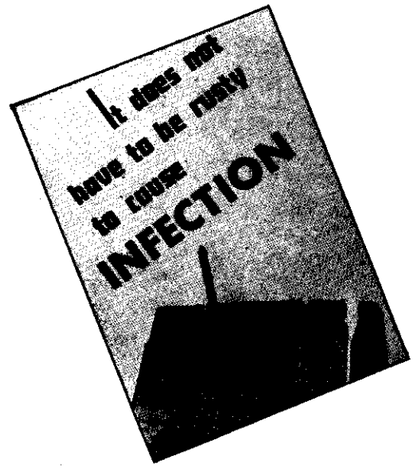
keeping it there. I'll place a bet that if you are particular about keeping everything in its place for 10 days, you'll find your work a heck of a lot easier and convenient. It will be safer too.

This talk prepared by the staff of the Industrial Department of the National Safety Council

NAILS--PULL OUT, BEND DOWN, PICK UP

The old gag about a school kid putting a thumbtack or nail on the seat of a classmate or teacher isn't funny. There have actually been cases where this has resulted in death from blood-poisoning. The reason I'm telling you this is that I want to point out that nails are really dangerous weapons. I know none of you fellows would pull a crazy stunt like intentionally jabbing someone with a nail, but sometimes you may be a little thoughtless about keeping the shop clear of nails or about getting nail wounds treated. So, I want to talk to you about the importance of preventing and caring for nail wounds.



First, I want to clear up one point. That's the idea that only rusty nails are dangerous. That's just so much nonsense! You won't find any nail that is surgically clean and sterile. Even the newest, brightest, cleanest nail can leave enough germs in a puncture wound to cause blood-poisoning.

Any puncture wound—that is, a deep, penetrating wound caused by a sharp object like a nail—is dangerous, whether the object that caused it is bright and shiny, or rusty. Get first-aid for it immediately. Only a doctor or nurse has the know-how and equipment to clean it properly and prevent infection. And have the wound checked frequently until it is completely healed. If you notice any reddening or continued soreness, see a doctor at once.

Well, I've talked about the seriousness of puncture wounds caused by nails. How can we prevent them from happening? We've already taken a lot of steps to prevent them. The shipping and receiving rooms have received instructions to either remove nails from all boards or bend them down before discarding lumber. They have instructions to dispose of old scaffolding lumber, car bracing, and the like. And they are going to police their shops so that loose nails won't be picked up in truck wheels or otherwise get into the rest of the shop where some of you fellows might step on them.

Now these precautions aren't foolproof and the shipping and receiving boys can't do the whole job, so I'd like to have the cooperation and help of the rest of you fellows. Right here in the shop I see nails lying around on the floor that have worked loose from packing materials, and sometimes I even see boards full of nails on the floor. A nail sticking up in a board, incidentally, is a vicious thing. When you step on it with your full body weight, it can pierce your shoe and go through your foot as if it had been hit

with a sledge hammer. I know of a case where a nail went through a fellow's foot and came out the top!

So, for your own good I want to ask you fellows to pick up loose nails, to pull them out of boards, or at least to bend them down.

You've seen some new containers around the shop marked "nail kegs." Well, those are for nails and other sharp objects you pick up off the floor. We found that putting nails in the paper and other trash cans was dangerous to the men that empty them. So use the nail kegs to keep maintenance men from getting hurt.

I know an outfit in Central Illinois that had a little contest some time ago to see how many loose nails could be picked up in a month. Believe it or not the fellows down there picked up over 400 pounds during that month! I don't know how many nails that would be but you can bet that represents a heck of a big saving in puncture wounds and time lost from work.

It might be a good idea to have sort of an unofficial nail-collecting contest here. We won't have any special rules or prizes. But let's see if in the next month by being especially alert for stray nails we can't cut a big hunk out of the number of puncture wounds and nail injuries that happen.

Let's make it a habit to pull 'em out, bend them down, and pick 'em up.

This talk prepared by the staff of the Industrial Department of the National Safety Council

WHAT TO DO IN CASE OF FIRE

(Note to foremen: Your plant probably has a definite set of rules and special equipment for reporting, fighting, and evacuating fires. This talk outlines general rules only. Use it as a guide in presenting the procedures to be followed in your plant and to give basic information in use of extinguishers and other fire fighting equipment.)

What do you do in case of fire?

Yell for somebody to do something?

Make a grab for the nearest extinguisher or water bucket?

Run like H___ ! for the nearest exit?

Well, in case of fire you do give the alarm, you do try to put out the fire, and you do try to save your skin. But you don't yell, you don't run, you don't grab just any extinguisher.

There's a right way and a wrong way to act in case of fire. In this plant we have definite rules and a lot of modern fire equipment that can help us save our jobs and our lives—if we use it the right way. So I'm going to tell you the right way.

1. In case of fire, the first thing you do is report it. Shouldn't you try to put the fire out first? No! If it's anything that just might get out of hand and spread, notify the fire department first. Many a fire has gotten out of hand because someone tried to control it without having enough equipment or help. Better to call the fire department and not need them than not to call them and to need them.

But do both if possible. Turn in the alarm and try to put out the fire. Use teamwork. One fellow turn in the alarm--the others fight the fire.

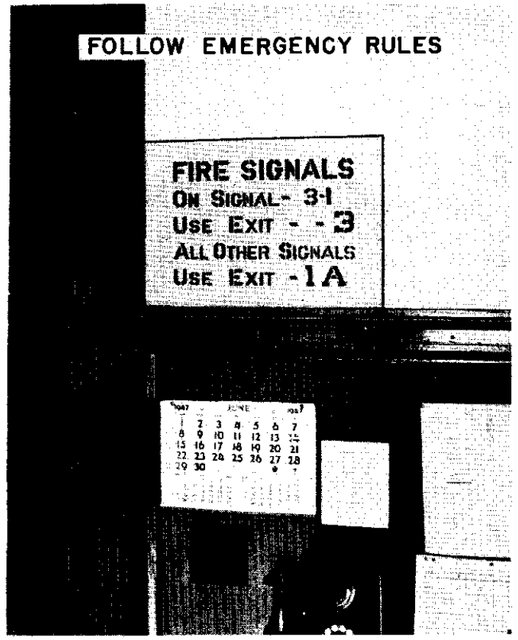
To report a fire quickly:

--Use alarm box nearest you. That means knowing where that alarm box is and how it operates. (Foreman: explain your plant's alarm system and show how alarm is operated.)

--Use the nearest telephone if no alarm is handy. Know beforehand who to call and how to get them. Give complete information over the phone: who you are, where you're at, where the fire is, what kind of fire it is, and how you are fighting it. (Foreman: tell who should be called, their number, and your plant's method of reporting fires.)

--Meet the firemen. This is important. Whether you use the alarm or telephone, have someone meet the firemen to direct them to the exact cite of the fire. Otherwise precious seconds are lost.

--Warn everyone not involved in fighting the fire. But keep your head. Don't run. Don't yell. Panic often causes more injuries than fire.



2. Try to put the fire out. Most fires start little and can be extinguished easily--if you don't lose time and do it right. Here's what you have to know:

--Know what type of fire it is. Is it in solid materials, flammable liquids, or electrical equipment? Don't use water on an oil or live electrical fire. It will cause it to spread, and there's danger of getting shocked. (Foreman: explain different classes of fires at another meeting.)

--Know what type of extinguisher to use on the different types of fires.

--Know where these extinguishers are.

--Know how to operate them.

(Foreman: explain and demonstrate use of fire extinguishers in another meeting.)

3. Get out safely.

--Know the meaning of fire sirens and warnings.

--Know your part in fire drills.

--Know the location of the nearest fire exit.

--Follow instructions of firemen and supervisors directing evacuation.

--Keep your head. Walk, don't run. Wait your turn. Don't shove. Don't crowd. Don't push. Watch your step on stairways especially. Use the handrails.

--If you leave your job, turn off your machinery, gas, etc.

--Don't try to save your tools or personal belongings. Delays may mean your life--and others too.

This talk has been prepared for the National Safety Council by J. M. Transue of the Philco Corporation

DON'T BLOCK FIRE EQUIPMENT

Fellows, I've spent a lot of time in the past talking about preventing and fighting fires. And I'm going to spend a lot of time in the future on the subject. The reason is pretty obvious.

Fire is probably our worst enemy. Fire concerns us all. If we ever had a bad fire here we'd all suffer. Some of us might get seriously injured, even lose our lives. All of us might be thrown out of work for a long time--maybe we'd never be able to return to our old jobs here.

That's not a very nice picture. Yet it happens every day. Pick up your newspaper tonight. Chances are you'll read about a whole factory somewhere being destroyed by fire, maybe with a terrific death toll.

Now, we all have a part in averting such a tragedy here in this plant. We can all do our part to prevent fires from starting. And we can all do our part in preventing little fires from spreading and destroying the whole outfit.

Almost all fires start small and are easily extinguished. After a short lapse of time, however, they may get beyond the point of control. So, the most important factor in putting out a fire is speed. That means that we've got to have our fire fighting equipment

ready to go into operation at split-second notice. A couple of minutes--maybe a couple of seconds--delay in getting the portable extinguishers and hoses into operation may spell the difference between success in putting out the fire--and disaster. Our fire fighting equipment must always be ready for immediate use.

How would you like to find yourself up against a situation like this some day? You spot a small blaze here in the department. You send someone to turn in the alarm and you go for an extinguisher. Luckily you remember the location of the nearest one. You make a dash for it. But someone on the night shift has unloaded a new shipment of material in front of the extinguisher. You climb up on the crates and you find that the trucker has the crates jammed right up against the extinguisher--and they weigh over a hundred pounds each. That gives you a sick feeling in the pit of your stomach. You try to remember where the next nearest extinguisher is. It happens to be in the paint shop through the fire door at the end of the aisle about 50 feet away from you. You start for it on the double.

But when you try to open the fire door you find that the heat has

operated on the fuse, closing the door, and for some reason it's jammed. It doesn't take you long to figure out what's wrong. Someone evidently wanted to open the door wider, maybe to get a load of boxes through, and had inserted a wedge on a piece of string in it. When the door automatically closed due to the fuse action, the wedge became fouled up in the floor guide pulleys. It takes you some time to get the door open.

By this time it's over five minutes since you noticed the fire. The fire's spread to a lot of crating and packing paper. Someone should have removed it--but didn't. Well, nothing less than a couple of pieces from the city fire department can control the flames now. You feel cheated. You know you could have handled the fire if--a big if--the fire equipment hadn't been blocked.

Our fire equipment--extinguishers, hoses, fire doors, sprinklers--are the finest available.

They represent a big investment. We hope we never have any use for this equipment. But, if in the case of fire, it isn't instantly available, the company would have done just as well to pour the money put out for it down a rathole. Because all that fine equipment wouldn't be of any use in protecting the plant or its workers.

So let's all remember:

--Keep extinguishers, hoses, hydrants, ladders, axes, and other fire fighting equipment clear and accessible at all times.

--Observe sprinkler head clearances at all times.

--Keep manually operated fire doors closed at all times. Keep fire doors that operate automatically by heat fuses and counterweights free of obstacles. Never use wedges or wires to block them open.

--Report any blocking of fire equipment to me immediately.

Unblocked fire equipment is your best guarantee that you're not going to get burned out of your job--ever.

This talk prepared for the National Safety Council by E. T. Lee of Eastern Air Lines

OBSERVE "NO SMOKING" RULES

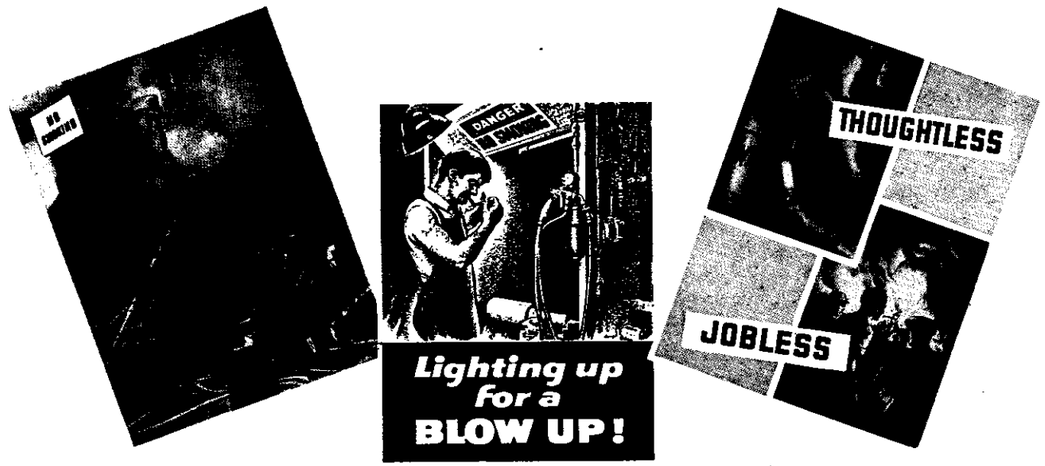
A lot of us enjoy a smoke now and then. Some of us would like to be dragging on a cigarette almost all the time. The fellows who run this plant understand this. Most of them like to smoke as much as we do. What I'm trying to say is that nobody is trying to preach to you against smoking because it will stunt your growth or aggravate your ulcers. The point is there's a time and a place for smoking, like everything else.

Smoking does present a fire hazard, not only here but in offices, homes, forests, and elsewhere. Matches and smokes are one of the leading causes of fire. A spark from a cigarette or cigar, a butt dropped in some flammable material, a burning match--all are enough to start a major fire.

Because of the fire danger from matches and smokes many plants used to prohibit smoking altogether. Most workers didn't like that rule, and many of them used to sneak a couple of drags in out-of-way-spots where they thought they couldn't be seen. I guess the fellows who ran the plants figured that since they couldn't stop smoking, they might as well control it by allowing it in certain definite areas where there was no danger of fire or by just prohibiting it in certain areas where there was great danger of fire. I'm sure you'll all agree this is a heck of a lot better policy than not allowing smoking anywhere. As long as we light up in the areas where smoking is allowed we won't be getting into any trouble. These are the areas where there are no dangers of setting off flammable materials.

(Foreman: Most plants have special rules about smoking that are difficult to cover in a general way. Describe the special rooms or areas set aside in your plant for smoking and the rules on matches. Some plants do not permit matches except the "safety" variety. Others permit no matches but provide lighters in smoking areas.)

Now the areas I've discussed where no smoking is allowed--and wherever else you see a "No Smoking" sign-- are the areas where flammable materials like solvents, paints, packing materials, paper products, and other stuff that will catch fire easily and burn fast are stored or used. Nobody would intentially want to start a fire but you know how easy that stuff burns-- one spark, one smoldering butt is enough to start it off. Spots like this have to be taboo for smoking.



So--remember:

--Smoke only in the areas where smoking is permitted

--Grabbing a couple of drags on the sly is kid stuff

--Wherever you smoke, be sure to kill your cigarette and match so not a spark remains

--Don't flip your butts or matches away. Put them in ash trays or other receptacles intended for them.

This talk has been prepared by the staff of the Industrial Department of the National Safety Council

KEEP OILY RAGS IN METAL CONTAINERS

This plant would sure look like a pig pen if everyone tossed their dirty oil rags around--just flipped them into a corner when they got through with them and figured that the janitor would pick them up at the end of the shift.

But that would create a much more serious problem than just one of neatness. Oily rags are a serious fire hazard.

Fire investigators tell us that a good many big plant fires are caused by what they call "spontaneous ignition." What happened is that when oily rags are piled together they generate so much heat that they burst into flame without fire being near them. Usually fires like this start in a dark corner or back of a machine where someone has been tossing some used rags.

FIRE PREVENTION

These fire experts also tell us that we can prevent oily rags from catching fire in two ways. We can keep air circulating through them or we can put them in a place where they won't get enough air to catch on fire. I can't see anybody turning a pile of rags over every once in a while to make sure the pile isn't getting too hot. The second idea is our best bet.

In this plant like many others we provide special self closing metal cans for disposing of oily rags. There's a stop on the cover so you can't keep it open. If in proper condition the cover always drops in place. By putting the oily rags in containers of this kind they won't get enough air to start a fire. Even if they did the fire would smolder harmlessly because the container is fireproof.

You can still beat the fire prevention plans if you put so many rags in the container that the lid can't close. If you see this happening check with your supervisor so the waste can is emptied. Maybe we'll have to make plans to have them emptied oftener. It's a lot easier to empty a couple of oily rag cans than clean up after a fire.

There are some oils that are worse than others in their ability to start fires by spontaneous ignition. Linseed and other drying oils used for painting are especially dangerous but even motor oil has been found to heat up rags spontaneously. It's a matter of having the right conditions and even the smartest fire inspector can't look at a pile of oil soaked rags and tell whether

it's going to burst into flames in 10 seconds or 10 hours.

In this case it's awful easy to be on the safe side. Toss every oil or soiled rag in the covered metal container provided. A little oil soaked rag can start a mighty big fire.

This talk prepared by the staff of the Industrial Department of the National Safety Council

KNOW LOCATION AND USE OF FIRE EXTINGUISHERS

(Note to foreman: This talk should follow the talk on reporting fires.)

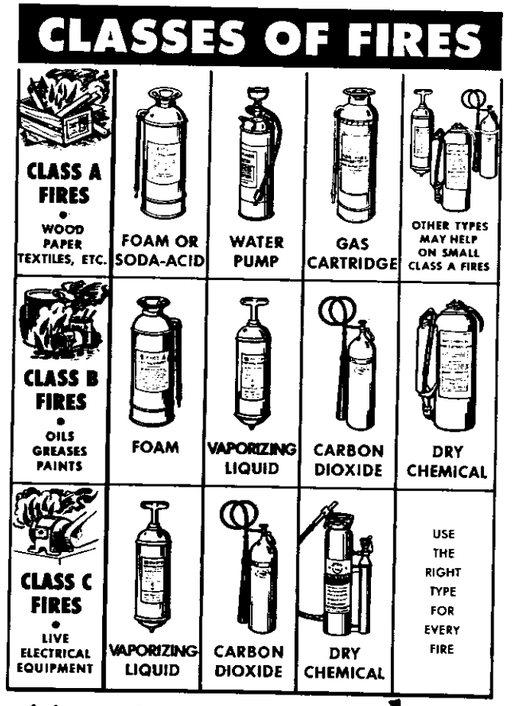
When we speak of fires we usually think of those spectacular blazes that run up millions of dollars of damage, tie up traffic for hours, and bring out every fire company in town. For every one of these fires, however, there are thousands that never make the headlines. They are discovered while they are still small blazes and are put out quickly by fast-thinking persons using portable fire extinguishers.

Practically all fires, including those headline-makers, start as tiny flames that can be put out easily if they are discovered early and if no time is lost in fighting it. Almost all fires, at their start, could be put out by stepping on them, spitting on them, dousing them with a cup of water, or by using portable fire extinguishers on them. But in just a couple of minutes these same fires can get out of control and destroy a building or maybe some human lives. Speed in putting out a fire is the most important factor.

Now each day as you go about your work, you pass right by a lot of fire extinguishers. Your job and your life may depend on your knowing where the nearest fire extinguisher is and how it should be used. If you lost even a few seconds in getting to a fire extinguisher or putting it into operation, you might not be able to control the fire. So, let's review the location and use of the fire extinguishers in this shop.

(Note to foreman: emphasize the importance of reporting a fire immediately. Make the point that it's better to call the fire department and not need them than not to call them and to need them. Also stress that wherever possible one man should fight the fire while another turns in the alarm.)

1. Know the location of the fire extinguishers in this department. (Note to foreman: Show men a floor plan of department with extinguishers marked. Take men on tour of department, showing location of fire extinguishers. If your department uses colors to locate extinguishers—for example, red posts—explain this to your men.)

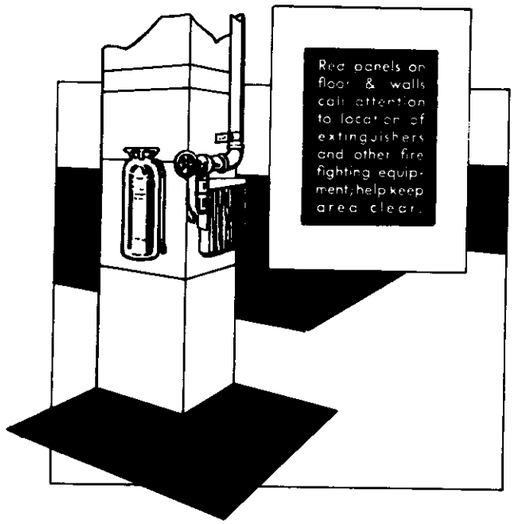


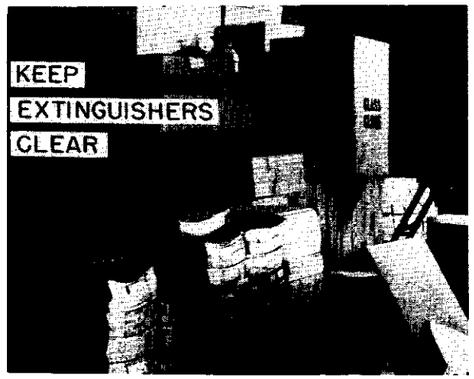
2. Know how to use the various types of extinguishers provided. (Note to foreman: Discuss how to operate different kinds of extinguishers and types of fires they should be used on. Read the directions to the men. Or schedule this topic for the next meeting. Five Minute Safety Talks for Foremen published in 1950 contain talks on the various types of extinguishers.)

3. Keep extinguishers clear at all times. Knowing where the extinguishers are should help in keeping them clear of obstacles at all times. Don't absent-mindedly block them or hide them so that if they're needed they can't be reached. To be of use on a fire, you've got to use an extinguisher at once. A lapse of a few seconds and the extinguisher may not be able to control the fire.

Well, we've had the fifty-cent tour and lecture on location and use of fire extinguishers. Now, I don't suspect

that a week or so from now any of you will be able to rattle off the location of all the extinguishers in this department. I wouldn't expect you to be able to, either. But I do want you fellows to remember where the extinguishers are in your own work areas. I also want you to know what kind of extinguishers they are and how they are used. Then you won't be careless about blocking them. And if a fire should start, you won't have to stop and think about what you should do. You can automatically make a bee-line for the nearest extinguisher and use it in the right way without half-thinking. In that way you'll be able to save your job--maybe your life.



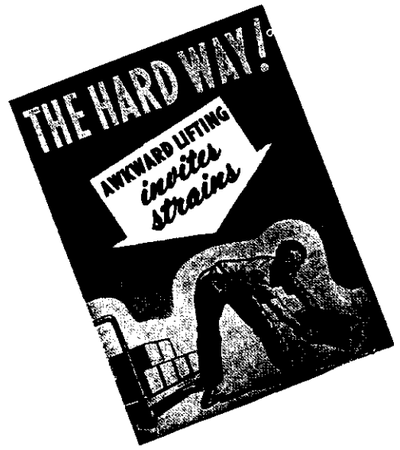


I want to caution you on a point before we go back to work. Don't rely on extinguishers or the fire department to protect you from fire. The only sure way to protect yourself is to prevent fires from starting. So, if you see a fire hazard, remove it or report it. Don't let fires start. But if they do, know how to use extinguishers.

This talk prepared for the National Safety Council by Shell E. Martin, U. S. Army Engineers

WHY STRAIN YOUR BACK?

We've come a long way since the days of the cave man. Those boys had to do it all with a club and their brawn. If they wanted to go somewhere, they walked. If they wanted to get to the next cliff, they climbed. If they wanted to bring home a nice big rock or the carcus of a sabre-toothed tiger, they had to push, tug, drag, or pick it up and carry it. There aren't any statistics available, but I bet many of those boys went around groaning, "Oh, my aching back."



Things are a little different today. We have gadgets and machines to do a lot of our lifting, pulling, pushing, and stacking for us. We have power trucks, lifts, cranes, hoists, hand trucks, and what not. But, of course, we still have to do some lifting ourselves. Probably we always will. And a lot of fellows still go around groaning, "Oh, my aching back."

The way I look at it, we shouldn't have any back injuries due to lifting anymore. With all these machines that reduce the amount of lifting we have to do and with a couple of thousand years of lifting experience behind us, I can't think of one good reason why a man should ever get hurt while lifting something.

Lifting safely is really simple. It's still a matter of muscle. But it's a matter of using the right muscles, and using those muscles in the right way. Here's what I mean.

I'm no doctor but I know this. The strongest muscles in our bodies are in the legs, thighs, arms, and shoulders. Just by running your hand down over your back, you can tell there's no big muscles there. You don't feel any

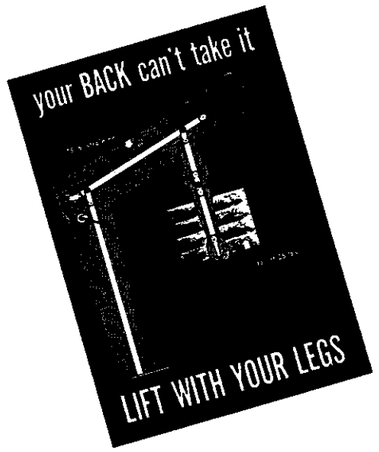
bulges or bands running down your back. See what I mean? Your back isn't designed to do heavy work. When you lift with your back and not with your arms and legs, you get hurt. That's the most important point to remember.

Now let's get down to the business of how to lift correctly.

If you have an object to lift, first make sure you have a solid footing. A lot of back strains result from losing your balance and throwing too much weight on those back muscles. When that happens you wrench your back.

The second thing is to squat down close to the object. The idea is to bend your legs and to keep your back

straight. In this way, your legs and not your back will do the lifting. Of course, when I say "bend your legs," I don't mean getting down in a full squat. If you do that, the weight of the load won't let you straighten your legs. What I do mean is getting into a crouch so that you can exert your leg power. You don't have to keep your back ramrod straight either. That way you'd be off balance. The idea is not to bend at the waist so that your back has to do the major part of the work.



The third thing is grasp the load firmly. You don't want to drop it on your foot or shin. And a sudden shift in the load may throw the weight on your back resulting in a strain.

The fourth thing is to take a deep breath while you're lifting so that your muscles are tensed. You avoid strain that way too.

Fifth, carry the load close to you. It's easier to keep your balance and you distribute the weight over your whole body evenly. When you carry the load out from your body, a lot of weight falls on the muscles of the lower back because it will be their job to keep your balance. The result can be a sprained back or worse.

Sixth, get help if the object is too much for you to handle by yourself. This shop is not a weight-lifting class. We don't run any contests to see who can hoist the most all by himself. I can't set any limits for what you can lift safely yourself. All I can say is if a load seems beyond your ability, get help.

The same procedures should be followed when two men are lifting an object as when one is. But there's another important ingredient: teamwork. There must be teamwork between the two men so that there is an even balance and distribution of weight. If one man suddenly has to support the major part of the load, he can get a back strain.

Let's remember these lifting points so we don't have any back troubles in this department:

—Solid footing
—Good grip
—Legs bent, back straight
—Keep load close
—Get help with heavy, awkward loads

This talk prepared for the National Safety Council by John B. Strahan, Inland Manufacturing Division, General Motors Corporation, Dayton, Ohio

SAFE OPERATION OF POWER TRUCKS

A lot of you fellows have been operating your power trucks for years without having an accident. You're experienced men — know your jobs. But look at it this way. Chances are you'll go through life without breaking your neck -- most people do. But necks do get broken. And if we're not careful one

of those necks can be yours or mine. It's the same with power trucks. Even if you've never had an accident with yours, power truck accidents -- a lot of them -- do happen. You can have one. So, it's a good idea to freshen up now and then on how they can be avoided.

Here's point number one.

Make sure your machine is in A Number One Mechanical Condition. Inspect your machine daily. Report anything that needs fixing. Don't operate it unless it's One Hundred Per Cent safe. What are some of the things you should check?

--Make sure engine and battery are in good order. Plenty of oil, water, and gasoline? No leaks or drippings?

--Check the controls and lifting mechanism. Check the coupler if it's a tractor.

--Check the brakes. Will they do their job instantly?

--How about the steering gear? Make sure it's not stiff or binding.

--How about the horn or other signal? In good working order? Someone's life may be saved by it someday.

Point number two.

Be careful when you're having batteries recharged or the truck refueled. Don't touch contacts. Don't smoke. Battery charging produces hydrogen and hydrogen sometimes goes up with a bang (ever hear of the hydrogen bomb?). Nix the cigaretts when you're gassing up too -- and turn off your ignition.

Point number three.

Operate the truck from a safe position. Whether you're sitting or standing, make sure your hands and feet are protected at all times. Get guards installed. It's a simple job.

Point number four.

Observe traffic rules. There are no state police in this plant. Let's show the world we don't need police. Observe speed and other traffic regulations.

More than that, use commonsense and common courtesy. No traffic code can put down all the precautions a driver

must take. The driver himself must be on the alert for dangers to himself and to others.

Traffic regulations are really common courtesy and etiquette for vehicles. So drive in "nice, friendly manner." Give pedestrians the right of way. Warn them of your approach. Don't pull any crazy stunts -- no horseplay, no cowboying.

Point number five.

Don't allow hitch hiking. Plant trucks are work horses not saddle horses. As a driver, you're paid to ride. Others are paid to walk. Make them walk. If they jump on, stop, tell them to get off, and explain that's the rule and that it's for their own protection. The same thing goes for the fellows who want to borrow your truck for a trial spin. Power truck driving looks easy-- like a lot of fun. But it's dangerous for the inexperienced man, so operate the truck yourself. And to make sure that's the way it is, lock the ignition when you leave the truck.

Point number six.

Load safely. Don't overload your machine. Don't run with your fork lifts up or tilted. Make sure your pile is secure -- cross-tie if possible. Handle every load like a crate of eggs and you can't go wrong.

That's just about it, fellows. Power trucks have eliminated a great deal of dangerous hand trucking and lifting operations. But they've introduced hazards of their own. But if you follow the points I've discussed here -- if you keep your machine safe to operate, operate it safely, and use your head -- you'll do OK. Do less and you invite trouble.

So let's go! Happy trucking to you!

The talk prepared for the National Safety Council by J. A. Draper of the Consolidated Paper Corporation

OPERATION OF HAND TRUCKS

Just like any other tool or machine, a hand truck can help you do a good job, but it can hurt you if you mis-use it. The first point to remember about hand trucks is to use the right truck for the job. Don't use a two wheeler where a four wheel truck is required. If there is a special truck to be had for a special job, use it for that job. For instance, a special barrel truck should be used when you have to handle barrels.

A truck in bad condition is dangerous. Inspect your truck at the beginning of work every day, and if it is in bad condition, send it to the shop for repairs. Missing nuts or cotter pins should be replaced immediately. The axles should be kept well oiled, because if they are not, a truck will push hard and that increases the danger of accidents.

Trucks should always be loaded in the right way. This means that loads should be neatly stacked on them, with the center of weight as low as possible. In the case of a two wheel truck, this means over the axle when the truck is in a raised position. The load should be set so that nothing is going to fall off and smash somebody's toe or shins. Loads have to be kept low enough so that your view ahead is not cut off.

When you're loading a truck, keep your feet clear of the wheels. If someone is helping you load, he should be careful about where he puts his feet, too.

Hands are likely to get smashed too, if you're not careful. This is especially true when you're in tight quarters and when you're turning corners. Keep your hands on the handles, and clear of anything they might catch against.

Watch where you're going all the time. Remember you can't stop a loaded truck on a dime, even on half a dollar. Keeping the truck under control will prevent collisions with posts, other trucks, and especially pedestrians.

You have to be even more careful when going around blind corners, through doors, and across aisles. A man on foot would get the worst of it if you ran into him with your truck.

Whenever you go down an incline with a truck, let it go down ahead of you. Then it won't run you down. The type of four wheel truck that has a swivel axle and tongue is, of course, intended to be pulled by the tongue, but other kinds of four wheel trucks should be pushed. If

you pull one of them, it's easy to catch your heel under the bed of the truck, or to slip and get yourself run over.

No riding on a hand truck — it's not a coaster wagon.

Never leave a truck standing around in an aisle or any place else where anybody could trip over it—or with the handles sticking out into an aisle. When it's out of use temporarily, a two wheel truck can be placed against a wall. When you're through using a truck, take it back and park it in the place where it is supposed to be parked.

These are a few simple rules for safety in using a simple kind of machine. Follow these rules for your protection.

This talk prepared by the staff of the Industrial Department of the National Safety Council

SAFE PILING OF MATERIAL

When we put materials in a pile, the main idea is to have them stay there until we want to remove them. We don't want a pile or any part of it coming down on somebody's head or toes.

In order to make sure the pile is going to stay piled, there are four main points to follow:

1. The pile must have a safe base.
2. It must be a safe height.
3. The objects in the pile must be locked into the pile.
4. There must be room to move around the pile.

1. A safe base. A safe base for a pile means a smooth, solid level surface. If the floor or ground on which the pile is to be built is not solid, smooth, level, dunnage or bearing strips or timbers should be placed as a base, and these must be solidly supported and level.

2. A safe height. Safe height means not so high that the pile is unsteady and may tip. It also means piles low enough so that the floor on which the material is piled will not be overloaded. (Note to foreman: Tell what the floor load limits are in your plant storage areas, and how high certain materials can be piled without exceeding the load limit.)

A safe height means that no material can be stacked within 18" of any sprinkler head, so as not to interfere with the spread of the spray in case of fire.

3. Locking-in materials. Locking the objects in the pile together means cross-tying if possible, or using dunnage between layers, or other means of avoiding unsteady stacks of material within the pile. To go into this question, we will have to get down to cases and talk about different kinds of objects.

Sacks of material should be cross-tied and piled with the mouths on the inside of the pile. When the pile reaches the height of five feet, it is safer to step it back in the higher layers, and keep stepping it back to the top. When removing bags from the pile, take them from the top first and never change the general shape of the pile.

It is safer to pile barrels and kegs on end than on the sides. Dunnage should be laid on top of each row of kegs or barrels before others are placed above them. The pile should be built up in a triangular shape, with each keg or barrel resting on the chimes of two barrels or kegs below it.

Empty barrels can be piled on their sides in the shape of a four sided pyramid. Stops should be placed at each end of the bottom rows.

When the length of boxes is not exactly twice their width, they are difficult to cross-tie. In this case, dunnage can be placed between rows at about every second or third row.

4. Space to move around the pile. Space to move around the pile means that aisleways around the pile should be wide enough to let workmen get at the pile, or to allow fire trucks or other equipment to move around without danger of bumping against the pile.

This business of clearance around the pile also means that no ends of dunnage or material in the pile should stick out beyond the face of the pile for an unfortunate fellow worker to run into or trip over.

There are dozens of different sizes and shapes of things that have to be put in piles, but anything can be piled to stay if we remember the four points of safe piling:

--Safe base
--Safe height
--Objects locked together
--Room to move around the pile

This talk prepared by the staff of the Industrial Department of the National Safety Council

UNLOADING FREIGHT CARS AND TRUCKS

Unloading a box car, truck, or truck trailer is pretty much the same kind of job. You have to work with cartons, boxes, crates, and maybe odd stuff of all sizes, shapes, and weights. Here are some rules for unloading any of them safely.

If you're working a box car, the first job is getting the door open. There are three things to watch out for:

1. Make sure the door is properly tracked at the top, so it won't fall off when you start to open it.

2. Never put your hands on the leading edge, on the bottom track, or on the door stop. Use the handles. This is so you won't get your fingers jammed.

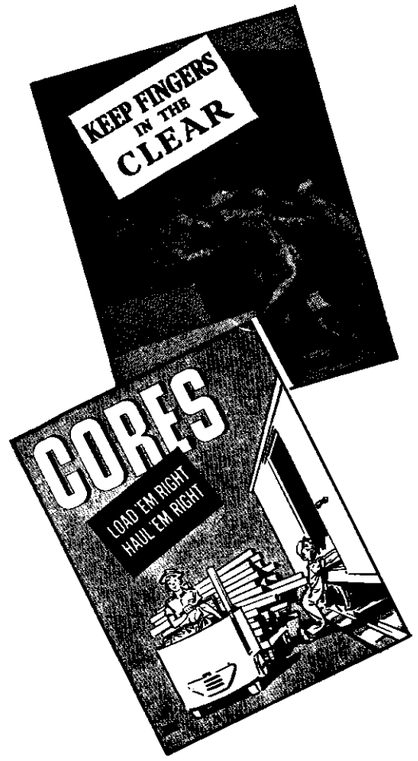
3. Open the door a few inches and then check the load to make sure nothing is leaning against it ready to fall out on you--and stay clear of the opening as you roll the door back.

Trucks and trailers must be set at a right angle to the dock, and wheels must be chocked.

Whether it's a box car or a truck you're unloading, always set a bridge plate in place to bridge the gap and to take care of any difference in level. Use the right plate for the job, and be absolutely sure you anchor it in place. (Note to foreman: Discuss standard method of anchoring plates.) Don't miss on this! Failure to use the plate or to fasten it safely can lead to serious injury to you or your sidekick.

When you're all set with the door open and the bridge plate in place and fastened, inspect the load. Plan how you're going to break it down. Naturally, you'll work from the top down when there are several layers.

From start to finish, keep an eye out for sleepers. I mean things that are partly supported by something else. Long objects, standing on end are the worst—like rolls of linoleum, for example. The sleeper may not be lying on the next thing you're planning to move, but maybe when you shift that next object, the piece that's supporting the sleeper may move too, and the next thing you know you're out cold.



A package may be partly pulled off the stack in such a way that it is just ready to fall. Some things standing free may be unsteady, and fall over with just a little jar or jiggle--bales, for instance.

So keep a close watch all the time. Be on the lookout for anything that may turn into a booby trap, and when you spot one, set it in a safe position before you go ahead.

Safe lifting, carrying and piling are important, but that's another story—we'll discuss it some other time.

Hand trucks have to be used the safe way, too, but that's also another story;

except, remember you're working in close quarters, which makes it easy to mash your hands and feet with a truck if you don't watch out. Be careful going over bridge plates and along the edge of the platform so you and your truck don't go overboard.

What about your clothes? Most important of all, we'd like to see every one of you wearing safety shoes. Smashed toes are no picnic.

Good tough leather gloves save your hands from cuts, scrapes, and slivers.

Sleeves clear down to the wrists are good protection against cutting and scraping your arms.

Pants or overalls should not have cuffs to catch on things, or to catch your toes in.

Dress safely, use safe equipment, and work safely, and we can move this stuff day in and day out without anybody getting hurt.

This talk prepared by the staff of the Industrial Department of the National Safety Council

SAFE HANDLING OF GAS CYLINDERS

Not long ago I was watching a construction job and I noticed something that bothered me considerably. I saw a cylinder of oxygen and one of hydrogen connected up with regulators and hoses to a welder's torch. What made me look twice at this equipment was the fact that it was laying in a very congested area. There were masons pouring concrete, fellows with wheelbarrows,

plumbers moving heavy pipe, and a lot of other activity going on.

I felt mighty uncomfortable being so near those gas cylinders. I felt that at any minute some accident would turn them into jet propelled bombs.

I remembered what happened not so long ago. An acetylene tank was accidentally bumped, struck another tank, and its valve was broken off. Because of the escaping gas, the tank took off like a jet plane. It passed through an open doorway, hit a car about 150 feet away, sailed through the trunk and came out the windshield without slowing up a heck of a lot, went through the wall of a house about 500 feet from where it started, and finally stopped.

Luckily no one was in its way. It would've killed anyone it hit.

Of course you don't have to knock a valve off and cause a cylinder to go careening through brick walls to have an accident. All you have to do is just let one roll up your shin bone to get yourself laid off work with a broken leg for a couple of months.

Any way you look at it, gas cylinders are tricky articles to handle and store. You have to be on the alert

every second. You fellows certainly know the rules for safe handling of cylinders. But a short review of the rules won't hurt any. It might even remind you of some safety measure that you've been getting sort of careless about recently. So here goes:

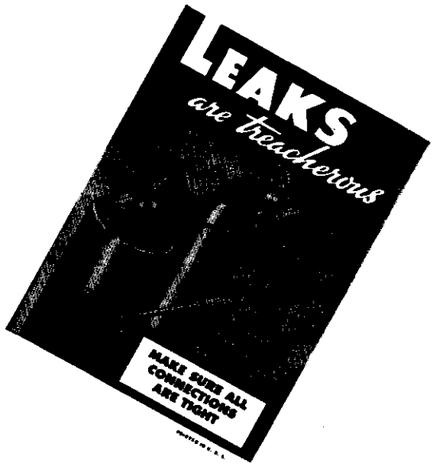
1. Handle every gas cylinder as if it were full. "I didn't know it was loaded" is as poor an excuse for a cylinder accident as it is for a gun accident.

2. Never handle cylinders with gloves that are greasy or oily.

3. Securely block or tie cylinders when they're being transported. <u>Always</u> keep them on end.

4. Store cylinders securely so they cannot fall or be struck. And I repeat: <u>always</u> keep cylinders on end. Store

them where they cannot come in contact with salt or corrosive chemicals.



5. Don't slide cylinders off a truck. Lift them. Avoid bumping the valve-protecting cap.

6. Always lift gas cylinders with another man. They're a two man job.

7. When lifting cylinders with a crane use a cradle or holder. Never use a magnet.

8. Rolling cylinders is dangerous. Use a carrier.

9. Avoid exposing cylinders to heat or sun and do not place them near flammable materials.

This talk prepared by the staff of the Industrial Department of the National Safety Council

SAFE SCAFFOLDS

(Note to foreman: This talk presents generally applicable safety rules for the use of scaffolds. Use it as the basis for discussing safe use of the particular type of scaffolds your men use.)

Before we discuss safety on scaffolds, I want to clear up one point. There's no denying that it's more dangerous to work on a scaffold than on the ground.

If you fall off a scaffold your chances of getting hurt bad—or killed—are greater than if you took a fall on ground level. But there's no more reason for falling off a scaffold than falling off the sidewalk. Accidents on scaffolds, like on the ground or anywhere else, don't have to happen. That's especially true here, where we have the best designed, best built, and best erected scaffolds we can get. Using these scaffolds, and following a few simple precautions, and you'll never have a scaffold accident. Let's discuss these safety precautions for using scaffolds.

First, swinging or suspended scaffolds. These are considered the most dangerous.

1. Know what the capacity of your scaffold is. Never overload.

2. Make sure your rope is of the proper length for the job. Check that it is not worn, frayed, knotted, or hitched in any places. Keep your rope clean—use the sheet metal drums provided for it. Keep rope away from caustics and acids which will deteriorate it.

3. Always tie fall lines to the scaffold, not to the building. By doing this you reduce the load on the cornice hooks to a half of what it would be if you tied the free end to the wall.

4. Be sure to lash the scaffold to some permanent support, so that in case of a wind gust it will not swing violently.

5. Before using a swinging scaffold, check pulley blocks, hooks, and fittings for obvious defects, and then test it by loading it with four times the weight it will carry in actual use and raising it about a foot off the ground.

6. Not more than two men should ever work on a swinging scaffold at one time.

7. Use a safety belt properly attached to a life line.

8. Never combine two or more swinging scaffolds by bridging them with planks.

In using scaffolds of any kind, follow these safety rules.

1. Keep your scaffold free of all rubbish and waste materials. Only carry the tools and materials you need.

2. Clean snow and ice off the scaffold before you use it.

3. Don't use make-shift scaffolds. If it's made of loose planks supported by barrels or boxes, stay off it. It's just as dangerous to use this type of scaffold for a few minutes as it is to use it for weeks. Don't erect a scaffold yourself unless you have been authorized to do so.

4. When other men are working above you, make sure you have overhead protection.

5. Never work on a scaffold during high winds or bad weather conditions.

6. If a ladder is used for mounting the scaffold, make sure it is securely fastened to the top of the scaffold and that the side rails of the ladder extends at least 3 feet above the platform.

7. If you feel dizzy or sick, don't get on a scaffold. If you're on a scaffold and you get sick or dizzy, come down at once. That's for your own safety and for the safety of others, because accidents on scaffolds unfortunately may injure more than one man.

Men, as I said, our scaffolds are the finest. If you use them properly and follow the safety precautions I outlined to you, you won't become involved in any scaffold accidents.

This talk prepared by the staff of the Industrial Department of the National Safety Council

WATCH YOUR STEP

Fellows, in the past I've talked to you about many specific safety subjects, things like using fire extinguishers, operating power trucks, using hand tools, and so on. Today we're going to discuss something of a much more general nature, that is, Watching Your Step!

That's about as simple a safety subject as you can find. It has to do with nothing more than watching where you walk.

You know, it's a funny thing. We've all been walking since we were a year or so old. We had our share of spills and bumps while we were learning. You'd think by this time we'd be pretty good at walking. But an amazing number of fellows still get hurt while they're walking. They slip, they trip, they walk into things, they walk where they're not supposed to—just like a kid who is just learning.

It shouldn't be that way. There's less reason to have walking accidents than any other kind. Let's review some of the simple, commonsense rules for walking safely.

1. Watch out for oil and other liquids on the floor. If you see some spilled oil or grease, walk around it. If you do happen to step in it, clean it off the soles of your shoes. Then wipe up the spill or spread an oil absorbent over it so the next fellow doesn't get knocked for a loop. Be particularly careful in shower rooms where floors are always wet. Tread easy there—and keep soap off the floors.

2. Watch out for faulty floors. Look out for loose floor boards, protruding nailheads, bolts and screws in the floor, and mislaid tiles. Floors should be free of these hazards in the first place, but occasionally someone slips up. So report unsafe conditions —and watch your step.

3. Watch out for loose objects on the floors. Short lengths of pipe, wire, bolts, tools, crate slate, empty cartons—and what not—find their way into the aisles and are serious trip hazards. Avoid them and pick them up so someone else doesn't fall over them. And don't just kick such objects out of the aisle. They're sure to get underfoot again. Toss them in a trash barrel.

4. Slow down at corners. That advice isn't meant for drivers only. It's for pedestrians too. You never know what's going to be around a blind corner—a fellow with a hand truck, a fellow on a power truck, someone carrying a length of lumber or pipe. So slow down and avoid a collision.

5. Watch yourself on stairways—going up and down. Use the handrail so you can catch yourself in case of a

trip. Take it slow. Don't carry objects on the stair that block your vision. If an object is too big, heavy, bulky for you to carry comfortably get help with it on the stair.

6. Walk in aisleways. Shortcuts from one aisle to another take you through moving machinery and stored material. You interfere with men working and might walk right into trouble. And instead of gaining time you probably lose it in climbing over stuff and going around obstacles. Observe "keep out" signs and barriers. They mean there's danger in the blocked off area. They're there for your protection.

7. When you're working around overhead loads, keep your eyes on where the load is going and where you're going too. Trouble can come from above or below—so be doubly careful.

8. Watch your step when you work around pits, excavations, holes, and on loading docks. A fall here is more dangerous because you've got a longer way to go before you hit bottom. Don't jump from one level to another. You can get a serious knee or ankle injury that way.

9. Above all, walk—don't run. The speed limit for pedestrians in this plant is a brisk walk. Anything faster and you're breaking the law. It's the old business of accidents happening when you try to save a couple of seconds in some way. We don't want to save the kind of time that's going to take a man off the job for a month, a week, even a day. In the long run, it's quicker to walk.

As you can see, fellows, there's nothing technical or complex about this business of walking safely. I haven't said anything you weren't aware of. This was just a reminder. Watch your step. Watch where you walk.

This talk prepared by the staff of the Industrial Department of the National Safety Council

KEEP MATERIALS AND EQUIPMENT OUT OF AISLES

Our discussion today centers on keeping materials and equipment out of aisles. You can step through the door leading into a department of any plant and without going any further, get a good idea of the type of people and the

efficiency of the department by just looking down the aisles. If materials are piled partly into the aisles and equipment partially blocks them, you can bet 10 to 1 that the rest of the department is just as disorderly.

If, on the other hand, the aisles are clear and materials are piled neatly along the edges, the impression is that the people have pride in their working place and the department is a good place to work.

But there is a lot more than just a good appearance behind neat, clear aisles.

Aisles are for one definite purpose. They are a travelway for you and for equipment; they are to transport materials and supplies. They definitely are not a storage area.

You know that as soon as we begin to use tools, machines, and anything else for purposes other than for which they are intended, we run into trouble. So, it's just plain common sense to expect difficulties when we use aisles for purposes other than for which they are intended. When we park a truck or put some equipment down in the aisle just for a few minutes, sure as shooting, just about then a fellow walking and a loaded truck are going to meet right at this narrow part and there's an accident. The department's accident record takes a wallop on the chin. Worse yet, some blameless guy is laid up for a week or so.

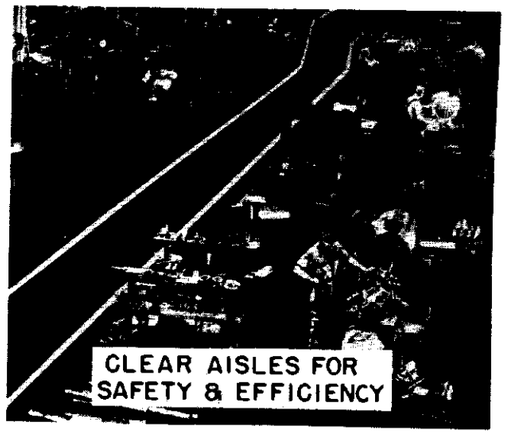
The more cluttered aisles get, the more accidents happen. People are continually getting bruised shins from bumping into things and sometimes a leg or an arm is broken due to stumbling over something.

Furthermore, someone is always getting hit on the side of the head or getting jabbed in the ribs by a piece of material or equipment which is being handled or moved in the aisle.

Trucks bump into equipment and materials, damage them, and knock over piled parts and materials, causing a lot of extra work.

This also means delays in our transportation system, and of course, holding you people up in your work.

When you want to go from one place to another, you don't want to weave and dodge around materials and equipment to get there. It's a nuisance.



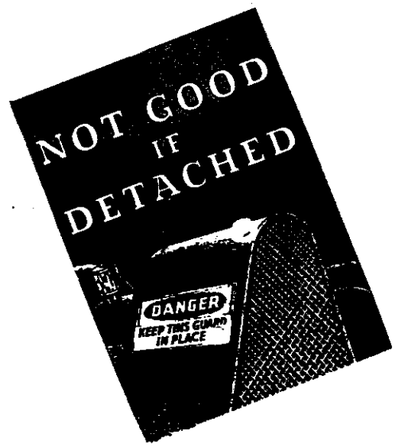
All these difficulties and the confusion simply aren't worth the little time and effort it takes to keep aisles clear. I am sure you will agree to that. So let's make a special point of keeping a close watch on our passageways.

This talk prepared by the staff of the Industrial Department of the National Safety Council.

ALWAYS REPLACE GUARDS

I want to tell you about an accident that happened to a friend of mine—one of the best darned maintenance men I ever knew.

This fellow's name is Pete Dutton—he works in a forging plant. He had a little job to do one day—a simple matter of replacing a rubber insert in a coupling on a one inch shaft. The coupling had a stirrup guard over it, a simple piece of sheet metal about six inches wide, bent to cover the coupling and bolted to the floor. The coupling, which connected the shafts from an elec-



tric motor to the pump at the fuel oil filter, was about four inches above the floor.

Well, Pete replaced the rubber insert and started the motor to see if everything lined up ok. Then, instead of shutting off the motor and replacing the stirrup guard, which would only take a couple of minutes, he decided to check the Diesel driven air compressors that the oil filter fed.

After he did that, Pete decided to check the gauge on the filter. In checking the gauge he stood so close to the coupling that his pant leg got snagged and in no time Pete was pulled down into the coupling. Luckily the motor stalled, but Pete still got a broken leg and plenty cuts and bruises. He was out of work for a couple of months. Compensation paid him only about a third of what he usually makes.

Pete's plant, I happen to know, has spent a terrific amount of money to

guard their machinery. Yet, despite all the money and time that went into those guards, Pete got hurt by slipping up on a two-bit guard over a coupling. He tried to save himself less than five minute's work.

Now in this plant we have hundreds of machines I'd rate a lot more hazard-

ous than a coupling. And they're all well guarded too. But all those guards are just a waste of time and money, if like Pete, any of you men expose yourself to dangerous machinery in order to

save a minute, or five minutes, or fifteen minutes of work.

If it's your job to take off a guard for any reason—to oil a gear or bearing, or to make an adjustment, or for a cleaning operation—put the guard back into place before you start the machine again. Suppose you want to make a check run? OK, make the run without the guard--but make sure, first, that no one is near the machine. Then shut off the machine and replace the guard before you put the machine into production operation. In my book, no repair job is complete until the guard is back in place.

If you operate a machine and someone has removed the guard for any reason, don't operate that machine again until the guard has been put back on. If you can't replace the guard for some reason, come and tell me. But don't run the machine without the guard.

If you think a guard hinders you or slows you down, don't decide on your own to take off the guard. Again, I'd like you to come to me. We'll look into it, maybe improve the guard, or make some other satisfactory arrangement.

It's practically impossible to foresee and prevent every accident. But let's not have any accidents because someone failed to replace a guard. That's one kind of accident that never needs to happen.

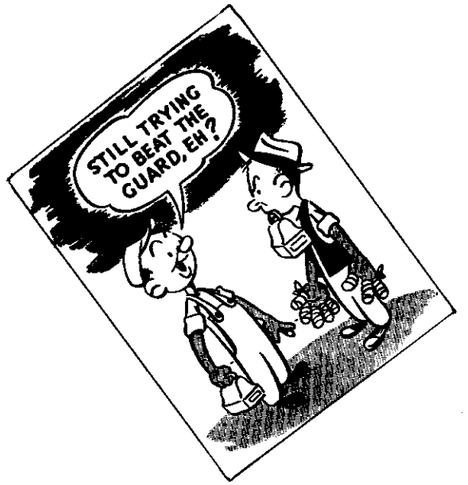
This talk prepared by the staff of the Industrial Department of the National Safety Council

USE GUARDS

Some people have rather peculiar ideas about how they should act. They do things that endanger their lives or the lives of others. They run through traffic lights or drive recklessly. Some few guys go so far as stealing or killing to get what they want. People who act this way are dangerous. We have to protect them and ourselves from acts like these. So we have laws against reckless driving, stealing, and killing.

Now guards are something like laws. They protect us. They are made to keep people from doing dangerous things. They keep us away from gears, blades, rollers, belts that can mash a hand or chop off a finger. They keep us away from splashing acids, flying sparks and metal that could blind us.

Guards are made because someone got hurt or saw how he could easily get hurt around machinery, just like laws are passed because someone got hurt or could easily get hurt without some control or regulation.



But just like a law, guards on machines are only good if they are obeyed. Suppose the police department spots a dangerous intersection and puts up a stop sign. That doesn't mean there won't be any more accidents there. A certain number of Joes are going to run through that stop sign anyhow. That's how it is with machine guards. You can disregard them or use them improperly so that they don't protect you at all.

Now, I don't believe anyone of you really want to get hurt when you don't use a guard right. Like a motorist, you figure it's safe to run through a stop sign. Maybe it is that once, or the next ten times you do it. But sooner or later your luck runs out. A cop spots you and you get fined or jailed, or another car comes along and you crack up. And sooner or later when you don't use your guard or when you use it wrong, your luck is going to run out, too. Only you don't get off with a fine. You or some other fellow might lose an eye, a couple of fingers, a hand.

Fellows, it's been a long, hard pull to get scientifically designed guards for your equipment. A lot of thought, a lot of time, a lot of money have gone into them. It's just good sense to use them and use them properly. They're the kind of law that it never pays to gamble on breaking.

I just want to point out a couple of general rules about machine guards that you should bear in mind when you go back to work.

1. Remember above all that guards have been installed for your safety.

2. Don't tamper with guards. Any adjustments or changes you make may cause another person to have an accident.

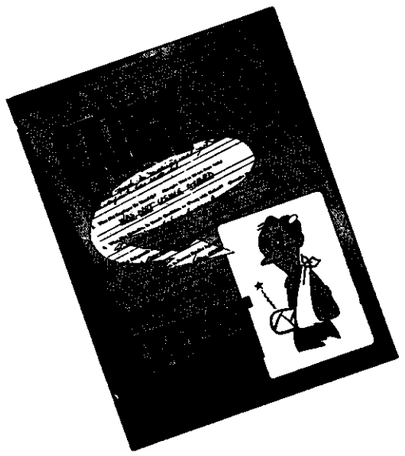
3. If a guard is defective or is not working just right, report it to me at once. Don't take a chance on it yourself. Don't let some other unsuspecting fellow have an accident.

4. Check all guards before you start your work.

5. If you have to remove a guard to make repairs, clean, or adjust the equipment, be sure that the power is shut off—and won't be turned on again until you're through. Lock the switchbox or post another man at it to make sure. And be sure that you replace properly guards and safety devices when you've finished your work.

6. You know better than anyone else whether the guard on your machine is giving the best protection or whether it could be improved. If you can think of a better guard, discuss it with me. Some of the best guards used today were thought up by fellows on the job, fellows like you.

This talk prepared for the National Safety Council by Stewart T. Cooper of the Whirlpool Corporation, St. Joseph, Michigan



SAFE USE OF GRINDING WHEELS

The grinding wheel looks like a simple machine that anyone could operate. Even hardware stores sell grinding wheels of all kinds and usually without any instructions for operating.

But we know there are too many ways for a person to get hurt on a grinder to let a man run one without instructions, and without more or less constant checking. So I want to run through the checks each of you should make every time you operate a grinder.

First, always have your eyes protected when you approach a grinder. Don't wait until after you have started the machine. Eye protection comes first. In most cases that means wearing the safety goggles you have been given. If the grinding job is a light one, a face shield will do. And don't forget, if the grinder has a glass shield on it, be sure it is lowered into place and that it is clean and that the glass is not cracked.

When you get to the grinder make a double check to see that it isn't running. Once in a while someone forgets to turn a grinder off and it is hard to tell whether or not the wheel actually is turning.

Next, check the work rest. It should be 1/8 inch from the wheel surface—no more than that. If it is greater than 1/8 inch you are liable to get the work caught between the wheel and the rest. If that happens it's quite likely your hand will be dragged in against the wheel or that the wheel will burst. In fact it is probable that both of these things will happen. So be sure of that 1/8 inch distance.

The next thing is to check the flanges. That is really a double check against the person who mounted the wheel. There should be a flange on each side of the wheel and they should be of the same size. If they aren't, and the nut is a little too tight, there is a bending stress set up around the rim of the smaller flange which could easily cause the wheel to burst. Make sure there is a washer of paper, rubber or leather between the flange and the wheel, too. This washer compensates for any slight unevenness on the surface of the flange or wheel. It should be at least as large as the flange. It never should be smaller. Of course, if the flange appears sprung, you should not start the wheel at all. Report the condition to your supervisor at once.

Next, check the guard. Good guards have been installed on all our wheels. But as a wheel is worn down, the space between the face of the wheel and the guard increases. On some wheels we have an adjustable tongue. The space between the face of the wheel and the bottom edge of the tongue should not be greater than 1/4 inch. That's to confine the pieces of the wheel if it should burst. Don't overlook this point. Other hood guards may be hinged or telescopic to give the same protection as the tongue I just mentioned.

If everything is satisfactory up to this point, you're ready to start the grinder. Stand aside when you turn on the power just to play safe in case something goes wrong. And be sure that no one else is in line with the wheel. After the grinder is turned on, let it run for a moment. There are two good

reasons for this. The first is to let the wheel warm up. If you apply work against a cold wheel, or against a wheel which has been stored in a cold room, there is serious danger of breaking the wheel.

Another reason for letting the wheel run for a moment before using it is to check for unusual vibration. If the wheel or machine vibrates too much, it means trouble. The cause may be worn or loose bearings or the wheel may be out of round. There may be a loose nut or the machine may not be securely anchored to the floor or bench. If you think the grinder vibrates too much shut it off and report it to your foreman.

If your wheel is exhausted make a check of the air suction. If it isn't strong enough the pipe may be plugged. Again shut the motor off and report to your foreman.

Now you're ready to start grinding. (Incidentally, all these checks take a heck of a lot less time to do than to tell about.)

When you apply your work to the face of the wheel be sure you have a firm grip and that you apply the work gradually to give the wheel a chance to expand evenly. If the rim heats too fast it will expand faster than the middle of the wheel and this may cause the wheel to crack.

Don't crowd your wheel. Use moderate, even pressure to avoid straining the wheel, and possible breakage. Applying even pressure is easier on you, too. And here's another tip; if the motor slows down or the work overheats when you press it against the face of the wheel, you're crowding it. If that happens, let up on your pressure.

Now a word about side grinding. If the wheel has been designed for side grinding, then ok, grind on the side. If it hasn't been designed for it, side pressure can cause the wheel to break. If you aren't certain the wheel you are using has been designed for side grinding, don't try it. Ask your foreman about it.

You may have to dress the wheel. If so make sure you know--from instructions, not from guesswork--how to do it. It isn't hard to learn but there are certain basic principles you have to be taught, so get the foreman to show you how.

Lastly when you finish a job, shut off the power. If you leave the grinder for even one minute, shut it off.

This has been just a review for most of you, but we want to make sure there is no misunderstanding. If you'll follow the steps I've outlined you'll avoid accidents. Always remember if you have any doubts or questions don't attempt to decide the answer for yourself. See your foreman every time.

This talk prepared by the staff of the Industrial Department of the National Safety Council

UNAUTHORIZED USE OF MACHINERY

I want to talk to you today about something that worries me a lot. It's unauthorized use of machinery. By that I mean someone operating a machine or piece of equipment without having permission--and without having any business doing so.

This hasn't been too much of a problem in this department, but I want you all to know my feelings on the subject and I want you to understand how serious and dangerous it can be.

I'll tell you what happened to a friend of mine.

I know a young fellow by the name of Dale Morris who worked in the accounting department of an engineering firm here in town. Dale was making some overhead cabinets and shelves for the kitchen in his mother's house. Here's how he was doing it.

In the shipping room of Dale's outfit there's a big power saw--a 14 inch job--that's used for making crates. For some time Dale had been watching the crate makers using that saw. He watched them zip through crating lumber two to four inches thick. It seemed to him that he could save himself a lot of time and energy and could make good square-

ended cuts by cutting the pieces for the cabinet on that saw. And that's what he did.

One morning he stuck some lumber in his car and drove to work. During his lunch hour he took the lumber into the shipping room and used the big power saw.

He didn't ask anyone's permission. He didn't have any special instructions on how to use the saw. He just set the fence of the saw over where he wanted it, turned on the motor, and started sawing just as he had seen the craters do it. Well, that day everything went fine. But the second day was a different story.

When he went to the shipping room the second day, he found that they had put a rip saw blade in the place of the cross-cut blade. This new blade was set about four inches above the table. But Dale didn't know it was a rip saw blade. As a matter of fact, he didn't know the difference between a rip saw blade and a cross-cut blade. It didn't occur to him that the saw blade was set too high for cutting the one inch stock he was using to make the cabinets.

The first thing Dale did was to take off the guard. He couldn't see well enough with the guard in place. He then turned on the power and started to cut a piece of 1 by 12 inch stock. He managed to cut the first piece, but he noticed it had a tendency to bounce. He couldn't hold the second piece so he

raised up on the blade. The blade threw the piece and it struck him across the forehead. He was stunned. It could have killed him.

But in his stunned condition he thrust out his right hand for balance. It struck the saw blade and he lost most of his little and ring fingers. The rest of the story is about what you'd imagine.

There are hundreds of cases like that—serious injury resulting from fellows using equipment they know nothing about. I heard of one fellow who tripped a power press to see what would happen when the ram came down. There was no stock on the bottom die. He's dead, now. And he ruined a $12,000 die.

Now it takes us about two weeks or longer to train a man to operate most of the equipment we have around here. It certainly seems foolhardy to me for a man to imagine that he can operate power equipment without any training or instructions. In addition to the possibility of getting hurt, there is the possibility of damaging the machine and injuring a fellow worker.

The machinery and equipment here belong to the company, and no one has the privilege to operate or use any machine unless he has been specifically assigned to do so.

Let's not have any misunderstanding about it. It's too dangerous for you. And it's a violation of company regulations. Now I need your help on this. A violation affects the entire department. Let's not have an accident in our department because someone got hurt operating equipment without permission.

This talk prepared by the staff of the Industrial Department of the National Safety Council

SAFE CLOTHING FOR HANDLING CHEMICALS

Fellows, I think experience has showed that we can't be too careful about wearing protective clothing when handling chemicals. There's always the danger of spills, splashes, and breakage of containers that can result in serious burns, hard-to-heal wounds, and eye injuries—unless we're properly clothed.

Now, of course, all chemicals aren't equally dangerous and we don't need the same degree of protection against them all. What I'm going to do at this meeting is outline the minimum amount of protective clothing you need to wear in handling any harmful chemical substance. I'll deal with special protection against certain chemicals at a later meeting.

When you're handling chemicals you should wear:

Hat. Under normal circumstances, this can be the battered old hat you wear around the shop. However, if there is danger of spill from above, you should wear a special rubber or plastic acid hood.

Goggles or face shield. This is standard protection for handling any chemical. You don't want to risk eye sight no matter how remote the chances of injury seem.

Rubber or plastic apron. An apron will protect your work clothes from damage as well as your skin.

Rubber or plastic gloves. The exposure to your hands is greatest of all, so protect them with acid- and alkali-proof rubber or plastic gloves.

Rubber boots. Leather deteriorates quickly under the action of many acids and alkalies. You'll save your shoes and your feet by putting on rubber shoes or boots before you handle chemicals.

On some occasions you'll have to put on more complete protection, but for handling chemicals in the amount and concentration we use here every day, hat, goggles, gloves, boots, and apron is about all the protection you need.

I want to warn you, though, that protective clothing won't protect you at all unless you care for it right and wear it properly.

Under the heading of care, first of all, comes a thorough inspection of the clothing before you put it on. Make sure there are no holes, cracks, or badly worn spots in it. If your clothing isn't absolutely leak-proof it isn't safe to wear.

To keep your clothing safe keep it away from radiators and strong heat, since plastic and rubber deteriorates quickly when exposed to heat.

Hang your clothing up carefully. Keep it off nails and sharp hooks that will puncture and tear it.

Keep protective clothing clean—clean of chemicals and clean of dirt and grease. Wash it after it's been exposed to a chemical. Wash after every wearing. Plenty of warm—not hot—water is the best cleaning agent. Don't use gasoline or any other solvent on it. They may ruin it. Make sure protective clothing is completely dried before storing it away, as the combination of moisture and heat may rot it.

Now we come to the matter of wearing protective clothing properly.

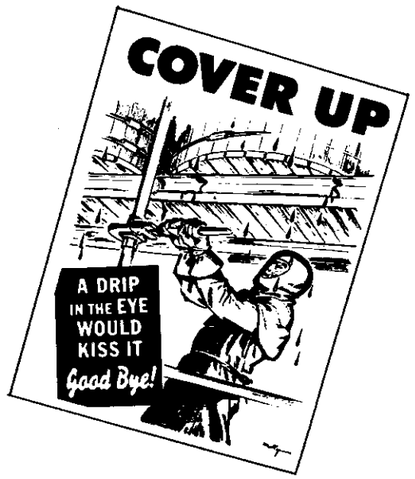
First, I want to stress the importance of washing off your clothing

whenever it becomes contaminated with a chemical. In that way you won't contaminate any equipment or material that you handle when you're not wearing protective clothing and you won't burn your own skin when you remove the clothing. There have been many cases of serious chemical injury resulting from a fellow wiping his eye or scratching himself while wearing a glove contaminated with an acid or alkali.

If you wash off your clothing immediately after contamination, you won't accidentally do this. In the case of a bad spill or splash, don't even bother to take off your protective clothing. Get under an emergency shower with it on so you don't get burned while removing it.

If an acid or alkali gets into your protective clothing, get out of it fast and wash your skin thoroughly. A little acid inside your glove is more harmful than the same amount on your bare skin, since your glove will keep the acid more concentrated and will prolong the contact resulting in greater injury. So, in case a chemical gets under your protective clothing shed it fast.

To prevent chemicals from getting under protective clothing, wear your sleeves over your gloves, your pant legs over your shoes or boots (unless they are hip length), and wear all other protective equipment so that liquids run off your clothing instead of into it.



That's it so far as protective clothing for handling chemicals goes. Wear the right clothing. Make sure it's in good shape. Keep it in good shape. Keep it clean. Wear it properly. And don't contaminate yourself with it.

I want to remind you, though, that the best clothing is not sure-fire protection against chemical damage. The best protection is safe handling and safe use. Let's play it safe all around for no chemical accidents!

This talk prepared by the staff of the Industrial Department of the National Safety Council

EMERGENCY TREATMENT FOR CHEMICAL BURNS

Fellows, I think you all realize the importance of preventing skin contact with chemicals, especially acids and alkalies. I've spent a lot of time discussing the handling and storing of chemicals to prevent spills, splashes,

and breakage of containers. I've talked about the protective clothing you should wear to prevent skin contact with chemicals and how this clothing should be cared for to insure that you're protected. If we stay on our toes and follow safety measures to a T, we should be able to cut the number of injuries due to contact with chemicals way down.

Today I want to talk to you about what to do in case there is an accidental skin contact with a harmful chemical. (Foreman: Discuss corrosive acids and alkalies used in your plant.) Knowing what action to take in case of contact with one of these chemicals— and then taking that action fast—can save you or your buddy from serious injury, bad burns, blindness, maybe death.

Emergency treatment for chemical burns goes like this:

WASH OFF THE CHEMICAL. If a bottle or line breaks and you or your buddy gets splashed with an acid or alkali, run—don't walk—for the nearest emergency shower or nearest source of water. Don't waste time. Seconds count. Flood yourself with lots of water, clothes and all, until you're sure the chemical has been washed off altogether—and then stay in the water for a couple of minutes more just to play it safe. Remove all your clothes while you're in the water so your skin is washed completely clean of the chemical. (Foreman: Discuss location and operation of emergency showers in your plant.)

In case the eyes have been exposed to the chemical, it's even more important that you flush them with water quickly. The eyes are extremely sensitive and blindness can easily result if the chemical is allowed to act for any time. Hold the eye open and wash it out with a gentle stream of running water. If there is no eye fountain near, use water from a drinking fountain, partly open faucet, or wash stand. If you can't get running water into the eyes, fill a bucket or pan with water, stick the victim's head in it, and instruct him to open and close his eyes until the chemical is washed out. After an exposure to a chemical, the eyes should be washed with water for at least 10 minutes. No less!

GET MEDICAL AID IMMEDIATELY. While the victim is under the emergency shower, someone should be calling for professional medical aid—the plant doctor or nurse. It's important that this aid be gotten immediately so that proper medical care can be given. While waiting for the doctor, or if you're taking the victim to the first aid room, keep him warm and in a lying-down position. Only give first aid treatment for the burns if a doctor or nurse can't be gotten immediately.

TREAT BURNS. (Foreman: Doctors differ widely in the first aid measures they wish workmen to follow for chemical burns. The treatment prescribed also differs with the type of chemicals handled in a plant and the medical facilities. Instruct your men in the procedures prescribed by your plant physician or nurse. If you have no specific

instructions from a plant doctor or nurse, instruct your men as follows.) After you're absolutely sure that the skin has been washed clean of the chemical, apply a thin coat of sterile petroleum jelly to the burned areas and cover with sterile bandages. The most important thing is to keep the burned areas free of dirt so they won't become infected. Keep hands and all unsterile material off the victim.

In case of eye burns, after they've been flushed with water for 10 minutes cover them with a sterile bandage. The eyes should be kept closed and should not be rubbed.

Fellows, I can't emphasize too strongly the importance of getting under water after an exposure to a harmful chemical and getting prompt medical attention. Don't waste time taking off the victim's clothes, comforting him, or applying medication. Wash off the chemical! Call a doctor!

I hope you fellows will continue to stay alert in handling chemicals so we don't have any accidental exposures. But I hope you'll remember what to do in case of an exposure. Fast and proper action may someday save you or your buddy from serious injury, blindness—even death—due to chemical burns.

This talk prepared by the staff of the Industrial Department of the National Safety Council

SAFE USE OF TOXIC SOLVENTS

The purpose of this talk is to acquaint you with some of the dangers in using industrial solvents and to point out some of the ways they can be used safely.

Now I'm not up here to alarm you or to make you afraid to use solvents. Any solvent is safe to use if you take the proper precautions. Any solvent can be dangerous if it's used carelessly.

Obviously we can't discuss each of the solvents we are using now or may use in the future. But here are some recommendations which can keep you out of trouble with any solvent.

1. Remember that few of the industrial solvents are wholly non-toxic. Most of them--from alcohol to xylene—are poisonous to some extent. The question to keep in mind is not "Is this solvent toxic?" but "How toxic is it?"

2. Don't judge the toxicity of a solvent by smell or irritating properties. A lot of fellows make the mistake of thinking that the degree of toxicity of a solvent can be determined by how bad it smells or by how badly it irritates the eyes, skin, or throat. These are not reliable tests. For example, benzene (some call it benzol), smells pretty good to some people and may not burn or irritate the nose or throat, at least not until its vapor has done serious damage. However, benzene is one of the most poisonous of the common solvents. On the other hand, other solvents smell pretty awful and are highly irritating to the nose and throat, yet are much less harmful than benezene.

3. Don't use any solvent until you've checked with me or your supervisor.

4. Follow all precautions set up in this plant for using solvents--proper ventilation, protective clothing, respirators, gloves, and creams and so on.

5. Use all solvents sparingly. Keep the vaporizing area as small as possible. Don't slop it around. Keep solvents in approved cans.

6. Use the least toxic solvent that will do for the job. There's no need to use benzene if kerosene will do.

7. Don't use substitutes unless you have checked with me or your supervisor or the Safety Department and know what precautions are necessary.

8. Consider the fire hazard as well as the toxicity of all solvents.

9. Wash thoroughly if solvents have come into contact with your skin.

Never use a solvent for cleaning your skin.

10. Finally, keep on asking questions until you know how to handle solvents safely.

This talk prepared for the National Safety Council by H. W. Schilling of Trans World Airline

GROUND ELECTRICAL EQUIPMENT

Men, everyone who uses electrical equipment becomes a little indifferent to its dangers. Now in this plant we inspect our electrical equipment regularly and do everything we can to keep it safe. But I want to remind you that electricity can be dangerous. You may feel that the regular 115 volt circuits you work around can't do you much harm. But even these low voltage lines can kill you. The possibility of death from electric shock doesn't only depend on the voltage of the power supply. It depends on the resistance of the human body--which varies greatly from one person to another--and on the conditions under which a person is working.

I want to talk to you today about one important way in which you can protect yourself from electric shock--that is, by grounding your portable electric tools.

When the insulation between the current-carrying part of the tool and the frame of the tool wears through or fails in some way, the tool operator can be shocked, burned, or knocked for a bad fall. What happens is this: One of the laws of electricity is that it always tries to reach ground by the easiest path, the "path of least resistance."

If the outer metal shell of a tool becomes charged with electricity, the fellow using the tool sets up a direct path through his own body for the electricity in the tool to reach the ground. (Ground can be the earth, or pipes or steel structure that runs to the earth.) In that way, he can get a severe electrical shock, even a fatal one.

Now to protect men against the danger of the frame of portable tools becoming energized (that is, charged with electrical current), the tools we use here have a separate ground wire built into them. When this wire is attached to the earth or something that runs into the earth, it makes a better path for the electricity to reach ground than the operator--so he avoids getting shocked.

Our tools are equipped with one of two types of grounding wires. One type, the most common, has a grounding wire built into the electric cord. That's the tool with the three-pronged plug. When you plug this tool in, connection is automatically made with ground--and you are automatically protected from shock.

The other type of ground on the portable tools we use here use a standard two-prong plug. There's a third wire--the grounding wire--built into the

cord which comes out just before the plug. It has a standard battery clip on it. To use this tool safely, you have to clip the grounding wire securely to a grounded structure, water pipe, or ground rod, before you insert the power plug.

(Foreman: demonstrate both types of tools. Show how the clip is fastened to ground.)

Then, if the tool is defective, the ground clip which is already hooked up will carry the dangerous current to the ground when you insert the plug.

It's important, when you use the battery type clip, that you make sure the object you clip onto has a low resistance ground. The best ground is a water pipe, well casing, or good grounded metal building structure.

In addition to making sure that you are protected from shock by properly attaching the battery clip to a good ground before you plug in the power, there are several other safeguards you should take.

1. Report all grounding defects, such as broken ground wire, loose battery clips, or a loose connection to the outer shell of the tool, to the maintenance department.

2. If you have to work in a wet area, near a water pipe, grounded tank, or other reinforcing rods that may be a good ground, be sure to keep yourself as dry as possible. Standing on a wooden platform or wearing rubber boots will give you good protection.

3. Finally, regardless of the grounding circuit, report any unsafe condition of your tool at once. Do not use any defective electrical equipment.

This talk prepared by the staff of the Industrial Department of the National Safety Council

DRESSING HAMMER STRUCK TOOLS

We've had quite a few accidents in the past involving the use of chisels and other hammer struck tools. Most of these accidents are due to mushroomed and spalled heads. They probably wouldn't have happened if the men using the tools had taken the few minutes necessary to turn the tool in or to dress it.

Flying chips account for a large number of these accidents. A lot of men lose eyes this way. A fragment from the head of a chisel has so much force that you have little chance of seeing again if you're struck in the eye. In fact, large fragments from chisel heads have been known to kill a man when they hit in a vital part of the body—like the chest or neck.

Mushroomed heads can cause accidents in another way. It's a lot harder to strike an accurate blow on a mushroomed head. Your hammer is easily deflected. You have to hit the head much harder to get the same amount of work done. And the harder you strike the easier it is to miss. So the easier it is to hit your thumb, your hand, or your leg.

Chisels are made out of tough steel. The cutting end and the head are hardened to about 40-50 Rockwell C hardness. This gives the tool a durable cutting edge and a head that will sustain many hard blows, yet at the same time it gives the tool a soft core that absorbs the shock of the blows. It's better to have a tool head a little too soft than a little too hard. The soft head will need dressing more often, but a hard head will splinter without warning when

a heavy blow is struck. I tell you men this so you'll understand why we don't use harder tools that won't mushroom so easily. It's because a soft tool is safer—as long as you keep the head dressed.

The time to get the tool head dressed is when it has been struck so often that the head begins to spread and crack so that tiny curls begin to form at the edge. If you don't dress it then, you're in for trouble. At this point, it may take only a few more blows to cause the fragment to break and fly through the air at a terrific speed.

I want you to make it a habit to examine your tool before you use it to make sure the head doesn't need dressing. If it does, turn it in to the tool room.

Dressing is simply a matter of grinding the mushroomed or torn portion down to sound metal. Then a small radius or chamfer of 1/8 to 3/16 of an inch is

ground around the edge. A radius is preferable to a chamfer in most cases.

If you do the grinding yourself, and you should only if you are authorized to do so, there are two important facts to remember. First, only a small amount of surface should be ground at a time and the tool should be held lightly against the wheel. Otherwise the tool is likely to become overheated, taking out its temper. Incidentally, there's another good reason to dress the tool at the first sign of spalling or cracking--it will require just a little grinding to put it into good shape.

The second thing to remember in dressing a tool is this: Dip the head in water frequently. This will reduce the temperature quickly and prevent overheating and the loss of hardness.

Speaking of grinding, this is a good spot to remind you to keep the cutting edge of your tool sharp. Sharp tools are always safer than dull ones. They're easier to use, too.

This talk prepared by the staff of the Industrial Department of the National Safety Council

CARRY TOOLS SAFELY

Something like carrying tools seems like such a simple thing that we are apt to get a little careless about it. But the fact is that a heck of a lot of accidents are caused by the simple, little things. So, today we are going to discuss how to carry tools so you don't hurt yourself or someone else.

There are five main ways of carrying tools: in your hands; in your pockets; in belts (the one you use to keep your pants up or a specially designed tool belt); in tool boxes; and in canvas bags. We'll discuss each way in turn.

1. Carrying tools in your hands

When carrying tools in your hands keep them close to your body so they don't hit anyone or bump against machinery. Don't swing them. Carry them on the side away from the heavy aisle traffic. Your tools should be free from oil and grease, so they don't slip away from you and get under someone's feet. Don't carry the sharp edge of a tool in your palm -- just in case you fall.

2. Carrying tools in your pockets

Don't carry long-handled tools in shallow pockets--it's too easy for them to slip out or to catch on something.

Never carry sharp-pointed tools in pockets--either sharp edge in or out. Sharp edge in--they can cut you and your pocket. Sharp edge out--they can cut someone else. Bending over, or climbing ladders with sharp tools in your pockets is especially dangerous, since stooping or doubling over can push a tool through your skin clean as a knife. Some tools, like claw hammers, are particularly easy to carry by hanging them on the outside of your pockets--but don't. The movement of your body can knock them off, and they can catch on someone's clothing--or skin--too easily.

3. Carrying tools in belts

Before I discuss regular tool belts, I want to say a word about tucking tools under your pants belt. That's an unsafe practice. And an uncomfortable one. In order to keep the tool from falling out, you have to pull the belt so tight that it bruises your skin and practically cuts off the flow of blood. And bending down with even a blunt pointed tool in your belt can puncture your skin.

Now for tool belts. These are made of leather or webbing with keepers--or loops--to hold tools snugly. They are a darned good way to carry tools, especially if you're working up off the ground and have to have your stuff handy. Make sure that the belt stitching or riveting is in good shape and will hold your tools before you put it on, however. Also, don't force oversized tools

into the keepers since you're liable to break or weaken them and eventually drop your tools. Don't insert long tools into keepers, either. They have a tendency to rise out or interfere with your work when you're stooping. Never cut additional openings in your tool belt. You're liable to weaken it so that it will drop right off you. If you have to climb a step ladder, pull your belt up with a hand line. In this way you avoid the possibility of getting your tools caught in the rungs and upsetting you.

4. Carrying tools in tool boxes

Keep your tool box uncluttered--keeps the weight of the box down and reduces the chances of its slipping out of your hand or breaking the handle. Lay tools flat so that you can close the lid securely. Make sure your handle is in good shape--they wear out quicker than anything else. If it busts, don't replace it with rope or any other substitute--get a new handle. Finally, keep your tool box in a safe place. Keep it out of aisleways and away from the edges of benches, scaffolds, and so on.

5. Canvas bags

When you're carrying sharp tools, make sure you cover them with shields or guards so they won't cut through the canvas. Don't overload your bag. Don't use a bag that is open at the seams or torn.

That's it as far as carrying tools goes. Just commonsense precautions. But believe me, they can save a lot of injuries.

This talk prepared by the staff of the Industrial Department of the National Safety Council

USE THE RIGHT TOOL THE RIGHT WAY

We've all heard jokes about how housewives can fix anything from a jammed zipper in a housecoat to a jammed drain pipe with nothing but a hairpin, paring knife, and eyebrow tweezer.

All I can say is "more power to them." We know we can't do it here--can't do it right and can't do it safely, anyhow.

In this shop we have a great variety of tools--a couple of hundred different types. Some are ordinary tools that we all use. Some are specially-designed tools for only one or two jobs. Not only that, but we're continually adding to our tool supply. We're glad to spend additional money to get the tools we need to do our work better and safer.

So, there is never any reason or excuse for using the wrong tool. If you don't have the right tool, take the time to get it. If you have any trouble getting it, let me know. Don't let it go. Don't take chances.

Of course the right tool is only half the story. The other half is using the tool in the way it's supposed to be used. One can be as dangerous as the other. Here's a couple of glaring examples.

Did you ever see a man put a wrench on a pipe joint or nut and then slip a piece of pipe over the handle to get additional leverage? No better way has been discovered in the last 500 years to hurt yourself and ruin equipment too.

Then there's the fellow who uses a pipe wrench on a nut instead of the proper style monkey wrench. He chews up the nut and takes a long shot that

the wrench won't slip and put him out of commission for a couple of weeks.

Case number three should be locked up for his own protection. He's the guy who holds an object in the palm of his hand and tries to work on it with a screw driver pointed directly at his palm. He might as well point a gun at his palm and pull the trigger. Sooner or later that screw driver is going to slip and bury itself a couple of inches into his flesh. The result is a puncture wound. Doctors tell us it's the most dangerous kind--hardest to clean, the most likely to lead to blood poisoning.

Here's another important point, fellows. No tool is the right tool unless it's in good condition. Before you use a tool, check it carefully to be sure it's not defective in any way. Is the

hammer head secure; the hammer face free from burrs; the hammer handle uncracked, unsplintered? Are chisel, wedge, punch heads cracked or spread? Dress them if they are. Are the cutting tool edges sharp? A dull edge makes you strike harder--and miss. And

it may cause your tool or hammer to bounce. Check the jaws on your wrenches --worn or spread jaws are potential knuckle busters. If the tool is bad, don't use it. Replace it.

A dirty or greasy tool is a potential hazard, too. Grease and dirt cause slipping.

And one last point. A lot of accidents are caused by leaving tools lying around after the job is done. They cause trips, can mess up machinery, and a falling tool can do as much damage as flying shrapnel.

Let's remember this: Hand tools are like fire. They serve us in many ways. But like fire, they are a serious potential hazard.

So:

--Use the right tool
--Use it as it should be used
--Make sure it's safe to use
--Keep it in its right place

and your job will be much easier and much safer.

This talk has been prepared for the National Safety Council by E. Clark Woodward of the A. O. Smith Corporation, Milwaukee

DANGERS FROM COMPRESSED AIR

Compressed air is used to do a great many jobs in industry. It serves many useful purposes and is of great help to us if we use it safely. But if we use it unsafely or as a plaything for practical jokes it is extremely dangerous. Right within our own organization, in the past couple of years, a lot of fellows have been hurt--and hurt badly --because they or someone else didn't use compressed air properly.

We can eliminate compressed air injuries if we follow safe practices whenever we use it.

1. Wear suitable goggles, mask, or other protective clothing that the particular job requires. A lot of fellows have been partially or totally blinded by not protecting themselves properly from flying chips, dust, and liquids while using compressed air.

2. Don't use compressed air for any type of cleaning. Not for cleaning your clothes, your work area, your machine, or for cleaning anything else. You stand the chance of injuring yourself, and flying chips and particles can hurt passers-by, too. Not only that, but it's not a satisfactory way to clean up. All you do is scatter the dirt over a wider area and make the job a lot harder.

3. Never point a compressed air hose nozzle at another person or use air for a practical joke. A blast of air in a man's eye, ear, or nose can seriously injure him--maybe permanently injure him. I know of cases, too, where a blast of air behind a man "just to scare him" has succeeded so well that the fellow fell against moving machinery or on the floor and was badly hurt. The man who uses compressed air to play a practical joke can't possibly realize how dangerous this is or he wouldn't do it.

4. Before opening the air valve to admit air into a hose, see that the nozzle is properly coupled or secured so that it will not whip.

5. If a portable pneumatic tool is being used, make sure the operating valve in the tool is closed before turning on the air.

6. When changing one pneumatic tool for another, first turn off the air at the base control valve. Never kink the hose to stop the air flow.

7. Before turning on air to a paint spray tank or gun, make sure that

everyone in the booth is wearing the required protective clothing and equipment.

Let's remember these points whenever we use compressed air so we don't have any injuries from this source in this department.

This talk prepared by the staff of the Industrial Department of the National Safety Council

to prevent accidents

FOLLO
THE
RULES