

NATIONAL SAFETY NEWS

JUNE 1935

PLAINTIFF'S EXHIBIT

NSC-140

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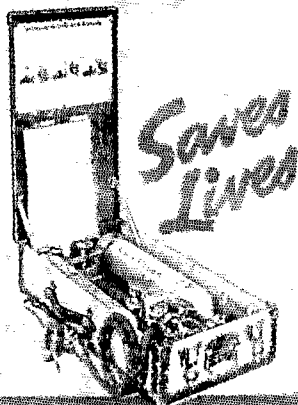


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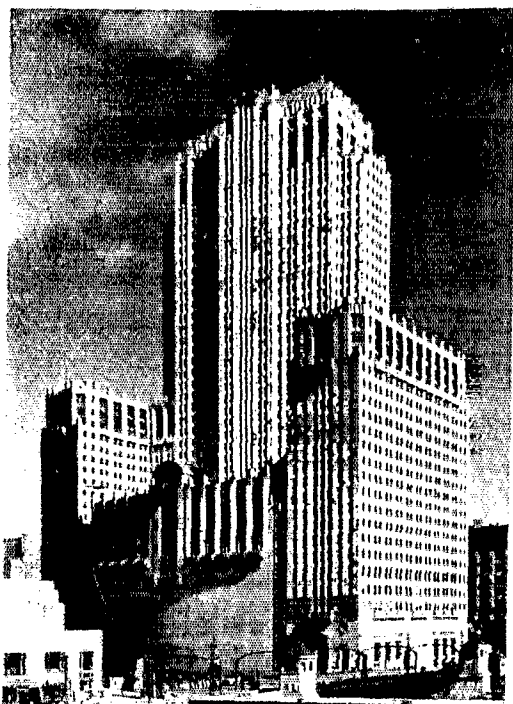
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10,000 people come and go every day . . . a veritable city within itself . . . yet so well guarded that no fire or accident of any consequence has occurred since its cornerstone was laid in 1929.

As one interested in Safety Equipment, you would note, in making a tour of the Civic Opera Building that it is thoroughly fireproof in every respect. However, should there ever be a fire, there are wide inside fire stairways with separate smoke towers which would quickly clear the corridors of smoke. Each floor is amply provided with fire hose and the latest type fire extinguishers in accordance with Board of Underwriters recommendation.

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D. E. SAWYER,
Manager

20 NORTH WACKER DRIVE

NATIONAL SAFETY NEWS



**INFECTION KNOWS
NO QUITTING TIME**
—for the dirty hand!

LAVA GETS HANDS REALLY CLEAN
—helps prevent infections

You can't keep workers' hands from getting grimy nor prevent minor nicks and cuts. But you *can* reduce the risk of hand infections with Lava Soap.

Lava, unlike ordinary soaps, gives cleansing in *two* elemental forms—dissolving plus scouring. First, its thick heavy lather *dissolves* the surface dirt. Then its pulverized imported pumice—so finely ground it can't scratch or irritate the skin—actually *rubs out* ground-in dirt. All the while, its glycerine and other

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Use Lava Soap in your plant to hold hand infections and resulting lost time to a minimum. Lava costs no more than ordinary soap—lasts much longer. Works well even in cold, hard water. Investigate Lava today.

LAVA SOAP

GETS DIRT
FAST...
PROTECTS
THE SKIN

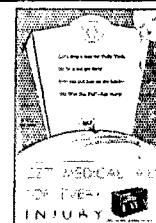


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BLOWOUT after BLOWOUT *proved the Safety of Goodyear's NEW* *LIFEGUARD TUBES!*

WHAT has made the sudden bursting of a tire so dangerous in the past is easy to understand —

When *all* the air goes out of a tire without warning — that sudden drop to the rim — the writhing contortions of the empty casing send the car lurching out of control.

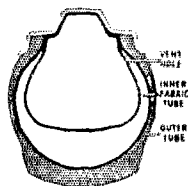
Analyzing this situation, Goodyear engineers found the first clue to blowout protection —

Why not keep part of the air from escaping — why not provide an inner, reserve chamber of air which wouldn't blow out, even if the tire itself was torn wide open?

So they started to work. Tried and discarded 1,300 different constructions, and finally developed a fabric-reinforced tube within a tube, which now wears the well-deserved name of LIFEGUARD.

RESULTS WERE AMAZING

We tried made-to-order blowouts — with spikes, with knives, with dynamite. Exploded, tore open, a single front tire, both front tires, a



How LIFEGUARD Tube looks inside the tire when fully inflated.

front and rear, both rears, and *all four tires at once!*

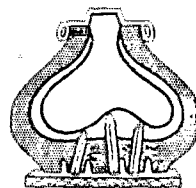
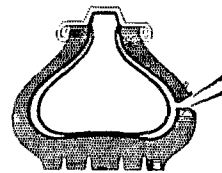
Over and over, results were the same:

Cars equipped with LIFEGUARD Tubes held the road — rolled straight ahead to a safe stop — and blowouts were no greater hazard than a slow leak!

With these tubes in a tire — the car rides the same, steers the same, looks the same. Tires are inflated much the same, and punctures can be repaired in much the same way. But — like safety glass and steel bodies — the LIFEGUARD Tube provides priceless protection in emergency.

SECURITY! PEACE OF MIND!

Outer air chamber of LIFEGUARD tube "blows" when tire fails but full-floating inner fabric tube is not affected. Tire rides as if partly deflated until air slowly whistles out of vent hole in the inner fabric tube

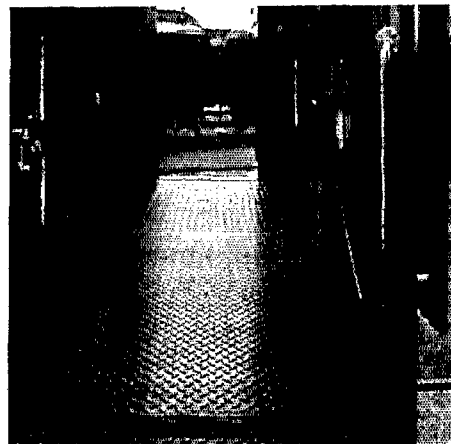
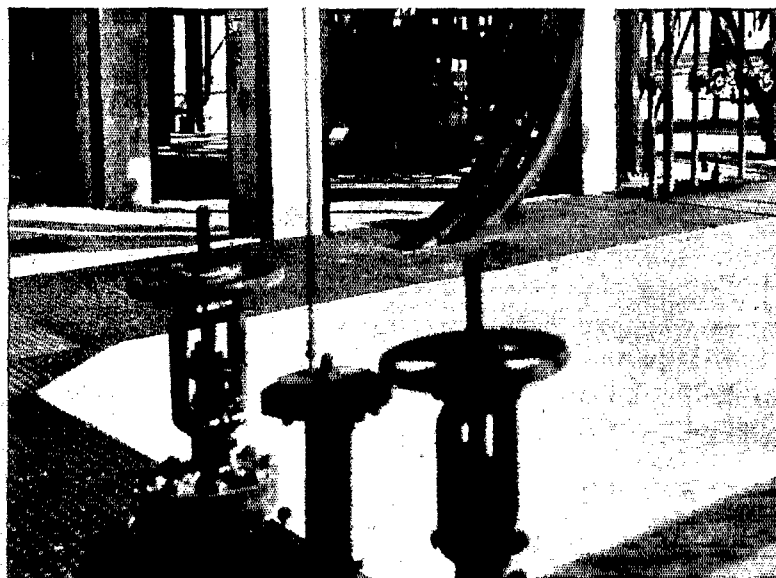


HERE'S WHY
the tire and the outer air chamber of LIFEGUARD tube are penetrated by spikes but the full-floating inner fabric tube "gives" like a pillow — escapes puncture — retains air long enough to enable car to stop safely

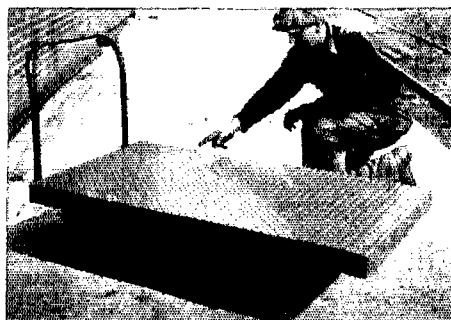
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THE GREATEST NAME IN RUBBER
GOOD YEAR
LIFEGUARD TUBE

NATIONAL SAFETY NEWS



All danger spots, indoors and out, are covered with Inland 4-Way Floor Plate in this foreign plant of a leading American oil company. At right, above: Many railroad car vestibules and steps are now of Inland 4-Way Floor Plate. Below: Loads do not slip off—platform of Inland 4-Way Plate.



Since 1931... OBLIGATION Many Have Met the with Inland 4-Way Floor Plate



Relative size of projections on Large, Small and Light Patterns of Inland 4-Way Floor Plate. Projections are respectively 1 1/4", 1", and 3/4" long.

In 1931, Inland offered to Industry a better method of meeting the obligation of safety to employees and the public—Inland 4-Way Floor Plate. 4 superiorities caused its immediate and widespread adoption by leading companies for use wherever foot or wheel may slip.

Projections exactly center one another at right angles on Inland 4-Way Floor Plate. Resistance to slippage is equal no matter at what angle foot or wheel contacts the plate. 4-Way Safety.

Projections overlap, reenforce one another both lengthwise and crosswise. Extra Stiffness 4-Ways results—an important factor on such applications as walkways.

4-Way can be cut to match whether plates lie side to end, end to end, or side to side—a worthwhile economy, for even small pieces can be used. And 4-Way Plate drains and sweeps clean 4-ways.

Made in three patterns to meet all requirements. Write for literature illustrating how others have met safety problems similar to yours. INLAND STEEL COMPANY, 38 S. Dearborn St., Chicago, Ill.

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Safety**

**Extra
Stiffness**

**4-Way
Matching**

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Drainage**

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Sheets Strip Tin Plate
Plates Structural Piling

Rails Track Accessories
Bars Rivets Billets

National Safety News

Published monthly in the interest of accident prevention and the health of industrial workers

VOL. 31, No. 6

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CARMAN T. FISH, Editor

CURTIS BILLINGS, Associate Editor

STANLEY H. KERSHAW, Poster Editor

C. H. MILLER, Advertising Manager

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New York Office, 9 East 41st Street

Office of the Education Division, 1 Park Ave., New York City



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THINK OF US

● WE ARE MODERNS"

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are surrounded with glass, an ever present hazard in case of accident. Anything that can be done to encourage the use of Safety Glass because of the greater protection it affords in all forms of transportation is surely in the interest of greater public safety.



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with a
NEW MAN'S EYES



The AO DURALITE "50" is light, cool, comfortable. Its fuss-proof bridge provides easy, permanent adjustment to any face. Super Armorplate lenses provide maximum protection from impact.



make sure he wears
his AO GOGGLES

The eyes of the green men, or of the man a bit rusty after a long lay-off, may cost you many thousands of dollars—if they aren't protected with goggles. Until men "get the hang" of a job their eyes are easy targets.

A machinery manufacturer reports a hard-driven fragment shot straight for a chipper's eye—on his second day at the job. The chipper stood to lose his eye . . . and the company many dollars in compensation, medical and hospital expenses, lost time and production delays—but goggles saved the eye and the profit.

But it isn't enough to supply your men with goggles. Workers need different kinds of eye protection for different kinds of jobs. That's why American Optical Company makes a complete line of goggles . . . and provides a service that insures each man getting exactly the goggle he needs. The AO industrial man stationed near you will be glad to survey your plant, study the eye hazards, and make recommendations. Write or call the AO branch office near you today.

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A Challenge to Industry

WHEN accidents in an industrial plant have been reduced to that theoretical "irreducible minimum"—then the safety work of the concern is a shade less than half done.

That was the meat of an address by Edward J. Mehren, president of the Portland Cement Association, before the Eastern Pennsylvania Safety Conference recently. What did he mean?

His meaning was contained in his subsequent remarks. One large organization, he said, which in five years had lost only two of its employees through deaths in the plant, lost 38 who were killed in accidents outside the plant—on the streets, in other public places, and at home. The records of 25 industrial companies, employing some 350,000 workers showed, over a three year period, that 360 employees had died from work accidents while 693 were killed in accidents elsewhere.

These extraordinary records, he concluded, showed both the effectiveness of industrial accident prevention methods and the urgent need for reductions in the public and domestic fields.

But Mr. Mehren went further than this. He answered the difficult question: "Who can accomplish this needed reduction outside the plant?" His answer was: The same men who have done it in industry. They have the experience; they know how. Every industry should assume the responsibility for its own community and make that safe.

It is so easy to talk about a national program for accident prevention. It is vague and calls upon nobody to do anything. What Mr. Mehren demands is not a "national program" but a strong and effective local program in every community. The practical ideal, then, is not national safety as such, but a nation of safe communities. This ideal is dangling before the industrial safety men of the United States today.



"Not on the Job"

ETHYL alcohol in varying concentrations and flavors has been used as a beverage since prehistoric times. Its use has always involved behavior problems, even amid primitive conditions, but the evils tend to become more acute in a complicated social structure.

People drink to excess for a variety of reasons. Some are merely convivial; others drink to escape the realities of life. But that is too involved a subject for discussion here.

If we are looking for medical testimony on the physical effects of alcohol, we can find it in confusing and contradictory abundance. The effects of indulgence on human innards, however, is not our chief concern. The most serious menace is to the individual's judgment.

The spirit of over-confidence— even bravado— which

follows a few drinks too often leads to disaster where automobile operation is concerned. Accidents involving both drivers and pedestrians who had been drinking showed a sharp increase during 1934.

How to keep the drunks from driving is a perplexing problem, but the real difficulty is to control those who have merely had a few drinks.

Frequently there is a popular demand to "jail the drunken drivers," but the public really doesn't mean it. A jury might sentence a belligerent drunk to the rock pile, but public sentiment would not support a drastic penalty for the driver whose judgment had been clouded by three Martinis on an empty stomach. Legislators and law enforcement officials know this all too well. With this attitude prevalent, we are afraid that laws against drinking drivers will have no more success than laws against liquor.

The story is told of a badly injured engineer who, when offered a drink, shook his head and replied, "not on the job." Only when the motorist takes his responsibilities as seriously as the locomotive engineer can we expect a solution of the problem.

This mechanical age calls for a degree of self discipline not demanded by any previous period. "Not on the job," is the only safe rule for the motorist, whose responsibilities are no less serious than those of the trainman.



In This Issue

LEFT an orphan at the age of six when his father was killed in a mine accident, J. B. John has known the tragedy of accidents. His energetic leadership as chairman of the Accident Prevention Committee of the Portland Cement Association is one of the reasons for the cement industry's conspicuous progress in safety. (Page 11).

Accidental deaths in the United States in 1934 reached the tremendous total of 101,000. Motorists added nearly 5,000 deaths to the year's toll as compared with the previous year while an excessively hot summer contributed almost an equal number. Accidents are unquestionably in the front rank of social problems. (Page 14).

Color in glass is no guarantee of its efficacy in protecting the eye against harmful light rays. There are definite standards, however, to guide the purchaser in securing adequate protection. (Page 17).

A hotel can keep track of the amounts paid in settlement of claims but the total loss when the irate victim of an accident leaves the premises cannot be estimated. Good will is one asset that cannot be locked up in the vault. (Page 19).

Any program for the protection of women workers must take into consideration the fact that women differ from men in many respects. Physical limitations, nervous reactions and emotional traits must be considered when women are employed and assigned to their jobs. (Page 21).

The Managing Director's Page

Face the Music

WHEN an experienced, highly regarded, and undeniably intelligent safety engineer steps forth and makes the statement that 86 per cent of the accidents in his plant last year were the fault of the workers, that ten per cent were the fault of the employer, and that four per cent were beyond control and the fault of nobody, that's news to the safety movement.

Very bad news indeed—if true.

But close analysis of the 250 odd accidents which occurred in this plant would reveal beyond any question that the statement is not true unless—as is most unlikely—this plant and its personnel differ not only from every other plant in the same line of business but also from every other industrial concern in the world.

The plain fact is that the management of this company as represented by the safety engineer, refuses to face the music, and I mean by that that the management does not shoulder a responsibility which it should shoulder. For the safety program is up to the management: if the program does not succeed, then the management in this regard has failed.

Those words are blunt and hard but I see no reason for softening them. Suppose you send your child, an average youngster, to school. He is expected to learn, among other things, arithmetic. In a day or two you receive a report from the teacher saying that Willie is a dunce. The little devil was told very distinctly how to solve a problem in short division. But when it came to a test, he disregarded what the teacher had said, and blockheadedly stated on his paper that three goes into fifteen four times.

Do you take Willie out behind the garage and thrash him? No. You conclude that the teacher is not worthy of that title, that her methods are wrong, that just because she

told Willie once how to do short division, she must not expect him never to make a mistake in it. Besides, Willie is an average boy; and you know perfectly well that other teachers are teaching average boys how to do short division the country over.

Instead of punishing Willie, therefore, you are far more likely to tell his teacher this. And you add that she must be patient, that teaching is accomplished largely by repetition.

Now the safety engineer who claims that 86 per cent of the accidents which occurred in his plant were the fault of the employees is very much like the unsuccessful teacher. Instead of considering that perhaps his methods are deficient, he refuses to face the music, preferring the complacent attitude that the fault must lie in the men.

This particular safety man is a great believer in the emotional appeal to workers. In a recent letter he complimented me highly on my article entitled "Uncle Tom's Cabin" in the March News. As a matter of fact he goes so far as to say that engineering revision for safety is a minor matter, that inspiring a desire for safety in the heart of the worker is all that is needed. (Not one word does he say about such things as job training and physical examinations).

Here again, though I liked his compliment of my article, he is wrong. Let's go back for a moment to the analogy of the school. Surely, the teacher must create in the heart of Willie the desire to learn short division. She must inspire him. She must appeal to his emotions by saying, for example, that he can be a success only if he learns. But she needs to do more than that. While she makes Willie's heart feel, she needs also to make Willie's mind comprehend.

It is easier for her to make Willie's mind comprehend if the school room itself is well appointed—well engineered, if you like.

Educators are intensely interested nowadays in *engineering revision* to aid learning—as we are interested in engineering revision for safety. The educators realize that so much light is needed for all the children to see plainly what the teacher is writing on the blackboard. They realize that glaring lights are bad especially for the youngsters near the windows. They realize that the air must be fresh and at the proper temperature.

They realize that teaching *could* be accomplished in a coal hole, but not nearly as effectively as in a modern school room.

It is so with safety. A badly laid out plant can sometimes be made almost safe. But it is always a formidable job and sometimes it is utterly impossible.

I hope my point is clear. The safety program is the management's job. If it does not succeed, the program is inadequate. In no industrial plant in the world are 86 per cent of the accidents the fault of the employees.

INTERESTING ITEMS

The Managing Director has been invited to participate in the Annual Convention of the British Safety First Association, London, May 27, 28 and 29. His speech will relate to "Traffic Surveys and Community Safety Councils." There will also be a meeting of representatives of a dozen or more countries to organize an International Safety Society. Mr. Cameron will be absent from the United States for four weeks and will pay his own expenses.

The reception of the new monthly publication, *THE INDUSTRIAL SUPERVISOR*, has justified this experiment. Hundreds of members have ordered copies for all of their supervisory forces. Employers are rapidly learning that foremen and others need constant reminders of the experience and activities of others.

The Council is diverting all of the activities of its New York office into an attempt to organize a New York Safety Council. For seven years this office has been maintained by the National organization to develop interest in a Metropolitan Safety Council.

The Regional Safety Conferences have been a great success this year. They have been better organized; the attendance has been larger; and there is a growing interest everywhere in safety.

M. J. Cameron

NATIONAL SAFETY NEWS



By J. B. JOHN

President, Medusa Portland Cement Company; Chairman, Committee on Accident Prevention, Portland Cement Association

- FOR more than twenty years accident prevention has been a major activity of the Portland Cement Association. The industry has profited no less from the by-products of good will in plant and community than from the direct savings

WHEN I first went to work in a cement mill it seemed like heaven after the years I had spent in a coal mine. But if we were to take a man from one of our modern mills and put him to work amid the conditions of thirty years ago he would probably walk out on the job. I know I would. Men today would not put up with the unsafe conditions we used to regard as normal. That in itself shows that we have made progress.

Making cement is still a hazardous job. Rock must be blasted from the quarry and transported to the mill. Huge kilns, some of them 400 feet long, are used in the processes. A cement mill operates a railroad and uses explosives, heavy machinery and high tension power circuits. The industry is the largest user of powdered coal. And this stuff must be handled like dynamite.

A storage bin full of cement looks harmless but no experienced worker would think of going into one without

When an Industry Is Organized for Safety

a good safety belt and life line. A man sinks rapidly in cement, and in most cases he would be smothered before he could be pulled out.

But in spite of these and other hazards, 43 plants operated without a disabling injury during 1934. Fifteen years ago a whole year of safe operation was unknown. Any practical cement man would have said it was impossible. What brought about the improvement?

I do not believe that the 160 member companies of the Portland Cement Association working alone could have done it. But 160 plants working together and sharing their experience and stimulating each other by their competition have made it possible.

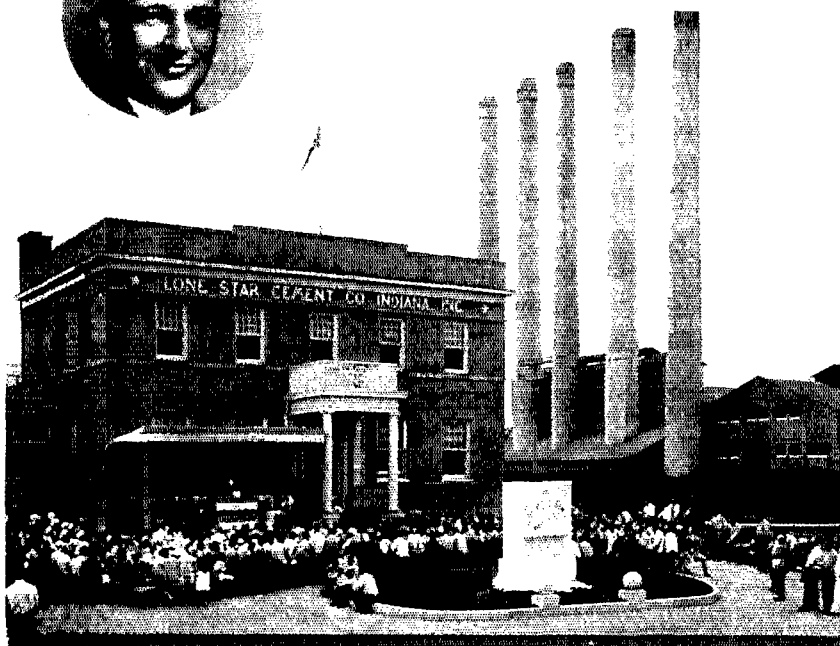
Back in 1910 the states began to enact workmen's compensation laws. Society felt that the victim of an accident should receive some compensation for his injuries. But few people thought that

accidents really could be prevented. Industrial leaders, however, knew that with increasingly liberal benefits the accident losses would bring a heavy financial drain. Just about that time the industry was installing new and heavy machinery and additional safeguards would be needed to protect employees against new hazards.

Many of us who had had first hand experience with accidents felt that something had to be done. It hurt our consciences as well as our pocketbooks. So in 1912 the Portland Cement Association organized an accident prevention committee.

The first step in the program was to make a survey of the accident situation in the industry and as a result the present accident reporting form used by the Association was introduced. By 1924 practically all of the members were reporting their accident experience to the

Dedicating the Portland Cement Association's trophy is an impressive event for both the mill and the community. Inset: A. J. R. Curtis, assistant to general manager of the association, who directs the industry's safety program.





ACCIDENT prevention is somewhat off the beaten track of trade association work, but I can say with the utmost conviction that no activity of our organization has been more absorbing in its interest to our members or more gratifying in its results than safety work. It is a common meeting ground for our member companies; it has produced very amicable and helpful relations between management and men, and between the companies and their communities. Since 1912 the Accident Prevention Committee has been one of the essential activities of the Portland Cement Association.

Many trade associations, it is true, have formed safety committees, but few of them have made serious efforts to organize the industry from bottom to top for safety, to compile all of the accident experience or analyze and interpret these lessons for their members.

An entire industry is a logical unit for accident prevention work. Within an industry there is a similarity of men, practices, equipment and hazards which makes the interchange of experience particularly valuable. A plant that proves helpful to one is bound to be at least measurably beneficial to all.

To the National Safety Council we are indebted for much valuable aid, particularly in visualizing safety. The Council is doing an excellent job. Its posters and publications have helped wonderfully in getting the message across to the men. Then, in addition to its direct services, the Council has been a very powerful motivating force because it provides strong leadership, sets up a vigilant watch, uses good ammunition, and shoots straight. All of this applies as well to community as to industrial safety.

EDWARD J. MEHREN, President,
Portland Cement Association

headquarters in Chicago. Only two or three small mills among 160 failed to report.

These reports furnished material for an annual analysis of accidents and their causes. This produced a lot of valuable material for use in the individual plant. One cement mill could hardly give a representative picture of the industry in a whole century, but the experience of the group, made available through these reports, provided ample material for the study of accident hazards. For the past twelve years the Accident Prevention Bureau of the Portland Cement Association has been diagnosing the accident ills of the industry and prescribing remedies. And let me take the opportunity here of expressing the cement industry's appreciation of the energetic work done by Mr. A. J. R. Curtis at the Association headquarters.

In the latter part of 1926 a special survey of the accident situation in the industry was made by Mr. Curtis and the reports from the various plants showed where the extra effort was needed.

The industry had decided to attack the most serious hazards first and selected

the worst month of the year. The first of our June no-accident campaigns started in 1925. Reports covering several years indicated that June was the worst month for accidents. By that time quarries all over the continent are in operation, cement manufacture is about

at the peak of the year and shipping is quite heavy. New men for the summer's operation who had been taken on during the spring are hardly accustomed to their new duties before production gets into full swing.

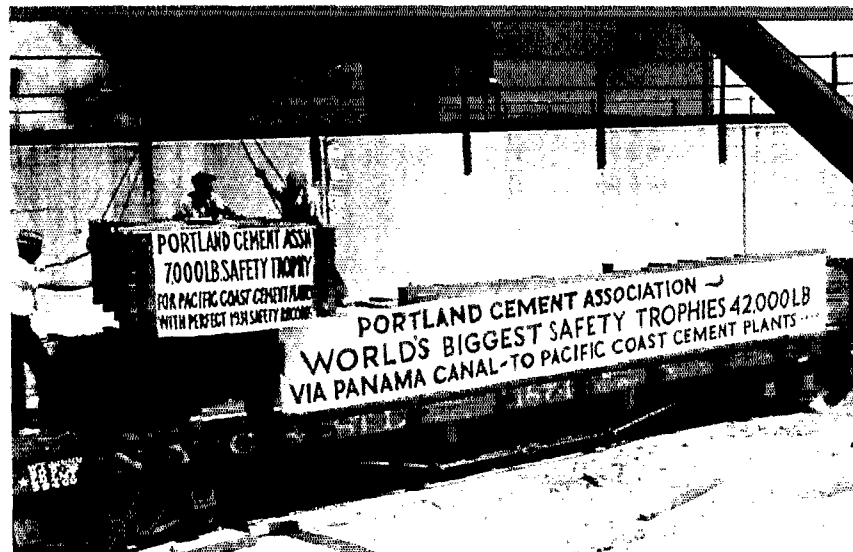
The earliest June no-accident campaign did cut down accident frequency during that month. But the accident rate bounced right back again in July and the succeeding months. Apparently the stunt was all right as far as it went, but it did not last long enough to have any serious effect on the yearly totals. On the other hand, it is difficult to maintain interest in a campaign for a whole year. We found this out during 1934 when we spread the activities throughout the year instead of holding the customary June campaign. We are going back to the old method this year with all the ceremony that has marked the campaigns of previous years.

We have found that a campaign must be started well in advance, so our June program starts on St. Patrick's Day.

First of all, the presidents of the various companies are lined up. They are pledged to hire only careful men and to give their support in every way possible. Copies of the pledge are sent to all mills, and when the superintendent knows that his president is behind the campaign you may be sure he will put forth his best efforts.

By May 1 every mill safety committee is ready for the June program. An elaborate ritual has been planned for the whole campaign.

On May 25 every plant in the industry has received its flag. The flag,



These trophies advertised the industry's safety program while en route to the Pacific Coast where they were to be erected by the winners.

is raised on June 1 with impressive ceremonies. A great mass meeting is held at each plant in honor of this event. The flag remains flying until an accident occurs. Then it must be lowered and returned to the headquarters of the Portland Cement Association. And I know from personal experience that it is a sad time for everybody in the mill when the banner has to be hauled down and sent back to the Association. Some of the no-accident records established by cement mills have lasted so long that only a few shreds of the banner remained on the flagpole; in a few cases these banners have had to be replaced.

Each foreman signs an agreement with the mill superintendent called "the green document." It might be called "a waiver of alibi." Between May 15 and May 21 the foreman must get busy with his personnel problems. He must assure himself that all the men under his supervision are mentally and physically fit for their jobs. He must also make a general inspection and clean-up. One of the valuable results of the June no-accident drive is that it reveals and rewards the good leaders in the plant.

At the mass meeting on June 1 every man is given a double pledge card to



J. B. John speaking at the dedication of a trophy.

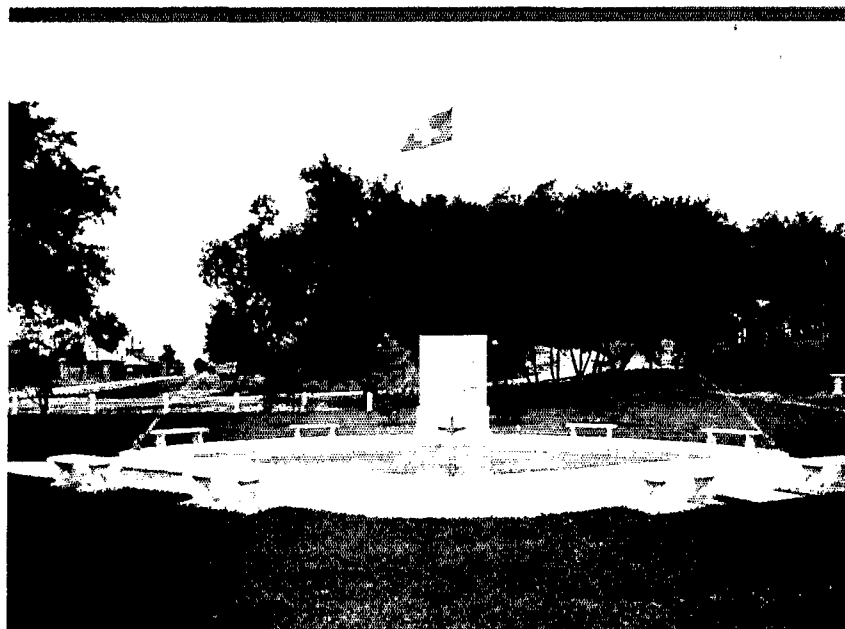
sign. He keeps one-half of the card and turns the other half in to the foreman.

We have found that men are strong for ceremony and ritual, so we make the fullest use of them in our accident prevention work.

When one working shift is over the foreman reminds the foreman of the next shift that the flag is still flying and the new foreman checks up on conditions. Every opportunity is taken to remind foremen and men of the significance of the flag.

The whole community watches the flagpole. If a flag is pulled down the story goes around the community. The

JUNE, 1935



The banner of the June no-accident campaign flying at the plant of the Medusa Portland Cement Company at Dixon, Ill. Mills invariably provide an attractive setting for the Portland Cement Association trophy.

whole plant from superintendent down feels disgraced in the eyes of the community, as well as of the industry. As a means of securing local publicity the June no-accident campaign is unequalled.

In addition to the June campaign, interest is maintained throughout the year by the annual trophy awards. Our handsome trophy of concrete with the inscription, "Safety Follows Wisdom," has been awarded to 112 of the 160 plants in the Association's membership. At first it was offered to the plant having the best accident record. For the first year, 1923, it was won by a plant which had only three accidents. That, everybody believed, was just about the last word in a safety record. The next year, however, it was won by a plant with no lost-time injuries. Now only a perfect record can win the trophy. Each year adds to the list of plants which have received these trophies, and to the fresh inscriptions appearing on the many trophies previously won.

While the awarding of the trophy has lost some of the competitive spirit which prevailed when it was awarded only for the one best record, it is now available for every mill which can operate without accidents for a whole year, which gives it far more general interest.

Before business conditions made it necessary to curtail expenses, each plant winning the trophy sent two men to the semi-annual meeting in New York City as guests of the Association. These delegates were formally presented with the trophies which were shipped to the

mills. The plants which have won trophies have shown considerable ingenuity in arranging appropriate settings. Mill yards have been landscaped and fountains constructed and the whole premises brightened up to receive the handsome monument. Incidentally, many of these displays are excellent examples of the ornamental uses of concrete.

The dedication of the trophy is always a great event in the mill community. Usually the whole town, or at least as many people as can get away from their jobs, attend the ceremonies. Mayors, senators, and governors have taken prominent parts, and some have even traveled by plane to be present. On such occasions the plant keeps open house for the whole community. In the southern mills a barbecue is an essential part of the ceremony. Parades with bands inform an interested world of the plant's accomplishments. The town is no less proud of the trophy than are the men in the mill. As a publicity getter and a good-will builder, safety work has few equals.

Recently a new form of recognition was set up. Any superintendent whose mill has operated 1,000 calendar days without accidents becomes eligible for the 1,000-day club. These superintendents form the aristocracy of the cement industry.

There is a constant flow of helpful ideas and information from the Association headquarters. The quarterly acci-

(Please turn to page 58)

Autos and Heat Swell 1934 Death List

By R. L. FORNEY

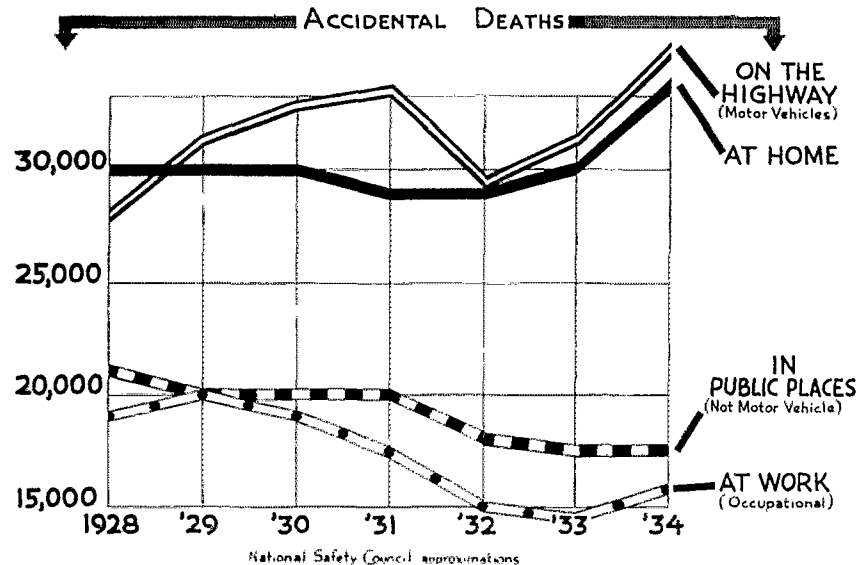
Statistician, National Safety Council

- ACCIDENT FACTS, 1935 Edition, will be published about June 1 and distributed to National Safety Council members. This valuable statistical handbook has been improved this year with 45 pages of attractive charts and a durable cover. In addition to the free distribution to members, copies will be available for purchase, with special rates for quantities

ACCIDENTS caused 101,000 deaths and more than 9,800,000 non-fatal injuries in 1934. The cost to the nation, in wage loss and medical expense, was approximately \$2,400,000,000. This is increased to \$3,500,000,000, if the property damage from fires and from motor vehicle accidents is included.

Never has the national accident toll been so tremendous. The previous high was reached in 1930 when there were 99,300 fatal accidents. The 1934 death total represents an increase of 11 per cent from 1933, when there were 91,087 fatalities.

Accidental deaths in 1934 exceeded the annual average of the previous ten years by 6,000. Population has also advanced, of course, with the result that the 1934 death rate per 100,000 population, 79.9, is slightly less than the rates of 80.9 and 80.6, established in 1929 and 1930. The rate was 75.8 per 100,000 population in 1923, 82.2 in 1918, and 85.5 in 1913. Only two years ago, in 1932, the rate was 71.4, which was among the lowest recorded in the past 20 years.



Motor Vehicles and Excessive Heat

The alarming increase in 1934 accidents is made up principally of two items — first, motor vehicle mishaps; second, deaths from excessive heat

occurring in 1934's abnormally hot summer.

When motor vehicle fatalities declined abruptly in 1932 the hope was frequently expressed that motorists and pedestrians had at last learned how to use streets and highways more safely. This possibility became doubtful when an appreciable increase occurred in 1933 accidents, and loses all plausibility with the record breaking toll of 36,000 fatalities in 1934. This is a 15 per cent increase over 1933 and is 7 per cent higher than the previous high total reached in 1931.

While motorists were adding nearly 5,000 deaths to the accident toll in 1934, soaring temperatures throughout the Mississippi Valley were contributing nearly an equal number to the accident list. There were 1,025 deaths from excessive heat in 1933 — a higher than average figure—and it is estimated that 1934 deaths from this cause were four or five times as many. There is little question that the number of excessive

PRINCIPAL CLASSES OF ACCIDENTAL DEATHS, 1913 TO 1934

Year (1)	TOTAL* (2)	Motor Vehicle (3)	Public (Not Motor Vehicle) (4)	Home (5)	Occu- pational (6)	Duplication Occupational and Motor Vehicle (7)
1913	82,460	4,227	..	..	..	..
1918	85,149	10,723	..	..	..	..
1923	84,528	15,394	..	..	..	..
1928	93,486	27,996	21,000	30,000	19,000	3,000
1929	98,258	31,215	20,000	30,000	20,000	3,000
1930	99,300	32,929	20,000	30,000	19,000	3,000
1931	97,415	33,675	20,000	29,000	17,500	2,800
1932	89,167	29,451	18,000	29,000	15,000	2,500
1933	91,087	31,363	17,500	30,000	14,500	2,500
1934 (est.)	101,000	36,000	17,500	34,500	16,000	3,000

Sources: Columns 2 and 3 calculated from U. S. Census Bureau data, except for 1934. Columns 4, 5, 6 and 7 are approximations by the National Safety Council, based on data from the Census Bureau, State and City Registrars of Vital Statistics, and other sources.

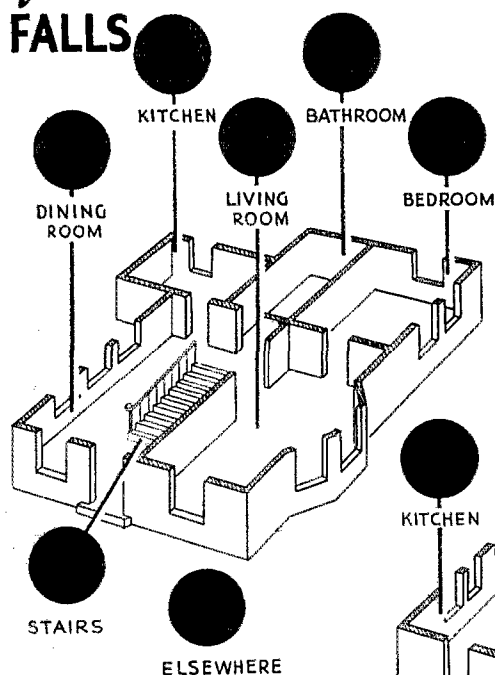
*From 1928 to 1934 each figure in column 2 is approximately the sum of columns 3 to 6 minus column 7. The totals are not exact sums of the individual items because columns 4, 5 and 6 are approximations only.

**Reliable figures not available prior to 1928. Various authorities estimated occupational deaths from 20,000 to 25,000 during the early 1920's and from 25,000 to 35,000 during the previous decade.

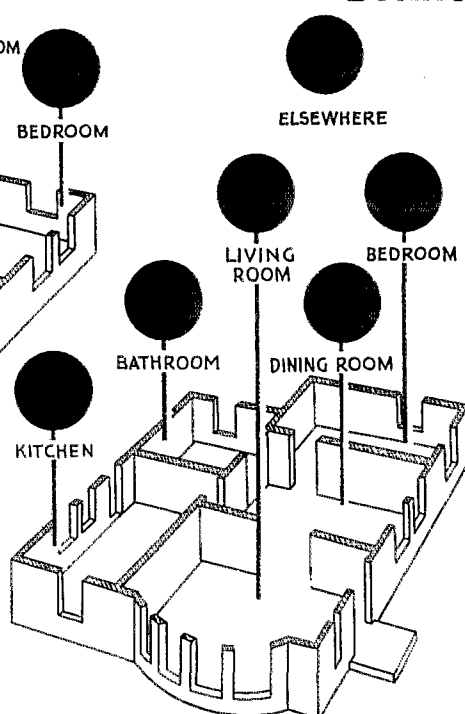
DEATH HAUNTS *the* HOME

(Kansas experience 1931-1934)
Source: State Board of Health

fatal
FALLS



fatal
BURNS



1934 increase in accidental deaths was among persons 65 and over. Whereas there were only 21,743 deaths from accidents in this age group during 1933 it is estimated that there were 26,000 in 1934. If this estimate proves true it will mean that the accident death rate per 100,000 population was four and one-half times as high in the "65 and over" age group as in the 25-64 year group.

The 1934 record of older persons is the culmination of a series of increasing rates for at least the past ten years. While the all-accident death rate has declined slightly among children under 15 and has held steady between the ages of 15 and 64, it has risen 40 per cent among persons 65 and over. The unusually large increase from 1933 to 1934 is explained by the fact that excessive heat fatalities—so important in the 1934 picture—occur mostly in this older age group.

Occupational Accidents

The estimated 1,500 increase in occupational fatalities cannot be accurately classified to any particular types. It is roughly estimated, however, that several hundred of the excessive heat deaths were occupational in character and that there were moderate advances in fatal falls, burns, and other types of accidents common to industrial operations.

Rough approximations result in classifying the largest number of 1934 occupational fatalities among persons in agricultural pursuits. There were an estimated 4,400 deaths in this classification, compared with 3,800 in the trade and service industries, 2,300 in construction, 2,000 in transportation and public utilities, 1,900 in manufacturing, and 1,600 in mining and similar operations.

The industrial membership of the National Safety Council and associated organizations experienced an increase in accident rates among their employees during 1934. The average injury frequency rate (disabling injuries per 1,000,000 man-hours of exposure) was 15.29 in 1934 and the average severity rate was 1.70 (days charged per 1,000 man-hours of exposure). Companies reporting in both 1933 and 1934 experienced an increase of 5 per cent in each of these rates. This was the second successive increase in the frequency rate from a low point reached in 1932. In spite of the increases in 1934, industrial concerns reporting to the National Safety Council still have an average frequency rate 57 per cent below 1926 and an average severity rate 37 per cent below 1926.

heat deaths in 1934 will closely approach the all time high reached in 1911.

It is difficult to ascertain the 1933-1934 changes in other types of accidents, due to inadequate data, but it appears likely that there were about 1,000 more deaths from falls in 1934 than in the previous year, and that several hundred more persons burned to death. Deaths in other kinds of accidents probably showed little change.

Viewed from the standpoint of where the accident occurred, we find an estimated increase of 4,500 home fatalities from 1933 to 1934, most of which results from the tremendous advance in excessive heat cases. Accidental deaths arising out of gainful employment are estimated at 16,000 for 1934, an increase of 1,500 over the previous year. This advance undoubtedly resulted from an increasing number of men at work, plus a somewhat higher accident rate. Public accidents not involving a motor vehicle show no change in the death estimate from 1933 to 1934; this type of accident is largely influenced by the number of drowning deaths, which showed no appreciable change last year. Motor ve-

hicle fatalities have already been quoted as increasing about 5,000.

Accidents versus Disease

Though 1934 data are not yet available comparing accidents with diseases as death causes, a recent analysis of 1933 information gives a good indication of what may be expected when the tremendous accident increases of 1934 can be completely analyzed and compared with other vital statistics.

For example, accidents were the fourth most important cause of death in 1933, being exceeded only by heart disease, cancer and cerebral hemorrhage. Such feared diseases as tuberculosis, pneumonia, and nephritis took fewer lives in 1933 than did accidents.

The picture is even worse when viewed in certain details. From ages 3 to 18, for example, accidents were responsible for more deaths than was any disease. Among males only, accidents were exceeded as a cause of death only by heart disease, and from ages 3 to 40 accidents were the most important cause of death, exceeding all diseases.

By far the heaviest portion of the

The outstanding importance of agriculture in the grouping of occupational fatalities lends special interest to a tabulation of fatal work accidents on the farm, recently prepared by the Kansas Health Department for the four-year period from 1930 to 1934. Five hundred and three deaths occurred in farm work during that time, of which 29 per cent were caused by agricultural machinery, 22 per cent by animals, 10 per cent by excessive heat, 9 per cent each by falls and vehicular accidents, 6 per cent by lightning, and 15 per cent by other causes. Tractor accidents alone accounted for 31 per cent of the agricultural machinery accidents and 9 per cent of all farm work accidents.

Accidents Increase More Than Travel

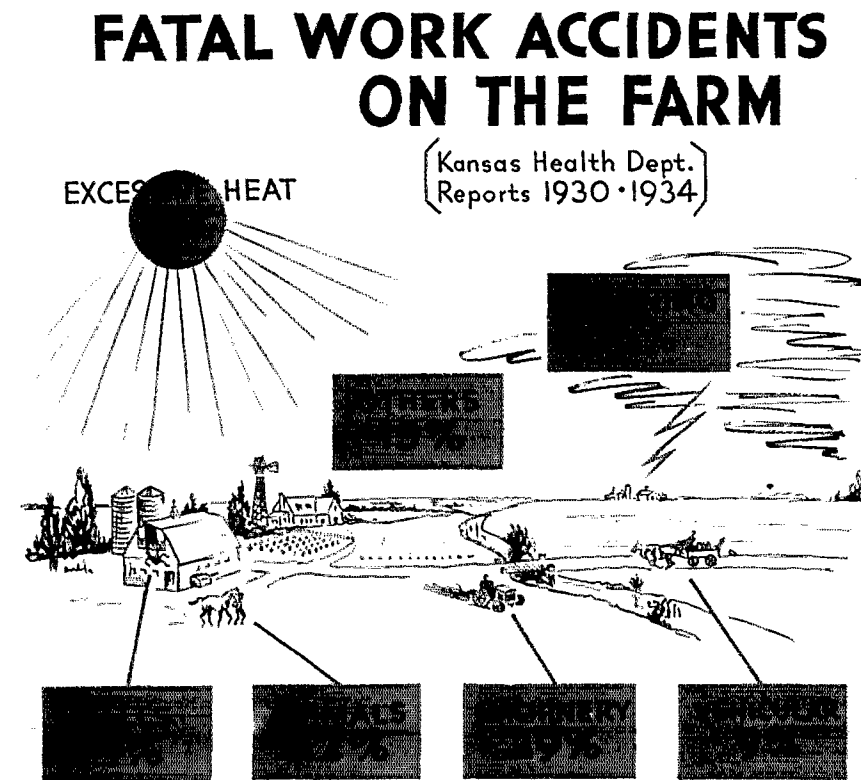
What caused another 15 per cent increase in motor vehicle fatalities during 1934, on top of an already shameful record? To some degree, the increase resulted from the fact that more cars traveled more miles on our streets and highways, thus increasing the chances of collision with each other and with pedestrians. However, the death increase was out of all proportion to the travel increase. Registered motor vehicles advanced only four per cent from 1933 to 1934 and gasoline consumption only 7 per cent, while fatalities in motor vehicle accidents jumped 15 per cent. The average motorist was not able to travel nearly as far in 1934 without getting into an accident, as he was in 1933.

It is interesting to note, however, that each car on the highway and each mile of travel did not produce quite so many deaths as they did some years ago. In 1934 there were 14.5 motor vehicle deaths per 10,000 cars, whereas in 1918 this rate was 16.8 and in 1913, 30.7. The 1934 death rate per 10,000,000 gallons of gasoline consumed was 23.2, compared with 23.5 in 1927 and 25.5 in 1925.

We cannot escape the fact, however, that there were 28.5 deaths per 100,000 population in 1934, compared with 25.0 in 1933, and 16.5 in 1923, nor the fact that the increase in deaths during 1934 greatly exceeded the increase in use of the highways. There is no question but what the average pedestrian and motorist was less physically fit, less skillful, less attentive, less careful, and less considerate in his 1934 use of the highways, than in any other recent year.

Pedestrian Experience Bad

All of the important types of fatal motor vehicle accidents showed increases



in 1934. Pedestrians had the worst record, when viewed from the standpoint of their previous favorable trend. Pedestrian fatalities in 1934 are estimated 16 per cent above 1933, which now places them 30 per cent above 1927, when National Safety Council approximations begin. Deaths in collisions between two motor vehicles increased about 18 per cent from 1933 to 1934 and deaths in motor vehicle-fixed object collisions increased 20 per cent. There was practically no change in the number of deaths in motor vehicle grade crossing accidents and only a minor increase in non-collision accidents.

Every age group showed a marked increase in motor vehicle fatalities during 1934 except children under 5, where there was probably another slight decrease. Persons 65 years and over showed the greatest increase—from 4,600 deaths in 1933 to an estimated 5,400 in 1934. School age children from 5 to 14 are believed to have suffered approximately a 10 per cent advance in fatalities, which would represent the second year in which there has been a sizeable increase, following a number of years with declining totals. Renewed efforts appear necessary to reestablish the favorable trend of motor vehicle accidents among school children.

1934 also saw another set-back in the accident experience of commercial trucks. In 1932 there were 16 per cent

fewer trucks involved in fatal accidents, in the National Safety Council's reporting area, than in 1927. There was then an advance in 1933 and a much larger one in 1934, with the result that last year now stands 9 per cent above 1927, whereas each intervening year had been below 1927.

This increase of 9 per cent looks relatively favorable when compared with a 55 per cent increase since 1927 in the number of passenger cars involved in fatal accidents. However, the present favorable comparison of trucks with passenger cars is entirely the result of experience before 1932, because during the past two years the number of trucks involved in fatal accidents has increased in about the same proportion as the number of passenger cars. Buses also showed an advance in participation in fatal accidents during 1934, although they still compare more favorably with the 1927 base year than do trucks or passenger cars.

License Laws Prove Value

Further proof appears in the 1934 records that standard drivers license laws are important in controlling traffic accidents. The National Safety Council's analysis divides the entire country into five groups of states—those with standard license laws, those with sub-standard laws, and three groups of non-

(Please turn to page 70)

Protecting the Eyes from Harmful Rays

By W. T. CAMERON

PROTECTING the eyes from flying objects is comparatively simple. The painful and many times disastrous effect when chips, sparks and dust particles enter the eye is felt immediately, and the effectiveness of the protection can be determined by simple physical tests.

In the case of dangerous light rays—ultra violet and infra red—the injury to the eyes is more often cumulative than immediate. Often permanent injury to the eye results before it is realized. The effectiveness of the protective glass cannot be determined easily, and as a result many workers are using colored glass which offers little or no protection.

Light is far more complex than it appears to the human eye. The eye cannot separate a beam of light into its component colors, but sees only the resultant effect of all the colors that may be present. Yet, by passing a beam of sunlight through a prism it can be spread out into a band of brilliant colors, ranging from red, through orange, yellow, green, blue to violet. This separation of light into its component parts is called the spectrum. The rainbow is the spectrum of sunlight reflected through the rain drops upon which it falls.

Color of objects is determined by the individual rays reflected from the object into the eye. If sunlight—which contains all the colors — shines on grass, we see grass green because all the rays are absorbed but the green. A white surface absorbs none of the rays; a dull black, all of the rays.

In addition to not being able to separate a beam of light into its component colors, the human eye is unable to see all of the spectrum spread out before it by means of the prism. It has been discovered that sunlight and other incandescent bodies contain radiations beyond both the violet and the red portions of the spectrum which are visible to the human eye. Just as our ears respond to only a certain limited range of vibrations in the air, so our eyes respond to only a comparatively narrow range of etheric vibrations. These in-



Courtesy The Linde Air Products Co.

● **GLASS** does not give protection by virtue of its color but from the chemicals used in its manufacture

visible radiations beyond the visible red and visible violet are called infra-red and ultra-violet.

While light rays can be referred to as "luminous" (visible) "ultra-violet" and "infra-red" and the luminous rays further identified by the color sensation they produce, it is often desirable to define a particular ray or band of rays more specifically. The simplest way to do this is to apply a linear scale to the full band of the spectrum. There are two such scales—the Angstrom unit and the millimicron, the latter having been adopted by the Bureau of Standards and the leading optical companies.

This scale is based on the "wave length" of the light ray — it being a generally accepted theory that light is a vibration or wave motion in a conducting medium known as the ether. Radio has made us familiar with the terms "frequency" and "wave length." A radio signal travels at the amazing speed of 300,000,000 meters (186,240 miles) a second. A radio signal of 1,000 kilocycles (1,000,000 cycles) frequency will have a wave length of 300 meters; one of 600 kilocycles frequency a wave length of 500 meters. In other words, the wave length, in meters, equals 300 million divided by the frequency.

Light waves travel at the same velocity as the radio wave, but with far greater frequency of vibration. For example, a violet ray, at the limit of visibility, has a frequency of 750 million million vibrations per second; a certain green ray, 600 million million; one of the red rays, 400 million million. Obviously such a unit is not convenient for general use.

Angstrom, a Swedish physicist, selected as the unit a measurement for the wave length of light $1/100,000,000$ of a centimeter. This is called the Angstrom unit, sometimes abbreviated "A.U." The wave length of the three rays just discussed, are then—Violet, 4,000 A.U.; the green ray, 5,000 A.U., and the red 7,500 A.U.

The millimicron (abbreviated Mu.) is ten times the length of the Angstrom unit. On this scale, the violet ray discussed is 400 Mu.; the green ray, 500 Mu. and the red ray 750 Mu. The visible range of the spectrum is from 400 to 780 Mu. The wave lengths of the dangerous invisible rays are shown in the accompanying table:

Designation	Wave Length
Short Ultra Violet	315 and below
Long Ultra Violet	315 to 400
Visible	400 to 780
Short Infra-Red	780 to 1250
Long Infra-Red	1250 to 100,000

Effect on the Eye

Ultra-violet and infra-red rays are found in sunlight and in most incandescent bodies. However, we very seldom look directly into the sun and these rays are not reflected in harmful quantities from most of the objects we look at.

There are numerous industrial operations, however, where workmen are required to look at light of high intensity, which contains both ultra-violet and infra-red. These operations include oxy-acetylene and electric welding, cutting and burning, cupola tending, open hearth and electric furnace operations, foundry pouring, looking into fire boxes, glass tanks and kilns.

Ultra-violet and infra-red rays are present in dangerous quantities in any combustion or incandescent body over 1,800 degrees F. The higher the temperature the more harmful they become.

The characteristics of the human eye with respect to different wave lengths are approximately as follows:

1. All the media of the eye are transparent to those wave lengths within the visible range.
2. The cornea absorbs all wave lengths shorter than about 300 Mu.

3. The crystalline lens absorbs completely at 350 Mu.

4. All the media are transparent to the radiation from white-hot bodies (short infra-red) and opaque to radiation from red-hot bodies (long infra-red).

As will be seen, the interior of the eye and particularly the retina is protected from the ultra-violet by the



Equipment for atomic-hydrogen arc welding.

strong absorption of the cornea and the lens. One would expect, then, to find that this type of radiation would have its effect on the outer portions of the eye. Such is the case, as it has been found that continued exposure to strong ultra-violet light brings a great amount of pain and discomfort in the form of inflammation of the cornea and conjunctiva. It may also produce complete corneal opacity. The effects resulting from such exposure are immediate and very noticeable. They will usually yield to treatment, unless the cornea has been permanently injured.

The effect of visible energy lies, of course, in the blinding and fatiguing effect on the retina to which it can penetrate without obstruction. The short infra-red waves, which also pass through the media without much absorption, have an effect that is not noticeable as the effect of the ultra-violet waves, but is probably more dangerous in that it is more likely to be permanent. It has been definitely established that continued exposure to such radiation can result in formation of cataract, permanent damage to the retina and choroid, or clouding of the aqueous.

In addition to the invisible rays, the glare from the intense visible rays produces irritation by admitting more light than the retina can stand. Upon sudden

exposure to intense visible light the iris contracts to exclude from the sensitive portions of the eye as much of this glare as possible. This closing of the iris takes only approximately one second. On the other hand, when the light source is removed the iris begins to open—taking approximately seven seconds to open to its full size. This explains the "temporary blindness" experienced by cupola tenders, open hearth melters, charging machine operators, soaking pit bottom makers, rolling mill operators, cranemen and others who intermittently look from high temperature incandescent bodies to comparatively dark surrounding conditions. Glare reducing lenses or divided lenses—upper half dark, lower half clear—are needed first, to reduce the fatigue which results from constant expansion and contraction of the iris; second, from the "seven seconds of blindness" which many times causes tripping and stumbling accidents.

Green and yellow-green are the easiest colors on the eye. The reason for this is that development of our eyes through the ages has been in an environment predominately green and yellow and brown. Man-made conditions—white paper, white sidewalks, roads and buildings—have created a condition much harder on our eyes than nature's.

Our eyes, formerly used mainly for distant seeing, now are required to concentrate on near objects; are used over longer periods of time, and a great deal of the time with artificial and often insufficient illumination. Add to this the industrial occupations requiring exposure to the blues and violets of welding on one hand, and the glaring orange-reds and white heats of iron, steel, glass and cement manufacturing, on the other. These create a condition requiring protection to which a great deal of scientific study has been given.

Protection

There are, then, four things to consider when furnishing protective glasses to workmen: Ultra-violet, infra-red, glare and color.

In the past a number of types and kinds of glass have been used to give supposed protection—brown, red, combinations of three or four glasses, and blue—this latter being predominant. Little or no thought was given in the past to harmful rays, workmen simply choosing a pleasing color and a density sufficient to cut down the glare. Workmen in various industries and different localities learned to judge temperatures,

(Please turn to page 62)

Hotels Live by Good Will

By LESTER L. SPENCER

*Assistant Supervising Engineer, The Travelers Insurance Company,
New York City*

When a guest is injured, the hotel's most valued asset, good will, is damaged

THE good will of guests is admitted to be invaluable to a hotel, but are there any accurate figures to prove just how valuable it is? From what I can learn through talking with hotel men, many of them have only a vague idea as to how good will affects profit and loss.

One obvious way of finding some of the costs would be to determine what is being spent to attract guests. What is the cost of newspaper and magazine advertising, the highway signboards scattered about the country, electric signs, magnificent lobbies, gold ceilings, murals painted by internationally famous artists, orchestras, and radio programs?

Let me quote from the house organ of one New York hotel. "The hotel keeper of today cannot wait until his guests actually voice their desires. He must anticipate and provide the things which will make a visit to his hotel pleasant."

Quite a slice of the income of every first class hotel is affected when good will is involved. The increasing cost of liability insurance is another factor which should be given consideration when you try to find out the effect of public accidents on profits. These rates go up or down in proportion to the amount of money paid in settlement of claims.

A few years ago if a person became involved in an accident and was not seriously injured, the chances were better than even that no claim would be made. Possibly it was necessary to listen to a complaint but courteous treatment usually settled the case. Today the public is claim conscious.

For several years there was little change in the manual rate for public liability insurance but in 1934 the New York State Insurance Department authorized substantial increases which were justified by the experience. The

amount of premium paid by an individual hotel is based on the area and frontage of that hotel. If the amount of premium is large enough, the indi-



Tipsy waiters are responsible for claims and ill will.



Before the public became claims conscious courteous treatment usually settled the case.

vidual experience of the hotel changes the premium up or down. For some years prior to 1934 the manual rates were \$.21 per foot of frontage and \$.24 per hundred square feet in area. The new rates are \$.34 per front foot and \$.35 per hundred square feet. In order to make the picture clear I had the rates, at manual, figured for one local hotel.

This house has a frontage of 972 feet and an area of 1,025,235 square feet. Prior to the rate change they would pay \$2,460.56 on area and \$204.12 on frontage—total \$2,664.68. Under the present rate they would pay \$3,588.32 on area and \$330.48 on frontage, total \$3,918.80; a difference of \$1,254.12. All of these figures are based on nominal limits of \$5/10,000 and, of course, there was no experience modification.

There are many circumstances which have an adverse effect on good will but we will discuss only one of them—accidents where guests are injured, which cause them embarrassment, or loss of

property. Certain of these accidents are unpredictable, but at least 50 per cent of them would be forestalled if ceaseless and alert consideration were



I escaped in my pajamas and overcoat.

given to conditions which experience has shown are liable to cause trouble.

For example, approximately \$1,600 was paid to the wife of a prominent local attorney because she slipped and fell in the lobby of a hotel in this city. The lady, with a party of friends, was leaving an affair in the early morning hours, just at a time when a porter was mopping the floor. The porter was one of those fellows who believe that it is easier to use a lot of water and cover considerable area at one time, instead of mopping a relatively small portion of floor and drying it, leaving a safe section to walk on. The combination of slippery floor, dirty water, and the effects of a gay party produced the accident, also the embarrassment. This lady was exceedingly proud and I have always believed that her dignity suffered more than her body as a result of her fall. Her gown was ruined, and even a moderate priced dress becomes a high priced creation when you are compelled to pay for it because of an accident.

This case happened several years ago and because I was called to account for the loss experience on the line I asked many questions. I learned the lady vowed she would never enter the hotel again and she didn't. Her family had entertained at this house rather extensively but up to the time of her death, about a year ago, she patronized other houses. Her son, who is also a lawyer

and a prominent politician, was one of a group a few years after the accident, when lunch was suggested at this house he remarked: "Not me, my mother had trouble there and if I was recognized somebody might put arsenic in my soup." The group ate elsewhere that day.

The hotel had to pay for an expensive accident, as this cost entered into the makeup of the experience rating for their public liability insurance. It is, of course, impossible to determine the exact amount of money the house lost when that family transferred their patronage to other hotels. The effect on friends of the lady and their attitude toward the house is less definite, but surely all this ill will represents a loss.

A few years ago some hotel executives were inclined to argue that this sort of thing evened itself out. They figured it this way: There are just so many guests and so many hotels and if a guest got sore at one hotel he would go to another in the same city. Time and experience proves this idea is no good. Restaurants cater to the same people the hotels serve in dining rooms, and high class rooming houses and apartments have been made more attractive to the so-called semi-permanent and permanent guest.

After I had left home as a boy and up to the time I was married I lived almost continuously at hotels. Perhaps I would still be residing in hotels if a series of fires hadn't occurred in one of them. The first two were not serious and except for a scare didn't mean much to me personally but the third one was

different. I escaped in my pajamas and an overcoat and lost nearly all of my possessions. I moved to a rooming house soon after that where I was only one story from the ground and where I didn't need to worry about the thoughtlessness of poorly trained employees. Practically all of the other permanent guests left also and that hotel, after a struggle, changed hands before it could be made into a paying proposition again.

Hotel fires bring another aspect of the problem to mind — unfavorable newspaper publicity, which in some instances hurts the whole industry.

Another sort of unfavorable publicity, which affects one house mainly, can be illustrated by the experience of one house where inside of a short space of time the newspapers carried stories of a man falling in the lobby and dying in his room; of a woman falling down an elevator shaftway, and another man being badly hurt by a fall on the stairs. It doesn't make any difference whether the management of the hotel is able to prove later that they were not negligent. The damage has been done and any explanations or retractions they are able to force from the newspaper merely serve to still further advertise the accidents.

It may be accepted as fundamental that the management must be aware of the cost of these public accidents; further they must demand that this cost be reduced and really mean what they say. It won't cure the situation to spend five minutes at a staff meeting reading a list of accidents, together with the cost.

(Please turn to page 50)



The combination of a slippery floor, dirty water and the effects of a gay party produced the accident, also the embarrassment.

Women Are Different

By ELLEN D. McKEON

*American Mutual Liability Insurance Company
New York City*

- PHYSICAL limitations, nervous reactions and temperamental traits must be considered in safeguarding women workers—

PROVIDING for the safety of the woman worker should start at the time of her employment. Right then due regard needs to be taken of the physical limitations, nervous reactions and temperamental traits which tend to differentiate women from men as problems in safe operations. Careful judgment must be used to fit the individual woman to the job for which she is being hired. First comes the temperamental factor. It is unwise to employ the dreamy contemplative type of woman or the temperamental, nervous type for monotonous work which involves danger. Other women can be found who are strong and steady on detailed work and who can be relied upon to maintain a clear head under reasonable working strain. Thus emotionally stable women should be selected for repetitive operations.

Since many of the tasks for which women are hired involve standing up for long periods, physical factors are important. A woman with varicose veins or fallen arches is at a definite disadvantage in work that requires her to be on her feet. Her fatigue is an invitation to injury. Such conditions as these call for special treatment and jobs where the woman can sit. Although eyesight will not be discussed in this article, it must be considered as an important factor at the time of employment.

There are jobs where the size of the woman, her height and weight, are very important from the standpoint of safety. Is she strong enough to lift the load she is expected to lift? Can she easily reach as high or as far as she is required to? If she is not physically fitted to the particular type of work at hand, she will be working unscientifically and probably unprofitably.



Courtesy Do-More Chair Co.

Correct posture seating is an important and often neglected factor in preventing fatigue and protecting health.

Of course, in hiring, attention should be given to the person's previous employment history and her accident record. Some concerns inquire into the social habits of the woman applicant. Too much drinking and too many late parties increase her chances of injury. Patient handling and advice can often correct unwholesome habits.

The age of the applicants in the minds of some is important. Some expert employers say that older women (within certain limits) are more reliable on dangerous machinery and less prone to accidents than younger women. On the other hand, it is pointed out that the older woman is more subject to tripping and falling than are her younger sisters. I repeat that the individual woman must be fitted to the individual task.

In the employing of women there are bound to be obsessions and fads. Different companies follow different practices, but the only point I have wished to make is that the first defense against

needless pain and inefficient operation is a wise and careful employment policy.

After the woman has been hired care must still be taken to fit her for her job. Is she properly introduced to it? Nothing is more important than adequate instruction. The worker should not be expected to know without proper explanation what are the things that the company expects her to do and how they are to be done. The term, "training and supervisory control" should embody all necessary safety considerations. Efficiency of operation comes from working with complete knowledge of what should be accomplished and what should be avoided. Job training is the name given to the science of building into workers the procedure calculated to get the best out of equipment and individual with the minimum of strain. Real training, especially for young women workers, involves a constant endeavor to teach by example and supervision. It is a common experience to investigate an accident and ascertain that it was caused

by a state of mind on the part of the employee which the employer or supervisor describes as "carelessness." But frequently the carelessness was not the woman's carelessness. She had not been properly hired or properly trained.

Let us now review the main contributory causes of injury to the employed woman.

Main Types of Accidents

From a broad study of accidents we find that five main types account for 80 per cent of the injuries. Falls and accidents occurring in connection with machinery account for more than half of the total. While injuries from falling objects and handling objects predominate among men, with women these are not so important, accounting for only 14 per cent of the injuries. On the other hand, men do not fall so frequently as do women, this type of accident alone being responsible for almost a third of the mishaps to women. Machinery is responsible for a quarter of the accidents to women, and textile machinery alone accounts for one-third of that total. Among the dangerous machines, the sewing machine stands high in the list. Next come metal working machines which are involved in 22 per cent of all machine accidents. Two-thirds of the metal working machinery accidents occur on presses. Thus it is seen that falls and machinery constitute the big problem of accidents to women in industry. There are many other causes, but for the purposes of this paper we shall discuss only these two.

One-half of all disabling falls to women occur on level places and two out of every three of these are simple falls which were not caused by some object in the victim's path. This suggests the need for proper shoes for women. Many of the accidents occur around time clocks and others occur on steps and stairs, particularly at the lunch hour and at closing time. Skylarking, where supervisory control is lax, plays a part in this. Some concerns place monitors at landings on stairways and at time clocks to prevent skylarking and in other concerns the hours of work are staggered, so that all workers will not leave the plant at the same time. The results are well worth the effort.

It is clear that the cause of some accidents to women is to be laid at the door of unsafe floor surfaces. Even in plants where women are required to wear shoes with moderate heels, safety will not be

achieved unless the floors are good. This also applies to stairways. Many accidents occur as a result of poor treads. And for approximately \$20 almost any staircase can be equipped with safe treads. The desirability of hand rails needs no comment.

Lighting is important. Poor lighting and bad housekeeping practices are a dangerous combination. More frequently than not good lighting does not require a heavy expenditure of money; commonly the proper placement and choice of fixtures and reflecting surfaces will help a great deal.

In the machine accidents we have a multiplicity of circumstances to keep in mind. Distraction is an important element. The layout of the plant, as well as company rules, should be such that a woman on a job which requires continuous concentration shall not be distracted by the needless talking of other women around her. Sometimes bench machines and foot presses are located along windowed walls, so that the employee looks toward the light. That is not an ideal circumstance, for fatigue from eye strain readily occurs. But distraction is also a factor and too many times employees are watching something through the window while their whole attention should be given to the job. Shades or a coat of whitewash can help to correct such a situation.

Women Are Poor Mechanics

Women should not be called upon to perform work which is beyond their strength. Strains and ruptures while operating machines represent an important cause of injury. No woman should be allowed to adjust, oil, or otherwise work on machinery while it is in motion. Moreover, women as a rule are not good mechanics and a slip with a simple screw driver may mean the loss of an eye or other serious injury.

In the clothing industry many accidents have occurred because machines were not equipped with needle guards. Many excellent guards are available, but frequently objections are raised that they obscure the work and moreover that they can be easily tampered with. The answer to the first objection is the choice of a good guard and to the second, strict supervision.

Accidents have occurred with too great frequency in connection with the transmission equipment located below the machine table. The common practice of leaving street shoes under the

table while wearing shop shoes results in a peculiar type of accident. Pin tickets fall into the unused shoe, causing puncture wounds, which are sometimes followed by serious consequences. For a woman simply to pick objects off the floor has caused much trouble. Hair becomes entangled in moving shafting, belts, and pulleys. Clearly all unnecessary machine hazards should be removed by guarding; and the occasional, terrible scalping accidents can be largely eliminated if the woman worker wears a net or cap over her hair. Proper clothing is important too. The employer should insist on safe clothing.

Fatigue Leads to Injury

Fatigue tends to break down physical balance and physical control. It works against that synchronization of motion essential to such routine activities as feeding a power press. Serious effort should be made to safeguard women from fatigue.

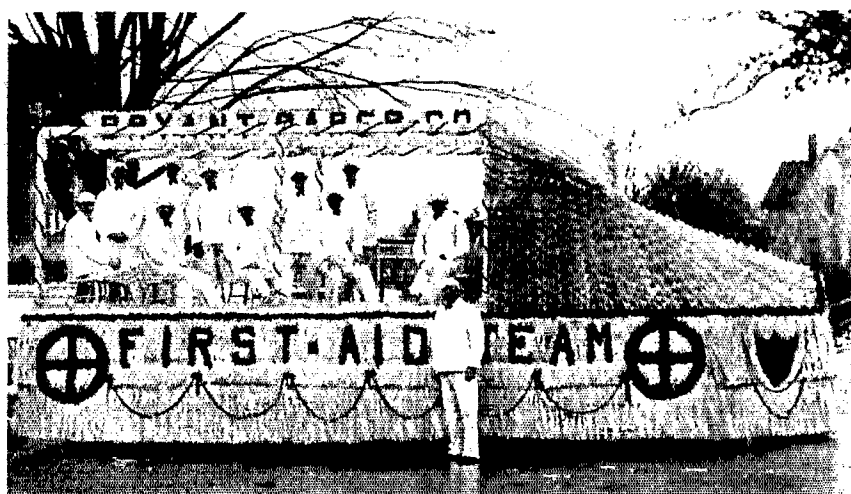
We have already mentioned the value of good footwear; it is an important part of women's equipment. Poor footwear causes strain upon muscles and sinews which is detrimental to the general tone of the body.

Women are entitled to rest *before* they become fatigued. Properly designed and maintained chairs should be available. For women a chair should afford back support and free room for the hips. While most chairs support the back, the construction often interferes with the hips. Any concern desiring to get the most out of its women workers must give serious consideration to posture. The bench or machine at which the woman is working should be adjusted to her height. She should not be required to adjust herself to the work through the use of such makeshifts as placing telephone books, folded clothing, or boxes on top of the chair to bring her to the proper working level. Suitable rest rooms for women employees should be provided and that consideration shown which makes for the adequate use of rest rooms.

Where the operations are monotonous some concerns overcome their fatigue problem by an alternating system whereby workers are relieved at intervals, going from a monotonous job to another type of work.

Safe clothing not only means the absence of loose flowing garments, bracelets, rings and earrings which can be

(Please turn to page 59)



First aid was the theme of this float, entered by the Bryant Paper Company, in an Armistice Day parade. Two lives have been saved by first aiders trained in the company's classes.

employment department, along with the trophy and current safety posters, is a sincere and convincing message to employees:

"This company feels a distinct responsibility for the Safety of its people and is making an earnest effort to avoid accidents.

"Each employee is expected to fully share this responsibility, and therefore, any carelessness that might result in an injury to yourself or others will be considered a misdemeanor and will be treated as such.

"Please be as good about protecting your fellow workers as you would about helping them if they were hurt. It is kinder and more profitable to all."

This appeal to employees appears also as an introduction to the company's safety rule book. Certainly, the exhibits at the employment office could hardly fail to impress the new employee or the visitor with the company's genuine interest in safety, and the impression is confirmed by a trip through the plant.

Winning the trophy, however, was but an incident in the continuous progress of accident prevention which started in 1927. At that time the entire plant had been operating with an average frequency rate of 81.60 and a severity rate of 2.78. During the calendar year of 1934, the company finished with a frequency rate of 7.85 and a severity rate

Competition Supplied the Punch

By CARMAN T. FISH

WHEN employees watch a safety bulletin board with almost the intensity of baseball fans at World's Series time, accidents disappear. And close competition in a safety contest makes men as alert as the home team's infield with a tied score and men on the bases.

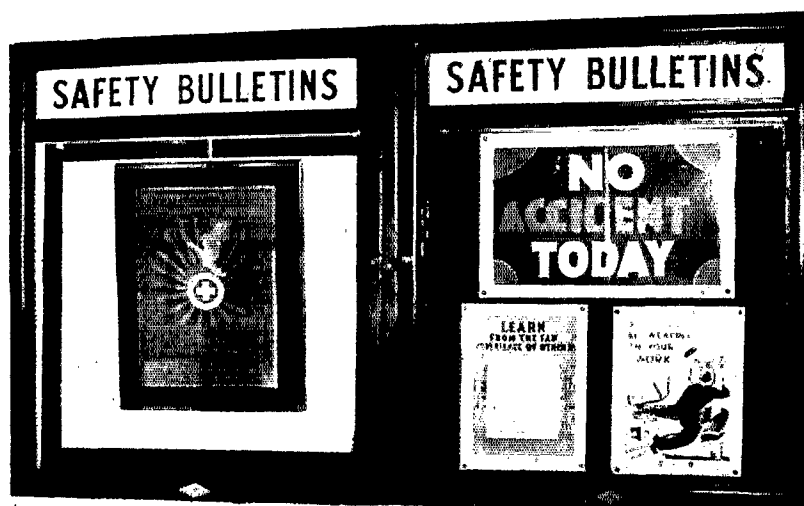
That has been the experience in hundreds of industrial plants, and nowhere have the results been more gratifying than among the paper mills of North America. It was in these mills that the contest idea really got its start. For ten years *The Paper Industry*, outstanding trade magazine in its field, has awarded annually a trophy which is regarded as the highest safety honor in the industry. This award, supplemented by the group trophies donated by the National Safety Council, has been a powerful incentive to continued safety efforts in the Paper and Pulp Section of the Council.

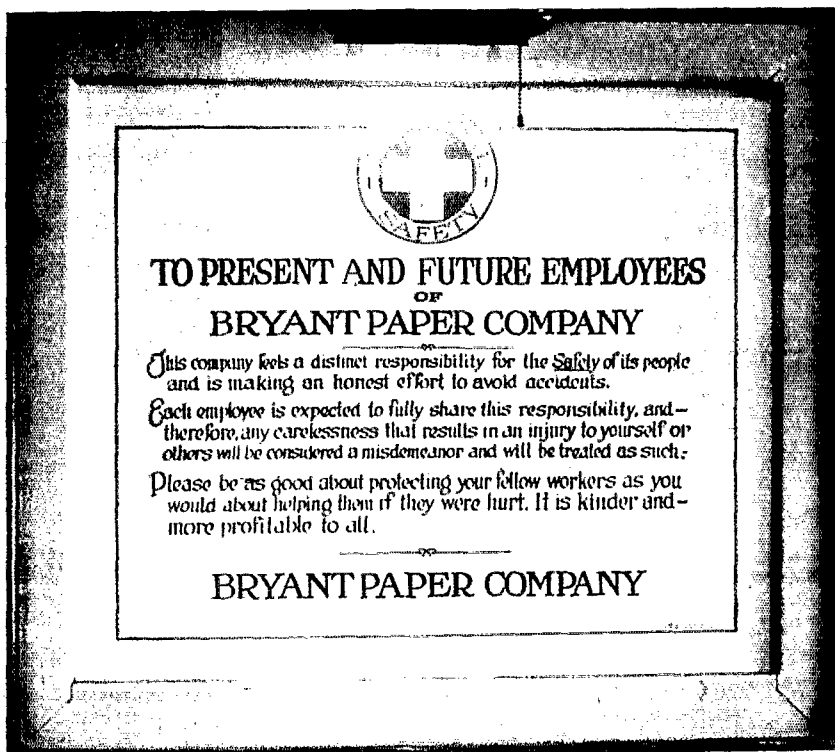
"Such contests put the necessary punch in accident prevention campaigns," says Earl Bullard, supervisor of personnel for the Bryant Paper Company, of Kalamazoo, Mich. "The spirit of competition brings out the reserve energy which remains dormant unless prompted by some stimulant such as these contests."

As tangible evidence of how effectively contests have stimulated the Bryant organization a trophy is proudly displayed at the entrance to the employment department. It was won by the paper division of the company entered in *The Paper Industry* contest for the year ending June 30, 1934. With an exposure of 506,873 man-hours, the division led Group C with a record of one disabling injury involving a loss of ten days.

Also displayed in the entrance to the

At the entrance to the employment office is displayed the trophy won by the company in the last Paper Industry contest. Attractive bulletin boards are placed in conspicuous locations throughout the plant.





This illuminated sign with its attractive hand-lettered message greets all applicants for employment.

of .021, showing a reduction of 90 and 93 per cent respectively in six years. During the latest *Paper Industry* contest, the figures for the Paper Division were 1.97 frequency and .002 severity compared with 9.05 and .020 during the previous contest. There has been no permanent disability case in the entire plant during the past five years. During the first three months of 1935 the entire plant operated 297,135 man-hours without a disabling injury.

The plant is located in the heart of the Kalamazoo River Valley paper district. The firm was established in 1895 on the present site and much of the original brick structure is still in use. Along with the original buildings are some modern structures of steel and concrete. The paper divisions of the company comprise old paper stock conversion, beating-washing units, eight paper machines, super-calendars, cutters, and a finishing department. The average daily output is 150 tons of magazine, writing, envelope, offset, eggshell and coating raw stock. There are no wood pulp operations. The plant employs in all departments an average of about 800 persons.

Following the inauguration of systematic safety work in 1927, the work of accident prevention increased steadily in effectiveness. By 1931 the present

program was well under way with well-organized safety committees, illuminated bulletin boards which are on duty twenty-four hours a day (with displays changed twice a week) centralized employment, physical examinations, accident investigations and analyses, transfer of accident-prone workers to less hazardous operations, plant inspection by the personnel department and other methods of keeping the accident rate down.

In 1931 safety shoes were introduced into the plant and their use has steadily increased. During the last three years all male employees in the entire plant have worn them while on duty. Toe injuries, which are frequent where heavy rolls of paper are handled, have been removed from the list of disabilities.

In 1930 a uniformed first aid team of twenty members was organized under the sponsorship of the company doctor. The team has developed a high degree of efficiency and has put on many local exhibitions to stimulate the interest of the community in first aid. On two occasions members of the team have been able to save lives through the application of the prone pressure method of resuscitation. Of great importance also has been the influence of first aid training in stimulating interest in safety throughout the plant.

The company maintains a well-equipped first aid room in charge of a full-time registered nurse. Outside physicians are retained and one of them visits the plant each day. Rigid physical examinations are given to all new employees.

The safety program is directed by the personnel department. No full-time safety man is employed, the accident prevention activities being combined with other duties such as employment, time-keeping, and personnel work. The basis of the program has been to seek 100 per cent cooperation from superintendents and foremen with the safety department in the background providing encouragement and stimulation. A fine spirit has been developed throughout the plant and to the supervisory force belongs much of the credit for the decisive reduction in accidents.

Departmental competition, as well as the National Safety Council contests, have contributed the necessary punch. During the last contest a good deal of publicity was given to the race, developing a competitive spirit between the paper mills and the coating mills, as well as promoting the desire to win against outside competition.

Award Gold Medal for Eyesight Conservation

THE Leslie Dana Gold Medal, awarded annually for outstanding achievements in the prevention of blindness and the conservation of vision, will be presented this year to Dr. William H. Wilder of Chicago, it is announced by Lewis H. Carris, managing director of the National Society for the Prevention of Blindness. Dr. Wilder was selected for this honor by the National Society in cooperation with the St. Louis Society for the Blind.

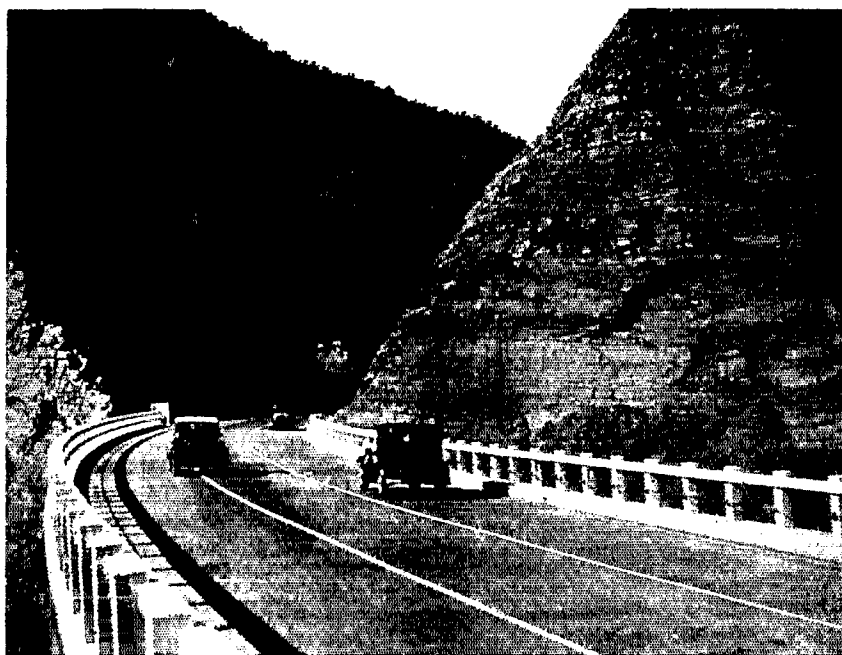
The medal, offered annually by a director of the St. Louis Society, is a prized mark of recognition of service for the conservation of vision. The medal bears the inscription: "Wise Clinician, Devoted Teacher and Humanitarian."

Dr. Wilder is secretary-treasurer of the American Board of Ophthalmology; vice-president of the Illinois Society for the Prevention of Blindness; professor emeritus of ophthalmology at Rush Medical College, University of Chicago; and a past president of the American Academy of Ophthalmology and Otolaryngology.

The Leslie Dana Medal was awarded last year to Professor F. de Lapersonne of Paris, president of the International Association for Prevention of Blindness.

Seeing America ... Safely

By CURTIS BILLINGS



WHEN a large manufacturer of automobiles decided to provide actual driving demonstrations as part of his exhibit at the World's Fair in Chicago, the officers at once recognized that one accident—one little slip with a large audience watching—would undo good work which was to cost hundreds of thousands of dollars. If a single passenger were to become injured or even badly frightened while riding in a car, invaluable good will would be lost to the company's product.

Therefore, it was essential to secure a corps of drivers such that better could not be found. They must be perfect drivers!

Hundreds of young men were interviewed. Many of them were fine looking, athletic, intelligent, experienced, quick, earnest, and very eager to get the work. Gradually the field was narrowed down to the approximate size of the desired staff. *And not one of the drivers measured up to the standards set.* They all had faults.

So a training program was inaugurated to teach these young men what they ought to know—to inculcate in them the habits of safe driving which were essential if more than a million passengers (and prospective customers) were to be transported safely over the rough and irregular terrain which had been built up for the purposes of the exhibit.

A common fault of the finest of these young "experts" was the habit of taking his eyes off the road. At first it was impossible to correct the seemingly simple trouble. Finally the instructor

hit upon a scheme. When the driver turned his head and took his eyes off the road in the course of conversation, the instructor would gently put his hand on the young man's cheek and push his head around straight. The movement was gentle, but firm. It was embarrassing to the driver, who already considered himself a faultless operator, to be caught thus breaking a fundamental rule right in the eyes of his employer. Very soon the fault disappeared. There is something to be said for this variation of back seat driving.

This episode is used only to point out that drivers without faults are so scarce that we are not likely to meet any of them on the highway. It may well be used also to give point to an article on safe driving, especially as it concerns the man who plans a touring vacation this summer. Most of us in our more reasonable moments must admit that we are not perfect automobile drivers.

Thus it is timely to sound a few notes of caution to the army of nomads who will take advantage this summer of those two great modern gifts, the automobile and good roads. Don't let an accident spoil your tour.

Care must be used even before the trip actually starts. While the knock

is being removed from the engine of your car ask the garageman to re-line the brakes, check the steering mechanism, and inspect the lights front and rear. These are small but vital jobs. It is a good plan also to be supplied with an extra set of lamp bulbs and, if the tires are worn smooth, to change to a new set before leaving, rather than to wait until the return. A blowout at a fast clip has put many a touring family into the ditch, or, even worse, into the path of an approaching machine.

It is a sound idea to establish a rule against cluttering the windshield and rear window with stickers and pennants. If you want the world to know that your goal is "the coast or bust," hang the sign where it will not obscure the vision of the driver. This slogan gives reason to pause also. Too many tourists try to cover more territory than their time will permit at a reasonable rate of travel. There is more rest and recreation in driving a thousand miles during the annual fortnight than in covering three times the distance with the whole family tired and fretful. Why schedule five or six hundred miles a day? Speed and frayed nerves often spell disaster.

Loading the duffel into the car is a particular task if everyone is to be comfortable and safe. Each member of the party should have plenty of room to stretch his legs, and the driver especially needs freedom of arm and of leg and of eye. The baggage must not obstruct his clear vision in any direction. Nor should it make prisoners of the passengers; for in case of accident everybody

MOTOR tourists must be prepared for anything, from poison ivy to road hogs

should be able to open a door and get out. If equipment is to be carried on the running board and on the carrier behind, it should not protrude from the side of the car and invite a crash with a bridge head or another machine. The tourist who carries his camping equipment in a trailer must be particularly watchful about his driving.

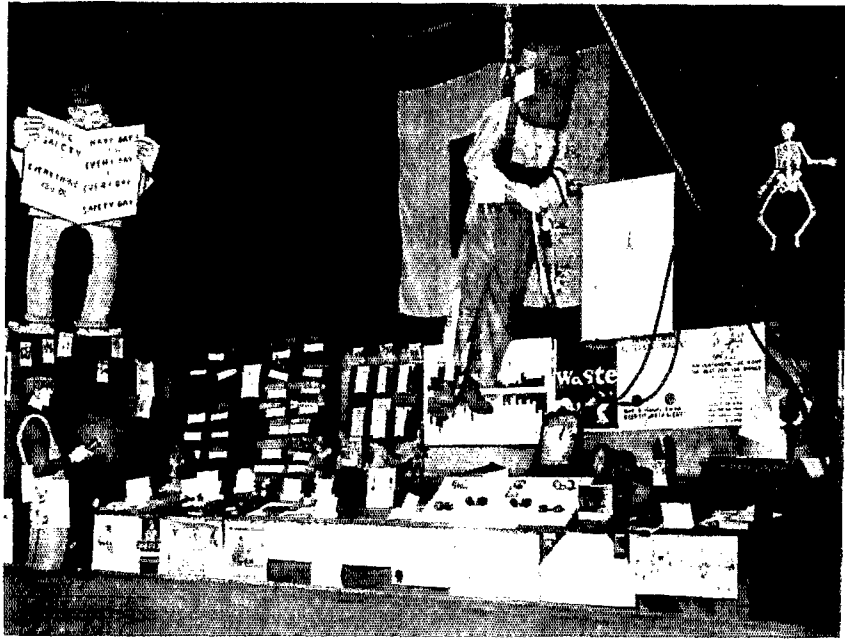
Before starting, the driver should remind himself of a few simple but often disregarded rules of the road. In the tour he will be confused many times by the lack of uniformity in signs, signals and traffic rules in the cities and states through which he passes. But there are certain fundamentals that can always be observed with safety.

One of these fundamentals is to drive in the outside lane except when passing. This is a sensible rule that retards nobody's speed and yet permits the traveler who is in a hurry to speed with a minimum of danger to himself and other drivers on the highway. Keep a safe distance from other cars. The driver ahead may have to stop suddenly, and while your brakes may be satisfactory, his may be perfect.

Turn right from the right lane and left from the lane nearest center to avoid cutting across the path of traffic moving in your direction. Never attempt to pass another car on a curve or hill. This is one of the worst traffic crimes because if an unseen car is coming all three vehicles may pile up in a tragic heap. Railroad grade crossings must be negotiated with care. Amateur drivers such as most of us are might well take a lesson from the professional bus operator who prefers to "stop, look and listen" — and live.

As a matter of common prudence, observe the signs and signals even if they do not seem as expedient as those at home. The tourist who breaks every traffic rule that does not suit his convenience because he knows that his foreign license will enable him to "get away with it," is beneath contempt. And sometimes he finds that he takes liberties to his own sorrow.

In driving through strange country it is a good plan to travel at such a speed that directional signs can be read in passing. Too many times tourists wonder what appeared on a certain sign past which they have sped and, without warning, stop abruptly in the center of the road and prepare to back up to have another look. Never stop, or turn, or pull into the lane of traffic from the curb without informing traffic behind of



Navy Exhibit Features Safety

By H. G. DESJARDINS

ONCE each year the Navy holds open house to the public. At this time every one who visits any of the ships or stations may see how large an institution their navy is. They also understand more fully what is necessary to keep the Navy ready.

Programs for Navy Day are planned months in advance and many committees are engaged in their preparation. The day usually starts with the presentation of the colors. Then there are band concerts, parades, formal guard mount by the marines, aerial shows, consisting of aircraft parades, catapulting (shooting) planes from ship's deck, aerial bomb attacks, life saving demonstrations in conjunction with the U. S. Coast Guard, deep sea diving exhibits, and other interesting features.

your intention. Know what you are going to do when you signal.

If it is necessary to stop to change drivers or to change a tire, park off the pavement.

Mountain driving presents new problems to the tourist from the plains. He is tempted to throw his machine out of gear and depend on his brakes in traveling down grade. This is foolish and dangerous. The car should always be

While manufacturing and military exhibits are most in evidence, safety is given a prominent part. No opportunity is overlooked to bring accident prevention home to our people. The accompanying photograph indicates what is being done for safety at the Washington, D. C., Navy Yard. Civilian artisans of many trades and occupations are employed, and machinery that cannot be found elsewhere is used here. At the Washington yards are manufactured large and small guns, torpedo parts, sights, directors, etc. Parts range in weight from ounces to tons.

The exhibit, arranged and directed by the author, was of an educational character. It was well received by the personnel of the Navy Yard and by the 98,000 persons who visited the yard on Navy Day. Among all the displays, the safety exhibit was the only one to be carried over for three additional days. Among the features of the exhibit were stereopticon slides showing the care of various injuries, and methods of safe motor vehicle operation. There were also demonstrations of protective wearing apparel and other safety devices.

Visitors were given a practical demonstration of how the Navy is trying to protect its workmen, and the workmen were reminded of the many items of equipment provided for their protection.

(Please turn to page 61)

Heavy Duty with Safety

By H. J. GRIFFITH

Superintendent, Safety and Welfare Department, Jones & Laughlin Steel Corporation

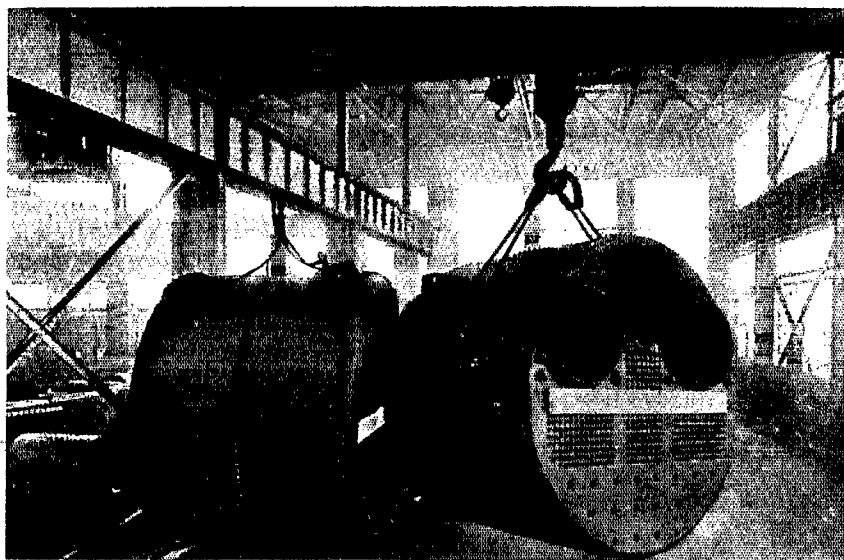
Three men share the responsibility for safe operation of overhead traveling cranes

CRANES do extremely heavy work under conditions which seem to be hazardous, but their operation can be, and should be—safe.

The three key men in the safe operation of an overhead traveling crane are the operator, the crane director, or hook-up man, and the repair man.

In our plant a basic rule reads: No one but a regularly authorized person shall be allowed to operate a crane. All operators must be more than 18 years old. They must pass a physical examination by a plant physician who lays particular stress on eyes, ears and heart. They must have two weeks of training under experienced supervision.

Even men who claim long experience in crane operation are supervised by a competent operator for a half day in the



John A. Roehling's Sons Co.

Constant maintenance of crane and slings is necessary for safe operation.

district where they are going to work. After a man is accepted he is given a rule book and a card signed by the superintendent of the Electrical Department and countersigned by the Safety and Welfare Department, which indicates that he is an authorized operator.

An operator must inspect his crane once during each shift. Any defect must be reported immediately, and if the foreman considers it serious, the crane is taken out of service until repairs are

made. Before making his inspection the operator must see that all controls are in the "off" position and that the main switch is pulled and locked.

The crane operator must take orders only from the person designated to give them. When he receives the signal to move, he must sound the crane alarm, making sure that everyone is in the clear. He must lift slowly, making certain that the block is directly over the load so that the load will not swing. If the swing does not rise properly, it should be lowered so the hook-on can adjust it. Neither the bridge nor trolley may be moved while the load is on the ground.

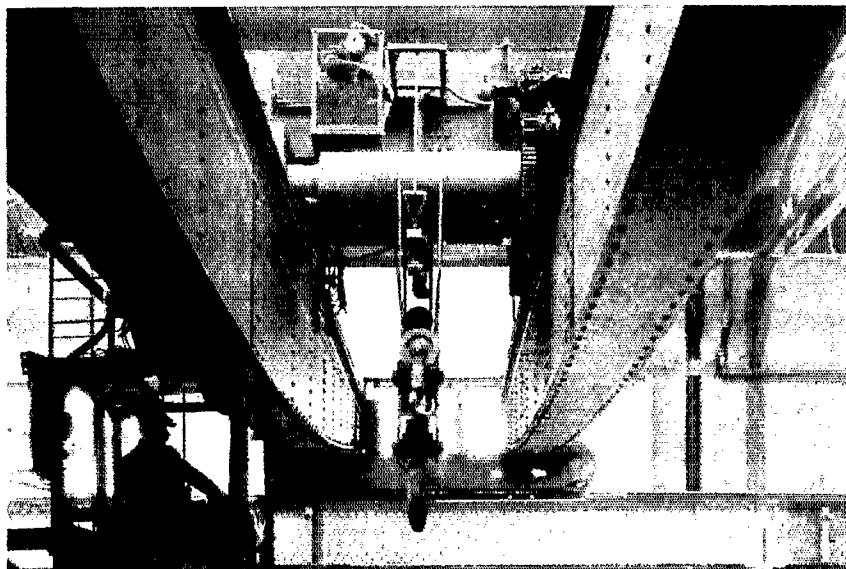
Loads must not be carried over the heads of workmen if it is possible to avoid doing so, and under no circumstances is it permissible to carry molten metal or metal with a magnet over men.

No person is ever allowed to ride on loads, cranes, hooks or magnets at our plant, and the violation of this rule is punishable by lay-off or dismissal.

Eating, reading or doing anything else that will distract the operator's attention is prohibited. Every crane operator is responsible for the safe operation of his machine.

(Please turn to page 55)

For cleaning lamps over crane runways the General Electric Company uses a fixed platform with cage mounted on the crane carriage. The cleaner can assume a crouched position and avoid being struck by overhead trusses when the crane is moved from one lamp to another.



Minor Repairs Prevent Major Accidents

By ROBERT H. CLARK

*Superintendent of Maintenance, Transportation Department
Consolidated Gas Company, New York City*

EVEN careful investigations of automotive accidents seldom penetrate the mystery of the original cause. Thus it is impossible to estimate with any degree of accuracy the annual toll of accidents whose cause may be directly attributed to the need of minor repairs. Insurance companies' statistics, newspaper accounts, and personal observation and experience furnish evidence that mechanical failure is a very important cause. To neglect known mechanical faults in the vehicle may be murderous.

Tires which display the fabric, front wheels that shimmy, unequalized or ineffective brakes, loose body racks and doors, broken spring leaves and worn shackle bolts, horns that won't blow, lights that won't light, and, worse, any combination of the above are, if they exist in our fleets, just waiting for an opportunity to break forth in a grand melee of broken bones and junk. Every overlooked bolt or nut on a chassis, every error of omission on the part of a mechanic, every "take-a-chance" attitude that is unchecked, will assist in creating the circumstances we are trying to avoid.

The automobile — and I mean every type of power driven conveyance — has become such a useful implement in every phase of life, that practically everyone is intimately acquainted with it. Children play games to see which one can outdo the other in naming the makes of cars as they pass by. We may return home from work in a chance acquaintance's car. We know nothing about his ability to take proper care of it. We hop in and out of taxis with no thought of the mechanism under us. Everywhere people place their confidence in equipment that they know is not always in the best condition, but they have no alternative.

We were shocked recently by the Ossining bus tragedy, where so many lives were needlessly lost. In this par-

- To neglect mechanical faults in a motor vehicle may be murderous

ticular incident the repairs needed would probably have constituted a major overhaul. The state-wide inspections following this disaster are perhaps the best form of insurance against such mishaps. The public was aroused to a point of protest, and public conveyances by the score were turned away from our tunnels, bridges, and ferries, because of defects that harbored potential accidents.

Commercial fleet operators need not wait to be told. We know the condition of our fleets. We appreciate that the "little drops of water" dropping one by one will eventually wear away the hardest stone. We know that an existing weakness will not improve, and will soon constitute a more expensive repair. To postpone a complete overhauling job safely can only be accomplished by a

constant and ever watchful eye for small defects. It is all too easy to let a running car run without looking for trouble. But trouble is part of our business.

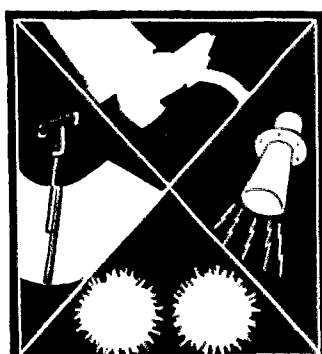
We have organizations whose purpose it is to maintain our cars. The owners of one or two cars, on the other hand, who compose the great majority of operators feel that they are sufficient unto themselves or place their faith in "Mike the mechanic," or the chauffeur himself. In our efforts to overlook nothing in the interest of safety it is only the better part of wisdom to adopt an inclusive plan of maintenance best suited to our own peculiar operating conditions.

There are four important factors entering into the discovery and correction of minor defects — the driver, the operating supervisor, the inspector, and the maintenance supervisor.

Proper cooperation must exist among these four men if a safety plan is to be a success.

The driver is the key to the situation. He is our first source of information for mechanical trouble. No one knows the car better than he and to fail to consider his criticisms and requests may be fatal. Our problem is not alone to find good drivers but also to find men who will feel that the equipment in their hands is just as much a part of their responsibility as the delivery of merchandise, or the completion of any service they are rendering. They must be company men. In addition they should have a reasonably comprehensive knowledge of the mechanics of the car. Every driver should spend a period of time in the shop under a qualified instructor. This instruction, however, need cover only the high spots; for a driver should not make repairs that belong to the maintenance department. He should merely be in a position to recognize symptoms of deterioration and breakdown. He should, for example, know the significance of running without oil

(Please turn to page 54)

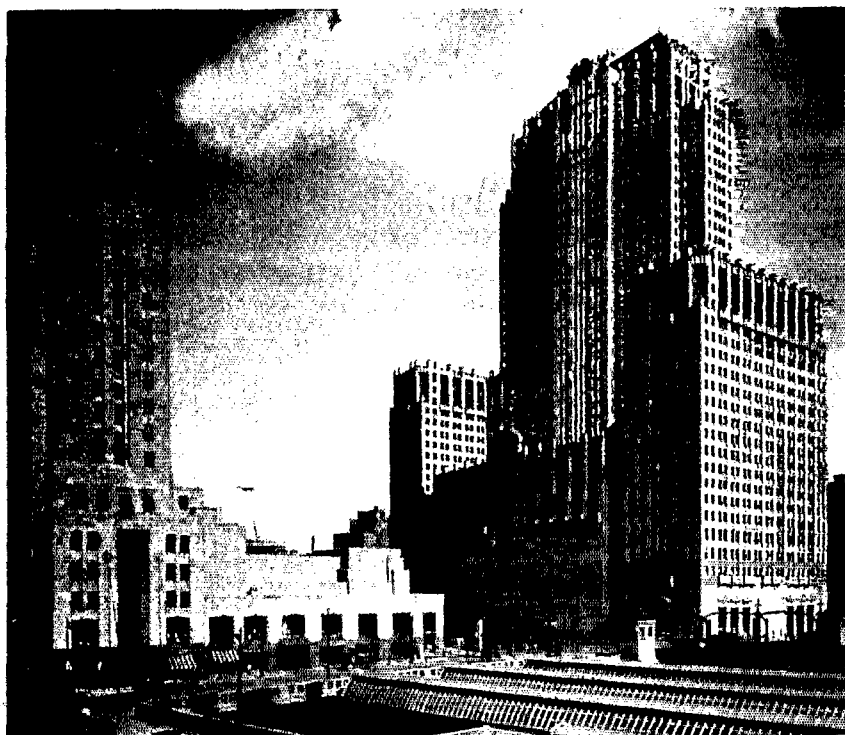


CHECK THE CONDITION OF YOUR
VEHICLE EVERY DAY. WHEN STARTING
OUT NOTICE THE CONDITION OF TIRES
AND REAR VIEW MIRROR.

TRY YOUR
BRAKES
HORN
LIGHTS
WINDSHIELD WIPER
NATIONAL SAFETY COUNCIL

NSC Poster No. 5272-B

NATIONAL SAFETY NEWS



Safety is First in the Council's Home

A TEMPLE to art and business and a proper citadel of safety.

To erect such a structure was the ambition of those who planned the Civic Opera Building at 20 North Wacker Drive, even before it was decided that the National Safety Council would become the most famous single tenant. Situated on the east bank of the Chicago River just across from the Daily News Building, also distinguished architecturally, the home of the Council is one of the outstanding office buildings in Chicago and one of the operatic centers of the world.

Both business and the opera have felt the withering effects of depression, but the building management has maintained a high standard of service to its tenants, a service which has as its high principle, the safety of every individual which enters the great stone portals.

Viewed from the river side, the Civic Opera Building resembles an arm chair, with the seat 15 stories high, the arms 22 stories, and the tower which forms the back, 45 stories high.

To maintain such a building, approximately 130 trained men and women are employed. These include engineers,

electricians, plumbers, steam-fitters, carpenters, decorators, elevator operators and janitors. Building maintenance involves many of the occupations and many of the accident hazards of the industrial plant.

Included in the maintenance departments are woodworking and machine shops with a great variety of equipment. Since the management and building staff have always been glad to cooperate with the Council in arranging photographs and since the equipment is well guarded, the shops have provided the background for many of the Council's safety posters.

Below the street level are the departments which supply vital services to the building. An elaborate exhaust system insures a supply of fresh air to all five basement levels. A refrigerating plant supplies conditioned air to the opera auditorium and to the smaller Civic Theatre which is also in the building.

Also contained in the basements which extend far below the Chicago River, which runs along the west wall, is a bewildering variety of electrical equipment, both for the opera and for the commercial occupants of the building. Incidentally seepage of water is con-

The Civic Opera Building at 20 North Wacker Drive, Chicago—the home of the National Safety Council. At the left is the Daily News building which has a covered thoroughfare to the Chicago and North Western Station.

trolled and removed by automatic pumps.

The uninitiated may think that the widely advertised salaries of prominent opera stars are the big item of expense. Most patrons of opera do not realize the enormous expense in plant equipment and personnel behind the scenes, an expense which must be met before the prima donna can let loose a single note.

The Civic Opera Building, therefore, has a variety of electrical and material handling equipment not needed in an office building devoted entirely to commercial occupancy. There is a vast amount of scenery stored in the grotto under the auditorium which must be brought up into place for each production. Staging an opera, however, is a subject deserving an article in itself.

Three stories below the street level are the five immense boilers which provide heat not only for the Civic Opera Building, but for several nearby buildings. The boiler room is operated by the Illinois Maintenance Company from which the Civic Opera Building purchases heat. A conveyor system ordinarily brings coal from the street level to the storage bins, but coal can also be brought in by the Chicago Tunnel Company, whose cars enter the building on the fourth basement level. Receiving coal from the street involves a less complicated procedure in handling and this plan is usually followed. All trucking is done at night.

Ashes are removed in cars of the tunnel company, and non-combustible rubbish is disposed of in a similar manner. Tons of waste paper from the offices are collected in bags and removed by a waste paper dealer. As the lower basements are below the level of the Chicago River, water-tight doors, motor operated, can seal off the basement in an emergency. A house telephone system connects all departments of the building. The freight elevator is equipped with a telephone and the operator can get in touch with all departments, even when he is between floors.

Power for the building is purchased from the Commonwealth Edison Com-

(Please turn to page 64)

THE SAFETY EXCHANGE

"A ROUND TABLE IN PRINT"



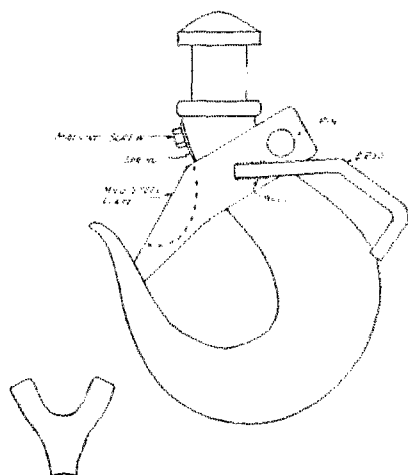
Conveyor Belt Guard with Cable Safety Stop

In this picture it can be plainly seen how metal guards overlap the conveyor belt for a considerable distance on either side where the belt goes over the roller, thus adequately protecting the operator from getting his fingers caught at the

point where he reaches across the belt. Note also the safety stop cable, at a convenient height for all operators to reach it along the entire length of the conveyor. A pull on this cable, in case of any accident or emergency, will stop the conveyor belt immediately. The picture is from the Goodyear Tire and Rubber Company, Akron, O.

Guard for Open Hook Has Proved Satisfactory

An open hook guard has been made safe by the method shown in the accompanying drawings, and all open tubing hooks of The Empire Companies,



Bartlesville, Okla., are now fitted with this safety attachment. The cost is approximately \$2.50 each. To make the

device, the bearing on the back side of the neck of the hook is first put on. It consists of a suitable steel tube with an inside diameter of $\frac{3}{8}$ or $\frac{1}{2}$ -inch, securely welded on. The pattern for the tongue is next made from a piece of cardboard and this is marked out on suitable malleable sheet iron. The spring is the flat spring used in O'Bannon safety tubing hooks, and is held in place with a set screw on the inside neck of the hook. The handle is made by welding on two pieces of about $\frac{1}{2}$ -inch iron rod and bringing them together on the back side of the hook to form the grip. Make the loose end a "V" to fit over the rib on back side of hook.

Mimeographed Calendar Reminds Safety Committee

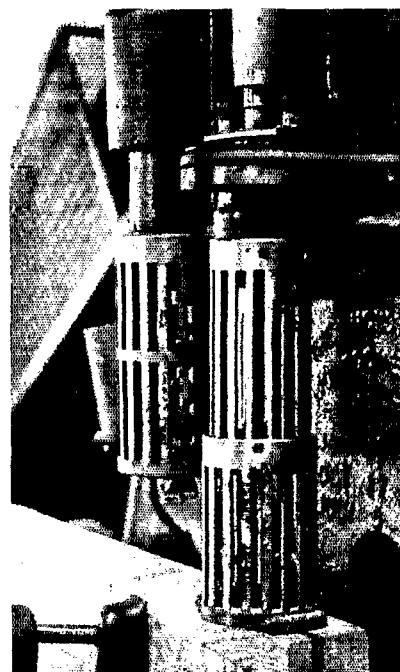
A mimeographed calendar to remind members of the safety committee of the dates of the quarterly meetings has been prepared by J. R. Franks, general yardmaster for the Atlantic Coast Line Railroad at High Springs, Florida, and chairman of the High Springs Terminal Safety Committee. Surrounding a panel

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

containing the schedule of meetings and a safety slogan are the months of the year with the date of each meeting circled.

Telescoping Guard for Wood Boring Bit

The construction of this interesting and effective telescoping guard is plainly shown in the picture. There is a counter-balanced weight which helps to lower or raise the guard from the work. The guard is easily lifted so that material can be placed under the bit and the bit can be raised for inspection. The open construction of the guard permits the operator to see what is going on at all times. The guard was developed by the American Steel & Wire Company, Cleveland.



NATIONAL SAFETY NEWS

A Sponsorship Plan of Safety Education

A sponsorship plan of safety education has been adopted by one company with gratifying results. Each inexperienced employee, or former employee, who has been out of work so long that his safety habits have become rusty, is given not only the usual instructions from his foreman, but is turned over to an older, more experienced employee, who agrees to serve as "his brother's keeper" during the "apprenticeship." The new man thus gets individual instructions from the fellow with whom he stands shoulder to shoulder in his daily work. In turn, the instructor unconsciously becomes a more careful worker and a bond is set up between the two men. There is nothing novel about this plan but it does place additional emphasis on the training of the new employee and causes the sponsor to feel his safety responsibility.

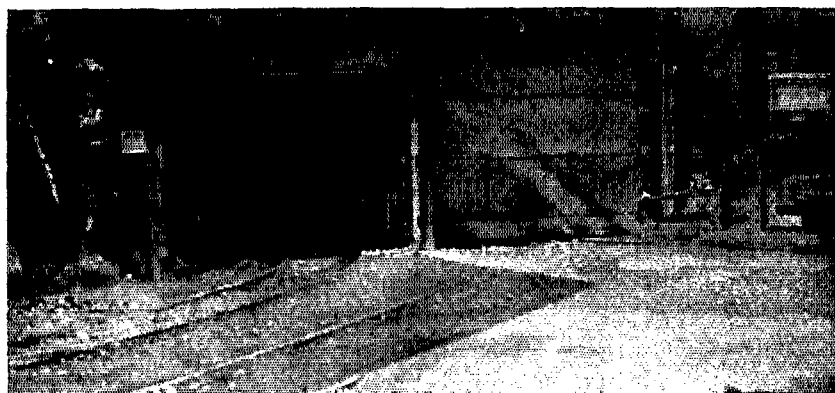
The Safety Slogan is Found on Every Time Card

Here is the outline of a time-card used in the plants of the Eagle Picher Lead

DATE.....		The time to Prevent an Accident is Before it Happens	
NAME			
Total Hours	Rate		Amount
CHECKED BY			
Charge.....	Hrs.....	Chg.....	
Description of Work		Amount	
Charge.....	Hrs.....	Chg.....	
Description of Work		Amount	
Charge.....	Hrs.....	Chg.....	
Description of Work		Amount	
Charge.....	Hrs.....	Chg.....	
Description of Work		Amount	

Company, where the safety slogan is given prominent place. Every time-card carries a slogan, and each day there is a different one. This is a simple means of putting over a safety thought.

JUNE. 1935



Entrance Door to Mines Keeps Out Trespassers

From the United States Bureau of Mines, we get this photo of a good type of entrance door for mines. This door

is solidly constructed of steel bars, which prevent intruders from entering the mine when it is not in operation. The open construction permits ventilating current to enter at all times.

Oil Container Carrier Speeds the Work

A square five-gallon can is an awkward vessel to pour from if provided with only a small handle. The condition can be greatly remedied by the use of a special carrier consisting of a band of metal and a large handle. The band is formed to fit a standard square can and is equipped with a wing nut and screw for clamping it on the body of the can.—*Coal Age*.

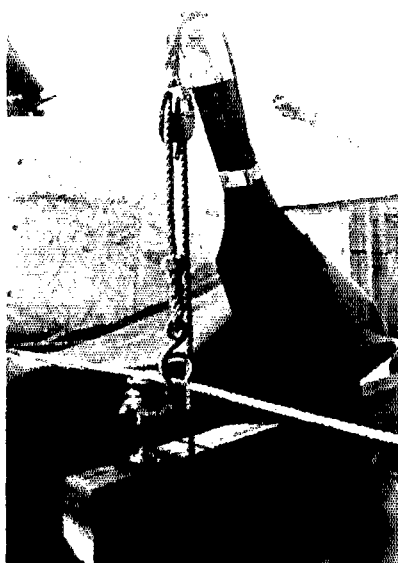
Cross-Arm Gin Prevents Lame Backs

The cross-arm gin is used to raise and support a heavy conductor when necessary to do such work as replacing its insulator or pin, or where the conductor is to be moved for any other reason. The "line hook" around the conductor is

so shaped that the wire cannot slip or jump out. This device has saved many a strained back and has prevented other injuries which would have been caused by lifting the conductor while in an awkward position. The picture is from the San Joaquin Light & Power Corp., Fresno, Cal.

Hand is Guarded for Strip-Cutting Operation

To protect the hand of the worker holding the material being cut, the



Corduroy Rubber Company of Grand Rapids, Mich., has devised this hand guard. It is made with tubular steel handle, and a flat piece of steel which rests flat on the material being cut and holds it firmly in place. It is set at such an angle from the cutting table that it keeps the operator's hand well above the table, and, in case the knife should slip, his hand will not be cut.

Arsenic and Its Compounds

Industrial Data Sheet D-Chem. 13

A. Problem

1. What are the hazards of arsenic and its compounds and what precautions are necessary in their use?

B. Hazards

2. The principal hazards are those of poisoning by:

- Inhalation of toxic dusts, vapors and gases.
- Irritation and ulceration of the skin because of contact with harmful dusts.

C. Discussion

3. Pure metallic arsenic is a brittle, steel gray substance which is considered harmless. However, every compound of arsenic is poisonous. Arsenic is widely distributed in nature and is found in all metal ores except quicksilver. The most poisonous solid compound is white arsenic (also called arsenic trioxide or arsenious acid). The best known compounds in industrial use are Paris green and Scheele's green, composed of mixtures of arsenic and copper. Arsenic vapors have a yellow color, and the odor of garlic is given off when arsenic compounds are heated.

4. Arseniuretted hydrogen (also called arsenic trihydride or arsine), an extremely poisonous gas, with no color and a foul smell, is produced when acids act on metals containing arsenic.

5. Arsenic compounds are used in preserving furs, feathers and skins; stuffing animals; removing hair from hide; making artificial stone and enamels; decolorizing glass and crystal; for insecticides; preparing green dyes and paints; and in many chemical operations.

6. The majority of industrial arsenical poisoning cases occur in either of two distinct forms; from (a) inhalation of, or contact with, the dusts of arsenic compounds and (b) inhalation of arseniuretted hydrogen gas.

Symptoms of Poisoning

7. The symptoms of chronic poisoning by arsenic dusts show themselves on the skin, on the mucous membranes of the eyes and upper air passages, and in the gastro-intestinal tract, and the nervous system. Dusts on the skin, especially

where there are folds, as around the nose or mouth, or where the surfaces are moist as under the armpits, set up an eruption or eczematous condition which, if not treated, will lead to an extensive ulceration. The most characteristic lesion produced on the upper air passages is perforation of the septum of the nose resulting in holes varying from $\frac{1}{8}$ to 1 inch in diameter. Associated with the skin eruption are swelling and inflammation of the eyelids, soreness of the throat, and hoarseness. In severe cases, the gastric symptoms become pronounced and result in vomiting, abdominal cramps and diarrhea. The nervous symptoms may start with deafness and a feeling of pins and needles, or a loss of sensation in the extremities, leading up to general exhaustion and brain disorder.

8. Acute poisoning by inhalation of arseniuretted hydrogen is indicated by weakness, dizziness, headache, vomiting, jaundice and anemia. These symptoms occur within a few hours after inhalation of the gas.

First-Aid Treatment

9. In case of acute poisoning by arsenic compounds, patient should at once be removed from further exposure and an emetic given. Raw eggs beaten in milk may be given freely, followed with sweet oil. The hands and feet should be kept warm. Sodium thio-sulphate may be given to promote elimination through the kidneys and bowels. In either acute or chronic poisoning, a physician should be secured as soon as possible and his recommendations followed strictly.

Precautions

10. Where arsenic compounds are used, the following precautions should be taken:

- Workroom should be well ventilated.
- Arsenic dusts and vapors should be removed at point of origin by suitable exhaust ventilation. (See Note X.)
- Work tables should be provided with down draft exhaust ventilation.

d. Arsenic fumes should be eliminated by passing them through coke and nitric acid.

e. Floors of workrooms should be of cement to prevent absorption and to permit ready cleaning.

f. Floors of workrooms should be cleaned daily with a vacuum cleaner or by washing with water.

g. Receptacles for arsenic compounds should be of metal to prevent breakage or leakage.

h. Workers should wear suitable overalls, gloves, and respiratory protective equipment. (See Note Y.)

i. Showers in the ratio of one shower to each five employees should be provided. These showers should be provided with hot water and plenty of soap.

j. Workers should not be allowed to eat food in the workroom and should be required to wash hands and face before partaking of food, tobacco, etc. Also, workers should wash their hands before going to the toilet.

k. Two lockers away from the workroom should be provided for each worker, one for street clothes and one for work clothes. Workers should be required to change from street to work clothes before entering the workroom.

l. At the end of the day's work, the workers should remove their work clothes and take a shower with plenty of hot water and soap before putting on their street clothes.

m. Any person before working with arsenic compounds, should be given a complete physical examination for evidence of any disease which may be aggravated by the arsenic compounds. All arsenic compound workers should have a physical examination at least once each year as long as they are exposed to the hazards of the compound. (See Note Z.)

NOTE X. Safe Practices Pamphlets No. 32, "Exhaust Systems," and No. 37, "Industrial Ventilation," contain information that will be of value in the design of proper exhaust and ventilation systems.

NOTE Y. Authentic information on suitable respiratory protective equipment will be found in Safe Practices Pamphlet No. 64, "Respirators, Gas Masks, Hose Masks and Breathing Apparatus."

NOTE Z. For information on physical examinations, see Health Practices Pamphlet No. 2, "Physical Examinations in Industry."

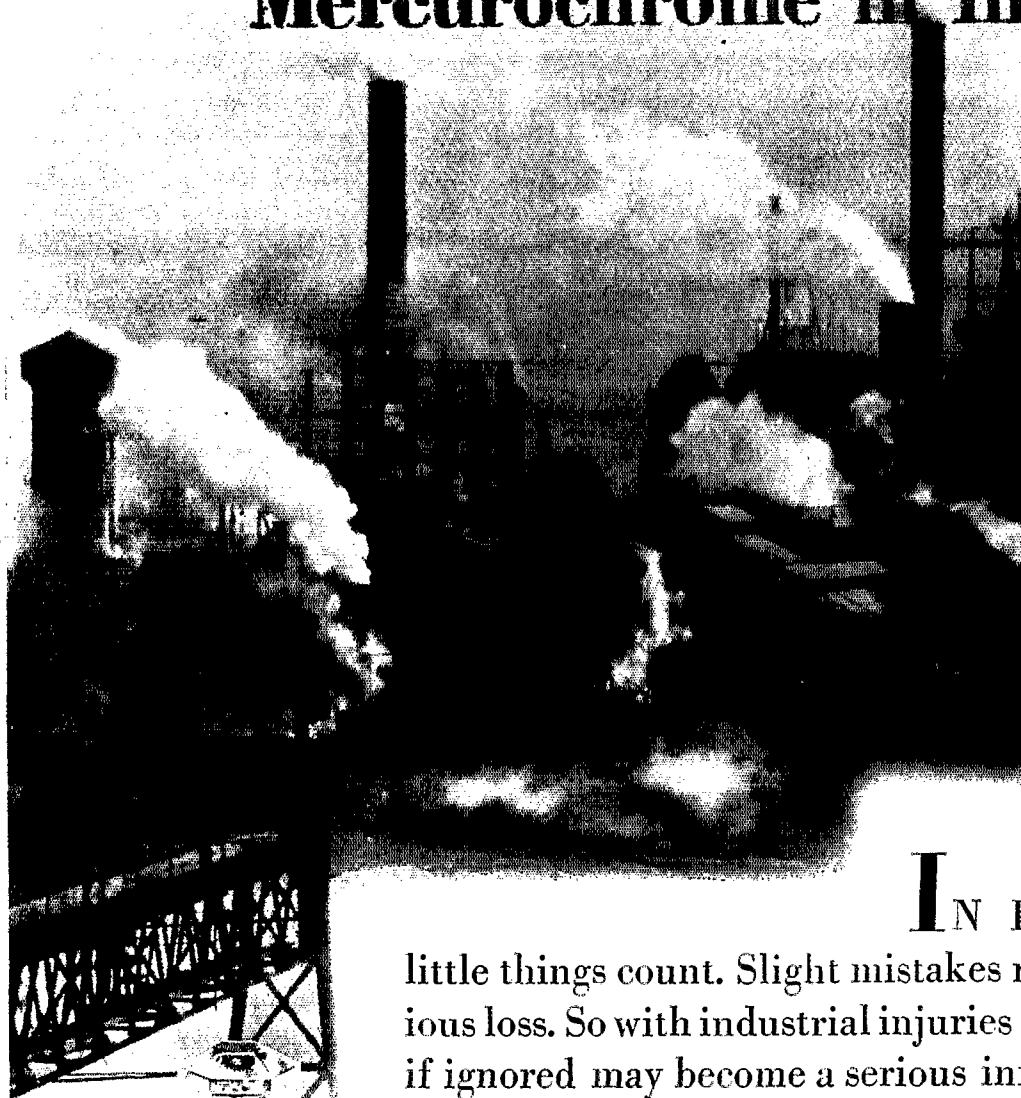
National Safety Council, Inc.

20 North Wacker Drive

Chicago, Illinois

NATIONAL SAFETY NEWS

Mercurochrome in Industry



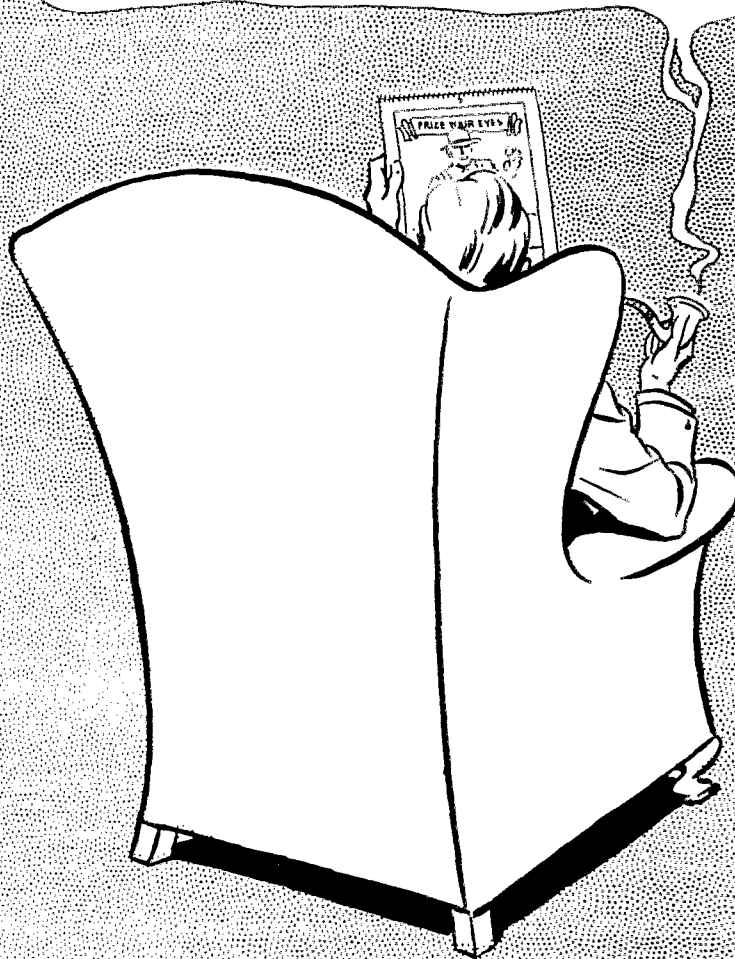
IN INDUSTRY little things count. Slight mistakes may mean serious loss. So with industrial injuries a little scratch if ignored may become a serious infection. ¶The first defense against infection is thorough cleansing and the application of an effective antiseptic. All wounds, however small, should receive treatment promptly. Be prepared with Mercurochrome for the first aid care of all minor injuries. In more serious cases call a physician.



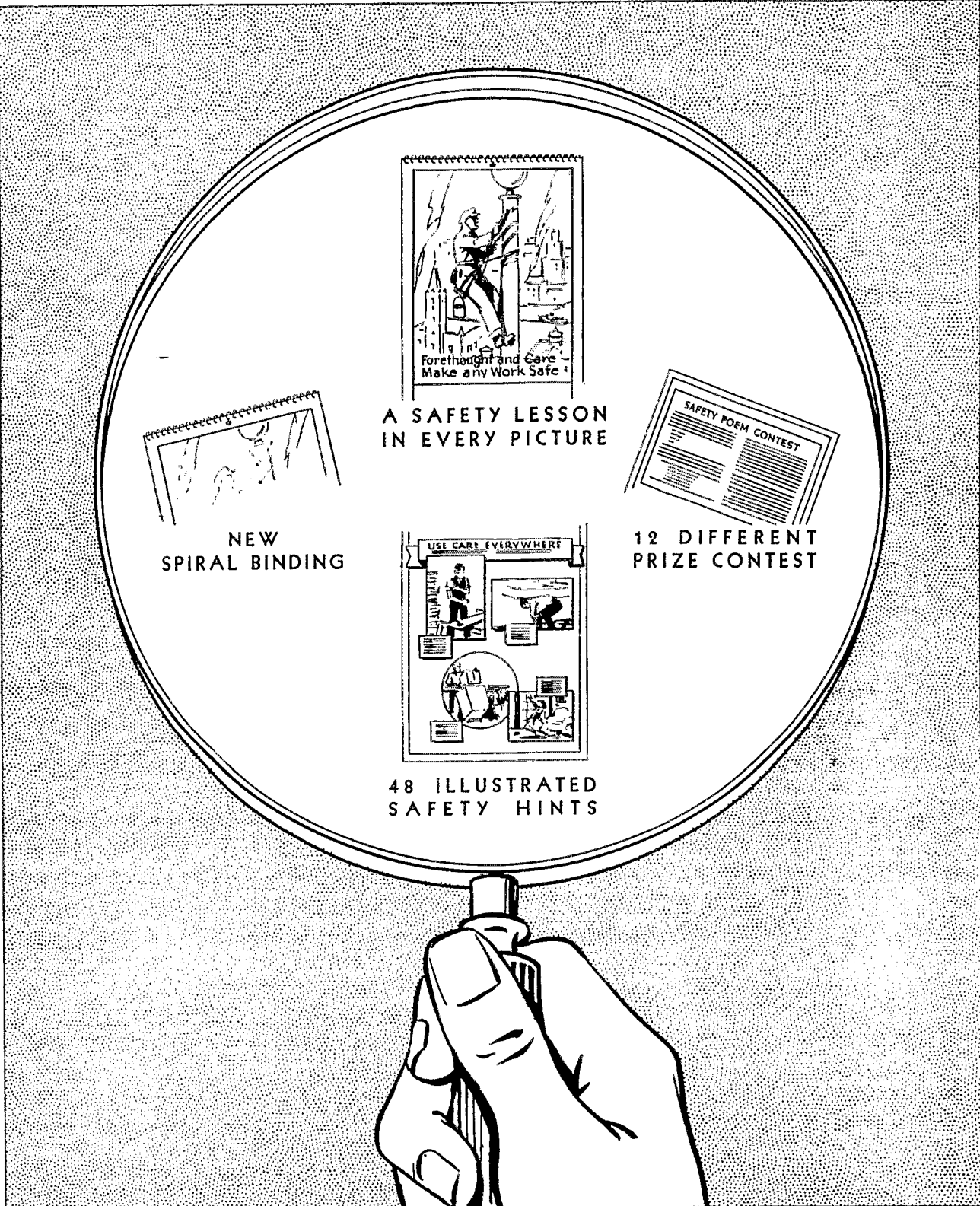
This seal denotes acceptance of Mercurochrome for New and Nonofficial Remedies by the Council on Pharmacy and Chemistry of the American Medical Association.

HYNSON, WESTCOTT & DUNNING, Inc., Baltimore, Maryland

"BUT WATSON, MY DEAR FELLOW!
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OVERLOOKED THE FOUR MOST
IMPORTANT REASONS WHY THE
NEW SAFETY CALENDAR WILL PLAY
A BIG PART IN INDUSTRY'S FIGHT
AGAINST ACCIDENTS DURING 1936!"



The GREATEST of ALL



The magnifying glass highlights several features of the safety calendar:

- NEW SPIRAL BINDING**: An illustration of a spiral-bound calendar.
- A SAFETY LESSON IN EVERY PICTURE**: An illustration of a worker on a construction site with the text "Forethought and Care Make any Work Safe".
- 12 DIFFERENT PRIZE CONTEST**: An illustration of a "SAFETY POEM CONTEST" form.
- 48 ILLUSTRATED SAFETY HINTS**: An illustration of a calendar page titled "USE CARE EVERYWHERE" showing various safety scenarios.

SAFETY CALENDARS

INDUSTRIAL HEALTH

A Non-Technical Symposium for Physicians and Laymen

Tannic Acid for Burns

By HAROLD P. SULLIVAN, M.D., F.A.C.S.

Chief Surgeon, Chicago Fire Department

SIMPLE first aid treatments can give immediate relief for minor burns. It is necessary, of course, to know exactly what to do and do it with dispatch. Severe burns, on the other hand, which always involve intense suffering, the probability of paralyzing shock, and the possibility of death itself, are quite another matter.

The most effective agent now known to combat burns is tannic acid. This is a non-nitrogenous, non-poisonous powder which is readily soluble in water and which may be obtained at any drug store. The advantages of tannic acid are manifold. It shuts out the air, thus stopping pain; it contracts the burned tissues, thus preserving in them their normal fluids which otherwise might be lost; and it forms a firm crust over the wound so that it is protected from infection. Doctors generally regard tannic acid as the "perfect remedy" for burns. Now, how shall the layman use this friend of the injured when emergency arises?

Let us suppose that you must treat a major burn. You recognize it as a major burn by its apparent depth or by the large area over which it is spread. You are in your home with no remedies at hand. First aid seems distressingly far away.

What to do? First, of course, realize that you must keep your head. Prepare to work speedily, but always deliberately and carefully. Spasmodic, jerky, or hasty motions on your part may jeopardize the patient's chance for recovery.

Fill a tub with warm water and add about four teaspoons of salt for every gallon. Lift the injured person into the tub and see that all burned parts are submerged. Then, have someone telephone for a doctor or do it yourself.

If the patient is extremely ill and suffering from shock, do not try to remove his clothing. Keep him warm, using blankets over the foot of the tub to hold in the heat if necessary.

From your druggist order tannic acid. Explain the seriousness of the case and impress on him the necessity for haste. Then, to help relieve the shock, give the patient some stimulant such as hot milk, brandy or whisky. Be sure the liquid is hot, but not too hot.

Now let us suppose that the doctor does not arrive but that the tannic acid does. Your patient is still in the warm bath, clothed.

Try very carefully to remove his clothing under water. If it does not come off readily when you cut it or pull it gently, leave it there. The doctor will remove it later or it will fall off of its own accord as the treatment progresses. Go to work with your tannic acid. We shall assume that this substance has arrived from the druggist in powdered form. Mix eight level tablespoonsful of the powder in a glass of water. Dip pieces of clean gauze or muslin into this solution and lay them dripping wet on the burned area.

If the area is very large it probably will be more merciful if you do not remove the patient from the tub to his bed until after you have applied the tannic acid. Thus it is necessary only to drain the water out of the tub before applying the dressing to his wounds. *Do not, under any circumstances, apply the solution with cotton batting.* After the muslin or gauze is in place, do not disturb it, but keep it constantly wet by pouring the solution onto the bandage with a teaspoon. This should be done at least every fifteen minutes until the doctor arrives.

There you have, in a nutshell, an excellent method of administering first aid to the victim of a severe burn. There are other methods, of course, and the one which I shall describe is used in our Chicago Fire Department and also in many hospitals. It consists of spraying tannic acid directly onto the burn and for this one can use an ordinary atomizer. A caution, the importance of which cannot be over-emphasized, is to clean and sterilize the atomizer before using it. It is not difficult to do this.

Wash all parts thoroughly with boiled water and rinse them with the best of alcohol. If you have no alcohol, place the atomizer in a pan of cold water, so that all parts are submerged and put it on the fire. Allow the water to come to a boil and keep the atomizer in the boiling water for at least three minutes. Then lift the parts out and place them on a clean towel. Allow them to cool until you can touch them, then assemble the device and fill it with the tannic acid solution.

When this method is used muslin or gauze is not needed. The solution should be sprayed directly onto the burn and the skin around it. As the sprayed parts turn brown, be happy. The darker it turns and the quicker, the sooner the pain will stop. Keep spraying every fifteen minutes until the doctor comes.

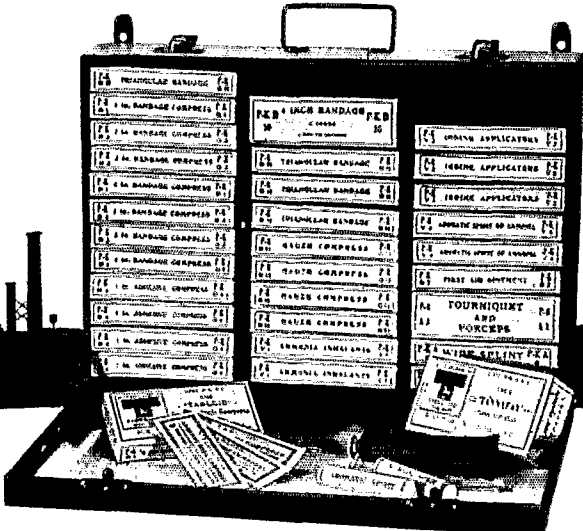
One of the great advantages of tannic acid is that it eases the pain at once. In other treatments of burns it is usually necessary to administer a drug to the patient. Moreover, the substance is non-poisonous and a supply should be kept in the home. Once the powder is mixed with water, however, it must be used immediately. I probably ought to say that your druggist will mix tannic acid up for you either as a liquid or as a jelly, or, as in the case described above, he will sell it to you in powdered form. For ordinary burns a solution of half the strength of the one mentioned, or four level tablespoonsful in a glass of water, is sufficient.

(Please turn to page 74)

YOUR SHIELD IN TIME OF EMERGENCY

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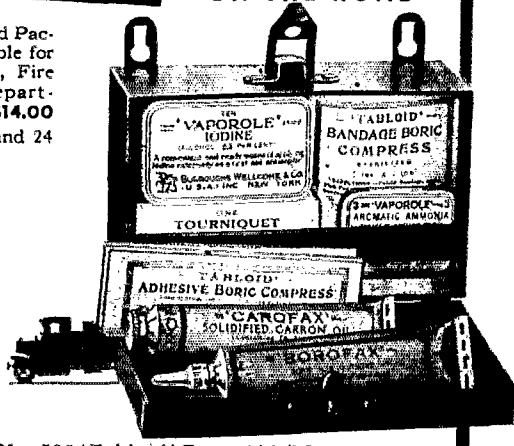


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No. 754 'Tabloid' First-Aid Pac-Kit 36 unit specially suitable for Public Utility Companies, Fire Departments, Police Departments, etc. List Price, \$14.00
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In accordance with the U. S. Department of Commerce (Aeronautical Division) meets all requirements of the aeronautical industry
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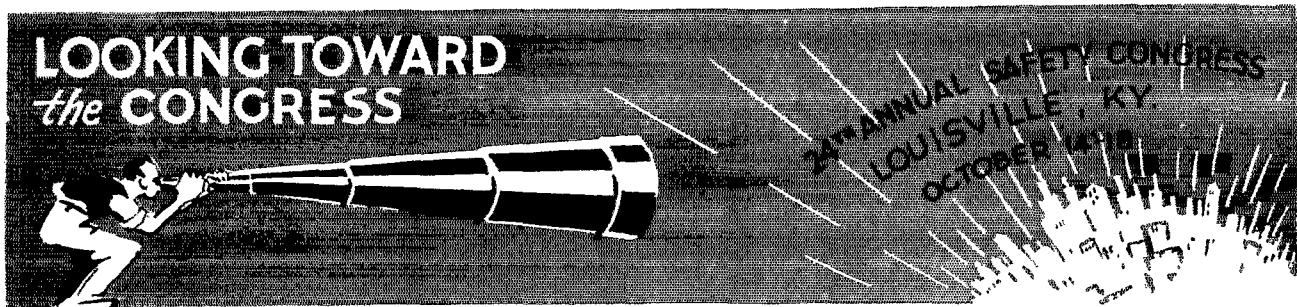
Please send me descriptive N.S.N.
literature regarding 'Tabloid' First-Aid.

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PLANs for the Twenty-fourth Annual Safety Congress to be held in Louisville October 14 to 18 are being completed now. The 120 meetings are scheduled for the Brown, Seelbach and Kentucky hotels; the huge exhibits of safety equipment will be in the Brown and Seelbach, the industrial at the former and the street traffic in the latter. The sessions will be divided roughly into 100 on industrial safety and 20 on public safety. Altogether there will be more than 12 sessions devoted to special subjects.

* * *

Many prominent men have already accepted invitations to speak. The Honorable Harold G. Hoffman, governor of New Jersey and chairman of the Street and Highway section of the Council will address the annual meeting of members on the opening day, Monday, October 14. J. M. Conway, president of the Hoberg Paper and Fibre Company of Green Bay, Wis., will discuss the subject "Psychology of Safety from the Management's Viewpoint" before the Paper and Pulp Section. Dr. Alvhh R. Lauer, associate professor of psychology at Iowa State College, will speak on "How to Drive Safely" at the session devoted to Industry and Its Motor Vehicle Accident Problem. Dr. W. F. von Oettingen, director of the Haskell Laboratory of Industrial Toxicology, Wilmington, will read a paper entitled "Toxic Range of Various Toxic Industrial Chemicals" at the subject session on Occupational Diseases.

* * *

Other headliners already scheduled include C. B. White, chemist-engineer of the American-La France and Foamite Corp., who will give a demonstration on "Causes and Extinguishment of Chemical Fires" at the Fire Prevention session; J. Newton Rayzor, admiralty attorney, Houston, Tex., who will discuss "Some Aspects of the Law Contributing to Increase in Injuries and Compensation Costs" before the Marine section; and

F. Robertson Jones, general manager of the Association of Casualty and Surety Executives, New York, who will discuss "Present and Prospective Occupational Disease Legislation" at the session on Occupational Diseases.

* * *

Subject sessions, which were an experiment at National Safety Council congresses a few years ago, have become so popular that at least a dozen will be held at Louisville. They will include sessions on the following subjects:

- First Aid and Health Service in Industry
- Fire Prevention
- Safety in the Small Plant
- Safety Training
- Safety Equipment
- Industry and its Motor Accident Problem
- Maintaining Interest in Safety
- Heat Exhaustion
- Industrial Nursing
- Finding and Correcting Accident Causes
- Occupational Diseases
- Home Safety

Most of the sessions of the Child Education Section and the Street and Highway Traffic Section also are devoted to a single phase of the respective problems.

* * *

A new feature of the 1935 Congress will be a special meeting for state and federal officials. It will be attended chiefly by safety men of the Federal Emergency Relief Administration, Civilian Conservation Corps, the Department of Labor and other federal and state departments.

* * *

Entertainment for lady delegates and wives of delegates is being planned by experts in southern hospitality. Trips, teas and bridge parties are on the program.

* * *

Entertainment for the delegates themselves is not being neglected either. The president's reception will take place Monday night. On Tuesday night a big Child Education rally will be the feature. The banquet on Wednesday promises to be one of the finest in Council history. And if present plans go through, there never has been an informal party to

equal the one to be held on Thursday night.

* * *

The exhibit this year is to be called The Safety Derby. It will be a "derby" and no mistake! The entrance to the industrial exhibit hall in the Brown hotel will be a miniature of the main gate at Churchill Downs. A jockey in riding clothes will be at the door and all the exhibitors will wear jockey caps. Each booth will be appropriately decorated to carry out the derby motif.

* * *

Infinite pains are being taken to avoid serious overlapping of congress programs this year. All sectional sessions will take place on Monday afternoon and on the mornings of Tuesday, Wednesday and Thursday. The subject sessions, on the other hand, are scheduled for the afternoons of Tuesday, Wednesday and Thursday and Friday morning.

* * *

The first room reservations for the Congress were made early in January! Make yours now.

* * *

At least a half dozen demonstrations are planned for the Congress so the eyes of delegates can pinch hit for weary ears.

* * *

Four early morning classes (8:30 a. m., that is) will be conducted at the Congress. Two of these meetings will be devoted to public speaking and two to the all-important subject of Safety in Foremanship. Outstanding men will conduct the classes.

* * *

News that attendance records will *not* be kept at the sessions will be welcome to delegates. It is planned instead to enforce strictly the registration rule.

* * *

As this issue of the News goes to press many of the programs for the sessions are completed and a good share of the speakers invited. All speakers for the subject sessions have been invited.

The Congress Reporter

NATIONAL SAFETY NEWS

MAXIMUM SLIP INSURANCE WITH **MULTIGRIP** FLOOR PLATE



AND EASIER ON THE FEET

Non-Skid from any angle—MULTIGRIP not only is safe, it's comfortable to stand or walk on. Working on MULTIGRIP, your employees can do a better, safer job. If you use safety plate on any equipment you manufacture, MULTIGRIP has six selling advantages that you can obtain *at no extra cost*. Write us for data on weights and thicknesses.

ILLINOIS STEEL COMPANY

208 SOUTH LA SALLE STREET, CHICAGO, ILLINOIS

United States Steel  *Corporation Subsidiary*

THE BULLETIN BOARD

A page for those who maintain the Show Windows of Safety

Conducted by STAN KERSHAW

Current Safety News Maintains Interest

THE current Safety News posters offer new possibilities for your bulletin boards.

You can now maintain interest in safety by letting your men know what is going on nationally in accident prevention work. The newspapers cannot be relied upon to provide the news, and it is not possible to give wide enough circulation to copies of the NATIONAL SAFETY NEWS so that all plant employees can know what is new in safety.

Thus the series gives every member an opportunity to acquaint his employees with the outstanding developments of the day. The idea is meeting with a sympathetic response, and it will be continued as a regular monthly feature if there is a sufficient demand for the posters.

The posters are printed in the large size (17 x 23 inches). The type used is big and easy to read.

The following posters have appeared: 5430-B in the April issue. This featured the marvelous no-accident record made by the Western Clock Company, the main causes of highway accidents,

and the investigations being made into home accidents by FERA workers. No. 5470-B in the May issue. This poster discussed the Morro Castle disaster, named the winners in the National Traffic Safety Contest and gave other interesting safety items.

The new poster appearing in this issue is 5485-B. See if you don't think this would make an interesting poster for your bulletin boards.

Announcing Another New Series of Posters

SINCE there are many kinds of people, a wide variety of appeals must be utilized in posters to put across the safety message. Every type of mind—from the analytical and logical to the emotional—must be reached and convinced.

Some people like to be told specifically how to avoid accidents; others resent this and develop an attitude of defiance; and still others are quite willing to learn but must be allowed to arrive at their own conclusions.

Teaching safety by inference is by no means the least effective method be-

cause it has the advantage of offending no one.

Perhaps the best of the methods of inferential safety teaching is that in which accident facts are presented in comparison with other facts which are common knowledge.

With this in mind, your attention is particularly directed to Poster No. 5486 in this issue. It is the first of a new series of posters aimed at the very heart of our national accident prevention problem.

Try this new series of posters on your bulletin boards, and accompany them with messages of your own, urging your people to take a more active part in the safety crusade.

A Variety of Posters for Your Needs

ON this page is a tabular index of the posters issued from January to June, 1935. This latest index, together with the one included in the December, 1934, issue, will help you to make a quick selection of groups of posters pertaining to some of the more important subjects.

Subject	1935 Issues of the National Safety News in which Posters Are Illustrated					
	January	February	March	April	May	June
Cleaning, oiling, adjusting, and feeding machinery	5355	5375	4445, 4855	4516, 4374 2327	5450	4669
Clothing	5346	1991	5419, 5407 5417	5424, 5447 5049	5077, 5456	4662
Explosions, electricity, heat, etc.		5382	5418	1911-B, 1227		5193
Eye and face protection		1990	5412, 5403	5426	5063-B	1350, 2932
Falling objects		4573	5420		5458, 5451	
Falls of workers	2972, 4951, 5356 4963, 5351	4913-B, 2118-B 4993, 4527, 5001 5377, 4112	2434-B, 5406 5416	5051, 1913	5452, 4634	2931, 4663 5088, 5472 5473
Fire prevention			5400	5439		5096
First aid	4534, 4960	2473-B	4779-B, 5026	5055-B, 5039	2778-B, 5465	4340-D, 5099 5481
Guards	5355	5359	5405		4632, 5078	4659, 4358, 4669
Hand tools	5363, 4613, 5347	5378	5006, 5007, 5420	5048	4629	5089, 5479
Handling objects	4552	4649, 4565	5417	2831, 1959	5448, 5082	2356, 2089-B 5482
Harmful substances	4114, 5350	5353				
Health	4198	5380	3014	5428, 4852		
Hoisting and conveying		1172-B, 5387	4284, 4885		4626, 1311, 5463	5478
Horseplay and distracted attention	5354	4563, 5379	5022	5427, 5440		2278, 5087
Housekeeping	2972, 4530		5275-B, 1653	5443, 2949		4652, 5491
Infections	5362, 4666			5404		5488, 5492-B
Machinery—general		1977	1421, 4939	2282, 5435		
Safety shoes		4570			4546	5110
Stepping on, or striking against objects (including nails)	1949	4446	5030	4604	5460	1803



NATIONAL SAFETY COUNCIL

CURRENT SAFETY NEWS

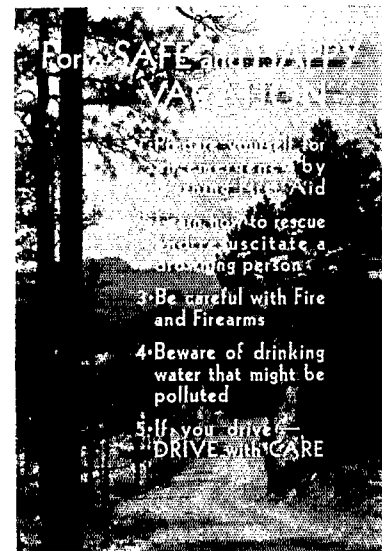
The sum of \$200,000 will be expended by the Federal Government before July 1, 1936, for the promotion of railroad grade crossings. This was the subject of a resolution passed by the House of Representatives at Washington, D.C., on April 12.

Industrial accident rates went up in 1934, according to government figures of the National Safety Council. A year is compared for 1934 with 1933. The number of deaths was 11,175, an increase of 10 per cent. The number of injuries was 1,175,000, an increase of 10 per cent. The number of lost time was 1,175,000, an increase of 10 per cent.

An International Safety Conference will be held in London, England, in May. The National Safety Council of Great Britain will be the principal sponsor of the conference. It will be the first of its kind in the world.

The Western Truck Company's annual report of 1934 shows a record of 11,175,000 man hours was lost in 1934.

NATIONAL SAFETY COUNCIL



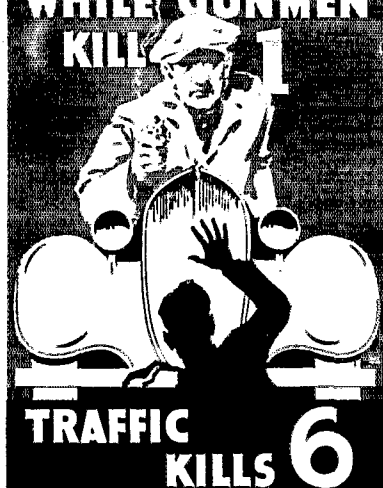
NATIONAL SAFETY COUNCIL

"Now don't you worry dear - we'll get along somehow - maybe I can get a job somewhere."



NATIONAL SAFETY COUNCIL

WHILE GUNMEN KILL 1



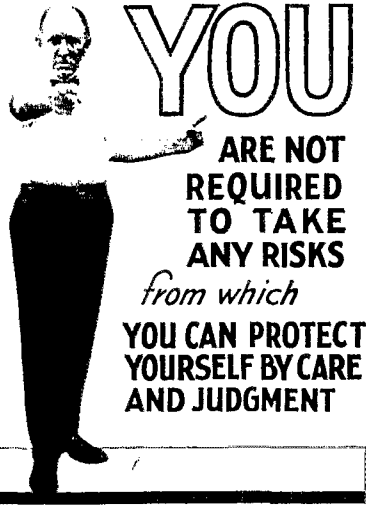
TRAFFIC KILLS 6

NATIONAL SAFETY COUNCIL

"He'd have saved himself all this suffering if he hadn't neglected that scratch."



NATIONAL SAFETY COUNCIL



NATIONAL SAFETY COUNCIL

A Car Going Fifty - and hitting something solid is wrecked as badly as if it had fallen from a nine story building

NATIONAL SAFETY COUNCIL



NATIONAL SAFETY COUNCIL

**your safety is
often in your
own hands**



NATIONAL SAFETY COUNCIL

2551-B 17x23 inches 4 units

**KEEP
THEM
OFF!**

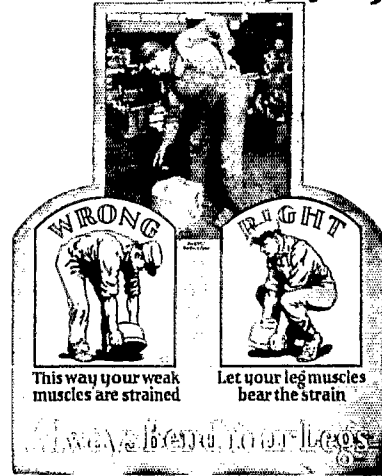


**IT'S YOUR
RESPONSIBILITY**

NATIONAL SAFETY COUNCIL

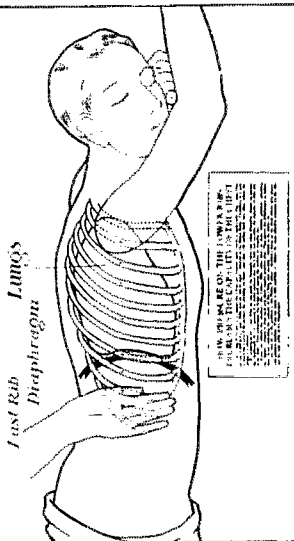
2869-B 17x23 inches 4 units

**A SPRAINED BACK
Caused by Wrong Lifting**



2089-B 17x23 inches 4 units

PRONE PRESSURE CHART NO. 3



NATIONAL SAFETY COUNCIL

4340-D 12x18 inches 2 units



**PROVIDENCE AND
ALERT MOTORMEN MUST
PROTECT THIS TYPE OF
DRIVER**

NATIONAL SAFETY COUNCIL

4077 9x12 inches 1 unit

**When you
try to beat
safeguards
You Fool
Only
Yourself**

NATIONAL SAFETY COUNCIL

4958 9x12 inches 1 unit

**A WORD TO
THE WISE,
SAVE BOTH
YOUR EYES**



**BY WEARING
GOGGLES**

NATIONAL SAFETY COUNCIL

2932 9x12 inches 1 unit



**DO YOU KNOW?
-SAND-
WILL CLEAN
GREASE FROM
SLEDGE AND
MAKE IT SAFER
TO USE**

NATIONAL SAFETY COUNCIL

5089 9x12 inches 1 unit

**NO
ADJUSTMENT
OR
REPAIR JOB
IS
FINISHED**



-UNTIL-



**THE
GUARD
IS
REPLACED**

NATIONAL SAFETY COUNCIL

4659 9x12 inches 1 unit

Electrotypes may be purchased from the National Safety Council for \$2 each

NATIONAL SAFETY NEWS

DON'T FOOL YOURSELF

EVEN A STRONG MAN CAN STRAIN HIS BACK HANDLING DRUMS and BARRELS IMPROPERLY



WRONG

Don't lean far from barrel and too far apart. Shoulders must be over the work and arms must be over the work and in the same line.



RESULT

The back is put in a strain of lifting it in this position shown above. It is all because of the wrong method of doing the work.



RIGHT

Don't lean so far from barrel and right to center barrel. Keep moving and if the individual should lean back, make sure that he is not leaning back too far. Keep your back straight. The position shown, is a good one to use.

NATIONAL SAFETY COUNCIL

5482 9x12 inches 1 unit

A THOUGHT for TODAY

YOU CAN LEARN TO WORK SAFELY FROM THE TRAGIC EXPERIENCES of THE FELLOWS WHO DON'T

NATIONAL SAFETY COUNCIL

5487 9x12 inches 1 unit

FLOORS

ARE TO WALK ON NOT TO FALL ON

KEEP THEM CLEAN
NATIONAL SAFETY COUNCIL

4663 9x12 inches 1 unit

GIVE THEM THE AIR TEST BEFORE USING



NATIONAL SAFETY COUNCIL

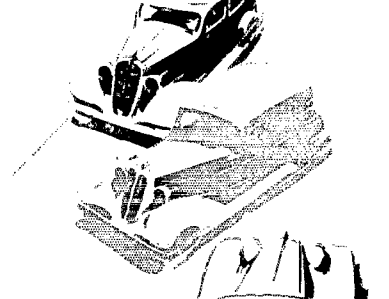
5483 9x12 inches 1 unit

ITS YOUR LIFE YOU KEEP IT SAFE

NATIONAL SAFETY COUNCIL

5474 9x12 inches 1 unit

LOOK OUT FOR the DRIVER

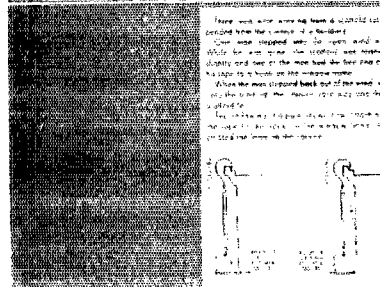


WHO DOESN'T LOOK OUT for YOU

NATIONAL SAFETY COUNCIL

5489 9x12 inches 1 unit

LEARN FROM THE EXPERIENCES OF OTHERS



PART OF THE JOB OF PREVENTING ACCIDENTS IS TO BE ALWAYS THINKING AHEAD OF DANGER

NATIONAL SAFETY COUNCIL

5472 9x12 inches 1 unit

Consult Your Foreman



WHEN ANYTHING GOES WRONG ON THE JOB

NATIONAL SAFETY COUNCIL

5479 9x12 inches 1 unit

DID YOU EVER STOP TO CONSIDER



ALL THE THINGS IN LIFE YOU WOULD MISS IF YOU LOST YOUR EYES?

WEAR YOUR GOGGLES



NATIONAL SAFETY COUNCIL

4350 9x12 inches 1 unit

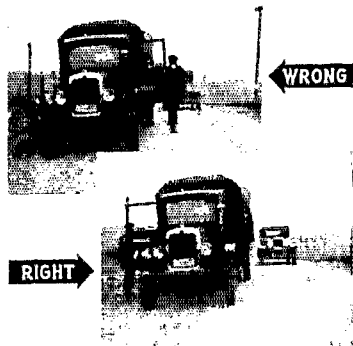
A CABLE that
has not been served—

*can rip a hand
wide open*

NATIONAL SAFETY COUNCIL

5478 9x12 inches 1 unit

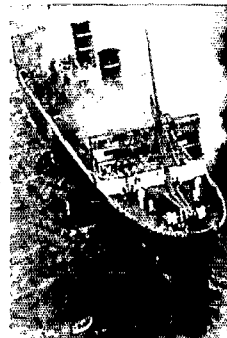
MODERN TRAFFIC
requires
EXTRA CAUTION



NATIONAL SAFETY COUNCIL

4133 9x12 inches 1 unit

**GRAY
DAWN**



On a gray dawn last September the whole world studied. On the Jersey coast, nestled a smoking hull, the crematory of scores of men, women and children in all—burned and drowned—134 persons met death horribly from an accident aboard the palatial Maine Castle.

But this catastrophe, awful as it was, did not equal in its toll the deaths from ordinary accidents which occur each day in the United States.

For during the same 24 hours no fewer than 270 persons lost their lives from accidents at work, on the streets and in their homes.

While we are making every human effort to prevent the disasters which too frequently dismay the world, let us not forget that the less spectacular, more common types of mishaps are ever so much worse in their total ravages.

NATIONAL SAFETY COUNCIL

5486 9x12 inches 1 unit



**A NEW MAN MAY BE
GREEN BUT DON'T LET
HIM STAY THAT WAY!**

NATIONAL SAFETY COUNCIL

5497 9x12 inches 1 unit

WHY
Should I have
to observe
safety rules

▼ ? ▼
TO

Protect myself
and others

NATIONAL SAFETY COUNCIL

4956 9x12 inches 1 unit

HEAT EXHAUSTION

**HOW TO
PREVENT
IT**

1. Keep your skin clean.
2. Wear light and loose clothing.
3. Eat less meat and more vegetables during the warm months. It is better to undereat than to overeat.
4. Eat fruits in moderation.
5. Avoid alcohol.
6. Avoid all strong alcoholic drinks.
7. Lemonades, popovers, and other sweet drinks can be used to advantage.
8. Avoid a loss of sleep, over-fatigue, and worry.

How to tell heat exhaustion

1. Skin cold, clammy, profuse.
2. A pale, clammy complexion.
3. Headache and other symptoms.
4. Dizziness or feeling of weakness in the joints.
5. Nausea, cold sweat.
6. Rapid, shallow breathing.
7. Head or complete collapse.

What to do

1. Remove to a quiet, cool place.
2. Loosen tight clothing.
3. Lay flat on back with head low.
4. Keep patient warm.
5. If pulse becomes and able to drink, give hot coffee or sweetened spirits of ammonia in water.
6. Call a doctor.

**HOW TO
TREAT
IT**

NATIONAL SAFETY COUNCIL

5481 9x12 inches 1 unit

THINK IT OVER
LOOK AHEAD
THINK IT OVER
YOU CAN'T
WAIT UNTIL
THE LAST
SECOND TO
PREVENT AN
ACCIDENT
THINK IT OVER

NATIONAL SAFETY COUNCIL

2988 9x12 inches 1 unit



NATIONAL SAFETY COUNCIL

5109 9x12 inches 1 unit

MONKEY BUSINESS
HAS NO BUSINESS
IN ANY BUSINESS



**A PRACTICAL JOKE OFTEN
HAS A TRAGIC ENDING**

2278 9x12 inches 1 unit

Electrotypes may be purchased from the National Safety Council for \$2 each

NATIONAL SAFETY NEWS

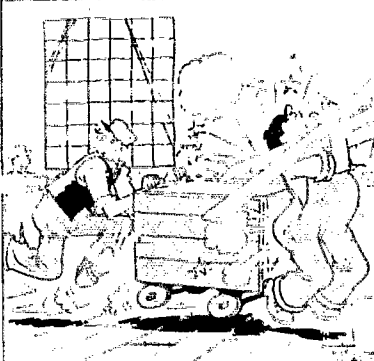


WATCH
those **SLEEVES**
CUT 'EM OFF

NATIONAL SAFETY COUNCIL

4662 9x12 inches 1 unit

DON'T RUSH!

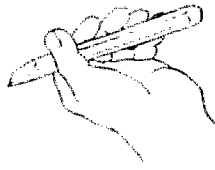


OTHERS
MAY SUFFER

NATIONAL SAFETY COUNCIL

5087 9x12 inches 1 unit

ONE OF THE THINGS
GOOD MECHANICS DO



Hold chisels
this way
whenever
possible



Not
this way

* If in these ways may
cause - or - moment injuries

NATIONAL SAFETY COUNCIL

4639 9x12 inches 1 unit



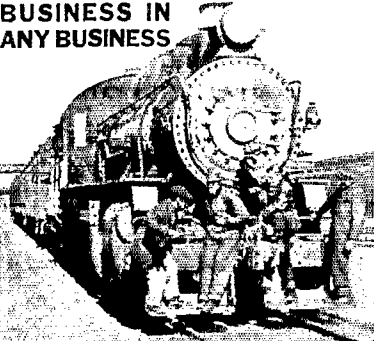
Many A Man Who
TOOK A CHANCE
Would Like To
HAVE A CHANCE
To Put It Back
Again *Gateman Bill*

NATIONAL SAFETY COUNCIL

5475 9x12 inches 1 unit

REMEMBER
THE
RULES

MONKEY
BUSINESS
HAS NO
BUSINESS IN
ANY BUSINESS



NATIONAL SAFETY COUNCIL

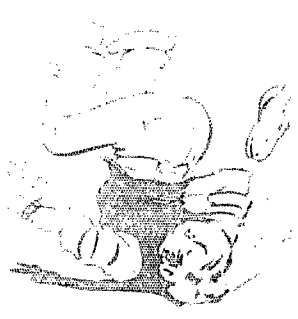
5484-B 17x23 inches 4 units

WHY SHOULD I
PICK THAT UP -
I DIDN'T PUT IT
THERE



OTTO NO BETTER

1803 9x12 inches 1 unit

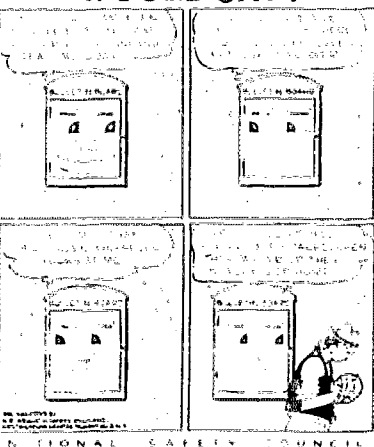


WHAT MAY
HAPPEN WHEN
YOU DON'T WATCH
YOUR STEP

NATIONAL SAFETY COUNCIL

5473 9x12 inches 1 unit

WONDER WHAT A
BULLETIN BOARD
WOULD SAY?



NATIONAL SAFETY COUNCIL

5111 9x12 inches 1 unit

Pulling for the
Doctor



WHAT IF
TONGS SLIP
OR ANOTHER
CAKE COMES
OFF CONVEYOR
?

PULL FROM THE SIDE!

2356 9x12 inches 1 unit



**DON'T LEAVE
TRUCKS IN
PASSAGE-WAYS**

NATIONAL SAFETY COUNCIL

5088 9x12 inches 1 unit

BE ORDERLY

SLOPPY HABITS
result in
POOR WORK
and
ACCIDENTS

NATIONAL SAFETY COUNCIL

4652 9x12 inches 1 unit

**BAR DOWN LOOSE
GROUND BEFORE
DRILLING**



*and always stand back
from falling ground*

NATIONAL SAFETY COUNCIL

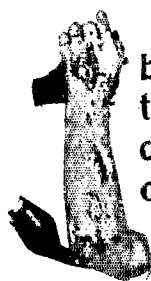
4085 9x12 inches 1 unit



**LOT of FARES
TO PAY FOR
• ONE •
ACCIDENT**

NATIONAL SAFETY COUNCIL

4941 9x12 inches 1 unit



This arm
became infected
through a small
crack in the end
of one finger

**DEATH
RESULTED
after seven
weeks of
SUFFERING**

NATIONAL SAFETY COUNCIL

5488 9x12 inches 1 unit

**A MAN IS JUDGED
BY THE COMPANY
HE KEEPS, AND THE
COMPANY IS
JUDGED BY THE
MEN IT KEEPS—
SO WORK
SAFELY!!**



NATIONAL SAFETY COUNCIL

5106 9x12 inches 1 unit

**STAMP
them OUT**

DO THAT WITH EVERY
BUTT SO YOU WON'T
LEAVE THE START OF
A FIRE BEHIND YOU



NATIONAL SAFETY COUNCIL

5096 9x12 inches 1 unit



**KEEP YOUR
SLATE CLEAN**

NATIONAL SAFETY COUNCIL

5107 9x12 inches 1 unit



**You LOSE
WHEN YOU BET ON
A HAND LIKE THIS**

NATIONAL SAFETY COUNCIL

5476 9x12 inches 1 unit

NATIONAL SAFETY NEWS

WHAT YOU SHOULD KNOW ABOUT GAS WELDING CYLINDERS

1. Never use acetylene at a pressure in excess of 15 lbs. per square inch gauge pressure.
2. Never allow oxygen to come in contact with oil or grease.
3. Always refer to gases by their proper names. Do not refer to oxygen as "ox" or acetylene as "gas."
4. Never use oxygen as a substitute for compressed air for pneumatic tools or similar devices.
5. Never use pressure from an oxygen supply for cleaning clogged oil lines.
6. Never use cylinders as rollers or to support work.
7. Do not tamper with safety devices on cylinders or cylinder valves.
8. Do not hang blowpipes from the regulators attached to cylinders.
9. Never attempt to transfer gas from one cylinder to another.
10. Never attempt to mix two gases in one cylinder.
11. Do not let hot slag fall on combustible materials or on the cylinders.

NATIONAL SAFETY COUNCIL



If you have not been authorized to do electrical work it is not your business to tamper with any of the electrical equipment. You risk serious injury if you do. Report all equipment that is out of order.

NATIONAL SAFETY COUNCIL



Safe

at the

Home Plate

NATIONAL SAFETY COUNCIL

3018 9x12 inches 1 unit

3103 9x12 inches 1 unit

2975 9x12 inches 1 unit



It's nice
the victim thought
To have a pal
so kind
But in taking off
the bandage
He found he'd gone
stone blind



NATIONAL SAFETY COUNCIL

A BREAK IN YOUR TOE MAY MEAN A BREAK IN YOUR PAY

Mr. McGrath dropped a piece of angle iron weighing about 20 pounds. It fell on his foot and broke a toe.

Immediately after the accident he purchased a pair of Safety Shoes with reinforced toe caps.

Recently he was moving a heavy steel partition and a projecting angle iron came down on his shoe but his toe was protected from injury.

Here is the shoe—the leather is cut but the reinforcement still stands guard like a piece of armor plate.



ANOTHER GOOD ARGUMENT FOR SAFETY SHOES

NATIONAL SAFETY COUNCIL



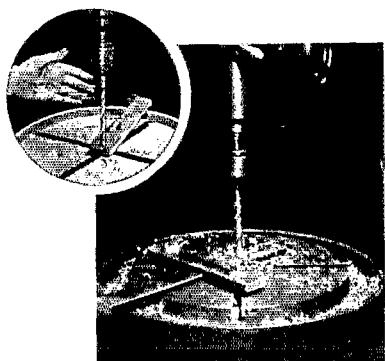
NATIONAL SAFETY COUNCIL

5099 9x12 inches 1 unit

3110 9x12 inches 1 unit

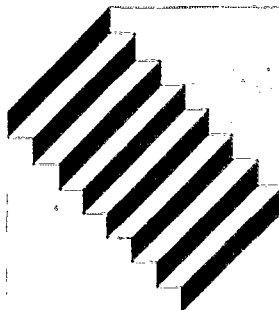
4354 9x12 inches 1 unit

Better Use A Clamp



NATIONAL SAFETY COUNCIL

A STAIRWAY IS A STAIRWAY NO MATTER HOW YOU LOOK AT IT



TO BE SAFE ON ONE TAKE IT EASY AND WATCH YOUR STEP

NATIONAL SAFETY COUNCIL

YOU CAN JUDGE A MAN by the KIND OF A WORK-PLACE HE KEEPS

A workplace is in order when there are NO unnecessary things about, and when all necessary things are in their proper places.

AN ORDERLY WORKPLACE IS SAFE TOO

NATIONAL SAFETY COUNCIL

4660 9x12 inches 1 unit

2931 9x12 inches 1 unit

5491 9x12 inches 1 unit

JUNE, 1935

Electrotypes may be purchased from the National Safety Council for \$2 each

Our Men Are Sold on Safety Shoes

And the reduction in foot injuries was well worth the selling effort involved

By W. A. JORDAN

*Safety & Training Advisor, The American Rolling Mill Company,
Ashland Division*

IN 1927, 1928, and 1929, we experienced a great deal of trouble with foot injuries at the Ashland Plant of the American Rolling Mills Company. The total lost time foot injuries for those three years was 101. The average frequency rate during that period was 4.5 for foot injuries alone. Something had to be done.

In June, 1930, we bought our first shipment of safety shoes. Since then, we have never been without them. Of course, we realized that safety shoes would not prevent all foot injuries, but we knew they would materially help to reduce accidents, provided we could get the men to wear them.

First, we called a group of foremen together and showed them the shoes. We staged a practical demonstration of the protective features and then the foremen were asked to sell the idea to their men.

At first, the shoes were issued to the men from our general storeroom, but this system proved unsatisfactory after a short time, due primarily to the fact that we had no one in the store who knew anything about fitting shoes. Therefore,

the job of selling safety shoes was given to the Safety Department and to one man, the exclusive job of fitting and selling the shoes.

Using this method, we are now able to learn, first hand, which type of shoe is best for a certain job, and to talk to the men about the service the shoes afford.

We have never felt that men should be forced to wear safety shoes, or that they should be told that they must wear them as a condition of employment, but rather have believed that the men should be sold on the idea of wearing safety shoes.

To do this, we have had to give the men good service. We must give them a good fit, and we must stock shoes which are attractive. Everyone will remember that when safety shoes first came out, they looked big and clumsy and the men didn't like them. Today, safety shoes are comfortable and good-looking, and the men do not hesitate to wear them on the street.

When we started selling safety shoes, we charged slightly more than cost in order to set up a small reserve fund with which to make adjustments in case of defective workmanship, or in the event of other conditions which might dissatisfy the wearer.

At present, we sell the shoes exactly at cost. The men may pay in installments, as little as \$1.00 a week. This fact, in itself, will eventually sell every man in the plant on the idea of wearing safety shoes. However, the shoe must



This man dropped a brick weighing 50 pounds, but his safety shoes were on the job.

make a good appearance and give real foot comfort.

The following should be taken into consideration in order to popularize safety shoes in the industrial plant:

1. Foot comfort.
2. Appearance.
3. Variety of styles.
4. Cost.
5. Method of payment.
6. Sales Service.

On this page is shown the slip which we use in deducting the price of the shoes from the men's pay.

During the first eleven months of 1934, we sold an average of 350 pairs of safety shoes a month, with an average working force of 2,400 men. At present, approximately 90 per cent of our men wear safety shoes and they would not return to the old soft-toed shoes at all. Each man satisfied with safety shoes is a salesman and booster for them.

During the last eleven months, our frequency rate for foot injuries has been 1.9. A comparison with our former foot-injury rate of 4.5 proves that safety shoes are of real value in any accident prevention program.



A piling iron weighing 20 pounds fell 4½ feet but safety shoes saved this worker's toes.

SAFETY SHOE DEDUCTIONS

Ashland Division Date
Quantity Style Description Size Price

You are hereby authorized to deduct the above amount from my pay. Deductions as follows:
Signature
Name of Employee
Check No.

COOL and SAFE

under the solid steel **"TURRET TOP"**^{*}
 of a smartly beautiful
 Body by Fisher

WHAT a comfort it is to know that those whose safety you cherish can have a protecting roof of solid steel over their heads, thanks to the "Turret Top" Body by Fisher.

That great single sheet of solid steel, comprising the "Turret Top," is arched and formed like the battleship turret from which it takes its name.

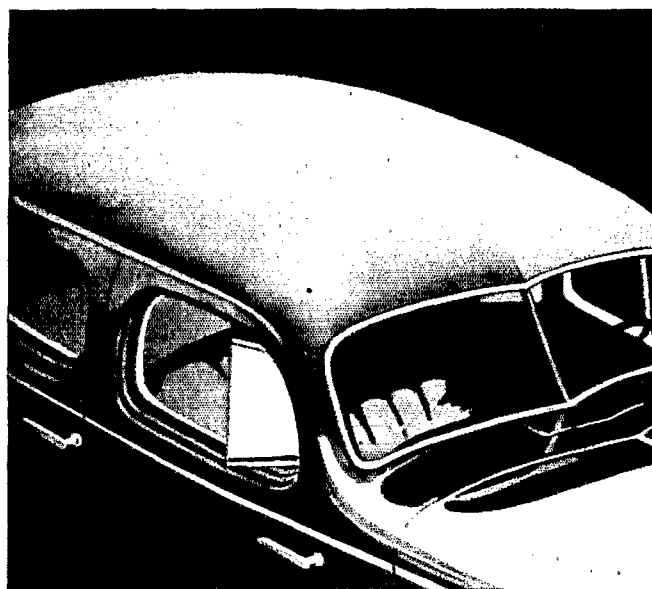
It is welded to the steel side panels, to the steel rear panels—even to the steel windshield pillars—so that the entire body is a super-rigid, shock-proof, weave-proof unit.

But important though it is, safety is only one advantage of this newest Fisher innovation.

Beneath that sturdy and beautifully contoured roof of solid steel there is scientific and generous insulation against heat, cold and sound.

That means you can ride with maximum coolness in hot summer weather in a "Turret Top" Body by Fisher—actually it gives you *the coolest ride you ever enjoyed* because you can literally *scoop in* air with Fisher No Draft Ventilation.

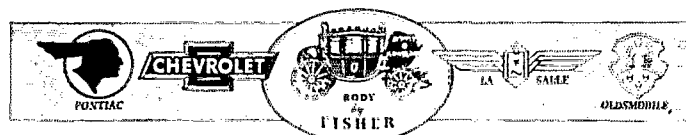
Just to look at the new Chevrolet (Master De Luxe series), the new Pontiac, Oldsmobile and La Salle



Even the corners of the solid steel "Turret Top" add to its sturdy strength. Notice how the solid steel "Turret Top" is scientifically rounded, sphere-like — not alone for the sake of pleasing appearance and to reduce wind resistance and noise — but because this employment of the principles of sphere construction enables the very maximum of over-all rigidity and strength.

closed cars — will convince you that the "Turret Top" has a smartness which distinguishes any car that has this crowning safety feature.

But to appreciate in full how cool, how comfortable, how spacious, how superbly appointed these new Bodies by Fisher really are, by all means try a ride in one of these new 1935 General Motors cars.

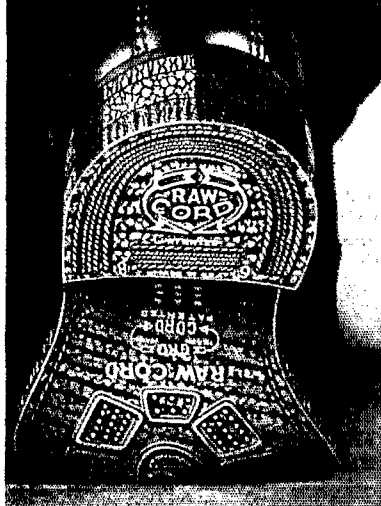


BODY BY FISHER on GENERAL MOTORS CARS ONLY: CHEVROLET • PONTIAC • OLDSMOBILE • BUICK • LA SALLE • CADILLAC

JUNE, 1935

MILLIONS WORN

I'LL TELL
YOU WHY



GRO-CORDS and RAW CORDS are widely used in Dairies, Iron and Steel Foundries, Railroad Shops, Auto Factories, Gas and Electric Plants, Ice and Fuel Stations, Stone Quarries, Mines, General Warehouses.



The Lima Cord Sole & Heel Co., Dept. 6-F, Lima, O.

Fully Protected by Patents—Any Infringement Will Be Prosecuted

GRO-CORD

NON-SLIP SOLES AND HEELS



Close Hopper-Bottom
Car Doors with

EASE and SAFETY

Prevent smashed fingers, strained backs, ruptures and other serious injuries, by using the Prescott Safety Tool—Saves time—is inexpensive.

Write for prices and details

The Trumbull Mfg. Co.
Warren, Ohio

Hotels Live by Good Will

(Continued from page 20)

and then pass on to other subjects. If he is to control accidents, the manager must take a personal interest in the conditions which cause them.

Let me tell you how one executive takes care of this situation. There is a short meeting each month. All the heads of departments must attend. Any accidents which have occurred are discussed and such action as is necessary to prevent recurrence is taken. The cost of settling each case is also made known to those present, as well as the uninsured or incidental cost, and everyone attending the meetings knows that these costs are charged to the department responsible and thus become a part of the entire cost of running that department. That executive makes a note of the conditions which cause the most troublesome accidents and as he makes trips through the house, he checks up on them. The department heads know that he does this and they also know that explanations, which must be good, will be called for if unsafe conditions are found. If all hotel executives would adopt the procedure just described I am confident the accident situation would improve.

I recently had the pleasure of talking to the owner of a hotel in a neighboring town. He formerly controlled a chain of hotels in New York City and was one of the founders of the New York Hotel Association. He told me he was writing a book about the hotel business, which he hoped to publish before he died. I hope he does; I want to read it. He has some ideas which are contrary to those followed by many hotel men, and perhaps he is right.

For example, he doesn't do business on the theory that the guest is *always* right. As he puts it, why should I pay the bill when a guest smokes in bed and ruins the bed clothes? If a guest damages anything in his house he makes the guest pay for it. If hard feelings develop and the guest doesn't return, he is sorry, but feels he makes more money without that type of guest.

He believes that most of the public accidents are a form of blackmail as the average manager is afraid of the unfavorable publicity which might ensue because of a suit against the hotel. I don't propose to argue whether he is right or wrong, except on one point. There is only one way to protect yourself against the blackmailing claimant,

NATIONAL SAFETY NEWS

Safety First Shoes



Are Comfortable
and Good-Looking

If you want your employees to adopt your safety policies—and like them—bear these facts in mind—Safety First Shoes are both comfortable and good-looking.

Let us send you a pair on approval. Or ask us to send our service-salesman. It's a pleasure.

SAFETY FIRST SHOE COMPANY

Pioneer Manufacturers of Safety First Shoes—for Over 35 Years
HOLLISTON — MASSACHUSETTS



BULB VALVE TYPE No. 4

Has a clear entrance filter aperture of $7\frac{1}{2}$ sq. in. and uses felt filter pads.

Extra Pads, $\frac{1}{8}$ in. thick, 4c each

The exhalation valve takes care of moisture and makes for easy breathing.

Price \$18.00 Dozen

Sample postpaid, \$1.50

DUPOR

Reg. U. S. Pat. Off.

The ORIGINAL
REVOLUTIONARY
Double Filter Chamber
RESPIRATOR

These Dupor Respirators are made under BASIC PATENT NO. 2,000,064, issued May 7, 1935, containing seventeen claims. Six other detail patents pending and some allowed.

The slower speed of the air through the felt filter pads, causes more dust and spray to be caught.

First users of DUPOR are continually ordering more.

Thousands in Use.

Used in all kinds of dusts. Also, in light fumes, vapors and paint spray free from harmful gases.

Manufactured only by



BULB VALVE TYPE No. 5

Has enlarged adjustable filter chambers of screw cap type and the very large filter aperture of $11\frac{1}{2}$ sq. in.

Extra Pads, $\frac{1}{8}$ in. thick, 3c each

The exhalation valve takes care of moisture and makes for easy breathing.

Price \$24.00 Dozen

Sample postpaid, \$2.00

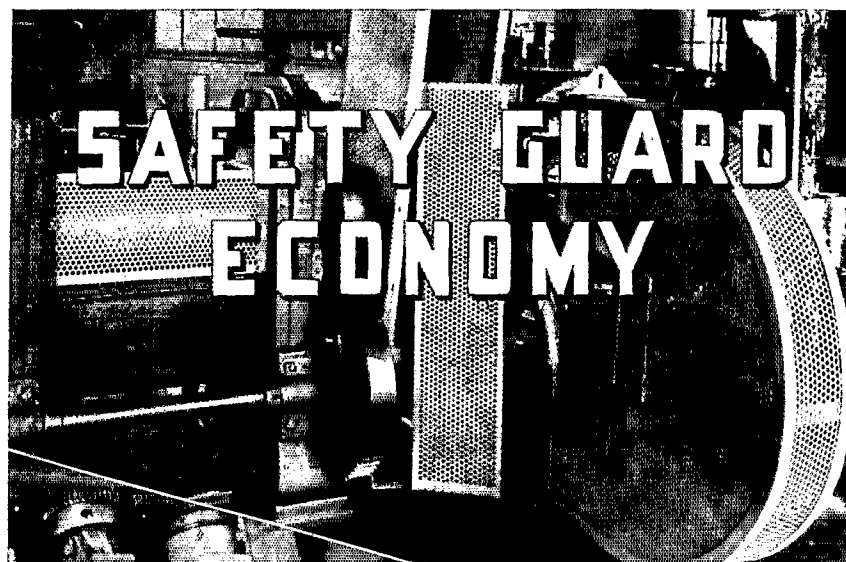
H. S. COVER

SOUTH BEND, INDIANA

CHIPPEWA-A

U. S. A.

JUNE, 1935



Safety Plus

A safety guard should not only protect from injury, but it should also combine the qualities of neatness, cleanliness and durability. In addition, it should be so constructed that it will not retard the speed of machine operation.

A poorly constructed or clumsily designed guard may be an expensive protection if it interferes with the adjustment of tools or speed of operation. H&K guard accessories permit the making of superior guards, and that by your own men during spare hours.

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

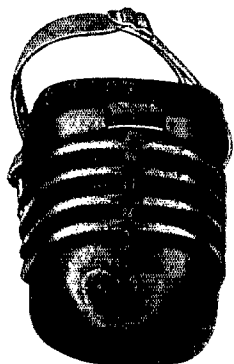
The Harrington & King Co.
PERFORATING

114 Liberty St.
NEW YORK, N. Y.

5615 Fillmore St.
CHICAGO, ILL.

Protect the Feet with—

SANKEY FOOT GUARDS



Made of 16-gauge steel, or Rigidium, an aluminum alloy. Sankey Foot Guards are light in weight, comfortable to wear and permit free and easy movement of the feet.

Built for strength—will withstand an impact of 300 foot pounds. Designed so that the floor or ground takes the force of the impact in case of falling objects.

Write for Your Sample Today.

ELLWOOD SAFETY APPLIANCE CO.
Ellwood City, Pennsylvania

and that is to keep your house and equipment in such condition that there is no chance to make a claim which can be made to hold in court.

With each department head watching conditions in his department and the actions of the employees under his control, badly chipped glasses or china should not be placed where a guest can claim injury. Rips in rugs, carpets or stair coverings should be detected and repaired before claim for injury is made. It isn't necessary to detail all the conditions which cause claims but we know they exist in too many houses. Our engineers generally find plenty of them when they make inspections. If they find these conditions, why can't the people who are in the hotel every day do so? Some managers seem to resent the outside engineer telling them of the sore spots in the house and spend more time trying to excuse the condition than in finding ways of correcting it. As long as you allow bad conditions to exist you are going to have claims, both genuine and fake.

There is a claim making condition about which the manager of an established house can do little. That is what I term an architectural abomination. Some architects, in order to obtain a certain effect, will design stairways that experience proves are accident producers—treads of uneven width or height, and full of winders. I can't understand why stairs which the state labor department would not allow in a factory, or the city building department allow in a multiple dwelling, can be built in a hotel and called beautiful. Balconies with low railings, service doors that swing directly into traffic, and many other examples of poor design are to be found in many houses. It is granted that little can be done with existing installations but is there any reason why, when new hotels are built, safety should not be considered while the plans are still on the drafting board?

I mentioned low balcony railings. A short time ago a guest in a local dining room backed into a low railing on a mezzanine floor and fell to the main floor, turning a somersault on the way down and landing on his feet. He broke both hips—a distressing and costly accident. The architect who designed that room should have known that he was designing a death trap when he asked for the installation of a rail less than 42 inches in height. Federal, state and city standards or rules are available to anyone who will ask for them. These standards are set up by able engineers;

NATIONAL SAFETY NEWS

they represent years of experience and there is no excuse for the architect who deliberately disregards them simply because hotels are not named in the ordinances, along with apartment houses.

One case was recently settled for \$17,500. A titled lady tripped over the turned up corner of a rug in the main lobby of a hotel and, it is claimed, received permanent injury to one of her legs.

Claims of injury from turned up rugs, torn rugs and small rugs that slide from under guests' feet are common. I sat in the lobby of one hotel a few weeks ago near where a large rug had been kicked up into a ridge or fold. Two assistant managers, several bell boys and porters walked over it and didn't even see it, or if they did, they didn't straighten it out. Finally, after about 15 minutes, I got too nervous to stand it any longer and gave up my plan of waiting to see just how long it would take for someone to fix it and called it to the attention of the assistant manager on the floor. Every employee in that house is supposed to be trained to watch for and remedy conditions of that kind. Obviously something is wrong with either the training method or the follow up system. It is so easy and inexpensive to place some non-slip material under small rugs that it seems inexcusable to lay them on hard or polished floors without such protection.

Torn or ripped rugs have caused so many accidents that it would seem to be good business judgment to train all employees to watch for and report such conditions; also to cover that spot in some way until the carpet man could repair it.

Tipsy waiters are responsible for claims and ill will. The head waiter or captain should be able to detect evidences of drinking and take the offenders out of the dining room. But many of them prefer to take a chance that nothing will happen and merely tell the waiter to watch himself.

Surely it doesn't help the reputation of a hotel when a tipsy waiter spills hot coffee or food over a beautiful gown. As one man said, when a waiter spills food, it hits two things, pride and a gown, and pride is an expensive thing to hit.

Books could be written about accidents and reasons for the loss of good will, but I think enough has been said to prove that at least 50 per cent of the cases are preventable. The remedy is proper selection and training of employees, plus executive interest and follow-through.

JUNE, 1935

Everything
BULLARD
in Safety

BULLARD



A complete, compact first aid kit for snake bites. Approved by medical authorities. Pocket size. Circular on request.

VENEX

**NATION-WIDE
SERVICE**

**SOUTH
MID-WEST**

WEST

EAST
NEW YORK W. S. Wilson Corporation - 123 Varick St.
PITTSBURGH Safety First Supply Co. - Brady Building
PHILADELPHIA J. A. Hunt Co. - 2036 Sansome St.
CLEVELAND Safety Clothing Co. - 3804 Payne Ave.
BRAINTREE, MASS. Direct Sales Co., 108 President Road

CHATTANOOGA, TENN. C. D. Genter Company, Chattanooga Bank Building

DETROIT C. H. Dockson Company - 2895 East Grand Boulevard
CHICAGO E. D. Bullard Company - 215 South Leavitt Street
GREEN BAY, WIS. Safety Service Company - 108 No. Quincey Street
DULUTH W. P. & R. S. Murs Company - 324 W. Michigan Street
HOUSTON E. D. Bullard Company - 1 Main Street

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LOS ANGELES E. D. Bullard Company - 1249 South Olive Street
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Installing a

BILLYMYRE VACUUM CLEANING System

(Stationary or Portable) may cause this man to lose his job BUT IT PROTECTS the health of every worker and official—the LIFE of every machine, and material being fabricated. Let us help with your DUST CONTROL PROBLEMS. NO OBLIGATIONS—A NATIONAL SERVICE BEYOND REQUIREMENTS.

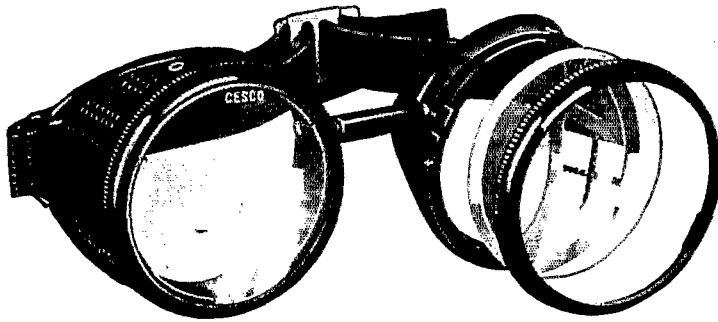
THE SURTY MFG. CO., INC.

4139 W. Kinzie St., Chicago

We make complete coverage of all mechanical and health hazards.



Goggle Improvement Reduces Eye Injuries!



CESCO No. 535 CHIPPER'S GOGGLE

(Weighs less than 2½ Ozs.)

Modernization of your entire head and eye safety equipment will save you money by preventing costly injuries.

As an example of CESCO's program of product improvement consider the new features included in the No. 535 SHALLOW-CUP CHIPPER'S GOGGLE: Large 50 m.m. lenses are near to the eyes, increasing vision in every direction; baffled vents and air channels under lens give cross circulation of air over the inner surface of lens—this prevents fogging and increases wearing comfort.

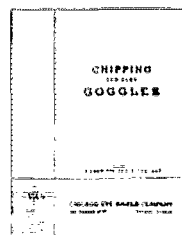
We shall be glad to assist you in selecting the goggle (or other head and eye equipment) best suited to your particular needs. Bulletins A, B and C give details and will be mailed without obligation.

CHICAGO EYE SHIELD COMPANY

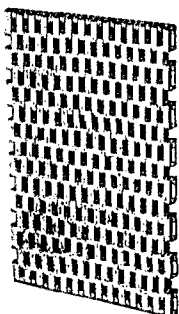
2323 Warren Blvd.

Chicago, Illinois

Chipping Goggle
Bulletin!
Write for it



RUBBERIZED FABRIC LINK MAT



This Non-slip Safety Mat is especially designed for industrial use where there is a slip hazard. In addition, they increase the workers' efficiency as they reduce fatigue brought on by standing on concrete, brick, tile or hard flooring. Ideal for placing in front of machines and where wet conditions exist.

Heavy galvanized wire with cadmium plated clips and plates are used to prevent rust. Furnished in sizes to meet your requirements. Low in cost and long wearing.

Write today for prices and complete information.

THE BUXBAUM COMPANY
Akron, Ohio

Minor Repairs

(Continued from page 28)

or water, driving on under-inflated tires, or with unequalized or poor brakes.

In the horse-and-wagon days it was the duty of every man to make a careful inspection of his horses' feet each night to find a nail which might produce infection. Today there is more to it than that. The driver should jot down for the maintenance department the things that need attention. Without driver education these items are not turned in and the car is taken out without the needed repairs. One hundred men have taken the shop training in our company. The instances of benefits derived are too numerous to mention. The results have been exceedingly gratifying. After the period in the shop each man takes a simple written examination.

While not responsible for the maintenance of the cars, the attitude of the operating supervisor toward both the drivers and the equipment has a great influence upon safe operation. If it is necessary to withdraw a car from service for a few hours to make the repairs noted by the driver, he should appreciate that while his business of making deliveries is delayed, in the long run he has been rendered a time-saving service. If, on the other hand, he hustles his men about and urges them to continue operating car with defective mechanisms, the time spent in instructing the drivers was wasted and the men reflect the boss's attitude by failing to report troubles.

When a complaint comes in, it is the duty of the inspector to check it and to look for other defects as well. It is his duty to note all the work that is required to correct the trouble and inspect the work after it has been done. It is needless to say that this man should be thoroughly familiar with every part of an automobile. His judgment should never be questioned when safety is concerned.

The maintenance supervisor has charge of all repairs. It is his duty to see that they are accomplished with economy and efficiency. He should be the coordinating factor to bring about cooperation between the three aforementioned groups. It is he, of course, who will be held responsible for an accident due to the need of a minor repair, where the defect was previously reported by the driver.

This has been an attempt to outline one efficient way of guarding against the neglect of minor defects in a large

NATIONAL SAFETY NEWS

fleet. No single set of rules will apply everywhere; for transportation problems are different in every business. Transportation's main purpose is to serve, first the public and secondly the business it is working for. Accidents bring delays, delays are costly, repair to property is costly, and the value of a human life cannot be estimated.

Let us pay more attention to the little things.

Heavy Duty with Safety

(Continued from page 27)

Standard signals used by hook-up men are as follows: the right arm raised with index finger pointing up means to hoist; the right arm lowered slowly up and down is the signal to lower; the right arm held at about the height of the waist means to stop; the right arm held horizontally at about the height of the waist with the thumb indicating the direction of movement means to rack; the right arm waving in the direction of travel means to travel; and the right arm held at a horizontal plane at the height of the waist indicates emergency stop. The hook-up man is responsible for seeing that the crane block is directly over the load, that the load is properly balanced, that the hitch is safe, and that all workmen including himself are in the clear.

It is also his duty to see that chains used are heavy enough for the load and that defective chains are not used. Splicing chains or shortening them with bolts is prohibited. The hook-up man and the crane operator must work as a team, both attempting in every way possible to avoid danger.

Crane Repairman

All controls must be in the "off" position and the main switch locked before repairs are made. The repairman must place a sign directly under the work which is to be done. If the job is one which will require considerable time, space below the work should be roped off. If other cranes are operating on the same runway, the foreman in charge of repairs should make certain that all other operators are informed of what is going on and temporary rail stops should be installed a safe distance from the crane which is being repaired. If building repairs are being made where a crane is operating, a responsible member of the repair gang should ride in the crane cab with the operator to watch out for these workmen.

In the interests of Greater Public Safety

Duplate

All-around!

THERE are thousands of automobile accidents every year. In these accidents, many thousands of people are injured by flying, broken glass. Such injuries are often serious, sometimes fatal.

The best way to minimize these glass injuries which has yet been introduced is the use of safety glass in all windows of a car. Duplate

Safety Glass in every window of a car provides an additional element of protection against the hazards of flying glass, increases the likelihood of passengers remaining safe when emergencies arise.

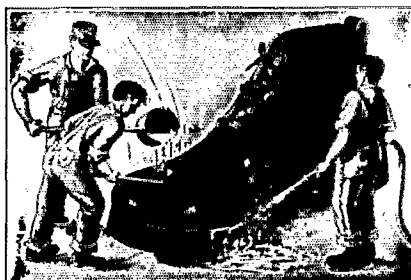
Therefore, any member of a safety council, or safety organization, any legislator in a position to influence the lawmaking of the nation, will find that anything he can do to promote the use of safety glass of proven quality in all windows of all automobiles, is contributing largely to the furtherance of public safety.

We will gladly supply complete information on Duplate Safety Glass upon request.

Duplate Safety

**PITTSBURGH
PLATE GLASS COMPANY**
2213A Grant Building : Pittsburgh, Pa.

WOODEN SOLE PLATER'S SHOE



No. 509 or 509X

Safety "STRONG TOE" is necessary protective equipment in the plating shop.

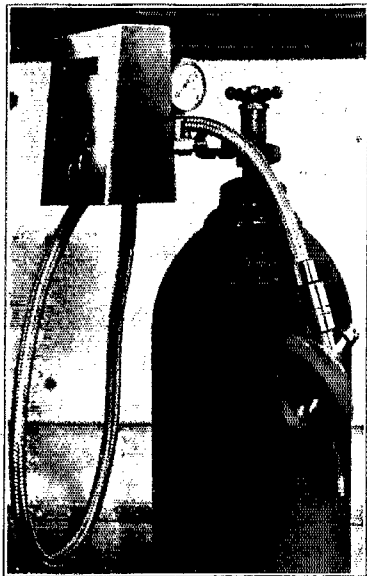
The REECE "PERFECT ROCKER" combines comfort with this maximum protection.

Write for details.

REECE WOODEN SOLE SHOE CO., INC., Columbus, Nebraska

B-K Plant Emergency INHALATOR

Lightweight
Portable
Inexpensive



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



FITS ANY STANDARD CYLINDER
Ideal equipment for administering oxygen or mixtures of oxygen and carbon dioxide to victims of suspended respiration from any cause—invaluable equipment for plant hospital and physician. Readily transported anywhere.

COMPLETE DETAILS ON REQUEST
Write for Bulletin No. 105

**BISHINGER-
KOEHLER**

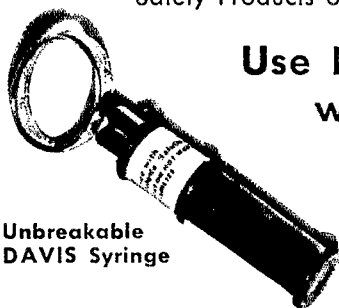
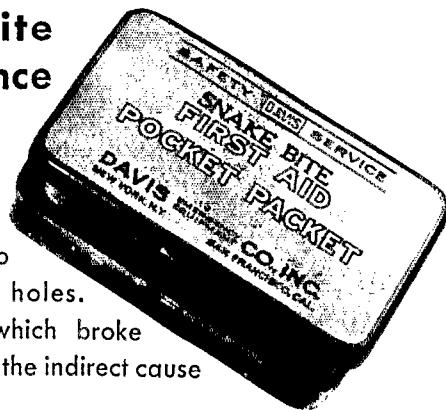
MANUFACTURING CO., INC.
7838-42 Kelly Street, Pittsburgh, Pa.

Manufacturers
OXYGEN EQUIPMENT PRODUCTS

Give that Snake Bite Victim a Better Chance to Live!

The DAVIS UNBREAKABLE SYRINGE is always "on the job" to suck the venom from the fang holes. A syringe of fragile material which broke when dropped on a rock might be the indirect cause of the loss of life.

This is one of the "essential details" which make Davis Safety Products of greater usefulness.



Unbreakable
DAVIS Syringe

Use Davis Snake Bite Packets with Unbreakable Syringe

Send for your copy of Snake Bite Bulletin No. 125

Davis Emergency Equipment Co., Inc.
55 Van Dam Street, New York City
Please send my copy of your Snake Bite
Bulletin No. 125 to

Name _____

Address _____

City _____

DAVIS EMERGENCY EQUIPMENT CO., INC.
55 Van Dam Street New York City

PERSONALS

FRANK H. ROWE, for several years safety director for the Otis Steel Company at Cleveland, has returned to Portsmouth, Ohio, to become safety director for Portsmouth Works of the Wheeling Steel Corporation, where he had been in charge of safety activities before going to Cleveland.

H. H. HENRY, formerly safety director for the Empire Sheet and Tin Plate Company, succeeds Mr. Rowe as safety director for the Otis Steel Company.

DR. FREDERICK L. HOFFMAN, consulting statistician of the Prudential Insurance Company for the past forty years, has retired from the company's service. He will continue his work at the Cancer Research Laboratories, Philadelphia. Among his statistical works which have been given wide circulation have been his annual studies of suicides and homicides. Dr. Hoffman was formerly chairman of the Statistics Committee of the National Safety Council.

RICHARD E. VERNOR, manager, Fire Prevention Department, Western Actuarial Bureau, has been elected president of the Rotary Club of Chicago.

J. I. BANASH, past president of the National Safety Council, has been elected honorary secretary of the Massachusetts Institute of Technology.

Dr. L. W. Chaney, Safety Pioneer, Dies

DR. LUCIAN W. CHANEY, biologist and statistician, died at his home in Washington, D. C., May 6. He was 78 years old.

For 25 years Dr. Chaney was teacher and professor of biology at Carleton College, Northfield, Minn. After achieving a national reputation in biological research he was retired under the Carnegie Foundation pension. He joined the staff of the U. S. Bureau of Labor Statistics in 1908 and became nationally known in the field of accident prevention.

Dr. Chaney took part in the First Co-

NATIONAL SAFETY NEWS



operative Safety Congress at Milwaukee in 1912 and was chairman of the original committee which was appointed to make plans for the organization of the National Safety Council. He appeared on the programs of many subsequent Congresses and made many notable contributions to safety through his department, and through the National Safety Council and the American Standards Association. He continued in Federal work until 1931.

Dr. Chaney is survived by his widow, three sons and a daughter.

Westinghouse Again Wins Safety Award

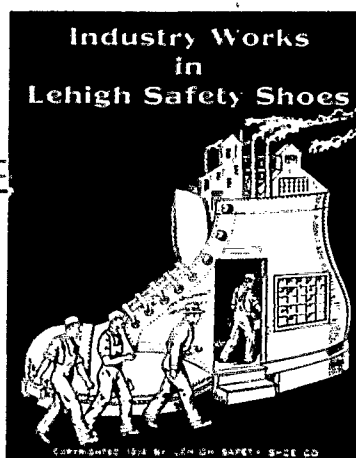
WINNING safety trophies is becoming a habit with the equipment and development division of the Westinghouse Lamp Company at Bloomfield, N. J. For the second time within three years, R. H. Beebe, superintendent, has received a Certificate of Merit from the Newark Safety Council because his plant worked more than a million man-hours without a lost-time accident. At the end of March, 1935, the division had worked 13 months with a total of 1,066,263 man-hours without a mishap—a record still unbroken as this notice was being prepared.

The period for this record began in February, 1934. Before that, allowing for an interval in which a lost-time accident occurred the division was awarded another certificate in recognition of its record of 2,622,028 man-hours without a lost-time accident covering a period of 20 months. This record was broken by an accident which occurred to a worker on his way out of the plant. It was not the result of lax supervision or unsafe premises.

The record is particularly noteworthy because companies in this trade group rarely accumulate more than a million man-hours in a twelve-month period without a disabling injury. The work is hazardous. It involves the installation of high-voltage test and generating equipment, the maintenance of lamp assembly equipment, the installation of gas pipe lines, the repair of buildings and grounds; and general machine shop practice.

Presentation of the certificate was made on April 30, 1935, by Fred M. Rosseland, secretary-manager, and E. L. Root, chairman of the Industrial Committee, respectively, of the Newark Safety Council.

JUNE, 1935



You Can Be Protected Against Toe Accidents *Insist On Lehigh Safety Shoes*



**FOREMAN
STYLE**
No. 908—Black Elk Blucher—improved Steel Box Toe—Leather Lined Vamp—Single Oak Bend Sole—Rubber Heel, Steel Shank—2 Brass Rivets, Shank to Sole. Sizes 5 to 12. D and E Width.
No. 907—As above except—Tan Elk Blucher.

Every year accidental injuries to the toes and feet exact their toll. This means enforced lay-offs, lost time, medical and compensation costs. Be safe, insist that your workmen wear Lehigh Safety Shoes. Save your workmen's feet and save medical and compensation costs. There is a Lehigh Shoe to meet your needs, made to exacting specifications developed through many years of Safety Shoe Manufacturing. Write today for complete information on Lehigh Safety Shoes. We will be glad to help you reduce your foot accidents.

*Make It a Habit to Wear
Safety Shoes*

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

Extra Safety for Workmen *due to hidden quality!*

Best of material, fast color—careful workmanship—you can see at a glance that Ta-Pat-Co Life-Save workmen's jackets are well made; but the reason for their greater safety is hidden from view. It is due to the more costly, far superior Private Estates Kapok—6 times more buoyant than cork and distributed for proper balance. Will give extra support in the water. Available with or without ventilating eyelets. Light—comfortable—adjustable—full freedom for arms. Furnished regularly to U. S. engineers. Built in accordance with the requirements of U. S. Steamboat Inspection Dept. *Full particulars on request.* The American Pad & Textile Co., 131 Reed St., Greenfield, O. 16 Pearl St., New York.

Ta-Pat-Co
TRADE MARK REGISTERED U.S. PAT. OFF.

**LIFE-SAVE
Workman's Jacket**



When an Industry Is Organized for Safety

(Continued from page 14)

dent prevention bulletin is full of helpful ideas based on the experience of other mills. There is also a monthly summary of accidents called the monthly accident round table. These monthly mimeographed statements and the quarterly bulletins are constantly being studied by superintendents, foremen and safety committees. They help to keep men from getting too well satisfied with themselves after a good record. They are urged to study these analyses and compare them with local conditions. Could such an accident happen in our quarry? Could it happen to you? What would you do to prevent it?

We also realize the importance of contacts between the operating men of different mills. Nothing is more helpful than an opportunity to swap experiences, to get batteries recharged. To meet this need we have arranged for regional safety meetings. Fourteen meetings are held each year in the geographical center of each group of mills. The aim is to have one operating man out of twenty at each meeting. That means that half of the

men responsible for safety work have the opportunity of attending. In the course of a year 150 good papers are contributed, in addition to the informal discussion. A prominent local executive is chairman of the meeting, which is tied up with the local safety council, if there is one in the community, and with other industries. The cement industry thus becomes a center of safety interest.

Our accident experience for 1934 showed a disturbing increase in both frequency and severity over 1933. The downward trend was reversed. We had been coasting along on our past record. We had trimmed expenditures to the point where essential activities had suffered. We have renewed our efforts this year and I believe we are getting the situation under control again.

This cooperative effort in the cement industry has been valuable in many ways. It has made it easier to train new men. When a man goes from one mill to another he at least knows what will be expected of him in the matter of safe practices.

An industry is an ideal unit for conducting a safety program. Its operating men have problems in common. They speak the same language and they are

all interested in building up the industry. They may disagree in politics and they are competitors for business, but they can all get together on safety. So can men of all ranks within the plant.

This does not mean that an industry should draw off by itself in conducting safety work. It needs contact with men in other lines of business. They are dealing with human beings, too, so their safety problems are not so different from ours after all. The National Safety Council has been a means of contact with these other industries. Through the Annual Safety Congresses, regional safety conferences and the publications of the Council, we learn what others are doing in accident prevention work. We find that many ideas from other industries will also work in our own plants.

Safety work in the plant is one of the ties that bind the mill to the community. Sometimes, however, we forget that our men are exposed to accidents on the street and at home as well as while they are at work. In most communities where there is a safety organization you will find that industrial leaders have been back of it. I would like to see our industry well represented in every program for public safety.

MAN OUT!

PRODUCTION STOPPED!

CREW DISMISSED!

all on account of heat sickness



"FAIRWAY JUNIOR" Dispenser with 1500 Tablets

That's expensive operating in any plant—but it has been eliminated in many by the installation of "FAIRWAY" Sodium Chloride Tablets and Dispensers shown here.

A service that replaces the salt loss from the muscular tissues—thereby preventing the drain that causes Heat Sickness—proven by Medical and Safety Directors in all types of hot work in Industry.

NEW PRICES JUNE 1, 1935

10 grain tablets	\$.50 per thousand
15 grain tablets	.60 per thousand

A free copy of booklet "Prevention of Heat Sickness" sent to any physician, safety or personnel director on request.

FAIRWAY LABORATORIES, INC.

Belleville, Illinois

NATIONAL SAFETY NEWS

Women Are Different

(Continued from page 22)

dangerous, but also healthful and sanitary clothing. Many materials which are worked with reduce the oil content of the skin; so proper clothing means protection from such substances. Lanolin and similar salves can be used if dermatosis occurs. Each plant should approach this problem as a special study.

Discipline requires control, and one of the greatest causes of accidents to female workers is the lack of control. But the woman should not be coerced; she should be reasoned with, instructed and supervised. One large concern points with pride to a very good safety record. When a girl disobeys an important rule she is brought before the safety committee. Her infraction which may or may not have caused an accident is investigated, and she is reprimanded. If she repeats the offense, she is given one day without pay; for the third offense the penalty is heavy. It is well to realize that women work better under the supervision of other women. In mercantile and industrial plants where women supervise other women, it is important that these supervisors have equal representation in the safety organization.

Vanity is frequently responsible for injury to women, but it can be dealt with. Some fifteen years ago the motion picture theatres in a city ran a Mary Pickford film. Mary wore her hair in curls over her shoulder. Within a few days almost every girl who had any hair at all came to work in a local plant with her hair dressed like Mary's. It was a serious situation because many of the girls worked where their hair might be caught in machines. Into the manager's office were called a number of the prettiest girls, who set the style. They were told that the management did not want to do anything that would detract from their personal appearance; so, as these girls were so pretty, to avoid any possible chance of their injury, they were being moved to a department in the basement where, incidentally, unskilled foreign women were employed. They were told, however, that if they decided to put their hair up on the top of their heads where it had been before, they could go back to their regular jobs. That noon time the stores in the vicinity reported a big demand for hairpins.

A golf course is place where they play a round in the day time and play around at night.

JUNE, 1935

Companies with 10 Employees ... and Companies with 10,000 Are Using **BRADLEY** Washfountains



Ten persons can wash at one time—and use but little more water than one person at an ordinary wash basin. Also made in enameled pressed iron models.

GENERAL Electric, International Harvester, DuPont, General Motors are some of the big manufacturers using Bradley Washfountains by the hundred—all having started years ago with a few.

Frost Laundry, Boston, Mass., Milwaukee Power Equipment Co., Milwaukee, Wis., and Scott Motor Co., Reno, Nevada, are some of the smaller manufacturers who have also found that they reduce the cost of water and washroom maintenance by means of group washing with Bradleys.

Always Clean and Sanitary

So inviting is the clean, sparkling water—that cleanliness becomes a habit and morale is materially improved. In the hot months, Bradleys are particularly appreciated because they permit washing from the waist up. You can still get them in for this summer's use if you act now. A copy of Bulletin 65-B will be sent on request—along with information on Bradley Group Showers. Your request implies no obligation. **BRADLEY WASH-FOUNTAIN CO.**, 2237 W. Michigan Street, Milwaukee, Wisconsin.



Industry has welcomed Bradley easy-to-install Group Showers—made in 5- and 3-stall models. Ask for Bulletin 58-S.

BRADLEY

WASHFOUNTAINS AND SHOWERS

STOP NEEDLESS INJURIES

AND
CUT COSTS 50%
WITH

SAFETY STEEL TAMPS

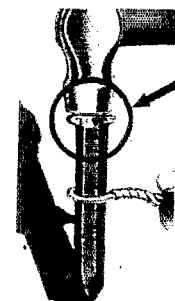
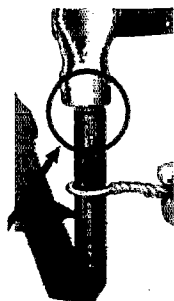
WILL NOT
MUSHROOM nor SPALL

MFG. BY

M. E. CUNNINGHAM CO.
E. Carson St. PITTSBURGH, PA.

IN SERVICE 800 HOURS

IN SERVICE 300 HOURS



SAFETY

Clothing Engineers FOR INDUSTRY

Your plant safety engineer is an expert in determining the causes of accidents . . . our field personnel are experts in finding the remedies, if the proper type and design of safety clothing and gloves will prevent them.

For many years we have served as "safety clothing engineers" to hundreds of industrial establishments throughout this and other countries. The majority of STEEL-GRIP items, manufactured exclusively by us, are specially designed to meet individual plant operations.

If you have a plant hazard that might be corrected by the proper design and application of safety clothing or STEEL-GRIP gloves, we invite you to write or phone our nearest office. There is no obligation.

**We Welcome the Opportunity
to Serve You**



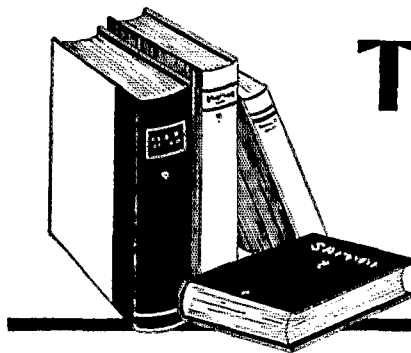
INDUSTRIAL GLOVES CORPORATION

725 GARFIELD BLVD.
DANVILLE, ILL.

Chicago

Philadelphia

Detroit



The Safety Library

by
MARY M. WELLS
Librarian N.S.C.

Further information regarding publications listed here can
be obtained from the National Safety Council Library

A Manual for Foremanship Development

Foremanship Development. Published by Industrial Relations Department, Westinghouse Elec. & Mfg. Co., East Pittsburgh, Pa., 1935. Price \$1.00.

The importance of supervisory forces in the present-day industrial organization emphasizes the need for the adequate and simplified plan for the training of foremen and other supervisors, contained in the manual "Foremanship Development." The manual is based upon the experience of the Westinghouse Electric and allied companies, and that of others who have been active in supervisory training. It is intended for both group leaders and the members of conference groups.

The first part briefly presents the increasingly important place which the foreman and the supervisor hold in industrial organization. Then follows a series of practical suggestions for conference leaders, including underlying fundamentals, suggested methods, conference technique, self evaluation for leaders, a working library, etc. The final section outlines a series of 38 conferences on major problems in foremanship, including outlines for discussion on collective bargaining, foremen as managers, as leaders, labor turnover, waste, developing understudies, company policies, wages, co-operation, self analysis, and similar topics.

The course is especially suited to industrial organizations and especially to those which are not in a position to develop a foremanship training course of their own and yet feel the need of carrying on such a program. Another field of usefulness is in connection with college courses in industrial management. The manual is an excellent introduction to this subject, used either as course material or for seminar outline work.

A Directory of Agencies for Social Work

Social Work Year Book, edited by Fred S. Hall and published by the Russell Sage Foundation, 130 East 22nd Street, New York City. 698 p., cloth, index. Price \$4.00.

The original purpose of this work was to supply a type of information not available elsewhere—a description of organized activities in social work. Part I of this volume consists of topical articles, dealing briefly with the general scope of social problems, for example, adult education, blindness, industrial injuries, unemployment, etc. Part II consists of a directory of agencies, national and state, classified as public or private.

OTHER BOOKS AND PAMPHLETS

Hat Industry:

Straw hat manufacturing. Published by the Retail Credit Company, Atlanta, Ga., 1935. (Pamphlet) (Industry Report)

Occupational Diseases:

Harrington, D. and Davenport, S. J., Review of literature on effects of breathing dusts with special reference to silicosis. Published by U. S. Bureau of Mines, Washington, D. C., 1935. (I.C. 6835)

U. S. Public Health Service. The potential problems of industrial hygiene in a typical industrial area in the United States. By J. J. Bloomfield and others. For sale by the Superintendent of Documents, Washington, D. C. Price 5c. (Pamphlet) (Public Health Bulletin No. 216)

PERIODICAL ARTICLES

Automobile Driving:

Morrison, R. L., Effect of pavement widths upon accidents. In *American Highways*, April, 1935, p. 18-21.

Paul, J. J., 800,000 miles and no accidents (Guerin Motor Freight Line). In *Fleet Owner*, May, 1935, p. 16-20, 22, 64.

Van Deventer, F. M., Carbon monoxide in moving vehicles. In *Fleet Owner*, May, 1935, p. 32-36, 65, 67.

Home Safety:

Spring jobs about the home. In *Travelers Standard*, May, 1935, p. 96-100.

Machinery:

French, H. M., How safe are your machines? Good light and proper safeguards are so much cheaper than accidents that it costs more to do without them. In *Factory Management and Maintenance*, May, 1935, p. 213-214.

Occupational Diseases:

Legge, R. T., Occupational hazards in the agricultural industries. In *American Journal of Public Health*, April, 1935, p. 457-462.

Sayers, R. R. and others: Response of the peritoneal tissue to dusts introduced as foreign bodies. In *American Journal of Public Health*, April, 1935, p. 452-456.

Suggestion Systems:

Mogensen, A. H., Every worker has ideas. Nothing flushes them out of hiding faster than a course in motion study plus a properly organized suggestion system. In *Factory Management and Maintenance*, April, 1935, p. 147-148, adv. 81-84.

Tools—Electric:

The hazards of portable electric hand tools. In *Travelers Standard*, May, 1935, p. 81-86.

NATIONAL SAFETY NEWS

Seeing America Safely

(Continued from page 26)

in gear and the steeper the slope, the lower the gear, so that the engine compression will "brake" you safely down.

While speed may not be a major cause of accidents, certainly it is the factor that makes accidents severe. Drivers need to develop a sense of "relativity" regarding it. Forty miles an hour on a lightly traveled country road may be safe under some conditions, but dangerous under others. We do not always realize that at 40 miles an hour a car is traveling at the rate of 58½ feet a second and has the same destructive force as it would have if it were to fall from the top of a building 54 feet high. Depend on common sense rather than the speedometer and realize that eight miles an hour can be excessive on downtown streets crowded with pedestrians. Slow down while going through small towns and past schools. It is easy to forget and dart through a village at a dangerously high rate of speed. Always expect children to do the unexpected thing. Youngsters on the curb or along the side of the road are a signal to be careful.

Give the roadhog all the room he wants. It does not pay to question his right to more than his share.

No family should start out for a tour without a first aid kit. This need not be an elaborate affair but it should contain sterile compresses, two-inch gauze bandage, adhesive plaster, burn ointment, iodine or mercurochrome, aromatic spirits of ammonia, sodium bicarbonate, safety pins, scissors, and first aid hand book. Incidentally, one should be familiar with the hand book before the need for applying first aid arises. There is no time to study the lesson when a member of the party has severed an artery, or is pulled from the water apparently drowned.

One might add too that there is scarcely a better way to teach safe habits to the members of the family and to acquaint them with the inevitable costs of unsafe habits than to instruct them thoroughly in the treatment of common injuries. Nor are members of your own party necessarily the only beneficiaries of such training.

There is really nothing negative about self protection. One can enjoy every pleasure of the summer tour and take not one foolish chance. The good drivers are the ones which enjoy motoring most, just as the good divers and swimmers have the most fun in the water.

JUNE, 1935

The Solution for Industrial Dust Problems

Each industry has its own peculiar dust hazards and "housekeeping" problems. In several industries, dust is a fire risk. In foundries, it is a question of working conditions. In molded products, nuisance-dust injures the finished product and in the rubber industry, production is speeded by the rapid removal of soap-stone dust.

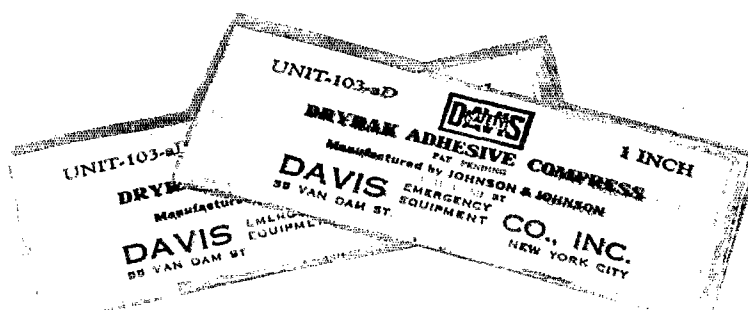
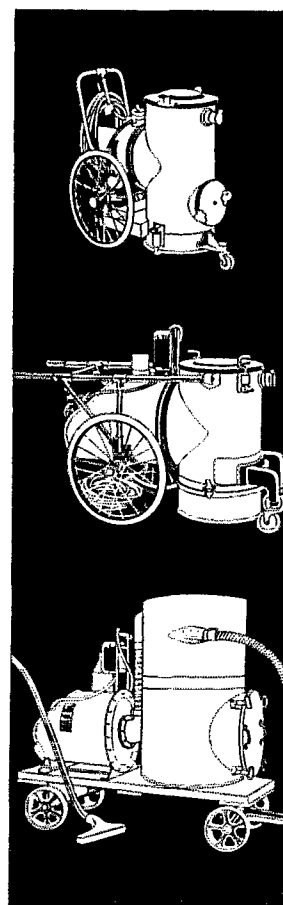
Spencer Portable Vacuum Cleaners will remove industrial dust at its source . . . promptly, quietly and efficiently. Three types of these machines are shown at the right. Each type is subject to variation for specific problems and a Spencer Central System is also available for conditions where a stationary unit is required.

Ask for the Spencer bulletin on this subject. Suggestions for the solution of the specific health, fire risk, production or cleaning problems caused by either dirt or industrial dust, will be furnished on request.

THE SPENCER TURBINE CO., HARTFORD, CONN.

SPENCER

CENTRAL AND
PORTABLE VACUUM
CLEANING SYSTEMS



DRYBAK ADHESIVE COMPRESSES will actually save you money

because the compress need not be changed so often.

The waterproof back will not collect dirt so rapidly—also dirt may be washed off.

DRYBAK ADHESIVE is oil resistant.

DRYBAK ADHESIVE leaves no residue upon removal.

You will profit by the use of DRYBAK adhesive—just another DAVIS service at no extra cost.

DRYBAK COMPRESSES are in all DAVIS FIRST AID KITS.

Send for your copy of First Aid Catalog

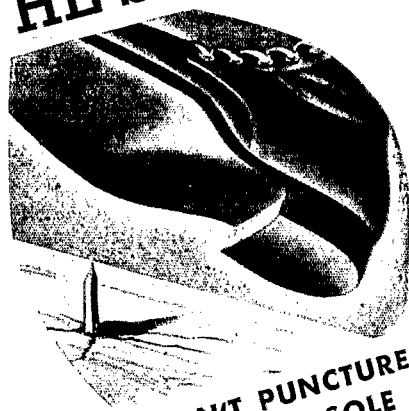
DAVIS

EMERGENCY
EQUIPMENT

CO., INC.

55 Van Dam St.
New York City

HE'S SAFE!



THE NAIL CAN'T PUNCTURE THAT SOLE

Injuries and infection to the sole of the foot, due to a punctured shoe sole, account for a large per cent of foot accidents.

Such accidents can now be prevented with the new (patent applied for) Brownbilt Safetoe Shoe which has a sheet of flexible watch-spring steel built into the sole.

Stock No. is H-100, C, D and E, sizes 5 to 12, \$3.35.

Write or wire. A representative will call with sample and full particulars.

SAFETY SHOE FOR WOMEN INDUSTRIAL WORKERS



Keeping in step with the trend we now offer a Safetoe Shoe for women in Industry.

Stock No. L-16, Black Calf Blucher Oxford, extra heavy box toe, double leather sole, leather counter and heel, steel shank, stitchdown construction. A to D, sizes 3 to 9—\$1.95. Comes also in white, same sizes and price.

Same style in welt construction, black or white, AA to E, 3 to 10—\$2.45.

SAFETOE DIVISION

Brown Shoe Company
MANUFACTURERS—ST. LOUIS

Protecting the Eyes

(Continued from page 18)

heats and flame characteristics with their predecessors' or fellow workmen's glasses. Makeshift standards and density numbers were set up and a feeling now exists among these operators that they cannot change from one color to another, or from one type of glass to another, without losing the ability to make the above determinations.

Now, glass does not give protection by virtue of its color, but from the chemicals used in its manufacture. Ultra-violet and infra-red have no color, therefore color does not affect them. Two pieces of glass of exactly the same appearance often have entirely different properties. Blue glass, most commonly used, gives little or no protection.

The United States Government, through the Bureau of Standards, and the U. S. Navy have set up a definite standard covering the amount of absorption necessary for protective glass; and have standardized a set of shade numbers based on the density of the glass. Table A is from Federal Specification No. GGG-G-541, covering the lighter shade lenses, and No. GGG-H-191, covering the darker shades.

Glasses made to these specifications assure the workmen of complete protection from ultra-violet and infra-red, it only being necessary to pick a shade of glass which cuts down the glare to the point where the eyes will function normally when looking into the flame or arc. All lenses in these specifications transmit the visible rays in the green or yellow-green portion of the spectrum.

Glass meeting these requirements is available from several manufacturers, in a number of types and kinds of goggles, in helmets or hand shields; also in plates of any size required for use in peep-holes, observation windows, etc.

The following table is suggested shades for various industrial operations

is recommended by the leading manufacturers of specification glass:

Shade Number	Suggested Use
14	Carbon arc welding and cutting. Electric furnace operation.
12	Metallic electric arc welding 250 amperes or more
10	Metallic electric arc welding 75 to 250 amperes.
8	Heavy acetylene cutting and welding
6	Acetylene welding set-up work on electric welding. Fire box observations.
5	Acetylene burning, cutting and brazing.
4	Light brazing.
3	Bull lademen, spot, flash and seam welding.
Extra Dark "Calobar" or No. 2	Employees in area of electric welding, stray or reflected light, low temperature fire box observations, rivet heaters, lademen, hand pourers.
Dark "Calobar" or No. 1	
Medium "Calobar"	

Some difficulty will be encountered in changing the habits of workmen who have been using blue, brown or other inadequate lenses, and it will require patience and perseverance on the part of employers to make the necessary change to the proper absorption lens. Bearing in mind that all the various shades of this specification glass give the necessary protection, it is sometimes easier to let the workman have his choice of several shades, letting him use both his old glass and several shades of new glass for a week or two until he becomes accustomed to the change in color. In this way he sells himself; his eyes will feel better at the end of the day and he will soon realize he gets better visibility through the new soft green color.

TABLE A

Shade No.	Density for Visible Radiation Standard	Total Visible Standard	Max. Total Infra-Red	Transmission, in per cent.			
				313	Max. 334	Ultra Violet 365	405
				Mu.	Mu.	Mu.	Mu.
3	0.857	13.9	9.0	0.2	0.2	0.5	1.0
4	1.286	5.18	5.0	.2	.2	.5	1.0
5	1.714	1.93	2.5	.2	.2	.2	.5
6	2.143	.72	1.5	.1	.1	.1	.5
8	3.000	0.100	1.0	0.1	0.1	0.1	0.5
10	3.857	.0139	.6	.1	.1	.1	.5
12	4.715	.0019	.5	.05	.05	.05	.1
14	5.571	.00027	.3	.05	.05	.05	.1

It is well to point out to the men the previous discussion of the eye and how it is affected by the ultra-violet, infra-red rays, glare and color. When he realizes that the dangerous ray transmission of both ultra-violet and infra-red, through blue glass, for instance, is from 30 to 45 per cent, and that its visible transmission is lowest where it should be best, namely in the green portion of the spectrum, he will be quick to see the advantages of the new glass.

Blasting Caps Still Menace Young Children

AT THIS time of the year it is necessary to stress again the importance of keeping blasting caps away from children, and of educating the youth of the country in the dangers of blasting caps as toys.

Hundreds of children are injured annually from detonating these small copper cylinders, which are about a quarter of an inch in diameter and an inch or two long, and which are loaded with fulminate of mercury, a very sensitive and powerful explosive. Children throw them in bonfires, strike them with a hammer or rock, hold lighted matches under them, attempt to pick out the fulminate of mercury with a pin, nail or some other instrument.

Many children are now facing the future with impaired eyesight. Some have been totally blinded. Fingers and even hands have been blown off, and many faces and bodies have been severely lacerated and disfigured.

During the year 1934, newspaper reports showed accidents in 37 states. Several hundred children were injured, and four were killed.

The campaign to protect children from the dangers of playing with blasting caps has been participated in by government agencies, safety associations, Boy Scouts, Girl Scouts, school authorities, and other important nation-wide institutions. The Institute of Makers of Explosives, at 103 Park Avenue, New York City, has available posters and memoranda on the subject which will be of interest to all those in a position to aid in safety work through lectures or in contact with groups and individuals. "How Jimmy Won the Game" is the title of a one-reel motion picture which also shows the dangers of children playing with blasting caps. It is printed on safety stock, in 16 and 35 mm. widths, and may be obtained for scheduled showings without charge.

JUNE, 1935

COOL CAPS and HATS



**can
take
it**

Not only are they officially approved by the Pennsylvania Compensation Rating and Inspection Bureau but they have a factor of safety 60% greater than the Bureau requirements—in other words, "they stand the gaff."

And without DURABILITY, head protection is of no avail!

Details on Request—Ask For Bulletin 102

PORTABLE LAMP & EQUIPMENT COMPANY

405 PENN AVENUE, PITTSBURGH, PENNA.

BRANCH DISTRIBUTORS

G. A. Luckenbach	Scranton, Pa.
Urquhart Service	Denver, Colo.
The Miner Rubber Co. Ltd.	Granby, Que.

THE OVERHEAD DUST IS THE REAL MENACE

- Dust that shakes loose from overhead piping, beams, ledges and walls—the fine powdery dust that constantly filters down and pollutes the plant atmosphere—that's where the REAL danger lies.



**.... REMOVE IT WITH A
HOFFMAN VACUUM SYSTEM**
Quickly, Safely, Economically

Most overhead dust was first on the floor. Pick it up from the floor, regularly and at low cost, with a Hoffman Vacuum Cleaning System—and use the same equipment for an occasional rapid, economical overhead cleaning. We build all types—portables, and stationary units engineered to meet your dust problems.

Write for New Booklet
"The Menace of Dust"

U. S. HOFFMAN MACHINERY CORPORATION
Air Appliance Division • 111 Fourth Ave., New York, N. Y.
Engineers and Manufacturers of Pneumatic Systems

DEMAND THIS LABEL



4 reasons why you should demand this Label....

PROPERLY sterilized wiping cloths protect workmen against infection and reduce fire hazard. Members of The Sanitary Institute of America identify their wiping cloths with the Institute label and pledge themselves to maintain set standards in the sale of their products. These standards provide—

1. STERILIZATION

Every purchaser of wiping cloths bearing this label receives an affidavit that the cloths so labeled have been thoroly boiled in a solution containing pure soap—76% Caustic and/or Chloride of Lime, and dried at a temperature of more than 212° Fahrenheit.

2. CORRECT WEIGHT

The Institute label not only provides a means of identifying wiping cloths of a specific grade but is a pledge of the shipper as to accuracy of weight.

3. UNIFORM PACKING

The label illustrated indicates that the wiping cloths bearing this label conform to specifications as to size, texture and color of each recognized grade.

4. FAIR DEALING

The label provides a means for the purchaser who wants a sterilized wiping cloth of a certain grade whereby he can get what he orders and pays for.

Ask for Complete
Institute Specifications

**The SANITARY INSTITUTE
of AMERICA**
32 W Randolph St., CHICAGO, ILL.

Safety Is First in the Council's Home

(Continued from page 29)

pany. A special circuit, for exit lighting and other vital services, would go into operation immediately should the current of the main circuit fail.

Fire protection has also been given careful consideration. In the basement are two centrifugal fire pumps which maintain constant pressure. The pump which affords protection for the main part of the building has a capacity of 1000 gallons per minute against 200 pounds pressure. This would permit four good 1½ inch smooth-nozzle fire streams. Another pump with higher pressure protects the tower.

There are no outside fire escapes in the building. Instead four fire towers have been constructed by which occupants could reach the street from any level without exposure to fire. Each tower has a smoke escape system.

Constant inspection of the elevators is maintained. Cables are renewed on a mileage basis long before they are unsafe to use.

Ohio Industries Join in State-wide Conference

ATTENDANCE and interest at the Sixth All Ohio Safety Congress and Exhibit, held at the Neil House, Columbus, April 23 to 25, fully justified the predictions of its sponsors. A total of 1,469 persons registered at the desk and many who came for a single session failed to register. The Congress was held under the auspices of the Industrial Commission of Ohio.

Opening with a general session Wednesday morning, the conference then divided into sectional groups, including Metals, Rubber, Mining, Pulp and Paper, Construction, Laundries and Dry Cleaners, Petroleum, Woodworking, Commercial Vehicles, Newspapers and Printers, Cement, Public Utilities, Public Employees, Employee Publications, and Fire Prevention. An executive dinner meeting was held Tuesday evening. The Conference concluded Thursday afternoon with a session devoted to foreman training.

The following officers were elected by the sessions:

Metals—Chairman, Frank Rowe, Otis Steel Co., Cleveland; Vice-Chairman, J. L. Sivard, Wheeling Steel Corp., Steubenville; Secretary, R. H. Ferguson, Republic Steel Corp., Youngstown.

Construction—Chairman, Fred I. Rowe, W. L. Johnson Construction Co., Hicksville; Vice-

Chairman, John W. Jockel, Ohio State Conference B. M. & P. I. U., East Cleveland.

Industrial and Commercial Vehicle Operation—Chairman, Floyd M. Shafer, Railway Express Agency, Cincinnati; Vice-Chairman, William Vaner, Central Ohio Light & Power Co., Findlay.

Newspapers and Printers—Chairman, J. H. Zucker, Cleveland Plain Dealer, Cleveland; Vice-Chairman, D. N. Grothaus, McCall Publishing Co., Dayton; Secretary, R. Reid Vance, Graphic Arts Association, Columbus.

Mining—Chairman, Harry E. Cameron, Cambridge Collieries Co., Cambridge; Secretary, Russell D. Squibb, Y & O Coal Co., Martins Ferry.

Woodworking—Chairman, George E. Wiss, Crane-MacMahon, Inc., St. Marys; Vice-Chairman, J. D. Lyle, Fisher Body Co., Cleveland.

Rubber—Chairman, John J. Loge, General Tire & Rubber Co., Akron; Vice-Chairman, A. B. Pettit, Goodyear Tire & Rubber Co., Akron; Secretary, R. M. Weimer, Dayton Rubber Manufacturing Co., Dayton.

Foundries—Chairman, George J. Leroux, National Malleable Co., Cleveland; Vice-Chairman, James R. Byrum, American Rolling Mill Co., Middletown.

Public Utilities—Chairman, A. M. Rose, American Telephone & Telegraph Co., Cleveland; Vice-Chairman, Walter J. McCarter, Cleveland Railway Co., Cleveland.

Petroleum—Chairman, J. H. Herbert, Standard Oil Co., Cleveland; Vice-Chairman, R. D. McClaran, Pure Oil Co., Columbus; Secretary, F. M. Carpenter, Illinois Pipe Line Co., Findlay.

Pulp and Paper—Chairman, Harry E. Hiers, Ohio Boxboard Co., Rittman; Vice-Chairman, Russell D. McVicker, Chillicothe Paper Co., Chillicothe; Secretary, Don C. Hunter, Oxford-Miami Paper Co., West Carrollton.

Laundries and Dry Cleaners—Chairman, W. S. Taylor, Franklin-American Laundry Co., Columbus; Vice-Chairman, William Groves, Fenton-United Dry Cleaning Co., Columbus.

Employees' Publications—Chairman, Charles A. Ward, Pure Oil Co., Columbus; Vice-Chairman, W. H. Texter, Youngtown Sheet & Tube Co., Youngstown; Secretary, George N. Kaufman, Columbus Railway, Power & Light Co., Columbus.

Public Employees—Chairman, John M. Caserly, assistant director of service, Columbus; Vice-Chairman, Jos. A. Sattler, personnel department, Cincinnati.

Quarries and Cement—Chairman, H. Vanderwerp, Medusa Portland Cement Co., Cleveland; Vice-Chairman, C. G. Knobloch, National Lime and Stone Co., Findlay.

Fire Prevention—Chairman, R. B. Criswell, Ohio Inspection Bureau, Columbus.

Fourteen G-M Plants Have No Accident Month

FOURTEEN General Motors plants operated throughout April without a single accident, according to tabulations compiled in the first month's results of a safety contest sponsored by C. E. Wilson, vice-president of the corporation. These plants employed more than 24,000 hourly wage earners who worked a total of 4,147,143 hours during the month.

In the 27 plants throughout the country enlisted in the drive to eliminate industrial accidents, a reduction of 65.3 per cent in accidents was reported, compared to April a year ago. The contest continues through May and June. At the end of the three months, banners will be presented every plant department having a perfect safety record.

Plants having no accidents during April were:

Anderson, Ind.—Motor Lamp division.
Cleveland—Winton Engine Corporation.
Dayton, Ohio—Delco Products, Inland Manufacturing and Moraine Products divisions.
Flint, Mich.—AC Spark Plug division.
Indianapolis—Allison Engineering division.
Meriden, Conn.—New Departure division.
Newark, N. J.—Hyatt Bearing division.
Pontiac, Mich.—Pontiac Motor Company.
Rochester, N. Y.—Delco Appliance division.
Saginaw, Mich.—Saginaw Malleable Iron division.
Warren, Ohio—Packard Electric and Sunlight divisions.

The contest has stimulated unusual interest in accident prevention throughout all plants enrolled, practically all of them showing sharp reductions despite increased employment and heavier operations over last year.

Midwest Safety Conference Held in Chicago

THE Thirteenth Annual Midwest Safety Conference, held at the Stevens Hotel, Chicago, May 8 and 9, again drew a large attendance, 1,874 persons being registered at the desk. The conference was sponsored by the Chicago Safety Council, the Illinois Industrial Commission, the Keep Chicago Safe Committee, and the Safety Section, Association of American Railroads—Steam Railroad Section, NSC, and co-operating organizations.

Sessions were devoted to Fire Prevention, Handling Materials, Safety Equipment, First Aid, Training and Educational Methods, Commercial Vehicles, and Occupational Diseases. On Wednesday evening a session was held on the topic of industry and community safety, stressing the problem of non-occupational accidents to employees.

At the banquet Thursday evening, Judge Lee E. Skeel, of Cleveland was the principal speaker. Trophies were presented to the winners in the Chicago Safety Council's Interplant Contest.

On Thursday the Safety Section, Association of American Railroads, held its Midwest Regional Meeting with morning and afternoon sessions.

JUNE, 1935

Conduct Safety Course for Women Workers

ONE of the first safety lecture courses for women supervisors in industry was completed by the Newark Safety Council recently. Planned by the Council's Industrial Committee and headed by Miss Sara A. Carr, educational assistant, Kearny Works, Western Electric Company. The course consisted of five sessions. The subjects and speakers were as follows:

1. "Situation of the Safety Movement," by Fred M. Rosseland, Secretary-Manager, Newark Safety Council;
2. "Why the Supervisor Should be Interested in Safety Promotion," by Mrs. Nellie H. Slayback, Inspector, New Jersey State Department of Labor;
3. "How the Supervisor Can Solve Her Safety Problem," by Don Johnson, Safety Engineer, Du Pont Viscoloid Co., Arlington, N. J.;
4. "Protection and Guards," by Hon. John Roach, Deputy Commissioner of Labor, State Department of Labor;
5. "Discipline and Education and its Relation to the Safety Movement," by J. Russell Craig, Safety Director, Pennsylvania Indemnity Co., Philadelphia, Pa.

Before each meeting the students were given a questionnaire outlining the points to be discussed. Those who attended four of the five sessions were awarded certificates.

The Newark Safety Council found that although there were many women workers in the industries there were only a few women supervisors. Discussion indicated that women workers are more obedient to safety rules and safer workers than men; and that one of the most serious hazards for women workers is the danger of getting their hair caught in moving machinery.

Seattle Railway Starts Drive for Public's Cooperation

"We hope to get cooperation from pedestrians, automobile and truck drivers in our efforts to make the Seattle streets the safest in the country," said Albert E. Pierce, superintendent of railways, before the recent annual meeting of the safety organization of the Municipal Street Railways.

The safety organization, which is now in its fifteenth year, has won some substantial credits from the base insurance rate by its successful activities. The safety committees are under the leadership of C. L. Hammons, chief safety inspector.

FREE TO OFFICIALS
INTERESTED
IN SAFETY.

SAF-T-TOP

Antiseptic Applicator

Write for sample today and prove to yourself the truth of all claims made for Saf-T-Tops. If you have never used one, you will doubly appreciate its safety, speed and convenience.

Exclusive Features

1. Patented feeder tip allows easy application but checks evaporation of antiseptic. From tip, solution is either fed directly to wound by capillary action or is sprinkled by tapping base of applicator.
2. The pocket size (2 cc) is practically unbreakable, the glass container being protected by a shock-proof wooden case. Safe to carry in pocket, tool kit, handbag, first aid kit, etc. No other antiseptic applicator has this shock-proof feature.
3. One Saf-T-Top may be used over and over again—more than 100 times in the 2 cc size (small) for average injuries.
4. Six available solutions. Both 2 cc and 15 cc sizes filled with either iodine, mercurchrome, metaphen, merthiolate, ferric chloride or iso-propyl-alcohol.



CLIP COUPON TODAY

Robt. A. Bernhard, Mfg. Chemist
153 Anderson Ave., Rochester, N. Y.
Please send me a Saf-T-Top Applicator.

Firm Name.....

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Street.....CITY.....Title.....

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SIGNS
for
ACCIDENT PREVENTION
TAG IT!
with a
Stonehouse
JUMBO
Tag



Actual Size: 1 7/8" x 2 1/2"

For emergency hazards. Quickly tied on, Stonehouse JUMBO Tags are miniature danger signs. Many different wordings in stock. Standard accident prevention design; red and black. Tough, strong material resists wear, handling, water. Strung with long, heavy cord.

Write for our JUMBO Tag Bulletin No. 1015E, with prices.

STONEHOUSE SIGNS, Inc.
Stonehouse Building
9th at Larimer
Denver, Colo.



"Ladies' Home Journal" Urges Safer Motoring

A SAFE driving campaign which will go directly into the homes of 2,600,000 American families and will reach directly a majority of the drivers in the country is being conducted now by *The Ladies' Home Journal*, according to Loring A. Schuler, editor.

The campaign in the editorial pages of the magazine began with an article entitled "Accidents Don't Happen" in the June issue. Written by Paul de Kruif, author of such well known books as *Microbe Hunters* and *Hunger Fighters*, it discussed the common rules of the road and set forth the code for super drivers developed by Maxwell Halsey, assistant director of the Bureau of Street Traffic Research at Harvard.

The code is as follows:

I will know the driving customs or rules of the road in whatever region I may be driving.

I will give understandable signals of what I am going to do.

I will place my car toward the center of the road and slow down if I am going to turn left.

I will place it at the curb and slow down if I am going to turn right.

I will signal my direction with my hand according to the system approved by the state I am in . . . or I will at least extend my arm out the window to indicate that I am about to do something different.

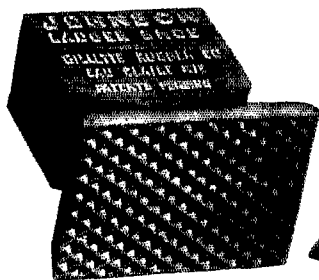
I will know my car and keep it in safe condition, so that it will pass any motor-vehicle in-



This red, white and blue sticker has been issued by the *Ladies' Home Journal* as part of a campaign for safer motoring.

JOHNSON RUBBER LADDER SHOES

V
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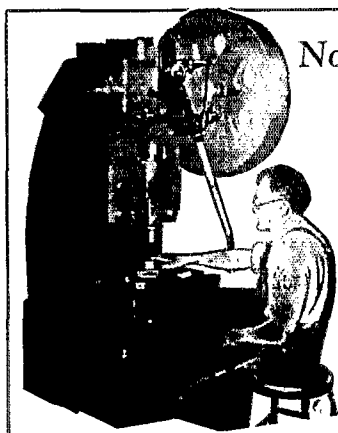
G
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Price
\$1.65
per pair

From your
dealer or
direct

JOHNSON LADDER SHOE CO.

Eau Claire, Wisconsin



No More Accidents in This Shop!

—or in any other where **WIESMAN SAFETY PRESS GUARDS** are installed on the power presses. The operating principle **ABSOLUTELY PROTECTS THE OPERATOR** without interfering with his natural working movements. Simple, easy to attach, for all types of presses. Made for right or left hand stroke. Details?

Wiesman Mfg. Co.
31 South St. Clair St.
DAYTON, OHIO, U.S.A.

spection. I will mentally "drive ahead" so that I will always have time to make whatever decision may be necessary.

I will suit my speed to conditions—to the traffic; to see how far ahead I can see; to the state of the road; to the time of the day; to the number of hours I have been driving.

I will choose the safest routes and times for travel.

I will never pass a car near the crest of a hill or on a curve.

I will never crowd slow-moving vehicles or join processions of cars. I will always stay far enough behind so that when the way is clear I shall have speed enough to pass any vehicle in the minimum time.

I will train myself to drive automatically, so that I will never have to think what I should do in any emergency.

I will be courteous.

I will remember that it takes two to cause any accident in which I am involved—and that the blame is always partly mine.

This article will be followed by others by Mr. de Kruif.

In addition to the educational material in the magazine an attempt will be made to reach every driver of an automobile through the widespread distribution of a safety seal to be pasted on the windshield, rear window, or tire cover of the automobile depending upon local regulations. Printed in red, white and blue, the seal will carry the simple slogan, "I will drive safely."

NATIONAL SAFETY NEWS

Disasters Show Need for School Bus Supervision

THE disaster at Rockville, Maryland, a few weeks ago was another shocking reminder that thousands of school buses operating in the United States today are unfit for the transportation of children or that their drivers are untrained incompetents. In this case the bus, which was chartered for a single trip, was driven into the path of a fast passenger train. Fourteen high school children were slain and thirteen others were seriously injured.

The accident, which was the most recent of a long series of similar tragedies, should serve boards of education all over the country as an object lesson. Schools will be dismissed for the summer holiday soon and the boards will be renewing contracts for the coming school year and they will be buying buses and employing drivers.

Since most of these accidents can be attributed either to the driver of the bus or to the vehicle itself, it might be well to look over the findings of a research made by the Florida state superintendent of instruction not long ago. The study was made following the death of nine children in a school bus accident on railroad grade crossing in that state.

It was found that of 1,000 drivers of school buses in Florida:

Three had only one leg each.

Two had only one eye each.

Four had only one hand each.

At least two were hard of hearing.

Six were more than sixty years old and several were between fifty-five and sixty.

Two were seventeen years old.

A considerable number were physically unfit for the job being described as "a little too delicate."

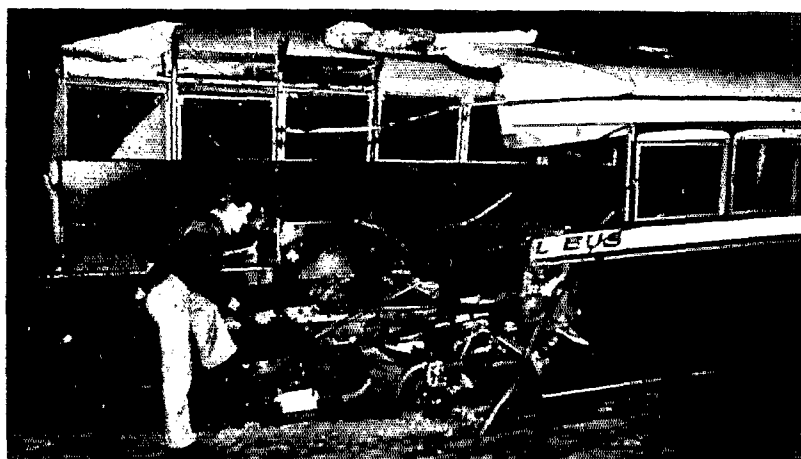
Since there is no reason for believing that the drivers of school buses in Florida are less qualified than elsewhere, it is plain that there is all the difference between the average corps of school bus operators and the drivers of a fleet of commercial buses as there is between raw recruits and a crack regiment.

The vehicles themselves are for the most part worthy only of their drivers. School buses are being used today which look like lop-sided crates for hauling live stock. Frequently they are mounted on chassis which have been discarded as inefficient or unsafe for commercial hauling. Many of them have no emergency door from which the children could escape in case of fire or if the other door became jammed. Many of the buses lack such equipment as adequate headlights, rear view mirrors, heating facilities, good brakes or sufficient seats.

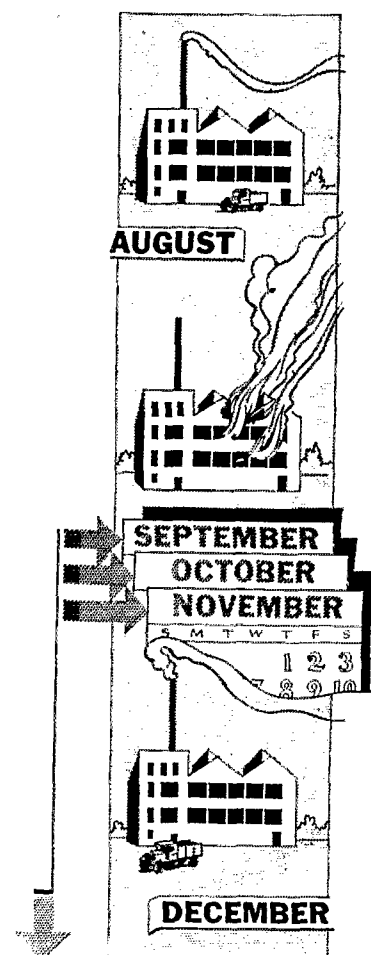
Putting such a contraption in the hands of an untrained boy or a crippled old man neither of whom has had any instruction on handling a bus properly is gambling with the lives of the children to be carried.

Here are brief descriptions of a few of the school bus disasters which have occurred recently in this country:

A bus loaded with forty boys and girls ran off the road and overturned in a creek five feet deep. By breaking windows the driver and all but one of the



Fourteen school children were killed and 13 seriously injured when this bus drove into the path of an express train.



THREE MONTHS IN THE RED

THE whole force was proud of the new plant—Insurance money had paid for every cent of it—But the Manager knew that three big months of interrupted operations had cost more in lost orders than an entire year's profit. He knew, too late, that LUX could have kept him out of the red.

Today, thousands of plants both large and small are depending on LUX extinguishers to protect various fire hazards—and thus their profits.

LUX smothers fire with a penetrating inert gas instead of a liquid—when this Clean—Dry—and Harmless gas is released. Fires even of the most serious type are killed instantly.

In many instances after other extinguishers have proved ineffective a LUX portable has been borrowed to save the day.

Write for information to
Walter Kidde &
Company, Inc.,
61 West Street
Bloomfield,
New Jersey.



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

Ded-Fuse Tattelite

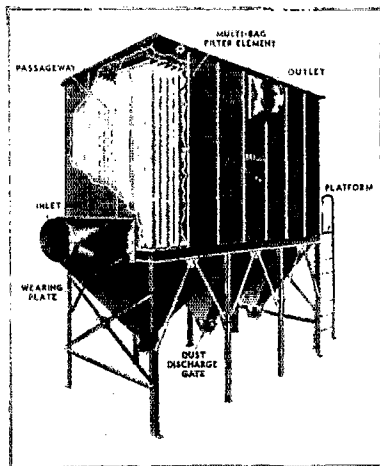
The Ded-Fuse Tattelite is a tiny neon lamp in a casing, designed to tell instantly when and where a fuse has blown. The lamp bulb itself is only the size of a pencil tip 1 inch long. It is connected directly with the fuse and draws no current until a fuse has blown. The devices are adapted for use on cartridge fuses of any size or



on plug fuses, since they measure only 1 3/4 inches long overall by 5/16 of an inch maximum diameter and have 6 inch connecting leads. They are designed for circuits of 100 to 550 volts AC or DC. They light on only .0005 ampere current. A protective resistance is built in. Other uses are indicating open circuits, switches, relays, etc. Manufactured by Littelfuse Laboratories, 4507 Ravenswood Avenue, Chicago.

Multi-Bag Filter for Dust Control

A new multi-bag filter is announced by The Dracco Corporation, Harvard Avenue and East 116th Street, Cleveland, Ohio. Made entirely of cloth, the filter is easy



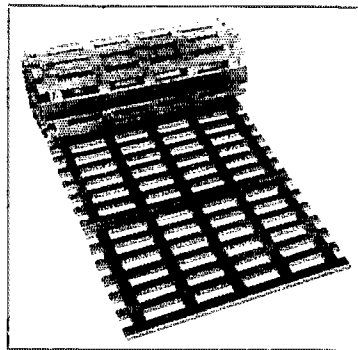
to insert and remove from the filter compartment. Because of the compactness of the construction it is possible to obtain a large filter area in a small space.

The shaking mechanism, the manufacturers state, makes it possible to have filter bags practically 100 per cent clean after each shaking. Shaking consists of an upward and downward motion. All working parts are easily accessible. The motor and gear drive are outside the casing to facilitate inspection and oiling. A walkway is provided for inspection and replacement. It is designed so that changing the bags can be accomplished without entering the dust laden side.

The filter house is of weather-proof steel construction. The hopper section is so designed that it is possible to make practically any type of connection to and from filter. The manufacturers state that this multi-bag filter complies with the present State Codes.

Safety Floor Mat

A new safety floor mat is now manufactured in sections 23 1/4 inches wide, 12 inches long and 3/8 inches thick. These sections are securely vulcanized together so that a piece of any length in one continuous strip can be made. Sides and ends are beveled. It is made from 80 per cent cotton cord, bound together by a com-

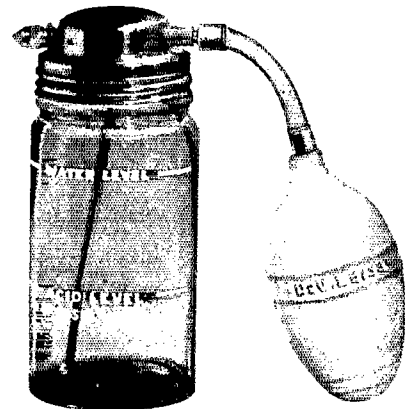


pound containing a small amount of rubber. It affords a resilient and non-slip working surface, and will stand up under heavy traffic, slight oil and other industrial conditions.

It is designed to lie flat on the floor and to keep the feet of workers dry and comfortable by elevating them above moisture, grime and refuse on the floor. The resilient surface protects against slipping. The floors beneath this mat can be easily kept clean and sanitary as it can be quickly rolled up and set aside while floors are being cleaned. This mat is particularly adapted for floors in wood-working shops, around presses, in twine factories, in washrooms, for weaving rooms in textile plants, in refrigerator rooms, and for floors of industrial trucks. It is manufactured by the American Mat Corporation, 1717 Adams Street, Toledo, Ohio.

New Tannic Acid Atomizer

The De Vilbiss Manufacturing Company, Detroit and Philips Avenues, Toledo, Ohio, has announced a new atomizer developed especially for use in applying tannic acid to burns. It was designed to facilitate treatment of burns and offers speed and convenience in first-aid work



by the incorporation of three special features, according to the manufacturer. These features are a wide mouthed bottle to facilitate filling, stirring and cleaning, acid and water levels clearly marked on the bottle to make correct mixing easy, and a wide volume of soft spray giving quick and effective application over a wide area.

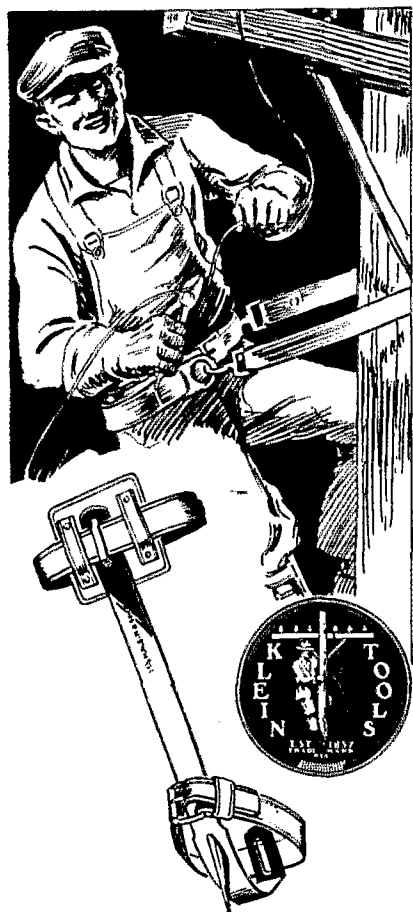
Workmen's Life-Save Vests

The Tapatco vest is made for the protection of men engaged in river and harbor construction or in service on barges and tows. It is constructed in accordance with the rules and regulations of the U. S. Steamboat Inspection Service and filled with Private Estates Kapok. The manufacturers state that it will sustain a heavy man for hours. It is made of a closely woven, fast color cloth approved by the U. S. Government and the kapok padding



is distributed for proper balance. The vest fits snugly and allows free use of arms. It is furnished in several styles, one of which has open ventilated eyelets for summer weather. The manufacturer is the American Pad & Textile Company, Greenfield, Ohio.

NATIONAL SAFETY NEWS



SAFETY

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

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

Distributed through jobbers

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

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



Mathias KLEIN & Sons
Established 1857 Chicago, Ill. USA
3200 Belmont Avenue, Chicago, Illinois

children escaped. This victim, a girl, was trampled to death in the wild scramble.

Another bus was taking on gasoline with all the children in their places. Something went wrong and the front of the bus burst into flames making it impossible for the children to escape through the main door. They rushed to the emergency door and found that it had been *nailed shut*. The youngsters escaped through the windows with their lives but all of them suffered burns and five were pitifully injured by the flames.

On December 14, 1933, ten children lost their lives and thirty others were injured on a railroad grade crossing near Crescent City, Florida, when a bus driven by an elderly man was struck by a fast freight train. The inquest exonerated the railroad and placed all the blame on the bus driver.

Three children were killed and forty injured in a similar accident near Merced, California; and ten children were seriously injured in a third near Springfield, N. Y.

Since approximately fifty million dollars are spent each year in this country to transport almost 2,400,000 children in 66,000 buses to and from 23,000 schools, it is seen that the problem is one of gravest importance to the present and future welfare of a large number of our children. Is it too much to ask that this transportation be safe?

COMING EVENTS

Of Interest to Safety Men

June 3-5, Beckley, W. Va.

Mine Inspectors Institute of America, 26th Annual Convention. N. P. Rhinehart, Chief, Department of Mines, Charleston, W. Va.

June 3-6, Washington, D. C.

Edison Electric Institute, Annual Convention. (Mayflower Hotel.) A. B. Campbell, Edison Electric Institute, 420 Lexington Ave., New York City.

June 11-13, San Francisco

Western Safety Conference. (Civic Auditorium.) C. H. Fry, superintendent of safety, Industrial Accident Commission, State Bldg., San Francisco, Calif.

Sept. 23-27, Atlantic City, N. J.

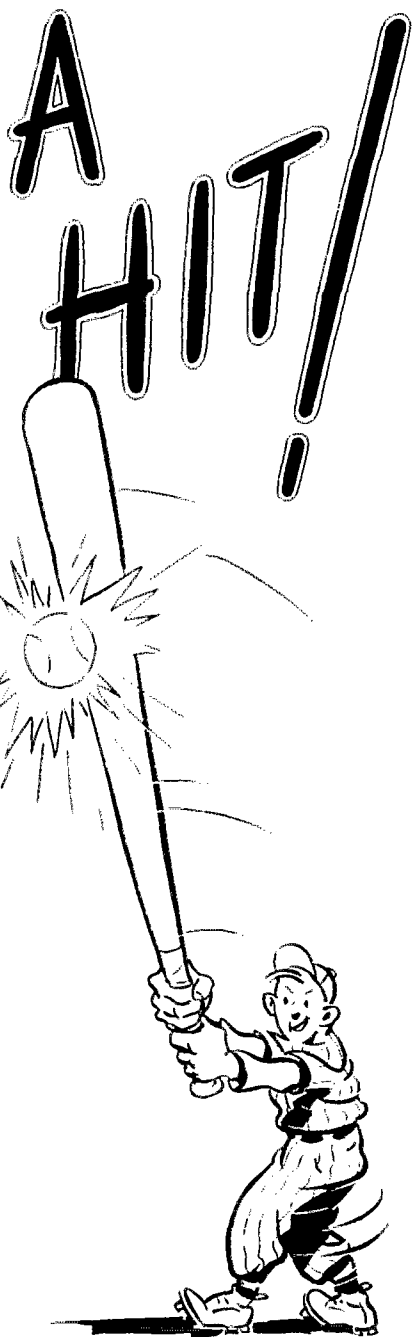
American Transit Association, 54th Annual Convention. G. C. Hecker, general secretary, 292 Madison Ave., New York City.

Oct. 7-10, Milwaukee, Wis.

American Public Health Association, Annual Meeting. Acting executive secretary, Dr. Kendall Emerson, 50 West 50th Street, New York City.

Oct. 14-18, Louisville, Ky.

NATIONAL SAFETY COUNCIL, Twenty-fourth Annual Safety Congress. W. H. Cameron, managing director, 20 N. Wacker Drive, Chicago.



THE INDUSTRIAL SUPERVISOR

Acclaimed by industrial executives as unique in its field. Hundreds of subscriptions received already and growing daily. Write for details and sample.

Published by

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

NATIONAL SAFETY NEWS

HONOR ROLL

Details of no-accident records in excess of 400,000 man-hours, or 200 working days, are invited for this department

American Can Co.

Lubec plant of the American Company has operated since October 12, 1927 without a disabling injury. The exposure on May 1 was approximately 1,226,537 man-hours.

Boston Gear Works Inc. —

Since May, 1932, no disabling injury has occurred in the plant of the Boston Gear Works Inc. at North Quincy, Mass. At the time of reporting (May 6) the record was still unbroken and the exposure had reached 1,442, 149 man-hours.

Burroughs-Wellcome & Co. (U.S.A.) Inc.

The coveted record of one million man-hours without a disabling injury was attained on March 4 by the Tuckahoe, N. Y., works of Burroughs-Wellcome & Co. (U.S.A.) Inc., manufacturers of first aid and photographic supplies. On March 15 the company completed an even two years without accident. Previous to 1928 there had been an average of eight disabling injuries a year.

Safety activity is headed by a committee of seven which has the moral and financial support of the management. All recommendations from the safety committee receive prompt action. Twenty-six bulletin boards are maintained in the plant, and time cards and work cards are stamped with safety slogans. All employees have been trained in first aid and one-third of them hold Red Cross certificates.

Green Mountain Power Corp.

On May 8 the Green Mountain Power Corporation, with operations scattered over the state of Vermont, completed its first million man-hours without a disabling injury. The last injury occurred March 25, 1933. The average number of employees for the period covered was 210. The company participates in the safety program of the New England Power Association and an annual contest has helped to maintain safety interest.

New Health Practices Pamphlet Published

A new Health Practices Pamphlet entitled "Physical Therapy in Industry" and carrying the serial number 16 has just been published by the National Safety Council. Written by Dr. John S. Coulter of Chicago, member of the Physical Therapy Council of the American Medical Association, and reviewed by Industrial Health Advisory and the Safe Practices Conference Committees of the National Safety Council, the pamphlet comprises an invaluable brief exposition of this important subject.

Health Practices Pamphlet No. 8, "Infected Wounds," has been revised and reprinted. Single copies of both pamphlets are available to Council members on request, also quantity prices.

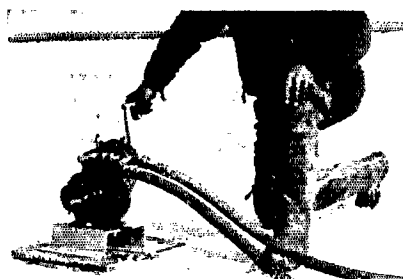
JUNE, 1935

Two men on a blower

You who are experts in the use of air line masks, need only get into a Davis Air Line Mask with air being supplied by a Davis-Roots Blower to know the advantages to you of this combination.



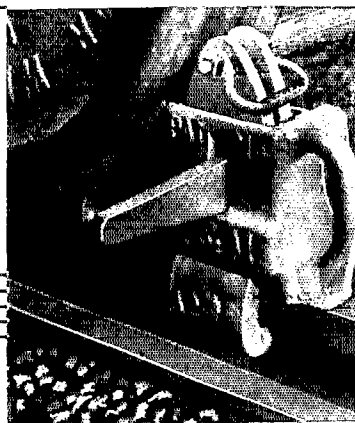
The GREATER SAFETY of POSITIVE PRESSURE throughout the breathing circuit during the entire breathing cycle—
The EASE of BREATHING even at hard work because of GREATER VOLUME OF AIR delivered to the mask even at low handle speeds.



Once tried you will always use —
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with
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POSITIVE PRESSURE BLOWERS

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RAIL CLAMPS

Easily and Quickly Removed
Guaranteed Against Breakage

M & M Rail Clamps are recommended as the surest and safest possible stop for use on runways, in repairing cranes, on loading platforms, temporary sidings, air ferries, under tipples, car stops and cars on grades.

M & M Rail Clamps eliminate the dangerous practice of placing wooden blocks under the car wheels for bracing.

M & M Rail Clamps are rigidly constructed of open hearth annealed cast

steel, with tool steel key. Will fit rail from 40 to 110 lbs.

M & M Rail Clamps are used and recommended by Manufacturing Plants, Cement Plants, Grain Elevators, Mines and Quarries.

Our Engineering Department will design clamps to meet special track conditions. Let us have your operating problems—we will gladly make suitable recommendations.

Style A. \$15 each
INDUSTRIAL PRODUCTS COMPANY
Accident Prevention Equipment

800 W. Somerset St.

Philadelphia, Penna.

mission reports 1,554 such deaths in 1934, compared with 1,511 in 1933. This 3 per cent increase compares very favorably with the 15 per cent advance in all types of motor vehicle fatalities. Grade crossing deaths now stand 31 per cent below 1923 and 40 per cent below 1928, the peak year. The railways can also point with pride to a reduction in employee casualty rates — from 30.88 injuries per 1,000,000 man-hours in 1923 to 7.04 in 1934.

1934 accident experience in air transportation was somewhat worse than the previous year. Civil aviation fatalities numbered 363 and non-fatal injuries 523, in 1934, compared with totals of 338 and 521 in 1933. Forty-nine per cent of the fatalities and 40 per cent of the non-fatal injuries occurred in miscellaneous pleasure flying. There were only 38 deaths and 69 non-fatal injuries in scheduled air transport operations.

Scheduled flying continues to be very much safer than non-scheduled operations. In 1934 scheduled air transport the death rate was 0.8 per 1,000,000 plane miles, compared with a rate of 4.3 in non-scheduled flying. The comparison has grown steadily more favorable since 1929 when scheduled flying had a rate of 1.8 and non-scheduled 4.2.

Homes More Hazardous

The terrific toll of excessive heat in 1934 will accentuate the proportion of home accident fatalities among persons 65 years and over; it is in this group that most of the heat cases will be classified. Even in the ordinary year over 40 per cent of all home fatalities are of persons 65 and over, and this proportion may be as much as 50 per cent in 1934.

In the normal year falls are the predominate type of accident in this older age group, accounting for over three-fourths of all the deaths. In the age group from 15 to 64 years falls are also responsible for more than a third of the fatalities. Below age 15 burns are responsible for about a third of all home deaths and in the youngest group under 5 around 15 per cent of the fatalities are chargeable to asphyxiation and suffocation.

No room in the house is a safe place unless it is safely used, according to a recent detailed study by the Kansas Board of Health. A classification of fatal home falls in that state from 1931 to 1934 showed that 39 per cent occurred in the bedroom, 21 per cent in the living room, 16 per cent on stairs, 11 per cent in the kitchen, 6 per cent in the dining room, 4 per cent in the bathroom and

3 per cent elsewhere. Fatal burns were similarly classified, showing 57 per cent in the kitchen, 19 per cent in the living room, 12 per cent in the bedroom, 5 per cent in the bathroom, 4 per cent in the dining room, and 3 per cent elsewhere.

Property damage loss from fire declined slightly from 1933 to 1934 according to an estimate by the National Board of Fire Underwriters. The preliminary 1934 figure is set at \$262,848,122, compared with a final 1933 figure of \$271,453,189. These figures compare favorably with the 1928 total of \$464,607,000; also with 1923 when the loss was estimated at \$535,373,000.

This property loss occurred largely in what vital statisticians call conflagrations. Persons burned to death in conflagrations numbered 1,521 in 1933, and there were 5,820 deaths from burns occurring under circumstances where there was no appreciable damage to property, making a grand total of 7,341. Limited data indicated a probable slight increase in deaths from burns during 1934.

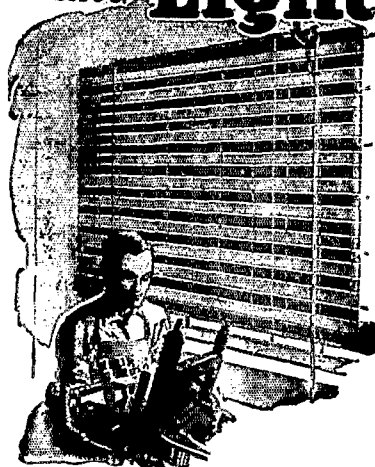
Summing up, the 1934 accident record was one of increases all along the line. Only one state out of the 48 had fewer accidental deaths in 1934 than in 1933; only 4 showed decreases in motor vehicle fatalities. Industrial concerns with long years of safety organization experienced increases in their employee accident rates. Every month of 1934 was worse than the corresponding month of the previous year.

Some of the groups which have been showing good safety trends for several years experienced set-backs in 1934. Pedestrian deaths increased sharply; commercial truck accident experience had a large increase over 1933; motor vehicle fatalities increased among school children, etc.

There were, it is true, a few bright spots. A new record was set in 1934 for man-hours worked by an industrial concern without a single disabling injury; a half dozen of the largest cities reduced 1934 motor vehicle deaths in spite of the national increase; steam railway fatalities declined again.

In all fairness, it should be noted that the unusual death toll from excessive heat last year was almost catastrophic in character and is not likely to be repeated again soon. Subtracting whatever share of the 1934 increase came from that cause, however, we still find a tremendous advance over 1933 — an advance which places accident prevention unquestionably in the front rank of social problems.

Cool Air and Light



Metal to Metal Installation

The enameled steel offset brackets supporting the Shades are fastened securely by a patented method, directly to the steel sash ribs in such a way as to resist the loosening effect of vibration and jar. No expensive boring or drilling of concrete is necessary.

An installation that is permanent . . . and a shade that, while excluding the glare and intense heat of the sun's rays, does let in light and air . . . from 30% to 40% more than any other type of shade.

You can open or shut your ventilator without interfering with the functions of the shade when using RA-TOX Shades.

Made from selected stained basswood strips, woven parallel with hard twist seine twine. RA-TOX Shades cost no more than ordinary shades. Send today specifications for price quotations and descriptive literature.

Now is the time to get the facts for scientific shading—when your attention is on it. Once decided, RA-TOX makes it unnecessary to think of it again for at least twenty years.

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SHADES for INDUSTRIAL
— SASH —

Our engineers are always glad to submit an estimate without any obligation to you. Send your specifications and we will return detailed information based on your requirements.

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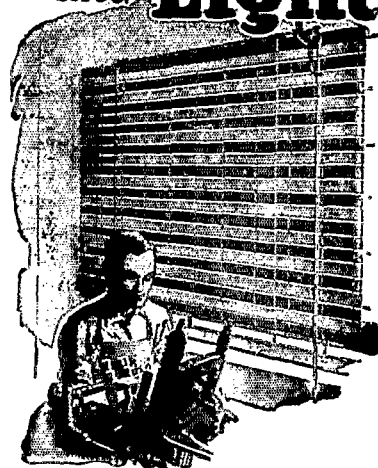
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An installation that is permanent . . . and a shade that, while excluding the glare and intense heat of the sun's rays, does let in light and air . . . from 30% to 40% more than any other type of shade.

You can open or shut your ventilator without interfering with the functions of the shade when using RA-TOX Shades.

Made from selected stained basswood strips, woven parallel with hard twist seine twine. RA-TOX Shades cost no more than ordinary shades. Send today specifications for price quotations and descriptive literature.

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Send the Coupon

Hough Shade Corporation

(Industrial Division)
1039 Jackson Street
Janesville, Wisconsin

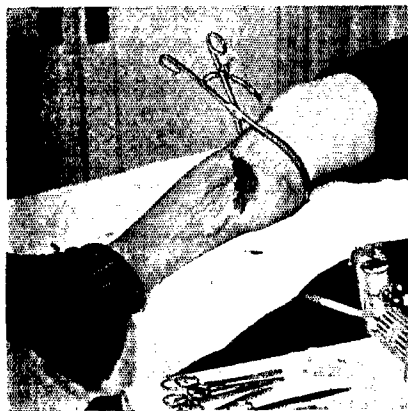
RA-TOX
OFFSET WOOD FABRIC
SHADES for INDUSTRIAL
— SASH —

Our engineers are always glad to submit an estimate without any obligation to you. Send your specifications and we will return detailed information based on your requirements.

HOUGH SHADE CORPORATION
1039 Jackson St., Janesville, Wis.
Send complete RA-TOX details at once.
Name _____
Address _____ City _____
State _____
☐ Steel Sash ☐ Wood Sash

Clamp Tourniquet

The Surty Manufacturing Company, 4139 W. Kinzie Street, Chicago, announce they have been appointed national distributors for this new clamp tourniquet. It works on the same principle as an artery clamp or sponge-forceps. The manufacturers claim it is positive in action, requires but a few seconds to apply



and can be released instantly. It is made of flexible, surgical steel, heavily plated with chromium. A button catch permits instantaneous release. A turn screw permits delicate adjustment of pressure and also allows release of pressure slowly or suddenly, as desired. Teeth on the ratchet are cut very deep to prevent slipping. The clamp is equipped with $\frac{1}{4}$ inch rubber tubing to pad the arms. The tubing is replaceable. The device is light in weight and can be carried in a first aid kit.

Processed Cover Glass

The Electro Cover Glass Company, 803 Westinghouse Building, Pittsburgh, Pa., announces a new processed cover glass for welding helmets. The glasses are cut to 2 x 3 $\frac{1}{2}$ inches to fit the standard welding helmet and are sufficiently heavy to withstand abuse. The glass is processed on one side only and the trade name is stamped on this side to show which side is to be exposed to the fusing particles.

The manufacturers state the glasses are guaranteed to withstand 200 hours of electric welding, be it carbon arc or straight electrode welding in the various positions. They also claim that the processed glass will not change from its original crystal clear condition due to the effects of ultra-violet and infra-red rays during its period of life.

[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.]

It happened recently when the instructor was showing some of the men the Prone Pressure Method of Resuscitation. A crowd of interested spectators had gathered around and the instructor was working on the "victim." A slightly intoxicated gentleman strolled up to the outer fringe of the crowd and inquired.

"Shay, whas going on here?"

"They're saving people" was the reply of one of the crowd.

"Fine," said the drunk. "Tell 'em to save me the big blonde over there by the door."

JUNE, 1935

Trade Publications

for your

SAFETY EQUIPMENT LIBRARY

Information You Should Have

All of these booklets contain many valuable facts on controlling accidents and promoting efficiency. Industrial executives should avail themselves of this fund of information—because along with "safe operation" goes its close friend "profitable operation." Check those you would like and mail the coupon right now!

- 1. Federal Signakall.** Circular illustrates and describes this call system designed to operate horns, sirens or other signaling equipment from a central point. Used for paging and signaling school periods, factory operations, power house signaling, drills, fire alarms, etc. One unit supplies 30 signal combinations. Federal Electric Company.
- 2. The Kirk Interlock System.** Bulletin No. 1349. This interesting 22-page bulletin covers the fundamentals of this system and show how it is applicable to simple or complex interlocking problem. Well illustrated with pictures and diagrams. Railway and Industrial Engineering Company.
- 3. McDonald Safety Hat.** This interesting folder deals with a safety hat designed for industrial and mining operations. The safety cradle is firmly attached to molded lugs and has an adjustment for maximum safety. Furnished in various sizes and models. B. F. McDonald Company.
- 4. M.S.A. Safety Signs.** Bulletin CD-1 a 4-page folder illustrating a number of accident prevention signs for many industrial uses where hazards exist. These signs are made of porcelain enamel fused to steel under high temperature. Mine Safety Appliances Company.
- 5. Safety Electric Mine Car Trip Lamp.** Circular describing this lamp tells how it is operated with two standard flashlight cells, giving a powerful light for a 35 or 40-hour week. It is approved by the United States Bureau of Mines. Justrite Manufacturing Company.
- 6. Sly Masterblast Mill.** Bulletin S-77 illustrates and describes this mill that represents a new principle of blast cleaning by the use of low pressure air. It is compact and of simple design. The W. W. Sly Manufacturing Company.
- 7. Ruin or Protection.** An interesting little folder illustrating and describing several models of carbon dioxide fire extinguishers that are approved by the Underwriters' Laboratories. Sizes range from 7 $\frac{1}{2}$ pound carbon dioxide gas capacity to 100 pound. American-LaFrance and Foamite Industries, Inc.
- 8. Interlocking Linemen's Protectors and Hose.** Bulletin No. 1059. This equipment is designed to prevent the film of water on outside of the hose or shield from contacting the wire and becoming a conductor for current from the wire to the body of the linemen. E. D. Bullard Company.
- 9. Protectoseal Products.** This folder illustrates several units designed for improved handling and storing of hazardous liquids. Includes a line of safety cans inspected and labeled by Underwriters' Laboratories and approved by Factory Mutuals. Protectoseal Company.
- 10. Swaco Safety Car Mover.** This circular illustrates and describes this new tool designed to safely move railroad cars. The mover is easy to use and is of sturdy construction. It is designed so as to prevent slipping from rails. Safety Wrench and Appliance Company.
- 11. Multi-Bag Filter for Dust Control.** Bulletin No. 301. This 4-page bulletin illustrates and describes a new multi-bag filter for dust control. It is designed to meet the requirements of where dust collectors should be installed. Dracco Corporation.
- 12. Locomotive Safety Belt and Sling.** 4-page folder illustrates how this new development in safety belts is used to advantage to protect workmen on any operation above the running board of a locomotive where any stress is required on wrenches, bars or other equipment. R. H. Buhrke Company.

NATIONAL SAFETY NEWS

20 North Wacker Drive
Chicago, Ill.

Please have sent to me the publications I have checked:

Name
Title
Company
Address

June, 1935

DEPENDABLE LEG PROTECTION



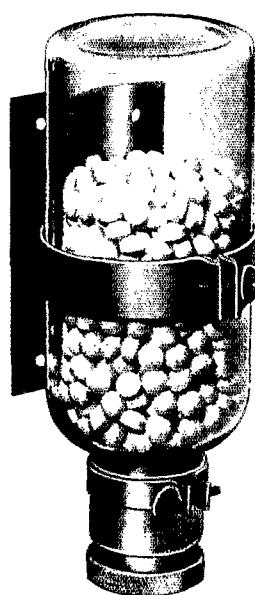
"FRANK" Knee Leggings Hip Leggings Spat

Reduce accidents and cut compensation costs with these quality protective leggings, in steel plants, foundries, welding plants, etc.

Write for complete new folder.

THE
SAFETY CLOTHING
COMPANY

Manufacturers
3804 Payne Ave. Cleveland, Ohio
"Everything from a finger cot
to an asbestos suit."



HEAT CRAMPS

We are able to give you complete information on the effective treatment and prevention of Heat Cramps, through the use of C.P. Sodium Chloride.

The expense is small and results are convincingly satisfactory.

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Division McKesson & Robbins, Incorporated
1382 West 9th Street
Cleveland, Ohio

Please send additional information on prevention of Heat Cramps.

Name _____
Street _____
City _____
State _____

NSC Directors Nominated for 1935-38

To the Members of the
National Safety Council:

As provided by the By-laws of the National Safety Council I transmit to you herewith the report of the Nominating Committee composed of Messrs. John S. Shaw, chairman, Walter S. Paine, Vern D. Sutton, G. A. Davis and C. E. Wormuth.

This committee has unanimously nominated the following for election as directors of the National Safety Council at the Annual Meeting in Louisville, Ky., October 14, 1935, and to serve until 1938:

A. L. Armstrong, safety director, Eastman Kodak Co., Rochester, N. Y.

J. I. Banash, consulting engineer, Chicago.

J. E. Culliney, Bethlehem Steel Company, Bethlehem, Pa.

Lewis A. DeBlois, consulting engineer, New York City.

Daniel Harrington, chief, Health and Safety Branch, U. S. Bureau of Mines, Washington, D. C.

G. T. Hellmuth, claims attorney, Chicago North Shore & Milwaukee Railroad, Chicago.

Thomas P. Kearns, superintendent, Division of Safety and Hygiene, Industrial Commission of Ohio, Columbus.

Frank J. Lanahan, president, Fort Pitt Malleable Iron Company, Pittsburgh, Pa.

John E. Long, superintendent of safety, The Delaware & Hudson Railroad Corp., Albany, N. Y.

Miller McClintock, director, Bureau of Street Traffic Research, Harvard University, Cambridge, Mass.

Harold L. Miner, manager, Safety & Fire Prevention Division, E. I. du Pont de Nemours & Co., Wilmington, Del.

John A. Oartel, chief of safety bureau, Carnegie Steel Company, Pittsburgh.

C. E. Pettibone, vice-president and manager, Engineering Department, American Mutual Liability Insurance Company, Boston.

General George B. Pillsbury, assistant chief of engineers, United States Engineer Office, War Department, Washington, D. C.

Lieut. - Colonel Henry A. Reninger, Lehigh Portland Cement Company, Allentown, Pa.

R. T. Solensten, vice-president, Elliott Service Company, New York City.

Dr. C. H. Watson, medical director, American Telephone & Telegraph Company, New York City.

Harry M. Webber, superintendent, Department of Claims, Illinois Bell Telephone Company, Chicago.

Albert W. Whitney, National Bureau of Casualty and Surety Underwriters, New York City.

W. H. Winans, manager, Industrial Relations Department, Union Carbide and Carbon Corp., New York City.

W. H. CAMERON,
Managing Director.

Tannic Acid for Burns

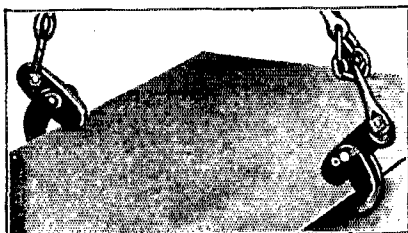
(Continued from page 36)

There is one important contingency that needs to be mentioned. What if such a burn occurs far from a drug store? Fortunately most homes have on hand a supply of tea. All the tannic acid needed for first aid can be made out of strong tea. Pour a cupful of boiling water over four teaspoonsful of tea leaves. Let this stand for fifteen minutes and it is ready to use instead of the tannic acid solution.

In treating face burns tannic acid in jelly form is preferred. It takes the druggist only a few moments to make up a batch of five per cent tannic acid jelly. In an emergency plain vaseline (not carbolated), or olive oil, or lard, or even wet baking soda will do. When an eye is burned, two drops of castor oil will ease the pain and help to prevent searing.

The important things to remember when confronted with the emergency of a serious burn are: Be calm and gentle. Decide what to do and do it quickly. Remember that the patient not only is in pain, but is also suffering from shock. Get expert medical assistance as soon as possible.





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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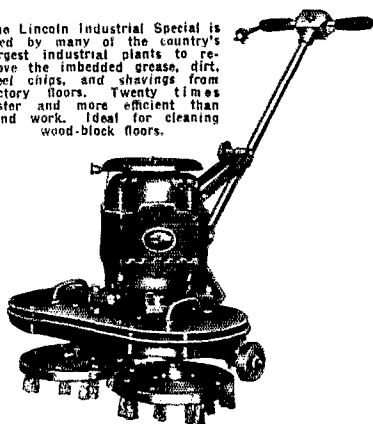
Never Slip Safety Clamp Co.

P. O. Box 448

Grand Central Annex, New York City

Lincoln Twin Disc Floor Machines

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



EFFICIENCY in plant floor cleaning produces a savings in cleaning time, a savings in cleaning materials; also, the plant superintendent and safety engineer are assured of clean, sanitary and safe floors. Many models to choose from. We can arrange for a trial on your own floors, under your own supervision, without any obligation.

Write for Complete Details

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FLOOR-MACHINERY CO., INC.**
237 W. Grand Ave. Chicago, Ill.

JUNE, 1935

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*Rx for slippery
floors*

● Efficient . . . eco-
nomical . . . easy
to apply to sur-
faces old or new.

PLASTIC FUT-SURE ends slip-hazards once and for all. Moreover it is oil and grease proof, heat and cold resisting, easily kept clean. The resiliency of **PLASTIC FUT-SURE** reduces foot fatigue, increases production output. Its slip-proof quality has definitely reduced accidents wherever used. Write for prices and particulars on this permanently safe covering for all walking surfaces.

GENERAL ABRASIVE CO., INC.

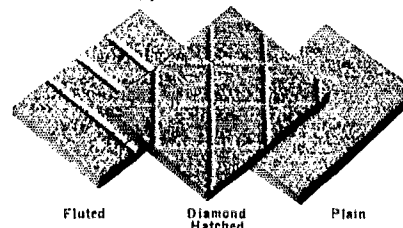
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FOR SAFER WALKING SURFACES

Mason Abrasive Iron, Bronze, Aluminum and Nickel Safety Treads

Formerly known as "Carbo-Cast"



A CAST safety stair tread in which a carborundum or aluminous abrasive is imbedded in the wearing surface effectively preventing slipping whether wet or dry. Treads are easily and quickly installed on new or old work. For use with concrete, wood, marble, slate and other types of stairs. Furnished in three surfaces, Fluted, Diamond Hatched and Plain.

Effective and Economical

Write today for details.

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Lowell, Massachusetts

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Safety First Supply Co.
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Arrestors, Dust
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Surtz Mfg. Co., The

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B

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Surtz Mfg. Co., The
U. S. Hoffman Machinery Corp.

Cans, Waste
Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Industrial Products Co.
Justite Mfg. Co.
Mine Safety Appliances Co.
Protectoseal Company
Pulmonan Safety Equipment Corp.
Safety Equipment Service Co., The
Standard Safety Equipment Co.

Clothing, Fireproof
Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Industrial Products Co.
Mine Safety Appliances Co.
Safety Clothing Co., The
Safety Equipment Service Co., The
Safety First Supply Co.
Standard Safety Equipment Co.
Strauss Company, The

Clothing, Weatherproof
Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Industrial Products Co.
Mine Safety Appliances Co.
Safety Clothing Co., The
Safety Equipment Service Co., The
Safety First Supply Co.
Standard Safety Equipment Co.

Cloths, Wiping
Sanitary Institute of America

Collectors, Dust
Drace Corporation
Surtz Mfg. Co., The
U. S. Hoffman Machinery Corp.

Compounds, Cleaning
Safety Clothing Co., The

Containers, Explosive Liquid
Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Industrial Products Co.
Justite Mfg. Co.
Mine Safety Appliances Co.
Portable Lamp & Equipment Co.
Protectoseal Company
Safety Equipment Service Co., The
Strauss Company, The

D

Detectors, Gas
Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Mine Safety Appliances Co.
Portable Lamp & Equipment Co.

Detectors, Indicators, Recorders, Carbon Monoxide
Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Mine Safety Appliances Co.

Detectors, Pyrotannic
Mine Safety Appliances Co.

Disinfectants and Deodorants

Dusters, Rock
Mine Safety Appliances Co.
Portable Lamp & Equipment Co.

Emblems, Safety
Mine Safety Appliances Co.

Exhausts, Grinding Wheel
Surtz Mfg. Co., The

Have You Included Safety Equipment In Your Modernization Plans?

American Industry today is facing the necessity of meeting many difficult problems which confront it with the coming of the new production era. This is an era characterized by a highly intensified demand for improved quality, greater productivity, and the elimination of every possible item of waste, so as to insure production at low cost.

Forward looking industrial executives are finding the answer to these problems in complete MODERNIZATION. They are proceeding to rehabilitate their plants, install modern equipment, improve operating methods and processes, and revise policies and practices relating to personnel. Thus they are laying deeper, broader foundations for future profits and rising standards of living.

(Continued on following page)

The Accident Prevention
Equipment Manufacturers' Section
National Safety Council

Belts, Window Cleaning
Buhke Company, R. H.
Bullard Company, E. D.
Industrial Products Co.
Mine Safety Appliances Co.
Portable Lamp & Equipment Co.
Safety Clothing Co., The
Strauss Company, The

Blankets, Fireproof
Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Industrial Products Co.
Mine Safety Appliances Co.
Pulmonan Safety Equipment Corp.
Safety Clothing Co., The
Safety Equipment Service Co., The
Safety First Supply Co.
Standard Safety Equipment Co.

Blockers, Mine Car
Industrial Products Co.
Mine Safety Appliances Co.

Blockers, Railroad Car
Bullard Company, E. D.
Industrial Products Co.
Safety Equipment Service Co., The
Safety First Supply Co.
Standard Safety Equipment Co.

Buckets, Hoisting
Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Industrial Products Co.

Bulletin Boards
Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Elliot Service Co.
Mine Safety Appliances Co.
Pulmonan Safety Equipment Corp.
Safety Equipment Service Co., The
Safety First Supply Co.
Standard Safety Equipment Co.

Cans, Oil
Bullard Company, E. D.
Industrial Products Co.
Mine Safety Appliances Co.
Protectoseal Company
Safety Equipment Service Co., The

Chain, Factory
McKay Company

Chairs, Safety, Bontswain
Bullard Company, E. D.
Mine Safety Appliances Co.
Strauss Company, The

Clamps, Rail
Industrial Products Co.
Safety First Supply Co.

Clamps and Sockets
Nerer Slop Safety Clamp Co.

Cleaners, Vacuum
Spencer Turbine Co.
Surtz Mfg. Co., The
U. S. Hoffman Machinery Corp.

Clothing for Industrial Workers—See Aprons, Gloves, Hand Leathers, Leggings, Shoes

NATIONAL SAFETY NEWS

THE BUYERS' SERVICE

See Advertisers' Index, Page 75—When writing, please mention National Safety News

Extinguishers, Fire

Bullard Company, E. D.
Kiddie & Co., Inc., Walter
Mine Safety Appliances Co.
Portable Lamp & Equipment
Co.
Pulmosan Safety Equipment
Corp.
Pyrene Mfg. Company

F

Fans, Exhaust

Dracco Corporation
Surtly Mfg. Co., The

Fasteners or Lacers, Belt

Clipper Belt Lacer Co.

Films or Slides, Safety, for Rent and Sale

National Safety Council, Inc.

First Aid Equipment

Bauer & Black
Bernhard, Robert A.
Bishinger-Koehler Mfg. Co.,
Inc.
Bullard Company, E. D.
Burroughs-Wellcome Co.,
(U.S.A.) Inc.
Davis Emergency Equipment
Co., Inc.
Hynson, Westcott & Dunning,
Inc.
Industrial Products Co.
Johnson & Johnson
Merek & Company
Mine Safety Appliances Co.
Pulmosan Safety Equipment
Corp.
Safety Equipment Service
Co., The
Safety First Supply Co.
Standard Safety Equipment Co.

Flags, Danger

Bullard Company, E. D.
Industrial Products Co.
Safety Equipment Service
Co., The
Stonehouse Signs, Inc.

Flashlights, Permissible

Bullard Company, E. D.
Portable Lamp & Equipment
Co.

Flooring Material, Safety

American Mason Safety Tread
Co.
Carnegie Steel Co.
General Abrasive Co.
Illinois Steel Company
Industrial Products Co.
Inland Steel Co.
Safety First Supply Co.
Surtly Mfg. Co., The

Footwear, Rubber

Bullard Co., E. D.
Industrial Products Co.
Lehigh Safety Shoe Co.
Mine Safety Appliances Co.
Portable Lamp & Equipment
Co.

Fountains, Drinking, Factory

Bradley Washfountain Co.

Fumigants

Bauer & Black

G

Germicides

Germicides, Cutting Oil

Glass, Safety

American Optical Company
Bullard Company, E. D.
Chicago Eye Shield Co.
Industrial Products Co.
Libbey-Owens-Ford Glass Co.
Mine Safety Appliances Co.
Pittsburgh Plate Glass Co.
Safety Clothing Co., The
Safety Equipment Service
Co., The
Standard Safety Equipment Co.
Surtly Mfg. Co., The
Willson Products, Inc.

Gloves and Mittens

Bullard Company, E. D.

Gongs, Sirens, Horns and other Signaling Devices

Bullard Company, E. D.
Industrial Products Co.
Mine Safety Appliances Co.

Gratings, Safety

Guards, Chip and Spark

Bullard Company, E. D.
Chicago Eye Shield Co.
Industrial Products Co.
Safety Clothing Co., The

Guards, Jointer

Industrial Products Co.
Safety Equipment Service
Co., The
Standard Safety Equipment Co.
Surtly Mfg. Co., The

Guards, Kick Press

Surtly Mfg. Co., The

Guards, Power Press

Chicago Eye Shield Co.
Industrial Products Co.
Standard Safety Equipment Co.

Guards, Treadle

Surtly Mfg. Co., The

H

Hand Cream

Bullard Company, E. D.
Davis Emergency Equipment
Co., Inc.
Industrial Products Co.
Mine Safety Appliances Co.

Hats, Safety

Bullard Company, E. D.
Industrial Products Co.
Mine Safety Appliances Co.
Portable Lamp & Equipment
Co.
Safety Clothing Co., The
Safety First Supply Co.
Strauss Company, The

Hent Cramp Preventives

Fairway Laboratories, Inc.
McKesson-Hall-Van Gorder

Helmets, Safety

American Optical Company
Bishinger-Koehler Mfg. Co.,
Inc.
Bullard Company, E. D.
Chicago Eye Shield Co.
Davis Emergency Equipment
Co., Inc.
Industrial Products Co.
Mine Safety Appliances Co.
Portable Lamp & Equipment
Co.
Pulmosan Safety Equipment
Corp.
Safety Clothing Co., The
Safety Equipment Service
Co., The
Safety First Supply Co.
Standard Safety Equipment Co.
Willson Products, Inc.

Hoists, Electric

Hooks, Safety Belt

Bullard Company, E. D.
Davis Emergency Equipment
Co., Inc.
Industrial Products Co.
Mine Safety Appliances Co.
Portable Lamp & Equipment
Co.
Safety Equipment Service
Co., The
Strauss Company, The

Hooks, Safety, Hoisting

Industrial Products Co.

Hospital Equipment

Bullard Company, E. D.
Burroughs-Wellcome Co.,
(U.S.A.) Inc.
Davis Emergency Equipment
Co., Inc.
Industrial Products Co.
Mine Safety Appliances Co.
Safety Equipment Service
Co., The
Safety First Supply Co.

I

Inclinators, Carboy

Bullard Company, E. D.
Industrial Products Co.
Safety Equipment Service
Co., The

Indicators, Flammable Vapor

Bullard Company, E. D.
Davis Emergency Equipment
Co., Inc.
Mine Safety Appliances Co.

Have You Included Safety Equipment In Your Modernization Plans?

(Continued from preceding page)

Because industrial accidents, besides causing needless destruction of men, are a preventable waste of money and an unnecessarily high factor in costs, plans for more effective prevention of accidents become an important part of every plant modernization program. It is now recognized that there can be no high degree of efficiency in plant operation without a correspondingly high degree of freedom from accidents. The reduction of accidents to the "irreducible minimum" is, therefore, the present aim and purpose of every progressive industrialist.

In this modernization effort with its necessary emphasis on preventing the waste of accidents, the first essential is to provide a SAFE plant, SAFE machinery, and MODERN SAFETY EQUIPMENT that will give workers full protection against whatever hazards may exist. Only then can the major accidents in industry be prevented, and only then can safety education be made really effective. (Continued on following page)

The Accident Prevention
Equipment Manufacturers' Section
National Safety Council

Chicago Eye Shield Co.
Davis Emergency Equipment
Co., Inc.
Industrial Gloves, Corp.
Industrial Products Co.
Mine Safety Appliances Co.
Pulmosan Safety Equipment
Corp.
Safety Clothing Co., The
Safety Equipment Service
Co., The
Safety First Supply Co.
Salsbury & Co., W. H.
Standard Safety Equipment Co.

Goggles

American Optical Company
Bullard Company, E. D.
Chicago Eye Shield Co.
Cover, H. S.
Davis Emergency Equipment
Co., Inc.
Industrial Products Co.
Mine Safety Appliances Co.
Portable Lamp & Equipment
Co.
Pulmosan Safety Equipment
Corp.
Safety Clothing Co., The
Safety Equipment Service
Co., The
Safety First Supply Co.
Standard Safety Equipment Co.
Willson Products, Inc.

Safety Equipment Service
Co., The
Standard Safety Equipment Co.

Guards, Flywheel

Harrington & King Perforat-
ing Co.
Industrial Products Co.
Surtly Mfg. Co., The

Guards, Foot and Toe

Bullard Company, E. D.
Ellwood Safety Appliance Co.
Industrial Products Co.
Mine Safety Appliances Co.
Portable Lamp & Equipment
Co.

Safety Clothing Co., The
Safety Equipment Service
Co., The
Safety First Supply Co.
Standard Safety Equipment Co.
Strauss Company, The

Guards, Gear

Surtly Mfg. Co., The

Guards, Grinding Wheel

Surtly Mfg. Co., The

Surtly Mfg. Co., The
Wiesman Mfg. Co., The

Guards, Safety

Bullard Company, E. D.
Davis Emergency Equipment
Co., Inc.
Harrington & King Perforat-
ing Co.
Industrial Products Co.
Safety Clothing Co., The
Safety Equipment Service
Co., The
Surtly Mfg. Co., The
Wiesman Mfg. Co., The

Guards, Saw

Bullard Company, E. D.
Industrial Products Co.
Safety Equipment Service
Co., The
Standard Safety Equipment Co.
Surtly Mfg. Co., The

Guards, Shaper

Industrial Products Co.
Standard Safety Equipment Co.
Surtly Mfg. Co., The

THE BUYERS' SERVICE

See Advertisers' Index, Page 75—When writing, please mention National Safety News

Inhalators

Bishinger-Koehler Mfg. Co., Inc.
Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Mine Safety Appliances Co.

Insurance

Metropolitan Life Insurance Co.

J

Jackets or Vests, Workmen, Life Saver

American Pad & Textile Co.

L

Ladder Shoes or Feet

American Mason Safety Tread Co.
Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Dayton Safety Ladder Co.
Industrial Products Co.
Johnson Ladder Shoe Co.
Mine Safety Appliances Co.
Patent Scaffolding Co., The
Safety Clothing Co., The
Safety First Supply Co.
Surtz Mfg. Co., The

Ladders, Safety

Bullard Company, E. D.
Dayton Safety Ladder Co.
Mine Safety Appliances Co.
Patent Scaffolding Co., The
Safety First Supply Co.

Lamps, Safety

Benjamin Electric Mfg. Co.
Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Mine Safety Appliances Co.
Portable Lamp & Equipment Co.

Lanterns, Carbide

Bullard Company, E. D.

Lanterns, Electric

Bullard Company, E. D.
Industrial Products Co.
Fustite Mfg. Co.
Mine Safety Appliances Co.
Portable Lamp & Equipment Co.

Leathers, Hand

Bullard Company, E. D.
Industrial Products Co.
Pulmonan Safety Equipment Corp.
Safety Clothing Co., The
Safety Equipment Service Co., The
Safety First Supply Co.
Standard Safety Equipment Co.
Strauss Company, The

Leggings

Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Industrial Gloves Corp.
Industrial Products Co.
Mine Safety Appliances Co.
Pulmonan Safety Equipment Corp.
Safety Clothing Co., The
Safety Equipment Service Co., The
Safety First Supply Co.
Standard Safety Equipment Co.
Strauss Company, The

Lighting Equipment, Industrial

Benjamin Electric Mfg. Co.
Westinghouse Electric & Mfg. Co.

Lockers and Hangers for Clothing

Industrial Products Co.

Locks, Lamp

Industrial Products Co.
Mine Safety Appliances Co.

Safety Equipment Service Co., The

Locks, Locker and Padlocks, Keyless

Dudley Lock Corp.

Lubrication

Pyroll Company

M

Machines, Floor Cleaning, Electric

Lincoln-Schluter Floor Machinery Co., Inc.

Industrial Products Co.
Safety First Supply Co.

Metal, Expanded

Surtz Mfg. Co., The

Metal, Perforated

Harrington & King Perforating Co.
Industrial Products Co.

Movers, Railway Car

Bullard Company, E. D.
Industrial Products Co.
Safety Equipment Service Co., The
Standard Safety Equipment Co.

Protectors, Arm

Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Industrial Gloves Corp.
Industrial Products Co.
Mine Safety Appliances Co.
Pulmonan Safety Equipment Corp.
Safety Clothing Co., The
Safety Equipment Service Co., The
Safety First Supply Co.
Standard Safety Equipment Co.
Strauss Company, The

Protectors, Finger

Bauer & Black

R

Respirators

American Optical Company
Bishinger-Koehler Mfg. Co., Inc.
Bullard Company, E. D.
Chicago Eye Shield Co.
Cover, H. S.
Davis Emergency Equipment Co., Inc.
Industrial Products Co.
Mine Safety Appliances Co.
Portable Lamp & Equipment Co.
Pulmonan Safety Equipment Corp.
Safety Clothing Co., The
Safety Equipment Service Co., The
Safety First Supply Co.
Standard Safety Equipment Co.
Willson Products, Inc.

Resuscitation Equipment

Bishinger-Koehler Mfg. Co., Inc.
Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Mine Safety Appliances Co.

Rope, Wire

S

Scaffolding, Safety

Patent Scaffolding Co., The

Screw Drivers, Non-skid

Surtz Mfg. Co., The

Shades, Eye, Non-breakable

Bullard Company, E. D.
Chicago Eye Shield Co.
Davis Emergency Equipment Co., Inc.
Industrial Products Co.
Mine Safety Appliances Co.
Safety Equipment Service Co., The

Shades, Window, Industrial

Hough Shade Corp.

Shoes, Safety, Factory and Foundry

Brown Shoe Company
Bullard Company, E. D.
Industrial Products Co.
Leitch Safety Shoe Co.
Mine Safety Appliances Co.
Portable Lamp & Equipment Co.
Safety Equipment Service Co., The
Safety First Supply Co.
Standard Safety Equipment Co.
International Shoe Co.
Safety First Shoe Co.

Shoes, Wooden Sole

Industrial Products Co.
Reece Wooden Sole Shoe Co., Inc.
Safety Clothing Co., The

Signs, Accident Prevention

Bullard Company, E. D.
Industrial Products Co.
Mine Safety Appliances Co.
Portable Lamp & Equipment Co.
Safety Clothing Co., The
Safety Equipment Service Co., The
Safety First Supply Co.
Standard Safety Equipment Co.
Stonehouse Signs, Inc.

Sirens and Signals

Bullard Company, E. D.
Industrial Products Co.

Slings, Safety, Wire Rope

Soap

Procter & Gamble Co.

Soles, Shoe, Non-slip

Lima Cord Sole & Heel Co.

Sterilizing Equipment

Straps, Safety

Muhrke Company, E. H.
Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Industrial Products Co.
Klein & Sons, Mathias

Have You Included Safety Equipment In Your Modernization Plans?

(Continued from preceding page)

The members of the Accident Prevention Equipment Manufacturers' Section of the National Safety Council have kept pace with industrial progress. Through continuous research and experimentation they are constantly improving their products and developing new devices to aid industry in its fight against occupational injuries and diseases. The organizations listed on these pages solicit an opportunity to acquaint you with the safety equipment which they have prepared to meet the problems of modernization and accident prevention that now confront you. They will welcome your inquiry, and will gladly offer constructive suggestions based on many years of experience in their respective lines of manufacture.

THE ACCIDENT PREVENTION EQUIPMENT MANUFACTURERS' SECTION NATIONAL SAFETY COUNCIL

Machines, Vending, Sanitary Napkin

Markers, Traffic

Safety Equipment Service Co., The

Masks

American Optical Company
Bishinger-Koehler Mfg. Co., Inc.
Bullard Company, E. D.
Chicago Eye Shield Co.
Davis Emergency Equipment Co., Inc.
Industrial Products Co.
Mine Safety Appliances Co.
Pulmonan Safety Equipment Corp.
Safety Clothing Co., The
Safety Equipment Service Co., The
Safety First Supply Co.
Standard Safety Equipment Co.
Wilson Products, Inc.

Mats, Standing, Safety

Bullard Company, E. D.
Buxbaum Company
Davis Emergency Equipment Co., Inc.

O

Oxygen Breathing Apparatus

Bishinger-Koehler Mfg. Co., Inc.
Davis Emergency Equipment Co., Inc.
Mine Safety Appliances Co.

P

Pads, Miners'

Leitch Safety Shoe Co.
Portable Lamp & Equipment Co.

Pads, Knee

Bullard Company, E. D.
Industrial Products Co.
Mine Safety Appliances Co.
Portable Lamp & Equipment Co.
Safety Equipment Service Co., The
Safety First Supply Co.

Poster Service

Elliott Service Co.
National Safety Council, Inc.

Bullard Company, E. D.
Chicago Eye Shield Co.
Davis Emergency Equipment Co., Inc.
Industrial Products Co.
Mine Safety Appliances Co.
Safety Clothing Co., The
Safety Equipment Service Co., The

Protectors for Linemen

Bullard Company, E. D.
Davis Emergency Equipment Co., Inc.
Industrial Products Co.
Mine Safety Appliances Co.
Pulmonan Safety Equipment Corp.
Safety Equipment Service Co., The
Safety First Supply Co.
Salthouse & Co., W. H.
Standard Safety Equipment Co.

Pullers, Fuse

Bullard Company, E. D.
Industrial Products Co.
Mine Safety Appliances Co.
Safety Equipment Service Co., The

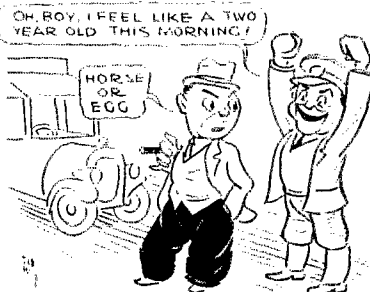
Pumps, Oxygen

Bishinger-Koehler Mfg. Co., Inc.
Mine Safety Appliances Co.

National Safety Council Monthly Cut Service

Electrotypes (mounted on wood) of any of the illustrations below are available in exactly the size shown. These cuts will help to put "punch" and "variety" into your house organ, plant safety messages, inter-department forms, etc. Order any selection you desire by the number shown under each illustration. Price to members \$2.00 each.

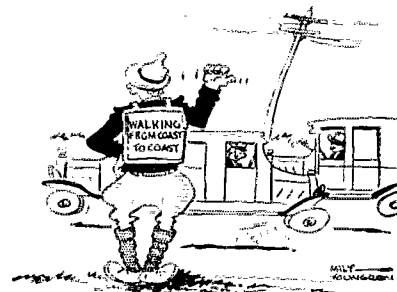
NATIONAL SAFETY COUNCIL, INC.
20 N. Wacker Drive
CHICAGO



B55



B56



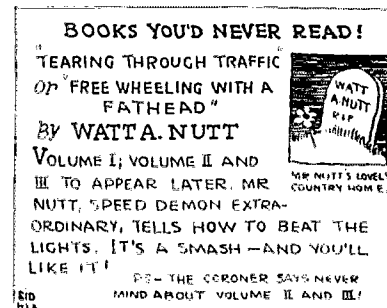
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B58



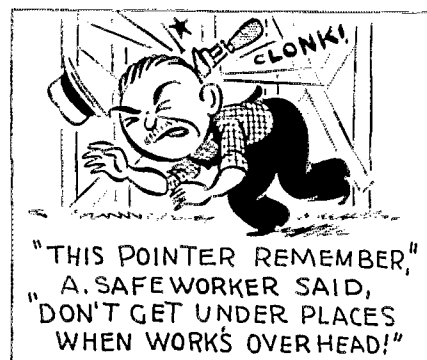
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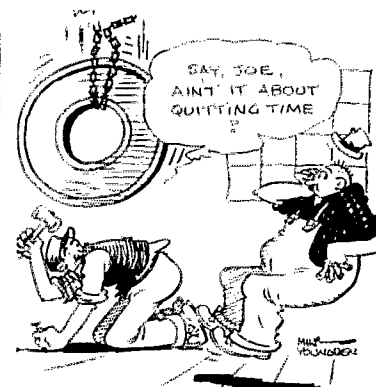
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B6:



B62



863

It has EVERYTHING!

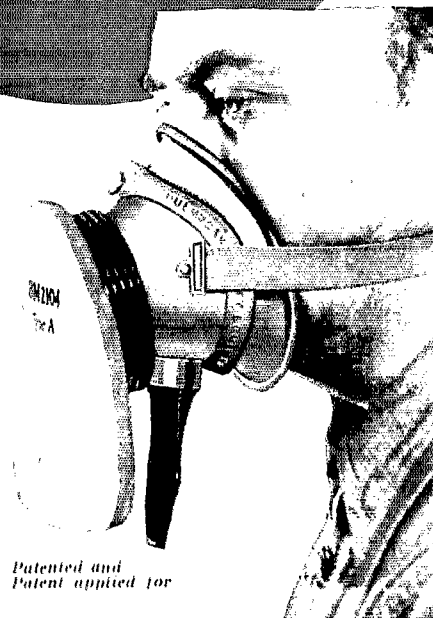
**COMFORT
HIGH SAFETY
EASY BREATHING
LONG SERVICE
PERFECT FIT
ECONOMY**

**PULMOSAN
M-15
DUST RESPIRATOR**

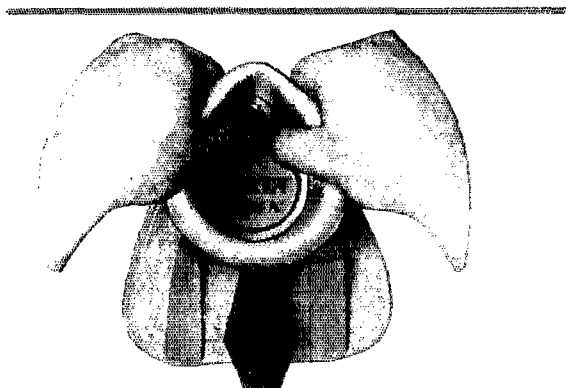
including **APPROVAL**
of U.S. Bureau of Mines!

In designing the M-15 Dust Respirator, nothing was overlooked. First, it was made **SAFE** . . . to provide reliable protection. Then came extreme comfort and easy breathing . . . so men would wear it. Then economical production . . . to keep the cost of safety within bounds.

AND FINALLY, the M-15 Dust Respirator was tested and approved by the U. S. Bureau of Mines . . . for employers' protection!



*Patented and
Patent applied for*



FITS ANY TYPE FACE, by simply bending the All-aluminum body inward or outward. Gives individual fit and holds shape. Patented face cushion fits comfortably.

Give your men M-15 Dust Respirators for dependable protection against Type A dusts, which are quartz, cement, limestone, asbestos, gypsum, coal, iron ores, coke, wood, cellulose, flour and aluminum.

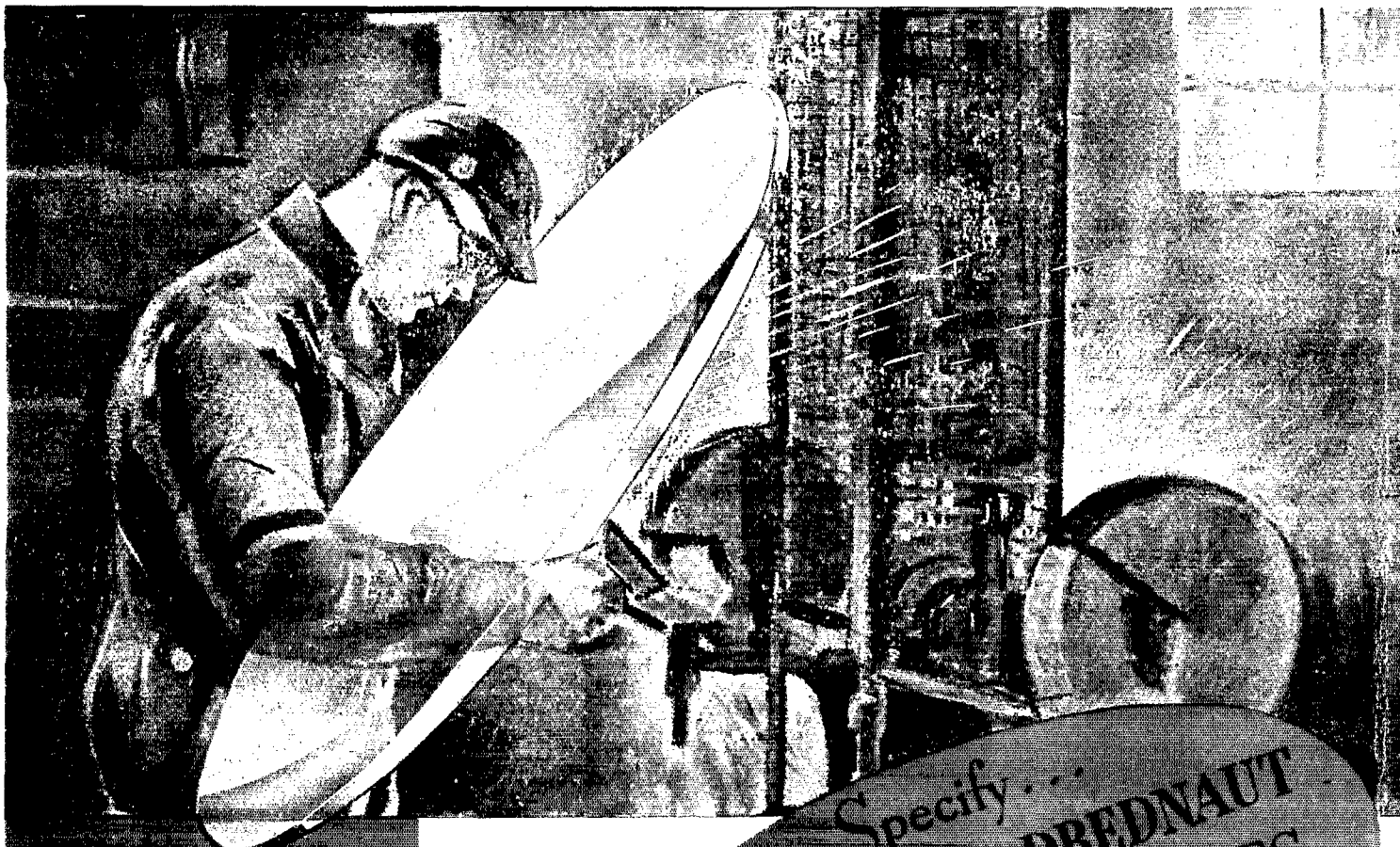
Remember—you cannot buy more efficient protection than the M-15 respirator *at any price!* Order several M-15 respirators for trial among your workers. Let them judge. Write for literature and prices . . . **TODAY!**

PULMOSAN SAFETY EQUIPMENT CORP.

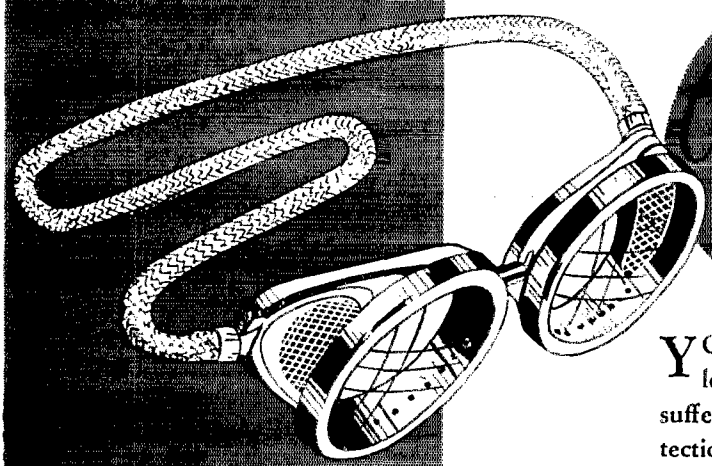
Member: Industrial Equipment Manufacturers Ass'n.

176 Johnson St. Brooklyn, N. Y.

Michigan Distr.: **THE BOYER-CAMPBELL CO.**, Detroit
Lake Superior Distr.: **W. P. & R. S. MARS**, Duluth, Minn.



Specify...
Curved SUPER-DREDNAUT
 TORIC-FORM LENSES
for Added STRENGTH

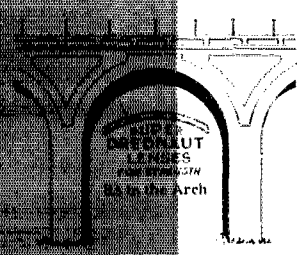


YOUR men's eyes are worth a lot to you—especially if they suffer injury. The very best protection on the market calls for your thorough investigation regardless of price. When that protection is to be had—in *Super-Drednaut Toric-Form Lenses*—at literally a few cents' premium, anything else is simply not deserving of consideration.

Being curved, Super-Drednaut Toric-Form Lenses are far stronger than ordinary flat lenses. They offer much greater resistance to blows and external pressure. The contour deflects emery, steel chips and other dangerous

flying particles. Even should breakage result from a terrific impact, the curvature would tend to prevent the glass from being driven into the eyes.

Super-Drednaut Toric-Form Lenses are made of the finest optical glass. They are ground and polished with extreme care to eliminate surfaces and distortion, and are specially annealed. A growing demand and recent manufacturing improvements now make this added protection available to you at a very slight differential. *Order a pair of Super-Drednaut Goggles and see for yourself.*



THE SAFETY EQUIPMENT SERVICE COMPANY

Boyd W. Nutt, President

1728 St. Clair Avenue, Cleveland, Ohio