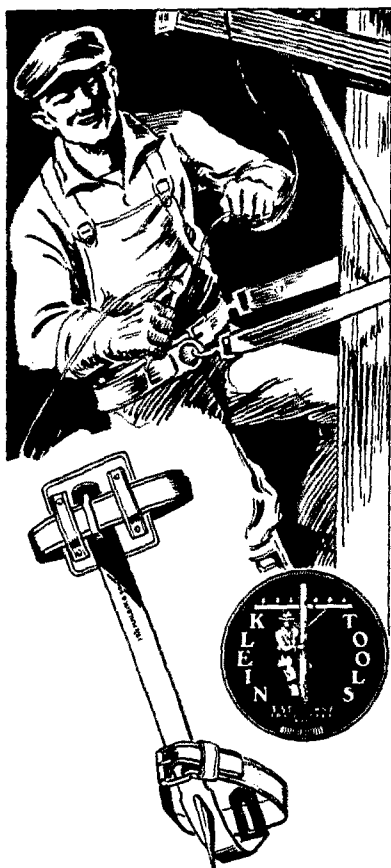
NATIONAL SAFETY COUNCIL

It's not WHAT you lift



but HOW you lift it

NATIONAL SAFETY COUNCIL



SAFETY

Swinging back on a strap of leather—gaffs dug deep in a wooden pole, an asphalt street or concrete curb below—the lineman knows that failure in equipment would probably be fatal. His job is free from worry because his equipment is Kleins.

"Since 1857" the name Klein on linemen's equipment has stood for the finest in quality, whether it's pliers or sleeve twisters, climbers or safety straps, torches or furnaces.

Distributed through jobbers

The four pamphlets listed below will be sent without charge to anyone interested. Check the ones you want.

- ☐ Safety for the Pole Climber.
- ☐ Specifications on Linemen's Belts and Safety Straps.
- ☐ The Safety Factor on Linemen's Leather Goods.
- ☐ Pocket Tool Guide.



Mathias KLEIN & Sons
Established 1857 Chicago, Ill. USA
3900 Belmont Avenue, Chicago, Illinois

Welding Wisdom

(Continued from page 18)

pressure required at the blowpipe; and second, to maintain the working pressure constant during operation of the equipment. By means of an adjusting screw, this working pressure may be set at any desired value within the range of the regulator capacity. Once set, the regulating mechanism will maintain this pressure automatically.

It should be remembered that regulators must be handled with a reasonable amount of care if they are to operate continuously without trouble. Regulators should be disconnected from the cylinder valves when moving cylinders that are not mounted on portable trucks.

Do not use regulators that are not in proper operating condition. If a regulator creeps, that is, if the pressure builds up on the working pressure gauge after the blow pipe valves are closed, the regulator should be repaired at once. It is a good plan to have the regulators inspected at regular intervals by a competent operator. In making replacements, use only standard parts supplied by the manufacturer. Major repairs should be made by the manufacturer.

Connecting Apparatus

Be sure there is no oil or grease on hands or gloves. Before attaching a regulator to the cylinder, the cylinder valve should be opened slightly for an instant and then closed. This will blow out any dust and dirt that may have accumulated and that might otherwise enter the regulator. Do not crack acetylene valves in the presence of a flame or other source of ignition. After tightening the regulator union nut, make certain that the pressure-adjusting screw is released before opening the cylinder valve. The pressure-adjusting screw is released by turning it counter-clockwise (to the left) until it is loose. The cylinder valve should be opened only slightly at first, so that the high-pressure gauge hand moves up slowly. If opened quickly, the sudden rush of high-pressure gas might strain the high-pressure gauge mechanism. After the high-pressure gauge hand has stopped moving, open the oxygen cylinder valve as far as it will go; open acetylene cylinder valves one and one-half turns only.

Connect standard oxygen and acetylene hose to the connections on the respective regulators and to the corresponding connections on the blowpipe. Select the proper welding head or cutting nozzle (according to the chart furnished by the apparatus manufacturer) and

screw it *carefully and tightly* into the blowpipe.

Open the blowpipe oxygen valve only. Adjust the oxygen regulator until the low-pressure gauge indicates the proper pressure passing through the head or nozzle. Then close the blowpipe oxygen valve.

The exact procedure for adjusting the acetylene pressure for lighting the blowpipe and adjusting the flame varies with the type of blowpipe and the source of acetylene. For this reason, the blowpipe manufacturer's directions should always be followed.

To light the welding blowpipe, open the blowpipe oxygen valve one-half turn, open the acetylene valve wide and light the mixture at the tip with a lighter.

To extinguish the blowpipe flame when the job is completed, first close the blowpipe acetylene valve and then the oxygen valve. Remember, acetylene will burn, oxygen does not. If work is stopped for a long period (overnight or during lunch hour), close the cylinder valves and then release all gas pressure from the regulators by opening the blowpipe valves momentarily. Close the blowpipe valves and release the pressure-adjusting screws on the regulators.

General Working Conditions

So far as the relation of the welding and cutting process to its surroundings is concerned, the principal facts to remember are that blowpipes give open flames and that in use sparks may be scattered about unnoticed by the operator.

This means that wherever possible, welding and cutting should be done in fireproof quarters. Floors should be of concrete or some fire-resisting material. Many foundries and shops have simply a dirt floor.

Where welding or cutting has to be performed in establishments having wooden floors, it is advisable to see that no unprotected combustible material is stored on the floor below, directly under the place where the work is being done. Better still, the floor should be covered with metal or other suitable non-combustible material wherever sparks or hot metal are likely to fall. In any case, all readily combustible materials should be removed from the vicinity. If the building is equipped with automatic sprinklers, the person in authority should not permit any work to be done until he has made certain that the sprinklers have not been disconnected for repair or alteration.

NATIONAL SAFETY NEWS

Because of the possible presence of flammable gases, vapor or dust, rigid restrictions are enforced against the use of any open flame in certain parts of some plants, such as gas plants, petroleum refineries and plants spraying lacquers or similar materials, and in mines known to be gaseous. Welding or cutting blowpipes should never be used in these locations unless the responsible official in charge has personally inspected the conditions and has issued instructions to proceed with the work.

Commercial Drivers' School Thrives

WHY is Milwaukee, Wisconsin's chief city, consistently bettering its already enviable record in public safety?

Part of the answer is that Milwaukee is applying the three "E's" of traffic accident prevention — Engineering, Enforcement and Education. The rest of the answer is that the work is being done with exceptional thoroughness, determination and continuity.

One example of the success won by this continuity or "follow through" is the annual motor drivers' school sponsored by the Milwaukee Safety Commission. The school is now in its tenth year. Each year, under the vigorous care of the Commission, the attendance has grown, and last year it reached a figure of 3,700. This year, on the basis of advance registration, the average attendance will be in excess of 4,500.

The school is chiefly for commercial drivers, although the public may attend. About a month in advance of the opening date announcements were sent to industrial enterprises throughout Milwaukee, and within three days a flood of entries was received, indicating a capacity audience.

The motor drivers' school opened in the auditorium of the Milwaukee Vocational School March 19, with Chauncey Yockey, of the Milwaukee Fire and Police Commission, speaking on "Cooperation." At the second conference, March 26, George Opp, of the Detroit Edison Company, addressed the group on "Accidents—Causes and Remedies." A. W. Koehler, of the National Conference on Street and Highway Safety, Washington, D. C., will address the third conference, April 2, on "Motor Driver vs. Pedestrian." The school will come to a close on the evening of April 9, when Clifford Davis, Vice-Mayor of Memphis, Tenn., speaks on "Speed—A Menace to Safety."

Persons attending three or more sessions will be awarded diplomas.

APRIL, 1936

HERC-ALLOY

Revolutionizes

OLD IDEAS ABOUT

STRENGTH

IN

SLING

CHAINS

One of the most important chain achievements in industrial history! Tested under severe conditions for over 3 years, the new **HERC-ALLOY Heat Treated Steel Sling Chain** has proved itself a "double duty" chain in both strength and endurance. And, best of all, it cuts sling chain maintenance to a *new low*. Check through these **HERC-ALLOY** superiorities:

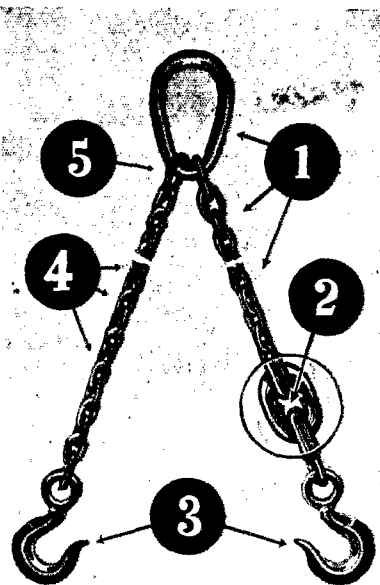
- 1 Heat Treated **HERC-ALLOY** throughout the entire chain to give maximum uniform strength.
- 2 Links are **INSWELL** Electric Welded by a new process fully covered by patents.
- 3 **HERC-ALLOY Heat Treated Hooks** give maximum strength at these vital points.
- 4 Short, narrow links reduce to a minimum the danger of bending or gouging when used around sharp corners.
- 5 All Joiner Links are of Heat Treated **HERC-ALLOY**.

Write for descriptive folder on this new extra-strength, low cost chain.

COLUMBUS McKINNON

CHAIN CORPORATION

General Sales Office:
TONAWANDA, N. Y.



HERC-ALLOY Heat Treated Steel Chain is manufactured from a high grade alloy steel containing nickel and molybdenum. Heat Treated under the most modern pyrometer control by an exclusive process. The result: an alloy combining in the highest degree these requisites: ductility, extreme strength and resistance to wear.

Designed and built by **COLUMBUS-McKINNON**

*No need
to work
in dust*

*If you have dust
problems like —*

Abrasives
Alkali
Carbon
Cement
Chemicals
Coal
Fertilizer
Gypsum
Industrial
Lime
Paint
Plastics
Pulp
Rubber
Silica
Starch
Tobacco
Zinc Oxides

**PUT YOUR DUST
SUPPRESSION
UP TO US**

**THE AMERICAN FOUNDRY
EQUIPMENT COMPANY**

637 BYRKIT ST.
MISHAWAKA, INDIANA

Investigate
**DUSTUBE
COLLECTORS**

Employee Training

(Continued from page 11)

terms of text books and school rooms. That is the symbol of education—not training. Industrial training is merely the acquiring of practical information about the job and the practical application of that information to the job, with the result that the skill of the individual is increased and the number of his mistakes is decreased.

Though American industry has become remarkably efficient with its mass production methods, we have never paid enough attention to the mass training of men. It is true that we have long had vocational training courses for electricians, welders, molders, machinists, and other tradesmen; it is true that we have conducted courses in fundamental education such as mathematics, practical metallurgy, and the like. But participation in such educational programs has been voluntary and has benefited only small groups. What industry needs today is employee training which reaches out to the average man on the average job, and as a condition of employment requires that he regularly and systematically devote a part of his time to improving his skill.

This is a responsibility which is delegated to supervisors by the president of the company, just as production and quality responsibilities are delegated to them. Naturally, the president is responsible to the owners of the business to manage their property as efficiently as possible. He cannot do all of the work himself, and so he trains and selects assistants. These assistants train and select other assistants, and so on. In the long run, every foreman is an assistant to the president. Selection and training of men is the most important single job the president has before him. It is also the supervisor's biggest and most important job.

Consciously or not, each supervisor does some training in the course of each day's work. Every time he issues instructions, every time he expresses criticism, he is adding to some man's store of knowledge. But the important questions are this: "Is he doing enough training? Is he doing it in a systematic and effective way?"

Whether his company conducts an organized training program or not, every supervisor can be his own training department if he honestly feels it is worth the time and effort. I have seen some

splendid results from job training programs which foremen have worked out on their own initiative.

Let me describe how one of these job training groups was organized and conducted in our own plant. Over a period of time there had been a number of lost-time accidents on a comparatively simple operation. The foreman in charge was at a loss to know how to prevent these accidents. Finally he decided to hold a job training class. He sought the aid of the plant safety adviser and the maintenance foreman in that section.

One evening all the men performing that kind of work were called together in the plant. There, alongside the machine, the foreman explained how the machine should be operated, how the product should be inserted, what the machine did to the product, the quality of product expected, the output, and all the other factors dealing specifically with production. All the while he encouraged the men to ask questions.

Next, the mechanical maintenance foreman took the floor. He described how the machine was built, what it cost, why it should be kept clean and well lubricated, and who was responsible for these duties. Next he explained the purpose of the safeguards and their proper position to prevent accidents.

He was followed by the electrical foreman who gave a detailed description of the electrical features, the location of the control switches, and so on.

Then the safety advisor took the stand. He pointed out the natural hazards of the job. He concluded by showing how they could be avoided.

After all this explaining, one of the least efficient operators was asked to step up to the machine and demonstrate his understanding of the discussion. This was repeated again and again.

The result of this job training class was the complete elimination of lost time accidents on this operation for several years. Not all of our job training groups worked out so well. However, taking the company as a whole, there was a very pleasing decrease in the number of lost time accidents as well as a corresponding decrease in severity.

In my opinion the chief reason for the effectiveness of job training in accident prevention is that it is simple and easily understandable. It deals specifically with the job, and the workman realizes

it is something conducted mainly for his benefit. Therefore he responds. I have heard it frequently said today that the average industrial worker isn't interested in his job, but I cannot agree with the statement. I believe that down underneath he really wants to be interested, and I believe that interest can be won.

I wonder if we fully appreciate how important this thing called "the job" really is to the average man. He has few outside interests competing for his time. He spends a large part of every day on that job. When there is no work to do he is like a fish out of water. I have known plenty of men whose idea of a pleasant Sunday afternoon after a hard week's work was a trip to the plant. In the days before prohibition, when the old corner saloon flourished, there was many a ton of steel rolled conversationally in Middletown before the bar.

It has always seemed to me that the foreman who cannot capture this natural interest of men in their job is missing something that can be mighty helpful. The men in your department can be of great assistance if you can find work for their brains as well as their hands. Most men are square. They want to do the right thing. They want to improve themselves, just as you do, so they may go on to a better job and a larger pay check. They will follow the leader who wins their interest through thick and thin.

Progress in industry is the sum of many ideas and many contributions from supervisors and men. Practical ideas and suggestions are valuable. Industry today operates on small margins of profit, and a good idea may mean the difference between profit and loss; it may mean—if the idea benefits your company—the difference between steady work and part-time work, for your company can book the orders your competitor can't afford to take. Employee training stimulates ideas because it encourages men to think. However, the supervisor is the only person who can maintain a steady flow of ideas. To do so, he must receive those ideas with enthusiasm; he must investigate them with care; he must always give full credit to the maker, or those ideas will not always be forthcoming.

About a year ago, while visiting a certain company, I became acquainted with a young department superintendent. He was aggressive and apparently quite brilliant. The works manager confidentially told me that Ed was slated for greater responsibilities.

Not long ago, I visited that plant again. Another man held Ed's job. I remembered what had been said on my

previous visit, so I asked the works manager what had become of Ed.

"We were wrong about Ed," he explained. "Ed ran out of ideas. He had 400 men working for him, but he was trying to do all the thinking for the entire 400. It didn't work."

An interesting incident occurred a few years ago in another steel plant. They were having a series of accidents on one of their picklers, but fortunately, these were accidents to the product rather than to the men. A brown stain was appearing on the sheets as they went through the operation. The plant man-

ager couldn't put his finger on the cause, so he called in an expert from New York, who spent several weeks at the plant. One day a veteran pickler approached him.

"I think this creek water we are using in the pickler is causing that stain," he said. That sounded reasonable, so they tried using city water. The stains disappeared. However, the plant paid the bill for high priced consulting service, when the man who had the solution of the problem was right there on the job all the time.

Though most of my remarks have been directed at what job training means

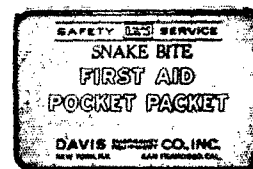
NOW is the time to Equip your Men FOR THE UNEXPECTED DEADLY BITE OF A SNAKE

THE Davis Snake Bite Kit contains an unbreakable syringe which is always "on the job" to suck the venom from the fang holes. An ordinary syringe of fragile material which broke when dropped on a rock might be the indirect cause of the loss of life.

For men who work independently along pipe lines, etc., you will find a first aid kit combined with the Snake Bite Kit a valuable addition. The Davis Combination Kit contains in one convenient carrying case a complete Pocket First Aid Kit as well as the Snake Bite Kit. Have your men fully protected and you will be more sure of their health and work. Give them a Davis Combination Kit. The low cost, adaptability and convenience will please you.



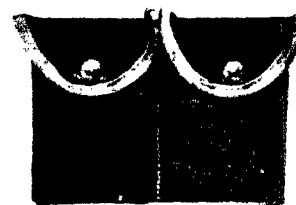
Use coupon now to send without obligation for a complete description of the self-contained Davis Combination Kit for men who work outdoors.



Contains:—Tourniquet, Scalpel, Unbreakable syringe, Iodine swab, Ammonia inhalants, Drybak adhesive compresses.



Contains:—Bandage Compresses, Drybak adhesive compresses, Ammonia inhalants, Iodine swabs, Tubes of Tannoid burn treatment.



The Davis Combination Kit—Snake Bite and First Aid Kit in one convenient carrying case.

DAVIS EMERGENCY CO., INC.

Chicago, Ill. • New York City • Houston, Tex.
San Francisco and Los Angeles, Cal.

Davis Emergency Equipment Co., Inc.
55 Van Dam Street, New York City

Please send my copy of your Bulletin
on Snake Bites to

Name _____

Address _____

City _____

yours. I train 'em. Then I insist that they do what they know how to do. But you—you let 'em drift and do as they please. Then you fire 'em."

At the beginning of the year the auditors are checking the company's books to determine what the organization accomplished during 1935 and what its assets are. Though the chief executive of every important industry will tell you that well-trained, loyal men are the most valuable assets of any company, few attempts are made to audit the human element. Yet you can "audit" your men even more readily than your company audits its physical assets.

A personnel audit will show you that all men may be classified in three general groups. First, there is that small group of outstanding men who are ready for greater responsibilities. Next, there is a large group, composed of average to good men. Finally, there is another small group of men who have never secured the right toe-hold in industry. If history repeats itself, and you care to carry the investigation further, you will probably find that not only is the five per cent of the force composed of the least capable workmen, but that it also accounts for the larger share of accidents.

Why are these men inefficient workers? Why haven't they developed along with others who had the same opportunities? There is usually a reason, and it is important that the supervisor find it.

I am well aware that the industrial supervisor is a busy man. He cannot spread his efforts too thinly, and he should not attempt more than he can carry through to a successful conclusion. It is therefore perfectly plain that his first efforts should be spent with this group of incompetents.

If, when the audit is repeated next year, the top and middle groups are larger and the incompetent group is smaller, you will have reason to feel gratified. Such a readjustment could not have occurred without painstaking and constructive work throughout the year.

Water and Fatigue

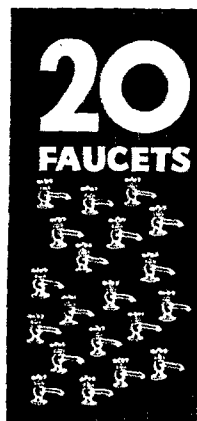
(Continued from page 27)

In the event that a circulating system is used bubblers should be spaced 50 to 75 feet apart to provide the ideal condition. If sanitary fountains and individual drinking cups are in use, the cups should be provided free, they should be kept protected from dust and dirt, the supply should never be permitted to run out, and adequate provision should be made for disposal of the used cups.

Fountains should be in open areas.

APRIL, 1936

Which Would You Rather Maintain?



20 Wash Basin
Faucets . . . or

One Bradley spray-head serves the same number of people as 20 ordinary faucets—and each user washes in clean, running water.

ONE
SPRAY-
HEAD?



10 wash basins with 20 hot and cold water faucets provide no more washing facilities than—one Bradley Washfountain.

This means 10 times as many drains to maintain—20 times as many chances for leaking faucets . . . practically 10 times as much water for washing 10 men.

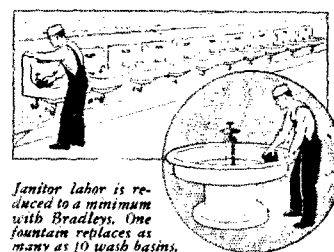
The Bradley is the choice of today's industrial plants—because it is more sanitary—saves its cost in lower water consumption and maintenance—provides speedier washing facilities—and is simpler and less costly to install.

New Catalog

Let us mail our recently published catalog—and give you the names of some of the users of the thousands of Bradley Washfountains. **BRADLEY WASHFOUNTAIN CO., 2237 W. Michigan St., Milwaukee, Wis.**



BRADLEY
WASHFOUNTAINS and SHOWERS



Janitor labor is reduced to a minimum with Bradleys. One fountain replaces as many as 10 wash basins.



No More Accidents in This Shop!

—or in any other where **WIESMAN SAFETY PRESS GUARDS** are installed on the power presses. The cam action operating principle assures maximum safety and in no way interferes with rapid production. Simple in construction, automatic in action, and easy to attach. Made for right or left hand stroke. Write for details.

Wiesman Mfg. Co.

31 South St. Clair St.
DAYTON, OHIO, U.S.A.

SYNONYMOUS *with* SAFETY



**WILLIAMS'
"NON-SPARKING"
SAFETY
WRENCHES**

WILLIAMS'
"Non-Sparking" Safety Wrenches are designed for use wherever a spark may produce disastrous results. Drop-forged from beryllium-copper and accurately heat-treated, they are unequalled in strength, toughness and hardness. Non-rusting, non-corroding, non-magnetic—practically as strong as steel wrenches of similar size and design. Single and double head patterns in a wide range of sizes.



**WILLIAMS'
"VULCAN"
SAFETY
LATHE
DOGS**
Bent and Straight
Tail Patterns
Single and Double
Screw— $\frac{3}{8}$ " to 6"
Capacity

Safety and better balance on the lathe are distinct features of this Williams' "Vulcan" design. No projecting set screws to catch the operator's clothes. Screws of special steel hardened and tempered. Specify "Vulcan" Drop-forged Lathe Dogs for safety.

J. H. WILLIAMS & CO.
75 Spring St. New York
Western Warehouse and Sales Office, Chicago
Works, Buffalo, N. Y.

Headquarters for: Drop-Forged Wrenches (Carbon and Alloy), Detachable Socket Wrenches, "C" Clamps, Lathe Dogs, Tool Holders, Eye Bolts, Hoist Hooks, Thumb Nuts and Screws, Chain Pipe Tongs and Vises, etc., etc.



Trucks, stock piles, or equipment should not be allowed to accumulate where they will make it difficult for employees to reach the bubblers.

There is still another side to the problem of drinking water. When the purity of the original water supply is assured, care must be taken to see that the water is kept pure until it is delivered to the employee.

Although most states now forbid the use of the common drinking cup, the "community" glass perched on top of the bottle of pure spring water is not yet unknown.

Workmen should be discouraged from drinking water from the end of a hose or from faucets and other outlets not designed for drinking purposes. The best way to do this is to provide a modern sanitary outlet system.

This implies construction of impervious material, such as vitreous china, porcelain, enameled cast iron or similar material; a jet which permits the water to issue at an angle, and a guard which prevents the lips from touching the end of the jet; the nozzle of the jet located at a level above the edge of the bowl, so that the nozzle will not be flooded in case the drain of the bowl is clogged; a bowl that is easy to clean and that will not cause splashing; a drain that does not have a direct physical connection to a waste pipe, unless the drain is trapped; a set valve or automatic valve to regulate the flow of water, so that the valve or lever manipulated by users of the fountain will merely turn the water on or off; a fountain tall enough so that it will be convenient for the majority of those using it; a waste opening and pipe of sufficient size to carry out water promptly.

Many old fountains can be modernized inexpensively to conform to these specifications.

Workmen should be encouraged to keep the fountains and surrounding areas clean. Fountains should be located in well-lighted, clean places, so that no employee will attempt to deposit chewing gum, cigaret stubs or other rubbish in the basin without feeling guilty. Plant regulations should insist emphatically that the fountain basin be not used for a cuspidor, and these regulations should be enforced.

Maintaining the purity of a water supply is particularly difficult in construction work, in out-of-the-way locations, and in mines. In these types of work, in many cases, a portable water supply is necessary. This may best be obtained by the use of a water bucket with a tight-fitting cover, equipped with

a spigot and a hand pump to give the necessary pressure. Equally convenient is a water jug from which water may be poured into the workman's receptacle. Where a portable water supply is used, care must be taken to rinse the container often with boiling water.

Even when every provision for an adequate drinking water supply is made by the management, some employees will not take advantage of the opportunity to provide the necessary irrigation for the body.

Through posters, articles in employee magazines and other literature the use of water may be encouraged. Physicians agree that at least six glasses of water a day are required by the average person in addition to the water assimilated in food. In hot weather even more may be required, particularly by employees engaged in strenuous occupations. To offset the loss of body salts through perspiration, sodium chloride tablets should be made available.

When these conditions are observed, it is relatively easy to ingrain in the employee the habit of drinking sufficient water. And when a regular schedule of "irrigation" is established, the way is paved toward greater efficiency and productivity.

Industrial Efforts Win Civic Awards

THE Safety Division of the Milwaukee Association of Commerce recently reported the largest registration in fifteen years in the Foremen's First Aid and Health, and Fire Prevention Schools. The registration totaled 11,700, representing 350 Milwaukee industries.

This group conducted three seasonal campaigns last year, reaching 110,000 homes in the fire prevention campaign; 1,500 mercantile establishments in the Christmas hazards campaign; and 600,000 citizens in the safe Fourth of July campaign.

As a result of this work, Milwaukee enjoyed honor awards in the fire waste contest and the health conservation contest conducted by the United States Chamber of Commerce.

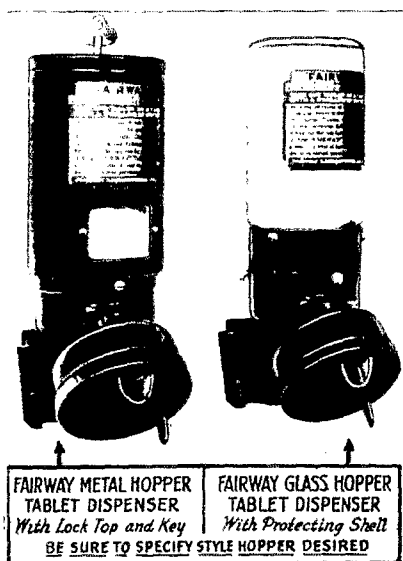
City Bars Sale of Gas or Oil to Drunks

A city ordinance prohibiting the sale of gasoline or oil to intoxicated motorists has been passed by the city of Canton, Ohio, according to an Associated Press dispatch. The ordinance provides penalties for attendants who violate it.

NATIONAL SAFETY NEWS

An Improved Unit for PREVENTION OF HEAT SICKNESS

The New Fairway Metal Hopper Salt Tablet Dispenser complete with lock top and key.



FAIRWAY METAL HOPPER
TABLET DISPENSER
With Lock Top and Key

FAIRWAY GLASS HOPPER
TABLET DISPENSER
With Protecting Shell
BE SURE TO SPECIFY STYLE HOPPER DESIRED

This new dispenser meets the problem where the glass hopper proves too fragile.

The new all metal dispenser has a number of better features—new lock top permits much easier refills—holds larger supply of tablets.

Free from any chance of breakage, thus widening the number of places in which the dispenser can be installed.

Now is a good time to arrange

for all the dispensing units your various departments will need.

We continue the glass hopper and will supply this on all units except where metal hopper is specified. Meet hot weather with a full supply of Fairway Sodium Chloride Tablets and your choice of these perfected dispensers. Write for booklet "Prevention of Heat Sickness" and prices of tablets and dispensers.

Note:—Metal hopper fits all present installations of "Fairway" Junior Dispensers where it is desired to replace present glass hoppers.

FAIRWAY LABORATORIES, Inc.
Belleville, Illinois



Practice Good Housekeeping for SAFETY

Good safety records are usually closely associated with good housekeeping. Industrial workers will do better work and have more pride in their jobs if working conditions are clean and healthful. Cluttered, dirty aisles, stairways and floors invite accidents, decrease efficiency.

Back up your rules and safety program with Stonehouse Signs. They are permanent reminders of the value of good housekeeping.

Stonehouse Good Housekeeping Signs have been developed over years of experience and have proved most effective. Hundreds of stock signs to choose from. Standard accident prevention colors and designs. Complete information and prices gladly on request.

"Signs since 1863"

Stonehouse
SIGNS, INC.
MANUFACTURERS

9th at Larimer

Denver, Colorado

There's a Stonehouse Accident Prevention Sign for every industrial purpose.



ACCIDENT PREVENTION Steel • SIGNS IN STANDARD COLORS AND DESIGNS



RAW CORD SOLES AND HEELS

Means Safety ALL OVER THE WORLD in any Language

Men, Women and Children all over the World wear RAW-CORD and GRO-CORD Soles and Heels because they provide NON-SLIP Safety and Long Wear.

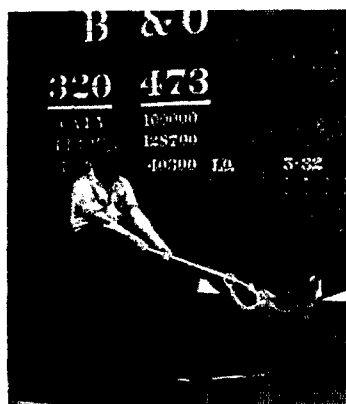
GRO-CORD and RAW-CORD Soles and Heels are used in dairies, on farms, iron and steel foundries, railroad shops, auto factories, gas and electric plants, ice and fuel stations, stone quarries, general warehouses—where Safety is an important factor, also street and office.

The Lima Cord Sole & Heel Co., Dept. 7-F, Lima, O.

Fully Protected by Patents—Any Infringements Will Be Prosecuted



NON-SLIP SOLES AND HEELS



Close Hopper-Bottom Car Doors with

EASE and SAFETY

with the

Prescott Safety Tool

This special tool will close hopper-bottom car doors. Prevent smashed fingers, strained backs, ruptures and other serious injuries. Saves time—Is inexpensive.

The Trumbull Mfg. Co.

Warren

Ohio

PERSONALS

WALTER W. MATTHEWS, for fifteen years director of safety in the Bureau of Highway Patrol and Safety, Department of Revenue, Commonwealth of Pennsylvania, has been appointed manager of the Philadelphia Safety Council, a division of the Chamber of Commerce. The newly organized council is arranging a comprehensive program of highway, industrial, and home safety activities, with the backing of many local organizations.

S. WESTON SCOTT succeeds Mr. Matthews as director of safety in the state motor vehicle department.

MRS. FRANCIA BAIRD CROCKER, R. N., has been appointed associate for nursing activities by the National Society for the Prevention of Blindness. Mrs. Crocker succeeds Miss Mary Emma Smith, R. N., who resigned to accept the position of director of public health nursing in the New Mexico Bureau of Public Health.

Mrs. Crocker was formerly director of the Prevention of Blindness Department in the Missouri Commission for the Blind.

H. J. BRAMMEIER, formerly assistant secretary-manager of the St. Louis Safety Council, has been appointed eye protection service representative of the American Optical Company for the entire state of Ohio. During the past two years Mr. Brammeier directed the state safety program of the CWA and the FERA in Missouri and more recently organized and directed a state-wide safety program for the PWA in Illinois.

FLOYD F. KAY has resigned as manager of the Safety Bureau of the Memphis Chamber of Commerce to become secretary of the Spartansburg, S. C., Chamber of Commerce.

INSURANCE DEPARTMENT MANAGER

Will set up and operate insurance department for large manufacturer. Experienced on self insurance. Safety engineering work. I am a licensed insurance broker with 21 years insurance work; seven years with present employer whose annual saving on insurance is \$100,000. Married and under 40. Address Box 298, NATIONAL SAFETY NEWS.

NATIONAL SAFETY NEWS

JAMES D. HACKETT

JAMES D. HACKETT, director of the Division of Industrial Hygiene, New York State Department of Labor, died in New York City on February 13, after a short illness. Born in Kilkenny, Ireland, he was educated at Clongowes Wood College in Ireland. After coming to the United States in 1904 he was engaged as a labor consultant and lecturer on labor problems.

Mr. Hackett was primarily interested in promoting hygiene and safety among industrial workers. In 1925 he wrote, "Health Maintenance in Industry," and in 1929, "Labor Management." He was appointed to the Department of Labor in 1929. He had been a member of the Metropolitan Chapter, ASSE-Engineering Section, National Safety Council. His work did much to popularize the facilities developed by the New York Department of Labor to help employers promote health and safety.

CLYDE M. BRADING

CLYDE M. BRADING, formerly superintendent of safety and labor for the Wisconsin Steel Works of the International Harvester Company, Chicago, died March 16 in Florida where he had been spending the winter. He was 52 years old and is survived by his widow and one son.

Mr. Brading joined the International Harvester organization in 1908 and was appointed superintendent of safety and labor in March, 1912, holding this position until ill health made his retirement necessary in October 1934. He had been a regular attendant at the Annual Safety Congresses since 1913.

Council President Honored

JAMES K. MILLER, JR., president of the Grand Rapids Safety Council, has been selected for the National Junior Chamber of Commerce Service Award for Grand Rapids. The award is made annually by the Junior Association in each city in which it is organized and goes to the man between 25 and 35 years old who has been judged as having rendered outstanding service to his community during the preceding year.

Mr. Miller's principal civic service has been with the Grand Rapids Safety Council of which he is now serving his second term as president. He also has served on various committees and in many local undertakings. He is manager of the United Auto Insurance Co.

APRIL, 1936

DERMA-SAN

D I S I N F E C T A N T



Prevent Oil Dermatitis with **DERMA-SAN!**

YOUR MEN do better work when you sterilize cutting lubricants with Derma-San. For Derma-San keeps oil dermatitis out of your plant. By protecting your workers against this serious skin disease, it saves compensation and medical costs. By eliminating oil infections, it increases efficiency and production. Guard your men with Derma-San. Add 1 pint of Derma-San to 35 gallons of cutting lubricant, and kill pus-forming germs before they attack your workers.

Derma-San is ideal for all general plant sanitation.

The HUNTINGTON LABORATORIES *Inc.*

DENVER

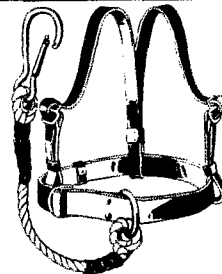
HUNTINGTON, INDIANA

TORONTO

BUHRKE Belts for Railroad Men.

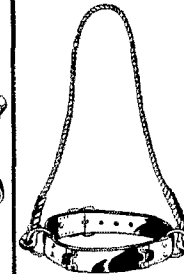
No. 1131
Car Runner's
Safety Belt

This special belt was designed for the protection of workmen in switching and dropping cars. Belt is made of leather or impregnated webbing. Worker prevented from falling to tracks.



No. 1130
Locomotive Safety
Belt and Safety
Sling

Designed to protect workman on any operation above the running board on a locomotive where it is required to put any stress on wrenches, bars or other equipment which might cause him to fall.



R. H. BUHRKE CO.

4538 Fullerton Ave.
CHICAGO, ILL.

STOP ACCIDENTS



At The Source!

EVERY industrial enterprise has its potential sources of danger. Some of them are quite apparent—others, apparent only to those skilled and trained in accident prevention engineering.

The INDUSTRIAL GLOVES CORPORATION has been engaged, for the past twenty-five years, in the manufacture of STEEL-GRIP personal safety equipment for the protection of industrial workers.

As specialists in this field we are called on regularly by our industrial customers to diagnose potential sources of danger and prescribe the remedies where properly designed safety clothing is the solution.

This service is offered without obligation. Call upon us to help you **stop accidents at the source!**

LET US SERVE YOU



INDUSTRIAL GLOVES CORPORATION

725 GARFIELD BLVD.
DANVILLE, ILL.

Chicago

Philadelphia

Detroit

A Plea for the Negative

(Continued from page 13)

clumsy at the controls, road tests are of doubtful value. On the other hand the mounting of a steering wheel and controls on a nicely finished stand does not constitute a test for automobile driving.

Don't stop with a diagnosis. When you have ascertained the condition of your drivers, the causes of your fleet accidents, or the most probable causes by acceptable methods, do not cease your efforts. Here is where your good work begins. Call the men in by groups—those who are careless about traffic regulations, those who are clumsy at performance, and those who are not as alert mentally as they should be. Plan your educational program around the defects of your men. Follow up men who have accidents. Try to find relationships to accidents. Start a scrap book of your own. When you have collected first hand evidence from 25 or 30 years' experience you will be in a favorable position to give sound advice on the causes of accidents you have observed. Supplement experience with scientific facts. Interpret the former in terms of the latter or vice versa.

Don't expect one simple measurement to give you the picture of a driver's potentialities. The intelligence testers a few years ago thought they had found the solution to most social and economic problems—the intelligence test. High intelligence—much success. Low intelligence—little success. Vocational guidance quacks flourished. It was too good to be true. Intelligence tests have a place in psychological measurements but are not to be considered the only indicator of success. At the extremes they are quite accurate but when used alone there is plenty of chance of error in the middle range.

Don't bank too heavily on any one measurement; reaction time, visual acuity, color vision, blood pressure, speed of movement, manipulative skill, or any other one test. It takes all the measurements possible and a great deal of experience with drivers to be reasonably certain of a man's qualifications as a driver.

Don't consider any driver so nearly perfect that he will not have an accident.

While 99 accidents out of 100 are traceable to some specific cause, the other one appears purely fortuitous. Barney Oldfield was sideswiped by a truck a short time ago. Human nature is not infallible. "Cockiness" is a common

cause of accidents. There is an old German adage that, "A jug will go to the well until it breaks."

A driver who has never had an accident would do well not to boast of the fact. Most superior drivers will not have accidents. Some ten to twenty per cent of them will, for one reason or another, have trouble. It will tend to wreck the morale if a shining example of safety does have an accident.

Don't preach safety and practice recklessness. The safety director himself must set an example.

Don't expect results without continuous systematic and scientific effort to get at the causes. Safety among employees, like advertising among consumers, requires constant effort. It is partly an educational program. The old method of making big claims for products, claims which can never be fulfilled, is being superseded by a modest scientific statement of facts. One mode of attack will not suffice. It takes constant and varied approaches to get the idea across.

In a similar manner the method of teaching safety by precept, posters and general slogans must be supplemented by scientific measurements and professional advice. Mose Brown may be interested in "Stop, Look and Listen"; he may take a second look at a "skull and crossbones"; but he will sit up and take notice when you show him he takes twice as long to react to a sudden stimulus as his driving partner. Prove to him that he is "cockeyed", and he will hound you for hours to find out what caused it, how he can correct it, or how it may cause him trouble when driving.

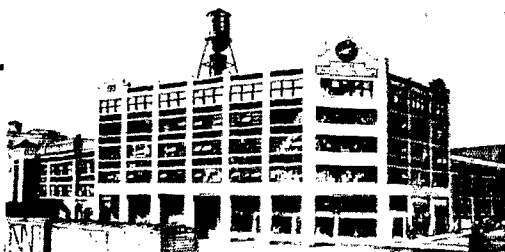
What can we do about it? A few of the remedial measures which might be suggested to overcome known difficulties are: (1) correction for defects whenever possible, (2) specific schools for drivers, teaching them the causes of accidents they have had or might have, and methods by which these accidents may be prevented, (3) test fields and driving courses for practice in actual performance, (4) interviews with both good and bad drivers, enlisting their cooperation in encouraging highway courtesy and good driving practices.

Have the drivers think through the possible accident situations in advance. This can be done in group discussions of accidents which have taken place within your company. Be alert constantly and infuse novelty and pep into your safety program.

NATIONAL SAFETY NEWS

**WEST
DISINFECTING
COMPANY**

42-16 Barn Street, Long Island City
New York City



**LARGEST ORGANIZATION
OF ITS KIND IN THE
WORLD**

Branches in 55 Principal Cities

**PROTECT YOUR WORKERS
from the Menace of Oil Dermatitis
with WESCOL**

WESCOL is a very powerful germicide, guaranteed to be 18.20 times as strong as carbolic acid. Because of its very high coefficient, WESCOL is an effective and economical disinfectant to use where a powerful germicide is required, and one that will not change the nature of the material in which it is used. WESCOL used in cutting oils and compounds keeps the material sterile and safeguards the workers against the menace of Oil Dermatitis.

OIL DERMATITIS is caused by pus germs carried

into the pores, hair follicles and abrasions of the workers' skins by cutting oils and cutting compounds. Even germ-free cutting oil becomes infected during use. Factories have had epidemics of Oil Dermatitis in which almost the entire force has become infected. The disease is a serious one, which may lead to blood poisoning and amputation. It is covered by compensation laws in many states.

One pint of WESCOL to 50 gallons of cutting oil or cutting compound will keep the material sterile without injuring its cooling properties.

Send for our Special Booklet on WESCOL

Safety First Shoes



One of 32 Styles

THE PIONEER LINE

Safety First Shoes are literally the first shoes for safety. Over 35 years of experience are reflected in their quality and protective features.

THE PROFITABLE LINE

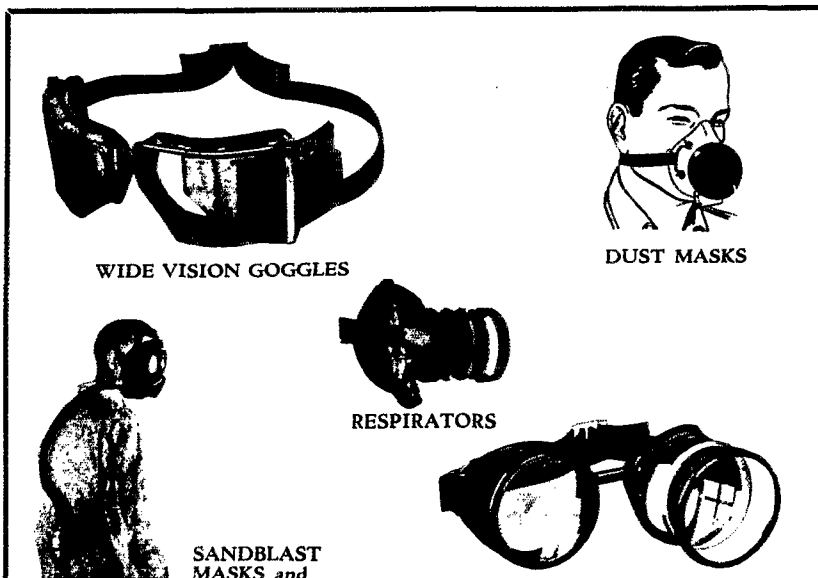
Profitable—for the plant owners (fewer accidents, less lost time, replacements, etc.). Profitable for the wearer . . . PROTECTION *plus* long wear.

THE SERVICE LINE

Orders are shipped promptly ("same day received" is the rule). Posters and other advertising assistance are furnished free.

Investigate the Safety First plan! Write for our new booklet "From Our Mail Bag"—actual stories of averted accidents. Let us send you our catalogue with a "Specific Use Sheet," describing shoes for every purpose. SALESMEN and AGENTS now being appointed for open territories.

SAFETY FIRST SHOE CO., Holliston, Massachusetts



WIDE VISION GOGGLES

DUST MASKS

RESPIRATORS

SANDBLAST MASKS and HELMETS

CHIPPING and WELDING GOGGLES

CORRECT SAFETY EQUIPMENT

When you need industrial head and eye protective equipment it is to your best interests to have a resourceful and responsive source for your requirements. The Cesco organization can supply your needs promptly and furnish rated and efficient equipment of the finest quality and usefulness.

For information and catalogs showing Goggles for welding and impact hazard work, Respirators, Dust Masks, Welding Helmets and Sandblast Masks, write



Chicago Eye Shield Co.

2323 Warren Blvd.

Chicago, Ill.



No. 436

IPCO SAFETY HAIR NET

- For all industrial operations where girls are employed around machinery and power driven equipment. Holds hair in place, out of the eyes and lessens the chance of accidents.
- Manufactured of heavy rayon silk with an elastic strand which entirely encircles the head. Will not shift or slip; stays firmly in place.
- Attractive in appearance and will give months of satisfactory service.
- Furnished in the following colors: Blue, red, black and light, medium and dark brown.

INDUSTRIAL PRODUCTS COMPANY
Accident Prevention Equipment
800 W. Somerset Street Philadelphia Pennsylvania

Garage Fires

(Continued from page 22)

An investigation of the possible source of ignition of the vapors tended to eliminate all theories but one. A test of the 110-volt, split-phase induction motor driving the grease gun showed that it sparked slightly when the starting brushes lifted. It is believed that these sparks ignited the explosive mixture.

To prevent a recurrence, the following steps were taken:

1. Enforcement of a company rule prohibiting the use of gasoline in the garage for any purpose other than fuel.
2. Replacement of the electrically-operated grease gun with one operated by compressed air.
3. Installation of a more adequate ventilating system in the pit.
4. Installation of vapor-proof light in the pit.
5. Installation of rotary pump on gasoline tank trucks to eliminate the necessity of handling gasoline in a bucket or other container.

2. In another case what might have been a disastrous fire was held in check by sprinklers and a foam extinguisher. An employee in the garage was cleaning a concrete repair pit with gasoline from a bucket, when the gasoline in the bucket was ignited in some unknown manner and fire spread quickly about the pit and up the wall to the ceiling. Five sprinkler heads opened and held the fire in check. The employee's clothing ignited and he received second degree burns. Other employees extinguished the fire with foam-type extinguishers.

3. In another case the breakage of an electric lamp started a fire which resulted in the death of three men and a property loss of \$10,996. Two employees were in a repair pit repairing an automobile and there were two other employees in the frame garage. One of the men in the pit dropped a portable extension lamp, which had a wire guard but no vapor-proof globe, and broke it. Instantly the interior of the garage was in flames. Three of the employees were fatally burned before they were carried from the building by firemen. A fourth employee who escaped from the building was severely burned. The fire department extinguished the fire with three hose streams but the building and its contents, including five automobiles, were badly damaged.

4. A cigaret thrown into the pit was blamed for this fire which was also extinguished by sprinklers with only slight damage. Fire had started in the concrete pit below the floor level which was used for draining off crankcases and also for greasing. Fire started in a pool

NATIONAL SAFETY NEWS

of oil in the corner of the pit, and as the floor of the pit was oily, flames spread quickly. Two sprinklers directly over the pit opened and extinguished the fire.

5. An employee was using an acetylene welding torch over an automobile repair pit. Boards covered the pit at the time the fire occurred. Flames appeared through the cracks in the boards and an employee used two foam extinguishers before removing the boards. When the covering was removed flames shot to the ceiling and opened a sprinkler head which extinguished the fire.

6. Using gasoline in a spray gun to clean the motor base of a bus led to this fire. The gasoline vapors ignited when a short circuit in the battery caused a spark. Fortunately, the employees suffered only slight burns and did not lose time from work. The property damage was less than \$2,000. Investigation committee recommended strict enforcement of the rule requiring employees to disconnect battery cables when working on motors and discontinuing the use of gasoline as a cleaning medium in locations other than the room designated for that purpose.

The Sight Meter Tells the Story

(Continued from page 25)

these lines and how they keep boxes, steel or other materials clear of these areas. Refuse cans, also conspicuously painted and conspicuously placed, keep lunch remains and oily rags off the floors.

One of the pioneers in recognizing the value of adequate illumination and the relationship of paint to light is the Ford Motor Company. The plants are painted white and the equipment in pastel shades, with bright contrasting colors to make moving parts stand out. The plants are as light as possible, equipment as visible as possible, and electrical equipment and moving parts are doubly visible. Aisle markings are always a conspicuous part of Ford plants and order is safety's first law.

As an example of what paint can do to reduce the number of accidents in a plant, none serves better than the experience of a shoe factory in Massachusetts. Machines were painted in light colors to provide better visibility and higher contrast with the work itself (the deep tans and black of men's shoes). Walls were lightened with ivory and white paint to increase the level of visibility. Within a six-months' period the accident rate had been more than cut in half, and the insurance premium rate was reduced.

APRIL, 1936



EAST

NEW YORK
W. S. Wilson Corp.
123 Varick St.
PITTSBURGH
Safety First Supply Co.
Brady Building
PHILADELPHIA
J. A. Hunt Co.
2036 Sansome St.
BRAINTREE, MASS.
Direct Sales Co.
108 President Road

SOUTH

CHATTANOOGA,
C. D. Genter Company
Chattanooga Bank Bldg.

MID-WEST

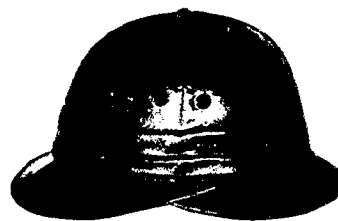
DETROIT
C. H. Dockson Company
2885 E. Grand Blvd.
CHICAGO
E. D. Bullard Company
215 South Leavitt St.
GREEN BAY, WIS.
Safety Service Company
108 No. Quincy St.
DULUTH
W. P. & R. S. Mars Co.
324 W. Michigan St.
HOUSTON
E. D. Bullard Company
1 Main Street

WEST

SAN FRANCISCO
E. D. Bullard Company
275 Eighth Street
LOS ANGELES
E. D. Bullard Company
1229 South Olive St.
SALT LAKE CITY
E. D. Bullard Company
1620 Yalecrest Avenue

Everything
BULLARD
in Safety

An unsolicited letter about a hat



JUST LIKE THIS!

E. D. Bullard Company
275 Eighth Street
San Francisco, California

Attention: Mr. Kenneth Butler

Dear Ken:

This letter should be regarded as an unsolicited testimonial of our satisfaction with Hard Boiled Hats.

We recently had the experience of having one of our laborers, who was wearing a Hard Boiled Hat (which has since been retired as a souvenir piece) struck on the head by a 2" x 4" block about 2' long that fell from the top of pylon S-2, at the San Francisco anchorage of the Golden Gate Bridge. This block fell a distance of 200' and struck the man just over the forehead. The Hard Boiled Hat absorbed the shock preventing a fractured skull and producing only a slight laceration of the scalp. The man returned to work after simple first aid treatment.

We believe this example is typical, but nevertheless intensely practical in showing the value of this type of protection on construction jobs.

Yours very truly,

*Name of this large contractor
will be given on request.

Hard Boiled Hats, in the model best suited for YOUR jobs may be examined at any office listed here.

Complete catalog will be sent on request.

BULLARD

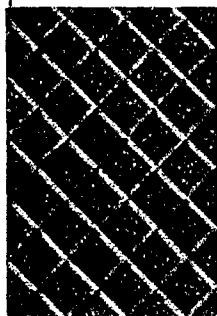
FERALUN (Also Bronzalun, Alumalun and Nicalun) Anti-Slip Treads

PREVENT ACCIDENTS
ON STAIRS and FLOORS

A hard metal matrix into which is cast an abrasive next in hardness to the diamond, assuring durability and anti-slip efficiency.

Specify Feralun and Be Sure

AMERICAN ABRASIVE METALS CO.
Irvington, New Jersey



HALSEY TAYLOR

Cooler Fountains



No other has ALL these Features

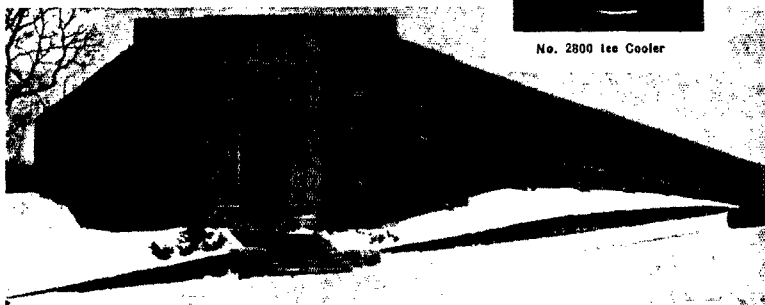
• Practical automatic stream control, distinctive two-stream projector—water never too high, never too low and always SAFE to drink from! Heavy Cork-Insulated Walls, Bottom and Cover, giving maximum cooling capacity and minimum ice consumption. Drinking water does not come in contact with ice or melted water! The very best in cooler construction—and all these features at no extra cost. That is why year after year Industry chooses Halsey Taylor Coolers. Write for our latest folder describing ice coolers, pedestal and wall fountains and electric coolers for office or factory.

THE HALSEY W. TAYLOR CO., Warren, Ohio
Largest Manufacturers of Drinking Fountains

Harris Calorific Co., Cleveland, Ohio, protects the health of workmen with Halsey Taylor Pedestal Fountains throughout their plant.



No. 2800 Ice Cooler

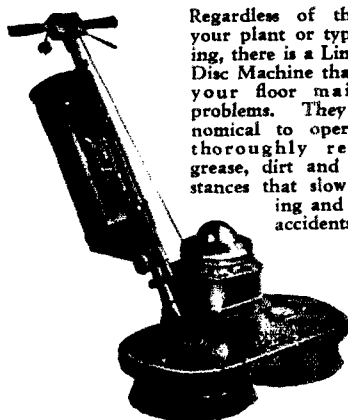


Reduce Accident Hazards

- Speed-Up Production
- Lower Floor Maintenance Costs

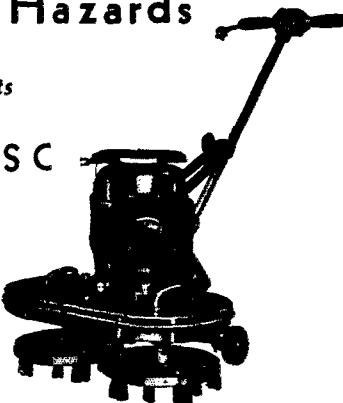
with a

LINCOLN TWIN-DISC FLOOR MACHINE



The Lincoln Type No. 20 is a compact combination scrubbing, cleaning and polishing machine—recommended for use in average congested areas. Has a capacity of from 2500 to 3000 sq. ft. per hr. Brushes revolve in opposite directions eliminating "Whip" or side pull.

Regardless of the size of your plant or type of flooring, there is a Lincoln Twin-Disc Machine that will solve your floor maintenance problems. They are economical to operate. They thoroughly remove all grease, dirt and other substances that slow up trucking and cause floor accidents.



The Lincoln Industrial Special is used by many of the country's largest industrial plants to remove the imbedded grease, dirt, steel chips, and shavings from factory floors. Twenty times faster and more efficient than hand work. Ideal for cleaning wood-block floors.

Large or small areas are cleaned faster and more efficiently than can be done by any other method.

Arrange today for a demonstration in your plant—without obligation. Write for details.

Available in 12 different models and sizes.

LINCOLN-SCHLUETER
FLOOR MACHINERY CO., Inc.
237 W. Grand Ave. Chicago, Ill.

The LINCOLN Twin Disc
SCRUBS - WAXES - POLISHES

New York Conference

(Continued from page 26)

Dr. John H. Finley, associate editor of the *New York Times* and former Commissioner of Education of New York State, addressed the Conference dinner.

The President's Medal of the National Safety Council was awarded at the dinner to 14 men who had saved life by the Schaefer prone-pressure method of resuscitation. Recipients of the award were Louis J. Beissel, Brooklyn Union Gas Company; Arthur J. Ayres, and Gustave Hambach, of the New York Edison Company; Norman Bergesen, Arthur Colonell, Joseph Pfrangle, Joseph Ballarin, Robert Downing, Robert H. Sisson and Frederick J. Spies, of the New York and Queens Electric Light & Power Company, and Matthew M. Di Pong, Preserved A. Leonard, Russell J. Sell, and Arthur H. Strunk, of the New York Telephone Company.

Following the presentation of awards the trophy winners in the Eleventh Annual State-Wide Accident Prevention Campaign of the Associated Industries of New York State, Inc., for the metropolitan area were announced.

On Thursday, the final day of the Conference, Commissioner Charles A. Harnett, of the New York State Motor Vehicle Department, proposed a strong program to promote motor vehicle accident prevention. Dean A. Fales, associate professor of automobile engineering at the Massachusetts Institute of Technology, criticized the style of the modern motor car, declaring that engineers could build a safer automobile than the stylists have thus far permitted them to do.

In the session on training the driver in high schools it was brought out that the educational directors of nine states are interested in a plan to teach high school students to drive a motor car. In New Jersey a high school course in this subject has been made compulsory.

The newest improvements in street and highway design were outlined in the session on "The Highway—The Pedestrian" by Wilbur L. Cross, Jr., chief engineer of the Department of Motor Vehicles of Connecticut.

Professor William Junkin Cox, of the Department of Engineering Mechanics of Yale University, proposed a system of control for the pedestrian.

More than 80 papers were delivered. Of these, many outstanding ones were given in the sessions on occupational diseases, the work of commercial vehicles, and "After the Whistle Blows."

NATIONAL SAFETY NEWS

More Firms Take Part in New Jersey Contest

A SAFETY awards dinner meeting attended by 800 persons was held recently to celebrate the successful conclusion of the Eighth Annual Statewide Inter-Plant Safety Contest conducted under the auspices of the New Jersey State Department of Labor. The contest ran from October 1, 1935, to December 31, 1935.

The final report of the contest, compared with the 1934 Contest report, indicates that important progress has been made.

Despite the increased hazards, due to an increased number of employees and a greater number of man-hours worked, the 1935 accident frequency rate was only a fraction higher than that of 1934, and this was more than offset by a slight drop in the severity rate.

An additional factor on which the conclusions of the report are based is the fact that a greater number of firms took part in the 1935 Contest and reported results than in the 1934 competition. This condition is credited with giving a broader and more accurate picture of the situation.

In 1935, 342,047 employees, hired by 2,138 firms, took part; in 1934 the employees numbered 268,567 and the reporting firms 1,545. During the 1935 Contest 166,149,815 man-hours were worked; the corresponding figure for the 1934 Contest was 120,795,097.

There were ten fatalities during 1935 as compared with nine for 1934. Non-fatal accidents numbered 1,942 in 1935 and 1,403 in 1934.

The frequency rate for the three months' period of the 1935 Contest was 11.74; the comparative figure for 1934 was 11.69. The 1935 severity rate was 1.72 and that of 1934 was 1.82.

The attendance at the safety awards dinner was indicative of the interest created by the contest.

James W. Burnison, vice-president in charge of manufacturing, RCA Company, Camden, N. J., acted as toastmaster. He had also served as chairman of the General Managing Committee in charge of the contest.

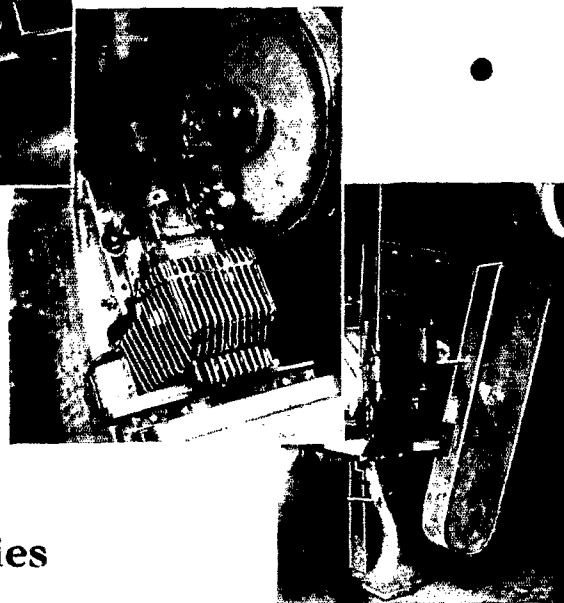
Addresses were given by Arnold Vey, traffic engineer and representative of Governor Harold G. Hoffman; W. S. Landes, president of the Celluloid Corporation; John J. Toohey, Jr., state commissioner of labor, and Edward J. Mulcahy, humorist.

The contest report was read by John Roach, deputy commissioner of labor, and director of the safety contest.

APRIL, 1936



Use H & K Guard Accessories



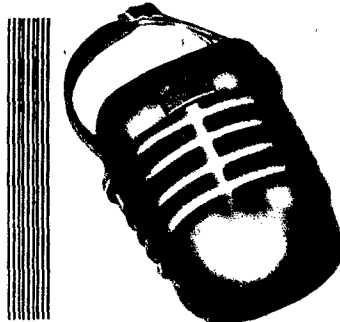
The hum of fly wheels, meshing of gears, whir of speeding drive belts, stamp of punch presses, are all pleasant industrial sounds, meaning production is under way—and so easily halted by needless, costly accidental injuries. Danger lurks in all machine operations. But, durable, economical and dependable safeguards can be provided by using H & K Guard Accessories. Assembled in your own plant—to your own particular needs—no special tools required. Write for prices and details.

*All H & K Guard Accessories are under inspection
service of Underwriters' Laboratories, Inc.*

THE HARRINGTON & KING PERFORATING CO.
5655 Fillmore Street—CHICAGO 114 Liberty Street—NEW YORK CITY

SANKEY FOOT GUARDS

Reduce Foot Injuries



Smashed, mangled and bruised toes slow down production and cost real money in compensation and medical costs. Protect your workers' feet against accidental injuries. Supply them with Sankey Foot Guards. They are light in weight, comfortable, strong and permit free and easy movement. A trial will convince, send for sample and details.

ELLWOOD SAFETY APPLIANCE CO.
ELLWOOD CITY, PENNSYLVANIA

SAFETY ENGINEERS— *Important*

SAFETOE SHOES are "ROCKWELL" TESTED

EVERY Safety Engineer knows and respects the severe and exacting routine represented by the Rockwell Impact and Compression Tests—knows that no steel toecap can pass such tests, made by impartial laboratories, without being "ace high" in safety.



"Safetoe"

Men's Black Elk Blucher Oxford, Leather Lined Vamp and Quarter, Steel Box Toe, Steel Shank, Heavy Single Oak Leather Sole, Whole Rubber Heel, Welt, Safetoe Last. C, 6-12; D, E, 5-12.

So we say—recommend SAFETOE, because Brownbilt SAFETOE Shoe; have successfully passed these tests and, therefore, you can be sure that they provide the utmost in safety for your employees.

Write or wire for information about our special Industrial Plant Selling Plan... It will place you under no obligation whatsoever.

Brown Shoe Company
MANUFACTURERS—ST. LOUIS

Also manufacturers of Air Step, Buster Brown and Brownbilt Shoes.

BROWNbilt SAFETOE SHOES

PRESENTING *New* Justrite Safety Cans!



Waste! Can!

JUSTRITE'S Automatic Safety Waste Cans give you safety, economy, efficiency. Opens with foot, closes automatically. Leaves both hands free—a great feature! Reduces insurance rate. Capacity: 6, 8, 10, 14 gallons.

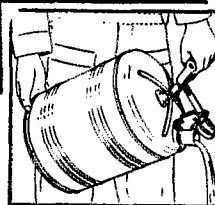
Opens with Foot
Closes automatically

JUSTRITE presents a New Improvement in the 2, 3 and 5 gallon Safety Cans. The carrying handle has been redesigned. This permits "Easier Carrying" and "More Accurate Pouring." Large Spout—easily filled direct from filling station hose—no funnels required.

See how easy it pours—the most efficient can for the workman. Automatic spring controlled spout cap. Natural Hand Grip—opens in one operation—closes automatically. A safe container for carrying explosive and volatile liquids—no leakage or evaporation. Labeled by the Underwriters' Laboratories, Inc., and Approved by the Associated Factories Mutual Fire Insurance Companies.

LESSENS INSURANCE RATES

Protect your plant—your employees—lower your insurance rate premiums—by installing the latest improved and approved JUSTRITE Safety Devices TODAY. See your dealers or write us for interesting prices and literature.



SIZES
2 to
5 Gallons

Justrite
TRADE MARK

Justrite Mfg. Co. 2087 Southport Avenue
CHICAGO, ILLINOIS

No Motors Menace Play

(Continued from page 19)

A prize contest was decided upon. This consisted of cash awards for the best play yards established, prizes to be awarded at the end of the vacation school period.

Play yards are divided into these classifications: Home yards on which not more than \$3 is spent, home yards on which not more than \$15 is spent, community or co-operative play yards, in backyards or vacant lots, which are made by the joint efforts of two or more families. No limit on amount spent in this latter class.

A four-page pamphlet telling of the entire plan was published. Copies were distributed by all the Flint school teachers to their pupils on the day schools closed for the summer vacation. A safety play yard contest entry blank was printed on the last page of the pamphlet.

A publicity program was drawn up. Window cards were designed for use in store windows throughout the city and for streetcars. Painted posters on billboards were put up rent free and at half the painting cost by a local sign company. A printing company, sympathetic to the movement and impressed with its great civic appeal, made up the pamphlets and posters at cost.

Follow-up work was conducted in a vigorous manner. Six women contacted all the homes in the city. Wherever children were found to be playing in the street parents of these children were immediately asked to join the contest. Those families who were unable to purchase necessary equipment and who could find no obsolete, cast-off material were furnished free iron pipe, rope, bur-lap and other material that local factories and stores gave to the club.

The Automobile Club made arrangements for this purpose, particularly with the various manufacturing establishments in Flint, whereby the factories donated usable salvage material to the club and which the club had stored in a central warehouse. While no publicity was given to this free material for play yards, it was sent to persons who otherwise would have been unable to get a yard started. Names and addresses of such persons were noted, their enrollment in the contest was established and the equipment forwarded to them in a city truck without cost. The city trucks, in some instances, also were employed without cost in clearing away rubbish for installing play yards.

A member of one of the cooperating

NATIONAL SAFETY NEWS

agencies, the Boy Scouts, donated their camp facilities for 90 boys, who are known as Safety Crusaders. These boys were picked the last week of school by the principal. They were required to furnish their own food and clothing and receive one week's training on organizing play, handicraft, games, storytelling, health, etc., and then were returned to Flint, sworn in by the Mayor, City Manager, as Safety Crusaders, given a card designating their authority and then sent out into various districts to work with the six contact women in charge of the district. These boys watch out for and report all hazards, lead children to safe places to play, obtain the permission from the owners for the use of vacant lots as play yards, work on the play-yard contest, lay out play yards, organize games, etc.

While the work of the Crusaders contributed in the reduction of accidents, it was decided that in order to make the boys more useful and to get better results it would be wise to organize a Crusader junior police force with definite assignments for every boy. Accordingly, these were elected.

The selected boys act as leaders in the backyard and play-yard work, as well as report all unsafe places and conditions existing within their territory. They are considered such a vital force in preventing accidents to school children that they may call the Police Department when any trouble arises with which they are unable to cope and the message will be broadcast to the radio cars and a cruiser will arrive on the scene.

The Girl Scouts contributed toward this program by training a group of some 65 girls to act as play leaders and organizers of cooperative lots and backyard playgrounds in their neighborhood. They are the natural leaders in their respective communities and have received instructions in the art of telling stories, simple handicraft and light dramatics, besides games for smaller children and athletics for girls of their own age.

The Junior Chamber of Commerce, the Civitan Club and other luncheon clubs were brought into the program in order to further enlarge the movement. The entire program was presented to these organizations at their weekly meeting. These organizations were given definite assignments—to contact with manufacturing plants in obtaining salvage, to sponsor neighborhood cooperative play-yards and to become active in obtaining enrollments in the contest.

The entire cost of the play-yard program amounted to \$402.93. This con-

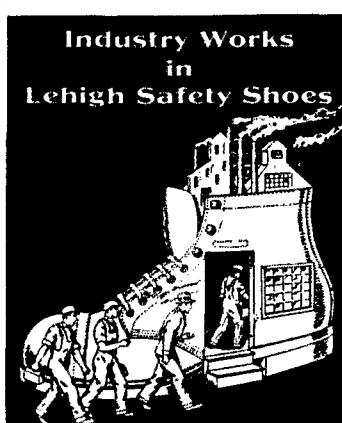
sisted of the 30,000 folders for school children, \$247.38; the 500 posters for shop windows, \$57.68; the 100 posters for street cars, \$15.45; the fifteen painted billboards at \$5 each, \$75, and \$7.42 to a lumber company for erecting a miniature billboard.

An important contributing factor in the success of the play-yard movement in Flint was the editorial support accorded the activity by the *Flint Journal*. Richard Roberts, city editor, gave special attention in the news column to the child safety work.

Messages of inquiry, congratulations and indorsement have marked the play-

yard campaign. These came from different parts of the United States, Canada and Europe. Governor Harold G. Hoffman of New Jersey, one of the nation's leading safety advocates, has declared that the Flint activity was an outstanding program.

"I believe the play-yard movement has been the means of saving child lives and curtailing accidents," Mr. Isherwood said. "I think it is educating a future generation in habits of safety. And I feel it has exerted a psychological influence upon parents and adults in general, beneficial to our present safety problems."



Registered U. S. Patent Office

Safety Shoe

Improvements



During the past decade there has been a vast improvement in the style, construction, comfort and appearance of Safety Shoes. Lehigh Safety Shoe Company has continually forged ahead, creating new patterns for proper foot protection and to make the wearing of safety shoes a pleasure.

Illustrated above is a recent improvement in a semi-dress, medium weight safety shoe with steel box toe. It is ideal for superintendents, foremen and others, particularly where wet or damp conditions are encountered. Also a splendid shoe for policemen and motormen.

Specifications: X910—Mens' Black Calf Blucher, Improved Steel Box Toe, Goodyear welt. Two full top-grade Oak Soles special Linol finish. Drilled lined, full Grain Inner Sole, Leather Counters, Stock Gusset, Leather Storm welt, Steinbrecher, Steel Shank Arch Support. 3 Brass Rivets shank to sole, 4 Brass Nails reinforced shank and toe, Keystone Rubber Heel, Leather Base. Sizes 6-12, Widths, A-EEE.

LEHIGH SAFETY SHOE CO., INC.
31 S. SEVENTH ST. ALLENTOWN, PA.



NOW BETTER THAN EVER IMPROVED PYROIL

DIFFERENT IN COLOR—GREATER
IN BENEFIT AND RESULTS

—Yet essentially the same product used for many years throughout the field of industry, engineering and maintenance. Tested, proved and found to markedly increase power; reduce wear; cut friction; speed production; provide unusual protection against fire hazards and common damage dangers to frictional areas of equipment.

Pyroil is not just a "graphite oil" although it contains colloidal graphite. It is not just a "break-in" oil; it does not accelerate wear. Its new color is dark wine red.

FREE, INTERESTING AND IMPORTANT CHARTS, PHOTOMICROGRAPHS, REPORTS, WRITE FOR THESE, NO OBLIGATION. Manufactured and Guaranteed by Pyroil Company, W. V. Kidder, Founder, 959 LaFollette Ave., LaCrosse, Wis., U.S.A.

Every Container Bears this Signature

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Founder

LARGE CONCERN* ORDERS 35

*Name on request—also
names of scores of
other concerns stand-
ardizing on this device.



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OPENER AND CLOSER**
is the **SAFEST**
and **QUICKEST** method

With this device, one man can do
the work of a gang thereby com-
pletely eliminating the injury haz-
ard. A one man pull exerts a force
of over 2000 lbs.! Order one on 10
DAY TRIAL—Money Back Guar-
antee.

Post Paid **\$14.50**

Paslode COMPANY
223-A North Bank Drive, Chicago

Asked and Answered

(Continued from page 32)

mixture of 50 per cent oleic acid (red oil) and 50 per cent kerosene. When the latter is used, the article is first immersed in the mixture, then washed thoroughly in a boiling water bath containing some soda ash.

Although carbon tetrachloride is non-flammable and incombustible, we hesitate to recommend its use in operations such as yours because of possible toxic effects. Oleic acid has a relatively high flash point, but there may be some objection to it because of its odor and possible toxic effects.

However, a special safety solvent, known as Stoddard solvent, has been developed under the sponsorship of the U. S. Bureau of Standards. This is a petroleum distillate, and while it will burn at temperatures above 100 degrees F., it is considered safe when used with discretion. It can be obtained from most of the gasoline refineries and is much less expensive than mixtures which are now being used. While it is perhaps faintly toxic, as are all products of this kind, it is said to be the safest from this standpoint of all the dry solvents which might be used. Its only disadvantage is that it does not evaporate as quickly as the benzol-trichloroethylene mixtures.

TANK CLEANING

QUESTION: Can you give us information relative to the use of dry ice or solid carbon dioxide as an agent for reducing the hazard of working in an atmosphere of flammable or toxic gases when cleaning tank cars?

ANSWER: The inert gas method of lowering the explosibility of gases not thoroughly removed from tanks has proved satisfactory in many instances. When carbon dioxide is used, care should be taken that a sufficient amount be introduced to produce a concentration of not less than 50 per cent by volume. However, it must be realized that carbon dioxide methods supplement rather than supplant other methods of making tanks safe.

More detailed information may be found in two addresses delivered at the Twenty-Fourth Annual Congress at Louisville. These are "Welding and Cutting in Tanks and Other Small Unventilated Places," by H. F. Reinhard, chemical engineer, Carbide & Carbon Chemicals Corp., New York City, pages 198-203, Volume 1, 1935 Transactions; and "How to Detect and Protect against Combustible Gases," by P. S. Williams, chemical engineer, Standard Oil Company of Calif., San Francisco, pages 33-43, Volume 1, 1935 Transactions.

BAKER'S GLOVES

QUESTION: We are insuring a large bakery which has been having trouble with employees handling hot bread pans as they come out of the oven. They have found asbestos gloves impractical, for they do not last more than five or six hours. Is there not some sort of studded gloves or mittens manufactured that would not only withstand the heat, but also be serviceable for this type of operation?

ANSWER: Most large bakeries use asbestos gloves when handling hot bread pans. Some, however, prefer the mitten rather than the glove, and in addition re-enforce the palm and the surface of the thumb with leather. These re-enforced mittens, which naturally are a trifle more expensive than the ordinary asbestos glove or mitten, stand a great deal more abuse and are equally efficient.

Local manufacturers of asbestos clothing tell

Floor Appearance and SAFETY for All Types of Flooring

Keep your floors safe as well as attractive. When Legge products are used the appearance and safety of rigid or resilient floors can be maintained at a low cost.

Falls are responsible for 18 per cent of all occupational injuries. Slippery floors are often the direct cause of serious injuries. Reduce your falling accidents with our Non-Slip products for all types of floors. Approved by safety engineers and insurance companies.

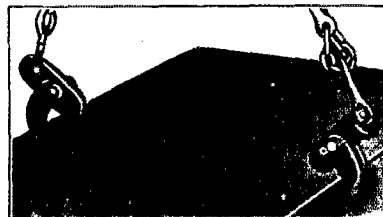
Floor Shine for rigid floors and Floor Shine AA for resilient floors are excellent for cleaning and polishing. Produce a Non-Slip luster.

Sure-Tred—a Non-Slip floor finish for all types of floors. May be buffed to a high luster.

Grip-Tred—an anti-slip treatment for stair treads, platforms, landings and various surfaces, whether wet or dry.

Many other products to choose from. For ECONOMY, SAFETY and FLOOR APPEARANCE we invite your inquiries.

WALTER G. LEGGE CO.
11 West 42nd St. New York City



THE 'SAFE WAY

NEVER SLIP Safety Clamps for use in handling boiler plate either vertical or horizontal constitute the safe sure way to perform this operation. They have many advantages over old-fashioned hooks and chains because they do not have a tendency to slip, as the weight of the piece pulls the clamp tighter.

Boiler plates are easily damaged—don't tolerate clamps that encourage bent, chipped work. The safe way is the only profitable way.

Write for complete details

Never Slip Safety Clamp Co.

P. O. Box 448

Grand Central Annex, New York, N.Y.

NATIONAL SAFETY NEWS

is that gloves and mittens are made in various weights for rough usage and extreme heat. Perhaps the make of gloves your assured is now using is too light for the operation. Or it may be that the pans are so constructed that the sharp edges soon destroy the gloves. In some bakeries the edges of the pans are relatively sharp, while in others the edges and corners are rounded, so as to reduce to a minimum the pulling action on the surface of the glove palm and fingers. Additional information which might be helpful may be found in the National Safety Council Industrial Safety Series Pamphlet No. F-3, "Safety in Bakery Operations."

Program Announced for Midwest Conference

THE Fourteenth Annual Midwest Safety Conference, sponsored by the Chicago Safety Council, the Illinois Industrial Commission, the "Keep Chicago Safe" Committee and a large group of cooperating agencies, will be held at the Stevens Hotel, Chicago, May 5, 6 and 7. Over 3,000 delegates from Illinois, Indiana, Iowa, Michigan, Missouri and Wisconsin are expected to attend. There will be 16 different sessions during the three-day period, which will be addressed by outstanding speakers from all parts of the country, on industrial, public and home safety subjects.

The high point of the conference will be a banquet on Wednesday evening, May 6, which will be addressed by Paul G. Hoffman, President of the Studebaker Corporation, South Bend, Indiana, and Chairman of the Safety Traffic Committee of the Automobile Manufacturers Association. The subject of his address will be—"Making Our Highways Safe for The Motorists."

At the banquet session plaques will be awarded to the winners in the 14th Semi-Annual Interplant Accident Prevention Contest. The following companies which won in their respective groups during the period July 1 to December 31, 1935, will be awarded plaques: Commonwealth Edison Company, James B. Low & Sons, Armour and Company, Visking Corporation, Delta-Star Electric Company, Western Electric Company Inc., Teletype Corporation, Wallace Press, Van Cleef Brothers, American Brake Shoe & Foundry Company, General Outdoor Advertising Company, Youngstown Sheet and Tube Company, Great Atlantic and Pacific Tea Company, and Acme Steel Company. Plaques will also be presented to the winners in the Southurban Group and Greater Pullman Group Interplant Accident Prevention Contests which cover the period October 1, 1935, to March 30, 1936. The plaques will be presented by S. M. Havens, Vice-President of the Chicago Safety Council for Industrial Safety.

Plans for the Midwest Conference have been developed by a committee composed of representatives of various business, civic and service groups under the chairmanship of J. B. Gibson of the Hawthorne Works, Western Electric Company, and a member of the Board of Directors of the Chicago Safety Council. The honorable Peter J. Angsten, Chairman of the Illinois Industrial Commission, and the Honorable Edward J. Kelly, Mayor of Chicago and Chairman of the Keep Chicago Safe Committee, are honorary chairmen of the conference.

APRIL, 1936

6 OUNCES OF BETTER HAND PROTECTION

TESTS under actual operating conditions prove: sturdy Davis Latex Gloves outwear ordinary gloves to a marked extent.

And these Davis Latex Gloves are lighter and more comfortable. Your men can feel the difference—do more work with less hand fatigue. Davis Latex Gloves are seamless, too, and have no cumbersome reinforcing strips to slow up the speed and accuracy of the hands of the wearer.

You will also be pleased with the slight cost.



USE COUPON now to send without obligation for further information on gloves to fit your type of industrial operation.

DAVIS EMERGENCY EQUIPMENT CO., INC.

Chicago, Ill. • New York City • Houston, Tex.
San Francisco and Los Angeles, Cal.

Davis Emergency Equipment Co., Inc.
55 Van Dam Street, New York City
Please send my copy of your Bulletin
on Davis Latex Rubber Gloves to

Name _____

Address _____

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3.6% of your employees do



Cleaning Work

That's the average in industries according to a recent report.

Vacuum Cleaning with a Spencer System enables a few operators to do more work in less time and to perform cleaning work that should not be done by hand. Such as:

- Cleaning ceilings and walls.
- Reclaiming valuable materials.
- Removing dangerous dusts.
- Cleaning shipping boxes and the finished product.
- Cleaning machinery.

Spencer Vacuum Cleaning Systems have been developed in a wide range of types and sizes with a large variety of vacuum tools that effectively eliminate the most obstinate industrial dirt and dust conditions.

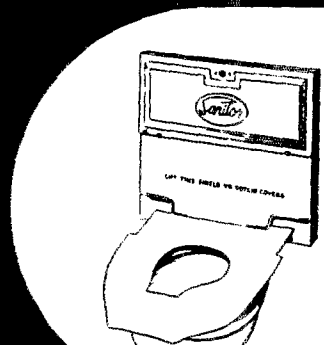
Our engineers will suggest methods and show you how little it would cost.

SPENCER
HARTFORD

CENTRAL AND PORTABLE
VACUUM CLEANING SYSTEMS

THE SPENCER TURBINE COMPANY, HARTFORD, CONN.

Infection LURKS IN EVERY UNPROTECTED TOILET SEAT



**BE SAFE
USE SANITOR
PAPER
TOILET SEAT COVERS**

YEAR after year, infection takes its toll. Loss of efficiency, fatigue, nervous breakdowns, lay-offs and even fatalities are traced directly to this deadly menace.

Millions have been spent in office and factory sanitation to thwart this enemy of public health and efficiency. Modern plumbing, individual towels, individual drinking cups, and more adequate ventilation have wisely been adopted. But, in the crusade to check infection, many Safety Engineers have overlooked the vital importance of Sanitor Toilet Seat Covers.

A major factor in spreading infection is the unprotected toilet seat. Doctors, nurses and public health officials are generally agreed that unprotected toilet seats afford alarming and serious possibilities for the transmission of deadly disease germs.

Protect yourself and your employees by installing APPROVED Sanitor Paper Toilet Seat Covers TODAY. Write for interesting prices and descriptive literature.

SANITOR MFG. CO.
508 S. Wabash Ave., Chicago

**SANITOR
TOILET SEAT COVERS**

COMING EVENTS Of Interest to Safety Men

April 23-24, Boston

Fifteenth Annual Massachusetts Safety Conference. (Hotel Statler.) Lewis E. MacBrayne, manager, Massachusetts Safety Council, 80 Federal Street, Boston, Mass.

April 28, Madison, Wis.

Ninth Annual Rock River Valley Safety Conference. Harvey G. Bergner, c/o Vocational School, Madison, Wis.

Apr. 30-May 1, Pittsburgh, Pa.

Thirteenth Annual Safety Engineering Conference. (William Penn Hotel.) G. E. Clarkson, manager, Western Pennsylvania Safety Council, 2409 First National Bank Building, Pittsburgh, Pa.

May 5-7, Chicago

Fourteenth Annual Midwest Safety Conference. (Stevens Hotel.) George G. Traver, manager, Chicago Safety Council, 222 North Bank Drive, Chicago.

May 8, Allentown, Pa.

Eastern Pennsylvania Safety Conference. (Americus Hotel.) Secretary, M. E. Rice, c/o Bethlehem Steel Company, Bethlehem, Pa.

May 11-14, Atlantic City, N. J.

National Fire Protection Association, Annual Meeting. Franklin H. Wentworth, managing director, 60 Batterymarch Street, Boston, Mass.

May 11-15, Cincinnati, O.

Thirteenth Annual Coal Mining Convention and Exposition. Julian D. Conover, secretary, American Mining Congress, Munsey Bldg., Washington, D. C.

May 14-15, Charlotte, N. C.

Seventh Annual North Carolina Industrial Safety Conference. T. A. Wilson, Commissioner, North Carolina Industrial Commission, Raleigh, N. C.

May 16-23, Tulsa, Okla.

International Petroleum Exposition. The International Petroleum Exposition Safety Conference will be held May 21 and a first aid meet May 22.

May 20-21, Asbury Park, N. J.

Twelfth Annual Eastern Safety Conference. Fred M. Rosseland, secretary-manager, Newark Safety Council, 24 Branford Place, Newark, N. J.

May 20-22, London, Eng.

National "Safety First" Association. Annual Safety Congress. Lieut.-Col. J. A. A. Pickard, D.S.O., general secretary, 52 Grosvenor Gardens, London, S.W. 1, England.

May 21, Erie, Pa.

Eleventh Annual Northwestern Pennsylvania Safety Conference. W. E. Dean, secretary, Erie Safety Council, Commerce Bldg., Erie, Pa.

May 21, Manitowoc, Wis.

Ninth Annual Fox River Valley and Lake Shore Safety Conference. A. L. Nimtz, secretary, c/o Manitowoc Vocational School, Manitowoc, Wis.

May 21-22, Richmond, Va.

Virginia State-Wide Safety Conference. (Jefferson Hotel.) William M. Myers, managing

director, Richmond Safety Council, 30 Allison Bldg., Richmond, Va.

June 2-4, Columbus, O.

All-Ohio Safety Congress. (Deshler-Wallick Hotel.) Thomas P. Kearns, superintendent, Division of Safety and Hygiene, The Industrial Commission of Ohio, Columbus, O.

June 4, Nekoosa, Wis.

Wisconsin River Valley Safety Conference. F. H. Rosebush, c/o Nekoosa Edwards Paper Co., Port Edwards, Wis.

Oct. 5-9, Atlantic City, N. J.

National Safety Council, 25th Annual Safety Congress. W. H. Cameron, managing director, 20 North Wacker Drive, Chicago.

October 26-30, Atlantic City, N. J.

American Gas Association, Annual Convention. Alexander Forward, managing director, American Gas Association, 420 Lexington Ave., New York City.

The Primrose Path

A forceful warning accompanied a \$5.00 fine which a New York magistrate imposed upon a motorist who got in the way of a fire truck.

"Keep on frolicking this way and you won't live long," His Honor observed. "I hope I am saving your life by fining you."

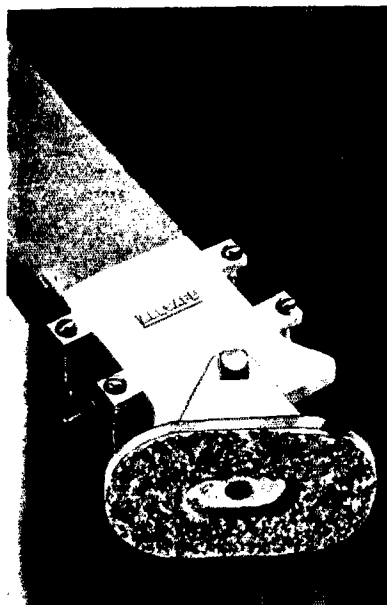


Safety directors and other practical executives will be interested in the low dust count, ease of maintenance and other evidences of efficiency which distinguish Parsons Dust Collecting Systems and are reflected in an enviable record of repeat orders. Write for Bulletin DA-5.



PARSONS
ENGINEERING CORPORATION
6836 Carnegie Ave. Cleveland, Ohio

NATIONAL SAFETY SYSTEMS



Allsafe
NON SKID
Ladder Shoes
with Carborundum
Contact Plates
Defy Slipping
on Any Floor

1. Sharp carborundum grits cast integral with light weight aluminum alloy feet prevent slipping on any surface
2. Exclusive integral angle stop makes it impossible to incline ladder at unsafe angles
3. Attached with saddles, no holes drilled in ladder rails . . . no splitting . . . fits all ladders
4. No spikes to get dull and slip . . . safe to carry . . . will not stab other workers
5. Carborundum contact plates easily replaced at low cost

Thousands of American Allsafe Ladder Shoes have met every test of time. Write for illustrated Bulletin.

AMERICAN
ALLSAFE CO.

210 Franklin St.

Buffalo, N. Y.

APRIL, 1936

HONOR ROLL

Details of no-accident records in excess of 400,000 man-hours, or 300 working days, are invited for this department

American Can Co. of Massachusetts

A record which had reached 416,197 man-hours without a disabling-injury accident and was still unbroken on December 31, 1935, has been accomplished by the American Can Company of Massachusetts, Boston. The record began January 1, 1935. The average number of employees is 200.

Brunswick Laundry Co.

A record of 4,083,100 man-hours without a disabling-injury accident has been accomplished by the Brunswick Laundry Company, Jersey City, N. J., a firm employing an average force of 687. The record began October 1, 1932, and was still unbroken December 31, 1935.

Louis DeJonge & Co.

Louis DeJonge and Co., paper importers and manufacturers, completed the past year without a single disabling-injury accident. The record, in which 188 employees participated, represents more than 359,000 man-hours.

Duplan Silk Corp.

Between December 21, 1934, and September 30, 1935, the Duplan Silk Corporation, Hazelton, Pa., operated 1,639,909 man-hours without a disabling injury. The average number of employees during this time was 1,190.

Emsco Derrick & Equipment Company

The D. & B. Pump and Supply Co., Los Angeles, Calif., a division of the Emsco Derrick & Equipment Co., has a record which reached 642,809 safe man-hours on December 31, 1935, at which time it was still unbroken. The record began May 13, 1931. The working force averages 61 employees.

General Cable Corp.

The Buffalo plant of the General Cable Corporation has more than 400,000 injury-free man-hours to its credit. The record, begun September 20, 1935, was still unbroken March 10, 1936. During this period more than 200 untrained persons were hired for temporary work lasting from two to 12 weeks.

Grasselli Chemical Co.

Two plants of the Grasselli Chemical Company, Inc., lay claim to unusual safety records. The acid and chemical works located at East Chicago, Indiana, operated 374 days—from January 7, 1935, to January 16, 1936—an exposure of 1,486,140 man-hours without a chargeable injury. The number of employees averages 775. The record is unbroken. The acid plant at Wurtland, Ky., has been running more than three years without a lost time accident. The record, started October 5, 1932, was still unbroken on December 23, 1935. At that time it had run three years, two months and nineteen days. The average number of em-



LOOK OUT FOR
PAINT-SHOP FIRES
They spread
like the wind—

ALL paint processes are highly hazardous . . . difficult blazes for most extinguishers. Water or soda-and-acid units spread flames. Chemical extinguishers, including foam, act too slowly, damage paints and materials in process. However, the LUX Extinguisher adequately protects these hazards.

LUX carbon-dioxide snow-and-gas blankets the blaze. It is the fastest known extinguishing agent . . . yet harmless to both man and materials.

Twelve great auto plants now protect dip-tanks with automatic LUX Systems. They extinguish fires with such speed that materials are not fire-damaged . . . and the production line is moving again—

Any paint process needs special protection . . . LUX protection. Prices on portable extinguishers start at \$14, on Systems at \$60. For complete information write today to



Walter Kidde & Company
 41 West Street, Bloomfield, N. J.



For All Electrical and
Flammable Liquid Fires

BARN'S

New Reinforced Electrician Gloves

YELLOW with BLACK center or ALL BLACK

Both Steam Cured



Either Straight or curved Fingers in all sizes and for all standard voltages.

The records of large utilities show that from 47% to 75% of the gloves that are rejected on Retest are on account of mechanical injuries, namely: TEARS, SCRATCHES, ABRASIONS and SNAGS on the glove cuff.

The Reinforcement of the Cuff:
is one third heavier than the hands and fingers—increases the factor of safety—longer service and greater economy—increases the efficiency and morale of the linemen.

Why the YELLOW with BLACK CENTER Glove?

The laminated construction gives added dielectric and tensile strength. Positive inspection in field and laboratory. Seriousness of all defects, snags, scratches, abrasions and imperfections are easily seen as black will show through the yellow.

Try a few dozen and be convinced of the economy and added safety factor, efficiency and high morale of your linemen. Price only 75 cents more per pair than regular gloves for all voltages.

Originated and patented by

FRANK E. BARN'S

130 North Wells Street
Chicago, Illinois

employees is sixteen and the exposure period at the last date of record had reached 111,307 man-hours.

C. Hager & Sons Hinge Mfg. Co.

The C. Hager & Sons Manufacturing Co., St. Louis, Mo., attained a safety record of 2,931,841 man-hours on December 31, 1935. The record began December 1, 1930, and is still unbroken. An average of 290 employees took part in building the record.

Halowax Corp.

A safety record of more than six years' duration has been made by the Halowax Corporation, manufacturer of wax products, Wyandotte, Michigan, which has worked 73 consecutive months without a disabling-injury accident, the equivalent of 252,223 man-hours. The last disabling-injury accident was December 31, 1929. The record was unbroken at the date of reporting, February 28, 1936.

International Business Machines Corp.

For the second time in two years the International Business Machines Corporation, Endicott, N. Y., bettered the two-million-hour mark in safe production. The latest record was 2,156,114 man-hours without a lost-time accident. The other no-accident period, which ended February 25, 1935, went 2,320,800 man-hours without a disabling-injury mishap.

Lehigh Structural Steel Co.

The Lehigh Structural Steel Co., Allentown, Pa., employing an average of 120 men, has a record which, on December 31, 1935, had reached 1,179,519 man-hours without a disabling-injury accident and was still unbroken. The record began April 16, 1931.

Pittsburgh District Locks

At the end of November, 1935, Lock No. 4, Ohio River, (Pittsburgh district) had gone 4,162 days, or more than 400,000 man-hours without a lost time accident. Lock No. 6, Ohio River, has worked 240,000 man-hours, and Lock No. 4, Monongahela River, 212,000 hours without a lost time accident. The total number of man-hours worked by all locks in this district since the last disabling accident is 3,881,600.

Union Carbide and Carbon Corp.

Plants and laboratories of the Union Carbide and Carbon Corporation which have worked twelve consecutive months or 1,500,000 man-hours without a disabling-injury accident are as follows:

American Carbolite Company, Duluth, Minn., 49 employees; 712,715 man-hours from September 23, 1928, to December 31, 1935.

Carbide and Carbon Chemicals Corp., Diamond, W. Va., 53 employees; 226,847 man-hours from November 16, 1933, to December 31, 1935.

Carbide and Carbon Chemicals Corp., Hastings, W. Va., 55 employees; 208,062 man-hours from March 22, 1934, to December 31, 1935.

Carbide and Carbon Chemicals Corp., Niagara Falls, N. Y., 134 employees; 391,688 man-hours from April 3, 1934, to May 23, 1935.

Dominion Mines & Quarries, Little Current, Ont., Canada, 52 employees; 90,900 man-hours from July 19, 1934, to December 31, 1935.

Electro Metallurgical Company, Holcomb, Rock, Va., 30 employees; 673,197 man-hours

from August 4, 1927, to May 13, 1935.

Haynes Stellite Company, Kokomo, Ind., 205 employees; 506,168 man-hours from October 23, 1934, to December 31, 1935.

Kemet Laboratories Company, Cleveland, Ohio, 41 employees; 215,174 man-hours from February 17, 1932, to December 31, 1935.

Linde Air Products Company, Chicago, Ill., 417 employees; 1,029,249 man-hours from August 26, 1934, to December 31, 1935.

Michigan Northern Power Company, Sault Ste. Marie, Mich., 50 employees; 1,048,244 man-hours from December 21, 1926, to December 31, 1935.

National Carbon Company, Clarksburg, W. Va., 68 employees; 1,648,072 man-hours from October 15, 1927, to April 16, 1935.

National Carbon Company, Cleveland, Ohio, 198 employees; 376,282 man-hours from June 5, 1934, to June 12, 1935.

National Carbon Company, Edgewater, Cleveland, Ohio, 1,556 employees; 1,606,328 man-hours from March 19, 1935, to October 17, 1935.

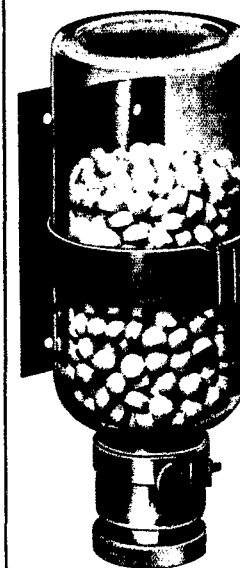
National Carbon Company Research Laboratories, Edgewater, Cleveland, Ohio, 52 employees; 1,280,701 man-hours from May 24, 1927, to December 31, 1935.

National Carbon Company, Fostoria, Ohio, 625 employees; 2,234,805 man-hours from February 27, 1934, to December 31, 1935.

National Carbon Company, Fremont, Ohio, 320 employees; 2,190,999 man-hours from November 1, 1930, to February 5, 1935.

National Carbon Company Warehouse, Jersey City, N. J., 35 employees; 693,769 man-hours from December 5, 1928, to December 31, 1935.

National Carbon Company, Niagara Falls,



HEAT CRAMPS

We are able to give you complete information on the effective treatment and prevention of Heat Cramps, through the use of C.P. Sodium Chloride.

The expense is small and results are convincingly satisfactory.

McKesson-Hall-Van Gorder

Division McKesson & Robbins, Incorporated
1382 West 9th Street
Cleveland, Ohio

Please send additional information on prevention of Heat Cramps.

Name _____

Street _____

City _____

State _____

N. Y., 366 employees; 1,045,828 man-hours from October 18, 1933, to February 12, 1935.

National Carbon Company, Port Richmond, Philadelphia, Pa., 15 employees; 178,893 man-hours from June 13, 1929, to December 17, 1935.

National Carbon Company Warehouse, San Francisco, Calif., 19 employees; 124,209 man-hours from August 26, 1932, to December 31, 1935.

Canadian National Carbon Co., Ltd., Toronto, Ont., Canada, 240 employees; 522,654 man-hours from March 9, 1934, to July 29, 1935.

N. C. - S. A., Mexico, 23 employees; 197,141 man-hours from September 3, 1931, to December 31, 1935.

Oxweld Acetylene Company, Newark, N. J., 448 employees; 2,105,719 man-hours from September 21, 1933, to December 31, 1935.

Oxweld Acetylene Company, Los Angeles, Calif. (Purox) 35 employees; 220,731 man-hours from November 19, 1931, to December 31, 1935.

Oxweld Acetylene Company Warehouse, Chicago, Ill., 38 employees, 582,965 man-hours from October 17, 1929, to December 31, 1935.

Oxweld Railroad Service Co., Chicago, Ill., 41 employees; 611,312 man-hours from November 8, 1928, to December 31, 1935.

Union Carbide Company, Niagara Falls, N. Y., 1,082 employees; 1,659,635 man-hours from July 17, 1934, to April 4, 1935.

Union Carbide & Carbon Research Laboratories, Inc., Niagara Falls, N. Y., 100 employees; 432,321 man-hours from August 29, 1933, to December 31, 1935.

U. S. Vanadium Corporation, Columbiana, Ohio, 13 employees; 82,513 man-hours from May 16, 1931, to December 31, 1935.

Union Electric Light & Power Co.

The County Electric group of the Union Electric Light & Power Co., St. Louis, Mo., worked from August 7, 1934, until February 7, 1936—978,690 man-hours—without a disabling-injury accident. The group comprises 335 employees.

Virginia Electric & Power Co.

The production department of the Virginia Electric & Power Co., Richmond, Va., on January 30, 1936, completed a three-year record without a single disabling-injury accident, working a total of 1,035,046 man-hours during that period. A previous record set by this department ran from January 11, 1930, to January 30, 1933, a total of 1,439,773 man-hours. Thus the department has a record of six years' continuous operation with only one disabling-injury accident, during which time it has worked nearly two and one-half million man-hours.

Westinghouse Lamp Co.

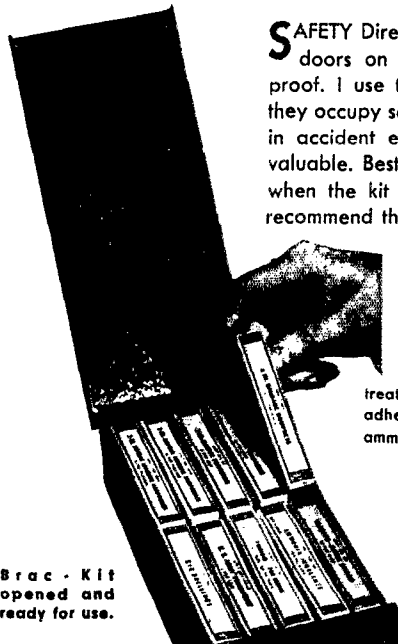
A safety record of 2,015,476 man-hours, still unbroken on December 31, 1935, has been accomplished by the miniature lamp department of the Westinghouse Lamp Co., Bloomfield, N. J. The record began February 1, 1934.

White Corbin & Co.

Six full years without a lost-time accident have been completed by the White, Corbin & Company division of the U. S. Envelope Co. The plant is located at Rockville, Conn. The record, which began January 1, 1930, had been extended to 2,257,485 no-accident man-hours by December 31, 1935. At the latter date it was still unbroken. An average of about 185 employees is represented in the record.

APRIL, 1936

EFFICIENCY PLUS



Brac-Kit opened and ready for use.

SAFETY Directors tell us—"I use Davis Brac-Kits out of doors on tool houses because they are weather-proof. I use them also on all my trucks and cars for they occupy so little space. Davis Brac-Kits save me time in accident emergencies when speed of action is so valuable. Best of all, the contents don't get dirty even when the kit is placed on the ground. That is why I recommend the Davis Brac-Kit for Efficiency +."

YOU, TOO, WILL FIND THE DAVIS BRAC-KIT MOST CONVENIENT FOR YOUR USE

Davis Brac-Kits contain 10 D-carton units, each of which holds material for several first-aid treatments. The standard Brac-Kit assortment includes adhesive, gauze compresses, iodine swabs, Tannoid, ammonia inhalant, eye-dressing and a tourniquet.

Use coupon now to send without obligation for complete details of the convenient DAVIS Brac-Kit.

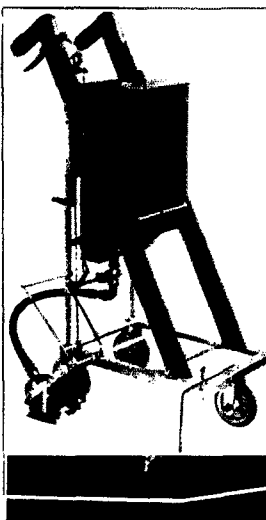
Davis Emergency Equipment Co., Inc.
55 Van Dam Street, New York City

Please send my copy of your Bulletin on Davis Brac-Kit to

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Chicago, Ill. • New York City • Houston, Tex.
San Francisco and Los Angeles, Cal.



NISSLY FLOOR LINER



One of the most important phases of a good housekeeping program for an industrial plant is the maintaining of clear passageways. All aisles should be kept clear for the safety of pedestrian, hand truck and power truck traffic. Well defined avenues of safety can be easily maintained when you use the Nissly Floor Liner. This machine will paint a line as rapidly as one can walk. It is easy to operate and handle and can readily be used in restricted places. Low in first cost and economical to use.

Write for complete details.

WALTER S. NISSLY

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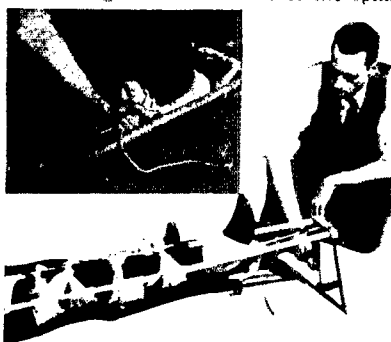
WITH THE MANUFACTURER

Manufacturers are invited to send in announcements of new products, or improved special features. Only items which can be considered as "news" to our readers will be published

New Splint for Broken Legs

An improved type of leg splint, known as the Green Traction Splint, has been developed especially to enable industrial first aid workers to take care of such cases easily and effectively.

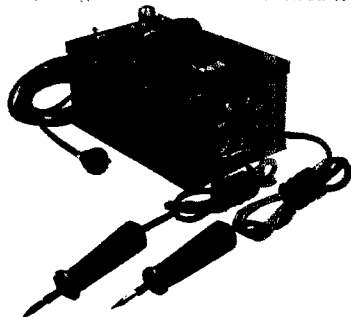
The longitudinal members of the splint



are made of wood. X-rays of the leg can be taken without removing the splint. The upper end of the splint is formed by a half ring of laminated wood, reversible for either leg, and the lower end by a cross-piece of metal in which is mounted a hook which can be drawn forward by turning a wing nut. The splint weighs only 7½ pounds complete and can be compactly packed in a flat case. It was developed by Harold Greene, of the Aetna Life Insurance Company, with the cooperation of Dr. Harry Archer, chief surgeon of the New York Fire Department, and Dr. Robert H. Kennedy, of the American College of Surgeons. The Davis Emergency Equipment Company, 55 Van Dam Street, New York City, are distributors.

Dielectric Tester

This new Dielectric or breakdown tester manufactured by The Acme Electric & Manufacturing Company, 1440 Hamilton Avenue, Cleveland, Ohio, indicates shorts, opens, or grounds and checks circuits at



approved standard testing voltages. The manufacturer states that this unit will permit actual application of the standard testing voltage of double the rated voltage plus 1,000 to the appliance device or equipment under test and thus prove the dielectric strength of the insulation to meet standard safety limits.

The transformer used in this device permits short circuits for a period of time without any damage. This current limitation also eliminates burning of materials at point of breakdown of apparatus

under test. Acme engineers point out particularly the use of a second secondary winding on the same common core, but shielded from the high voltage secondary. This secondary supplies 110 volts to a small indicating ruby lamp. The lamp is inset and shielded by metal mask. This lamp glows when the tester is turned on, warning the operator of live secondary leads. On partial breakdown the lamp dims and on complete breakdown it goes out.

Shockproof Screw Driver

Industrial Products Company, 800 W. Somerset Street, Philadelphia, Pa. announces a new shockproof, unbreakable, rubber insulated screw driver.

It is made with a live rubber handle and cabinet style blade which is moulded into the rubber so that it will not turn. It is designed for electricians, service maintenance and meter men and is also a practical tool for work on radios and automobile ignition. It is made in one size only, length overall 8 inches.

New Light Hoist

A new line of electric hoists, known as the "Zip-Lifts" with capacity ratings from 250 to 500 pounds, is announced by the Harnischfeger Corporation, Milwaukee, Wis. The manufacturers state they are primarily designed for "spot handling"

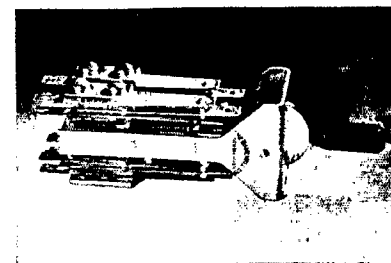


work in machine shops, welderies, storage booths, foundries, etc. These units are of all welded construction and are exceptionally light; the ¼-ton model weighing only 100 pounds. They have hoisting speeds up to 32 feet per minute and are controlled either by push button or pendant rope.

Safety is provided with a weight-type limit switch, solenoid dry disc motor brake and ratchet and roller type mechanical brake. Standard units are furnished with or without trolley.

Cam Lever Switch

The Gamewell Company, Newton, Mass., announce a new cam lever switch designed



for use where the break-down requirements do not exceed 2,500 volts. The contacts are rated at 1 ampere, 110 volts, DC, non-inductive load.

A positive stop is provided in the center position so that when the handle is returned to this position from an operated position the contacts on the opposite side of the switch are not affected. There is approximately 1/16 of an inch between the railers and the operating springs when the switch is on the center position.

Sight Light Indicator

This new photoelectric illumination meter of vest-pocket size checks the adequacy of lighting in homes, schools and factories for a wide range of seeing tasks. Illumination values as high as 250 foot-candles are read directly from the scale. The scale is so spaced that low illumination levels are fully and legibly indicated and it is divided into five "seeing task" zones, set off by colored divisions. The back of the indicator contains an embossed metal plate classifying specific seeing tasks.

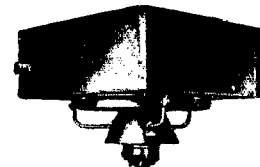
An improvement which reduces the size of the meter and simplifies its use is the location of the light-sensitive cell within the scale opening, as a part of the scale



itself. Thus, when the meter is placed so that the cell directly views the illumination to be measured, the scale is in the natural position for easy and instant observation. Manufactured by the Weston Electrical Instrument Corporation, Newark, N. J.

Heater for Large Openings

A heater to answer the problem of heating entrances to garages, bus terminals, freight houses, docks, shipping and receiving departments, etc., is announced by the L. J. Wing Manufacturing Company, 154 West 14th Street, New York. This heater is designed for ceiling suspension just inside of and directly over each door



opening. The unit itself consists of a combined electric and steam directional heater, compact in size and simple in construction. A powerful fan draws a large volume of air through a copper coil.

NATIONAL SAFETY NEWS

Heat Tablet Dispenser

The Fairway Laboratories, Inc., Belleville, Ill., announce a new all metal dispenser with a lock top and key. This dispenser is unbreakable and was designed for installations where the glass hopper would not be practical. It holds a large supply of heat tablets and can be installed at any location where it is advantageous to have a supply of tablets available.

"CM" Puller

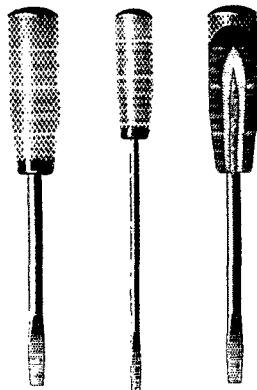
Chisholm-Moore Hoist Corporation, Tonawanda, N. Y., announces this general utility tool designed for lifting or pulling vertically, horizontally or at any angle. Capacities are $\frac{3}{4}$ ton and $1\frac{1}{2}$ ton. It is intended for numerous pulling jobs, such as tightening guy wires, stretching fence, pulling posts, trench work and also for general maintenance and construction service.

An efficient gear reduction in both capacities provides for a minimum amount of effort to operate the ratchet handle—43 pounds to pull $\frac{3}{4}$ ton. Light weight facilitates handling— $\frac{3}{4}$ ton weighs 17 pounds. Little space is required in service or storage. Double duty, alloy steel chain, is used with ultimate strength in excess of five times capacity load. Operation is controlled by two buttons which also permit quick adjustment of the chain. Mechanism and automatic friction brake are fully enclosed.



Screwdriver with Fibre Handle

The Worcester Fibre Products Company, Worcester, Mass., is offering a screwdriver provided with a handle which is insulated with fibre. They state the construction allows the setting of the blade without pin or ferrule, eliminating the danger of contact from this source. The blades are of special steel selected to



render hard service and can easily be insulated further with fibre tubing. The use of fibre also makes a strong handle that will not easily split open. This material provides a non-slipping grip that holds even with oily and perspiring hands.

Statements published on this page are based on the claims of the manufacturer. While the National Safety News cannot guarantee these statements, they are believed to be accurate.

APRIL, 1936

Trade Publications

for your

SAFETY EQUIPMENT LIBRARY

Information You Should Have

A reference file of trade publications on safety equipment should be a part of every plant's ammunition for the battle of controlling accidents. A wealth of valuable data and information is yours at no charge and with no obligations. Every executive should avail himself of these publications—much help in the every day problems of efficiency, safety and profitable operation are found in them. Mail the coupon today!

1. American Dustube Collector.

Bulletin No. 222. This bulletin illustrates and describes this dust collector and lists many of the dusts or materials which can be collected in this system. The American Foundry and Equipment Company.

2. How Today's Planes Are Protected from Fire.

This folder illustrates and describes a special fire extinguishing system for combating airplane engine fires. Also shows an airplane hand extinguisher designed for use in the cabin. Walter Kidde and Company, Inc.

3. Safety Wheel Wrench.

Bulletin No. 16-A. These wrenches are designed to permit a twisting of sucker rods or wire line without hazard to the men doing the job or damage to the equipment. Baird Manufacturing Company.

4. Connector End Line Hose.

A 4-page folder covering this product designed to protect linemen where it is necessary to cover up longer spans of wire than can be accommodated with single pieces of standard line hose. W. H. Salisbury and Company, Inc.

5. Nissly Floor Liner.

Bulletin No. 7 illustrates and describes machine especially designed for painting well defined traffic lanes in industrial plants. Walter S. Nissly.

6. Expansion Bolts.

An interesting and comprehensive loose leaf book containing architectural and engineering data on expansion bolts and devices for holding to masonry. Shows various material in which anchors are used and the proper type anchors for each. The Rawplug Company, Inc.

7. Hydrogen Sulphide Detector.

Bulletin No. DY-1 describes this detector in detail. It is a hand operated instrument for quick, accurate detection and measurement of low but dangerous concentrations of hydrogen sulphide in air. Mine Safety Appliances Company.

8. Marine Specialties.

Catalog No. 164. This catalog contains many modern life saving products. Included are a number of Kapok life saving vests. Also shown are blasting mats made from closely woven manila rope. Atlantic-Pacific Manufacturing Company.

9. Protecting Costly Lamps Against Vibration.

Folder shows heavy duty lamp shock absorber or vibration arrestor designed to give longer life to lamp filament and to prevent lamp from falling. The Thompson Electric Company.

10. Spencer Drill-Vac.

This interesting folder deals with portable and stationary units for the control of dust caused by the drilling of rock in mines and quarries or wherever rock drills are used. The Spencer Turbine Company.

11. Propellair Fans.

This 40 page catalog contains a full description of all Propellair exhaust and ventilating fans for a variety of purposes. Propellair, Inc.

12. Prevention of Heat Sickness.

This interesting booklet deals with the problems of heat sickness and the use of Sodium Chloride tablets. These tablets equalize physical resistance with heat hazards in all types of hot work conditions. Fairway Laboratories, Inc.

NATIONAL SAFETY NEWS

20 North Wacker Drive
Chicago, Ill.

Please have sent to me the publications I have checked:

Name.....
Title.....
Company.....
Address.....

April, 1936

LET DRACCO your DUST!

We know it's a good plan to CHECK UP on DUST because DRACCO Engineers have done it and discovered that DUST was taking an enormous toll each and every day. For twenty years, DRACCO Engineers have solved DUST problems, and you are invited to avail yourself of our vast experience. Information will be mailed upon request.

CONTROL DUST

A sound management knows that a Dust Condition is a serious hazard and a financial liability and consider it good business to control DUST. DRACCO Dust Control will give you: (1) increased efficiency of operation; (2) longer life and less maintenance of equipment; (3) improved health of workers; (4) fewer lawsuits. Have DRACCO check your Dust condition. Write for information today.



The New DRACCO Multi-Bag Filter

Write for Bulletin No. 301

DRACCO CORPORATION
Successors to The Dust Recovering & Conveying Co.
4073 E. 116th St. Cleveland, Ohio

Whenever GOGGLES
are used...

PLAY SAFE WITH
HALCO
Sweet Bands

SNAP! IT'S ON!
SNAP! IT'S OFF!
NO FOGGY LENSES
For Me.

... prevent faulty vision,
annoyance, and danger
... keep goggles fog-clear,
haze-free, sweat-less... fit
any head... replaceable sterile
gauze bands... can be washed
many times, yet inexpensive
enough to throw away after using
... increase safety, efficiency, com-
fort... snap, it's on!... snap, it's
off!

For Safety Sake,
WRITE NOW for SAMPLES
and LOW PRICES!

A.E. HALPERIN CO. Inc.
Home of Halco Safety Products
257 ATLANTIC AVE. BOSTON, MASS.

Good Housekeeping

(Continued from page 16)

where conditions are less hazardous.

Much new construction work has been going on at all Monsanto plants in recent years to meet the increasing demands for chemical products in modern life. Each new building and its equipment are carefully planned for lighting, ventilation, sanitation and protection against mechanical hazards.

Experience has shown the company that there are two essentials to the success of any housekeeping plan. First, the realization that the company expects good housekeeping. Second, cooperation of employees all along the line. The spirit of cleanliness and order has proved to be contagious, and it has extended to the personal appearance of employees as well as plant appearance.

Health Pamphlets Now Available

BECAUSE back injuries comprise such a large percentage of industrial accidents, a new Health Practices Pamphlet issued by the National Safety Council is of particular importance to industrial executives and supervisors.

In addition to the "Back Injuries" pamphlet, No. 17, a pamphlet on "Lighting and Health" No. 18 has just been released. The two constitute a valuable addition to the Health Practices series. Both are written so that they may easily be understood by the layman.

Pamphlet No. 17, written by Dr. Sumner M. Roberts, includes a chart showing the cause, treatment and prevention of back injuries.

Pamphlet No. 18, written by Mrs. Janet H. Clark, of the Johns Hopkins University, explains the effect of lighting on the hygiene of the eyes. It is illustrated with charts which help the reader understand what type of lighting is needed in specific cases.

Single copies of the two pamphlets are available to Council members upon request. Quotations will be given on quantity prices.

According to Walter Winchell a Detroit cop held up his hand to halt a lady motorist, who ignored the uplifted hand, but was promptly whistled to a stop.

"Don't you know what I mean when I hold up my hand?" the cop sarcastically inquired of the lady.

"I ought to—I was a school teacher for twenty years," she replied.

WARNING! LOOK OUT FOR SLIPPERY FLOORS

Floors, glazed from age and wear, are a continual source of slips and falls. They slow up production—often lay up valuable workers. Overcome this hazard with PLASTIC FUT-SURE. Economical to buy—easy to apply—this slip-proof surfacing is durable, easily cleaned, resilient, oil and grease proof, unaffected by heat or cold. Folder on request.

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2068 College Ave.
Niagara Falls, N. Y.

PLASTIC FUT-SURE

FOR SAFER WALKING SURFACES

ARMSTRONG



Safe because they are
ARMSTRONG

Day after day, year in and year out, ARMSTRONG Drop Forged "C" CLAMPS are safely depended upon to carry these great automobile body dies where the least spring, give, or slightest loosening of the screw would spell disaster. Embodied in all ARMSTRONG an extra strength—a dependable safety factor that can be counted on.

Write for
Catalog



ARMSTRONG BROS. TOOL CO.
"The Tool Holder People"
339 N. Francisco Ave., Chicago, U.S.A.

NATIONAL SAFETY NEWS

Fluted Diamond Hatched Plain



MASON ABRASIVE IRON, BRONZE, ALUMINUM AND NICKEL SAFETY TREADS

A CAST safety stair tread in which aluminous abrasive is imbedded in the wearing surface effectively preventing slipping whether wet or dry. Treads are easily and quickly installed on new or old work. For use with concrete, wood, marble, slate and other types of stairs. Furnished in three surfaces, Fluted, Diamond Hatched and Plain.

Over 40 years' Experience is
at your service for the asking.

**AMERICAN MASON
SAFETY TREAD CO.**
LOWELL, MASS.

**IN STOCK AT TEN PLANTS
RYERSON STEEL-SERVICE**

Chicago

Jersey City

**For SAFE
Climbing—**



—Use Johnson
Ladder Shoes
Per pair

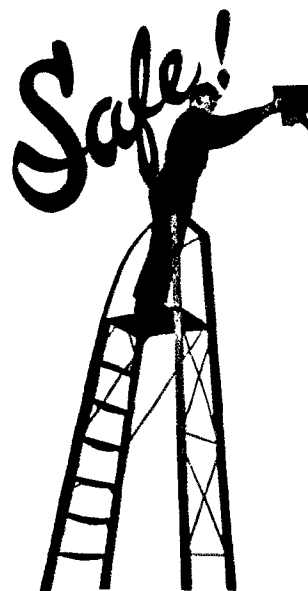
\$1.65

Johnson Ladder Shoe Co.
Eau Claire, Wisconsin

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A puncture is a small hole in a tire,
usually found several miles from a gar-
age.



Order Daytons BEFORE the Accident

Don't wait until after a cost-
ly accident to equip with
Dayton Safety Ladders.
Daytons pay for themselves
not only in accident preven-
tion, but in promoting faster
and better work.

Made of durable airplane
spruce—light, strong, easy
to carry. Straight back per-
mits close work. Sizes 3 to
16 feet.

Write Dept. NSN-4 for
details

**THE DAYTON
SAFETY LADDER CO.**

121-123 West Third Street, Cincinnati, O.

**DAYTON
Safety Ladder**

(Patented)

Stock carried on Pacific Coast by E. D. Bul-
lard Co., Los Angeles and San Francisco, and
by 160 other distributors from coast to coast.
Made and distributed in Canada by Safety
Supply Co., Toronto.

THE BUYERS' SERVICE

See Advertisers' Index, Page 75—When writing, please mention National Safety News

A

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National Safety Council, Inc.

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Alarms, Fire

Mine Safety Appliances Co.

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Bullard Company, E. D.
Draco Corporation
Surtz Mfg. Co., The

Awards, Prize

Mine Safety Appliances Co.

B

Badges and Buttons

Bullard Company, E. D.
Mine Safety Appliances Co.

Bags, Tool, Linemen

Buhrke Company, R. H.
Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Industrial Products Co.
Pulmonan Safety Equipment Corp.
Safety Equipment Service Co., The
Sallybury & Co., W. H.
Strauss Company, The

Belts, Linemen

American Allsafe Co.
Buhrke Company, R. H.
Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Industrial Products Co.
Klein & Sons, Mathias
Mine Safety Appliances Co.
Pulmonan Safety Equipment Corp.
Safety Equipment Service Co., The
Safety First Supply Co.
Standard Safety Equipment Co.
Strauss Company, The

Belts, Safety

American Allsafe Co.
Buhrke Company, R. H.
Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Industrial Products Co.
Klein & Sons, Mathias
Mine Safety Appliances Co.
Pulmonan Safety Equipment Corp.
Safety Equipment Service Co., The
Safety First Supply Co.
Standard Safety Equipment Co.
Strauss Company, The

Belts, Tree Trimming

Buhrke Company, R. H.
Bullard Company, E. D.
Industrial Products Co.
Mine Safety Appliances Co.
Pulmonan Safety Equipment Corp.
Strauss Company, The

Belts, Window Cleaning

Buhrke Company, R. H.
Bullard Company, E. D.
Industrial Products Co.
Mine Safety Appliances Co.

Blowers, Hose Mask

Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.

Blowers, Portable, Electric

Spencer Turbine Co.
Surtz Mfg. Co., The

Box Car Door Opener

Pastode Company

Chain, Factory

American Chain Co., Inc.
Columbus-McKinnon Chain Corp.
McKay Company

Clothing, Fireproof

American Allsafe Co.
Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Industrial Gloves Corp.
Industrial Products Co.
Mine Safety Appliances Co.
Pulmonan Safety Equipment Corp.
Safety Equipment Service Co., The
Safety First Supply Co.
Standard Safety Equipment Co.
Strauss Company, The

Clothing, Weatherproof

American Allsafe Co.
Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Industrial Gloves Corp.
Industrial Products Co.
Mine Safety Appliances Co.
Pulmonan Safety Equipment Corp.
Safety Equipment Service Co., The
Safety First Supply Co.
Standard Safety Equipment Co.

Collectors, Dust

American Foundry Equipment Co.
Blaw-Knox Co.
Draco Corporation
Parsons Engineering Corp.
Surtz Mfg. Co., The

Compounds, Cleaning

Safety Clothing Co., The

Compounds, Floor and Stair, Non-slip

Legge Co., Walter G.

Containers, Explosive Liquid

Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Industrial Products Co.
Justite Mfg. Co.
Mine Safety Appliances Co.
Protectoseal Company
Pulmonan Safety Equipment Corp.
Safety Equipment Service Co., The
Strauss Company, The

D

Detectors, Gas

Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Mine Safety Appliances Co.
Portable Lamp & Equipment Co.

Detectors, Indicators, Recorders, Carbon Monoxide

Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Mine Safety Appliances Co.

Detectors, Pyrotannic

Mine Safety Appliances Co.

Disinfectants and Deodorants

Abbott Laboratories
Huntington Laboratories, Inc.
West Disinfecting Co.

Dust Camera

Dusters, Rock

Mine Safety Appliances Co.
Portable Lamp & Equipment Co.

E

Emblems, Safety

Mine Safety Appliances Co.

Exhausts, Grinding Wheel

Surtz Mfg. Co., The

Gas and Electric Cutting and Welding Demand Many Safeguards

Accident Prevention Equipment Manufacturers Section of the National Safety Council

Many accidents have been caused in industry by lack of adequate precautions when using gas and electric welding equipment. Care must be taken to see that all such equipment is in good condition. Regular inspections are of great importance.

Personal protection for the operator has developed along with the growth of this type of work. It is now possible to obtain from a number of reliable sources, the proper safeguards. Such equipment includes goggles, helmets, masks, fire resisting suits, gloves, aprons, leggings, spats, etc. Check up and be sure your welders are adequately guarded.

Pulmonan Safety Equipment Corp.
Strauss Company, The

Blackboards

Blankets, Fireproof

Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Industrial Products Co.
Mine Safety Appliances Co.
Pulmonan Safety Equipment Corp.
Safety Equipment Service Co., The
Safety First Supply Co.
Standard Safety Equipment Co.

Blockers, Mine Car

Industrial Products Co.
Mine Safety Appliances Co.
Pulmonan Safety Equipment Corp.

Blockers, Railroad Car

Bullard Company, E. D.
Industrial Products Co.
Safety Equipment Service Co., The
Safety First Supply Co.
Standard Safety Equipment Co.

Buckets, Hoisting

Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Industrial Products Co.

Bulletin Boards

American Allsafe Co.
Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Elliott Service Co.
Mine Safety Appliances Co.
Pulmonan Safety Equipment Corp.
Safety Equipment Service Co., The
Safety First Supply Co.
Standard Safety Equipment Co.

C

Cans, Oil

Bullard Company, E. D.
Industrial Products Co.
Mine Safety Appliances Co.
Protectoseal Company
Safety Equipment Service Co., The

Cans, Waste

Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Industrial Products Co.

Chairs, Safety, Boatwain

Bullard Company, E. D.
Mine Safety Appliances Co.
Pulmonan Safety Equipment Corp.
Strauss Company, The

Clamps, Rail

Industrial Products Co.
Pulmonan Safety Equipment Corp.
Safety First Supply Co.

Clamps and Sockets

Armstrong Bros. Tool Co.
Never Slip Safety Clamp Co.
Williams & Co., J. H.

Cleaning Equipment

Abrasive
American Foundry Equipment Co.

Cleaning Systems, Vacuum

Spencer Turbine Co.
Surtz Mfg. Co., The

Clothing for Industrial Workers—See Aprons, Gloves, Hand Leathers, Leggings, Shoes

Clothing, Acid Proof

NATIONAL SAFETY NEWS

THE BUYERS' SERVICE

See Advertisers' Index, Page 75—When writing, please mention National Safety News

Exterminator, Rodent

West Disinfecting Company

Extinguishers, Fire

American Allsafe Co.
Bullard Company, E. D.
Harker Mfg. Co.
Kidde & Co., Inc., Walter
Mine Safety Appliances Co.
Pulmonan Safety Equipment
Corp.
Pyrene Mfg. Company

F

Fans, Exhaust

American Foundry Equipment
Co.
Blaw-Knox Co.
Dracoo Corporation
Surtz Mfg. Co., The

Fasteners or Lacers, Belt

Clipper Belt Lacer Co.

Films or Slides, Safety, for Rent and Sale

National Safety Council, Inc.

First Aid Equipment

American Allsafe Co.
Abbott Laboratories
Bayer & Black
Bernhard, Robert A.
Bishinger-Koehler Mfg. Co.,
Inc.
Bullard Company, E. D.
Burnham Laboratories
Burroughs-Wellcome Co.,
(U.S.A.) Inc.
Davis Emergency Equipment
Co., Inc.
Halberstam Co., Inc., A. E.
Hynson, Westcott & Dunning,
Inc.
Industrial Products Co.
Johnson & Johnson
Merk & Company
Mine Safety Appliances Co.
Pulmonan Safety Equipment
Corp.
Safety Equipment Service
Co., The
Safety First Supply Co.
Standard Safety Equipment Co.

Flags, Danger

Bullard Company, E. D.
Industrial Products Co.
Safety Equipment Service
Co., The
Stonehouse Signs, Inc.

Flashlights, Permissible

Bullard Company, E. D.

Floor Cleaning Machines, Electric

Lincoln-Schulter Floor Machy.
Co.

Flooring Material, Safety

American Abrasive Metals Co.
American Mason Safety Tread
Co.
General Abrasive Co.
Industrial Products Co.
Inland Steel Co.
Safety First Supply Co.
Surtz Mfg. Co., The

Footwear, Rubber

Bullard Company, E. D.
Industrial Products Co.
Lehigh Safety Shoe Co.
Mine Safety Appliances Co.
Pulmonan Safety Equipment
Corp.

Fountains, Drinking, Factory

Bradley Washfountain Co.
Taylor Co., Halsey W.

Fumigants

Rater & Black

G

Germicides

Abbott Laboratories

Germicides, Cutting Off

Huntington Laboratories, Inc.
Merk & Company
West Disinfecting Company

Glass, Safety

American Optical Company
Bullard Company, E. D.

Chicago Eye Shield Co.
Industrial Products Co.
Libbey-Owens-Ford Glass Co.
Mine Safety Appliances Co.
Pittsburgh Plate Glass Co.
Pulmonan Safety Equipment
Corp.
Safety Equipment Service
Co., The
Standard Safety Equipment Co.
Surtz Mfg. Co., The
Willson Products, Inc.

Gloves and Mittens

American Allsafe Co.
Barns, Frank E.
Bullard Company, E. D.
Chicago Eye Shield Co.
Davis Emergency Equipment
Co., Inc.

Industrial Products Co.
Mine Safety Appliances Co.

Gratings, Safety

Blaw-Knox Co.

Guards, Chip and Spark

Bullard Company, E. D.
Chicago Eye Shield Co.
Industrial Products Co.
Safety Equipment Service
Co., The
Standard Safety Equipment Co.

Guards, Flywheel

Harrington & King Perforating
Co.
Industrial Products Co.
Surtz Mfg. Co., The

Guards, Portable Lamp

Guards, Power Press

American Allsafe Co.
Chicago Eye Shield Co.
Industrial Products Co.
Standard Safety Equipment Co.
Surtz Mfg. Co., The
Wiesman Mfg. Co.

Guards, Safety

American Allsafe Co.
Bullard Company, E. D.
Davis Emergency Equipment
Co., Inc.
Harrington & King Perforating
Co.
Industrial Products Co.

Mine Safety Appliances Co.
Pulmonan Safety Equipment
Corp.
Safety First Supply Co.
Strauss Company, The

Heads Safety, Explosion

Hent Cramp Preventives
Fairway Laboratories, Inc.
McKesson-Hall-Van Gorder Co.

Helmets, Safety

American Allsafe Co.
American Optical Company
Bishinger-Koehler Mfg. Co.,
Inc.
Bullard Company, E. D.
Chicago Eye Shield Co.
Davis Emergency Equipment
Co., Inc.
Industrial Products Co.
Mine Safety Appliances Co.
Pulmonan Safety Equipment
Corp.
Safety Equipment Service
Co., The
Safety First Supply Co.
Standard Safety Equipment Co.
Strauss Company, Inc. The
Willson Products, Inc.

Hoists, Electric

Holders, Tool

Armstrong Bros. Tool Co.
Williams & Co., J. H.

Hooks, Safety Belt

Bullard Company, E. D.
Davis Emergency Equipment
Co., Inc.
Industrial Products Co.
Mine Safety Appliances Co.
Portable Lamp & Equipment
Co.
Pulmonan Safety Equipment
Corp.
Safety Equipment Service
Co., The
Strauss Company, The

Hooks, Safety, Hoisting

Industrial Products Co.
Williams & Co., J. H.

Hooks, Tool Equipment

Bullard Company, E. D.
Burroughs-Wellcome Co.,
(U.S.A.) Inc.
Davis Emergency Equipment
Co., Inc.
Industrial Products Co.
Mine Safety Appliances Co.
Safety Equipment Service
Co., The
Safety First Supply Co.

Inclinators, Carboy

Bullard Company, E. D.
Industrial Products Co.
Safety Equipment Service
Co., The

Indicators, Flammable Vapor

Bullard Company, E. D.
Davis Emergency Equipment
Co., Inc.
Mine Safety Appliances Co.

Inhalators

Bishinger-Koehler Mfg. Co.,
Inc.
Bullard Company, E. D.
Davis Emergency Equipment
Co., Inc.
Mine Safety Appliances Co.

Insurance

American Mutual Liability
Insurance Co.
Metropolitan Life Insurance
Co.

Interlock Systems

Union Switch & Signal Co.

J

L

Ladder Shoes or Feet

American Abrasive Metals Co.
American Allsafe Co.
American Mason Safety Tread
Co.
Bullard Company, E. D.
Davis Emergency Equipment
Co., Inc.
Davton Safety Ladder Co.
Industrial Products Co.
Johnson Ladder Shoe Co.
Mine Safety Appliances Co.
Patent Scaffold Co., The
Pulmonan Safety Equipment
Corp.
Safety First Supply Co.
Surtz Mfg. Co., The

Accident Prevention Equipment Manufacturers Section of the National Safety Council

An Incident That Clearly Shows the Value of Safety Belts and Lines

While three riggers were repairing a crane run-way about 35 feet above the ground, the coupling on the air hose they were using broke. The hose end struck all three men knocking two of them out and dazing the other. All men wore safety belts and lines properly tied, saving them from falling to the ground when they were knocked off the scaffold. Two of the men returned to work after proper treatment at the plant hospital and the third one returned the next morning. Had they not been wearing safety belts and lines the results may have proved fatal.

Industrial Gloves Corp.
Industrial Products Co.
Mine Safety Appliances Co.
Pulmonan Safety Equipment
Corp.
Safety Equipment Service
Co., The
Safety First Supply Co.
Sallabury & Co., W. H.
Standard Safety Equipment Co.

Goggles

American Allsafe Co.
American Optical Company
Bullard Company, E. D.
Chicago Eye Shield Co.
Cover, H. S.
Davis Emergency Equipment
Co., Inc.
Industrial Products Co.
Mine Safety Appliances Co.
Pulmonan Safety Equipment
Corp.
Safety Equipment Service
Co., The
Safety First Supply Co.
Standard Safety Equipment Co.
Willson Products, Inc.

Gongs, Sirens, Horns and other Signaling Devices

Bullard Company, E. D.

Guards, Foot and Toe
Bullard Company, E. D.
Ellwood Safety Appliance Co.
Industrial Products Co.
Mine Safety Appliances Co.
Pulmonan Safety Equipment
Corp.
Safety Equipment Service
Co., The
Safety First Supply Co.
Standard Safety Equipment Co.
Strauss Company, The

Guards, Gear

Surtz Mfg. Co., The

Guards, Grinding Wheel

Surtz Mfg. Co., The

Guards, Jointer

Industrial Products Co.
Safety Equipment Service
Co., The
Standard Safety Equipment Co.
Surtz Mfg. Co., The

Guards, Kick Press

Surtz Mfg. Co., The

Safety Equipment Service
Co., The
Strauss Company, Inc. The
Surtz Mfg. Co., The
Wiesman Mfg. Co.

Guards, Saw

Bullard Company, E. D.
Industrial Products Co.
Safety Equipment Service
Co., Inc.
Standard Safety Equipment Co.
Surtz Mfg. Co., The

Guards, Shaper

Industrial Products Co.
Standard Safety Equipment Co.
Surtz Mfg. Co., The

H

Hand Cream

Bullard Company, E. D.
Davis Emergency Equipment
Co., Inc.
Industrial Products Co.
Mine Safety Appliances Co.

Hats, Safety

Bullard Company, E. D.
Industrial Products Co.

THE BUYERS' SERVICE

See Advertisers' Index, Page 75—When writing, please mention National Safety News

Ladders, Safety

American Allsafe Co.
Bullard Company, E. D.
Dayton Safety Ladder Co.
Mine Safety Appliances Co.
Patent Scaffolding Co., The
Pulmonan Safety Equipment Corp.
Safety First Supply Co.

Lamps, Safety

Benjamin Electric Mfg. Co.
Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Mine Safety Appliances Co.

Lanterns, Carbide

Bullard Company, E. D.
Lanterns, Electric
Bullard Company, E. D.
Industrial Products Co.
Justine Mfg. Co.
Mine Safety Appliances Co.

Leathers, Hand

American Allsafe Co.
Bullard Company, E. D.
Industrial Gloves Corp.
Industrial Products Co.
Pulmonan Safety Equipment Corp.
Safety Equipment Service Co., The
Safety First Supply Co.
Standard Safety Equipment Co.
Strauss Company, The

Leggings

American Allsafe Co.
Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Industrial Gloves Corp.
Industrial Products Co.
Mine Safety Appliances Co.
Pulmonan Safety Equipment Corp.
Safety Equipment Service Co., The
Safety First Supply Co.
Standard Safety Equipment Co.
Strauss Company, The

Lighting Equipment, Industrial

Benjamin Electric Mfg. Co.
General Electric Company
Westinghouse Electric & Mfg. Co.

Lockers and Hangers for Clothing

Industrial Products Co.

Locks, Lamp

Industrial Products Co.
Mine Safety Appliances Co.
Safety Equipment Service Co., The

Lubrication

Pyrrol Company

M

Machines, Floor Cleaning, Electric

Lincoln-Schluter Floor Mch. Co.

Markers, Traffic

Nissly, Walter S.
Safety Equipment Service Co., The

Masks

American Allsafe Co.
American Optical Company
Bishinger-Koehler Mfg. Co., Inc.
Bullard Company, E. D.
Chicago Eye Shield Co.
Davis Emergency Equipment Co., Inc.
Industrial Products Co.
Mine Safety Appliances Co.
Pulmonan Safety Equipment Corp.
Safety Equipment Service Co., The
Safety First Supply Co.
Standard Safety Equipment Co.
Strauss Company, Inc., The
Willson Products, Inc.

Mats, Standing, Safety

Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Industrial Products Co.
Safety First Supply Co.

Metal, Expanded

Surtz Mfg. Co., The

Metal, Perforated

Harrington & King Perforating Co.

Meters, Light Testing

General Electric Co.

Strauss Company, Inc., The
Wheeler Mfg. Co., F. H.

Poster Service

Elliott Service Co.
National Safety Council, Inc.
Bullard Company, E. D.
Chicago Eye Shield Co.
Davis Emergency Equipment Co., Inc.
Industrial Products Co.
Mine Safety Appliances Co.

Protectors, Arm

Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.

Standard Safety Equipment Co.
Strauss Company, Inc., The

Publications, Safety

National Safety Council, Inc.
Safety Magazine Publishing Corp.

Pullers, Fuse

Bullard Company, E. D.
Industrial Products Co.
Mine Safety Appliances Co.
Safety Equipment Service Co., The

Rope, Wire

Williamsport Wire Rope Co.

S

Scaffolding, Safety

Patent Scaffolding Co., The

Screw Drivers, Non-Skid

Industrial Products Co.
Surtz Mfg. Co., The

Seats, Toilet, Sanitary

Sanitor Mfg. Company

Shades, Eye, Non-breakable

Bullard Company, E. D.
Chicago Eye Shield Co.
Davis Emergency Equipment Co., Inc.
Industrial Products Co.
Mine Safety Appliances Co.
Safety Equipment Service Co., The

Shades, Window, Industrial

Shoes, Safety, Factory and Foundry

American Allsafe Co.
Brown Shoe Company
Bullard Company, E. D.
Industrial Products Co.
International Shoe Co.
Lehigh Safety Shoe Co.
Mine Safety Appliances Co.
Safety Equipment Service Co., The
Safety First Shoe Co.
Safety First Supply Co.

Shoes, Wooden Sole

Industrial Products Co.
Safety Clothing Co., The

Signs, Accident Prevention

Bullard Company, E. D.
Industrial Products Co.
Mine Safety Appliances Co.
Safety Equipment Service Co., The
Safety First Supply Co.
Standard Safety Equipment Co.
Stonehouse Signs, Inc.

Sirens and Signals

Bullard Company, E. D.
Industrial Products Co.

Slings, Chain

American Chain Co., Inc.
Columbus McKinnon Chain Corp.

Slings, Safety, Wire Rope

Williamsport Wire Rope Co.

Soap

Huntington Laboratories, Inc.
West Disinfecting Co.

Soles, Shoe, Non-slip

Lima Cord Sole & Heel Co.

Sterilizing Equipment

Straps, Safety

Buhrke Company, R. H.
Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Industrial Products Co.
Klein & Sons, Madras
Strauss Company, Inc., The

Stretcher Units

Sweat Bands for Goggles

Halperin Co., Inc., A. E.

Systems, Dust Control

American Foundry Equipment Co.
Blaw-Knox Co.
Dracoo Corporation
Parsons Engineering Corp.
Surtz Mfg. Co., The

T

Tents, Pneumonia

Bishinger-Koehler Mfg. Co., Inc.
Mine Safety Appliances Co.

Texters, Fuse

Tools, Linemen

Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Industrial Products Co.
Klein & Sons, Madras

Foot Injuries Are Numerous, but Adequate Protection Can Be Easily Provided

Accident Prevention Equipment Manufacturers Section of the National Safety Council

The legs and feet are involved in approximately one-fourth of all industrial injuries. Adequate foot protection would beyond question, reduce the number of injuries involving the feet. For example, the following true story is but one illustration of the value of such protection:

"While loading plate glass, a large piece broke, fell and struck the foot of one of our packers. Fortunately he was wearing steel foot-protectors. While the glass pierced the protector and cut the shoe cap, the toes of the foot were not injured. Undoubtedly, without this safeguard the packer would have suffered a painful and serious injury."

Industrial Products Co.

Movers, Railway Car

Bullard Company, E. D.
Industrial Products Co.
Pulmonan Safety Equipment Corp.
Safety Equipment Service Co., The
Standard Safety Equipment Co.

O

Oxygen Breathing Apparatus

Bishinger-Koehler Mfg. Co., Inc.
Davis Emergency Equipment Co., Inc.
Mine Safety Appliances Co.

P

Pads, Miners'

Lehigh Safety Shoe Co.
Portable Lamp & Equipment Co.

Pads, Knee

Bullard Company, E. D.
Industrial Gloves Corp.
Industrial Products Co.
Mine Safety Appliances Co.
Safety Equipment Service Co., The
Safety First Supply Co.

Industrial Gloves Corp.

Industrial Products Co.

Mine Safety Appliances Co.
Pulmonan Safety Equipment Corp.
Safety Equipment Service Co., The
Safety First Supply Co.
Standard Safety Equipment Co.
Strauss Company, Inc., The

Protectors, Finger

Bauer & Black
Industrial Gloves Corp.
Safety Equipment Service Co., The
Strauss Company, Inc., The

Protectors for Linemen

American Allsafe Co.
Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Industrial Gloves Corp.
Industrial Products Co.
Mine Safety Appliances Co.
Pulmonan Safety Equipment Corp.
Safety Equipment Service Co., The
Safety First Supply Co.
Salisbury & Co., W. H.

Pumps, Oxygen

Bishinger-Koehler Mfg. Co., Inc.
Mine Safety Appliances Co.

R

Respirators

Mine Safety Appliances Co.
American Allsafe Co.
American Optical Company
Bishinger-Koehler Mfg. Co., Inc.
Bullard Company, E. D.
Chicago Eye Shield Co.
Cover, H. S.
Davis Emergency Equipment Co., Inc.
Industrial Products Co.
Mine Safety Appliances Co.
Pulmonan Safety Equipment Corp.
Safety Equipment Service Co., The
Safety First Supply Co.
Standard Safety Equipment Co.
Willson Products, Inc.

Resuscitation Equipment

Bishinger-Koehler Mfg. Co., Inc.
Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Mine Safety Appliances Co.

NATIONAL SAFETY NEWS

THE BUYERS' SERVICE

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Tools, Marking or Stamping	American Mason Safety Tread Co.	Inc. Mine Safety Appliances Co.	Standard Safety Equipment Co.	Wrenches, Non-sparking Williams & Co., J. H.
Tools, Non-sparking	Industrial Products Co.	Vending Machines, Sanitary	Washroom Equipment, Industrial Bradley Washfountain Co.	Wrenches, Open End Armstrong Bros. Tool Co. Trimont Mfg. Co. Williams & Co., J. H.
Ameco Metal, Inc.	Inland Steel Co.	Ventilating Equipment	Welding Equipment	Wrenches, Pipe Armstrong Bros. Tool Co. Williams & Co., J. H.
Bullard Company, E. D.	Surtz Mfg. Co., The	American Foundry Equipment Co.	Wrenches, Hopper Car Industrial Products Co.	Wrenches, Socket Armstrong Bros. Tool Co. Williams & Co., J. H.
Davis Emergency Equipment Co., Inc.	Trestles, Safety, Extension	Blaw-Knox Co.	Padlock Company	
Pulmonan Safety Equipment Corp.	Industrial Products Co.	Dracoo Corporation	Safety Equipment Service Co., The	
Torches, Blow	Patent Scaffolding Co., The		Trumbull Mfg. Co., The	
Klein & Sons, Mathias	Safety First Supply Co.			
Treads, Safety	Trophies			
American Abrasive Metals Co.	V			
American Allsafe Co.	Valves, Oxygen			
	Bishinger-Kochler Mfg. Co.,			

The following companies are those whose names appear under the various headings contained in this Buyers' Service

Abbott Laboratories	North Chicago, Ill.	Ellwood Safety Appliance Co.	Ellwood City, Pa.	Nisly, Walter S.	York, Pa.
American Abrasive Metals Co.	Irvington, N. J.	Elliott Service Co.	New York, N. Y.	Parsons Engineering Corp.	Cleveland, Ohio
American Allsafe Co.	Buffalo, N. Y.	Fairway Laboratories, Inc.	Bellefonte, Ill.	Passide Company	Chicago, Ill.
American Chain Co., Inc.	New York, N. Y.	General Abrasive Co.	Niagara Falls, N. Y.	Patent Scaffolding Co., The	Chicago, Ill.
American Foundry Equipment Co.	Mishawaka, Ind.	General Electric Co.	Cleveland, Ohio	Pittsburgh Plate Glass Co.	Pittsburgh, Pa.
American Mason Safety Tread Co.	Lowell, Mass.	Halperin Co., Inc., A. E.	Boston, Mass.	Protectoseal Co.	Chicago, Ill.
American Mutual Liability Insurance Co.	Boston, Mass.	Harker Mfg. Co.	Dayton, Ohio	Pulmonan Safety Equipment Corp.	Brooklyn, N. Y.
American Optical Co.	Southbridge, Mass.	Harrington & King Perforating Co.	Chicago, Ill.	Pyrene Mfg. Co.	Newark, N. J.
American Tel. & Tel. Co.	New York, N. Y.	Huntington Laboratories Co.	Huntington, Ind.	Pyroll Co.	Lafayette, Wis.
Ameco Metals Inc.	Chicago, Ill.	Hynson, Westcott & Lunning, Inc.	Baltimore, Md.	Safety Equipment Service Co., The	Cleveland, Ohio
Armstrong Bros. Tool Co.	Chicago, Ill.	Industrial Gloves Corp.	Danville, Ill.	Safety First Shoe Co.	Holliston, Mass.
Barns, Frank E.	Chicago, Ill.	Industrial Products Co.	Philadelphia, Pa.	Safety First Supply Co.	Pittsburgh, Pa.
Bauer & Black	Chicago, Ill.	Inland Steel Co.	Chicago, Ill.	Safety Magazine Publishing Corp.	New York, N. Y.
Benjamin Electric & Mfg. Co.	Des Plaines, Ill.	International Shoe Co.	St. Louis, Mo.	Salisbury & Co., Inc., W. H.	Chicago, Ill.
Bernhard, Robert A.	Rochester, N. Y.	Johnson & Johnson	New Brunswick, N. J.	Sanitor Mfg. Company	Chicago, Ill.
Bishinger-Kochler Mfg. Co.	Pittsburgh, Pa.	Johnson Ladder Shoe Co.	Eau Claire, Wis.	Spencer Turbine Co., The	Hartford, Conn.
Blaw-Knox Co.	Pittsburgh, Pa.	Justice Mfg. Co.	Chicago, Ill.	Standard Safety Equipment Co.	Chicago, Ill.
Bradley Washfountain Co.	Milwaukee, Wis.	Kidde & Co., Inc., Walter	New York, N. Y.	Stonehouse Signs, Inc.	Denver, Colo.
Brown Shoe Company	St. Louis, Mo.	Klein & Sons, Mathias	Chicago, Ill.	Strauss Co., Inc.	Pittsburgh, Pa.
Buhrke Co., R. H.	Chicago, Ill.	Lease Co. Walter G.	New York, N. Y.	Surtz Mfg. Co., The	Chicago, Ill.
Bullard Co., E. D.	San Francisco, Calif.	Lehigh Safety Shoe Co.	Allentown, Pa.	Taylor Co. Halsey W.	Warren, Ohio
Burham Laboratories	W. Medway, Mass.	Libbey-Owens-Ford Glass Co.	Toledo, Ohio	Trimont Mfg. Co.	Boston, Mass.
Burroughs-Wellcome & Co. (U.S.A.) Inc.	New York, N. Y.	Lima Cord Sole & Heel Co., The	Lima, Ohio	Trumbull Mfg. Co., The	Warren, Ohio
Chicago Eye Shield Co.	Chicago, Ill.	Lincoln-Schluter Floor Moly. Co.	Chicago, Ill.	Union Switch & Signal Co.	Swissvale, Pa.
Clipper Belt Lacer Co.	Grand Rapids, Mich.	McKesson-Hall-VanGorder Co.	Cleveland, Ohio	West Disinfecting Company	Long Island City, N. Y.
Columbus-McKinnon Chain Corp.	Tonawanda, N. Y.	McKay Co.	Pittsburgh, Pa.	Westinghouse Electric & Mfg. Co.	East Pittsburgh, Pa.
Cover, H. S.	South Bend, Ind.	Merck & Co., Inc.	New York, N. Y.	Wiesman Mfg. Co.	Dayton, Ohio
Davis Emergency Equipment Co., Inc.	New York, N. Y.	Metropolitan Life Insurance Co.	New York, N. Y.	Williams & Co., J. H.	Buffalo, N. Y.
Dayton Safety Ladder Co., The	Cincinnati, Ohio	Mine Safety Appliances Co.	Pittsburgh, Pa.	Williamsport Wire Rope Co.	Williamsport, Pa.
Dracoo Corp.	Cleveland, Ohio	National Safety Council, Inc.	Chicago, Ill.	Willson Products, Inc.	Reading, Pa.
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Contestants Show Skill in Unscrambling Words

THE scramble for prizes in the Scrambled Word Contest that marked the February activity in the Safety Calendar competition brought out a wealth of unusual material from some 3,000 entrants in all parts of the world.

Hundreds of essays in rhyme were received, but only one of these was judged worthy of a place among the major prize winners on the basis of thought, rhyme, and rhythm. This poem, incidentally, was the first prize winner.

The fortunate author was Lawrence W. Francisco, 2907 Ferris Road, Elsmere, Delaware.

An Alaskan nun, Sister Mary Rosalinda, of the Pius X Mission, Skagway, won second prize.



L. W. Francisco

Samuel E. Power, Jr., 6928 Greenwood Street, Pittsburgh, Pa., won third.

Winners of the fifteen \$1.00 awards were as follows:

Mrs. M. J. Adams, 1705 Monroe Street, Wichita Falls, Texas.

Mrs. H. G. Kahl, 603 North Street, West Bend, Wis.

Mrs. W. S. Hutchinson, Koppers Store No. 22, Beards Fork, W. Va.

Carlos Gallardo Vega, P.O. Box 662, Ponce, Puerto Rico.

George C. Peters, 115 King Street, Aliquippa, Pa.

Miss Marie D. Haggerty, 204 Renova Street, Pittsburgh, Pa.

Julian F. Smith, duPont Experimental Station, Wilmington, Del.

R. E. Whalen, 2542 Graham Avenue, Akron, Ohio.

Ray Peterson, 110 W. New York Avenue, Oshkosh, Wis.

Charles V. Ortnier, Darien Center, N. Y.

Louis T. Valley, 35 Maple Street, Hudson Falls, N. Y.

J. Vincent Anderson, 4857 14th Ave., So., Minneapolis, Minn.

Thomas A. Smith, 131 N. Belvidere Ave., York, Pa.

William C. Musolf, 604 Illinois Avenue, Huron, S. D.

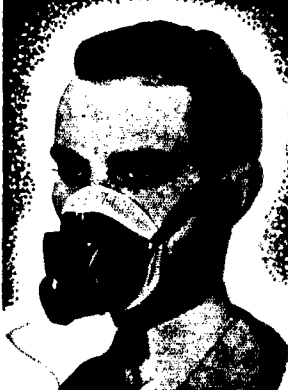
Harold Rogers, 417 S. 15th Street, Reading, Pa.

Fewer entries were received than in the first contest. This is believed due to the fact that many were unable to unscramble one or more of the six words offered as safety brain teasers. Some entries were submitted with only four or five words unscrambled, and naturally, these were ruled out in accordance with the contest regulations.

Some failed to arrange the scrambled letters in the right formations. For example, one contestant derived "nose guard" rather than "dangerous" from the letters "rudasogen." Another, by omitting an "e", transformed "rongacine" into "no racing" instead of "ignorance."

Most of the January prize winners were also entered in the February contest, but strangely, not a single one of them placed in the final list, and only one was grouped with the first 100 as the elimination progressed.

An unusual feature of the contest was the fact that several schools took part, sending mass entries in which entire grades were apparently represented.



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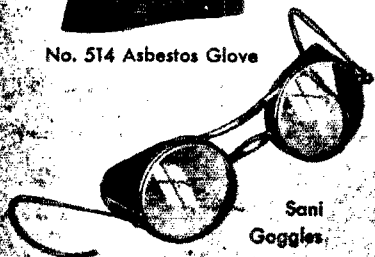
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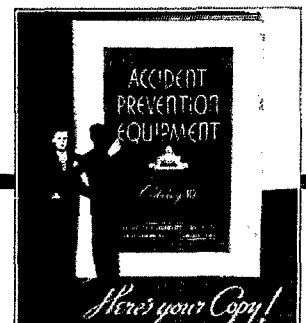
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