

PLAINTIFF'S EXHIBIT

NSC-155

National SAFETY NEWS

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JANUARY, 1937



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DIRECTIONS and CONTENTS

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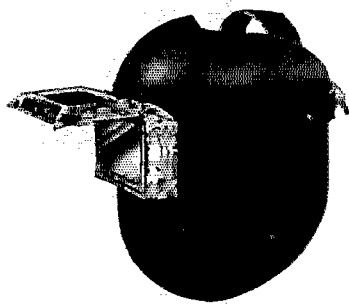
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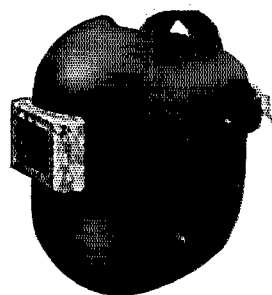


Well Balanced Sturdy --- Comfortable

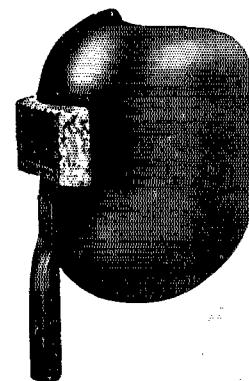
The new welding helmet, cupped deeply to obtain close side protection to a point well back of the ears, permits unbelievably free head and neck movement. Protection from reflections and flashes from nearby work is provided by the full turned edges which run well back under the chin and above the head. The usual riveted, lapped-over seams have been eliminated; smooth rounded interior promotes air circulation and results in a well ventilated, cool, comfortable

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JANUARY, 1937



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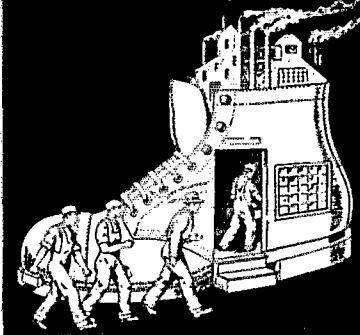
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NATIONAL SAFETY NEWS



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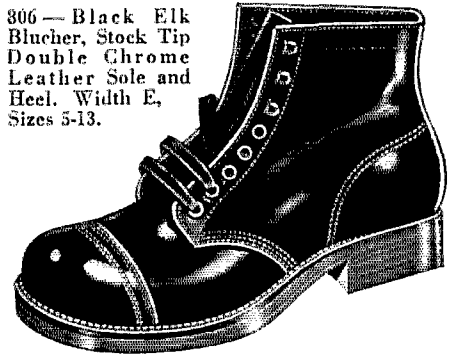
Since the days of armor, steel has protected men against injury. Its resistance to heavy blows has saved casualties in industry as well as in combat.

Steel provides protection for the feet that wear Lehigh Safety Shoes. The improved **steel box toe** is a shield of safety reducing foot injuries and compensation costs.

The added advantages of comfort, long wearing qualities and good appearance are features that readily induce workers to wear Lehigh Safety Shoes.

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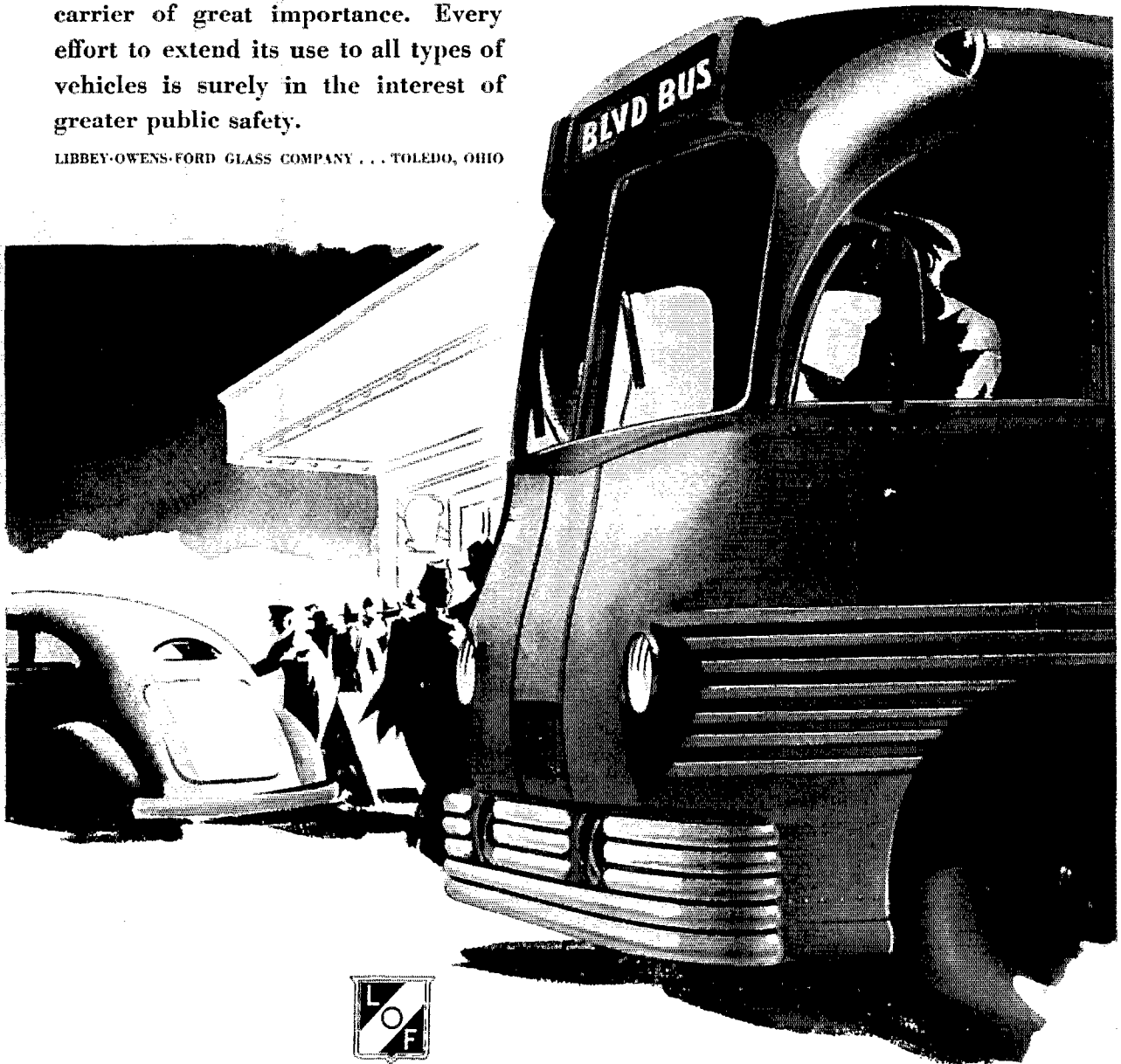
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Blucher, Stock Tip
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Sizes 5-13.



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Safety **PLATE** *Glass*
ALL-AROUND

NATIONAL SAFETY NEWS



FIRST AID

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by the House that Pioneered
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Fifteen years ago The Davis Company introduced to industry an entirely new system of First Aid for treating industrial accidents — the Interchangeable Unit System of dressings and treatments. With it, industry could take care of accidents more quickly and more efficiently. This System was found to be of particular value in locations not immediately accessible to the services of a physician or nurse. The Units, plainly marked and always visible, contained sufficient material for the proper treatments. They were inserted into the kit in an orderly fashion, like books on a shelf. Because of its simplicity and usefulness, the Davis First Aid Kit was quickly adopted by industry throughout the country.

Now the Davis Kit is given a "wrinkle" finish which is much more durable than the smooth enamel paint. It is more resistant to scratching and marring. It retains its clean-cut appearance. The kit lasts longer.

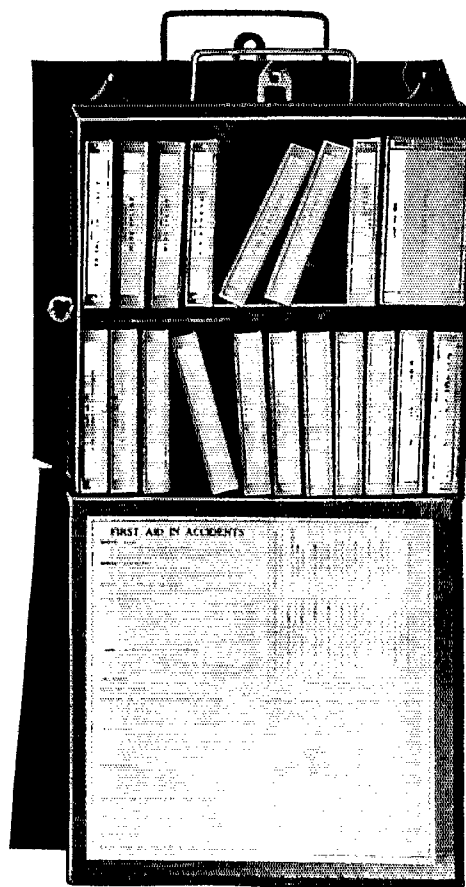
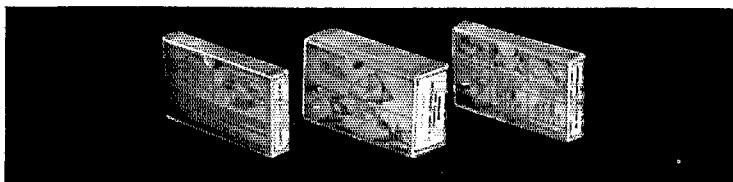
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National SAFETY NEWS

VOLUME 35

NUMBER 1

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13,750 copies of this issue were printed.

HERSWIN WILLIAMS
SAVE-LITE



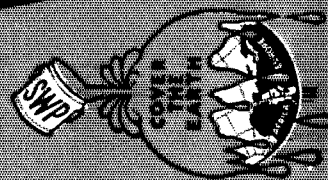
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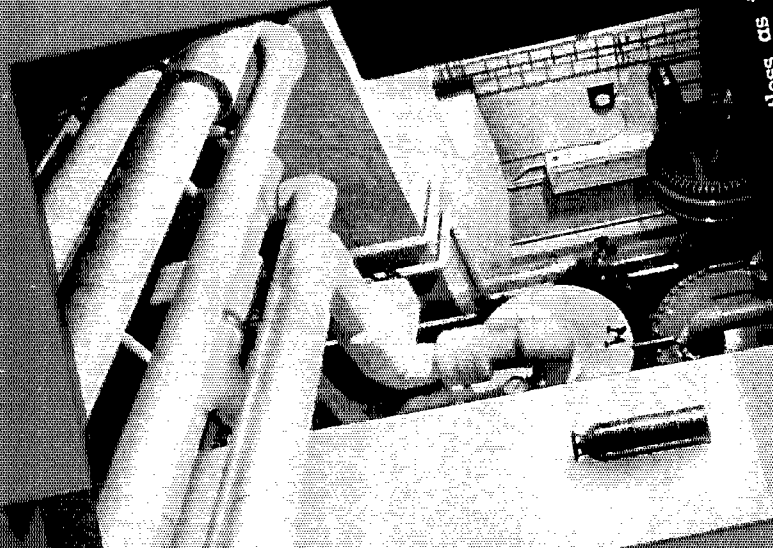
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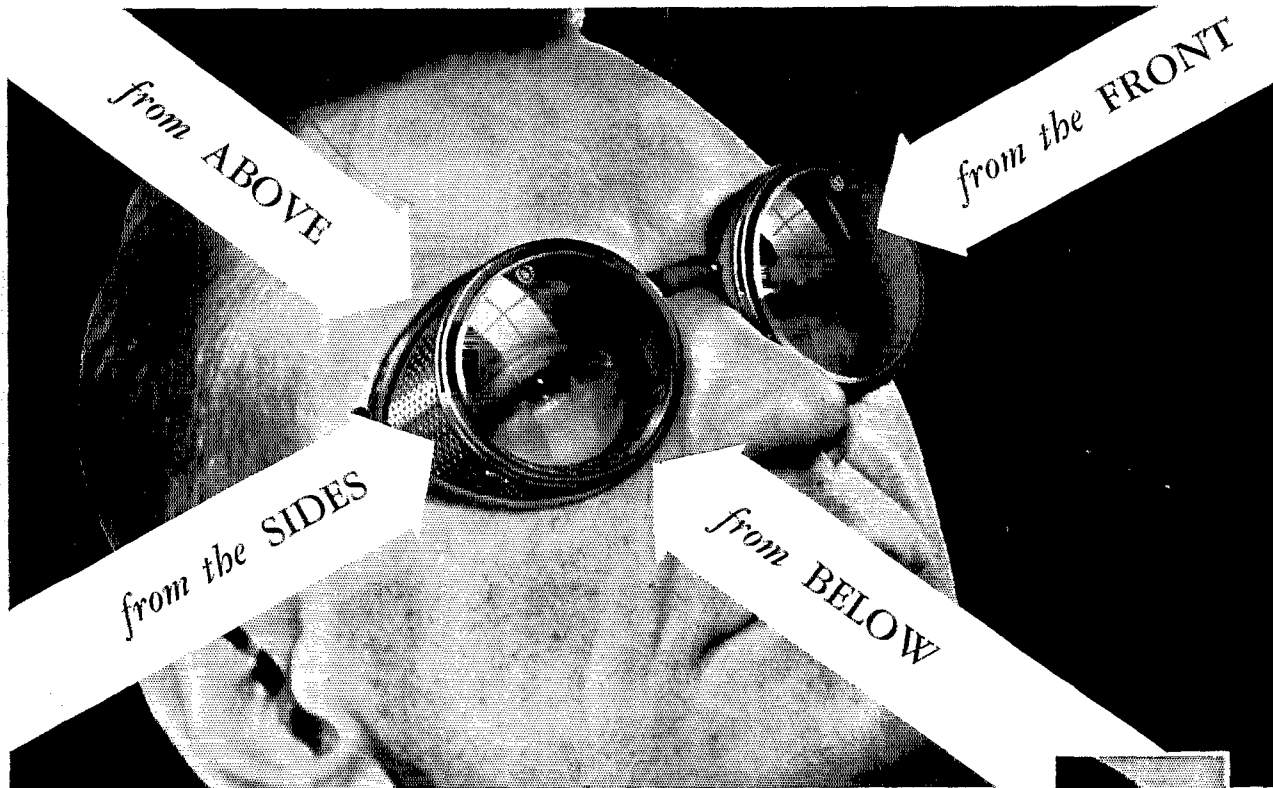


The Engine Room is as spotless as the chocolate making division. The Sherwin-Williams Save-Lite — the "plant conditioning" paint.



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Duralite-50 for cool eyes and clear lenses in normal atmosphere. Air channels in the edge of the eye-cup under the lens — plus side perforations — produce a natural draft inside the cups.

In addition to the Duralite-50 Goggle,* American Optical Company makes a complete line of goggles for every industrial eye hazard. Also — the services of AO industrial representatives are always available to help make your eye safety program most effective and profitable. Write your nearest AO branch office today or to American Optical Company, Southbridge, Mass.

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Individual eye-cups anatomically designed



Wide angle of vision

NATIONAL SAFETY NEWS

Published by National Safety Council, Inc.
JANUARY, 1937

Unfinished Business

THE NATION begins the New Year with several important items coming under the head of "Unfinished Business."

Not the least of these perplexing social and economic problems is the control of motor vehicle accidents. While many cities and a few states made progress during 1936 toward the goal of a 35 per cent reduction in traffic fatalities by the end of 1940, the total of deaths for the nation will probably exceed the high mark of 1935.

On the basis of gasoline consumption, progress has been made. Unfortunately, it is not a cheering kind of progress. It is saddening to realize that this barometer of increasing prosperity must also record a growing number of deaths and crippling injuries.

The deaths of 37,000 persons and the disabling of several times that number demands the earnest study and vigorous action of all who have jurisdiction over streets and highways, and of those who use them as motorists or pedestrians.

There can be no disputing the fact that our highways need widening, with segregation of lanes of traffic and separation of grades at both highway and railroad crossings. The startling increase in night accidents points to the need for highway illumination.

Many states are now considering the adoption of standard drivers' or the strengthening of present inadequate laws. Such bills, however, may languish and die in the legislatures unless there is a well organized public opinion back of the movement. Here is where state and community safety organizations can help.

More companies are extending their safety programs to include the after-work hours. A company's efforts, however, should not stop with its own workers. However skillful and careful they themselves may be, they are continually menaced by the acts of the reckless and the undisciplined. Industry should extend its support and influence to community and national safety efforts.

Progress is hindered by the comparatively small proportion of the population reached by organized safety work. Businesses whose hazards are not sufficiently obvious to command respect, small shops, one-man ventures and agriculture are outside most of the programs for accident prevention. These groups are also responsible for a large proportion of the occupational deaths.

The home presents the most baffling problem of all. Second only to the motor vehicle toll in seriousness, home fatalities attract little public notice. They are seldom spectacular, unless a conflagration destroys a home and its inmates. Newspapers do not publish the totals and in many communities adequate reports are not available. The law has little control over home hazards unless they

become a public menace. And the agencies which reach the home lack the facilities for effective educational programs.

Yes, there is plenty of unfinished business on the books for 1937.

Resolution

WHEREAS, reckless speed, carelessness and intoxication of both motorists and pedestrians are among the major factors that threaten to set, for 1936, a new all-time high of persons killed in traffic accidents, eclipsing even the record of 37,000 dead in 1935; and

WHEREAS, while it is true that there has been during 1936 a marked increase in gasoline consumption, which means a decrease in deaths relative to automobile mileage, we recognize that no excuse can be accepted for conditions and practices that produce an ever-increasing toll of lives, and

WHEREAS, the National Safety Council is entering the second year of its Five-Year Campaign to reduce traffic accident deaths throughout the country 35 per cent by the end of 1940, and has helped and encouraged intelligent organization for safety in all 48 states and the District of Columbia, and in hundreds of communities within the states through its field forces and the complete facilities of its engineering, educational, editorial and statistical services; and

WHEREAS, while we recognize the urgent need for improvement of our highways and our enforcement programs, we know that greater carefulness of drivers and pedestrians would promptly and drastically reduce the traffic toll;

THEREFORE BE IT RESOLVED, that the National Safety Council does solemnly call upon the millions of persons using the streets and highways of America to accept their personal obligations in this matter, to the end that the phrase, "Drive carefully and walk safely," may become not merely a slogan but an effective reality; and

BE IT FURTHER RESOLVED, that the National Safety Council continue all its various activities in furtherance of the cause of highway safety during the coming year; that it intensify and expand every effort already undertaken in its Five-Year Campaign, to the end that 1937 will bring to society a richly deserved reward of thousands of men, women and children spared from accidents or untimely death.

THE NATIONAL SAFETY COUNCIL

By C. H. Watson, *President*

By W. H. Cameron, *Managing Director*

(Passed unanimously by the members of the Executive Committee of the National Safety Council at their regular meeting held in New York City, December 14, 1936.)



THE MANAGING DIRECTOR'S PAGE

Better Safety Records and a Better Civilization

EDWARD Everett Hale said, "Look out—not in!" We realize that safety is an extrovert's task. Safety men must continually visualize and deal with external, outside things—even though they be the minds and hearts of human beings.

Nevertheless it would seem to be desirable at the end of the year to take personal inventory—to look within our own hearts and our minds—certainly a viewpoint not out of harmony with the true spirit of the season.

We are fellow workers, associates, travelers, companions—all marching along together upon a unique, distinctive highway. As public servants and as members of the same profession we have been hammering away all during the year on the same problem. Our tasks are all similar; our motives the same; we strive for the same objective. We are workers, not theorists, not faddists; we are practical people, not inexperienced school boys.

It is our work and our responsibility to grapple earnestly and persistently with subversive forces which we seek to control.

So for the moment let us look within—and congratulate ourselves. We have been sincere, ardent, vigorous for twelve long, trying months. We have gone forward—made definite progress. Each day we have sought to do our jobs better and better. Every resource at our command has been used to the best of our knowledge and ability.

We are neither complacent nor self-satisfied; there is too much unfinished work before us. Yet as we lay aside our tools for the moment and calmly reflect on the progress and disappointments of the past twelve months I am sure there will come to all of us the soulful satisfaction of having done our very best.

The leadership of the National Safety Council is indeed grateful for the multitude of services contributed so spontaneously and generously in the carrying out of its safety programs in so many fields of activity. If all its help, all its good will, all the practical accomplishments could be packed into bulky containers—like bales of cotton—the whole city of Chicago would not be big enough to store these precious packages. Never has there been a more generous, a more enthusiastic body of cooperators.

And outside of our immediate family membership, hundreds of organizations and groups have been generous and sympathetic in their cooperation toward the National Safety program. There has been more acceptance of recognized safety principles; more working together—in harmony—for a common safety objective. Our business men, public officials, school teachers, our Boy Scouts and other national bodies are all helping in some measure in this zealous attack on the accident problem. They deserve high praise and commendation from an appreciative nation.

To all, then, we extend most cordial wishes for a Happy New Year—and with this one supreme hope topping it all:

That you shall be spared to press forward again during 1937 and the years to come; to fight the good fight with renewed vigor and optimism—more determined than ever to help in establishing better safety records—and a better civilization.

W. H. Jamerson

INTERESTING ITEMS

1. Improved business is bringing a real up-swing in new memberships. Of special interest is the number of new *Complete Industrial members*. If your membership service is a Basic Industrial one, and if you want to make a stimulating change in your program, we shall be glad to send you a portfolio presenting this Complete plan.

2. New publications on the fire are:

(a) The 1936 Congress Transactions. Two volumes. One copy goes automatically to each member.

(b) "Engineering for Traffic Safety." This is one of the series of booklets prepared for the Five-year Campaign to save 38,000 lives.

(c) "Safety for Small Communities." This is another of the same series and presents the carefully planned program for smaller communities.

(d) "How Long on the Highway?" This report is the sequel to "Too Long at the Wheel" pamphlet published over a year ago. This new pamphlet deals with the subject of vehicle driving fatigue.

3. We urge industrial members to be making plans now for their 1937 "After the Whistle Blows" campaign. Be sure and tie this fine work into the national campaign to reduce traffic accidents 35 per cent by the end of 1940. You will find an article on page 22 offering suggestions for a 1937 program.

4. How about every member helping to get a member during 1937? Inquire if your neighboring plant is a member of the Council—if not, urge them to come into the family.

5. Highway officials are taking a more and more active interest in Safety, and in many states are taking the lead in safety organization and educational work as well as in building safer roads. Safety was the principal topic of discussion at the recent convention of the American Association of State highway Officials at San Francisco, where one entire session was devoted to this subject, including an address by a National Safety Council representative.

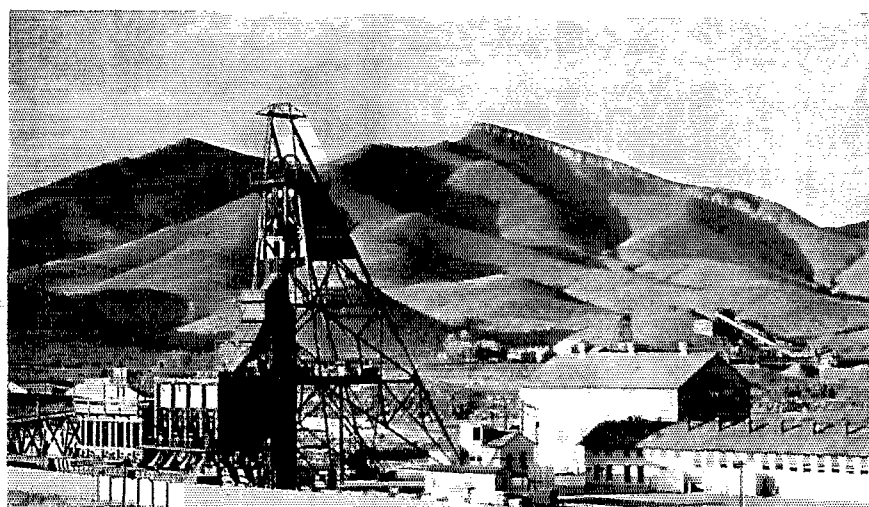
6. All signs point to a record breaking interest in traffic safety in the 1937 legislatures. In practically every state whose laws are not now in accord with the uniform vehicle code (including a good drivers' license law) strenuous efforts will be made to enact the needed laws or amendments. Every member of the National Safety Council is urged to support reasonable constructive traffic legislation based on the Uniform Code.

The COST is RETURNED MANY TIMES



By
LOUIS S. CATES

President, Phelps-Dodge Corporation



Campbell Shaft, Phelps-Dodge Corporation, Bisbee, Arizona.

One company alone can create little enthusiasm for safety. In all industry and in all walks of life people must be educated to the necessity of accident prevention

JANUARY, 1937

SAFETY work has been carried on by Phelps-Dodge Corporation over a period of many years, but in 1925 it was felt that the results being obtained were not satisfactory. At that time it was decided to treat the prevention of accidents as a major operating problem and to require the management to give as much attention to this side of the work as to any other. An organization was set up with various committees at the different mines and plants, headed by the General Manager of the Company and the managers of subsidiaries and branches.

At the time of this reorganization we adopted a policy of assuming that practically all industrial accidents were preventable. Measures were taken to report and analyze all accidents with a view to fixing responsibility and correcting dangerous conditions in order to prevent the recurrence of similar accidents.

Further steps were taken to maintain strict discipline and the enforcement of safety precautions, such as the wearing of special shoes, safety hats, and goggles. It has been demonstrated clearly that

any expense incurred in behalf of safety is returned many times over through decreased compensation for injuries and generally improved working conditions.

Although we are still trying to improve our record, the following figures of the accident rate per 1,000 shifts worked indicate that improvement has been made. The figures are for our mining properties in the Southwest:

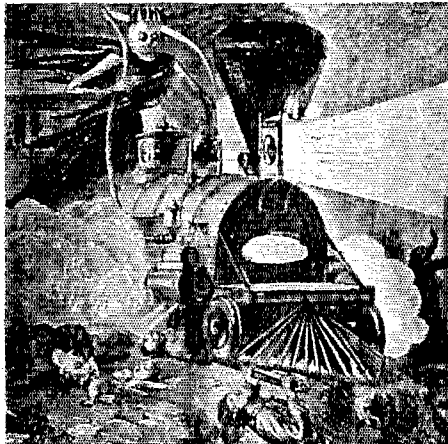
Year	Rate per 1,000 Shifts Worked
1924	1.111
1925	.718
1926	.313
1927	.175
1928	.091
1929	.045
1930	.047
1931	.054
1932	.064
1933	.039
1934	.137
1935	.083

It will be noted that in 1934 the rate of accidents increased. This was due to an increase in production and the employment of men who had not recently been in contact with safety work. It illustrates that no one company alone can stimulate enthusiasm for safety, and that in all industry and in all walks of life people must be educated to a real consciousness of the necessity of accident prevention.

The National Safety Council is acting as a central clearing agency for this desirable work and deserves to be supported by all who are interested in reducing accidents.

Frank McManamy

Railroad safety as the press viewed it seventy years ago. From Harpers Weekly, 1865.



Faster train schedules and a remarkable reduction in accidents are notable accomplishments of American railroads during the past half century. Now they face the problem of maintaining their safety record while meeting the demand for still greater speed

FOR HALF a century the Interstate Commerce Commission has been active in promoting the safety of employees and travelers on railroads, but the actual history of the movement for protection of railroad employees dates much farther back. Coincident with the rapid growth and development of American railroads following the Civil War came the need for protection of employees engaged in the then extra hazardous occupation of operating trains. The excessive number of deaths and injuries in coupling and uncoupling cars and falling from the tops of moving trains while operating hand brakes caused active steps to be taken by railroad employees to provide safer methods and attracted the attention of humanitarians throughout the country. This resulted in further agitation for automatic couplers, power brakes, and other safety devices.

SPEED *without* HAZARD?

By FRANK McMANAMY

Member, Interstate Commerce Commission

In 1871 Senator Sumner of Massachusetts introduced in Congress a resolution providing for an investigation to determine what steps should be taken to prevent the great loss of life on railroads, and from time to time thereafter numerous bills were introduced.

In his first message to Congress in 1889, President Harrison urged that legislation be enacted to protect railroad employees. He said in part:

"* * * It is a reproach to our civilization that any class of American workmen should in the pursuit of a necessary and useful vocation be subjected to a peril to life and limb as great as that of a soldier in time of war."

The recommendation for legislation was repeated in 1890 and again in 1891. In the meantime, legislation for the protection of railroad employees and travelers had been enacted by various States. It at once became apparent, however, that the transportation of persons and property across state lines made it impossible to provide adequate regulation by state laws. In fact, it soon became apparent that state laws often created additional hazard because of their lack of uniformity and their failure to bring about standardization of railroad equipment.

The creation of the Interstate Commerce Commission by act of Congress

NATIONAL SAFETY NEWS

approved February 4, 1887, provided a Federal authority to which legislation regulating railroads could be assigned. For the entire period of its existence, therefore, the Interstate Commerce Commission has been the agency of the Federal government in direct charge of the promotion of safety on railroads.

On January 31, 1889, the Interstate Commerce Commission called a conference composed of the state commissioners, or other authorities entrusted with the supervision of railroad affairs, for the purpose of considering, among other things, the question of safety in railroad operation. This conference adopted a resolution in which the Interstate Commerce Commission was requested to formulate appropriate regulations and to make such recommendations to the railroads and suggestions to the Congress with respect to legislation on the subject of safety. Pursuant to this request, a questionnaire was issued by the Secretary of the Commission for the purpose of obtaining the views of state officials, railroad officials and employees, and all other persons who might have something of value to present. Recommendations for the promotion of safety were contained in the first annual report which the Commission made to Congress, and subsequent annual reports have contained further recommendations. Most of these have been enacted into law.

The duties of the Interstate Commerce Commission with respect to the promotion of safety on railroads are prescribed by a series of separate laws enacted by the Congress at different times. Most of these were in response to urgent

demands by the railroad employees for protective legislation. The recommendations of the Commission cover not only the protection of railroad employees but also the protection of travelers by railroad and the property of the carriers. These laws in the order of their enactment, with a brief summary of their provisions, follow:

The Safety Appliance Act. This act which was approved March 2, 1893, has since been broadened and strengthened by amendment and clarified by Supreme Court decisions.

The express purpose of this law is to promote the safety of travelers and employees upon railroads. In general terms it requires that all locomotives be equipped with power driving-wheel brakes and appliances for operating the train-brake system. All trains must have a sufficient number of power-braked cars so that the engineman can control the speed of the train without the use of hand brakes. All cars must be equipped with automatic couplers. All cars must be equipped with grab irons or hand holds, and the Commission was given the authority to establish the standard height for draw bars for freight cars which was to be initially designated by the American Railway Association subject to approval by the Commission.

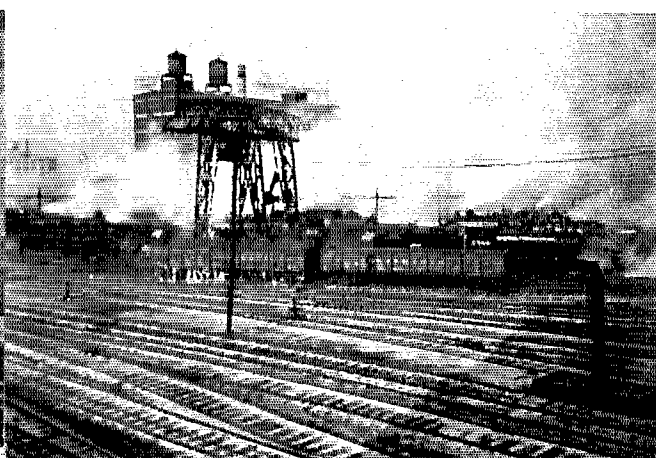
The amendment of April 14, 1910, required additional safety appliances such as hand brakes, ladders, running boards, and sill steps, and at the same time authorized the Commission to designate the number, dimensions, location, and manner of application of such appliances.

The Medals of Honor Act. This act approved February 23, 1905, followed the principle established in 1874 when Congress provided for the bestowal of medals upon persons who endangered their own lives in saving, or endeavoring to save, lives from the perils of the sea. It extended similar recognition to those who endangered their own lives in saving, or endeavoring to save, lives from any railroad wreck, disaster, or grave accident, or in preventing or endeavoring to prevent such wreck, disaster, or accident.

The Hours of Service Act. This Act was approved March 4, 1907. During the period when efforts were being made to secure the enactment of the Safety Appliance Law a new hazard was developing due to railroad employees being required and permitted to remain on duty for long periods. This resulted in many accidents causing death and injury to employees and passengers, as well as causing heavy property damage.

The hours of duty of railroad employees were not regulated by law and there were frequent instances when employees remained on duty so long that they became weary in body and mind and were not sufficiently alert to perform the exhausting duties assigned to them. As time went on these practices became more aggravated and it became increasingly apparent that the conditions could be corrected only by legislation limiting the hours of duty of the employees engaged in or connected with the operation of trains.

In its annual reports for 1904 and 1905 the Commission called attention to the fact that excessive hours of labor



The steam locomotive is still the mainstay of American transportation. (Right) The life of a large city is dependent upon the network of railways which serve it.

Industrial fire protection must overcome the hazards of new processes as well as the more familiar causes of fire

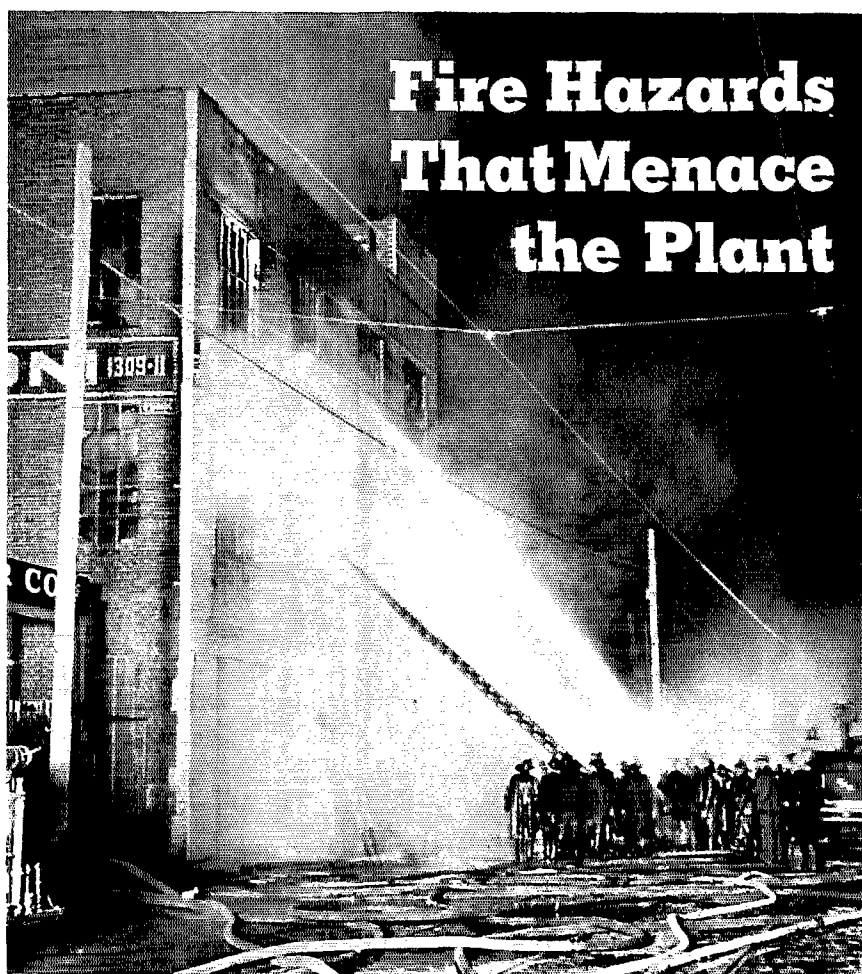
PROCESSES of manufacture have changed materially in recent years as a result of chemical research. These changes have been made without sufficient study of the fire and explosion hazards that may be involved. In addition, recent industrial recovery has placed in use buildings which have deteriorated during the depression period and which are not in keeping with standard, safe construction.

Recently a fire occurred in the sub-basement of a five-story industrial building. The original fire was so small that firemen needed only a 2½-gallon extinguisher to put it out. They were ready to leave when they noticed smoke coming from an open window of the unused top floor. They found two-thirds of this section in flames as the result of ignition from the concentration of super-heated air which had come from the basement through stairways and other vertical openings. The loss from the original fire was nothing, while the blaze in the upper section cost several thousand dollars.

This emphasizes the importance of planning new buildings and reconstructing older ones to cut off the spread of dangerous hot air, gases and burning substances, not only upward, but horizontally. Tightly enclosed elevator shafts, stairways, and other vertical openings, and the erection of standard fire wall partitions will give a much improved margin of safety.

Two costly explosions took place in soybean processing plants during 1935. Eleven men lost their lives and 45 others were injured in Chicago, with a property damage of \$600,000. Two weeks later a smaller soybean oil extracting plant was blown up in Momence, Ill., where two persons were killed and two were injured. In each of these there was present the hazard of dust explosion and also danger from the ignition of fumes from the solvent used, which is generally a high grade of gasoline, such as hexane. Lack of knowledge of methods of safeguarding these manufacturing processes was the direct cause of the heavy casualties.

JANUARY, 1937



Fire Hazards That Menace the Plant

By T. ALFRED FLEMING

Director of Conservation, The National Board of Fire Underwriters, New York City

For years manufacturers in many lines of industry have developed numerous new products by utilizing waste materials possessing inherent hazards. Chemical research is largely responsible for these new products which, incidentally, have often brought profits exceeding the normal operating costs of the entire plant. In the development of these by-products, the inherent hazards are frequently overlooked, and disastrous results are inevitable.

As an example, an explosion took place in the hydrogen building of a vegetable oil hardening plant in the stockyard district of Chicago, in February, 1936, causing the death of four workmen, serious injury to several others, as well as the complete destruction of several buildings.

The explosion resulted from the ignition of hydrogen gas which escaped from a leaking pipe line. The hydrogen was manufactured for use in the processing of vegetable oils, and was stored in tanks

on the roof. A hissing sound was first noticed and attendants started to close off the valves, but a spark from some source completed the job before they had a chance. Static electricity or the flame from a gas-fired dryer may have caused the ignition.

In Cleveland, the industrial area along the Cuyahoga River was seriously endangered by a fire which spread over the entire river surface, on which there was a quantity of oil and scum. Every industrial property adjoining for blocks and an important railway bridge were in serious danger. Due to a slow current, which is frequently paralyzed during the winter season, gasoline, oil and chemicals from tankers passing up and down the river coated the water. Farther up the river more than fifty million gallons of gasoline were stored.

A workman was using an acetylene torch in cutting a steel plate on a 600-foot vessel. Sparks must have fallen on the oily surface of the river. A surround-

was one of the principal causes of railroad accidents. Three Presidential messages to the 58th Congress (1903-1905) urged the enactment of laws limiting the hours of service of railroad employees.

The Ash Pan Act. This Act, which was approved May 30, 1908, made it unlawful to use in interstate or foreign commerce any locomotive not equipped with an ash pan which can be dumped or emptied and cleaned without an employee going under the locomotive. Exception is made for locomotives upon which by reason of the use of oil, electricity, or other such agency an ash pan is not necessary. A penalty is provided for any violation thereof and provision made for enforcement by the Interstate Commerce Commission. The act became effective January 1, 1910, thus providing ample time for the railroads to make the necessary changes in construction. The records showed an average of 14 persons killed and 119 injured each year while under locomotives cleaning ash pans. Compliance with the act by the railroads removed the necessity for men going underneath locomotives for the purpose of cleaning the ash pan, and wholly eliminated casualties from this source.

Transportation of Explosives Act. The original Transportation of Explosives Act, approved May 30, 1908, applied to transportation of explosives only. It was amended in 1921 to include flammables and other dangerous articles.

Contrary to the usual procedure, this law was advocated by the railroads

themselves under the leadership of James McCrea, later president of the Pennsylvania Railroad. In presenting the matter to the Congress it was shown that for more than 20 years the railroads had struggled by individual efforts to enforce regulations to prevent fires and explosions on railroad property resulting from the transportation of explosives and other dangerous articles. They were unsuccessful because, as they testified in the hearings on the proposed bill, some of the railroads would wink at violations of the regulations in order to secure the traffic. To correct this practice the railroads requested that the Interstate Commerce Commission be given by law jurisdiction over the regulations, which was done.

In the execution of the provisions of this act the Commission has, as provided therein, utilized the services of the bureau for the safe transportation of explosives and other dangerous articles which is created and maintained by the railroads.

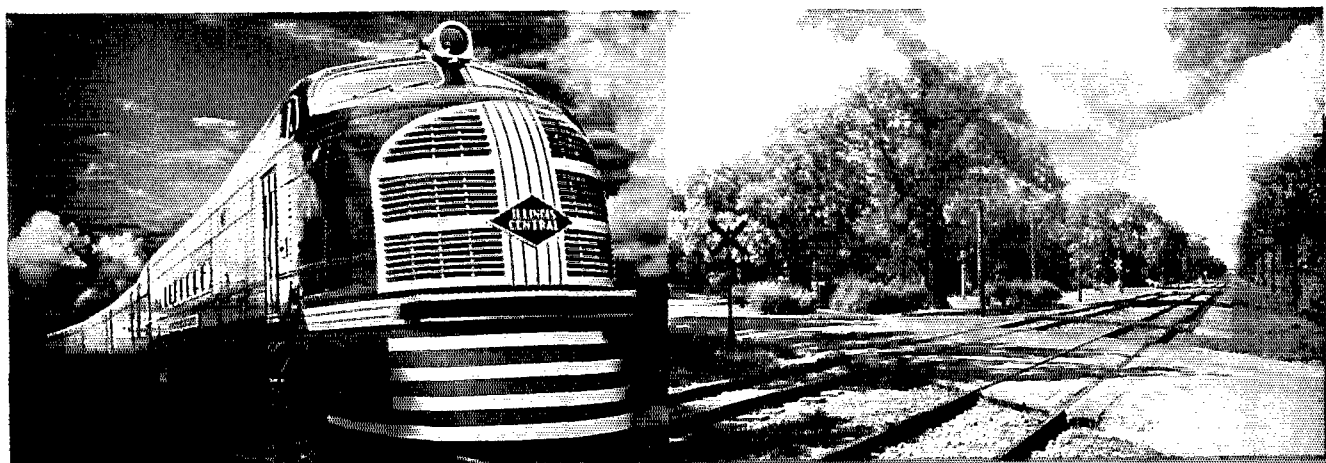
The Accident Reports Act. Since 1888 the Commission has required railroads to include in their annual reports information concerning accidents. The present accident investigation law was approved May 6, 1910. Under this law and orders of the Commission issued pursuant thereto, in addition to being required to file monthly accident reports the carriers are required to report by telegraph to the Commission all serious collisions and derailments, and the Commission is authorized to investigate such accidents and render reports thereon. Such accidents are investigated and re-

ports setting forth in detail the facts disclosed concerning each accident investigated, the cause, and recommendations for preventive measures are transmitted to the president of the railroad on which the accident occurred. These reports lead to the correction of operating conditions and practices which are likely to cause accidents.

The Boiler Inspection Act, which became effective July 1, 1911, established a general safety standard for locomotive boilers and boiler appurtenances. It provided for the appointment of a chief inspector, two assistant chief inspectors, and 50 district inspectors to administer the provisions of the act. It also provides for the promulgation by the Commission of rules and regulations by which the general condition of equipment should be determined. An amendment to this act, approved March 4, 1915, extended these provisions to the entire locomotive and tender and all their parts and appurtenances, and a further amendment making the provisions of the law applicable to any locomotive used or permitted to be used on the line of any carrier engaged in interstate commerce was approved June 7, 1924.

Section 26 of the Interstate Commerce Act. Section 26 of the Interstate Commerce Act was approved February 28, 1920, as a part of the Transportation Act. This section gave the Commission authority, after investigation, to require carriers to install upon the whole or any part of their lines automatic train-stop or train-control devices, or

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Streamlined Diesel powered trains are the railroads' answer to the demand for faster transportation. (Right) Trees enhance the beauty of a roadside but obscure the view at railroad crossings.

operating department, however, where men are employed steadily with few changes in the character of their work, and where, perhaps, education and training in safety rules are most effective, the number of accidental injuries was reduced 76 per cent and time lost 40 per cent.

The campaign for the safety of industrial workers is one that never ends. Year after year the same old hazards confront us and some new ones, arising from new machinery, new methods and greater speed. Changes in personnel take place. New men, untrained in the Company's safety code, must be taught how to protect themselves against injury or death and what to do when chance catches them unaware. Obviously the major premise of any plan to reduce the number of accidents and cut their toll of losses must be its unceasing continuity, its persistence in application of common sense protective rules.

The safety organization of Pacific Gas and Electric Company was formed in 1914. With changes and improvements dictated by experience, the safety program has been carried on unremittingly ever since.

The Company's gas and electric system covers a large territory, approximately 89,000 square miles in extent. Employees of the various departments are scattered throughout this area, frequently in small groups, and intensive organization necessarily was the first essential.

The Safety Engineer and two assistants direct the work from headquarters in San Francisco under the Central Safety Committee which is composed of the

Vice President in Charge of Public Relations and Sales; The Second Vice President and Assistant to the President; the Engineers of Gas Construction and Operation, of Electrical Operation, and of General Construction; the Superintendent of the San Francisco and East Bay Division, the Claims Adjuster, Manager of the Personnel Department, and the Safety Engineer.

The Central Safety Committee has general supervision and control of all accident prevention activity throughout the system. It establishes standards for safety devices, equipment, and material; promulgates safety rules and instructions; reviews reports of all accidents and injuries; and issues educational information.

In each of the twelve geographical divisions of the system a Division Safety Committee, consisting of from five to fifteen members, is responsible for making the program effective among the employees. These committees investigate all accidents, reporting their findings to the central authority. They hold meetings of foremen and men, keep accident and injury records, and take such disciplinary action as is necessary when rules are violated.

Last, but perhaps most important of the agencies by which the practice of safety measures is spread among the working forces, are the Workmen's Inspection Committees, of which there are 40 in the twelve divisions. Each of the inspection committees is composed of three men, membership rotating so that the personnel changes every twelve months. The schedule is so arranged that

the entire system is inspected every three months.

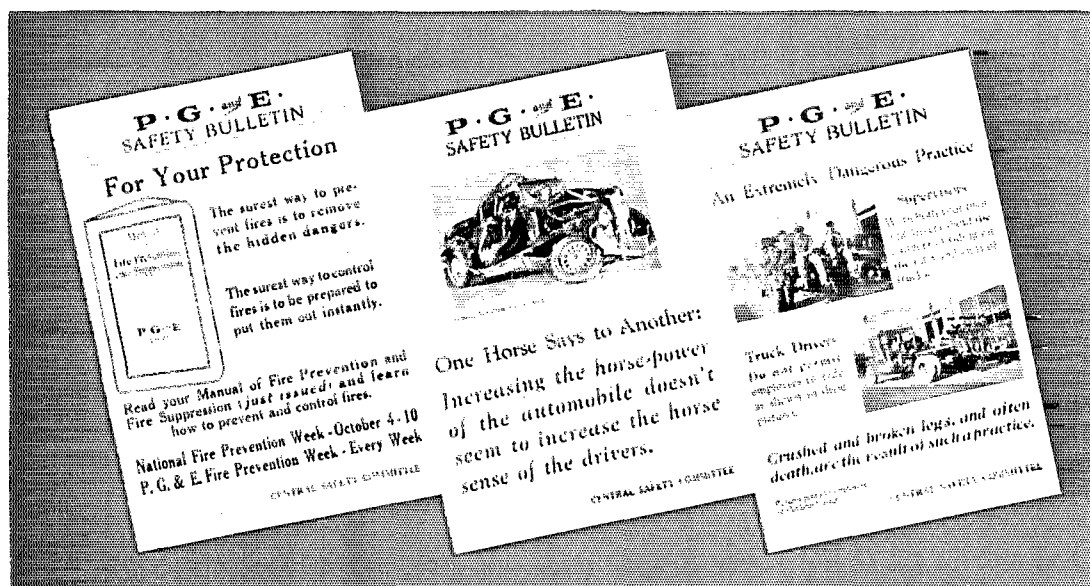
Hazardous conditions, unsafe practices, and the use of unfit tools or equipment are sought out by the inspection committees, promptly reported, and remedial steps promptly taken. The workmen's inspection committees have a realistic view of the conditions under which they and their fellows labor. Theirs is the duty to prevent accidents by uncovering potential causes and by enforcing the safety code. With their on-the-ground knowledge of actual conditions they may recommend further precautionary rules or changes in methods designed to reduce occupational hazards.

Safety work does not stop at preventive measures. When an accident does happen and injuries are suffered, the employees are taught what to do to save life or lessen the severity of injuries. First aid instruction is given systematically, every employee whose work involves risk or injury being required to devote at least four hours every year to this part of the safety program.

Teams are organized throughout the system and contests held to foster a friendly rivalry for supremacy among employees. Over one thousand employees of the Pacific Gas and Electric Company now hold U. S. Bureau of Mines first aid certificates and over 5000 have had one or more full courses of instruction. A large number also hold American Red Cross certificates.

Proficiency in first aid has not only contributed materially to improving the Company's safety record, but repeatedly it has helped sufferers from accidents

(Please turn to page 76)



Typical bulletins issued by the Central Safety Committee of the Pacific Gas and Electric Co. Caution after hours, as well as the hazards of the job, is stressed in these messages.

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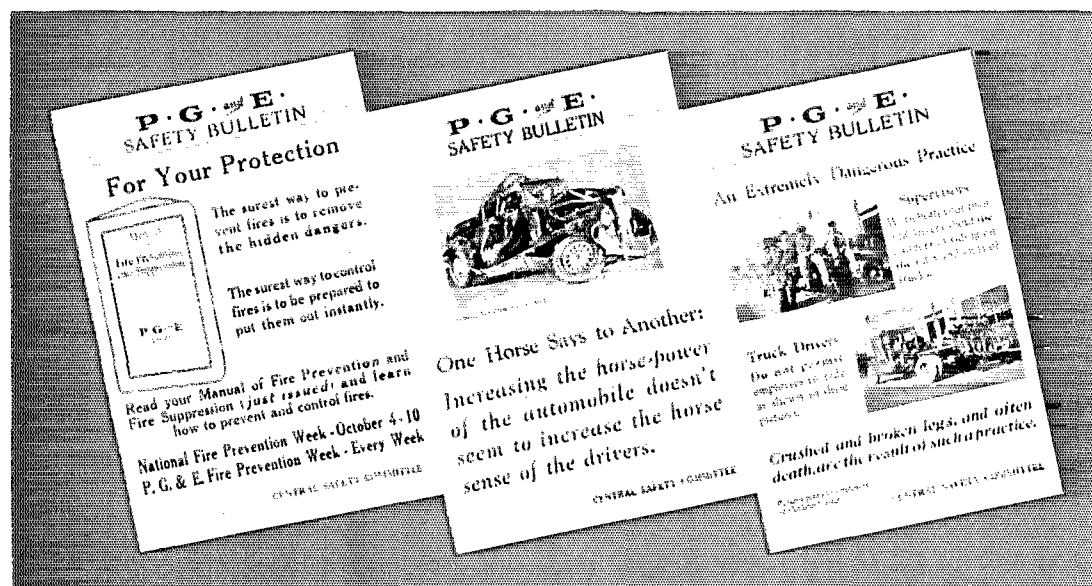
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ing curtain of water from ten hose streams, the application of over half a ton of foam, and the absence of a wind enabled the fire department to control the blaze at a point 100 feet from exposed gasoline tanks.

This is the second serious river fire at the same location caused by floating oil. The first took the lives of seven men. Such fires demonstrate the need of complete information of the hazard of the materials or processes involved, and illustrate the need of modern fire equipment and constant vigilance.

Electrolysis

Another hazard to industry given infrequent consideration and seldom understood is electrolysis. This is unquestionably the cause of what might have been a tragedy in Utica, N. Y., in February, 1936. All business in the busiest section of the downtown area was suspended for more than 48 hours, telephone and gas service over a much larger area was interrupted and several fires occurred in nearby buildings, following the ignition of gas escaping from a street main.

The gas may have been ignited by a workman's pick striking a stone while the repair of a water main was in process. The temperature was below zero. The leak in the water main was no doubt due to electrolysis or electric currents straying from their usual return and using water or gas pipe instead. This break was near the street car tracks.

When dug up, the water pipe was found to have been eaten away for a distance of almost three feet, and the water had washed out a cavity extending 15 or 20 feet square and about seven feet deep. Mains had been undermined by the removal of the supporting soil, and the six-inch gas main had broken from the strain. After the gas was ignited, the fire followed sewers and subways, blowing up four manhole covers in three blocks, followed electric conduits into adjoining buildings, causing explosions and fires. More than 5,000 telephone wire connections in underground conduits, including police department lines, were put out of service.

Quick action by the chief of the fire department and the fine cooperation of all organizations, merchants, and industrial companies averted what might have been a tragedy. Modern science has supplied ways to test for straying electric currents. Such a test should be required frequently.

A hazard has made its appearance in many locations, caused by the leakage

of gasoline and fuel oil from buried tanks. Explosions and fires due to the escape of these liquids have been caused by either improper installation or deterioration, frequently assisted by electrolysis or ordinary corrosion. In making the excavation for a tunnel system in an eastern city recently, seepage of gasoline was found which was traced to a tank 150 feet distant. It cost the tunnel company \$60,000 to protect its installation against this hazard.

A number of reports are on file of similar leakage entering the subway systems, as well as plant and mercantile basements. A report of a flagrant example comes from a town of five thousand in Colorado. A new tank of standard construction, installed less than two years, was found to be leaking. Investigation showed electrolysis was the cause. The location was near the power house of the street railway system.

The hazard is general and may be found wherever tanks and service lines have been installed for a period of years. Prior to installation, underground tanks should be protected against corrosion by the equivalent of at least two preliminary coatings of red lead, followed by a heavy coating of hot asphalt. Before being placed in service, every such tank should be subjected to a pressure test and thereafter any evidence of leakage promptly investigated.

Sometimes fighting fires in the ordinary way, where chemical products are involved, brings about reactions which not only spread and intensify the fire but increase the life hazard to those carrying on fire fighting operations and any persons remaining in the building. Some time ago the fire department of an eastern city responded to a fire involving large quantities of sodium nitrate. The material had worked through many of the containers and resulted in the nitration of woodwork and other materials of construction: hence the fire was extremely intense.

The fire department, not familiar with sodium nitrate, attempted to extinguish the fire by high pressure hose streams, which scattered the burning material, the reaction resulting in numerous minor explosions which spread the fire throughout the building. A nitrate fire can be extinguished only by discharging on it large quantities of water at low pressure through the open butt of a hose line.

Lightning

Few industrial operators give sufficient consideration to the hazard of lightning. Their location in the heart of

the city with large quantities of steel framework construction has provided them with a considerable degree of protection. However, additional safeguards are frequently necessary.

The steel framework of a building supplies a good conductor similar to a well-installed lightning rod system on a farm barn, provided the steel members are securely riveted or welded together and grounded to permanent moisture; and usually, even though both of these conditions are not wholly met, the steel structure has sufficient capacity to absorb an ordinary discharge of lightning without material damage.

Frequently, however, a high smoke-stack far above the top of the structure has no steel in its construction nor any metal conductor, and as it is the highest point, it invites the current from the lightning discharge and causes extensive damage. All such stacks, both inside and outside the city, should be protected by the installation of a suitable copper cable with sufficient points at the top arranged on a band of copper surrounding the stack. This cable should continue down to a permanent ground and also should be tied into the steel framework of the building at one or more points.

Air Conditioning

Hazards in air conditioning systems were brought to notice by several serious fires. Duct systems necessary for forced passage of air are insulated with a material to prevent the transmission of the sound of air passing through. Very little thought had been given to the combustibility of the lining substances, until a serious fire occurred recently in a New York theater. The fire department, early in the evening, extinguished a small fire in some rubbish near the steps of a rear entrance. Shortly thereafter it was found that the entire air conditioning system was on fire inside the ventilating ducts.

The outside intake of the air conditioning system was near the location of the first fire, and superheated air from this blaze had been drawn by suction into the intake pipe, setting fire to the lining by spontaneous ignition.

The introduction of a "production line" or continuous conveyor is being undertaken by some furniture manufacturing plants. Furniture of the cheaper grade is finished on a moving platform which conveys it into an enclosed spray booth, from which it goes to the drying oven, then to another en-

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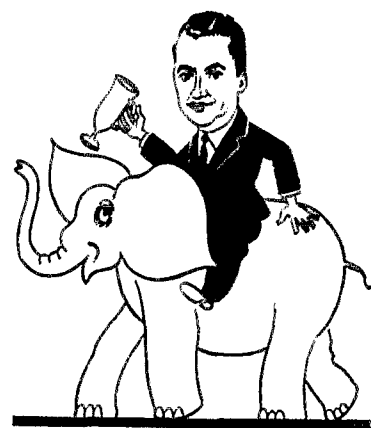
NATIONAL SAFETY NEWS

The White Elephant Is on the Job

By FRED J. HATCH

Wisconsin Public Service Corp.

The Wisconsin Public Service Corp., like many other companies, finds that this "pet" keeps departments alert to find hazards



WHEN a foreign country adopts American practices or ideas, that is not news. But when an enterprising American company adopts a Siamese custom and it proves successful that's news! And by the tail of the Siamese white elephant hangs another tale of how the Wisconsin Public Service Corporation has practically eliminated accidents in a program centered around an old Siamese custom.

When the close of the 1935-36 National Safety Council contest found the Wisconsin Public Service Corporation in ninth place J. P. Pulliam, president, and C. B. Boulet, safety director, decided to do something about renewing interest in accident prevention. Win-

ners of the Council's national award in 1929, 1930 and 1932 resting in ninth place did not look good to the company's executives and when the 1936-37 contest began the managers and employees found that their chief executive was sponsoring a company activity known as the President's Safety Campaign.

Announcement of the campaign was sent to the division managers and department heads in the form of a brochure, the cover of which was imprinted "A Personal Message from J. P. Pulliam." The first page of the folder contained a personal letter signed by Mr. Pulliam and the balance of the pages outlined the details. Quotations from various parts of the folder follow:

"Bring our accident frequency record back to the level of 1932 and 1933. The excellent record made during those years can be attributed to (1) Enthusiasm of the men on the job; (2) Personal interest and supervision by department heads, superintendents, and foremen.

"Recreate active interest among superintendents and foremen in the job of stopping accidents before they happen. Experience has proven that accidents *do not happen* in those departments where the superintendent is enthusiastic about safety—where he takes *personal* interest in accident prevention. When the men know that *the boss* wants something done, his men do it. If he insists on speed, he usually gets it. If he requires good housekeeping, his department will show it; and if he demands that work be done safely, he will have a good safety record.

"Make every man in the organization *safety conscious* so that every job he does will be preceded by careful thought."

Planners of the campaign realized that something with an appeal to all employees would create widespread interest and participation. The awarding of badges, buttons, cups and flags for not having accidents was an old stunt. But suppose they were awarded something for having an accident? That's where the White Elephant came in.

Did You Ever Hear The Story About The White Elephant?

"In Siam the White Elephant is a sacred animal and can be owned only by the king. The White Elephant cannot be used for income-producing purposes or for labor, and furthermore, the White Elephant is very expensive to keep. In Siam, if some of the nobility incur the displeasure of the king, he immediately assigns to that person the upkeep of a

(Please turn to page 66)



President Pulliam and his staff inspecting the White Elephant. Left to right: C. R. Phenicle, vice-president; J. P. Pulliam, president; M. H. Montross, Wisconsin Valley division manager; A. J. Goedjen, Green Bay division manager; C. B. Boulet, safety director; E. S. Schrank, Oshkosh division manager; A. F. Davey, Sheboygan division manager; H. P. Taylor, assistant secretary.



The neat, trim exterior of the plant reflects what the visitor may expect inside.

ANYONE who believes that an industrial plant must be a dull, drab, dingy sort of place would change his opinion after a trip through the Ditzler Color Company plant at Detroit. There, by the simple expedient of the use of light and the application of color, an effect of brightness and cheerfulness has been attained that cannot help increasing the feeling of well-being on the part of the employees.

Admittedly in a paint and lacquer factory there would be plenty of color available. But the actual use of color to achieve a decorative effect unusual in industry requires thought. And the constant application of the paint brush requires time and energy.

The Ditzler Color Company, however, has found it worth while to keep its plant clean, airy and bright. And rarely does a visitor fail to remark about the colorful effect.

As a part of the program of cleanliness, the process of paint manufacture has been made automatic wherever possible, to avoid manual handling which might cause spillage.

Batteries of grinders prepare the pigments and pastes, which then pass on to the mixing tanks, where solvents, driers and thinners are added. At this stage, samples of the paint are drawn off and taken to the testing laboratory, where they are tested for color, shade, and working properties. When the batch has been mixed properly and thoroughly, it is drained into drums or smaller containers and packed for shipment.

In following the process through the plant the visitor will note that every department is plentifully provided with window space, ventilation—and color. In some departments even the floor has been painted. In general the walls near the base are painted black—with the

corners white to make them conspicuous and thus keep them clean. The remainder of the walls and also the ceilings are done in white or aluminum. Tanks, vats and machinery vary in color, though all those within a given department conform to the same color scheme.

Everything which it is desirable to bring out and make noticeable has been treated with a coat of brilliant yellow. The hand trucks, for example, and the 50-gallon containers used for shipping paint would stand out conspicuously on the darkest day.

The fire extinguishers, which are both plentiful and readily accessible, are also done in yellow and stand out strikingly against a deep red background.

A brilliant red color also identifies the 17 miles of sprinkler system piping.

Even the transformer rooms and the storerooms housing raw material, where few persons ever venture and where there might be a temptation to slight housekeeping, have received their share of color.

No estimate has ever been made of the quantity of paint used annually, but it must run well into thousands of gal-

lons; for every paintable surface is given its coat of color at least once a year. In departments where spilling occasionally occurs, paint may be applied at intervals of only a week or two weeks.

The whole effect of the plant may be summed up in these words—bright, light, and airy.

The safety program does not begin and end in the application of color, however.

In the mixing rooms, for example, all equipment and tanks are grounded—not only through bus bar to the electrical control rooms, but also directly to the ground—to prevent accidental ignition of flammable fumes. Containers which are being filled must be grounded to the pipe lines.

Vapor-proof electric motors operate the machines in these danger zones, and are in turn operated by remote control—the fuse boxes and electrical switches being isolated in a section of the basement and working through vacuum switches at the machines.

The varnish plant is set off from the main portion of the plant and has an independent sprinkler system.

Housekeeping Is Easier In a Bright Plant

By C. F. SCHEER

Light and paint have accomplished much more
than decorative effects in the Ditzler Color plant

Isolated from every other building is the huge liquid storage house containing sixteen 12,000-gallon tanks filled with alcohols, esters, coal tar thinners, and similar flammable solvents. Each tank is equipped with a built-in carbon dioxide fire extinguisher. Two watchmen are on duty constantly, to detect immediately any leakage and to prevent unauthorized persons from entering the premises.

Spray booths in the research and testing laboratories are equipped with water-spray hoods.

When the stones from the grinding mills are being re-furrowed with an air-hammer, a fine spray of water is directed at the point of operation to prevent small abrasive particles from flying about.

Electrical hoists are used to remove the full 50-gallon drums from the storage racks, so that back strains will not be involved.

And finally there is a modern plant hospital which recently was installed in new quarters. All employees are given a thorough physical examination, including a chest x-ray, before hiring. Should they work in a department where considerable dust is generated, the ex-

amination is repeated every six months.

Employees have been trained to report any and all injuries. Particular attention is given to small cuts, which comprise the majority of injuries, for pigment introduced into even a minor skin break might cause a serious infection.

The safety department makes inquiries regarding employees absent from work. The nature and seriousness of the illness is determined, and the case is followed until the employee returns to his job.

Sanitation is regarded as a natural adjunct of safety. Employees who may become covered with pigment or perspiration, or whose work requires the wearing of overalls, are provided with a change house and shower room and given half an hour to clean up and dress before the whistle blows at quitting time. There is also a wash room for every department in the plant.

Safety as a plant-wide production factor is discussed once a month at a meeting of all foremen. In addition, departmental safety committees consisting of three to five employees from each unit of the plant meet once a week with the plant safety director. Discussions at

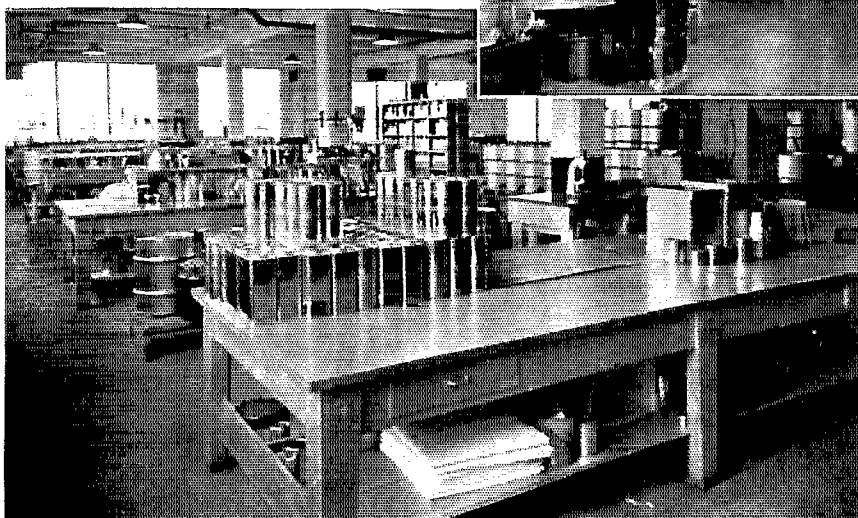
such meetings concern not only hazards, but also such items as proper methods of operation and the correct way to use protective equipment. The personnel of these committees rotates so that practically every employee will become acquainted with the safety requirements. When new men are placed on the committees, the first meeting thereafter is devoted to a discussion of first aid.

Clean-up time in the Ditzler plant is all the time, and toward the end of each shift mops and brooms go into action vigorously. Each department is held responsible for its own appearance.

During slack periods employees are retained on the payroll and put to work on a concentrated clean-up program. At these times practically the entire factory is given a complete scrubbing and painting.

A plant of this type is a revelation of what might be done in industry simply by carrying a few common household practices into the factory. If a plant which handles paint can keep from splattering itself—can be so bright and colorful that it fairly smiles—the majority of industrial plants should have no difficulty in achieving a similar effect.

Tanks lose their humdrum characteristics when color enters the picture. In this corner of the synthetic enamel mixing department paint is used not only on the battery of mixers but also on pillars, light switches, ducts and pipes, and even on the floor.



Characteristic of the cleanliness of the entire plant is the small order department, where small quantities of paint are compounded to order. Here, as in other parts of the plant, maximum window space has been provided to make the greatest possible use of natural daylight.

New Responsibilities ... And Old Ones, Too

The safety man's job is being enlarged to include the protection of employees and their families from non-industrial accidents

IN SPITE of the fine safety records that have been achieved by hundreds of American industries, it must be remembered that the accident problem will never be completely solved, nor will it stay solved. The introduction of each new machine, each new process, each new worker is a jolt to a well established safety program. Periodically the safety engineer must start all over again in his program of checking and improving the physical condition of "the works," of making job analyses to discover the best and safest way to do each job, and of training and supervising the workers in their everyday tasks.

And new responsibilities are being added constantly onto the shoulders of those safety directors who have demonstrated their ability to "take it."

As an example, consider the responsibility for protecting workers and their families from the devastating results of non-industrial accidents. With the inauguration of the Five-Year Plan a year ago by the National Safety Council for a 35 per cent reduction in motor vehicle fatalities, many employers began to realize that motor vehicle accidents, as well as accidents in the home, were costly to industry, particularly when such accidents involved their own workers and members of the workers' families. Thus, hundreds of safety men who have learned how to reduce the cost of accidents during working hours have been called on to do everything in their power to achieve a similar reduction in the cost of accidents occurring after working hours.

The results attained in this new field have amply justified the expansion of the safety man's job. Take the record of a midwestern concern whose frequency rate of industrial injuries decreased from 4 in 1935 to 3.3 in 1936, even in the face of increasing employment when frequency rates might normally be expected to go up. Not only that, but in addition, this company had 8 workers who met death in outside accidents in

1935, but only 2 in 1936. That is a twin accomplishment of which to feel justifiably proud—and incidentally, it represents an indirect saving to the employer that more than repays the cost of all of the work that was done.

Fortunately, most employers do not need a financial incentive to influence them in attacking the problem of outside accidents that has become a national disgrace. They appreciate the fact that they cannot exert the same degree of supervision over their workers after hours, but they are convinced that through industry a great work can be accomplished by familiarizing the employees with the causes of after-hour accidents and with the part that each man, woman and child must play if the objective of the Five-Year Plan is to be achieved.

A Plan That Works

Safety men as a whole have formulated a great variety of plans for decreasing the number of after-work accidents. Practically all are making sure that each worker has copies of the state laws and the local ordinances governing the operation of motor vehicles. One particularly interesting plan that is reported to be

working effectively by several Council members is the notification of the management by the police department every time any worker is involved in an automobile accident or is observed violating a traffic law or ordinance. Such men are then interviewed by the safety man who, among other things, may say: "Bill, the boss just heard you were reported for a traffic violation and he's started to wonder if you haven't been violating some of the shop safety rules too. He doesn't say that you have—but he's wondering about it. I thought I had better say something to you about it because violations of traffic rules and shop safety rules sometimes result in accidents, and neither you nor the company can afford to have you mixed up in an accident, either at home, on the street or on the job."

Another concern whose plant is on the outskirts of a large manufacturing area found upon investigation that workers were being injured because of their hurry to leave the plant and get seats on the street car that passed the entrance. The officials conferred with the trolley car executives and as a result, two special cars were spotted in front of the plant just before quitting time every day. Now that the men are sure to get seats, there is no rushing or crowding, and no accidents.

Two demonstrations were staged in the city of Detroit to prove the folly of ignoring local traffic regulations. First, a fire truck started out from a certain manufacturing center and was driven as fast as possible to an adjacent residential district, the driver paying no attention whatever to traffic signs, signals, or regulations. Then a police car traveled over the same route in a much more leisurely manner and in strict compliance with all traffic rules and regula-

(Please turn to page 64)

I hereby certify that during 1936 I was not involved in an automobile accident; nor was I required to appear before a traffic court or any other traffic enforcement body for violation of traffic laws.

I further state and pledge to do my utmost in continuing correct automobile driving practices in 1937, as well as observing traffic laws and courteous driving habits, and I hereby promise wherever possible to encourage others to do likewise.

Signed _____

Date _____

A suggested pledge for a Safe Drivers' Club.

NATIONAL SAFETY NEWS

Lighting Is Most Important

To insure high standards of workmanship, and to avoid nervous strain, daylight conditions must be maintained twenty-four hours a day in servicing aircraft

By H. O. WEST

Superintendent of Engineering, United Air Lines

SEVERAL years ago, when we concentrated our overhaul facilities at Cheyenne and established a standardized maintenance routine at this base, we recognized that our drive for improved maintenance practice began, rather than ended, with the installation of modern testing and servicing equipment and other direct mechanical aids to precision workmanship. The aim from this point on was to develop our procedure, our personnel, and our working conditions in the shop so as to make more efficient use of these facilities.

The procedure itself, developed by actual experience over the past two years, now follows these general lines: Each United plane is routed to the Cheyenne base after every 500 hours of flight. As it arrives in the central hangar, it is first thoroughly cleaned, and then turned over to the inspection staff for a thorough-going initial examination inside and out.

Engines, propellers, certain of the flight instruments, batteries and other removable parts are removed and routed to special shops which concentrate on these individual parts. Sections of the wing and tail surfaces are removed for more complete inspection and such servicing as may be necessary. The interior of the cabin is entirely stripped at each of these 500-hour intervals to permit complete inspection of internal structural elements, as well as cleaning and repair of upholstered chairs, interior decoration, and the like. The engine and other parts which were removed are meanwhile replaced by others already overhauled and checked.

This entire routine occupies a five-day period. As the plane leaves Cheyenne, it is virtually a brand new ship.

In the meantime, the parts of the plane which were sent to the individual shops are routed through their own inspection and overhaul procedure. Engines are completely disassembled, and all parts subject to wear are gaged and replaced

if our close tolerance standards are exceeded. All steel parts are magnaflux tested for hidden flaws. Propellers are cleaned in acid baths, subjected to minutely inspection and such regrinding and reburnishing as may be necessary. Hubs are also magnaflux tested and given a "double-check" inspection routine. Re-assembled, the power plants are ready and waiting as subsequent planes arrive for overhaul. During the past summer, approximately six planes per week have been handled at Cheyenne, and present winter schedules call for five a week.

Naturally, as this maintenance procedure has been continued month after month on a standardized basis, it has become possible to get a good line on the factors, both mechanical and human, that contribute to high standards of workmanship. Test equipment has been

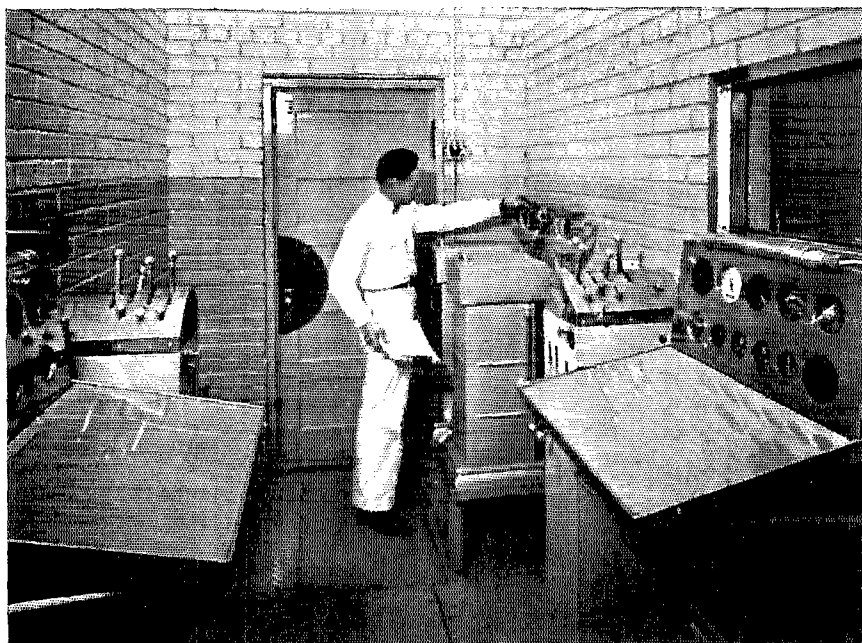
subject to continual refinement. Welding operations and sheet metal fabrication have shown decided progress. Basically, however, the problem still remains one of skill and care on the part of a carefully trained personnel, working under conditions that aid and encourage an attitude of precision and pride of craftsmanship.

When the base at Cheyenne was set up, the hangar and shops were laid out to provide the best of working conditions from the standpoint of daylight, heat, cleanliness, spacing of equipment, convenience to tools and stock, step-saving in routing of the work to the various departments, and the like. Right from the beginning, the influence of one of these factors—good lighting—stood out as most important, both in its direct effect upon workmanship, and its indirect effect in avoiding the nervous strain which comes from poorly lighted visual tasks.

Naturally, however, operating schedules in the shops had to proceed on the same basis in spite of dark days, and during the night hours as well. Thus, we soon came to realize the need for a system of artificial light that would give us daylight conditions twenty-four hours



Mercury vapor long-tube lamps provide a satisfactory light for the exacting work of servicing planes of the United Air Lines.



Control room of the motor test plant at the overhaul and repair base of the United Air Lines at Cheyenne, Wyo. Thorough inspection and testing is the principal reason for an outstanding safety record. As in all departments, good lighting is an aid to accuracy.

a day, and at every point, whether near or far from the windows.

Considering its effect upon operating results, we decided that the problem of choosing proper lighting should be considered just as critically as that of choosing any other production tool. Indeed, lighting is the one "tool" upon which all other means to good workmanship depend. This meant a study of the types of lighting particularly suitable to the kind of work we were carrying out.

As an example, we found that the bright aluminum finish of Alclad sheets or bright-finished aluminum alloy parts are somewhat difficult to work on or inspect under ordinary artificial light, due both to glare and to its apparent failure to show up fine detail. Following the practice which we understand is used by the Aluminum Company of America in inspecting polished sheets, we turned to the tubular type of mercury vapor lamps for this purpose. In contrast to our previous light sources, we found that these long-tube lights provided a soft light without glare, and with a color quality that showed up detail in many cases better than daylight itself.

Eventually, our tests of various light sources brought us to the conclusion that this type of lamp, properly spaced and mounted for the specific job to be lighted, was undoubtedly best suited to our needs, for the hangars as well as in the shops.

For fine machine work, propeller grinding, and the like, these 450-watt mercury vapor tubes, mounted on eight-foot centers, appear to exceed daylight in their ability to reveal detail without visual strain. In the engine overhaul and assembly shop, a ten-foot spacing provides a sight-saving light level in the absence of daylight. The sheet metal and welding shops have a uniform layout of lamps of the same type, mounted on twelve-foot centers and about thirteen feet high. In this work, the uniform distribution of light across the wing surfaces, cowlings and other large work areas has proved a decided aid to finishing and inspection.

For the hangar, there has been some question as to the suitability of the Cooper-Hewitt type (long tube) mercury lamp in comparison to the bulb-type mercury vapor lamp which operates at a somewhat higher efficiency on a wattage basis. Despite the higher hanging heights necessary in the hangar, however, it is our experience that the softer effect and minimization of shadows resulting from the use of "long-tube" type of mercury lamp produces superior seeing conditions. Certainly, for hangars where inspection and precision work on bright metal parts is being carried out, we are convinced that this is so. As a result, our division hangars in Newark, Cleveland, Chicago, Los Angeles, and other points have recently been equipped

with the same standardized symmetrical layout of these lamps installed at Cheyenne.

The benefits of good lighting are not confined to workers in the hangars and shops. When the United Air Lines occupied its enlarged general offices on the entire nineteenth floor of the LaSalle Wacker Building in Chicago the standard building lighting fixtures were replaced with silver ray type illumination, providing approximately 35 foot-candles and employing 750 and 500 watt. We are convinced that greater accuracy and greater efficiency can be attributed to this improved lighting system.

Present Trophy To Dominion Rubber Co.

ONE of the important events of the Industrial Safety Conference held in Montreal, Quebec, November 18 and 19 by the Province of Quebec Safety League was the presentation of a National Safety Council trophy to Papineau Factory of the Dominion Rubber Company Limited. The presentation



was made by W. H. Cameron, managing director of the National Safety Council, who is shown in the above photograph with W. A. Eden, president of Dominion Rubber Company.

In the Rubber Section Safety Contest for the six months ending June 30, 1936, the Papineau Factory led Groups C and D with no disabling injuries in an exposure of 579,962 man-hours.

Another Canadian plant which was honored in the Rubber Section Contest was that of the Goodyear Tire & Rubber Company of Canada, Limited, at New Toronto, Ont. This plant ranked second in Groups A and B with one disabling injury in an exposure of 1,209,559 man-hours.



Courtesy Tennessee Valley Authority
This man is working within six inches of the brink of a 60 foot cliff. The safety belt and life line will save him if the earth gives way.

be strong enough to withstand the shock or load to which it might be subjected.

Rigid standards have been established by reliable manufacturers regarding the material in the belt, as well as all attachments such as dee-rings, snaps, buckles, threads, and rivets. Two types of material are being employed in the construction of safety belts, linen webbing and leather.

The question has often been raised as to which material provides the greater protection and the longer service. The important factor in either type is to secure a belt containing the best material properly constructed with all attachments of sufficient strength to withstand the shock of a fall by the wearer.

The linen webbing used by the United States Government for parachute harness tests 2,800 pounds without breakage and breaks at 3,500 to 4,000 pounds. Two-inch prime leather strap $\frac{1}{4}$ -inch thick cut from the heart of the hide breaks at 2,000 to 2,400 pounds and tears at the buckle hole at 1,200 to 1,800 pounds. Linen webbing is a uniform product, whereas leather, no matter how closely inspected, is variable either through bad hide substances or faulty tanning which cannot be detected.

Both leather and webbing must be carefully selected and must answer all requirements before being used. The selection of the hardware and the construction of the belt are equally as important as the selection of the webbing or leather.

There is greater strain on the belt at the location of the dee, and reinforcement at this point is essential. A $\frac{1}{4}$ -

inch soft laid wire life line is being successfully used as well as a one-inch or $\frac{1}{4}$ -inch manila rope. Wherever acid is present, or where there is danger of an electric flash or fire, it is more desirable to use the wire life line. The life line should be attached to the dee ring by an egg shape thimble and by splicing, or it should be plated into the dee-ring.

In locations where the wearer may be exposed to an unexpected fire or flash, consideration should also be given to the buckle. There is on the market today a belt with a quick release feature designed especially for use in locations where it would be desirable to get released from it in a fraction of a second. This belt is made without a buckle and, therefore, has no holes on the billet end.

In a number of instances where the old style tongue was used the tongue was torn through the billet holes. We can, therefore, realize the advantages of using a belt where no buckle is necessary. Another feature of this belt is the quick release feature whereby the user can release himself immediately by simply pulling a strap. This type of belt has a large usage in the oil fields, particularly by men working on derricks.

Inspection and Care of Belts

To eliminate the sudden shock occasioned by the life line catching a man's weight after he has fallen, a spring attached to the life line is being used by some companies. Another belt resembles a harness which fits the wearer around the legs, as well as the body. It has the advantage of eliminating the shock to his chest and abdomen when

the life line catches his weight after falling.

When new belts are purchased, a careful inspection should be made and it should be definitely ascertained that the belt will provide the protection for which it is to be used. There is a difference of opinion as to whether a belt should be given a severe test before being accepted for use. Some believe that the only sure way of determining the strength of a belt and its attachments is by an actual test, while others feel that the test tends to weaken the belt and after the test is made the strength of the belt is questionable.

It might be practical when new belts are purchased to test one of the lot and to consider the information from this test as applying to the strength of all other belts in the shipment, or applying a test of somewhat less severe nature to the balance of the lot. In no case should a test be given of so severe a nature as to render the belt too weak for service, unless the purpose of the test is to determine its strength with no idea of using the belt thereafter.

It is not only necessary to secure a quality type of belt, but it is equally important to maintain the standard of this equipment during its normal life.

1. Each day before using a belt carefully inspect it and make sure that it shows no defects.
2. Never permit belts to be exposed to excessive heat, such as from steam coils or radiators.
3. Wipe belts off with a clean rag after a day's work in the rain and allow them to dry at room temperature.
4. Give leather belts a light dressing of neatsfoot oil after use.
5. Always keep belts out of the range of blow torches, furnaces and other sources of excessive heat.
6. Never punch extra holes in a belt or strap.
7. Belts should never be dropped or thrown from an elevation to the ground.
8. If a belt is accidentally cut it should be immediately discarded.
9. Belts should be stored in special compartments or bags or hung on a rack so that contact with hardware or sharp tools will be avoided.

10. At least every 60 days each belt should be given a thorough inspection, carefully washed and cleaned to remove all dirt, and leather belts should be given a thorough treatment of neatsfoot oil. This inspection should include a careful examination of all parts of the belt for wear, cuts and defects. In the event that there is a suspicion as to the strength of any belt a test might afford the only means of determining whether it should be discarded or issued again for further use. In no event should a belt be re-issued if there is any doubt as to its serviceability.

Safety Has No Quitting Time

By WILLIAM C. JAMES

Portland Cement Association, Chicago

The safety program of the Cement Industry extends beyond the plant gates and the close of the working day

MANY plants in the cement industry have undertaken extensive community safety programs. Under the leadership of the Portland Cement Association, the industry is sponsoring a safety program for its employees outside of working hours and, by extension, for the community in which the plant is located.

At El Paso, Texas, the Southwestern Portland Cement Company has organized a Safe Drivers' Club, which has met with an enthusiastic response not only from plant employees but from the entire community.

In Mason City, Iowa, the Minute Men organization of the Lehigh Portland Cement Company has extended its activities to the entire community. Many residents of the town who are not plant employees have signed the Safety Minute Men pledges. Each year the Minute Men are to sponsor a June no-accident campaign which should bring worthwhile results. Supplementing this campaign, they are to publicize the importance of periodic vehicle inspection. Local garages have offered their facilities for the inspection of automobiles during this period.

The Penn-Dixie plant at Richard City, Tenn., has offered to equip a school boy safety patrol.

The Huron Company at Alpena, Mich., produces periodically a mimeographed bulletin to publicize the efforts being made to keep the worker safe. Many hints for household and highway safety are included in this bulletin which is mailed to the homes of employees. The first mailing of this bulletin attracted discouragingly little attention. The second edition aroused more comment, and now the bulletin has become a powerful stimulus to home and highway safety among the employees and their families.

These are a few examples of after-work activities which are being undertaken by Portland Cement organizations throughout the country. The basis of

this after-work safety program is the Safety Minute Men organization. The title of the organization, the wording of the pledges and the emblem all combine to attract the interest of the employees' families and stimulate them to active participation in the work.

The possibilities of such a program are limitless. It might be well to begin with introduction of ideas on home and highway safety in the plant safety meetings. Literature on these subjects is now available from the Portland Cement Association and the National Safety Council. Additional material will be available in the future.

From this beginning, work can be extended to include the whole community. Each member of the employees' families should sign pledge cards and perhaps, as interest spreads, other residents of the community may be encouraged to join the movement. Community safety meetings may be held with outside speakers. Community safety campaigns may also be conducted, with group prizes awarded.

A very important activity is safety instruction in the public schools. A child who has been trained in safety will grow

up to be a safety-minded citizen. The sponsorship of a program of child safety education will pay large dividends in future reductions of accidental deaths and injuries. In all cases where the whole community is involved the cooperation of the city government and the newspapers should be enlisted.

The 1935 absenteeism study, undertaken by the Portland Cement Association, has demonstrated consistently the desirability of an improved employee attitude with regard to physical condition. This, too, is essentially an after-work activity. The home office of the Metropolitan Life Insurance Company has a very extensive plan for assisting employees to maintain good health. It has established a full-time clinic in its offices for diagnosing ailments and for guiding employees' efforts to prevent illness.

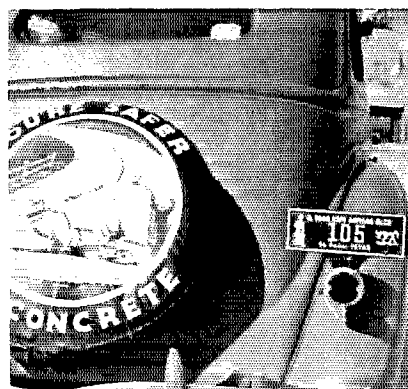
A recent bulletin on the results of this plan reports that the number of days lost due to sickness was reduced 23.50% through the efforts of the clinic over a period of three years. I do not believe that such an extensive program is practicable at the present time in the cement industry. It is mentioned here only as evidence of what can be accomplished in the reduction of sickness absenteeism.

Last winter a brief health campaign was instituted experimentally. The results were quite satisfactory, considering the brevity of the campaign. An extension of the preliminary campaign was made this summer following an onset of heat prostration cases. It brought immediate results, with a complete cessation of fatalities from this cause.

For many years the Portland Cement industry, in common with all industry, has believed that the employee welfare activities should be limited to the working time of the employees. More and more, industrial organizations are coming to realize that diplomatic, unofficial extension of welfare activities, particularly in the field of safety and health, to the employee and his family in the home, and at times even to his neighbors, is very desirable.

Such a program assists in the establish-

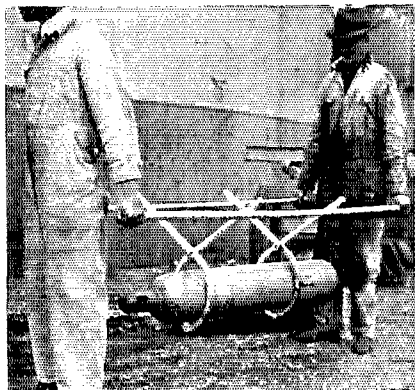
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This emblem on the right rear fender indicates that the car is driven by a member of the Safe Drivers' Club of the Southwestern Portland Cement Company, El Paso, Texas.

The Safety Exchange

A Round Table in Print



**Cylinders Held Securely
With This Carrier**

This device for carrying cylinders is made of two pieces of tubular steel to which are welded four pieces of steel, forming tongs. The bolts permitting the tongs to open and shut are set to give free swing to the tongs but will not allow the nut to become loose.

This device, light in weight, will handle most ordinarily sized cylinders. With it cylinders can be picked off the ground or floor and transported easily.

This cylinder carrier is in use at the United Public Service Company, Houston, Texas.

**Drums Opened Easily
With This Device**

The drum opener shown is of welded steel, and the cutting disc is bolted directly through to the handle. A guard of metal over the disc prevents the operator from cutting his hand on the disc.

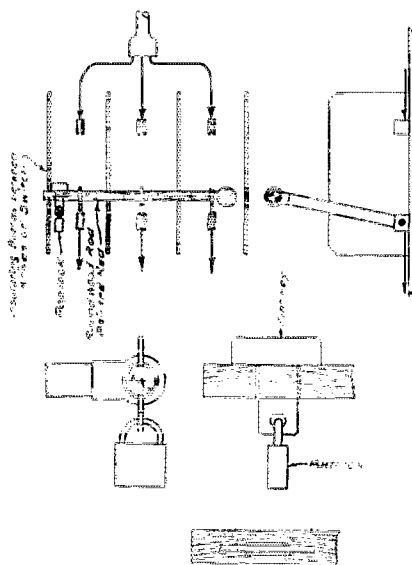
This device which cuts the top



through parallel to the sides permits the opening of drums which contain gases that might explode when an acetylene torch is applied. The device originated with E. I. du Pont de Nemours & Co., Wilmington, Del. Further details may be obtained from National Safety Council headquarters.

**Wooden Rod Locks
Disconnect Switches**

Disconnect switches that are side by side and on the same level can be locked by passing a wooden rod through the ring of the knives and padlocking the rod in place. For additional safety the



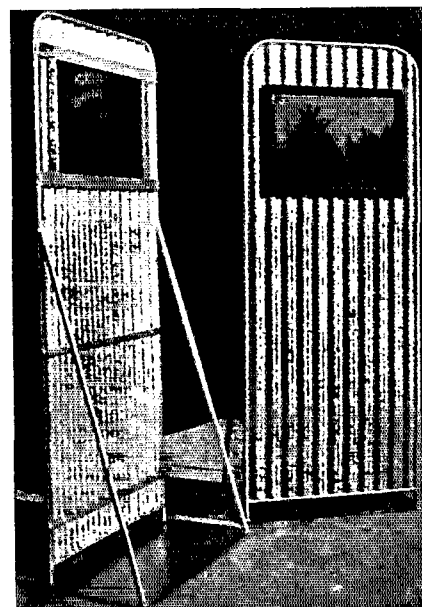
rod can be painted a bright red, as it is in Denver, where this idea was developed by an employee of the Board of Water Commissioners. The accompanying sketch shows the method as applied to a three phase switch; however, the length of the rod can be determined by the number of switches to be locked.

**Observation Shield
for Kiln Burner**

A cement plant in the East developed this unique shield for protecting the kiln burner who must frequently make observations through opening around

the kiln hood. Small diameter pipe was utilized to make the framework. Similar pipe was used for supporting arms from the shield to a base of sheet steel on which it rested. This makes the whole arrangement steady as it rests on the floor.

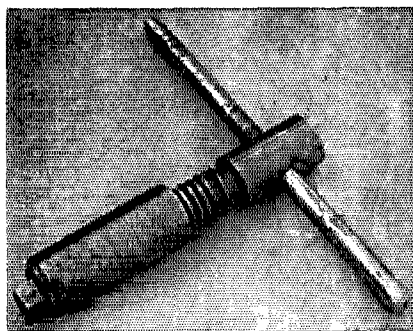
Within the frame a large panel of corrugated asbestos roofing is inserted and



held in place by strips of flat iron stock. At normal eye level a large aperture is cut in the asbestos roofing, and a frame of steel is made in which is inserted a section of 1/4-inch plate glass through which the observation can be made.

The whole assembly is of welded construction, except for the bolts which hold the asbestos roofing to the cross strap supports. The ends of the straps are, of course, welded to the pipe frame, as are the ends of the window glass frame.

The floorplate of the shield is forward so that the operator can stand behind it without any possibility of stumbling or catching his foot on either the floorplate or the supporting pipe frame. To stabilize the arrangement further a weight may be placed on the floorplate. To assist in repelling heat radiation the entire shield is painted with aluminum paint.



Safety Chuck Wrench Is Useful Tool

This safety chuck wrench is for use on a drill press, lathe or any machine having a chuck which is operated with a key type wrench. It prevents operators from having their hands pulled into the machine if the chuck is set in motion.

The wrench is a simple type of "T"-handled wrench with a sleeve added. The sleeve must be pressed back against the spring before the wrench can enter the hole in the chuck. The moment pressure is removed, the spring forces the sleeve against the chuck, and pushes the wrench out.

This wrench was designed by Leon J. Avery of the American Mutual Liability Insurance Company.

Bulletin Board Tells the Accident Facts

This bulletin board is placed inside the employees entrance of the Acklin Stamping Company, Toledo, Ohio. On the board which is 3 feet high by 5 feet

The ideas presented in the SAFETY EXCHANGE have proved helpful. If you have developed some useful device or method, send in a description, with illustration, if possible. Devices known to be available commercially are not included

wide are two light sockets. The light on the right is green, and the one on the left is red. The base color of the board is black, the lettering a bright yellow, and the outside molding painted in aluminum.

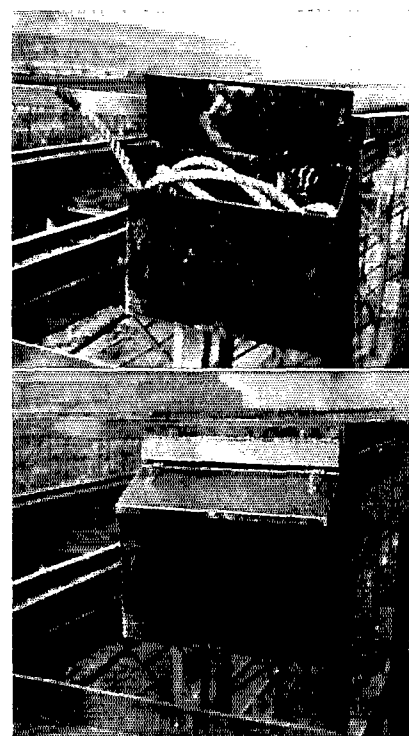
The board operates as follows: The green light remains on at all times until a lost-time accident occurs, then the red light is turned on and remains on until the end of that month. The name of the injured employee is placed on the board in red chalk, along with information pertaining to the length of time he lost, how the accident happened, the number of times the employee was injured, length of his time of service, and the approximate cost of the accident. The last day of each month all names are erased and a fresh start is made.

As soon as a man is injured, the recording is made and employees immediately secure the proper information about the accident. Gossip, rumors, and false statements are out of the picture when such a system is used, and it also carries a message of safety to all who read. It is placed so that persons applying for employment may see it, and know that in this plant action is taken to safeguard its workers.

Since the inception of this board, accident costs have decreased approximately 50 per cent. Plant morale has been improved and the company is getting prestige because of its improved accident rating.

Life Lines Convenient for Crane Workmen

In order that men working on cranes or crane runways always have a life line



available the Continental Steel Corporation, Kokomo, Ind., mounts a box for storing them in a convenient location on each crane. The boxes are made of sheet metal, designed so that when the lid is closed there is a protective strip along the opening between the lid and the box to prevent water from getting inside. As a further means of protecting the rope, holes are drilled in the bottom of the box to allow water to drain out in case the lid is opened during a rain.

Strict orders are issued that the rope is to be used for no other purpose than a life line, and the rope purposely is too short to be used as a hand line.

Keep the Green Light Burning									
LOST TIME					NO LOST TIME				
LOST TIME ACCIDENTS					LOSS OF MORE THAN SEVEN DAYS				
NAME	DATE	TIME	CAUSE	COST	NAME	DATE	TIME	CAUSE	COST
WELSH, SWALSKI	2-22-36	16	HEAVY PRESS	2-8	WELSH, SWALSKI	2-22-36	16	HEAVY PRESS	2-8
FOUR, HARMON	3-4-37	11	MILL WRIGHT	4-22	FOUR, HARMON	3-4-37	11	MILL WRIGHT	4-22
ACCIDENTS - NO LOSS OF TIME									
TOTAL MAN HOURS TO DATE WITH NO LOST TIME ACCIDENTS					188,400				

Safety Instruction Cards

Practical Information for the Man on the Job

SAFETY Instruction Cards are published primarily for the instruction of workers in safe operating methods. However, their distribution among foremen and operating executives is also advisable. These cards present a wealth of practical information in concise, readable form.

New cards are issued each month, and many of the previously issued cards are being revised and placed in stock. Members are invited to submit suggestions for new subjects or for the revision of cards previously published.

Miniature reproductions of 12 cards added to the list during the current month are shown herewith.

Following is a list of previously issued cards now carried in stock:

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Acid and caustic pipe lines, opening flanged joints	117
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Air hoist operation	142
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Safety Instruction Cards are printed on white card stock, 3 by 5 inches, slightly heavier than government postcards. In any quantity the price is one cent per card (all of one kind or selection) with a minimum order of 25 cents.

The order should specify "Safety Instruction Cards," and give the numbers of the cards selected.

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MAINTENANCE and REPAIR MEN (Some General Suggestions)

1. Make sure that the operating head of the department in which you are to work knows when and where the work is to be done.
2. If you are to work on any power driven machine, or other power equipment, make sure that it is locked, or otherwise out of commission, and cannot be set in motion without your permission. (See Safety Instruction Card No. 259.)
3. Wear snugly fitting clothing—no loose ends—about machinery; and always carry your goggles—you may need them unexpectedly.
4. Use only safe tools in good condition.
5. Be especially careful of electric shock hazards; use only portable electrical equipment which inspection shows to be in good condition.
6. Never work alone under conditions which you know to be extraordinarily hazardous.
7. Do not overload hoists, ropes, chains, scaffolds, ladders, or any other equipment or structure which you may use to support loads.
8. Before placing the repaired equipment in service, see that all safeguards are in place, and check to make sure that everything else is O.K.



SAFETY INSTRUCTION CARD No. 79
Revised Dec., 1934

THAWING FROZEN PIPES INSIDE BUILDINGS

BAD fires are sometimes caused when open flames are employed to thaw frozen water or heating pipes inside of buildings.

If combustible materials are stored near the pipes, the materials may catch fire before it is realized that the flame is not enough to be dangerous.

The safe way under these circumstances is to use hot water.

1. Wrap the frozen section of the pipe with cloths and pour hot water upon them until the ice gives way.
2. Harm to the floor may be avoided by catching the water in buckets or long pans, or by covering the floor with heavy rags or rugs which will absorb the water.

Never use an open flame to thaw frozen pipes inside of a building. Even though the flame may not cause a fire, its sudden local heat on metal may cause the pipe or pipe fittings to break and flood the premises with water.



SAFETY INSTRUCTION CARD No. 131
Revised Dec., 1934

YOUR GOOD HEALTH

ILLNESS may often be avoided by following a few common sense suggestions, like the following:

1. Clean your teeth thoroughly after each meal; have your dentist examine them twice a year.
2. Bathe frequently, and scrub all over.
3. Wash your hands with soap before every meal; if working in dust or fumes, cleanse the face and rinse out the mouth also.
4. Eat slowly, chewing the food thoroughly; eat plenty of fruit and vegetables.
5. Drink several glasses of cool (not ice cold) water daily; avoid the common drinking cup.
6. Keep the bowels open—at least one bowel movement daily; if troubled with constipation, consult a physician.
7. Get plenty of sleep—so that you feel fit every morning.
8. Sleep with windows open, but avoid direct drafts.
9. Dress according to the weather and your job; keep the feet dry.
10. Do not dope yourself with pills and powders. Frequent headaches are a sign that something is wrong—it may be indigestion, eye strain, worry, etc. Consult your physician for any continued disorder.
11. Have a complete physical examination once a year.



SAFETY INSTRUCTION CARD No. 141
Revised Dec., 1934

These are miniature reproductions

DRY CLEANING AT HOME

SO MANY persons are fatally burned or disfigured while cleaning garments at home that one is justified in advising positively: "Don't do it!"

Garments may be dry cleaned cheaply, and far more efficiently as well as safely, by the commercial dry cleaning establishments.

For those who insist, however, on attempting this work at home:

1. Use only a non-flammable fluid. [A can of cleaning fluid may be marked "non-explosive" and still be **FLAMMABLE**.]
2. Keep the hands out of the solvent by using a suction washer.
3. Do the cleaning outside of the house, where all toxic and other vapors will be quickly dissipated.
4. Dry the garments outside of the house also.
5. Keep the children and the pets away.
6. Never, under any circumstances, use gasoline, naphtha, or kerosene for garment cleaning purposes.

Even in removing small spots from garments, follow these suggestions. The importance of such rigid care when dry cleaning cannot be over-emphasized.



SAFETY INSTRUCTION CARD No. 276
Revised Dec., 1934

A GOOD SAWYER

A GOOD sawyer performs his job in the safest and most efficient manner. He is careful to avoid injury to himself and damage to his machine.

1. He makes regular use of all the guards supplied for any given job.
2. He uses a rip-saw for ripping only—never for cross-cutting.
3. He makes use of a push stick when sawing short or narrow stock.
4. He uses a stick or a brush to keep small pieces away from the saw—never his fingers.
5. When ripping he wears a heavy protective apron, and stands out of the line of stock being cut, to avoid a possible kickback.
6. Surplus stock, tools and other objects on the saw table are removed without delay.
7. If he must leave his machine, he always first turns off the power and waits by it until the saw comes to a full stop.
8. He never attempts to oil, clean, or adjust the machine while it is running.
9. He doesn't talk while he is sawing, and he doesn't want anyone to talk to him; he knows that talk and sawing don't mix.



SAFETY INSTRUCTION CARD No. 371

SOME AMMONIA HAZARDS

AMMONIA under pressure, if released, may cause painful and dangerous injuries. A small amount in a small space may make breathing difficult.

1. Never open a compressor cylinder or release packing in the stuffing box until the cylinder has been pumped out and a valve opened to the outside air.
2. Do not stand in front of a cylinder head when compressor is in operation.
3. When opening valves connected to a gage glass of ammonia equipment, protect your eyes and face.
4. Screw cannot ammonia valves, when being opened after being jammed shut, sometimes come loose at the bonnet. Be sure the stem is turning in the packing (not the whole bonnet turning) when opening such a valve.
5. If you open an ammonia valve which discharges near by, stand by the valve until necessary to close it again. If you should leave, a dangerous concentration may be built up and you may not be able to return.
6. Learn how to give first aid for ammonia burns (See Safety Instruction Card No. 381.)
7. Learn the proper pressure method of resuscitation. (See Safety Instruction Card No. 165.)



SAFETY INSTRUCTION CARD No. 372

Actual size of cards 3x5 inches

GAS AND ELECTRIC METER READERS

1. Do not enter premises where there is a hazard of contagious disease, noxious or irritating fumes, or a vicious dog. (See Safety Instruction Card No. 382.)
2. Always ring the bell or knock and announce your errand. Attend strictly to business—never "visit" or get into an argument.
3. Use your flashlight in dark places to detect stumbling or slipping hazards.
4. Walk slowly down and up stairs: use the handrail; watch out for loose objects, ice steps and broken handrails.
5. Climbing on chairs, tables, boxes, cabinet drawers and other makeshift supports is dangerous; use a ladder placed securely.
6. Avoid outside cellar doors; if you must enter them, brace them with a bar, stiel or box which will hold them upright.
7. Never attempt to cross roofs from one apartment house to another; descend to the street level; use the sidewalks—never tramp across lawns.
8. Observe all street traffic signs and signals; cross only on the cross-walk. Take short careful steps in ice or snow. Never write or read tickets while walking, or do anything else that can prevent you from being alert to traffic dangers.



SAFETY INSTRUCTION CARD No. 373

RAILROAD SAFETY

(Track and Extra Gang Timekeepers)

1. Do not alight from or board moving trains, engines or motor cars until they come to a full stop.
2. Do not ride engines or trains, including engines of work trains.
3. Walk outside the tracks, where there will be no danger of being struck by moving trains; never walk between the rails.
4. When necessary to cross tracks, step over the rails—never on them.
5. When passing men who are working, keep sufficiently clear to avoid being struck by tools or materials they may be handling.
6. Protect your eyes with goggles when in the vicinity of moving machines, men who are spiking, and other hazards of flying materials or objects.
7. Look both ways before stepping onto any track.
8. Never cross tracks ahead of approaching cars, engines, or self-propelled machines.
9. Do not pass immediately behind standing cars, engines, or self-propelled machines clear such objects by at least 15 feet and look carefully for hazards on the far side.
10. Under no circumstances go between moving cars or moving cars and engines.



SAFETY INSTRUCTION CARD No. 374

USE OF MANTRIPS

(On Mine Trolley Haulageways)

1. Wait for the mantrip at a designated station.
2. Do not get on or off the trip until the car comes to a complete stop.
3. Ride inside the car and remain inside until the trip comes to a complete stop; do not allow your fingers, arms or legs on the outside of the car.
4. Remain seated in the mantrip and do not stand up until the car has come to a stop.
5. Do not get on or off the trip on the trolley wire side, and do not sit on the trolley wire side of the car.
6. At stations where rules require that the power be cut off of the trolley wire before loading or unloading, do not get on or off the trip until the man in charge gives the signal.
7. Wear your goggles while riding in the mantrip.
8. All tools should be placed in the tool car—never carried in the same car with you.
9. Explosives should never be carried on the mantrip.



SAFETY INSTRUCTION CARD No. 375

GASOLINE SERVICE STATION (Air and Water Service)

BEFORE giving service, if the customer has not shut off his engine and set the brakes, ask him politely to do so. Here are other suggestions:

1. When inflating tires, keep the head and face where the fender will protect you in case of a blow-out.
2. Be especially careful when inflating giant truck tires.
3. When changing tires, deflate the tire completely before removing it from the wheel or rim.
4. Use the proper tools; avoid strains, if the tire sticks, take time to loosen it carefully.
5. Do not permit children to play with the air hose; discourage customers from using it; give the service yourself.
6. When supplying water to a radiator, stand beside the hood; avoid standing in front of the car.
7. When servicing a steaming radiator, protect your hands with a large rag, and loosen the cap slowly; allow the steam to escape before removing cap entirely.
8. It is dangerous to use a lighted match to test in a radiator; it may contain alcohol or other flammable fumes.
9. Never pour cold water into a steaming radiator; this may crack the water jacket of the motor.



SAFETY INSTRUCTION CARD No. 376

WHEN TIRES BLOW OUT

MOST persons, rightly, fear a blow-out when traveling at high speed; particularly a blow-out in a front-wheel tire.

That is why many drivers, if buying only one pair of new tires, always put them on the front wheels.

Great care and skillful driving are necessary when a blow-out occurs.

You will, of course, have a firm grip on the wheel at all times when driving, and will be alert and ready for emergencies.

If a blow-out occurs (on any wheel) what should you do?

1. Steer! Don't think of anything but steering!
2. When you are sure you have the car under control, and then only, use your brakes—but use them with caution.
3. If the car jerks about when brakes are applied, sways badly, release the brakes at once; let the car roll farther, then apply the brakes again lightly.

Good tires are good insurance against blow-outs. If tires are old or worn, don't drive at excessive speeds; and get new tires.



SAFETY INSTRUCTION CARD No. 377

DRIVING AT NIGHT

DO YOU drive much at night? On long trips, after driving many hours by day, do you often say: "It's early; we can make another 100 miles by midnight?"

Actually, at such a time, you decide that, although tired, you will drive into a land where the hazard of fatality on the highway is doubled or trebled.

Nearly two-thirds of all fatal traffic accidents occur between 6 P.M. and 6 A.M.; yet traffic for those hours is only one-third of the 24-hour total.

A large percentage of these fatalities occur in the single hour from midnight to 1 A.M.

Why do many drivers relax their caution on midnight roads?

For one thing, they are often tired and sleepy. Some of them drive much faster because the stream of traffic has grown thinner. Many drivers are influenced by drink-inflamed minds. Others, sober enough, are almost blind at night.

You may be entirely efficient and careful; but you and your passengers will be far safer if you will do as little driving after nightfall as possible.



SAFETY INSTRUCTION CARD No. 378

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FIRST AID IN INDUSTRY

Preventing errors is an important job in industry. Even slight mistakes are sometimes costly. So it is with injuries; a minor wound if ignored may lead to serious infection.

The first step in preventing infection is to report all injuries promptly, because delay increases risk. Prompt thorough cleansing and application of an effective antiseptic is the first defense.

Mercurochrome is especially useful in first aid work, because application is not painful, with the result that injuries are usually reported more promptly. Mercurochrome is non-irritating and exerts bactericidal and bacteriostatic action in wounds.

Mercurochrome should be used in the first aid care of all minor wounds; in more serious cases, a doctor should be called.



This seal denotes acceptance of Mercurochrome by the Council on Pharmacy and Chemistry of the American Medical Association.

HYNSON, WESTCOTT & DUNNING, INC.

BALTIMORE



MARYLAND



Industrial Health

A Department for Physicians and Laymen

After the Injury

The problem is not only to return the man to work
but to get him back in the best possible status

By N. E. ECKELBERRY, M.D.

*Surgeon in Charge, Medical Dept., Consolidated Edison Co., Inc.,
and Affiliated Companies, New York City*

THE best method of getting a man back to work is to prevent his injury. However, until we reach that Utopia, the problem of getting the injured back to work is an important and serious one.

The problem is not only to return the man to work but to get him back in the best possible status. The question should not be "how soon did you get him back?" but "how well did you get him back?" Have you given him the best possible opportunity for the pursuit of happiness, gainful employment and economic independence?

Before any method can be devised, there must be a thorough understanding of the problem. There is an apparent or dormant reaction of resentment in the majority of the injured. This resentment may be against the driver who struck him with his automobile, or against the fellow workman who let a brick fall on his head. It may be a resentment against the injured's own clumsiness or carelessness.

A normal emotional response to this resentment is to seek revenge. If the man can tell the automobile driver or the fellow workman what he thinks of him, possibly punch him in the nose, satisfaction is obtained and a normal emotional balance results. Unfortunately our society does not countenance such an outlet.

Furthermore, when the injured man himself is at fault, he has the problem of finding someone else to blame. Consequently this desire for revenge, this attempt to balance the emotional reaction, many times is productive of perverted emotional response, such as an exaggeration of symptoms and prolonga-

tion of disability in an attempt to gain sympathy to substitute for the thwarted normal response. The idea of revenge toward the employee who dropped the brick on the injured's head may be converted into revenge against the employer, and an attempt to make the employer pay as much as possible.

Again, the element of fear is ever present. Without commenting upon the efficiency of the procedure, much of our safety work has been taught by the use of "fear psychology." We even see it used in our advertising. This, together with the present trend of popularizing medical literature for lay consumption, has developed a fear of possible consequences of an injury or disease in the individual which cannot be overestimated in its influence on the well-being of the person.

The Work Habit

The past four or five years have accentuated a fear of economic insecurity which is very real. The fear of a man that he will not be able to return to his job and continue to support his family after he has been injured, is fully as important a factor in his disability as the broken leg. In this same connection the fear of subsequent incapacity makes him cautious in resuming employment and early settlement of his claim. This fear of economic insecurity, coupled with uncertainty as to the legal status in the case, may prolong recovery indefinitely.

Most of us are fundamentally lazy, and the desire to work is largely a healthy habit developed as the result of environment and necessity. The inactivity associated with the treatment of many in-

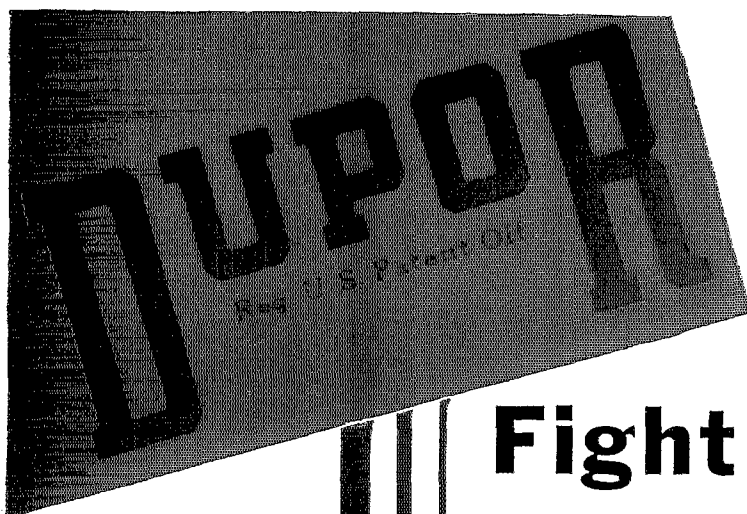
juries may destroy or diminish this healthy work habit.

Management and treatment of the injured individual should be directed to avoid or minimize these factors which impede the recovery and diminish the possibility of complete rehabilitation. The resentment of the injured individual should not be aggravated.

When a man has just had his foot crushed by a passing truck, that is not the time to remind him that he should have been more careful. It is not the time to harangue the employee about breaking a no-accident record when he is regaining consciousness after the brick has hit him on the head. The man who is experiencing the pain of a crushed hand is not in a receptive mood to be disciplined because he failed to follow the safety rules in the operation of the machine. Despite the importance of accurate details of how the accident occurred, the man lying in the hospital being prepared for a blood transfusion should not be subjected to a third degree examination. This holds just as true for the man who has received a so-called trivial injury.

Fear of the consequence of the injury is one of the easiest difficulties to overcome. The solution is to furnish every injured individual the maximum of medical care, particularly diagnostic procedures, as soon after the accident as condition permits. This is particularly true in the so-called minor injuries which obviously are the group where fear and uncertainty play the most important role. It is particularly true in head and back injuries. Hundreds of head injuries occur each year which, anatomically, are of no consequence; but the fear of the possible extent many times converts these minor cases into total permanent disabilities. Far better results are obtained by hospitalization, x-rays and the exhaustion of best medical facilities in proving to the individual, during the first two or three days, that his injury is not severe and that he will completely recover.

With this assurance the patient is usu-



APPROVED
By
U. S. BUREAU
OF MINES
(No. B. M. 2111)



*The above illustration shows the DUPOR No. 24 U. S. Bureau of Mines Approved Respirator with filter pads and newly approved Face Cloth in place. Note how snugly it fits the face and does not interfere with clear vision.



*The above illustration shows the No. 24 DUPOR Respirator with filter pads removed. Note the plate extrusions and the very small amount of dead air space.

* Basic Patent No. 2,000,064. Detail Patents Pending and Allowed.

Latest Patent Granted Dec. 22, 1936. No. 2,065,304.

Fight SILICOSIS

With Cover's New, Approved RESPIRATOR

The DUPOR Respirator No. 24 provides needed protection against Type A or Pneumoconiosis (SILICOSIS) producing dusts. Exhaustive tests have proved its inestimable value to those who must brave the hazardous dusts characteristic in many phases of industry.

U. S. Bureau of Mines Approval on Comfortable Face Cloth, Too!

To add to the comfort of every DUPOR Respirator, a Face Cloth is necessary. It absorbs the friction between Respirator and Face, eliminating all sign of discomfort and possible soreness so common to most respirator wearers. So unusual in design is this Face Cloth that it too has received U. S. Bureau of Mines Approval, as well as the approval of users everywhere!

Revolutionary, new construction has eliminated screw cap lids for filter apertures. Making possible easy passage of filtered air between plate extrusions to protected opening and then to interior of respirator.

Safety of construction is the main feature with marginal edge of filter plate curved inwardly forming a secure anchor for

filter pads, preventing all leakage. Construction is such that filter pads can be quickly removed for replacement or cleaning. Filter pads measure $4\frac{3}{4}$ inches in diameter giving a clear entrance filter aperture of over 24 square inches.

Here are just a few reasons for Industry's Approval:

1. Large Filter Area, securing (a) Easy Breathing (b) High Efficiency.
2. COMFORT.
3. Light Weight, only 4 Ounces (without pads).
4. Good, clear, unobstructed vision.
5. Compact. Easily fits the pocket.
6. Audibility and Drainage.
7. Practically no dead air space.
8. Low cost—long life.

The price of the DUPOR Respirator No. 24 complete with two extra filter pads is \$27.00 per dozen.

Sample Sent Postpaid for \$2.25

The new DUPOR needs only to be tried to convince you of its superiority. Money refunded if not as represented! Send for your sample NOW!

Order Your Approved Respirator—TODAY!

Sample Sent Postpaid—Mail Coupon Today

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H. S. COVER

CHIPPEWA-A, SOUTH BEND, IND., U. S. A.

H. S. COVER, South Bend, Indiana

Dear Sir:

SAMPLE OFFER COUPON

☐ Please rush me your SAMPLE OFFER (postpaid). I enclose \$2.25 to cover cost.

☐ Please rush me one dozen DUPOR Respirators No. 24, for which I enclose check for \$27.00.

Name _____ Address _____

City _____ State _____

ally anxious to get out of the hospital and back to work. Too often the injury is treated lightly and then, because of persistence of complaints, chiefly due to the uncertainty in the patient's mind at the end of a week or two or even a month, hospitalization, x-rays and diagnostic studies are made. Even though they confirm the triviality of the injury, the patient has lost confidence and is usually afraid to leave the hospital.

His natural question is: "If x-rays were necessary a month after the accident, why were they not necessary immediately after the accident?"

Prompt Diagnosis

This practice of investigating thoroughly the full extent of the injury by the best diagnostic method at once after the accident not only goes far to reassure the injured, but is also good practice of medicine. Many of these accidents happen so suddenly and under such abnormal conditions that it is difficult to evaluate their extent by the clinical signs during the first 24 hours. In an early competent diagnosis in one of these so-called trivial injuries the expense of the large number of seemingly unnecessary x-rays or other laboratory examinations is well justified.

Whenever possible, the exact status, from a legal or responsibility standpoint, should be established on the day of the accident and the injured informed as to his legal status and who will bear the expense. This will do a great deal to obviate the fear of economic insecurity, which is such a large factor where the question is held in abeyance and the injured is forced to learn by his own methods what compensation he is entitled to. If there is controversy, it pays to obtain expert opinion as to causal relation within the first week after the accident, rather than two years later when the same experts may have to be employed, when they would find it difficult to form an accurate opinion, and when the injured man is discouraged and embittered because of the long litigation.

There are some situations where legal responsibility cannot be determined during the first week. In this small group of cases it is far better for those subject to liability to arrange for the best of care and obtain expert opinion at once and argue about responsibility later. From the standpoint of those subject to questionable liability, half of their battle is won if they have avoided permanent disability by prompt and adequate medical care. It is far better to ques-

tion the medical expense of a man who is recovered and returned to work than it is to question the responsibility of the maintenance of a man who is permanently disabled as a result of delayed care and poor management.

Again the physician should be frank with the injured in informing him of his future capacity to earn a living. It is futile to attempt to make a man who has had his leg amputated above the knee believe he will be just as good as he was before. Nothing can be gained by assuming that the loss of a hand will not interfere with a man's old job at the bench. In cases where a permanent defect or partial disability is obvious, rehabilitation should begin the day of the accident.

From the beginning of the treatment the individual should be studied, observed and prepared for some occupation commensurate with his subsequent physical condition. If this is done, very often by the time the injured is out of the hospital he has become reconciled to a different program and a new field of endeavor. On the other hand, there are injuries which probably to the average layman appear to be permanently disabling, but which we know from experience eventually result in no disability whatever. In this group, reassurance, patience and gradual realization that he will recover completely must be developed in the patient's mind at the outset.

Light Work

One of the greatest aids in rehabilitation is the opportunity for the workman to resume work of a lighter character than his usual job and gradually approach the work he enjoyed prior to the accident. This aid applies to the majority of traumatic cases. It accomplishes many ends from a purely medical standpoint. The best type of physiotherapy we can give at a certain stage in the treatment is the normal muscular activity which the injured experiences in work particularly selected for his condition. Furthermore, this gradual approach to his usual occupation eventually gives the injured man confidence in himself and is a sure way of dispelling the fear of permanent incapacity.

In post-operative cases the opportunity to do work of a lighter nature is almost imperative if one wishes to obtain the best results. I refer particularly to that large group, the hernia cases. The time that the workman can return to heavy work after operative repair of a hernia varies with different authorities,

but we all agree that it is poor practice to keep a workman idle for three or four months and on the first day he returns have him resume heavy manual labor. This unnecessary idleness produces sluggishness, constipation and flabbiness of the very tissues which we have sought to repair. An early return to light muscular activity maintains tone of these tissues and keeps the workman in good physical condition until he is able to resume heavy work.

When Rest Is Needed

I am not advocating light work as a method of cutting down lost time; on the contrary I am afraid there is a tendency to return traumatic cases to work too early. Such comparatively insignificant injuries as sprained ankles or contused toes usually require a definite period of absolute rest if the best ultimate results are to be obtained. By keeping fractured toe cases from working during the period that the soft tissue damage is apparent and muscle spasm present the period of partial disability is greatly diminished, and there are far fewer permanent defects when the cases come up for final adjustment.

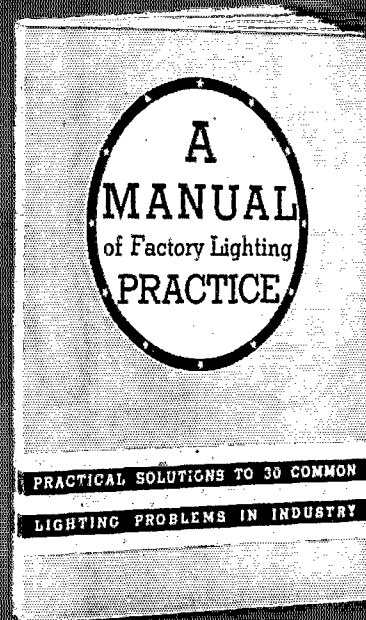
Permitting light work when the injured is sufficiently recovered helps maintain the healthy work habit. Even though his duties are small, his production of little consequence, at least he is disciplining himself to the requirements of regular hours and the association with his working companions. This diminishes the opportunity for brooding and self pity.

In cases where prolonged convalescence is required before the injured can be referred even to light duty it is advisable, if possible, to change environment, send the convalescent to the country, let him visit his aunt in Maine or Pennsylvania. In so doing he has not developed the habit of sleeping until noon, of annoying his family and they annoying him. When he does return to his home environment, he will naturally fall into his old habits, reporting to the job at a certain time and again experiencing the pleasure of returning home at the end of the day and being greeted as a responsible member of his household. I consider this maintenance of the work habit so important that visits to the doctor or clinic should be made in the morning rather than late in the afternoon.

The variation in individuals, accident situations and types of injury makes an

(Please turn to page 70)

"A MANUAL OF FACTORY LIGHTING PRACTICE"



FOR BUSY EXECUTIVES

Benjamin Electric Mfg. Co.
Des Plaines, Illinois

You may send me a complimentary copy of your new book . . . "A Manual of Factory Lighting Practice"

Name _____ Title _____

Firm _____

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★ A NEW BOOK

TELLS HOW TO IMPROVE WORK STANDARDS AND
CUT PRODUCTION COSTS ALL THROUGH PLANT

Here is a book every executive ought to read and pass along to his electrical maintenance engineer or chief electrician. To management, it gives a new insight into the breadth and scope of modern industrial lighting. To the operating executive, it provides the complete working data for up-to-date plant lighting.

Written in easy-to-understand, non-technical language, the book outlines 30 specific lighting problems and gives a complete statement of how Benjamin Illuminating Engineers have solved each of them. A study of these problems will reveal how surprising improvements both in general and supplementary lighting often can be made at negligible cost; how easily lighting can be fitted to each plant operation with amazing improvement in work standards and lower production costs.

With the data contained in the Manual the operating executive can easily and quickly select the proper lighting to meet the "seeing requirements" of practically any operation. Typical of the subjects covered are . . . "How to secure good general lighting from the side where obstructions or building construction precludes the use of overhead reflectors" . . . "How to light spray

booths . . . stock room aisles . . . drafting boards . . . signs . . . outdoor material storage dumps" . . . "How to assure getting rated life from lamps exposed to shocks" . . . "How to protect reflectors from loss of light output in dusty, dirty locations" . . . "How to light polished and non-polished parts for accurate inspection" . . . "How to check your present overhead lighting with the most modern approved standards", etc., etc.

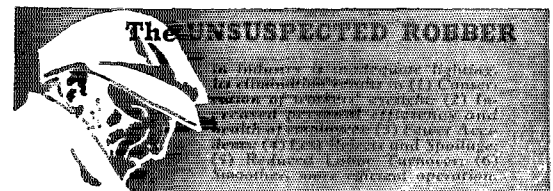
This Manual is intended to be used as a basis for a complete CHECKUP of your plant lighting. The edition is limited—so may we suggest that you send for your copy today.

BENJAMIN

TRADE MARK

LIGHTING EQUIPMENT

Distributed Exclusively through Electrical Wholesalers



B r o m i n e

Industrial Data Sheet D-Chem. 21

A. Problem

1. What are the hazards of bromine and what precautions should be taken in its use?

B. Hazards

2. The principal hazards are those of fire, because of the oxidizing effect when in contact with organic material, poisoning by inhalation of the gas, and deep burns by contact of the chemical with the flesh.

C. Discussion

3. Bromine is a dark reddish brown liquid with an extremely disagreeable odor. It is obtained chiefly by electrolysis from "bittern," the mother liquor of the salt industry. Bromine is slightly soluble in water and very soluble in alcohol, ether, chloroform, and carbon bisulphide. At ordinary temperatures it gives off a poisonous, suffocating, brown gas which affects the mucous membrane in a manner similar to chlorine fumes. It attacks the skin in a violent manner, causing sores which heal very slowly.

4. Bromine is used in the liquid state or in the form of a gas as a disinfectant; in laboratories as an oxidizer; in gold and platinum metallurgy for extraction and purification; in the manufacture of bromides, coal tar dyes, explosives, medicine and asphyxiating gases; in photography; and in the preparation of Prussian blue, tetraethyl lead, permanganate of potash and other chemical compounds.

5. The Interstate Commerce Commission "Regulations for the Transportation by Rail of Explosives and Other Dangerous Articles in Freight, Express and Baggage Services" classify bromine as a corrosive liquid and specify that it must be packed as follows:

(a) In wooden boxes, specification 15A or 15B, with glass inside containers not over 6½ pounds (one quart) each, or with stone or earthenware jugs not over one gallon each; or in lead-lined metal barrels or drums, specification 5A, not over 5 gallons each.

(b) The vacant space above the liquid for inside containers must be not less than 15 per cent of capacity of container; inside containers must be closed by glass, earthenware, or stone stoppers, ground to fit and securely fastened.

(c) Inside containers must be securely cushioned on all sides with incombustible packing material such as whiting, mineral wool, or sifted ashes, at least one inch thick, which will not produce heat when mixed with bromine.

Hay, sawdust, excelsior or other organic material, either treated or untreated, must not be used.

(d) Not more than 15 quarts of bromine in bottles, or more than 12 quarts in jugs may be packed in one box.

Symptoms of Poisoning

6. Bromine on the skin causes a feeling of heat, a yellowish brown stain and more or less pronounced irritation which often results in eruptions and sometimes causes ulcers which are painful, deep, and difficult to heal. When swallowed, bromine exerts a corrosive action throughout the alimentary canal which causes intense pain and may result in death. The gas irritates and inflames the membrane of the eyes. Inhalation of the gas results in an extremely painful irritation of the respiratory passages which may become so seriously inflamed that bronchitis or broncho-pneumonia may follow.

7. In table A is shown the physiological response to various concentrations of bromine gas. The data contained therein have been compiled from work done by the National Fire Protection Association Committee on Gases.

First Aid

8. If a person has swallowed bromine, an emetic should be immediately given to induce vomiting. Starch is an antidote and may be given in the form of a boiled solution. Such a solution should be kept on hand for use in case of emergency. Any bromine spilled on the skin should be washed off promptly with soap and warm water. If the victim has inhaled the gas, he should at once be re-

moved to the open air and if conscious, allowed to inhale the fumes from a cloth moistened with grain alcohol. If the victim is unconscious and not breathing, the prone pressure method of resuscitation should be begun without delay, and should continue until breathing is restored, or rigor mortis sets in. In all cases of bromine poisoning the services of a physician should be promptly obtained.

Precautions

9. Operations in which bromine is used should be carried on in a well ventilated room and the gas removed at its point of origin by an efficient exhaust system. (See Note W.)

10. Persons working with bromine should wear non-ventilated rubber frame goggles and a gas mask or other suitable protective respiratory equipment. (See Notes X and Y.)

11. When a container of bromine is broken and the bromine spilled in a room or other closed area, the floor and work surfaces should be flushed and washed with water. The enclosure should also be well aired before operations are resumed.

12. Bottles of bromine should be stored in an isolated place, free from liability of breakage and possible contact with organic material.

14. Workers with respiratory disturbances should not be assigned to work with bromine.

15. Physical examinations of bromine workers should be made at regular intervals. (See Note Z.)

TABLE A

Physiological Response to Various Concentrations of Bromine Gas	
Per Cent by Volume of Bromine	Physiological Response
0.1	Kills most animals in a very short time.
0.001 to 0.006	Dangerous in 30 to 60 minutes.
0.0004	Maximum amount for 60 minutes without serious disturbances.
0.0001	Slight symptoms of poisoning after several hours and more than is safe for prolonged exposure.

Note W. Detailed information on ventilation and exhaust systems will be found in National Safety Council Safe Practices Pamphlets No. 22, "Exhaust Systems" and No. 37, "Industrial Ventilation."

Note X. Detailed information on suitable goggles will be found in National Safety Council Safe Practices Pamphlet No. 14, "Goggles."

Note Y. Detailed information on gas masks and other suitable respiratory equipment will be found in National Safety Council Safe Practices Pamphlet No. 61, "Respirators, Gas Masks, Hose Masks, and Breathing Apparatus."

Note Z. Information on physical examinations will be found in National Safety Council Health Practices Pamphlet No. 2 "Physical Examinations in Industry."

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

NATIONAL SAFETY NEWS

Announcing....

The First Annual Safety Equipment Issue

March 1937

● A real service is in store for readers of NATIONAL SAFETY NEWS. Be on the lookout for the March copy which will bring you an up-to-the-minute reference guide on all modern equipment to promote industrial health, safety and efficiency.

● This Annual Safety Equipment issue has been planned to help you make an appraisal of the mechanical side of your safety program and to provide a suggested formula for keeping your operations mechanically safe.

● Safety Equipment will rule the March issue of NATIONAL SAFETY NEWS. The entire content will be focused on creating a safer environment for safer operating practices. Editorially this issue will tell where and what kind of equipment should be used, followed by a detailed catalog of reliable products.

● The Buyers' Service will be enlarged to include more complete listings of products. This issue will effectively replace the old Buyers' Guide and a new number will be brought out annually through the March issue of NATIONAL SAFETY NEWS.

● For your protection, only products which the National Safety Council believes will fulfill the claims made for them are accepted in any issue of NATIONAL SAFETY NEWS. Use the NEWS as your guide in the selection of all products, service and equipment to promote health, safety and efficiency and you will make sure of securing the most dependable merchandise on the market.

● Keep this March reference volume of Safety always at hand. You will want extra copies so please let us have your orders before this Safety Equipment Issue goes on the press.

NATIONAL
SAFETY
NEWS

NATIONAL SAFETY COUNCIL, INC.
20 North Wacker Drive, Chicago

The Bulletin Board

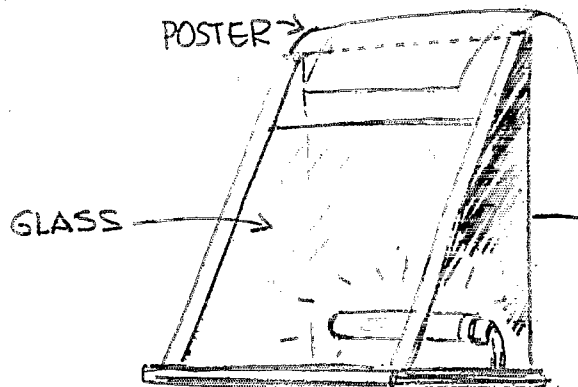
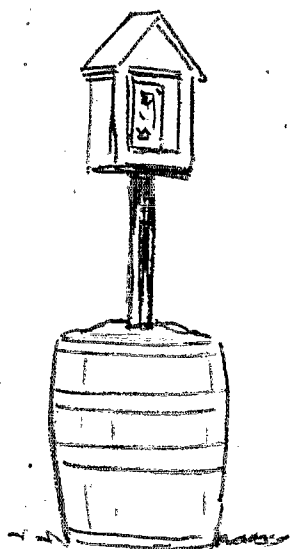
A page for those who maintain the Show Windows of Safety

Conducted by STAN KERSHAW

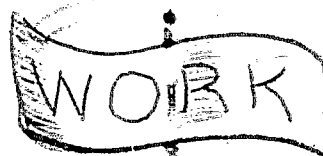
FROM A POSTER-MAN'S SKETCH PAD



ASSORTMENT OF POSTERS
NAILED TO BOARD —
FRONT ONE TORN OFF
EACH DAY.

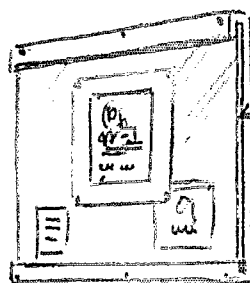


A LIGHT BEHIND THE POSTER
GIVES A NOVEL EFFECT



A WINDMILL
SAFETY SIGN

REVERSE
SIDE →



SLIDING GLASS PANEL
OVER WALL BOARD
BACKGROUND —

LET YOUR CONSCIENCE BE YOUR GUIDE TO SAFETY

NATIONAL SAFETY COUNCIL



There are safe and unsafe ways of doing almost anything.... The knack of doing things safely is gained by experience, properly directed.

RALPH BUDD
President, National Safety Council

NATIONAL SAFETY COUNCIL

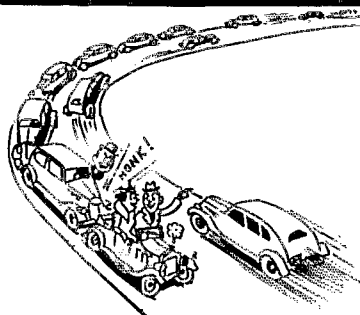
Better to carry on with Safety than be carried off by Accident

NATIONAL SAFETY COUNCIL



NATIONAL SAFETY COUNCIL

Another... HIGHWAY ENEMY



The TRAFFIC SQUATTER

NATIONAL SAFETY COUNCIL



NATIONAL SAFETY COUNCIL

YESTERDAY IS GONE TO-MORROW MAY NEVER COME TO-DAY IS THE DAY TO PREVENT ACCIDENTS



NATIONAL SAFETY COUNCIL



NATIONAL SAFETY COUNCIL

Great Grief FOLLOWS SERIOUS ACCIDENTS



NATIONAL SAFETY COUNCIL

WHY!

**MUST WE KEEP
SAYING SO MUCH
ABOUT SAFETY ?**

BECAUSE

**SOME PEOPLE DON'T YET
REALIZE THAT ACCIDENT
PREVENTION IS GOOD
FOR ALL OF US ---**

NATIONAL SAFETY COUNCIL

A GOOD SAFETY RECORD *is no* ACCIDENT

NATIONAL SAFETY COUNCIL

**FEEL DROWSY ?
SMELL EXHAUST GAS ?**

**IT MAY BE
DEADLY
CARBON
MONOXIDE**



OPEN *the* WINDOWS

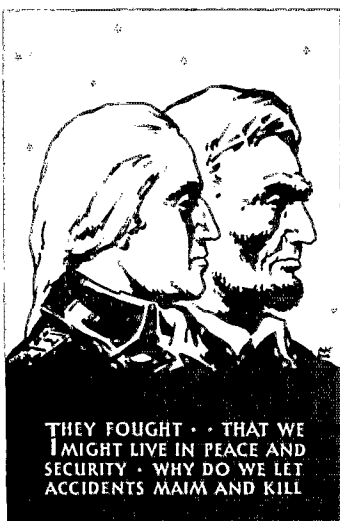
NATIONAL SAFETY COUNCIL

That
UNSAFE HABIT

**MAY CAUSE AN
ACCIDENT
when you least
expect it**



NATIONAL SAFETY COUNCIL



**THEY FOUGHT • THAT WE
MIGHT LIVE IN PEACE AND
SECURITY • WHY DO WE LET
ACCIDENTS MAIM AND KILL**

NATIONAL SAFETY COUNCIL

Put more
BACKBONE
and less
WISHBONE
into
SAFETY

NATIONAL SAFETY COUNCIL

**HE THOUGHT
HE WAS SAFE**



**IT PAYS
TO MAKE
SURE**

NATIONAL SAFETY COUNCIL

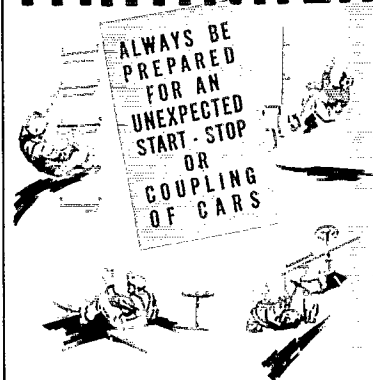


**How about
a safety
committee
in your own
home ?**

**More lives are lost in
HOME ACCIDENTS
THAN IN MOTOR
VEHICLE ACCIDENTS**

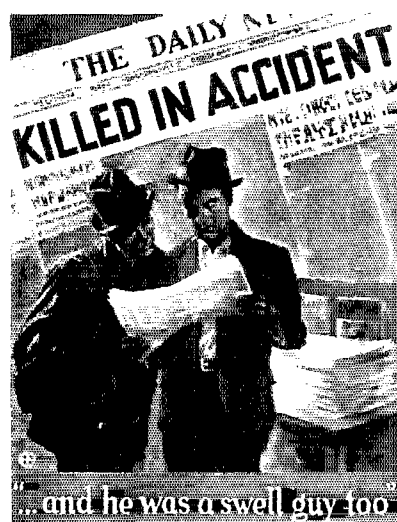
NATIONAL SAFETY COUNCIL

TRAINMEN



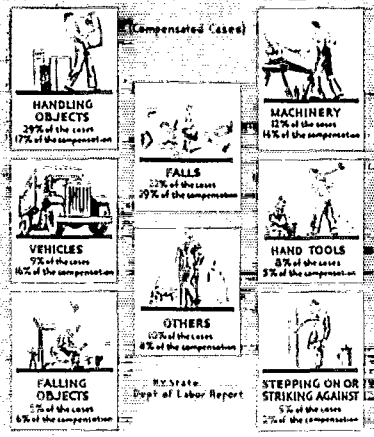
**ALWAYS BE
PREPARED
FOR AN
UNEXPECTED
START • STOP
OR
COUPLING
OF CARS**

NATIONAL SAFETY COUNCIL



NATIONAL SAFETY COUNCIL
(Full Color Process Poster)

CAUSES OF INJURY IN INDUSTRIAL ACCIDENTS



NATIONAL SAFETY COUNCIL



NATIONAL SAFETY COUNCIL
(Full Color Process Poster)

**AN ICY WALK
DANGER TO ALL
MAKE IT SAFE
PREVENT
A FALL**

NATIONAL SAFETY COUNCIL

COLDS

come when
resistance is low

get extra sleep
and rest when
you're tired



NATIONAL SAFETY COUNCIL



**KEEP ELECTRIC CORDS
in SAFE CONDITION**

NATIONAL SAFETY COUNCIL



BRANDED

NATIONAL SAFETY COUNCIL

MINERS

Remember this:

It isn't always
the other fellow
who gets caught
under a falling
roof

USE PROPS

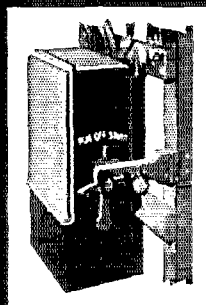
NATIONAL SAFETY COUNCIL

**BEWARE
That
TAIL LIGHT
AHEAD**

MAY BE
STANDING
STILL

NATIONAL SAFETY COUNCIL

NATIONAL SAFETY COUNCIL



SAFETY

Do You Get the Idea?

DO YOU GET THE IDEA?
NATIONAL SAFETY COUNCIL



Abraham Lincoln

NATIONAL SAFETY COUNCIL

**You might as well hit him
over the head as leave tools
where they may fall on him**



NATIONAL SAFETY COUNCIL



**ARE YOU DOING
ALL YOU CAN
to PREVENT
ACCIDENTS**

NATIONAL SAFETY COUNCIL

WARNING

TO BYSTANDERS

NATIONAL SAFETY COUNCIL

**"You'd better
take Jenkins-
I KNOW he's a
Safe Worker"**



NATIONAL SAFETY COUNCIL

OUR SAFETY RECORD FOR THIS MONTH-

SUN. MON. TUE. WED. THU. FRI. SAT.

[illegible]

THE DATE IN BLACK INDICATES
A NO-ACCIDENT DAY. THE DATE IN
RED INDICATES AN ACCIDENT DAY.
NATIONAL SAFETY COUNCIL



**YOU WOULDN'T
DO THIS**

Look out
FOR THIS



NATIONAL SAFETY COUNCIL



*The ONLY WAY TO BEAT A **Smart Guy** IS TO LET HIM GO ON HIS WAY*

NATIONAL SAFETY COUNCIL



Only **A WORKBENCH**

BUT ONE LOOK WILL TELL YOU WHAT KIND OF MAN WORKS THERE

NATIONAL SAFETY COUNCIL



NEVER POUR BENZINE OR GASOLINE INTO WASTE CAN

OR THIS MAY HAPPEN WHEN REFUSE IS BEING BURNED



NATIONAL SAFETY COUNCIL

A CABLE *that has not been served"*



can rip a hand wide open



NATIONAL SAFETY COUNCIL

GIVE THEM THE AIR TEST BEFORE USING



NATIONAL SAFETY COUNCIL

**BROKEN RULES
BROKEN RUNGS
BROKEN BONES**



NATIONAL SAFETY COUNCIL

MORE THAN 23,000 PEOPLE ARE KILLED BY FALLS



EVERY YEAR

NATIONAL SAFETY COUNCIL

We want everyone here to understand what Safety means and to help bring it about



NATIONAL SAFETY COUNCIL

HOLD ON BILL - THE SAFEST WAY TO DO THAT JOB IS GIVEN RIGHT HERE IN THE RULE BOOK



NATIONAL SAFETY COUNCIL

VERY DANGEROUS

Dusting off the hair or clothing with compressed air may injure your hearing or eyesight either by the force of the blast or by blowing dirt into your eyes or ears...



NATIONAL SAFETY COUNCIL

THOUGHT FOR TODAY

What would your family be doing today if you had been killed in an accident, say, a year ago.

?

NATIONAL SAFETY COUNCIL

Keep an eye out for NAILS and SLIVERS



IF YOU ARE INJURED BY ONE — GET FIRST AID — AT ONCE

NATIONAL SAFETY COUNCIL

A LOOSE HEAD—

A BROKEN HEAD



NATIONAL SAFETY COUNCIL

YOU'RE NEVER SAFE ENOUGH To Be CARELESS

NATIONAL SAFETY COUNCIL

Do you ... DEPEND ON LUCK TO PULL YOU THROUGH OR ... Do You STAY OUT OF TIGHT PLACES

NATIONAL SAFETY COUNCIL

COMPENSATION does **NOT** relieve

PAIN

NATIONAL SAFETY COUNCIL

BEING CAREFUL is better than

Maybe

BEING LUCKY

NATIONAL SAFETY COUNCIL

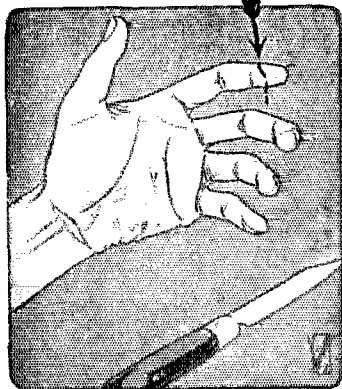
NEVER FORCE A VALVE



REPAIR IT

NATIONAL SAFETY COUNCIL

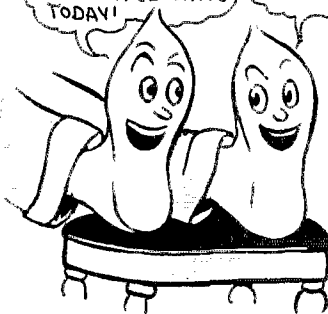
OPEN FOR INFECTION



**GET FIRST-AID
FOR CUTS**

I THOUGHT I WAS
A LOST SOLE WHEN
THAT STEEL PULLEY
WAS DROPPED ON ME
TODAY!

IT'S LUCKY
FOR US OUR
OWNER WEARS
SAFETY SHOES!



BE KIND TO YOUR FEET

WEAR YOUR SAFETY SHOES
NATIONAL SAFETY COUNCIL

SALAMANDERS

Give off
**DEADLY CARBON
MONOXIDE**



VENTILATE

NATIONAL SAFETY COUNCIL

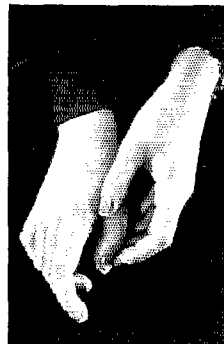


**HORSE-PLAY
IS THE
ENEMY
OF
SAFETY**
**NO PLACE FOR HORSE-PLAY
HERE**

NATIONAL SAFETY COUNCIL



NATIONAL SAFETY COUNCIL



Why
sacrifice
the
Beauty
of your
hands

**Get proper First Aid
for all minor cuts
and scratches**

NATIONAL SAFETY COUNCIL



**KEEP
FIT
by
KEEPING
CLEAN**

**USE PLENTY
of SOAP
WATER
and
CLEAN
TOWELS**

NATIONAL SAFETY COUNCIL

**SHORTY SEZ:
TAKE
NO CHANCES**

If you don't know
the safe way
ask the man
who does



**IT ISN'T HOW
WELL YOU DROVE
LAST YEAR OR
LAST MONTH**

**IT'S HOW SAFELY
YOU DRIVE TO-DAY
THAT COUNTS**

NATIONAL SAFETY COUNCIL

Safety Serves on Public Works

By W. O. WHEARY

Director of Safety, Works Progress Administration

Energetic measures have brought down the accident rates on WPA projects

IN NOVEMBER, 1933, when the Federal Government undertook quickly to put four million idle persons to work at gainful pursuits on thousands of local projects throughout the country, there was much concern in the minds of those who were familiar with accident prevention.

This vast program called for the hurried preparation of suitable engineering projects and the placement of workers at the rate of hundreds of thousands each day. To many young persons with dependents the government was offering the first chance they had ever had to be gainfully employed. Naturally, most of these were totally inexperienced for the work to which they were being assigned. On the other hand, much of the ability gained from past experience by the older workers had been lost through long enforced idleness. There were many more who were physically unfit for hard work by all standards of labor selection, but who were otherwise entitled to consideration in this gigantic drive to provide jobs. Others had developed certain mental attitudes under the strain of adversity, which were expected to add to the normal hazards incident to their new employment.

Considering the wide variety of operations to be conducted under the pro-

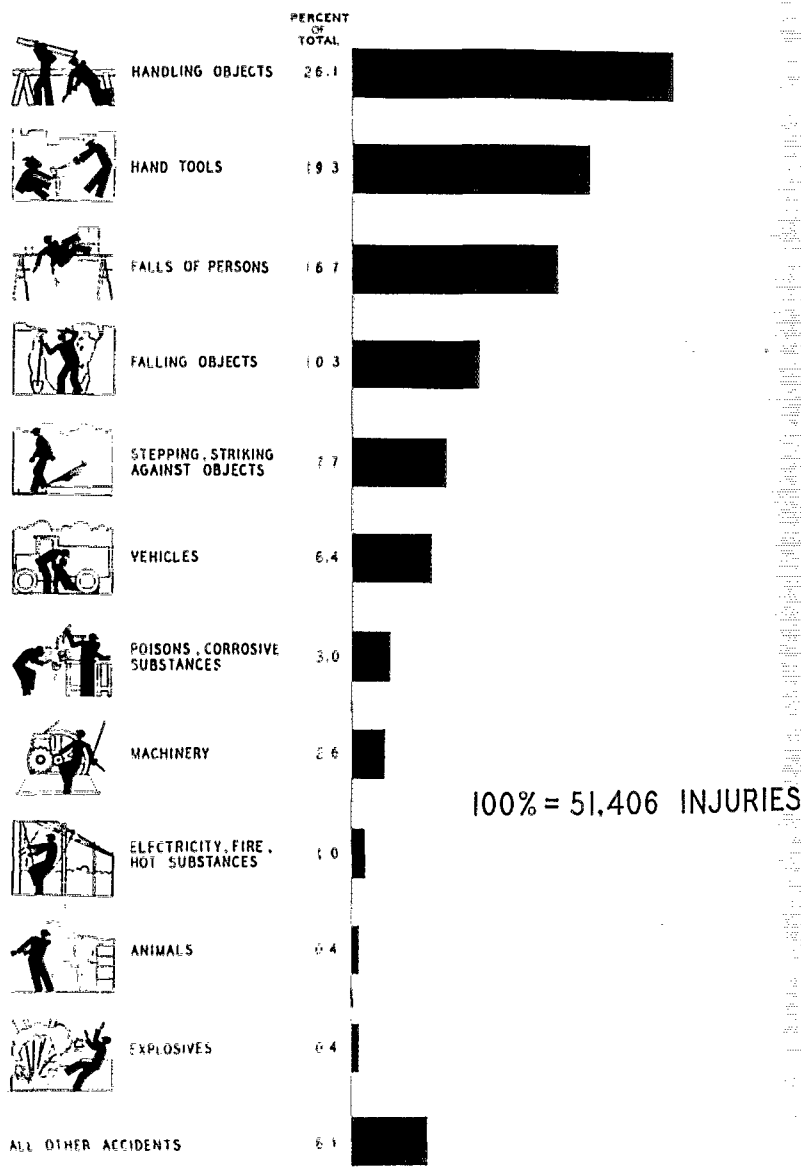
gram, ranging from extremely hazardous building demolition and tunnel blasting to less hazardous road repair and park improvement, there was good reason for serious concern over the hazards involved. The need for a definite safety policy and the practical means to make it effective became apparent immediately, as serious accidents started to occur

on many projects the day they were opened.

This emergency was met by calling upon the accumulated experience gained during the past twenty years in private industry. Codes established by safety authorities and public agencies were carefully adapted, or new instructions were drafted, to combat the various hazards

LOST TIME INJURIES

JULY 1, 1935 TO JULY 31, 1936



CIVIL WORKS ADMINISTRATION

November, 1933 to April, 1934

(1,192,593,055 Man-hours Worked)

Fatalities 275
Lost-time Injuries 48,000
Fatality Frequency 0.31
Lost-time Frequency 40.2

EMERGENCY RELIEF ADMINISTRATION

April, 1934 to July, 1935

(1,083,014,502 Man-hours Worked)

Fatalities 566
Lost-time Injuries 43,320
Fatality Frequency 0.25
Lost-time Frequency 40.0

WORKS PROGRESS ADMINISTRATION

July, 1935 to July, 1936*

(2,382,092,250 Man-hours Worked)

Fatalities 450
Lost-time Injuries 51,406
Fatality Frequency 0.19
Lost-time Frequency 21.6

*Data For Later Period Not Yet Compiled

A Happy New Year

for

Kathryn



Dear Warner:
 You can toss away
 the memorandum of that other
 phone number now as we have
 one of our own! And if you
 don't think I feel swell about
 it, you're not the smart brother
 I think you are. I get a
 kick every time I pass that
 telephone in the living room.

Kathryn

The number is Exchange 2376.

THAT's a real letter—written by a real Kathryn—to her brother. You can read her happiness in every line. She's mighty glad to have the telephone back.

And so are a great many other men and women these days. About 850,000 new telephones have been installed in the past year.

That means more than just having a telephone within reach. It means keeping the family circle unbroken—contacts with people—gaiety, solace, friendship. It means greater comfort, security; quick aid in emergency.

Whether it be the grand house on the hill or the cottage in the valley, there's more happiness for everybody when there's a telephone in the home.

The Bell System employs more men and women than any other business organization in the United States. The total is now close to 300,000. Good business for the telephone company is a sign of good business throughout the country.

BELL TELEPHONE SYSTEM



drafted to combat the various hazards to which relief workers were being exposed. Personnel trained in industrial and insurance safety and experts from the ranks of safety organizations and public safety bureaus were attracted into the service of a nation-wide decentralized organization to promote safety.

The experience gained during this period was used to advantage in developing the accident prevention program of the Emergency Relief Administration which followed. The safety organization that had done such effective work in each state under the Civil Works Administration was, in nearly every instance, reestablished intact under the Emergency Relief Administration and

charged with a similar responsibility. Codes and safety regulations were revised where necessary to meet rapidly changing conditions. Workers were becoming more adapted to their employment and safety was generally recognized as a guiding principle in the conduct of projects.

Under these conditions it was to be expected that the accident frequency would more nearly correspond to that in private industry. The remarkable safety record of the Emergency Relief Administration can be credited largely to the cooperation of such public-spirited organizations as the National Safety Council and to the active interest of local Administrators and other officials

charged with the safe conduct of this program in the states.

An executive order signed by the President on May 20, 1935, prescribing rules and regulations relating to wages, hours of work, and conditions of employment under the Works Progress Administration, provided in part that:

(a) No person under the age of sixteen (16) years, and no one whose age or physical condition is such as to make his employment dangerous to his health or safety or to the health and safety of others, may be employed on any work project. This paragraph shall not be construed to operate against the employment of physically handicapped persons, otherwise employable, where such persons may be safely assigned to work which they can ably perform.

(f) All work projects shall be conducted in accordance with safe working conditions, and every effort shall be made for the prevention of accidents.

Up-to-date codes and safety instructions relating to every conceivable type of occupational hazard are made available to engineers, supervisors, foremen and others responsible for safety on projects. Some of the standards studied and used as a basis for safe practices include:

National Safety Council Safe Practices pamphlets
State Laws

American Standards for Safety in the Construction Industry (A10-1934) (Associated General Contractors Manual)

American Standard Safety Code for the Construction, Care, and Use of Ladders (A14-1935)

American Standard Safety Code for Automobile Brakes and Brake Testing (D4-1927)

American Standard National Electrical Code (C1-1935)

American Standards for Prevention of Dust Explosions

American Standard Code for Identification of Gas-Mask Canisters (K13-1930)

American Standards for Industrial Sanitation (Z4.1-1935, Z4.2-1935, Z4.3-1935)

American Standard Safety Code for Floor and Wall Openings, Railings, and Toe Boards (A12-1932)

Code for Head and Eye Protection

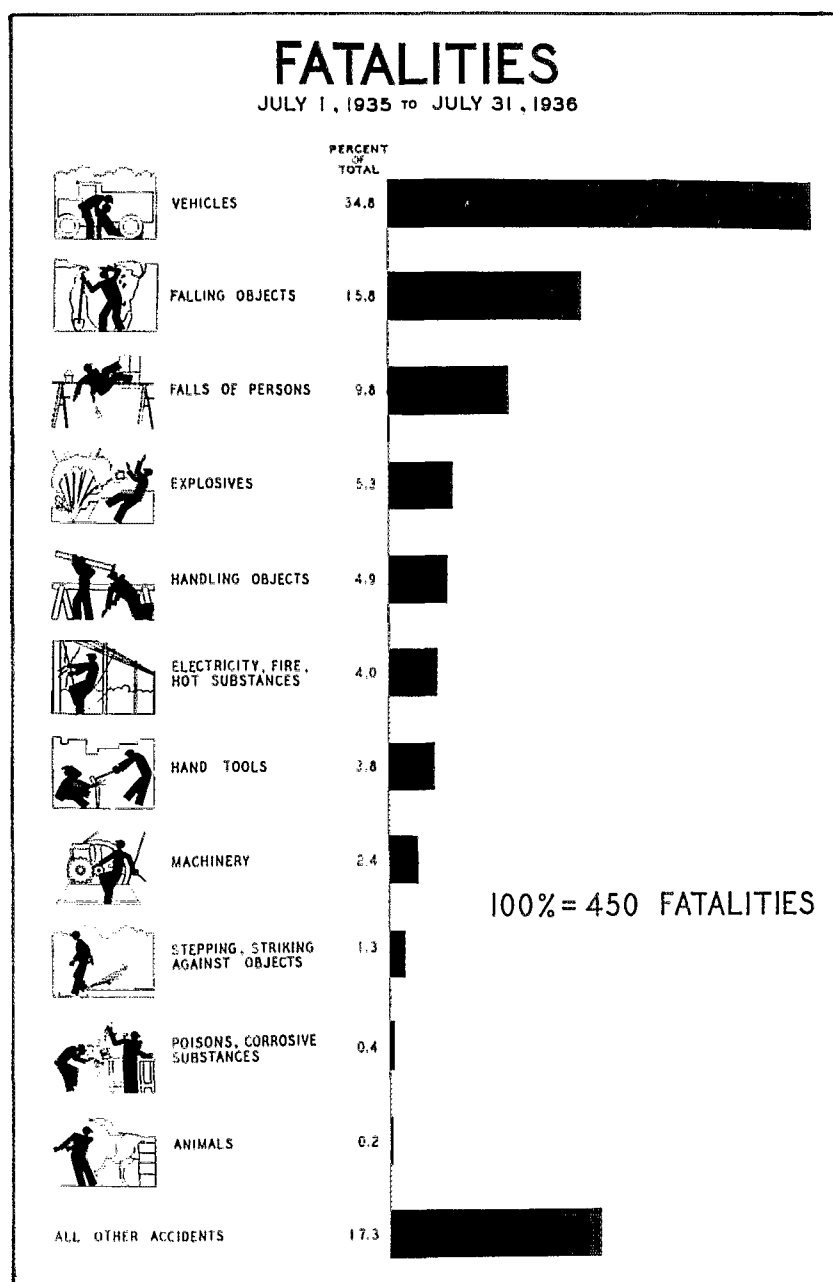
Revision of the codes and safety instructions to conform with the development of new methods and experience is provided through the Federal Director of Safety in Washington.

All project proposals are carefully reviewed for safety provisions before they are finally approved. The hazards involved in any undertaking are thereby anticipated and arrangements are made in advance to secure the materials and appliances necessary to safeguard the workers and assure the most efficient operation of the project.

Sponsors are fully instructed in their responsibility for the safety of workers

(Please turn to page 80)

NATIONAL SAFETY NEWS



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Specific recommendations for First Aid equipment to meet your individual requirements will be furnished promptly on request.

Write for full particulars and quotations

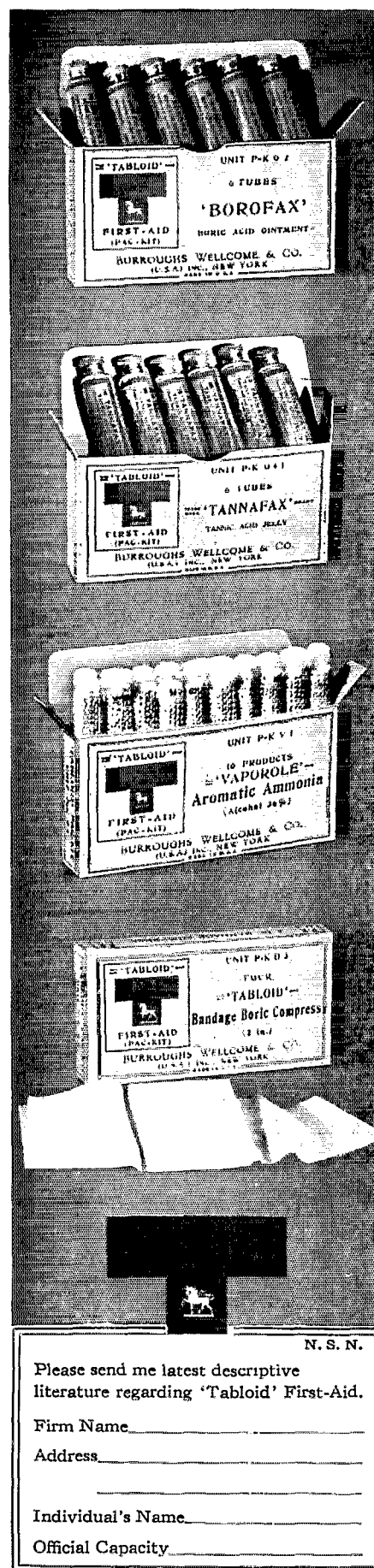
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JANUARY, 1937



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Official Capacity _____

Compensation for Silicosis Involves Knotty Problems

By THEODORE C. WATERS

Mullikin, Stockbridge & Waters, Baltimore, Md.

Some agency other than the courts of law should be established to determine the liability of employers for occupational diseases

PRIOR to the adoption of the workmen's compensation acts by our several state legislatures, an employee injured in the course of his employment could only recover from his employer for those injuries which could be attributed to the negligence of his employer.

While liable for his own negligence, the employer was not liable for the dangers of the employment, a risk that was assumed by the employee. The contributory negligence of the employee and the negligence of his own fellow servants were similarly available as defenses to the employer. Therefore, in cases involving industrial disputes, as a result of this legal status, employees resorted to actions at common law to obtain compensation for injuries based upon the alleged negligence of the employer.

The main purpose of the workmen's compensation acts enacted by state legislatures was to make the remedy granted thereby the exclusive remedy for injuries suffered by employees during the course of their employment. These acts stripped the employer of his common law defenses, including:

1. Failure to prove the employer's negligence.
2. Assumption of risk by the employer.
3. Contributory negligence of the employee and negligence of his fellow servants.

In other words, the compensation acts made the employers insurers of their ployees against accidental injuries. On the other hand, the compensation acts deprived the employee of his right of common law action for accidental injuries sustained by him in the course of his employment. We must bear in mind, however, that the workmen's compensation acts did not purport to cover occupational disease injuries, but solely ac-

cidental injuries, that is, those injuries which occurred at a specific place, at a certain time, and which could be ascertained and determined coincidentally with the infliction of the injury.

Forty-six states and the District of Columbia have enacted workmen's compensation acts. Arkansas and Mississippi alone not having such acts at the present time. Compensation acts which exclude compensation for occupational diseases, either expressly or by judicial interpretation, have been enacted in 32 states. Fourteen states and the District of Columbia have (a) Workmen's compensation acts which include compensation for occupational diseases, either expressly or by judicial interpretation, or (b) specific occupational disease acts.

Common Law Liability

With respect to those courts holding that the workmen's compensation acts do not provide an exclusive remedy to an employee, whereby the employee retains his common law right of action for injuries sustained by him in the course of his employment, such ruling is based substantially upon the reason that workmen's compensation acts were designed primarily to compensate for traumatic injuries; therefore they replace the employer's common law liability solely for those injuries sustained by accidental means.

With respect to those personal injuries sustained by other means, as for example, silicosis, which is not compensable under the compensation acts, the employee still retains his common law right of action therefor, based upon the negligence of his employer.

With respect to those courts holding that the Workmen's Compensation acts do provide exclusive remedy, such ruling

is based primarily upon the language of the act and the further ruling that an employee had no common law right of action for occupational disease injury.

The usual form of declaration contains allegations that the defendant manufacturer caused the plaintiff to work in an atmosphere where silica dust existed; that the defendant knew or should have known that certain materials used by the defendant employer contained harmful or dangerous agencies of silica which were destructive to life and health; that the defendant was guilty of negligence in failing to warn the plaintiff of the danger and in failing to provide the plaintiff with a safe place in which to work or safe appliances with which to work; that thereby the silica became introduced into the plaintiff's lungs and body, causing him permanent injury.

The defense pleadings set up the defense of assumption of risk by the plaintiff, the plaintiff's contributory negligence, the negligence of the plaintiff's fellow servants and a general denial of the allegations of negligence as charged by the plaintiff.

It is needless for me to emphasize the seriousness of this type of litigation. Class is arrayed against class. The local press in those places where the cases are tried will carry sensational headlines, describing the terror of the disease and emphasizing each complaint against the manufacturer. Suits are filed, not singly, but by the dozens. The whole community becomes aroused, with the attendant industrial chaos, and by the time trial day arrives, every citizen is so prejudiced against the defendant that it is almost impossible to procure an impartial trial.

Legislation Needed

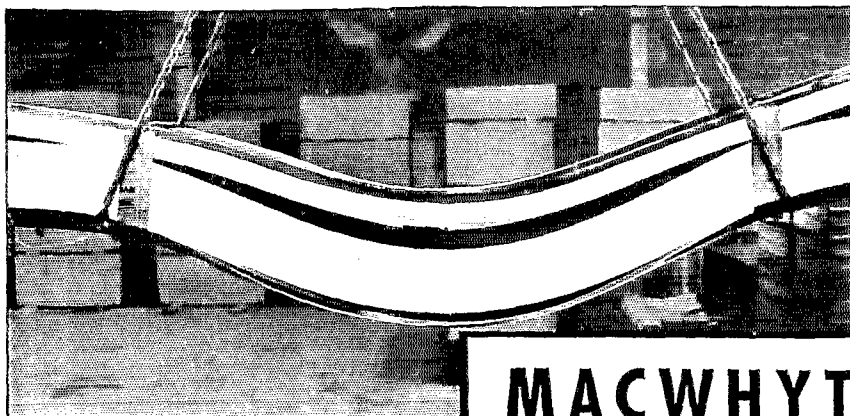
The ultimate solution of the problem of compensation for silicosis must be found in some type of legislation that will remove this dispute from the field of common lawsuits. In the same way that workmen's compensation acts elim-

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On the Job. Macwhyte Braided Slings are seen here handling sheet packs. On this work, the Superintendents report 6 to 10 times better service with Macwhyte Slings.

Because Macwhyte Slings hug the load, they prevent slippage and increase safety.

The multiple-part body does not damage the load. It spreads on corners so that from four to six ropes are in contact with the load.

The multiple-part body is non-kinking, gives maximum flexibility, is light in weight, and safe beyond comparison.

Floormen, Superintendents, Safety Engineers, tell us they are the best slings they have ever used.

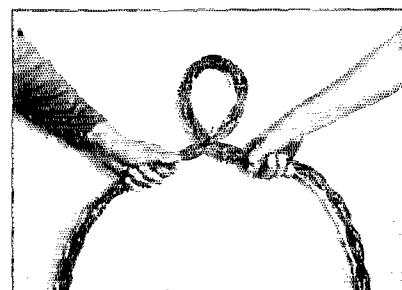
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Kenosha, Wisconsin

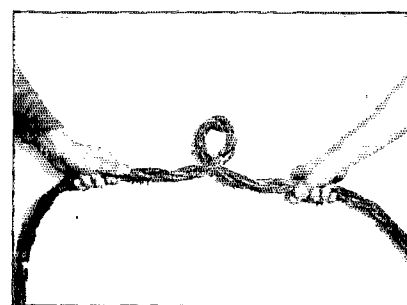
Specializing in the manufacture of wire rope and custom-built wire rope slings.

Distributors throughout the U. S.

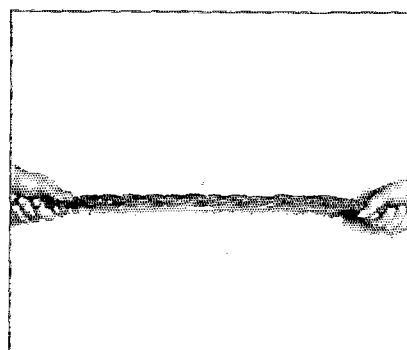
Macwhyte Braided Slings are Flexible and Non-Kinking



Loop in a braided body



... pulls down under tension



... and straightens out. The flexible braided body of Macwhyte Slings throws out the loop — and in this way resists kinking.

MACWHYTE BRAIDED WIRE ROPE SLINGS

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AG NO. 257

inated such actions for accidental injuries, some legislation must be devised to eliminate such actions for occupational disease injuries.

The honest employer desires to provide compensation for those injuries occurring to his employees as a result of the industrial processes in which the employee is engaged and which are peculiar thereto. The honest employee similarly desires compensation only when he has suffered actual injury.

To attempt any detailed discussion of silicosis and preventive and compensatory legislation therefor would consume far more time than is available. However, there are certain basic principles to which I desire to call your attention.

In the first place, the nation-wide publicity that has been given to this problem has served a fortunate purpose in molding public opinion to eliminate such diseases from industry so far as engineering control is capable of doing so. As citizens, we recognize the fact that industry should provide for its employees a safe place in which to work, and accept this obligation imposed upon us by law.

In the second place, the problem itself is one that calls for the cooperative effort of both capital and labor. There are certain industrial processes wherein the hazard of silicosis exists, and today there are available mechanical improvements to eliminate or control this hazard. Upon capital rests the burden of installing such mechanical equipment as will minimize the hazard. An affirmative duty of constant care is imposed upon industry to perfect its mechanical improvements for control. However, for their part, those who labor must be educated in the ways and means of protection, to carry out the principles of good housekeeping, and utilize protective appliances that may be offered for their protection.

If employers and employees alike recognize and discharge these duties, effective results should be obtained in minimizing the hazard and controlling diseases. Again, with respect to compensatory legislation, occupational disease compensation should not be permitted to become health insurance. Upon industry should be imposed only those costs which compensate injuries that are peculiar to the particular industries in which the employees are engaged.

Form of Silicosis Compensation Acts

For many who have given but superficial thought to this problem, it has been

somewhat easy to say that compensation for silicosis injuries should take similar form to that for accidental injuries. Such thought fails to recognize the essential differences between the two types of injuries—that *accidents* occur at a specific time, at a specific place, in a specific way, under a specific employer, while silicosis and other occupational disease injuries are the result of the accumulation of injurious substances over an extended period of time in different types of employment and even under different employers.

We have seen that in considering the national development of compensation acts, their original design was to cover *only* accidental injuries; in form and in methods of administration they were not designed to cover occupational diseases. It may be true that certain occupational diseases have characteristics strikingly similar to traumatic injuries—such as anthrax and lead poisoning, where the disease develops immediately after exposure and development of the disease is rapid—and become disabling, fatal or cured within a limited period of time.

A Different Problem

On the other hand, there are certain forms of occupational diseases, for example, silicosis, where the injuries sustained represent the accumulation of injurious substances over an extended period of time and disablement may follow exposure to hazards under successive employers.

Therefore, in considering legislation for occupational diseases, we must recognize the fact that the problem is, of necessity, different from the accidental injury problem and that the administrative provisions of such legislation must be designed especially to handle this particular problem.

I am not a professional critic of Workmen's Compensation Laws, but one thing is certain, none of them is perfect. Some of their provisions are perhaps unjust, either to the employer or the employee and, certainly, in the administration of these provisions, the human element may give rise to certain inequities. However, these acts were the result of the need of transferring the disputes arising between employer and employee to some State agency whereby they might be settled, other than provided by our courts of law.

From my own observation of silicosis litigation, I believe that from the standpoint of the employer, the employee, and

the public, some agency other than our courts of law should be established to determine the liability of employers for occupational disease injuries sustained by their employees.

I have mentioned the possible inequities that have existed under our compensation acts and in the administration of their provisions. However, I believe that any attempt to repeal those compensation acts would meet with the combined resistance of employer and employee. Neither interest would desire to transfer back to our courts administering common law, the question of the legal liability of employers for accidental injuries sustained by employees in the course of their employment.

Serving Social Needs

Therefore, in view of the past administration of our compensation laws, unsatisfactory to certain interests as they may have been, it is not unreasonable to hope that intelligent occupational disease legislation may similarly meet with the approval of employer and employee alike. Furthermore, it is reasonable to hope that such legislation may eliminate the possibility of expensive litigation that may arise and serve the social needs of all parties concerned.

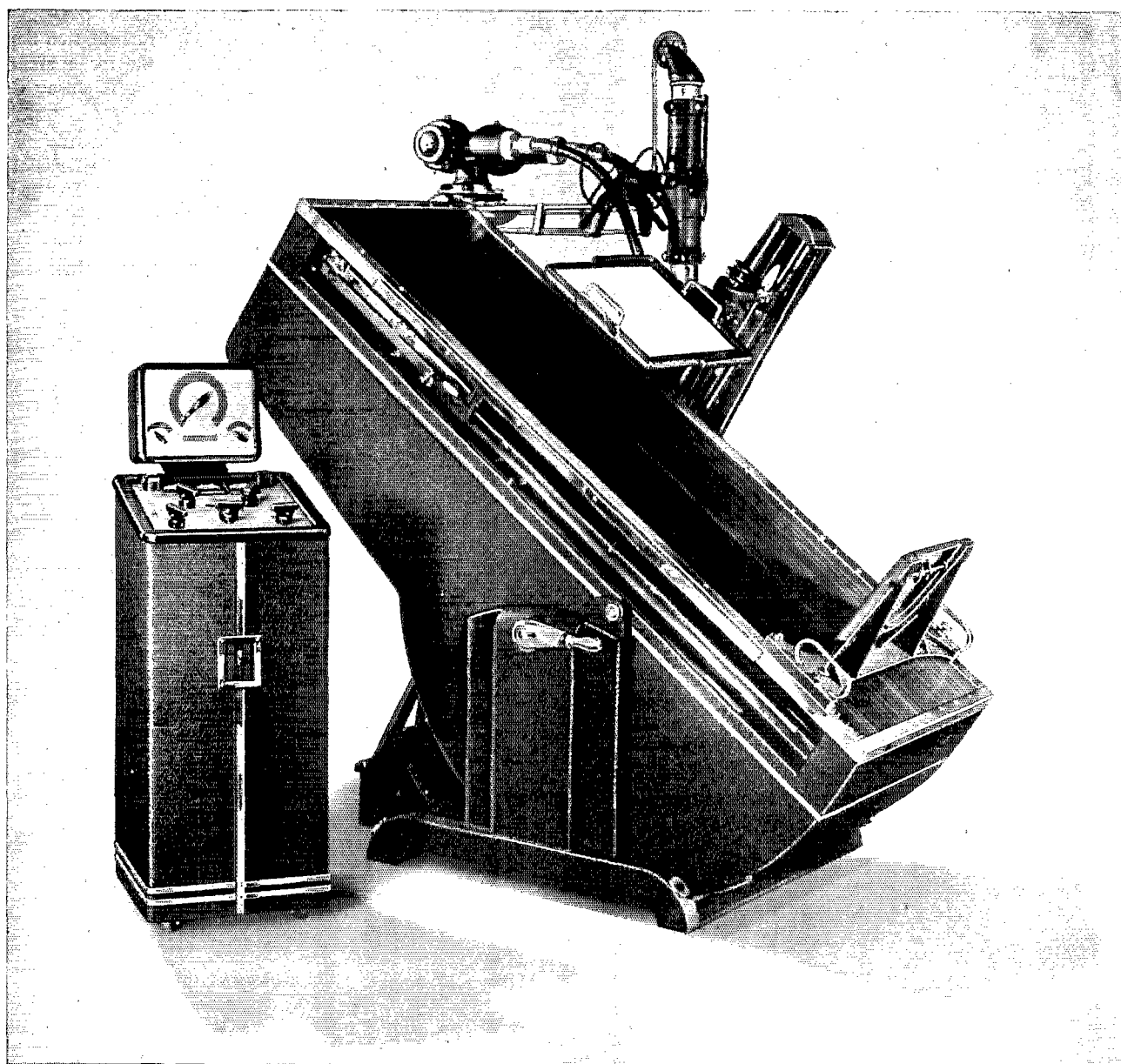
The statutes providing compensation for silicosis injuries that have been heretofore adopted in several of the states vary both as to form and as to provisions for their administration. In my judgment, uniformity of legislation is not only impossible, but distinctly inadvisable. Industrial conditions vary greatly in the different sections of the country and what may be the answer to the problem in New York may not be the answer to the problem in California. Any legislation must be suitable to the particular working conditions in the particular state in which it is to be applicable. Frank recognition of this fact will eliminate unnecessary contention.

Again, some of our friends who purport to speak for labor have been advocates of the so-called "all-inclusive" occupational disease acts. In my judgment, the "all-inclusive" occupational disease acts tend inevitably to health insurance and enable the Department charged with the administration thereof to award compensation for all the human ills that may occur to employees in the course of employment.

Another phase of the problem of silicosis compensation legislation is that of accrued liability. In most instances

(Please turn to page 62)

NATIONAL SAFETY NEWS



No matter what the yardstick

More accurate diagnosis, more certain prognosis, shorter disability time, lessened burden—it matters little what the yardstick might be, the final result is the same. In any event, the routine use of x-ray in the industrial clinic has fully proved its practical value—proved it in the accumulated experience of more than a hundred plants using Westinghouse X-Ray equipment. We particularly suggest that you let us give you some facts about the Fluoradex, the compact, complete diagnostic unit, for its many models cover so wide a range of capacity and usefulness that it is indeed ideally suited to industrial requirements—from first aid room to the large hospital.

*Westinghouse X-Ray Co., Inc.
Long Island City, N. Y.*

States Plan Stricter Driver Control

Many states with inadequate drivers' license laws are studying the enactment of standard laws in 1937

SHOULD any one be permitted to drive an automobile, or should every motorist be required to have a license—issued only upon examination and subject to suspension or revocation for bad driving?

This question looms larger in the public safety picture this year than ever before.

The year 1935 brought an all-time record for motor vehicle fatalities. The 1936 toll bids fair to be equally appalling.

Determined to help curtail the slaughter on the highways, interested groups in a number of states are campaigning for the passage of standard driver's license laws or for the revision of existing state laws to bring them up to standard.

Legislatures meet this year in 43 states, and at least 23 of these states have either no driver's license law or a measure that is sub-standard. With public interest in such laws increasing rapidly, it is possible that some sort of drivers' license legislation will be introduced in every state not already having a standard law.

The drivers' license campaigns are in full accord with the National Safety Council's Five Year Plan to reduce motor vehicle fatalities 35 per cent or more by the end of 1940. Field representatives of the Council and public safety staff members are cooperating with safety groups in the interested states.

High lights of current state activities are as follows:

ALABAMA—The Alabama legislature is in special session, and there is a possibility that the present law may be amended.

ARIZONA—The executive committee of the state safety council has decided to sponsor legislation providing for annual renewal and to have vehicle registration handled by the motor vehicle division rather than by county assessors.

ARKANSAS—The Congress of Parents and Teachers, which met recently, adopted a resolution supporting a drivers' license law.

COLORADO—Improvements in the present law, to strengthen the examination provision, are being urged by the motor vehicle administrator, the state highway commission, and the Rocky Mountain Motorists, a motor club.

DISTRICT OF COLUMBIA—A standard law is in effect, but the administrators are seeking a method for more positive identification of licensees.

FLORIDA—A standard law is backed by the State Chamber of Commerce, the P.T.A., Rotary Clubs and similar groups. The attorney general is now drafting a proposed bill.

GEORGIA—The Junior Chamber of Commerce, through the Georgia Civic Safety Association, is leading a campaign for a law.

ILLINOIS—The Governor has asked the State Highway Department to draft a drivers' license law.

INDIANA—The Governor's Committee on Public Safety is working on a stronger law.

KANSAS—The Kansas Safety Council and the American Legion have been urging a standard law. The Legislative Council is drafting bills to this effect.

MAINE—A movement to strengthen the present law has been initiated by the Maine Highway Safety Campaign. Legislation is being drafted.

MICHIGAN—The State Safety Council is urging legislation providing for a thorough examination of applicants.

MINNESOTA—The present law does not provide for examination. The Minnesota Public Safety Committee is seeking an amendment.

MISSOURI—The Governor's State Highway Safety Committee is drafting a law said to be standard.

NEW MEXICO—No law at present. State Police and the State Highway Department are studying the standard law, and it may be introduced at this session.

NORTH DAKOTA—The present law does not provide for examination nor renewal. The movement for a standard law is supported by the Highway Commissioner.

OKLAHOMA—Governor E. W. Marland, in his message to the Legislature, asked that a drivers' license law be considered.

SOUTH CAROLINA—The service clubs of Florence, S. C., are planning a state-wide safety meeting in that city on January 11 to study a state traffic safety law and to suggest improvements.

SOUTH DAKOTA—There is a possibility that a standard law will be enacted at the current session.

TENNESSEE—The vigorous campaign for a standard law, now being carried on, is being supported by the governor-elect. It is backed by the State Planning Board and the Governor's Committee for Law.

TEXAS—The State Safety Council is working to have the present law brought up to standard. The Governor has appointed a committee on street and highway traffic to study needed legislation and make recommendations.

WASHINGTON—A new bill has been drafted making more specific the examination provisions of the present standard law.

WISCONSIN—The legislative committee of the state Safety Council is working to have the present law brought up to standard at the present session.

WYOMING—It is expected that a standard law will be adopted at the present session.

Motorist's Prayer

GRANT me a steady hand and watchful eye, that no man shall be hurt when I pass by.

Thou gavest life, and I pray no act of mine may take away or mar that gift of Thine.

Shelter those, dear Lord, who bear me company from the evils of fire and all calamity.

Teach me to use my car for others' need, nor miss through love of speed

The beauties of Thy world; that thus I may with joy and courtesy go on my way—*The N. Y. Times.*

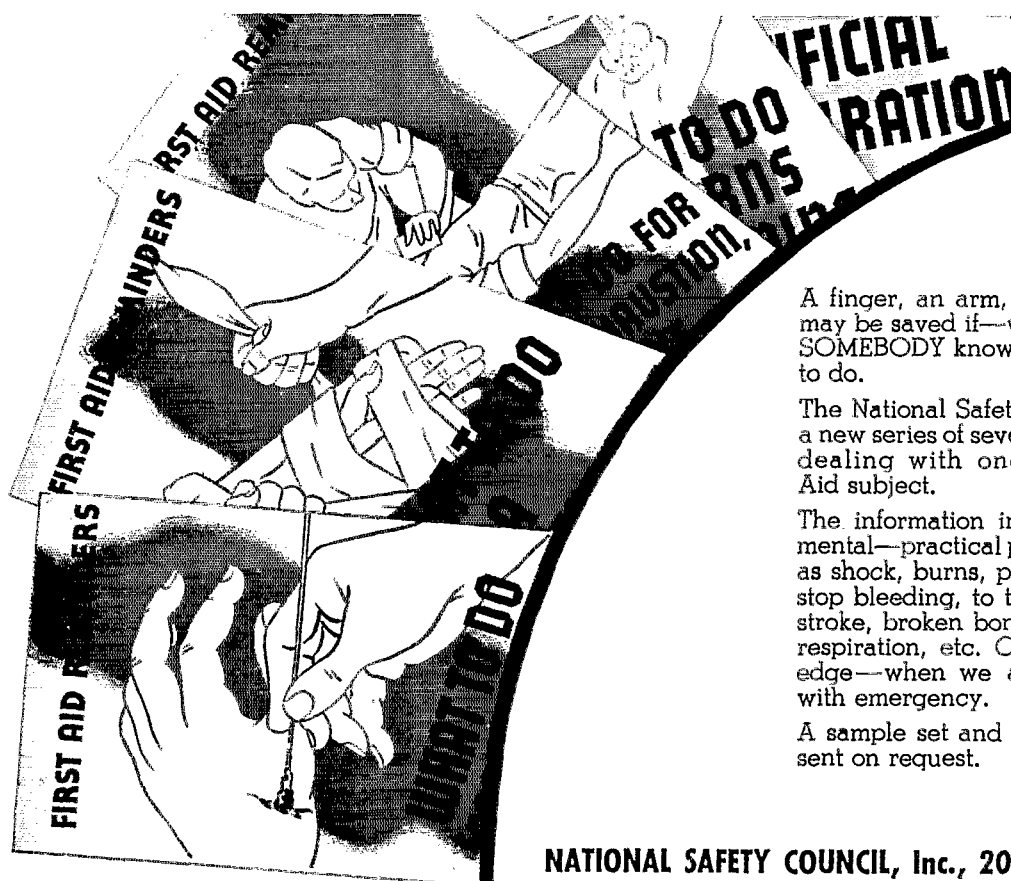
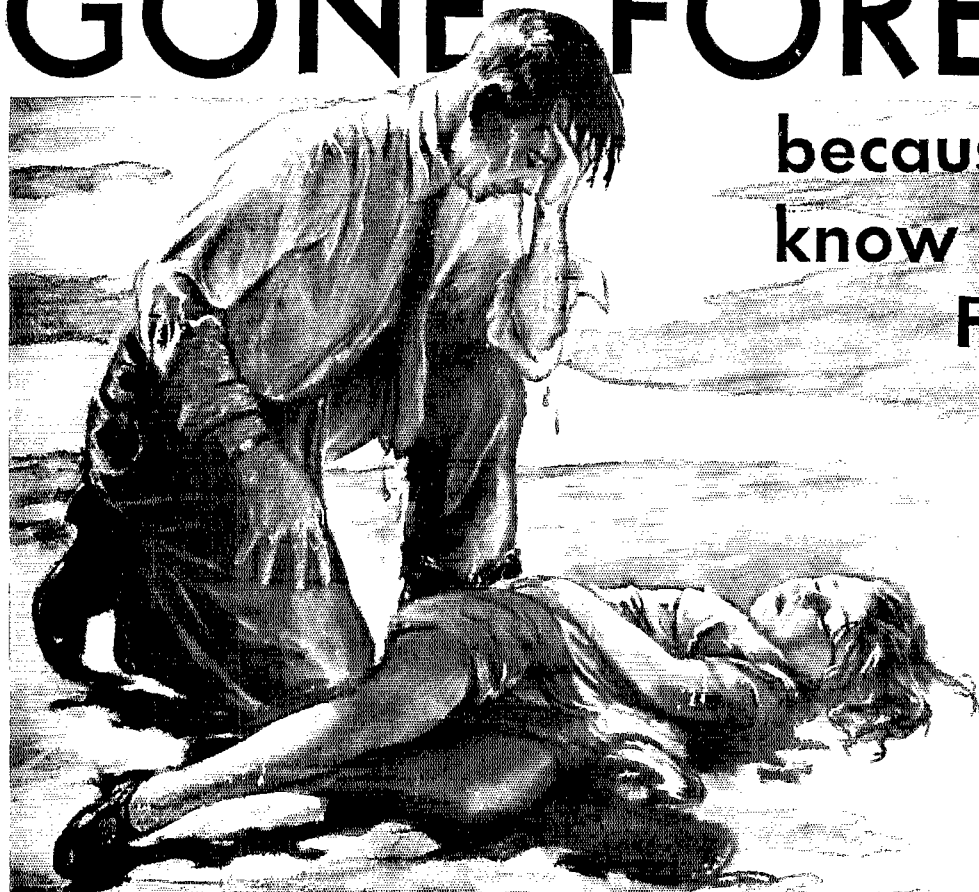
It Wasn't a Woman Driver

Startled when a mouse appeared on the steering wheel, a motorist in Connecticut lost control of his car and crashed through a fence. The shaken motorists went on their way when the damage had been repaired.

GONE FOREVER

because he didn't
know

FIRST AID



A finger, an arm, a limb—yes, even a life may be saved if—when emergency arises—SOMEBODY knows what to do; or what *not* to do.

The National Safety Council has just issued a new series of seven attractive leaflets, each dealing with one most important First Aid subject.

The information in these leaflets is fundamental—practical pointers about such things as shock, burns, poisoning, bruises; how to stop bleeding, to treat sun-stroke and heat-stroke, broken bones; how to give artificial respiration, etc. Certainly priceless knowledge—when we are brought face to face with emergency.

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THE SAFETY LIBRARY

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

BOOKS AND PAMPHLETS

Safe Driving

"LET'S BE SKILLFUL." A publication of the Aetna Casualty & Surety Company, Hartford, Conn. Pamphlet. Free.

Written primarily as a mold of attitude to make skillful driving "fashionable," this 13-page pamphlet presents in an attractive way what the skillful driver knows and does. Its eight paragraphs deal with driver attention, knowledge and obedience of natural and man-made laws, anticipation of the other fellow's negligence, speed, attitude as to what is good "performance" courtesy and thoughtfulness.

In addition, several pages of illustrations are included to show bad driving and walking practices in urban and rural areas. These show hazardous locations of cars and pedestrians and the hazardous practices are explained. Four pages are devoted to the driver on city streets, four pages to the driver in rural areas, and one each to the pedestrian in city and rural areas.

The pamphlet should be valuable for use in high schools in working out special projects, since there is an opportunity for the student to dig out the essential points and list them. The text material will also be of value in helping mold attitude.

—DONALD S. BERRY

Vocational Rehabilitation

VOCATIONAL REHABILITATION AND WORKMEN'S COMPENSATION. By Dr. Carl Norcross. Published by the Rehabilitation Clinic, 28 E. 21st St., New York City, 1936. Price \$1. (Book)

There is little or no therapeutic benefit in cash settlements paid to injured workmen who have traumatic neuroses, according to an investigation made recently by Carl Norcross, Ph. D., of the Rehabilitation Division of the New York State Department of Education.

The published report is a follow-up study of 322 workmen's compensation cases in New York which were closed by a lump-sum settlement of \$1,000 or more.

It has been generally accepted in both medical and workmen's compensation

circles, says the report, that a cash award would help cure a neurosis. "Investigation made a year or more after the settlements has convinced us that the value of a cash award is overrated," writes the author. "It is the settlement of the case, the actual ending of the litigation, which is of value. Whether the final compensation award is paid in one lump or extended through a number of installments makes little difference to the claimant's condition."

Dr. Norcross makes recommendations for improving the handling of neurotic cases in the workmen's compensation rooms. The average neurotic case is open in the workmen's compensation division for nearly three and one-half years, he says, and much of the delay is unnecessary.

Plant Temperature

WARMTH AND COMFORT AT WORK. By Dr. T. Bedford, Industrial Health Research Board, London, England. Copies of this report may be obtained from The British Library of Information, 270 Madison Ave., New York City. Price 65c.

A report giving the results of a physiological study of heating and ventilation of industrial plants, made by Dr. Bedford. The report is concerned only with the study of conditions producing comfort and discomfort, and it does not come within its scope to offer suggestions as to the methods of heating and ventilation. Five important conclusions emerge from this publication:

1. A suitable degree of warmth should be maintained.
2. Air should not be much warmer at head level than near the floor, and the head should not be exposed to excessive radiant heat.
3. The air should be moving rather than still, and variable in its rate of movement, but there should be no local draft.
4. Walls should be warmer than the air.
5. The fresh air supply should be sufficient to keep the room free from odours.

W. DEAN KEEFER.

Public Safety

POLICE ADMINISTRATION AND POLICE SCIENCE. A bibliography of police administration and police science. By Sarah Greer, with a preface by Bruce Smith. Published by the Institute of Public Administration, Columbia University, New York City, 1936. Price \$1.50. (Book).

Miss Greer's bibliography, while world-wide in its scope, includes a larger number of American works on police administration than any of its predecessors. With respect to certain phases of police science, American sources are still overshadowed in number and importance by those produced in European institutes and laboratories. Since many such developments are universal in their application and usefulness, the studies which describe them have been included here in liberal number.

Emphasis upon American problems and the American viewpoint is thereby made to serve the special needs and purposes of American police students, without regard for geography or national boundaries. In order, however, that this bibliography may have a general use, and for the greater convenience of its users wherever they may reside, geographical and national divisions have been freely employed as a secondary classification.

Traffic Regulation

HOW TRAFFIC REGULATION MAY BE IMPROVED IN TOWN AND COUNTRY. By William Phelps Eno. Published by Eno Foundation for Highway Traffic Regulation Inc., Saugatuck, Conn. Price \$1.00 (Pamphlet)

This pamphlet is issued as a supplement to "Simplification of Highway Traffic," a pamphlet which was published by the Eno Foundation for Highway Traffic Regulation Inc., in 1929. It is divided into two parts, the first on "partial synopsis of work done" and the second on "partial list of work to be done." The former is a briefly stated list of the accomplishments in traffic regulation and control and some of the publications on the subject. The second part discusses the work to be done at somewhat greater length.

Part II refers by chapter number to the book on "Simplification of Highway Traffic" and supplements the discussion there by treatment of new developments.

EARL J. REEDER.

Labor Legislation

ADMINISTRATIVE LABOR LEGISLATION. A Study of American Experience in the Delegation of Power to Labor Organizations.

NATIONAL SAFETY NEWS



Stonehouse Signs Provide Definite, Timely Warnings

Occupational accident fatalities for the first eight months of 1936 are estimated at 11,700 or 7 per cent above 1935. Falls of persons and injuries caused by falling objects account for one-third of all compensated occupational accidents.* Use Stonehouse Accident Prevention Steel Signs to reduce the frequency of your falling accidents. Many pertinent signs carried in stock for immediate shipment.

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★ Here is the most practical shield ever produced. Its TURRET-TYPE rivetless face-piece, formed from one seamless, heavy-gauge, fibre sheet, eliminates all possibility of electric shock through the shield—permits easy, complete sterilization and cleaning—and insures exceptionally long life with maximum economy . . . its unique lens holder, made from a special oil-resisting rubber com-

pound highly resistant to flying sparks and hot metal particles, reduces breakage and allows for instant changing of clear cover glass without removing colored glass . . . and its new, instantly-adjustable, headgear really fits all heads and its fitted with a new detachable head pad that affords maximum comfort. Available in helmet and handshield types.

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SAFETY

Here's a job that calls for nerves of steel—working on a fifty foot pole—pulling up on a heavy line. In equipment, too, there can be no compromise with quality. Linemen, and those responsible for the safety of linemen, know that the Klein circle on their safety straps and belts, come-alongs, spurs and pliers, sleeve twistors, furnaces and torches, is more than just a trademark it spells SAFETY! Only Klein equipment possesses Klein quality.

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 1891 Chicago, Ill. USA
3200 Belmont Avenue, Chicago, Illinois

tion of Legislative Power. By John B. Andrews. Published by Harper & Bros., 49 E. 35rd Street, New York City, 1936. Price \$2.50. (Book).

Mines and Mining

ANNUAL REPORT OF THE SAFETY IN MINES RESEARCH BOARD (Including a Report of Matters Dealt with by the Health Advisory Committee of Great Britain). 1935. Copies may be obtained from the British Library of Information, 270 Madison Ave., New York City. Price 65c. (Pamphlet).

Rehabilitation

VOCATIONAL REHABILITATION OF THE PHYSICALLY HANDICAPPED. Published by the U. S. Office of Education, 1936. For sale by the Superintendent of Documents, Washington, D. C. Price 15c. (Pamphlet) (Vocational Education Bulletin No. 190).

Respiratory Protection

SOME PROBLEMS OF RESPIRATORY PROTECTION IN THE PETROLEUM INDUSTRY, WITH SUGGESTIONS FOR THEIR SOLUTION. By G. M. Kintz and H. C. Fowler. Published by the U. S. Bureau of Mines, Washington, D. C., 1936. Free. Mimeographed. (L. C. 6915)

Writings dealing with dusts and other extraneous air-borne material peculiar to the petroleum industry are relatively few. Accordingly this paper deals mainly with hazards of this type and makes some suggestions regarding protection against them.

PERIODICALS

Dusts

DESIGN OF EXHAUST HOODS FOR DUST-CONTROL SYSTEMS. By T. Hatch. In *Journal of Industrial Hygiene and Toxicology*, November, 1936, p. 595-603.

Some simple rules of procedure and elementary equations for calculating the desired rate of air flow are given, although the experimental determination of the latter under actual working conditions is recommended as the most satisfactory means of establishing the necessary capacity of the exhaust system.

THE ELECTOR DUST AND SMOKE METER. By S. C. Blacktin. In *Journal of Industrial Hygiene and Toxicology*, November 1936, p. 583-594.

Health Hazards

CARBON MONOXIDE POISONING. By Carl K. Drinker. In *Journal of Industrial Hygiene and Toxicology*, November, 1936, p. 657-650.

HEAT DISEASE: A CLINICAL AND LABORATORY STUDY. By Marlin W. Heilman and Edward S. Montgomery. In *Journal of Industrial Hygiene and Toxicology*, November, 1936, p. 651-667.

This is the individual summarization of thirteen heat disease cases, selected as the most severe clinical forms of heat disease from a total of 184 cases studied. Six of these are heat cramp cases, three are heat retention cases, and one is a

mixed cramp and exhaustion case. Clinical data, laboratory findings, diagnosis, therapy, and the clinical course of the disease are reported.

Planing Machines

SAFETY IN THE USE OF PLANING MACHINES. By H. J. Scholte. In *International Labour Office. Industrial Safety Survey*, September-October, 1936, p. 121-132.

Traffic

THE "30" CAMPAIGN IN ST. LOUIS. By Reyburn Hoffman. In *American City*, December, 1936, p. 51-52.

The regulation of motor vehicle speed in St. Louis to 30 miles an hour was emphasized.

Asked and Answered

STEVEDORING

QUESTION: What procedure would you suggest to improve the accident experience of a large stevedoring concern with a high accident frequency and severity?

ANSWER: The control of accidents on stevedoring operations has always been difficult. Probably most accidents are attributable to very ordinary causes. For instance, there are always a number of falls of workers who trip over objects left lying about, a condition which just ordinary good housekeeping would prevent. Objects and materials should be arranged in piles, and the piles should be built up carefully, limited in height and properly blocked when necessary. Because of the limited space available in many places, this is not as simple as it sounds.

Cuts, bruises, strains, sprains and fractured bones are common forms of injury, and adequate first aid on the job is always considered a necessity.

Lack of experience in handling heavy objects is frequently responsible for ruptures and strains, and while proper training is the real answer, large labor turnover is often found a handicap to safety engineers.

Intelligent supervision is always necessary on a stevedoring job.

Probably the best answer to your problem will be found in a thorough analysis of your accidents. Proper investigation of these mishaps would show very clearly the outstanding unsafe practices and unsafe conditions causing the poor experience.

Booklets listing safety rules for stevedores and longshoremen are available in the National Safety Council Bureau of Information.

STREET LIGHT GUARDS

QUESTION: We have had occasional cases where a youngster let a street light down on a corner by unhooking the lamp chain and letting it drop. In one or two cases passing automobiles have struck the light before anyone noticed it was down.

NATIONAL SAFETY NEWS

To correct this situation we have discussed the feasibility of placing a ring and lock on the end of the chain, making it impossible to lower the lamp except by using a company key. Some of our people are opposed to this practice, however. Is there any other solution to this problem?

ANSWER: Most utilities favor the ring and lock plan, although even with this additional safeguard there have been cases where the lock has been broken and the lamps let down as before.

One company places the ring and lock higher than usual on the pole, so the children cannot reach it without a great deal of trouble. In this case the lamp tender employs a longer ladder than usual.

The Bureau of Safety favors locking the chain, although their experience has been that not more than ten or 12 reports are received in a single year in which the ordinary installation is tampered with.

CORRESPONDENCE

AUGUST KAEMS

DETROIT, MICH.—It is with regret that I read of the passing of our honorable August L. Kaems who passed away on October 23.

I remember many years ago when Mr. Kaems first brought his die samples to our National Safety Congress and explained his method of keeping fingers from between the dies and while getting the work in and out efficiently.

I believe no other man has done as much as Mr. Kaems to eliminate accidents to operators of punch presses. While he may not have a monument erected in honor of his deeds, he will certainly be remembered in the minds of safety engineers who have been inspired and assisted because of his wholesome safety activities.

It is indeed with regret that we say "Goodbye."

R. A. SHAW, *Safety Engineer,*
Murray Corporation of America.

This Salesman Was A Real Safety Man

RECENTLY a six-year-old girl came to a service station with a two-quart glass fruit jar and asked the attendant to fill it with gasoline, according to the *Accident Prevention Bulletin* of the American Petroleum Institute. She stated that mother wanted to clean a dress. The service station salesman did not sell the gasoline. He called on the child's mother and explained that his company did not wish to sell gasoline for cleaning purposes and explained the possibility of the child breaking the glass jar and receiving severe cuts from the broken glass, also the risk of the child's clothing becoming saturated with gasoline with the ever-present danger of serious burns.

JANUARY, 1937



EAST

NEW YORK
E. D. Bullard Company
1775 Broadway
and
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
2109 Broad St.

MID-WEST

DETROIT
C. H. Jackson 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.

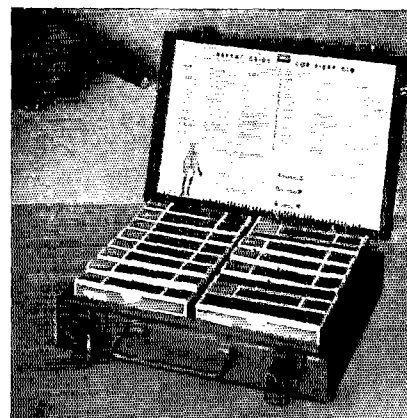
SALT LAKE CITY
E. D. Bullard Company
1620 Yalecrest Avenue

SEATTLE
Sundfelt Equipment Co.
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Everything
BULLARD
in Safety

First Aid NEWS!

All Bullard Unit Kits Now WEATHERPROOF!



- Weather-strip rubber tubing built into cover now SEALS contents against rain, dust and every outside element. First aid packets always CLEAN and DRY.
- Weather-strip tubing prevents cover rusting on, causes cover to "spring" open instantly when snap-locks are released. No more sticking.
- Side walls are lower so that first aid packets can be grasped more easily and quickly removed. No more fumbling.
- Sizes, weight and prices have not been increased. Nearest Bullard office has sample waiting for you. Call them today!

BULLARD

HEAT PROOF PUNCTURE PROOF Wooden Soles . . .

For adequate foot protection there is no substitute for Reece "PERFECT ROCKER" Wooden Sole Shoes.

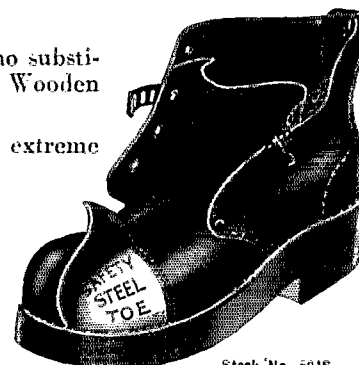
SOLES—that are safe under the most extreme conditions.

STEEL TOES—that are high, roomy and fully tested.

Write for catalog No. 1.

Anything in Wooden Soles.

REECE WOODEN SOLE SHOE CO., Inc.
COLUMBUS, NEBRASKA



Stock No. 5048



KEEP YOUR PLANT DUST-FREE, for Safety and Efficiency

Dust is not only a health hazard, but an annoyance to workmen—and a hindrance to your quality and quantity of output.

You can END DUST at a surprisingly low cost. A Sly Dust Control System costs little to buy, little to operate. Exclusive features make for most effective dust suppression, collection and disposal.

Write us. There is a competent representative near you, who will gladly analyze your problems.

**CLOTH BAG
DUST FILTERS**
For
DUST CONTROL **SLY** **SUPPRESSION,
POSITIVE
COLLECTION,
DISPOSAL.**
AIR-SUPPLIED HELMETS
FOR PROTECTION AGAINST DUST, FUMES, ETC.



The Sly PURAIR Helmet is a dependable protection from injurious dust, fumes, etc. **KEEPS MEN FRESH!** Light and comfortable. Air is cleaned and deodorized and free from moisture and oil. **LOW IN COST.**

Write for Bulletin S-81

The W. W. Sly Manufacturing Co.
4727 Train Ave. Cleveland, Ohio

"Find the Hazard" Contest Proves Popular

THE world's largest shop inspection committee went into action during the past month when men and women from all parts of the country submitted their entries in the eleventh of the monthly Safety Calendar Contests conducted by the National Safety Council during the past year.

The contest, which proved to be one of the most popular of the year, was of the "find the hazard" type. The illustration on the reverse side of the November Calendar page showed a corner of a shop in which the most flagrant violations of safety procedure prevailed.

In addition to pointing out the hazards contestants were asked to submit a statement of 75 to 100 words on "How to Work Safely."

The women contestants, who have done their share of bidding for prizes in the past months, came out second best in the November competition, all the major prizes being taken by the men.

W. P. Carlon, 1204 Birdsall Street, Old Hickory, Tenn., won the first prize of \$20. He received his Calendar from the E. I. du Pont de Nemours & Co.

To Gerald A. Collins went the second prize of \$10.00. Mr. Collins received a Calendar from the Lehigh Portland Cement Co.

The third prize of \$5.00 went to Allen McCluskey, Birmingham, Ala., who received his Calendar from the Virginia Bridge Company of that city.

Winners of the 15 one dollar prizes were as follows:

Miss Catherine Wipperfurth, Cross Plains, Wis. Calendar from the Madison (Wis.) Gas and Electric Co.

Mrs. H. C. Harrell, 1630 De Queen Blvd., Port Arthur, Texas. Calendar from The Texas Company.

D. H. Weeks, 720 Eighth Street, Port Arthur, Texas. Calendar from The Texas Company.

Miss Hilda M. Hooten, 635 W. 37th Street, Norfolk, Va. Calendar from The Texas Company, Norfolk, Va.

George Henry Goodwin, 1207 Russell Street, Berkeley, Calif. Calendar from The Pullman Company.

Richard F. Blough, Lorain Division, Carnegie-Illinois Steel Corp., Johnstown, Pa. Calendar from the Pennsylvania Manufacturers' Association Casualty Insurance Co.

Albert F. French, 1818 Seventh Ave., No., Great Falls, Mont. Calendar from Anaconda Copper Mining Co.

M. J. Hangartner, Casper, Wyo. Calendar from The Texas Company, Casper, Wyo.

M. C. Jeffers, 2064 Williams Street, Jacksonville, Fla. Calendar from The Texas Company.

A bigger premium for first prize! Greater rewards to work for—that is the keynote of the 12 new monthly contests which the 1937 Safety Calendar offers as a test of the skill and safety knowledge of Contest fans.

The Contests have even more variety than the series offered in 1936.

The first prize for each month has been increased to \$50; second prize is \$10 and third \$5. In addition 15 prizes of \$1 each are awarded every month.

During the past year the National Safety Council distributed \$600 in Contest money among employees of its members. This year a total of \$960 will be distributed—\$80 every month.

Urge your employees to try for their share.

Miss Lucile B. Rice, 1606—13th Ave., So., Birmingham, Ala. Calendar from the Alabama Power Company.

James W. Dunnell, 155 Maple Avenue, Patchogue, N. Y. Calendar from Electrolux Inc., 500 Fifth Ave., New York City.

William H. Brown, 331 Erie Ave., Quakertown, Pa. Calendar from Pennsylvania Manufacturers' Association Casualty Ins. Co.

C. A. Stevenson, Schumacher, Ont., Can. Calendar from McIntyre Porcupine Mines.

T. C. Ogren, DuPont, Wash. Calendar from E. I. du Pont de Nemours & Co.

Mrs. George F. Harris, 817 Highland Ave., Lead, S. D. Calendar from the Homestake Mining Co.

The great majority of entries were from persons actually engaged in production within the plant, rather than from members of their families. Almost all of the contestants succeeded in finding all of the hazards illustrated. Thus the decision of the judges was based primarily upon the quality of the essays submitted.

Contest judges were Dr. C. H. Watson, President, National Safety Council; Harry Guilbert, Director, Bureau of Safety and Compensation, The Pullman Company; and Miss Laura Hill, Information Bureau, National Safety Council.

Compensation for Silicosis (Continued from page 54)

where silicosis is found, the employees have accumulated the injurious substances during the term of their employment before such proposed legislation could become effective. With respect to that liability, I believe it is inequitable to saddle the expense thereof upon in-

NATIONAL SAFETY NEWS

dustry at one given time, and some method should be found for apportioning this accrued liability.

Another most important element to be considered in the drafting of silicosis compensation legislation should be a provision for the appointment of a competent medical board. Neither lawyers nor laymen are in the position to pass upon medical questions.

Necessity of Prevention

I wish to emphasize what to me seems to be the most important aspect of this problem, prevention. From the standpoint of those who labor, they should be far more interested in the maintenance of their health than in compensation for injuries to that health. From the standpoint of employers, the cost of prevention of occupational disease injuries will be but a small fraction of the ultimate cost of compensation for such injuries.

With respect to silicosis, through agencies such as, the National Safety Council, the United States Public Health Service, and other state and industrial organizations, there is available, to employers, scientific information as to methods of eliminating most of the silica hazard that exists in your particular industries. If, for none other than selfish reasons, employers, should make use of this information. The initial cost may seem great, but it will many times repay the cost of compensation for silicosis.

I do not believe that modern society will countenance the continued failure of many industries to utilize available methods of engineering control to minimize health hazards.

Labor, for its part, must discharge its duties with full appreciation of the hazards that are present. There must be no half-hearted use of protective appliances. Similarly, there must be no half-hearted enforcement of factory rules and regulations with respect to the use of such appliances. Again, there must be a co-operative observance of rules and regulations laid down by safety engineers or state officials.

The problem of health must become a major consideration by all interests involved. I honestly believe that with full cooperation by employer and employee alike, industry may be well on its way to elimination of this hazard and may relegate the problem of compensation for such injuries to such statutory provisions as the state may see fit to adopt, reasonable in their provisions, but unnecessary to enforce because of the previous elimination of the hazard.

JANUARY, 1937

Increase and Protect the Foot Power of Your Plant

Foot power depends on leverage. You can't have it on slippery, unsafe floors. You can have it—permanently, too—by installing Inland 4-Way Floor Plate which provides equal foot traction in all four directions.

Easily installed, easily kept clean—may we send you a bulletin describing its exclusive features?



INLAND STEEL COMPANY
38 South Dearborn Street, Chicago, Illinois

**INLAND
STEEL**

Ladder-Slipping Accidents MATERIALLY REDUCED!

Effective traction elements for all of the various working surfaces are combined into one practical unit in

SAFE-HI LADDER SHOES

To minimize the hazard of ladder-slipping accidents . . . specify Safe-Hi Ladder Shoes on new ladders; and order through your dealer, or direct, to equip ladders now in use.



ROSE MANUFACTURING CO.

2121 Welton St.

Denver, Colo.

New Responsibilities

(Continued from page 22)

tions. These demonstrations were given wide publicity and motion pictures were taken. In publicizing the results, special emphasis was given the fact that the first car made the trip only a few minutes faster than the second car, and the question was asked "What does the driver do with the time saved by taking such chances?"

Later, several surveys were made and special routes of travel from the home to the plant were recommended instead of the more crowded boulevards.

In many concerns where a considerable number of workers drive their own cars to and from the plant, a traffic problem is created because no special parking facilities have been provided. In some cases the management has waited until a major accident has emphasized the seriousness of the situation, while in other cases the management forestalled trouble by opening up part of the company yard for car parking purposes. Stalls are laid out on the ground with tennis court markers, and one of the plant

watchmen is assigned the job of directing traffic during rush hours.

This has not only prevented many accidents to workers and damage to their cars, but it has also been good training in observing the "rules of the road" and in demonstrating courtesy to the other fellow.

Numerous other activities have been devised to influence workers and members of their families in avoiding after-hour accidents. For instance, safe drivers' clubs have been organized among the employees in some companies; pledge cards have been used to good advantage; literature of one sort or another has been distributed for reading at home; and prizes have been awarded to the best safety essays written by workers' children.

Safety men are realizing that the instruction of their own employees is only part of the program. These workers are being menaced by the reckless acts of others on the streets and highways and industries must take part in cooperative efforts to raise the general standards of driving.

Industrialists as a whole are doing

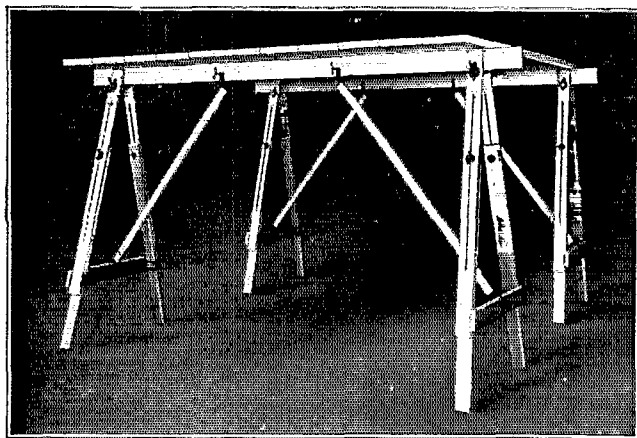
WILLIE EVERLEARN



their part to save 38,000 lives which is the objective of the Five-Year Plan. Legislative and enforcing authorities are hitting their stride too. Traffic engineers, vehicle fleet operators, the schools, and other agencies are all working hand in hand, and 1937 should record a real advance all along the line in this effort to make people hear and heed the demands of safety.



..... for your maintenance gang in 1937



Range of sizes: from 2 feet extending to 3 feet—to 12 feet extending to 20 feet.

Complete Tilley Line is shown in our catalog. Write for it.

Tilley adjustable scaffolding jacks are the ideal scaffolding for interior work. An ideal scaffold must be easily and quickly adjusted to the desired height, either on level or uneven floors: must be light, strong and durable, and fold up compactly for ease in storage and transporting. Tilley Jacks combine all these important features, plus a large safety factor.

Specify "Tilley" when buying any scaffolding or ladders and thus ensure your satisfaction with well-designed, secure and rigid products that do not require such frequent renewals.

THE JOHN S. TILLEY LADDERS CO., INC.
WATERYLIET, NEW YORK

CHICAGO REPRESENTATIVES — PROTECTIVE EQUIPMENT, INC.
634 Orleans Street, Chicago, Illinois

No Quitting Time

(Continued from page 27)

ment of a high employee morale. When employees know that the plant is taking a real interest in them and is anxious to help them keep safe and well, they will reciprocate by taking a more active interest in their jobs and their company. Of course, it is axiomatic that a healthy, interested workman is a bigger asset to a plant than a chronic semi-invalid and hypochondriac. After-work programs will greatly increase the percentage of healthy, cooperative employees.

The building of community good will is another important advantage. The plant which takes the lead in sponsoring community safety will be prominently and favorably in the public eye. It will become an even greater asset to the community. The maintenance and expansion of such cordial relation between community and industry is an essential factor in the success of the industry.

As member interest grows, it is expected that plans for the after-work program will be developed and expanded. Each member, of course, will be able to determine the form of program best suited to his needs. The Portland Cement Association will assist in developing the program and will act as a clearing house through which plants can exchange ideas for improving the program.

Buick Enthusiastic for Sloan Safety Contest

AN intensive drive for the reduction of accidents among factory employees has been announced by Harlow H. Curtice, president and general manager of the Buick division of General Motors, with the inauguration of the Sloan Award inter-factory safety campaign. The campaign, which began simultaneously in all automobile factories of General Motors Corporation, is being sponsored by its president, Alfred P. Sloan, Jr., and will continue for a six-months period, ending May 31.

The primary purpose of the campaign is to recognize and honor the foremen who do the most outstanding jobs in the prevention of industrial accidents. Out of a group of more than 500 foremen, the first 15 with the highest records will be awarded all-wave table radios together with certificates signed by Mr. Sloan.

These awards will be given on the basis of four points: safety performance (based on accidents statistics), hazard elimination, safety education and "good

housekeeping." Selections of the winners will be made by an award committee composed of plant executives.

"While the Buick division of the corporation has been striving to reduce accidents since 1920, the Sloan Award campaign adds impetus to the goal set for this year," Mr. Curtice said. "With two more months to be recorded before reaching the goal of six accidents per one million hours of work, our frequency rate has dropped to 6.62 accidents. This year's record is an 18 per cent reduction over the 1935 rate of 8.12.

"Our severity record, which is based on the number of days lost by factory employees, shows 0.98 days for ten

months this year as compared with the goal of 0.9. This is a 22 per cent reduction under last year's mark of 1.31 days.

"Since the beginning of this accident prevention campaign in 1920 when the frequency rate was 40 and when the severity mark was 2.55, remarkable progress has been made. This can be attributed to four groups, the Buick safety department, the superintendents, foremen and the workers. Every year thousands of dollars have been spent by Buick to buy new machines equipped with all the latest safety devices and to eliminate working hazards and unhealthy working conditions.

**EVEN YOUR
OWN EMPLOYEES
may not tell you!**



● Your washing facilities may be far from adequate—far from sanitary or modern . . . but even your best employees won't tell you.

It's up to *you* to investigate—put yourself in your employees' position . . . is there too much delay—are there too many men for present facilities—are your facilities as clean, modern, sanitary as they should be?

You can change all this easily—make water savings that pay for sanitary Bradley Washfountains in a short time—give each man clean, sanitary running water—and improve morale instantly.

MODERNIZE . . . ENLARGE WASHROOM FACILITIES



Bradley Washfountains and, at left, three Bradley 5-Unit Showers.

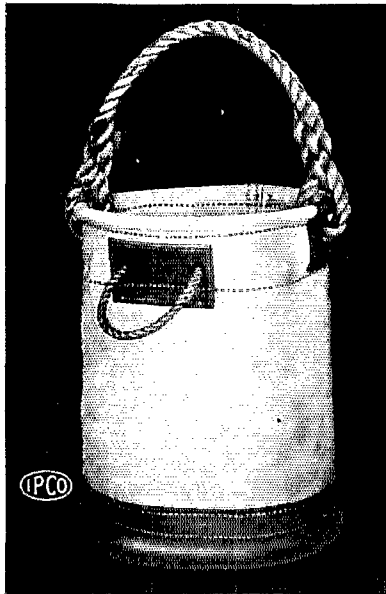
Put in Bradleys—each unit serves 10 washers at one time yet uses but little more water for the 10 than for one at an ordinary wash basin . . . Bradley Washfountains provide more washing facilities with less piping and installation expense. Hundreds of thousands of workmen in plants of every kind are enjoying Bradley better washing facilities daily.

"Group Washing" with Bradleys is the modern way—investigate now—make this dividend-paying investment for your employees' benefit,—and for your own. BRADLEY WASHFOUNTAIN CO., 2237 W. Michigan Street, Milwaukee, Wisconsin.

BRADLEY
WASHFOUNTAINS and SHOWERS

LINEMAN'S INSULATED TOOL BAG

Style L



For hoisting and lowering tools, insulators and supplies.

Manufactured of heavyweight, hard woven canvas and specially designed, flexible, waterproof leather bottom.

Collapsible—No metal parts.
12" diameter—15" deep.

Side rope loop for placing over pin, holding bag at correct working position.

Handle holes and loop holes leather reinforced inside and outside.

PREVENT ACCIDENTS

Equip your line crews with this serviceable product.

Other products purposely designed for the Electrical Industry include glove bags, line hose bags, portable danger signs, danger flags, insulated brushes, solder catch pans, pike pole guards, fuse pullers, portable hand lamps, linemen's belts and climbers.

INDUSTRIAL PRODUCTS COMPANY

Accident Prevention Equipment
800 W. Somerset St.
PHILADELPHIA, PENNA.

The White Elephant

(Continued from page 19)

few white elephants, and on account of the tremendous expense involved the nobleman soon goes bankrupt. Hence a White Elephant is something to avoid if you don't have one, and something to get rid of quickly if you do."

There was an idea for a safety campaign. It contained the elements of pride, humor, fear and competition. No one would want a white elephant in their department or division announcing that they had an accident.

And so the Siamese custom of passing out White Elephants was adopted in the President's Safety Campaign. The organization was called the "Royal Order of the White Elephant" and the rules of the order were inclosed in the brochure:

1. Beginning July 1 the department or division having the last lost-time accident will be visited by the White Elephant. We want to impress upon you that this White Elephant is just a nice desk size. The White Elephant will stay in the department or the division until a lost-time accident occurs in some other department or division. (There is now a large, almost life size elephant for the unlucky division.)

2. Each time an accident occurs a bulletin will be issued and those having the White Elephant in their possession will have the opportunity of shipping it with their compliments (and comments) to the individual designated.

3. Those who have possession of the elephant will be required to display it upon their desks in their offices at all times.

4. They must fully explain what the elephant represents to anyone asking them.

5. The individual with the presence of the White Elephant will be designated as "Official Keeper of the Elephant" until an accident occurs elsewhere.

6. If all departments and divisions have a perfect safety record for one month, the safety director, Mr. C. B. Boulet, will be the honorary president until an accident occurs and will have the honor of displaying the White Elephant on his desk.

7. In the event of the entire company making a perfect safety record for three consecutive months, our little pet will be presented to the president, Mr. J. P. Pulliam, with due pomp and ceremony, and he will then be elevated to the exalted position of "Maharajah" of the Royal Order of the White Elephant.

Twelve postcards were sent to each manager, which were to be filled out with the division accident record and mailed to the president every month. From these a chart or scoreboard was compiled and is kept in the president's office.

The plan was received with enthusiasm by the division managers, and in various divisions life-size elephants were

made for display purposes to rouse interest in the new plan. At the end of three no-accident months, the elephant was shipped to Mr. Pulliam with much pomp and ceremony, filling the office with straw, peanuts, and other such impedimenta. When the first accident occurred, the White Elephant was dispatched to the unfortunate division. At present the elephant is in the possession of Mr. Boulet, and if, at the end of December, the corporation is without further accident, the pet will be sent to Mr. Pulliam again.

Results of the campaign were immediately noticeable. From June 24 to September 29, covering a period of 96 days, there was not a single disabling injury. The Wisconsin Public Service Corporation was the only utility in the group of large gas and electric companies to maintain a perfect record. On September 29 a minor lost-time injury marred the record, but since then until the present writing there has not been another. That means that only one lost-time case occurred in over 1,000,000 man hours worked by more than 1375 employees.

The National Safety Council campaign starts each year on July 1, and with the first quarter of the race over, the Wisconsin Public Service Corporation is out in front, and a keen contender for the coveted annual reward.

The corporation also was one of the few companies in the Public Utility Engineering and Service Corporation group to show a decrease in accidents. Its accident frequency this year from January 1 to September 30 was 3.939 in comparison with 6.278 for the same period last year. The average frequency for the entire group increased 31%.

Last year the company finished in ninth place nationally, and stood in fifth place for the same period of time in the Public Utility Engineering and Service group. Three times during the past eight years Wisconsin Public Service Corporation has won first place in the National Safety contest, and it hopes to regain that prestige at the end of the current contest.

The Company completed the entire month of November without a disabling injury, bringing the total man-hours up to 1,300,000 with but one chargeable accident. One thousand employees in the company's eastern division have completed 1,000,000 man-hours without a disabling injury. The last accident that occurred in the eastern territory was on May 25, 1936.

NATIONAL SAFETY NEWS

POSITION WANTED

Safety engineer with 12 years active experience in safety work in the steel industry wishes to contact an industrial organization needing a man well grounded in all phases of safety work. Age 34, married. Middle west location preferred. Address Box 302, NATIONAL SAFETY NEWS.

Water May Create A Fire Hazard

WHILE water is commonly used in fighting fires, strangely enough, it causes indirectly a large share of the farm fires occurring throughout the United States, according to Dr. David J. Price, fire and explosion specialist of the U. S. Bureau of Chemistry and Soils.

Fire caused by water, Dr. Price explained, is better known under a more technical name—spontaneous ignition. Bacteriological and chemical action influenced by water is likely to cause the ignition of hay, cattle feeds, fertilizers, and other farm products when stored in barns, farm buildings, or any kind of storage place.

The bureau's record of farm fires contains many strange stories.

For instance, the average person finds it difficult to imagine a fire starting in an ice house. Yet, in the bureau's files is a record of an ice house burning to the ground after the sawdust had become wet from a heavy rain followed by a period of very warm weather. The fire started from spontaneous ignition.

The records contain accounts of many other strange happenings, including a fire starting in a carload of mixed feed while in transit. The feed had a high moisture content and again spontaneous ignition started the flames. Similar fires have been reported when fertilizers were in storage or shipment. A check showed that in each instance the fertilizer had a high moisture content.

Furthermore, Dr. Price pointed out, water is not always a safe thing to use in fighting certain types of fires. It is a possible indirect cause of terrific explosions. This might happen when a full stream of water at high pressure knocks loose accumulations of dust or stirs up piles of finely ground combustible materials, which is likely in fighting fires in industrial plants. The flames ignite the dust cloud. The best procedure in the face of such hazards is

**WHY
try to
GUESS?**

When You Can Know!

What is the right way to keep your floors new and beautiful? Which is going to save you most in the long run—electric floor polishing and scrubbing or hand mopping and polishing? If you decide in favor of the machine, which should you choose—a small machine or a large one? Why try to guess the answer to these important questions when you can *know*?

We have a simple plan, based on our years of experience that will give you facts upon which you can make a right decision. This service costs you nothing. We cannot know in advance what the survey may show. We do know that it has in the great majority of cases shown the true condition of the floors, the facts as to the actual cost of the present maintenance methods. It has shown with amazing accuracy the probability of savings as well as improved cleanliness and appearance.

We offer you this service free. Then, if you wish, we stand ready to furnish you a service that will assure the full possibilities shown by the survey. Finnell floor polishing and scrubbing machines are the most complete line in existence. Finnell floor finishes include virtually everything for floor maintenance—Gloss Seal in several types, a full line of waxes both paste and liquid, headed by Finnell Kote, the unique hot process wax, also soaps, soap powders.

ASK FOR FREE SURVEY. Upon your request, one of our trained men will make a complete survey of your floors, and give you the facts upon which you can act with assurance. Address: FINNELL SYSTEM, INC., 2201 East Street, Elkhart, Indiana.

FINNELL SYSTEM
EST. 1906
OF FLOOR MAINTENANCE



NO. 1016 - 2"
SAFETY STRAP

NO. 1032 - 4"
SAFETY BELT

BUHRKE

Linemen's Safety Belts

When a lineman is on the pole he shouldn't have to worry whether or not his "safety" is safe.

Use Buhrke Belts for Satisfaction and Safety

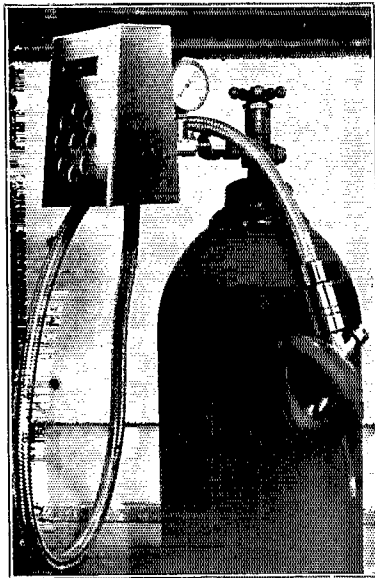
The R. H. Buhrke Company pioneered in the development of safety belts and straps over 40 years ago, with the help of public utility engineers. The result was equipment that was designed right, built right and provided maximum safety. Improvements in design have been made from time to time but the same exacting specifications of material, hardware, inspection and workmanship have always been maintained.

Write for catalogue

R. H. BUHRKE CO.
4538 Fullerton Ave., Chicago, Ill.
SAFETY EQUIPMENT FOR CONSTRUCTION AND MAINTENANCE

B-K Industrial INHALATOR

- for
- ★ Plant Hospitals
 - ★ Blast Furnaces
 - ★ Mills, Etc.



CATALOG NO. BK-402
Weight 7 lbs. \$75.00 With Case



Valuable plant emergency resuscitating equipment. Fits any standard cylinder. When attached to 200 cu. ft. cylinder, as illustrated, furnishes approximately 10 times as much oxygen as standard inhalator without changing cylinders. Widely used and approved.

Write for Bulletin 105

BISHINGER—
BK KOEHLER
MANUFACTURING CO.
7620 Kelly St., Pittsburgh, Pa.
Manufacturers
OXYGEN EQUIPMENT PRODUCTS



IN 1937 INSURE DEPENDABLE DUST CONTROL

PANGBORN DUST COLLECTORS operate day and night . . . protecting millions of dollars worth of property from the DESTRUCTIVENESS OF DUST. Are you *sure* your equipment is safe from this costly menace? You can be assured of real Dust Control in 1937 if you turn your dust problems over to Pangborn engineers. For over 30 years we have been successfully collecting dust in both large and small plants. Let us tell you more about our service. Write today.

PANGBORN
WORLD'S LARGEST MANUFACTURERS OF BLAST CLEANING AND DUST COLLECTING EQUIPMENT
PANGBORN CORPORATION HAGERSTOWN, MARYLAND

to use a vapor spray nozzle instead of the full pressure stream.

Too, there is the ever-present danger of water combining with some other substance and forming a combustible gas. An example of this is when water comes in contact with burning aluminum powder. Hydrogen gas is formed and an explosion may follow.

When dust is encountered in fire fighting, Dr. Price advises caution in the use of water. This is especially true in factories manufacturing metallic powders and it is best for such establishments to have large quantities of dry sand in suitable containers as a part of their fire-fighting equipment.

A recent sound picture, "Dangerous Dusts," produced by the U. S. Department of Agriculture under Dr. Price's supervision, has been shown at several meetings.

OBITUARY

P. W. A. FITZSIMMONS

P. W. A. Fitzsimmons, president of the Michigan Mutual Liability Company, died suddenly in Jerusalem on November 28. With Mrs. Fitzsimmons he had been enjoying a tour of the Mediterranean countries when he was stricken with dysentery. He was 66 years old and is survived by his widow and a daughter.

As an insurance executive Mr. Fitzsimmons had been active for many years in the promotion of both industrial and public safety. He was an influential supporter of the National Safety Council, in which he served as a director for several years, and of the Detroit Industrial Safety Council. He was also affiliated with numerous other organizations for the advancement of public welfare.

A. C. GIBSON

ALBERT C. GIBSON, director of safety and employment for Spang, Chalfant & Co. at Etna, Pa., died December 4. Death was due to a heart ailment from which he had been suffering for several years.

Mr. Gibson was born in Millvale, Pa., October 5, 1887. He had been with Spang, Chalfant & Co., since 1909, first in the drafting room, and since January 1, 1916, he had been in safety and employment work. For many years he was active in the Metals Section of the National Safety Council, serving as vice-chairman for 1924-25 and general chair-

NATIONAL SAFETY NEWS

man for the following year. He had been a member of the ASSE-Engineering Section since 1931 and had been prominent in safety activities in the Western Pennsylvania territory.

George J. Gorman has been appointed to the position left vacant by Mr. Gibson's death.

CHARLES E. BABCOCK



CHARLES E. BABCOCK, National Safety Council field representative, died November 23 at his home in Elk River, Minn. On November 15 he had suffered a heart attack in Cheyenne, Wyoming, and had remained there a few

days before returning home. His widow, Mrs Anna H. Babcock, survives him.

Mr. Babcock was born August 10, 1871. He was nationally known for his significant contributions to the development of the nation's highways. Among his many accomplishments in this field was his work in advancing the development of trunk highways. He was the first highway commissioner of the state of Minnesota and at one time was president of the Association of American State Highway officials, and president of the American Road Builders Association.

Joining the National Safety Council's staff in March, 1936, he was assigned to District 7, embracing Minnesota, South Dakota, North Dakota, Montana, Wyoming, Utah, Colorado, Arizona, and New Mexico. He assisted Arizona and New Mexico in organizing state safety councils.

Wounded Doe Kicks Gun; Kills Hunter

A WOUNDED doe was blamed for the fatal shooting of a hunter, according to an Associated Press dispatch from Reed City, Mich., dated November 22. The victim, Walter Draminski, a farmer, came upon the doe while hunting ducks and leaned over to examine it. According to the coroner, the doe apparently kicked Draminski's gun. It discharged and the shot killed him.

JANUARY, 1937

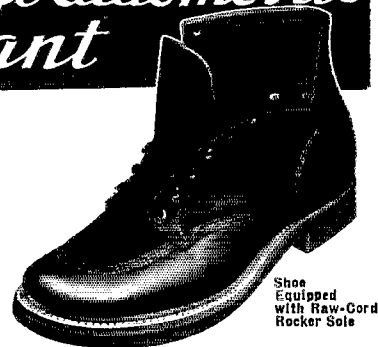


RAW-CORD SOLES AND HEELS

ARE WELL THOUGHT OF IN THIS PLANT AND I HEARTILY RECOMMEND THEM

A statement by personnel director of a large automobile plant

The Safety of workers is of paramount interest, not only to the workers themselves, but to officials and personnel directors as well. They know that workers wearing RAW-CORD, NON-SLIP Soles and Heels on their shoes are more efficient, and an efficient worker is usually a profitable one. This is why plant managers and personnel directors are recommending RAW-CORD equipped shoes. They are sold by shoe dealers in your city, ask for them by name.



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

SHOULD BE IN EVERY FIRST AID CABINET



Vio Gen

New Instant Treatment for Burns and Surface Injuries

Proved in service! Steel mills, foundries, chemical plants, and oil refineries use VioGen as the standard remedy for burns of every type. Painless spray application wins instant approval of the injured workman. Positive antiseptic protection and prompt, clean healing of injuries mean cash savings to the management. TRY VioGen NOW.

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WEST MEDWAY, MASS.

- ☐ Send _____ VioGen Spray Outfits at \$1.50 Postpaid.
- ☐ Send full information only, including bulk prices.

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There's SUPERSUCTION . . .

in the Powerful HOFFMAN HEAVY DUTY CLEANING EQUIPMENT

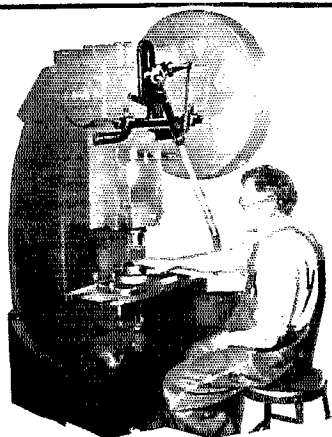
*Gets ALL Dirt
and Debris*

These bolts, nuts and other pieces were removed from a Hoffman system installed in a coal preparation plant. Lying hidden in piles of dust they were picked up by the nozzle, swept along the hose and deposited in traps placed in the piping for that purpose. Hoffman systems get the dirt; they pick up anything small enough to enter the nozzles.

Portable Cleaners—and permanently piped systems—for every industrial housekeeping job.

SEND FOR NEW BOOKLET
"THE MENACE OF DUST"

U.S. HOFFMAN MACHINERY CORPORATION
AIR APPLIANCE DIVISION, 111 FOURTH AVE., NEW YORK



Wiesman Safety Press Guards

Efficient protection for the operator without interference of natural working movements. Improved production because accident worry is reduced to a minimum.

Wiesman Press Guards are simple, easily attached, applicable to all types, sizes of presses; right or left hand stroke. Details?

Wiesman Mfg. Co.

31 to 35 South St. Clair St.
DAYTON, OHIO, U.S.A.

FERALUN Anti-Slip Treads

(Also Bronzalun, Alumalun
and Nicalun)

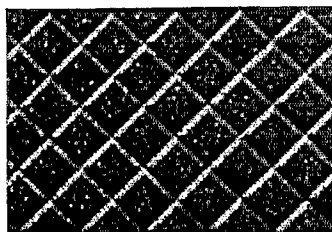
PREVENT ACCIDENTS
ON STAIRS and FLOORS

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



After the Injury

(Continued from page 36)

arbitrary stereotyped method of management impossible. To each individual, however, certain general principles may be applied. From the time of the accident until the injured workman is able to return to some type of work, complete control of the patient should rest with the physician, except that part which has to do with the classification of legal responsibility. In the latter connection the physician is serving only as a fact finding agency and technical advisor.

The injured workman's own family and his industrial family should interfere as little as possible with the doctor's management of the case. Many a workman's recovery has been unduly prolonged by many visits to the hospital, by a too solicitous foreman, or by a too "hard boiled" foreman. Once the injured is ready for some kind of work the employer at once shares responsibility with the doctor in the process of rehabilitation. The boss and the doctor should work with wholehearted cooperation toward obtaining the best result. The claim agent or insurance carrier greatly assists in the complete rehabilitation by keeping all parties concerned informed as to the workman's status from a compensation or liability standpoint.

In the management of the malingering these principles of procedure will be of little effect. The diagnosis of malingering should be made with extreme caution. In my experience the number of injured who come under this classification is exceedingly small. Too often the diagnosis of malingering is a substitute to cloak deficient medical care, inadequate study and poor management. When the diagnosis of malingering can definitely and unquestionably be made, the management of the individual should be the same as that of any other offender guilty of fraud and deceit.

"Oh, well," moralized the moralizer, "somewhere behind the clouds the sun is shining."

"Maybe," demoralized the demoralizer: "And under the sea is land, but that doesn't help a guy when he falls overboard."

Signs of the Times

"You are now entering God's country. Don't drive through it like hell."

This highway sign was seen at Hondo, Texas, says *Liberty*.

NATIONAL SAFETY NEWS

Warns of Asphyxiation Hazard in Silos

BECAUSE of the possible presence of suffocating gases soon after silage has been stored, entering a silo is considered particularly dangerous at that time, says Dr. David J. Price, chemical engineer of the Bureau of Chemistry and Soils, who recently investigated a case in Maryland, where three lives were lost in a pit silo.

The greatest danger comes, the bureau engineers say, when large quantities of carbon dioxide gas are generated during the fermentation that takes place when corn ensilage is placed in the silo. This fermentation, which begins immediately after the ensilage is put in, may continue for several days. The excess amount of carbon dioxide often lowers the oxygen content of the air to such a point that persons entering the silo will suffocate.

The pit silo, with its lack of ventilation, is the source of greatest danger. The air in the above-ground silos may be regulated by keeping one of the many doors open near the surface of the silage. Care should be taken to open the doors as near the silage level as possible after it has had time to settle.

The presence of dangerous gases may be detected easily by lowering a small animal or fowl into the silo before anyone enters. If the atmosphere is dangerous the animal or fowl will be affected but may be revived when brought back into fresh air. No attempt should be made to enter the silo until the gases have been removed by agitating the air or by proper ventilation.

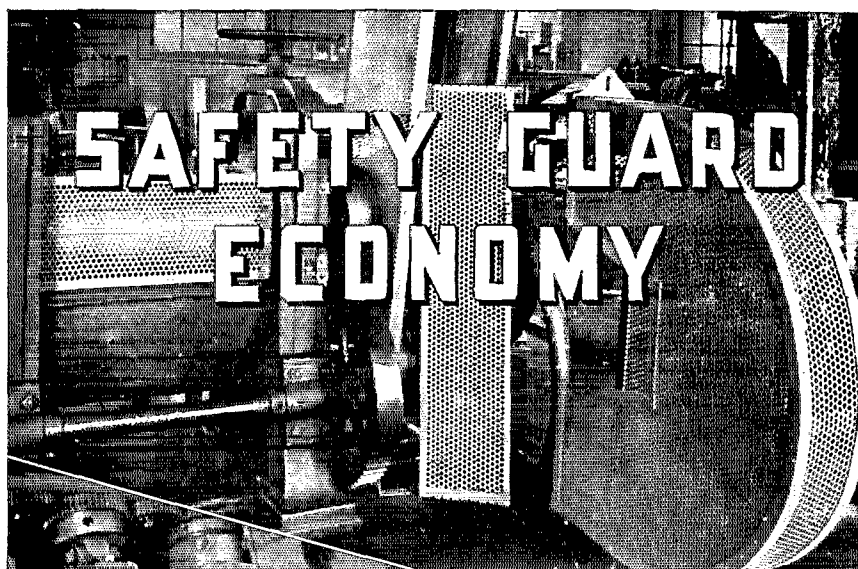
This can be accomplished by using a blanket, a piece of canvas, a limb of a tree, or similar devices to circulate the air and remove the carbon dioxide. As the carbon dioxide is heavier than air it is likely to settle just above the silage and remain until the silo has been aired properly.

If it is necessary to rescue a person overcome by gas in a silo, a rope should be tied securely to the person entering so that he can be removed promptly. If possible the air should be agitated quickly before he enters.

In cases of suffocation from silo gases the person affected should be removed as quickly as possible and artificial respiration given immediately.

A fatal accident is just a vital statistic—unless the victim happens to be your loved one or mine.—*Midvale Safety Bulletin.*

JANUARY, 1937



Economical protection

● Every accident prevented is a direct saving, and Safety should always be viewed from the standpoint of an investment and never as an expense item.

● A protected hazard reduces to a minimum the possibility of an injured worker and accident costs.

● H & K Guard Accessories are simple in design and construction yet afford maximum protection. They are not only efficient and durable but do not interfere with machine operation.

● Your inquiry will receive prompt attention.

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

The Harrington & King
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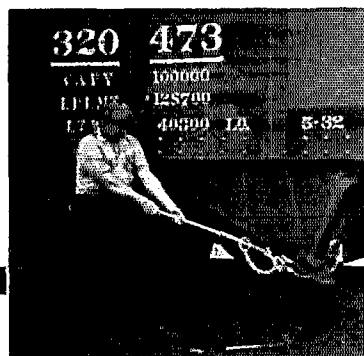
114 Liberty St.
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The Only Device Providing Protection against

- smashed fingers,
- strained backs,
- ruptures

and other injuries caused by dangerous hand, foot and bar methods of CLOSING HOPPER BOTTOM CAR DOORS.



The Prescott Safety Tool

Saves Time Safely with Any Car with Latch Type Door Lock.

Write for details and low prices.

The Trumbull Mfg. Co.
Warren, Ohio

CLOTHING BUYERS



MANY Department Stores employ special buyers for their clothing departments. They are experts in their line and have the knack of "picking up" special bargains, usually at a price, and turning the purchase into a profitable investment.

But STEEL-GRIP clothing is not purchased that way. The buyer is the man who is responsible for the life and limb of the employee. He knows you cannot buy protection in bargain lofts of clothing jobbers.

STEEL-GRIP gloves and safety clothing are designed for a single purpose—that is to protect and save human life. For this reason we spare neither time nor materials to make this brand of safety clothing as near perfect protection as possible. Most of our output is made up according to the specifications of the safety engineering departments of industry.

LET US SERVE YOU!



INDUSTRIAL GLOVES CORPORATION

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Detroit

Employee Training Pays Its Way

By J. P. MURRAY

*District Foreman, Empire Oil & Refining Company,
Oil Hill, Kansas*

Better relationships between foremen and men, improved job efficiency and greater safety consciousness are some of the results of a systematic program of training

OUR aim in employee training has been to develop alertness to the hazards confronting us, to eliminate as many of the hazards as possible, and to form safe and efficient working habits. The elimination of removable hazards and the installation of safeguards and protective equipment are important items, but the development of alert thinking and correct working practices seems to be the key to the situation.

In laying the foundation for any program of accident prevention, the men must be made to realize the hazards confronting them in their jobs. They must also realize that their sense of alertness to these hazards is still, generally speaking, undeveloped. When this picture is properly presented to them, they will usually be found receptive to instruction.

The first and most important requirement in carrying on accident prevention work is a foreman who has the necessary understanding of his job and some ability as a teacher and leader. These qualities are often latent in a foreman and can be developed through study and experience. Accident prevention work cannot be divorced from the foreman or the job. If the real training is removed from the job its effectiveness is lost. There must be association of instruction to the work done.

Training employees is primarily a problem of getting them to think on the job. However, if training is to be effective, it must be directed. Mere thinking without direction may lead to the formation of undesirable work habits. A man's ability to think is limited by

his mental capacity, his education and his job experience. A man of limited mental capacity is handicapped from the beginning in his ability to analyze his job and see the operation in its entirety.

Lack of educational experience restricts a man's thinking because it reduces the fund of information available for solving the immediate problem. In the same manner lack of job experience will handicap a man. To be of greatest value, job experience must be varied so as to offer numerous approaches to the solution of the problem.

Training, in the final analysis, consists of selecting a man who has the ability to think because of mental capacity and educational and job experiences; arousing his interest so that he will start thinking on the job; and directing it so that he will produce the desired results—efficiency of operation, which means a safe job. The goal is to make *thinking*, instead of manual operations, a habit.

Methods of Training

The training of foremen has been the first line of attack. The first move was to sell them on the importance of accident prevention, because the results obtained from any campaign are in direct proportion to the enthusiasm of the foreman and the energy he puts into it.

A number of job analyses and safety conferences were held. These started the foremen thinking in the right direction and helped them make a mental file of the information they already possessed. A conference on foremanship was also held. This brought out the facts on many phases of supervision and made the foremen conscious of their responsibilities.

Current data are continually supplied to aid foremen in conducting their work.

A word of caution regarding conferences is in order. Before calling one there should be a definite objective in view and the conference so directed as to arrive at that objective. If the objec-

NATIONAL SAFETY NEWS

tive is indefinite in the beginning and more so in the end, the results are likely to be damaging, particularly when we are dealing with men who are not accustomed to work of that nature.

About the time foreman training was begun in our organization, and in some instances before, all employees were required to pass an examination in first aid work. As new employees are added to the payroll, each is required to pass this examination. Aside from the direct benefit the men obtain from first aid training, it has been one of the important factors in creating interest in accident prevention work.

Accident prevention meetings are now held monthly for all employees. From a rather crude beginning has evolved the group, or, in our case, the tool house meetings held on company time. Here the foreman has his men together for consideration and discussion of safety and operating problems. Through the foreman's influence these take the form of directed thinking. Hazards, faulty working habits, accidents, near accidents and the like are discussed, new ideas developed, and conclusions drawn.

Preceding each month's meetings a regular meeting for superintendents is held, at which timely topics are discussed. The conclusions reached at these sessions are passed on to the foremen to be discussed at the regular tool house meetings for employees.

On October 9, 1933, a new project was launched with results surpassing those obtained from previous efforts. I refer to the employee training classes.

A wide variety of subjects has been taught, and each subject pertains to some phase of the job. Subjects have been selected according to their importance from an operation standpoint and the lack of knowledge displayed by the men. Also a reasonable number of lessons containing auxiliary information and scientific facts concerning operation have been prepared and presented. Wherever possible safety factors are included. In this way valuable information has been brought to the men.

A few examples of the subjects taught in the Oil Production Division are:

1. Manufacture and care of sucker rods.
2. Theory, construction and operation of gun barrels.
3. Concrete.
4. Levers and their practical application.
5. The pollution problem.
6. Pulleys, simple machines, friction.
7. Oil well pumps.
8. Occurrence and treatment of emulsions.

In many cases two or more lessons are required to cover a subject.

JANUARY, 1937

If Dust Injures the Product



USE VACUUM

Printing plants are a typical example of hundreds of industrial plants where dust can injure and even ruin the finished product.

Many plants are now reducing their percentage of rejects by keeping dirt and dust away from the product with a Spencer Vacuum Cleaning System. Workers do more work—and better work—in a clean room, and in most cases it costs less to keep the plant clean the Spencer Way.

A single operator—with a Spencer Portable, or a connection to a Spencer Central System, with a varied assortment of vacuum cleaning tools for every kind of floor or wall surface—can cover large areas quickly and easily.

Also the machinery, shipping containers, and even the finished product can be cleaned at a minimum cost. Ideal for removing silica and chemical dusts. Many types and sizes for all kinds of industrial applications. Write for the bulletin.

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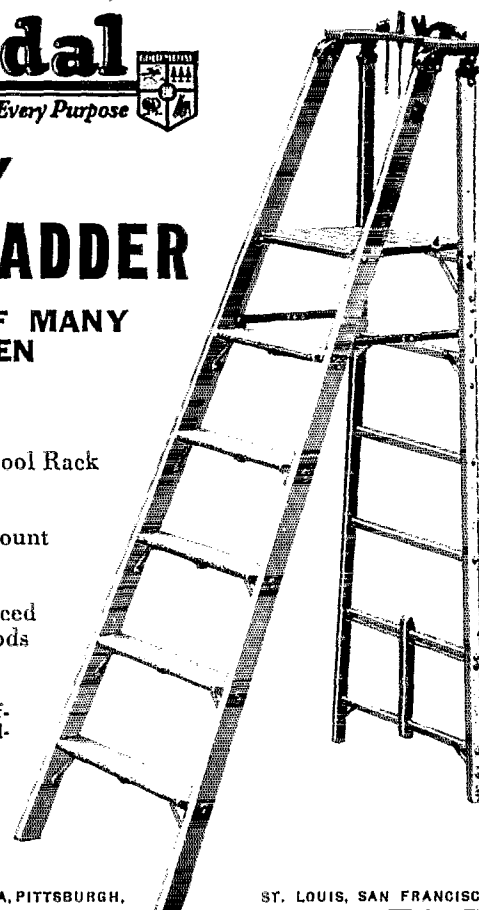
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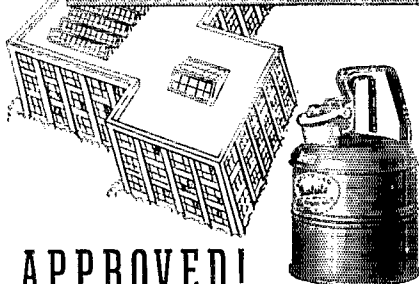
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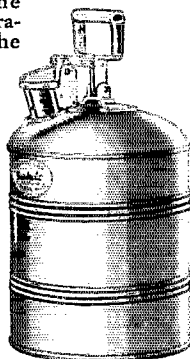
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There is a Justrite Safety Can for every Plant and Purpose—sizes from 1 pint to 5 gallons. Safe for handling gasoline, benzine and other volatile liquids—
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MANUFACTURING COMPANY

The outstanding benefit from our educational work has been improved job intelligence. It has made the men job conscious. Better operating practices have been developed in a number of cases and efficiency improved generally.

To the men these courses have brought additional information, helping them to develop themselves. While this training does not always bring higher positions and increased earnings, it does promote job security, which is very important to every man.

It has created interest in new things and in new ways of performing familiar operations.

It has brought the foreman and his men into closer relationship, created a better mutual understanding and an appreciation of each other's problems, and it has been a factor in the working out of new ideas by the men. The fraternal relationships developed have been conducive to better morale.

The teaching of safety in connection with the job lessons seems to leave a more effective and lasting impression than any other method tried previously.

Because of lack of previous experience in employee training, the ground work was carefully laid before the plan was put into operation. A college trained man with experience in teaching adults was employed as supervisor and placed in the field to get acquainted with oil production operation. Later experience has proved that this is necessary for the satisfactory operation of the system. Operating foremen seldom have the time or training needed for the preparation of material, and poorly prepared programs are likely to lag and finally fade out altogether.

A teacher's training conference was arranged in cooperation with the State Vocational Training Department and attended by the supervisor and other key men who in turn held teacher training conferences for the field foremen. These conferences dealt with the fundamentals of teaching. Many foremen, even the most efficient ones, found teaching rather difficult, but as a result of the training conferences and months of practice they have become quite proficient.

The foremen were selected as teachers of their respective groups for logical reasons. They were better acquainted with their men who consequently put more into the program. The lessons could be taught in a way that helped solve the problems of the group. The foremen would keep abreast of the pro-

gram and help to keep it active. They could also see to it that employees applied the information learned.

And finally, by studying and teaching the lessons, they have materially improved themselves as foremen. This alone has been worth more than the cost of the program.

It must be borne in mind by the key men that the success of such a program depends upon the attitude of the foremen. Where this needs building up, it can be accomplished by tact and salesmanship on the part of the superintendent or key man.

With the teaching staff assembled and prepared, after a fashion, the educational plan was presented to the employees at group meetings. The plan was explained to them and the hoped-for results outlined.

A class was organized by each foreman, consisting of men under his supervision. Each class meets bi-monthly on a regular schedule so that the supervisor can attend each one, keep the attendance roll and assist with the teaching when necessary. The classes are from one to one and one-half hours' duration and are usually held immediately after working hours or in the evening. Where the nature of the lesson makes it advisable, the class is held on the job during working hours.

It is important to keep the schedule regular and continuous, or both foremen and men will lose interest.

The subjects for the lessons are selected by the supervisor in conference with key men of the operating division and are prepared by the supervisor or men in the division who are qualified to prepare them.

At the close of each series of classes a teachers' meeting is held at which the next lesson is taught the teachers by the supervisor or by the man who prepared it.

Some idea of the attendance will be found in the following figures taken from one group of foremen in a field having a large number of men in a small area:

Men on payroll	271
Average attendance, per cent	77.4
Absent, on duty, per cent	2.5
Absent, on vacation, per cent	2.8
Absent, all others, per cent	17.3

The results of our work have been a better relationship and understanding between foremen and men, increased job efficiency of both foremen and men, improved safety consciousness and a greater tendency to give thought to the job instead of performing operations as a matter of habit.

Fire Hazards

(Continued from page 18)

closed spray booth, and another oven until the piece is finished. Failure to collect and remove resultant vapors by adequate ventilation systems renders practically certain flammable and explosive concentrations and eventual disaster.

Transformers, switches, and circuit breakers using flammable oils, though normally harmless, are potential fire hazards. Fires in these devices are usually very intense, hard to fight, and require special equipment and men thoroughly familiar with its use. The cause is generally an arc occurring between switch contacts or a short circuit in either the primary or secondary windings, causing intense heat which creates abnormal pressure from the vaporization of oil, resulting in explosion and the release of burning oil.

Sometimes these transformers are installed without regard to code requirements, are not properly segregated and enclosed, with no provision for indicating dangerous temperatures, with oil not regularly tested for its dielectric strength, and not well supervised from the standpoint of either installation or maintenance.

Static Electricity

Static electricity is said to have been the cause of many serious explosions and subsequent fires in recent years. There are few industrial operations where it is not found, dependent upon the type of manufacturing and the atmospheric conditions. In intensity it runs from 5,000 volts to 65,000 volts, but with very small amperage. It lasts only a small fraction of a second, having no continuous source of supply, and is especially dangerous in plants where there is dust or flammable vapor.

Exhaustive tests have shown that static electricity is much more likely to be disastrous in low humidity. It may be caused by belts, pulleys, paper in course of manufacture or printing, revolving or elevating machinery; in fact, it is likely to be in evidence almost anywhere where there are rapidly moving parts or materials. A simple method of detecting static is to hold a piece of cotton thread near the object to be tested. If static is present, the fibres of the thread will stand out with the appearance of bristles.

The remedy is proper grounding of all machinery, line shafts and hangers, and operating units and chutes. The

JANUARY, 1937

DRACCO UNIT FILTERS

Collects DUST from INDIVIDUAL MACHINES

DRACCO Unit Filters will efficiently and economically control dust for individual machines. Many operations create dust and grit that spreads to all parts of the plant and causes a serious nuisance. In many plants a few DRACCO Unit Filters will do away entirely with a serious dust hazard. DRACCO Unit Filters can be placed at the dust source, near the machine, and a short pipe will carry dust to Filter. Filter can also be placed a reasonable distance from source of dust if necessary. We supply DRACCO Unit Filters for individual machines or complete DRACCO Dust Control system for entire plant. No job is too large or too small.

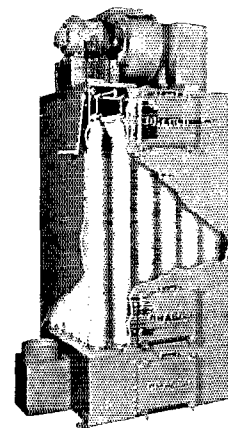
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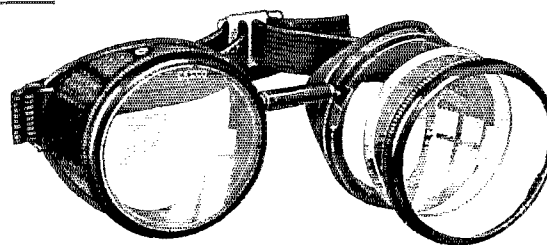
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Dracco Unit Filter

No. 535 CESCO

Light — scientifically ventilated — clear — safe.



The Eyes of Industry CESCO Need a Friend— CHIPPING GOGGLES

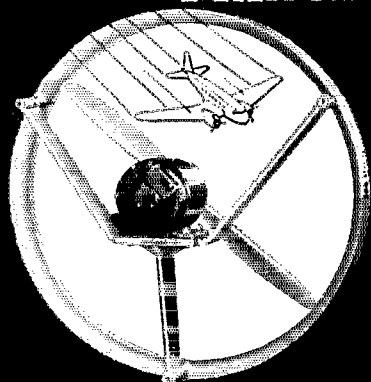
Where there are impact hazards, eyes must have protection from them. In CESCO Chipping Goggles that protection is complete. Eyes should also be safeguarded against strain. This is accomplished by shallow eye cups that are anatomically shaped and adjustable to a perfect fit—to safe circulation of air inside the lenses and elimination of fogging. All CESCO Goggles and Spectacles are real friends to the eyes of industry.

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for Ventilating and Exhausting are GUARANTEED to move more air at smaller cost than any other fans of equal size. Write for facts.

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best ground is a cold water pipe system. If this is not available, a proper ground must be made to permanent moisture, using large copper wire to provide against mechanical injury destroying the ground. A system of grounded combs installed near the release of belts from pulleys, particularly wooden pulleys, is good, but the belts should be covered with a conducting dressing applied frequently, containing lamp black or graphite and varnish with carbon tetrachloride as a thinner. In some plants a 50-50 solution of glycerin and water has given excellent results.

In a printing plant where strong static charges were in evidence, they were overcome by placing a few strands of tinsel, made of thin copper attached to a thread and suspended across the machine, both over and under the paper as it left the printing press.

Of course, everything possible should be done to eliminate dust and flammable vapors from buildings where static charges are detected.

After every remedy has been applied for grounding to remove static charges, careful tests should be made with an electroscope or other device to see that the desired results have been obtained. These tests should be continued at least monthly.

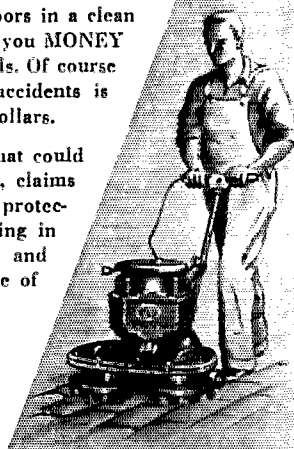
**Slipping Accidents
Often Prove Fatal**

WET and slippery floors—floors that are greasy—embedded with dirt or otherwise in a dangerous condition due to other waste material, contribute to fatalities from falls among industrial workers. Do not let a hazardous floor condition rob an employee of Life or Limb, when it can so easily and economically be corrected with a LINCOLN TWIN-DISC Machine.

Not only will this machine be an important factor in accident prevention, in keeping your floors in a clean-sanitary condition, but will actually Save you MONEY in Labor, Time and floor cleaning materials. Of course the Savings accomplished in preventing accidents is incalculable and far beyond all worth of dollars.

Don't delay until a common floor accident, that could have been easily and economically prevented, claims one of your employees before you have this protection. Write TODAY, stating the types of flooring in your plant and floor problems you encounter and we'll gladly arrange a FREE demonstration of one of our industrial machines at your convenience.

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FLOOR MACHINERY COMPANY, INC.**
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The LINCOLN Twin Disc
SCRUBS - WAXES - POLISHES

The Proof?

(Continued from page 16)

outside of the gas and electric field. Time after time, members of the Company's first aid crews have happened to be near the scene of some accident and have given of their expert knowledge to save the lives of the victims.

Educational work is carried on unceasingly by the Safety Engineer and his assistants. Warning posters and placards are displayed throughout the system. Meetings are held. Awards are given for freedom from accidents. Construction work is inspected to enforce both Company and State safety requirements. Accidents that do happen are analyzed to make known avoidable causes. Rule books and manuals of instructions in first aid are issued. Everything humanly possible is done to eliminate inattention, poor judgment, haste, improper planning, disobedience of rules, recklessness, inexperience and unskillfulness, and other contributing causes of accidents, injuries, and fatalities.

A patrol wagon isn't much of a car, but it'll do in a pinch.

NATIONAL SAFETY NEWS

Speed Without Hazard!

(Continued from page 14)

other safety devices, which complied with specifications and requirements prescribed by the Commission. At present there are 10,254 miles of road, 19,770 miles of track, and 9,155 locomotives and motor cars equipped with automatic train-stop, train-control, or cab-signal devices.

The laws above described contain all of the authority which the Commission is permitted to exercise to promote safety on railroads. In so far as equipment and practices come within the scope of laws administered by the Commission, the improvement has been gratifying.

The results of these laws have been two-fold: That they have promoted safety in large measure is abundantly proved; that they have been equally effective in promoting efficiency in railroad operation is not now questioned. Devices such as automatic couplers and power brakes were workable devices when the laws requiring their use were passed and would no doubt have eventually come into general use, but the experience of the carriers in their efforts to regulate the transportation of explosives proves that it would only have come about after a long period of years, and even then the degree of uniformity and standardization necessary to provide adequate safety would have been lacking.

For more than two decades the Commission labored under difficulties in its work to promote safety. There was no regular organized safety movement as at present. Safety agents or superintendents of safety on railroads had not even been suggested. It was the general view that in accepting employment railroad employees accepted the occupational risks, and this view had the support of the courts. I speak from experience when I say that in those days railroad employees who took the greatest chances in the interest of expediting their work were considered the best employees. The rule that an employee must take sufficient time to do his work in safety had not been heard of.

Since 1888 when regular accident statistics for steam railways were first compiled by the Interstate Commerce Commission, there have been numerous changes in the rules for reporting accidents. For the entire period only general comparisons such as those given regularly in Appendix A of our annual

accident bulletin can be made. For illustration, some examples must be given. In 1890, out of a total of 749,301 railroad employees, 2,451 were killed in the performance of their duties. In 1935 this had been reduced to 600 killed out of a total of 1,013,654 employees. In 1890, 286 passengers were killed, while in 1935 there were but 30, 18 of which were passengers on trains. In 1890 one passenger was killed for each 41,426,000 miles traveled, while in 1935 one passenger was killed for each 616,983,000 miles traveled. To travel this distance at 1,000 miles per day would require 1,690 years. During 1935 not a single passenger was killed in a collision or derailment.

I do not wish to leave the impression that the present remarkable safety record on American railroads is wholly due to the safety regulations administered by the Interstate Commerce Commission. Far from it. I do say, however, that in so far as the particular devices and practices covered by these regulations are concerned, they have proved a pretty complete remedy and have also helped to make railroad officials and employees safety conscious. Ever since the enactment of the first law for the promotion of safety on railroads the Commission has earnestly sought the cooperation of railroad officials and employees, and for more than a quarter of a century it has received such cooperation to a remarkable degree. The results are shown in our annual reports and in our quarterly accident bulletins. Those results show conclusively that at the present time travel by railroad is the safest known means of transportation.

The Motor Carrier Act. I shall briefly discuss the safety provisions of the Motor Carrier Act for two reasons. They are to be administered by the Commission and accidents resulting from collisions between trains and automobiles are now investigated by our Bureau of Safety.

Under the provisions of the Motor Carrier Act of 1935 a new phase of safety work has been assigned us. Section 204 of this act directs the Commission to regulate the safety of motor transportation by establishing reasonable requirements governing "qualifications and maximum hours of service of employees and safety of operation and



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IN SAFETY THE BEST IS NONE TOO GOOD

equipment" of common and contract carriers in interstate commerce by highway. These broad powers open up a new field of activity and present very difficult administrative problems. Of course the scope of the Commission's work under the Motor Carrier Act will cover only a small fraction of the 26,000,000 motor vehicles on our streets and highways, probably at the outset not more than 200,000 vehicles, but the results of our work will have a marked effect over the entire safety field.

In the preparation of regulations governing safety on the highways our Bureau of Motor Carriers has been in touch with the National Safety Council and many of its affiliated organizations and welcomes their assistance. A public hearing was held in September in Washington. The record made is under consideration and as soon as practicable an order will be issued making effective the initial safety regulations applicable to common and contract motor carriers.

Some of the major items in the Commission's work in this field which will require consideration are a more general adoption of recognized safe driving practices; development of competent drivers; proper limitation on hours of service; improvement of equipment; better inspection and maintenance; greater uniformity as to maximum permissible size and weight of motor vehicles; careful study of the causes of accidents; and recommendations or regulations to prevent similar accidents in the future. The regulations which will be necessary to accomplish this must be based on experience and study but they must be adequate to control the loss of life on the highways which far exceeds that in any other industry.

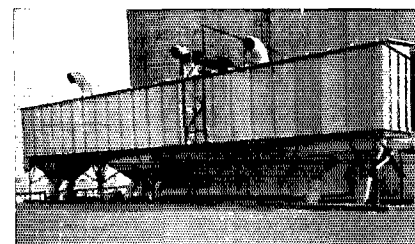
We must not assume that the question of safety on railroads has been solved for all time. Due to legislative action and the splendid spirit of cooperation between the government, the railways, and the railway employees which has been developed in the administration of safety laws and rules, problems affecting safety have been met as they have arisen and the record is one of which all may be proud.

But the question is still here and demands the best thought of all of us. Established means of transportation are passing through a period of evolution. If, in fact, it is not one of revolution, and new means are being established, some of which are admittedly far more hazardous and present problems far more difficult than any encountered in the past.

The principal hazards in all forms of transportation, which must be controlled if reasonable safety is to be provided, are due to the public desire for speed for which adequate safety provisions have not been made. To meet this desire highway transportation on the open road crowded with vehicles operated by whoever happens to own them and controlled by hand is speeded up to compete with railroad transportation over a private highway where all vehicles are mechanically or automatically controlled, and the results are disastrous. Railway transportation is being speeded up to compete with transportation by air, and air transportation is daily being speeded up to establish new speed records in competition with itself, and the price of it all is shown in the accident records.

Last year 37,000 persons were killed and more than 1,000,000 were injured in motor vehicle accidents. These include 3,933 grade-crossing accidents in which 1,680 persons were killed and 4,658 persons were injured. Of these crossing accidents, 1,372, in which 338 persons were killed and 2,018 were injured, were caused by motor vehicles running into the sides of trains.

Train speeds of 100 miles per hour, which is 146.6 feet per second, are now



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PARSONS
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6536 Carnegie Ave. Cleveland, Ohio

NATIONAL SAFETY NEWS

common on a number of railroads. In many States heavy motor vehicles are required by law to stop before crossing a railroad track. At many crossings trucks with trailers, which perhaps may be carrying flammables or other dangerous commodities, would be struck before they could get across a multiple track railroad by a high-speed train which was not within the range of the driver's vision when he started across the tracks, and the train could not be stopped before reaching the crossing by an emergency application of the brakes made as soon as the crossing came within range of the engineer's vision. There is only one remedy for such a situation, namely, grade separation, and this should be the immediate objective wherever such trains are operated.

Banquet Celebrates Twelve-Year Record

THE completion of 12 years without a reportable injury to any of the 60 car department employees of the Delaware & Hudson Railroad Corporation was celebrated at a banquet and reception in the Hotel Redington,

Wilkes-Barre, October 20. More than 200 employees and their guests attended. The 12 years represented a total of 1,877,557 man-hours. The last reportable injury occurred August 28, 1924.

Among the speakers at the banquet were John E. Long, Superintendent of Safety and Past-President of the National Safety Council; Patrick Monahan, President of the Independent Association of Car Men of Hudson; Carl Dierks, Chief Car Inspector; Guy A. Smith, Manager, Metropolitan Life Insurance Company, Wilkes-Barre District, and Father Joseph Paddon, who at one time had been employed at Hudson under Foreman T. H. Smailes.

Baseball Film Aids Safety Campaign

CAPITALIZING upon the interest boys and men have in baseball, the Maine Highway Safety Campaign is utilizing a combined safety and baseball moving picture show throughout the state with most pleasing results.

Through the cooperation of Aetna Casualty & Surety Company, Don Brennan, Maine's only major leaguer and a member of the Cincinnati Reds pitching staff, has been employed and assigned to the campaign. Brennan uses the official American League sound film "Take Me Out To The Ball Game," together with safety movies. The baseball picture is a contribution of the Fisher Body Corporation.

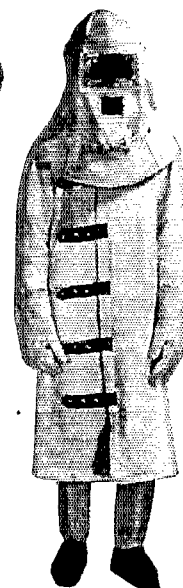
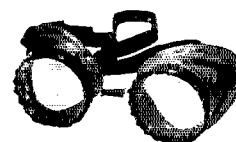
Much emphasis is being placed upon "Father & Son" Nights and later "Baseball Clinics" will be held in many schools to help youngsters improve their game and incidentally to place before this group of drivers their responsibilities on the highway.

The response to this activity has been most gratifying. Legion posts, men's clubs, college groups and industrial gatherings are booked for showings throughout the winter months and a tremendous impetus has been given safety work in many areas. One noticeable result is that more parents are instructing their youngsters before turning over the family car to them.

N. Y. Central President Honored by Yalermen

DURING the week before Christmas 300 Yale alumni gathered in Montclair, N. J., to honor F. E. WILLIAMSON, president of the New York Central Lines. Mr. Williamson (Yale '98) received the Montclair Yale Bowl which is awarded annually to the Yaleman "who has made his Y in life."

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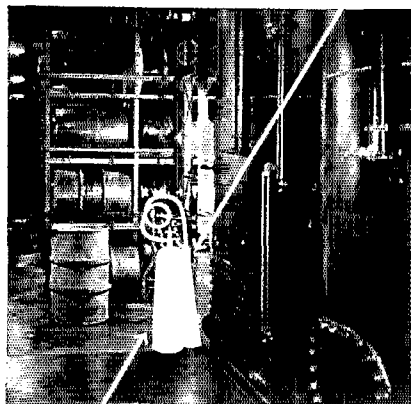
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IT IS mighty bad business policy not to guard every fire hazard. There is no economy in sparing the extinguisher and spoiling the factory. It is equally poor safety policy to have the *wrong* extinguisher. Let's be specific—In the oil storage room, pictured above, carbon-dioxide protection is essential. Ordinary extinguishers are helpless before flammable liquid fires. LUX carbon-dioxide snow-and-gas snuffs them out in a few seconds . . . in a fast-expanding cloud that reaches every remotest inch of the fire area.

LUX extinguishers use the fastest known extinguishing agent, LUX carbon-dioxide snow. It is clean, dry and harmless to man or materials. You may use LUX on the most delicate electrical equipment without the slightest damage.

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Walter Kidde & Company
21 West Street Bloomfield, N. J.



**For All Electrical and
Flammable Liquid Fires**

Safety on Public Works

(Continued from page 50)

on their projects. In most instances, projects financed in whole or in part from Federal Emergency Relief funds are conducted under the direct supervision of superintendents employed by the sponsors, who are in no way relieved of responsibility for maintaining safe working conditions and preventing accidents.

Regular inspections of all operating projects are made by members of the state and district safety staffs. Notices of observed infractions of safety regulations and of unsafe conditions are immediately dispatched to responsible authorities, together with recommendations for their corrections, since the safety inspectors serve in an advisory capacity only.

Buildings to be occupied by project workers must be inspected and approved before their use is permitted. Since many premises used by sewing projects and other similar indoor activities are donated for this purpose, every precaution is taken to see that they are safe for occupancy.

All trucks and other mechanical equipment are inspected frequently to insure their safe operation. In this connection it should be mentioned that in many localities where other means of transportation are not available, it is necessary to transport workers to and from remote projects by trucks. This practice involves many unusual hazards and the most rigid standards of passenger safety are maintained.

Safety devices and appliances are provided and used wherever necessary in hazardous undertakings. These include goggles of all kinds, safety belts and lines, respirators, gas masks, safety helmets and other equipment.

Adequate first aid facilities are maintained for all workers, including the services of a person certified as competent to administer first aid. Many thousands of relief workers have been given first aid training by the United States Bureau of Mines and the American Red Cross, to fit them to properly perform this important duty on projects. First aid kits and refills, which must conform with standard specifications, are purchased in large quantities in each state.

Regular conferences and meetings are held in every district to instruct supervisors and foremen in safe methods and safety procedure. Operating executives are fully advised that they will be held strictly responsible for preventable accidents involving workers under their supervision, and are impressed with the

fact that the success of safety effort depends largely upon their leadership and good example.

The last, but by no means the least, accomplishment during the present program has been the further development of a simple accident reporting system, that provides Washington and the state headquarters pertinent information on accident causes throughout the country. By means of this efficient reporting service it is possible to analyze the more prevalent causes of accidents and to formulate corrective measures. In this way the safety organization in each state is able to profit from the experience in other states and to more effectively promote its own safety effort.

The Works Progress Administration has now completed over a year of its activities. During this time more than three million persons have been employed, working over three billion man-hours on nearly one hundred thousand operating projects. This is undoubtedly the greatest single peace-time occupational exposure on record, yet it is believed that the lost-time injury and fatality frequency rates will continue to compare favorably with those in private industry and other branches of the government service. It will be noted that the proportion of accidents attributable to each of the twelve classified causes shown in the accompanying charts, nearly conforms with the experience in similar operations conducted by private enterprise.

As a result of the prompt and efficient work done by this splendid safety organization and the willing cooperation of work supervisors in adopting measures of accident prevention, the Civil Works Administration ended its operations in April, 1934, with lost-time injury and fatality frequency rates much lower than had been expected by many at the start of the program.

Aside from the purely humanitarian aspects of providing safe working conditions for this large number of employees, it should be recognized that a very valuable contribution is also being made to the industrial safety movement. Many of these relief workers have never before received safety training. Through the effort that is made to guard them against accidental injury in their present employment, they are becoming safety-minded in the truest sense of that term.

Many of these workers will eventually enter the ranks of private industry. When that time comes they will carry with them a knowledge of safe practice which should make them capable and preferred employees.

NATIONAL SAFETY NEWS

The Honor Roll

Details of no-accident records in excess of 400,000 man-hours, or 300 working days, are invited for this department

Central Illinois Electric & Gas Co.

With an average force of 34 employees, the Line Department of the Central Illinois Electric & Gas Company, Rockford, Ill., worked from June 3, 1932 to May 14, 1936, without a disabling injury. A total of 237,328 man-hours was worked during this period.

Consolidated Cigar Corp.

The Casing and Packing Departments of the Consolidated Cigar Corp. plant at Poughkeepsie, N. Y., with an average force of 75 employees, has operated for more than eight years under the direction of M. C. Boesch, general manager, without a disabling injury. The number of man-hours during this period totaled 1,118,720 man-hours.

Lever Brothers Co.

On December 3, 1936, the Cambridge, Mass., plant of Lever Brothers Company had operated a total of 1,269,909 man-hours since July 31, 1936, without a disabling injury. The record was still unbroken at the time of reporting.

The best previous record among those submitted by the soap manufacturing industry to the National Safety Council was 1,200,731 man-hours made in 1933 by the Procter and Gamble Manufacturing Company at the Port Ivory Plant, Staten Island, N. Y.

Ralstona Purina Co.

The following records are reported by plants of the Ralstona Purina Company:

Battle Creek, Mich. Manufacturing and packing flaked and shredded cereals, this plant has operated since August 25, 1932 (over 578,000 man-hours) without a disabling injury. Only one lost-time case (2 days lost) since October 1, 1929.

Winner of the Purina Interplant Contest for Class "A" plants in 1933-34 and again last

WILLIE EVERLEARN



year, this plant has operated six periods of twelve months each without a disabling injury since 1928. For the fiscal year 1935-1936 this plant averaged 112 employees.

Nashville, Tenn. Manufacturing animal and poultry feeds, this plant is also a six time winner of our trophy for twelve perfect months. No disabling injuries since February 1935, when this plant broke a record of over 650,000 man-hours, they have now operated over 246,000 safe man-hours in 17 months.

Ry-Krisp Plant, Minneapolis, Minn. Another six time winner of the company's "No Accident Year" trophy, this plant has operated since August 1934 without a disabling injury. On November 1, 1936 this amounted to over 394,000 man-hours. Winner of our Class "A" Interplant Contest in 1930-31 and in 1934-1935.

Woodstock, Ontario. Making animal and poultry feeds since February 2, 1933 (over 264,000 man-hours) without a disabling injury. Winner of the Class "B" trophy in 1935-36 and six times winner of the "No Accident Year" trophy. The first plant in the organization to work twelve consecutive months without a disabling injury. This first year was completed on March 13, 1929.

St. Johnsbury, Vermont. Winner of our Class "C" Contest in 1935-36. A six times winner of our "perfect year" trophy and their last disabling injury reported in July 1931. This plant has now made animal and poultry feeds for over five years (more than 156,000 man-hours) without a disabling injury.

Standard Lime and Stone Co.

The bridge plant of The Standard Lime and Stone Company at Havre de Grace, Md., completed three years of operation without a disabling injury on November 10, 1936, on which date the record had not been broken. This stone crushing plant, which employs approximately 137 men worked 411,826 man-hours during the three-year period. In the continuous safety campaign, prizes are awarded to foremen, badges to the men, and all workers are entertained by the company at banquets.

Coming Events

Of Interest to Safety Men

April 13-15, New York City

Eighth Annual Convention, Greater New York Safety Council. (Hotel Astor.) Julius H. Harvey, executive vice-president, Greater New York Safety Council, 60 East 42nd Street, New York City.

June 3, La Crosse, Wis.

Second Annual Upper Mississippi Valley Safety Conference. Secretary, W. F. Oppermann, c/o La Crosse Vocational Schools, La Crosse, Wis.

October 11-15, Kansas City, Mo.

National Safety Council, Twenty-sixth National Safety Congress. W. H. Cameron, managing director, 20 North Wacker Drive, Chicago.

Out In 3 Seconds!



The Lux Model 2 Bears Underwriters' Laboratory Approval.

**New Small-Size
EXTINGUISHER
Shows Speed in Killing
TRUCK FIRES**

THEY drenched this truck's engine with gasoline, then tossed a match in. A pair of men with stop-watches gave the signal to a man who held a small fire-extinguisher.

In 3 seconds it was all over! This little fire-killer poured a miniature blizzard of carbon-dioxide snow over the motor and the fire was out in a snap of your finger.

The new LUX Model Two, about half the size of a baseball bat, is an extinguisher with a real wallop against fire. It uses LUX carbon-dioxide snow, the fastest known extinguishing agent. It kills fires by snuffing them out, smothering them.

For sure-handed, fast-moving protection on truck fleets, company cars, LUX Model Two is your answer. It extinguishes electrical fires as well as gasoline blazes. And LUX won't do a trace of damage.

We suggest you send for our new booklet, giving information on the complete line of LUX extinguishers. Write today to

Walter Kidde & Company

11 West Street, Bloomfield, N. J.



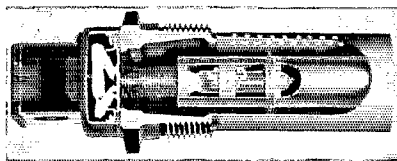
**For All Electrical and
Flammable Liquid Fires**

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

Float Operated Switch Controls

A simple float-operated switch for the checking or control of liquid levels has recently been developed by McDonnell & Miller, Wrigley Building, Chicago. The working mechanism, as shown by the accompanying cut-away view, consists of a mercury switch inside of the float which



is attached to the head by means of a flexible metallic bellows. As the float switch moves through its arc, the mercury switch makes and breaks contact.

The unit shown in the illustration can be screwed in a horizontal position directly into a tank or vat at any desired height. When the liquid level reaches a height that will move the float, the mercury switch makes contact to sound an alarm, light a warning light, or may be used to start up a motor operated pump or other electrical device. It may also be installed at a pre-determined low level to cut in a motor-pump unit or sound an alarm, as required.

This particular unit is used as a low water cut-off switch to stop an oil burner or stoker when the boiler water level falls to the danger point. A device of similar design is equipped with a three wire switch so that it makes one circuit and breaks another when the float is moved through its arc by rising or falling liquid level. Used as a low-level switch, for instance, it can be made to start a pump and sound a low-level alarm, or used as a high-level switch it can be wired to stop the same pump and sound a high-level alarm. On oil storage tanks the three-wire type will sound a low-oil alarm and stop the oil burner. Another, set at the high level, will indicate when the tank is filled.

New Non-Metallic Belt Lacing

The Sudbury Laboratory, South Sudbury, Massachusetts announce a new non-metallic belt lacing for fastening flat belts or V-belts.

Made of the strongest fibres, "Tek-Lace" is only 0.055 inches in diameter, but has a tensile strength of 100 pounds, so states the manufacturer. This is more than 50% stronger than Federal specifications for raw-hide $\frac{1}{4}$ " wide and $\frac{1}{8}$ " thick. A three-inch belt fastened with Tek-Lace has a tensile strength of 2000 pounds at the joint, asserts the manufacturer. The small holes that it requires are pierced through the belting without cutting the fibres.

It sets into the belt instead of standing out above the surface and the joint is thus as smooth and flexible as any other part of the belting. The joint takes the curve of the pulley perfectly, and there is no slipping or bumping to interfere with the transmission of power. Fastenings may be made by means of an ordinary awl or other piercing tool. For quicker application, however, a special piercing tool with gauge and channeling device is available.

Sound Absorbent Telephone Booth

A new de luxe phone booth, utilizing a sound absorbent lining instead of wood panels, is the latest development of the Burgess Battery Company, Acoustic Division, 111 West Monroe Street, Chicago, Illinois.



The new booth harmonizes with the furnishings of hotels, depots, drug and department stores. It is open around the base and, states the manufacturer, due to the absorption of the Burgess Acousti-Pad lining, it requires no door. This feature of the design facilitates natural ventilation and easy cleaning, yet greater privacy is achieved than in ordinary closed booths. Noises which enter the booth are absorbed and sounds from within can only be picked up by the telephone transmitter.

It is constructed of steel and the overall height is 85 inches; width 32 inches; depth 42 $\frac{1}{2}$ inches. A concealed ceiling light is provided with pull chain socket. Two shelves are provided for holding the telephone instrument and directories.

Paint Cleaner

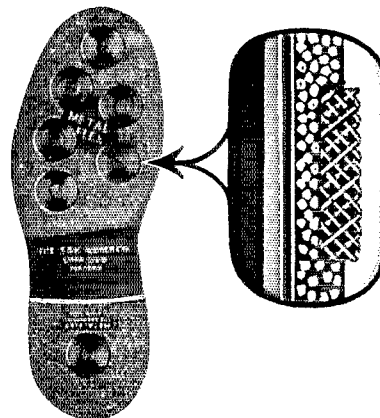
The Flexrock Company, 800 No. Delaware Ave., Philadelphia, Pa. has placed on the market a new paint cleaner known as "Cleanbrite". It is the contention of the company that it cleans paint easily without



odor to disturb the employees and restores the original gloss to the surface cleaned.

New Shoe Sole

The S. & K. Rubber Co. Lima, Ohio are announcing a new shoe sole and heel for the wearers of heavy shoes. The illustration shows an enlargement of the in-



serted plug "Metal Flex" which is composed of fine, sharp, flexible steels and, according to the manufacturer's statement, will cut through films of oil, water or grease and have a spring action when pressure from the foot causes them to protrude and grip.

Wire Rope and Cable Sockets

Patents recently purchased by the Electroline Company, S. La Salle St., Chicago, Illinois apply to a novel method of holding the ends of stranded wire ropes or cables by bending them over or around and/or passing them through a tapered metal plug enclosed in a steel body.

There are many forms of this device and they have been made applicable to practically every installation where wire rope and cable is employed. They are manufactured for use with all sizes of wire rope and cable from $\frac{1}{4}$ " to 1" inclusive.

These fittings are made of 1040 S. A. E.

Application to Wire Rope



Wire rope passed through sleeve and strands broomed-out for insertion of tapered plug.



Plug driven in and strands closed to apply socket.



Socket applied showing the twisted strands and completed assembly.

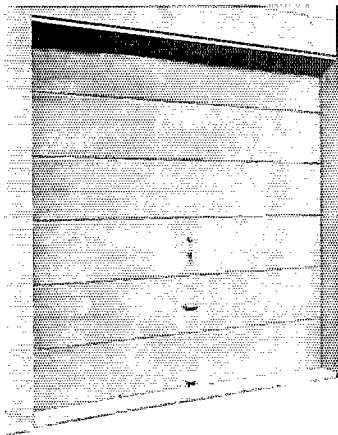
steel—drop forged, heat treated and machined to precise dimensions. They are neat, compact and smaller in size than the hot sockets because the large basket for the hot metal in the old sockets has been eliminated. There is no zinc to heat. The plug designed to specification is inserted.

NATIONAL SAFETY NEWS

The manufacturer states that there is no danger of weakening the wire by annealing due to too hot a metal having been poured, or to the loosening in the socket by too cool a pouring.

Metal Roll-Up Garage Door

The Kinnear Manufacturing Company, 115 Fields Avenue, Columbus, Ohio, manufacturers of all kinds of roll-up doors, is now making the "All-Steel RoL-ToP" garage door. The door sections are rolled from heavy gauge steel sheets and then galvanized. A roll on the edge of each section provides a continuous, smoothly operating, interlocking hinge and also serves as a substantial reinforcement against deflection or possible warpage. Operating on ball-bearing rollers traveling in steel vertical and horizontal tracks, the door easily raises up, over, and back, being perfectly counter-balanced by means of two matched tension springs that lay parallel to the horizontal tracks. Vertical tracks are mounted on a continuous angle



assembly to which an adjustable sloping metal weatherstrip is attached. This strip engages the end of the door, forming a "Keystone" sealing arrangement. The doors are made in any size and are furnished with or without sash. It is said they meet established fireproof requirements, are both strong and weather resistant.

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.

Swell Chance

Rastus and his wife, driving to town in their decrepit olivver, had parked it casually in the first available space. While they were away a traffic officer attached a number tag to the vehicle for parking in a prohibited zone. On their return, Rastus noticed the tag and was for throwing it into the street, but Dinah restrained him.

"Sabe de ticket, honey," she said. "Dat number might win somethin'."

Teacher: "Who said, 'I come to bury Caesar'?"

Nervous youngster: "P-please, teacher, the undertaker!"

JANUARY, 1937

Trade Publications

for your

SAFETY EQUIPMENT LIBRARY

A Service For Our Readers

Now is the time to devote more study to all types of equipment and products which can lower production costs through factors of safety. Find out now what the market offers. The publications listed below will be sent free and without obligation to readers of National Safety News. Indicate on coupon the publication you desire.

1. Find the Defect Before the Failure:

Four pages with photographic illustrations, devoted to a Live Line Insulator Tester describing its construction and method of use. Railway & Industrial Engineering Co.

2. Velocity-Power Cable Splicers:

A brochure showing two types of self contained and portable cable splicers for distribution systems and power lines. Mine Safety Appliances Co.

3. Safe Housekeeping for Industry:

A folder dealing with the Spencer Portable Vacuum Cleaner and showing its uses and applications in various industrial requirements. The Spencer Turbine Co.

4. Erie City Safety Latch:

A discussion of the safety factors, uses and purpose of the safety latch on boiler fire doors. Erie City Iron Works.

5. The Answer to Industrial Dermatitis:

A sixteen page booklet giving a detailed discussion of industrial dermatitis—various causes, preventions, protectives and illustrated cases by actual photography. Milburn Co.

6. Watchman's Clock Systems:

A sixteen-page booklet covering a complete line of apparatus for supervising watchmen. Explains the principle of operation, diagrams and specifications of systems. Detex Watchclock Corp.

7. Crusading Against Fire:

A small folder detailing specifications of two new fire extinguishers: 2½ gallon Foam Type and Soda-Acid Type. American La France and Foamite Industries, Inc.

8. Allsafe Life Line Grab:

Four pages illustrating, by photographs and line drawing the applications and uses of a new line grab and its safety factor for use by construction workers, steeplejacks, public utility men, millrights, etc. American All Safe Co. Inc.

9. Get the Whole Story:

A booklet giving the detailed construction of safety shoes. International Shoe Co.

10. Gold Medal Twin-Drum Scaffolds:

Bulletin No. TD-1 presents an improved type of scaffolding for stone setting under all modern construction conditions. The Patent Scaffolding Co.

11. Burgess Products:

Twenty-four pages made up of various bulletins issued at intervals—which covers the complete listing of products manufactured by The Burgess Industries.

12. Pulmosan Industrial Safety Equipment:

A catalog giving method of use and specifications for a Car-boy Truck and Tilter. Pulmosan Safety Equipment Corp.

NATIONAL SAFETY NEWS

20 North Wacker Drive
Chicago, Ill.

January, 1937

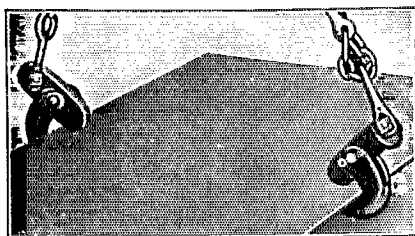
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Boiler Plate Can Be Handled Safely

BOILER plate can be handled safely with Never Slip Safety Clamps. Old-fashioned chains or hooks, which have a tendency to slip, cause accidents to men. These clamps make carrying work over the heads of workmen safe. No time lost in adjusting the hold or forming a balance.

Made for horizontal and vertical lifting.

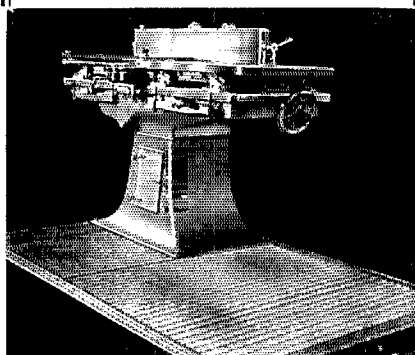
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Never Slip Safety Clamp Co.

P. O. Box 448

Grand Central Annex, New York, N. Y.

Put Mason Protection Around Machinery



The abrasive filled steel base is supplied in standard widths, lengths as required, usually 6 inches, and may be easily installed around any machinery where slipping hazards are present. May be anchored to any type flooring, and provide safe protection against slipping. Treads available to fit any sized space.

Write for samples!

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SAFETY TREAD CO.**

LOWELL, MASS.

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"But you cannot withdraw your plea of guilty after the case has been heard. How is it you wish to reverse your plea now?"

"Well you see, judge, that final speech of my lawyer has convinced me I am innocent."

DETECTION

IS THE BASIC STEP IN
PREVENTION
OF FIRE LOSS

PREVENTION of fire loss is based on detection of the fire before it gains headway.

EARLY detection of a fire is surest when an alert watchman is patrolling his rounds in accordance with your plan.

A DETEX Watchclock System is your best assurance of an alert watchman who is properly checked and his rounds recorded untailingly.

THIS FACT is best evidenced by 80,000 Detex Clocks now in use, recording the rounds of a like number of watchmen in 50,000 plants.

ASK DETEX to supply information on a thoroughly modern system that will meet both your present and future needs.

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AS MUCH AS 90% Increase in Film Strength

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NATIONAL SAFETY NEWS

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The Accident Barometer

Prepared by the Statistical Bureau, National Safety Council

ACCIDENTAL DEATHS OF ALL TYPES in October numbered 9,000. This total is only one per cent larger than the comparable total for October, 1935. The slight increase was due entirely to an advance of 2 per cent in motor vehicle deaths. All other kinds of accidental deaths remained at the 1935 level. With the addition of October the cumulated total of deaths for this year stands at 91,870, compared with 82,080 for the first ten months of last year—an increase of 12 per cent. Most of this advance came from the large number of excessive heat deaths in July and August.

OCCUPATIONAL ACCIDENTAL DEATHS totaled about 1,500 in October, the same number that occurred in October, 1935. It is the fourth month this year in which there has been no increase over last year, although increases in employment appear to have been fairly steady. The ten months' total of these deaths is now estimated to be 14,500, or only 5 per cent above the total for the first ten months of 1935. In the inter-plant contests of community safety councils the October accident frequency rate (per million man hours) was 10.63, or 20 per cent lower than the rate for October last year. Days lost per thousand man hours, however, went up from 0.78 to 1.24. The January-October averages showed frequency to be 11.86, or 13 per cent less than last year, and severity as 0.81 which is practically no change from last year. In three sectional contests conducted by the National Safety Council the trend of frequency was in the opposite direction. The October rate was 10.50, or 12 per cent over last year, and the ten months' average was 14 per cent up at 10.04. Deaths reported in November to Industrial Commissions in 18 states

totalled 617, or 7 per cent more than the number reported in November, 1935.

AIRPLANE ACCIDENTS in miscellaneous flying (as distinguished from scheduled operations) brought death to 98 persons, severe injuries to 76, and minor injuries to 133, during the first six months of 1936. In the same months of last year deaths numbered 124, severe injuries 74 and minor injuries 152. Thus, there were substantial reductions in deaths and minor injuries, despite the fact that there was an increase of 3 per cent in the number of plane-miles flown. Nearly half of the accidents occurred at the time when the airplane was making a regular landing (that is, not forced down). About one-fourth happened when the plane was taxiing or taking off.

STEAM RAILROAD ACCIDENTS in August resulted in 510 deaths and 2,923 injuries. Deaths were 3.5 per cent fewer than in August last year, but injuries were 23.4 per cent more numerous. The decrease came in trespasser fatalities—the increase principally in employee injuries. For the first eight months of the year, the death total was 3.9 per cent over last year and the injury total 23.9 per cent up. Highway grade crossing accidents showed an increase from 983 to 1027 in deaths, and from 2,695 to 2,883 in injuries.

MOTOR VEHICLE FATALITIES in October were 2 per cent above the total for October, 1935, totaling 3,920 compared with 3,850 for the earlier month. This brings the ten months' total to 29,950—less than 300 deaths above last year's comparable figure. This is a remarkable record in view of a 10 per cent increase in the amount of traffic, as indicated by gasoline consumption. The principal changes in the types of deaths from last year have been as follows: pedestrian deaths 2 per cent up, other types 1 per cent down; deaths 5 to 14 years 10 per cent up, 15 to 24 years 5 per cent up, other ages down 1 to 6 per cent.

COMMERCIAL VEHICLE ACCIDENTS averaged 2.04 per 100,000 vehicle miles during October, among vehicles entered in the National Fleet Safety Contest. This is an increase of 10 per cent in the rate over October, 1935. Trucks, alone, advanced 9 per cent from 2.65 to 2.88,

passenger cars were up only 1 per cent from 1.56 to 1.58, while the bus rate increased 28 per cent from 0.79 to 1.01. However, for the first four months of the Contest (July to October) in total, the rate for all vehicles was the same as in the comparable period of last year—1.81.

PUBLIC, (NOT MOTOR VEHICLE) DEATHS totaled 1,200 in October, thus indicating no change from the same month last year. These deaths have been decreasing steadily in number since July, and have now about reached the year's smallest total. During the first ten months of the year they numbered approximately 15,900, or 8 per cent more than were estimated for the same period of 1935.

HOME ACCIDENT DEATHS in October totaled 2,600. This is also the total for October, 1935. The only other month this year that showed no increase over last year was May. Increases in the other months ranged from 100 to 500, except for July when excessive heat fatalities brought the increase up to 5,600. The estimate for the ten months in total was 33,900, compared with 26,200 for the same months last year. It is practically certain that the twelve months' total will exceed that of motor vehicle deaths.

Looking ahead

January will bring a sharp drop in motor vehicle deaths, according to available data for earlier years. This probably will result from decreases in travel due to cold and unpleasant weather, and to reduced speeds of the remaining vehicles, because of snow and ice on the highways. Deaths from firearms accidents, also, may decrease somewhat, but most other types of fatal accidents will be about as numerous in January as in December.

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. In addition, the annual statistical report "Accident Facts," contains detailed information on all types of accidents.

All Accidental Deaths

January-October

1936	91,870
1935	82,080
1934	83,664

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

The New York Times
has the highest
circulation in the world

Daily News
Interest in the new truck has been the subject of many articles in the press

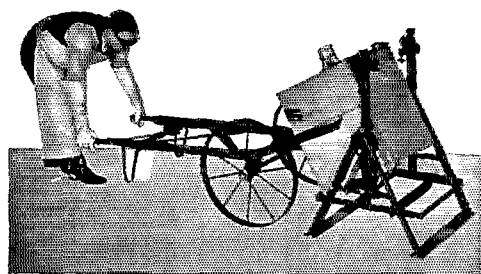
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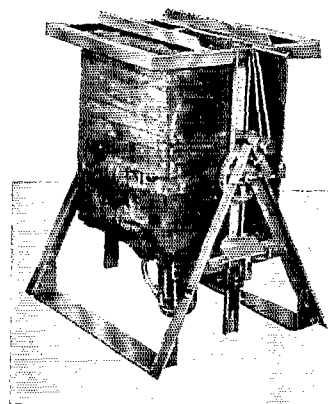
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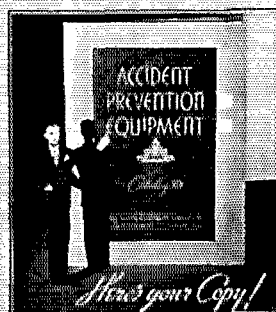
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