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WOOD PRODUCTS and TEXTILE INDUSTRIES

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CONTENTS

LEARNING TO LIVE . . .

Learning to live—safely—was the drawing card which brought more than 13,000 men and women from the United States and 27 other countries to Chicago for the 45th National Safety Congress. These people gathered to exchange the latest ideas in safe attitudes, safe methods and safe equipment. Through speeches, panel discussions and symposiums, they acquired new ideas for helping others—and themselves—to live, work, and play safely.

This was the reason the National Safety Council was organized less than half a century ago, a time when man's thoughts barely kept pace with the industrial revolution. Since then, man has introduced an atomic age which is bringing the continents closer and has made the earth a smaller world. And now man anticipates inter-space travel!

Through science and technology, man is progressing to increasing speeds in travel and production, and increasing dangers—new dangers never before encountered. These, in addition to the everyday hazards of life, occupied the thoughts of the safety people at the Congress.

To encourage more widespread knowledge of the various fields of safety, the National Safety Council publishes the Current Safety Topics—30 volumes of condensations of Congress speeches and exchanges of ideas. Each volume is a handy reference to different phases of accident prevention. The complete set of volumes are listed on the back page of each volume.

Since the proceedings have been edited and condensed for reference purposes, the complete original manuscripts with any charts or illustrations used, are available in the National Safety Council files. Views expressed at the Congress or in any volume of Current Safety Topics are those of the Congress participants, and not necessarily those of the National Safety Council.

THE WOOD PRODUCTS SECTION
TEXTILE SECTION

This volume is a record of the sessions held at the 1957 National Safety Congress by the Wood Products and Textile Sections. The conduct of these Congress sessions each year is only one of the many cooperative activities which these Sections carry on in behalf of their members, and for the benefit of accident prevention work in the wood products and textile industries generally. The Sections give guidance in the preparation of a great variety of technical and educational material useful in the day-to-day safety programs of wood products and woodworking plants, and textile plants.

The activities of the Sections are under the direction of their executive committees, the members of which are listed at the close of this volume.

THE WOOD PRODUCTS SECTION

SAFETY NEEDS COMMUNICATING, TOO

by HERBERT E. IHRIG
staff consultant, Florez, Inc., Detroit, Mich.

America has become the greatest technocracy in the history of mankind. Aside from our being second best in the business of creating man-made satellites, this great country of ours can probably build anything bigger, better, faster and cheaper than any other nation on the globe.

Essentially, we have been, and to a great extent still are, "things" minded. When it comes to the "human" side of the equation, we are still pretty much in swaddling clothes.

To see how "mechanically" minded we are, let's take the subject of automation. The average person will tell you that automation means building an automatic factory where you put the raw materials in one end of the machine, press a button and a packaged product comes out the other end. Peter Drucker, in his book "The Next Twenty Years" says, and I quote, "The automatic factory is the end-product rather than the beginning of automation.

Automation properly does not start with production at all, but with an analysis of the business and its re-design on automation principles. The form the automatic production takes in the plant is determined by that analysis and re-design; and mechanization, the replacement of human labor by machines, is a detail of automation and not always an essential one."

MECHANICAL COMMUNICATION

Take "communication" as another example. Realizing the need for improved communication, what have we done? Quite naturally, we have attempted to solve the problem of increasing human understanding through mechanical means.

Today, we not only have the printing press and the telegraph, but an intricate system of telephones. We can talk to our homes and offices from our cars. We have "ship-to-shore," whether the ship is in the air or on the water. Before long we'll be able to dial to any point of the world without the benefit of an intermediary operator.

We have radio and television, and the newspapers, magazines, pamphlets and books which are produced every 24 hours total up into an unbelievable amount of tonnage.

But have these mechanical means really helped us? Or wouldn't a true appraisal indicate that they have merely made it possible for all of us to misunderstand each other faster!

FASTER MISUNDERSTANDING

Now, let's relate the problem of communication as it evidences itself within the structure of our business organizations. Here again "mechanics" have led the way —perhaps backwards. For the past 25 years, they have attempted to improve understanding within business groups through the utilization of such mechanical devices as pamphlets, flannelboards—yes, even elaborate closed-circuit TV programs.

I do not mean to imply that the "gadgetry" and "gimmickry" of communication is not useful. It is indeed. However, due to our mechanistic, intellectual heredity, we are sometimes prone to think of these mechanical widgets and gadgets as substitutes, rather than as supplements to the creation of better understanding.

Tremendous strides have been made in the field of golf, for example. We have easier courses, better greens, greatly improved golf balls and superlative playing equipment, yet the number of good golfers has not increased perceptibly. There's no doubt about the fact that good equipment will make a good golfer a better golfer.

But the finest of equipment will never make a pro out of a dub. What the majority of we hackers need is to know how to swing a golf club correctly. Until we know how to do that, any investment in superior equipment can only help us produce marginal results.

LOST RIGHT ROAD

And so it is with communication. Not only have we naturally looked for mechanical means of solving the problem, but in so doing we have been guilty of taking our eye away from the right road.

The problem has probably never been better phrased than by W. H. White, Jr. of *Fortune* magazine, when he stated, "The greatest enemy of communication is the illusion that we are communicating." And he added—"and the chief reason for the preservation of this illusion is that we continue to place undue emphasis on the format instead of the context."

To put it more briefly in another way—in trying to find short cuts to our communication problems, we have developed an expensive and elaborate system of short circuits!

Allow me to indulge in a "corney" example of what I'm trying to get across. Take some kernels of one of the finest types of seed corn developed in our part of the country. It's called K-29 and it comes from Fremont, Ohio. I'm not a farmer, but I'm told that this type of seed corn will guarantee taller and stronger stalks, a highly desirable resistance to fungus, and will result in bigger and higher quality yields.

SEED REPRESENTS AN IDEA

So let's assume, for the moment ,that this seed represents an idea, any kind of idea, some idea that you want to put across. After all, an idea is nothing more or less than a mental seed. We know that the idea is good—just like this seed corn is good. Now, if I throw some of these kernels out into a meeting room, will they grow? Of course not.

Let's put ourselves, therefore, in the shoes of the farmer who wants to get a record-breaking harvest of corn. What does he do? Doesn't he take a look at the field in which he wants to plant? If he finds rocks, boulders, or stumps, doesn't he arrange to have them blasted and removed? Before going into that expense, wouldn't he send soil samples to determine whether the soil is worth planting, and what ingredients it might lack?

Assuming that the effort is worthwhile, doesn't he then plow and prepare the soil and then fertilize it as needed? Doesn't he also have to worry about the amount of moisture the soil will need—maybe irrigate, if necessary? And what about the temperature factors? Doesn't he have to plan keeping them in mind, too?

It is only until he has given plenty of thought to each and all of these many and important inter-related factors that he is ready to do the planting. He knows, of course, that the planting operation itself is probably the simplest one of them all.

ACCEPT FALSE BELIEFS

Most of us have been unthinkingly educated into accepting the false concept that it is possible to pound ideas into people's heads. In accordance with this concept, we have been trained as the shock troops of communication to increase our vocabulary, learn about semantics, study grammar and rhetoric, develop our powers of logic to become public speakers, even to become ham actors or participants in some type of a "communicational show."

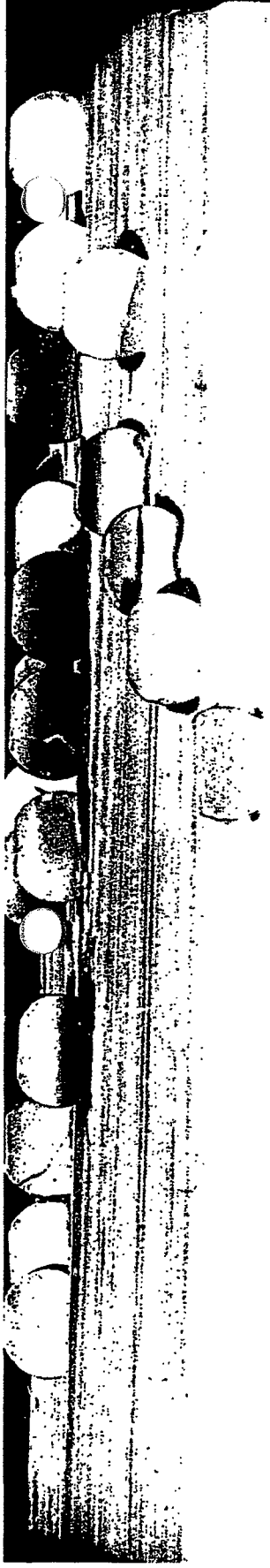
The emphasis has been on improving our ability to tell other people our ideas better. Our school systems and our business systems in following this concept have done two things. They have provided us with different kinds of hammers and have taught us how to wield them more effectively. But a hammer is still a hammer, no matter what shape or size or weight. And no matter how skillfully used, an idea is still an idea—a bit of mental seed.

Probably the greatest lesson that my company learned in the past 25 years is that it is impossible to transplant an idea as such. All we can do is to stimulate the other person in such a manner as to induce him to recreate for himself a facsimile of the idea we are trying to get across.

MUST RE-EVALUATE

This, in essence, represents a complete reversal of method—a method which requires that we make a total re-evaluation of our individual concepts of communication.

Can the gimmicks of communication help us as we look upon this problem from an inside-out point of view? Certainly. But only when they are used in the right way and at the right time. These gimmicks can perhaps be compared to the mechanical corn planter—a useful bit of farm equipment indeed when used at the right time, in the



right way, with the proper seed, and given the proper soil conditions.

Since we of Florez Incorporated are primarily specializing in sales training, our greatest opportunity to experiment has been in relation to our efforts to help our clients develop greater efficiency of marketing manpower, to assist in the marketing personnel development function of marketing.

JOB DESCRIPTION

Like many other people, we have learned the hard way. For example, the simple truth that before you can train a man to do anything, you must have a pretty good idea of exactly what you want this man to do. Out of this kind of thinking comes what is commonly known as job description.

The next truth which is equally simple is that a cabbage cannot be trained to climb a trellis—even if it is made of solid gold. Similarly, we have to define generally the kind of man who can do what the job description calls for and then go out and get this kind of a man. Now, of course, I'm talking about man specifications and the elements of recruiting and selection.

There are some close similarities between my job in the field of sales training and the work of safety personnel. My job is to help develop more effective sales manpower and this really does not differ too much from the fundamental responsibility of developing safer employees.

I have just said that in applying these principles of communication to the job of developing more effective sales manpower, we learned that the beginning point was the job description, the establishment of man specifications, and the proper recruiting and selection procedures. Is this a starting point for you in developing safe employees?

PUT SAFETY IN DESCRIPTION

It is as important for safety to be written in as an integral part of the employee's job description as it is for salesmanship to be written in as an integral part of the salesman's job description? Can the man specifications for a given job be so drawn up that the safety factor is taken into consideration?

Do the selection and recruiting processes of your company tend to eliminate the unsafe employee in the same way that a good system for recruiting and selecting salesmen will tend to screen out those men who are not readily trainable, to recognize the cabbages that cannot be trained to climb the trellis?

This, you see, is some of the important soil analysis, cultivating, and conditioning which must happen before we plant the first seed. When it comes to actually planting the seed, once again it depends upon the conditions that exist. In actually training the new man, we use all three methods—on the job training, self-study, and various types of meetings.

Within each of these situations we employ the media which seems to fit best. When you go to plant the seeds that will help make the new employee a safe employee, do you have a variety of methods and media at your disposal? When the employee is new, you have your greatest opportunity to make your broadest, deepest impression and here the devices and gadgets of communication take their proper place.

MUST RE-CHECK ALWAYS

The only way to measure the effectiveness of your communication is the constant checking and re-checking of understanding. In the development of effective salesmen we feel that the close personal supervision and an organized system for performance evaluation is the only effective way to check understanding.

Does this apply in the field of safety? Do you find the supervisor with his evaluation of an employee's performance to be a vital link in your chain of communications?

With this approach to the communications problem, I think perhaps we can see communications now not as an isolated program or campaign, but we see communications as a concept which applies beginning with the definition of the job to be done through recruiting and selection, training, supervision, and performnce evaluation.

There is only one true measure of my effectiveness as a sales trainer and that is the performance of the salesmen I have trained. We also seem to agree that your effectiveness as safety directors could be measured by the safety performance record of your employees.

In other words, how good we are is measured by how well other people perform. A few years ago we worked on a safe-

driving program for the United States Army and one of the points we made in this program was that performance was a combination of skill plus attitude.

COMMUNICATIONS GROW ATTITUDES

I think it is apparent that the development of proper employee attitudes is contingent on a broad and mature understanding of the communications concept by management. If we can understand that no matter how wide the screen is, it is still impossible to transplant an idea as such.

Remember, the best farmer with know-how and the finest seed corn mechanical planter cannot make corn grow on the floor of a meeting room. Neither can all the mechanical and visual devices in the world do any appreciable good unless a company develops a concept that communication is a process of management which begins prior to the selection of an employee and carries on through the process of recruiting and selection into his everyday contacts with his supervisor.

It is this kind of effective communication that I would recommend to help you in your job of developing safe employees.▲

HOW TO TRAIN LOGGERS

by H. J. DEABAY

safety director, Woodlands dept., Great Northern Paper co., Ashland, Maine

"How to Train Loggers" covers a broad field and varies because of different hazards caused by terrain features, snow and ice and different sizes of timber being cut. However, training is basically the same whether you teach a man to fell a tree or operate a drill press.

My experience has been in the Northeast, so my remarks will be based on cutting and handling small trees as compared to the large Western timber. In the Northeast the one man chain-saw is used exclusively, as in the lake, southern states and Canada.

The frequency of the logging industry is twice or three times greater than it should be as is our severity. It is hard to believe some companies still do not have a formal safety program in their woods operations and that others charge the safety work to someone in personnel as a secondary duty. This is certainly not the way to reduce woods accidents.

There are several reasons why the logging industry is more hazardous than most industries.

1. Work in the bush is seasonal. The lumberjack has lost time during each year. Since most work is done on a piece work basis, the men work at excessive speeds earning as much as possible while the job lasts.

2. Every cutter works with very sharp tools, i.e., axe, chain-saw, cantdog, bark spud, and works with either a horse or tractor. The new direct drive chain-saw which turns fast, is used on snow and ice, in brush, steep terrain, all weather conditions, and by all types of workers regardless of their intelligence. There is no such thing as choosing the right man for the job during the cutting season.

EXISTING HAZARDS

3. All types of uneven terrain, rocks, roots, mud, snow and ice, and other hazards cannot be taken care of with "Non Skid Paint" or "Speedi-Dry Absorbent." These hazards exist, are exposed to all kinds of weather, and have to be accepted as part of the occupation.

4. In most of our Maine forests (and in sections of Canada) there are dead hardwood trees and stubs that are a menace overhead. Some are so rotten that the least jar will cause them to fall. Many are around yards where wood is piled and along twitch trails, but it would be costly to saw them all down and would also be dangerous.

5. Our large labor turnover is another factor that has an adverse effect on our frequency. There is much discussion on how it could be stabilized, since a lot could be

and should be done. However, it can never be as stable as our mills and factories where people live, own homes, and depend on the work in that town for a living. Several incentives would help stabilize our labor and also help us keep a better caliber of men:

1. Bonuses.
2. Contracts drawn up with employees guaranteeing them a certain number of months work during the year.
3. Sick benefits insurance and retirement benefits.

TRAINING PROCEDURES

Indoctrination is one of the most important steps of any training. A new employee is more receptive to instructions before going to work. All the instructions possible should be given at this time. A successful safety program is largely dependent on the attitude of management, supervisors and the worker, but it must start at the top. In an indoctrination program, we must tell new employees what is expected of them and what they can expect of us.

They should be briefed on the company rules and policies, who will help them with problems, where the first aid room is and to be sure and get treatment for minor injuries. Men should be told about the safety clothing and equipment available for their use and protection, and of their responsibility for the safety of their fellow employees as well as their own. Make them feel we are interested in their welfare and if time permits find out something of their past and their families.

This is not always possible in our woods camps where turnover is sometimes great, but we should do what is most important. The first impression a new employee gets of his boss and the camp he is to live in, plays an important part in how long he stays at that camp and how content he will be.

FORMAL TRAINING

Formal training is given by specially trained instructors or foremen. There are many stages of training: there may be men who know nothing about the work, others who have some experience, while some may be semi-skilled.

These men should be divided into three different groups so the ones with less experience would not hinder the progress of the others. However, until labor is stabilized, this type of training is not feasible. In addition, we may feel some men need training while in their own minds they are experts. If asked to attend a training session and be paid on an hourly basis they would be apt to pack up and go elsewhere.

Our company has tried twice to train some of our American youths. In May 1952, we went to all the high schools in the surrounding areas and talked to boys 18 years old. We explained our planned program telling them they would be paid on an hourly basis until they could produce enough to make more. We showed the earnings of skilled woodsmen and estimated their earnings in two months. We also advertised our program in the local paper. Few boys showed interest but some said they might try it. On the opening day we had one recruit from the southern part of the state.

Our second attempt was in 1955. This session began after our employment manager received letters from college boys who wanted to cut pulpwood during the summer to get in shape for the football season. Eleven boys showed up and the company started its program with a very capable instructor. They were healthy, rugged fellows with no experience and had to start out with the basic fundamentals of what tools were used and how to prepare and maintain them. They were enthusiastic and started out very well. With the exception of a minor scratch, none of the boys were injured during the summer. This was quite an accomplishment because after the first three weeks the boys were producing in crews of two or three and were on their own because the instructor was with one crew at a time.

ON THE JOB TRAINING

On-the-Job training is the type of training our company has concentrated on for the past six or seven years. Most of our employees come from Canada and are skilled to some degree. "On-the-Job Training" we make extensive use of visual aids. We show safety movies and slides which emphasize the proper and improper working habits. We also have camp meetings with the men to discuss work hazards during the current season, brief the men on our accident analysis and discuss means of elimi-

nating reoccurrance by better working practices and techniques.

Our foremen see their men at least twice a week. Unsafe practices are corrected and any possible unsafe condition eliminated. Here are some of the common unsafe practices noted:

1. Bucking on cluttered yard (too many logs yarded in).
2. Bucking too close to pile.
3. Starting chain-saw from knee.
4. Failure to clear around tree to be felled.
5. Walking with chain-saw with motor running.
6. Men working too close together.
7. Occasionally a man is found not wearing his hard hat.

Common unsafe conditions are:

1. Working on yard with a dry stub or tree overhanging.
2. Poorly maintained tools.
3. Working on icy truck bodies.

These are only a few of the unsafe practices or conditions that may be noted. If an employee needs more attention than the foreman can give him, we could send him home because our Bond Quota calls for *SKILLED* woodsmen. However, this is a rare case. If the man was willing he could work at our experimental camp where the supervisory force has time to train him properly.

When making his rounds in the woods, the foreman talks with each crew three to five minutes about some of the hazards or an accident that happened at another camp. The safety supervisors visit the men in the woods and work with new foremen to assist and encourage them to speak to the men. One important, never ending task is keeping our employees safety conscious.

It is a foreman's obligation to inculcate a sense of individual responsibility in each employee, to himself and his fellow worker. To accomplish this, it must be made a daily task that is never completed. Should an accident occur, our foremen and clerks are trained in first aid to make a man as comfortable as possible until a doctor arrives or the injured is transported.

SUPERVISORY TRAINING

Supervisors are not necessarily all good instructors. Therefore if we expect them to do "On-the-Job" training, they should attend an instructor training course. Most insurance companies offer this service to their insured.

Good instruction is as important as good tools. A man should be told why he should do something, and should be shown in an easy manner, and observed while doing it. The supervisor should return frequently at first to make sure the job is done as he taught it.

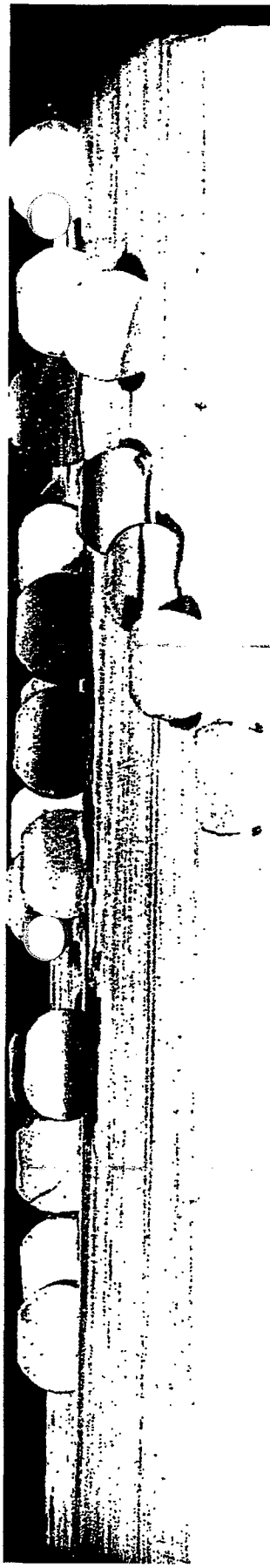
An annual refresher training course is almost as important as the initial one. Some supervisors have done a better job of instructing after they had the course for the second or third time. There are steps and techniques that are a MUST for effective instruction. These may not be fully retained by the supervisors until they have taken the course for the second or third time.▲

SAFETY IN THE SMALL SAWMILL

by FREDERICK B. MALCOLM

technologist, Forest Products Laboratories, U. S. Department of Agriculture, Madison, Wis.

The numerous scientists on the staff of the Forest Products laboratory study every property of wood—how strong it is, how it can be made stronger—its chemical nature—what can be made with the chemicals derived from it—how it can be made more useful. In other words, these men are trying to make a better way of life through the use of wood. Why do I emphasize the small sawmill? A brief sketch of the character



of the industry will be helpful. In general, there are 50,000 sawmills that annually produce 36 billion board-feet of lumber products. One-half of this amount, or 18 billion board-feet, is produced by 2,000 large sawmills. The other 18 billion board-feet, are produced by about 48,000 small sawmills, each of which cuts less than 5,000,000 feet of lumber a year. It is this group of small sawmills with which I am primarily concerned.

They are operated by small businessmen—rugged individuals—and are located in the timbered areas or rural farm areas of every state. On the average, these operators employ no more than eight men, although a number employ as many as 30, depending upon the extent of their logging and remanufacturing activities. This is not a large labor force per sawmill, but collectively it is, sizeable.

In many small communities these mills are an important industry, and most owners have a strong sense of responsibility for every employee. These small units are essential tools in the effective harvesting of our timber supply—one of our most important natural resources.

SMALL MILLS AID IN EMERGENCIES

About 75 per cent of our private commercial forest land is in the hands of four million farmers and other owners of small timber lands—in tracts of less than 5,000 acres. In many tracts the small sawmill is the most efficient method to harvest timber.

This is another reason why the small sawmills are a highly important part of the lumber industry and why it is important to keep them operating. In times of emergencies such as disastrous hurricanes that blow down huge areas of timber, these small units can quickly move in and harvest the timber before it spoils.

Few of these small mills operate anywhere near capacity. The large mill, on the other hand, is operated near capacity because the owner, with a large investment, cannot afford to do otherwise and increased production requires additional equipment and men.

Consequently, during World War II the small sawmill was an important source of increased production when lumber was critically needed. For the most part this was accomplished not by adding men or equipment but simply by increasing the operating efficiency of the mills and by operating more days of the year.

The unfortunate part of this whole picture is that small operators usually work so hard they seldom recognize that efficiency is the key to greater profits. Large mills readily recognize the need for efficiency and often hire special engineering firms to solve their problems. The small mill owners generally cannot afford such services.

Added to the small sawmill operator's difficulties is the fact he has the reputation of being a poor financial risk and of producing poorly manufactured lumber. But that picture is changing. Today a large number are efficient, produce accurately made lumber, and are quite successful financially.

These usually produce three to five million board-feet annually. Unfortunately, there are many small mills producing large volumes of lumber not nearly so efficient because they operate close to break-even cost margins. They are so absorbed in keeping out of financial difficulties they fail to see inefficient and unsafe practices which cost them money.

As a part of my work, I help small sawmill operators improve their practices. This responsibility is met through research on ways to improve small mill operations and by developing informational literature on improved practices. But one of the best mediums is to work directly with these people showing them their problems and how to overcome them.

PERSONAL CONTACT BEST

Because it is impractical to visit many mills individually, we work with state forestry agencies, forestry colleges and other organizations, conducting short courses or sawmill clinics. As many as 200 sawmill workers may attend, although small groups of 25 to 35 are best to work with. We cover most phases of small mill operations and their associated problems. But the successful meetings are those run for more than one day covering problems in more detail and giving individuals more time to "air" their problems.

Prominent among the subjects covered is production efficiency and its relation to reducing operating costs, and mill setup and alinement. Worker fatigue from unneces-

sary lifting and carrying contributes to production slowdown. Associated with this is that unsafe conditions and practices increase production costs. Workmen's compensation insurance is a direct cost that operators readily recognize. However, few small sawmill operators recognize that unsafe practices contribute to his cost of operation.

However, the small operator sincerely wants to practice safety but does not know how without interfering with normal production. In the past year I have been emphasizing safety as a factor in production costs, although I spend only about 15 to 30 minutes on safety as it applies to efficiency in sawmill operation.

My approach is to show them unsafe operating conditions that contribute to inefficiencies and higher production costs. I use pictures of actual conditions taken at various mills to point up my discussion.

SLANTED LOG DECK

One picture shows the log deck has considerable slant, and it is obvious the logs are heavy. They are restrained from rolling only by chuck blocks. The question here is, how can the logs be efficiently and safely brought to the carriage?

The workers must pull the blocks and run. A badly bent turn-down device is mute evidence of this. The sawmill carriage and track likewise had borne the brunt of pounding by similar logs. A slip, and a man can be badly injured or killed. The poor design of the mill deck slows production as well as being unsafe.

Another picture shows a worker dodging a log overhead. The crane operator was being crowded to unload logging trucks and was swinging the logs directly to the mill deck. The man in the center was supposed to be a spotter, but the crane man could not wait for him, hence the crew was not forewarned. It almost was an accident. The mill manager was with me at the time, and measures were taken to correct the situation. Nevertheless, these men were constantly conscious of looking for danger, and their actions—and consequently their production—were slowed.

One picture of a man chopping truck stakes shows a practice sometimes outlawed. Trucks must be equipped with safety trip stakes. However when wooden stakes are used, the truck driver chops the stakes nearly through. If he chops too deep, the entire load will come tumbling down on top of him or his helper.

Another hazard is caused when a sawyer reaches for chips alongside saw to remove chips that wedge against the saw. A slip, and the sawyer may lose an arm or his life. Another stunt sawyers sometimes pull is brushing the saw with their hand to find out if it is overheating.

In all such cases, the tax cost is only a minor consideration. The really severe cost is the loss of a key man, and possibly one's entire business, because of one careless act.

DANGEROUS KICKBACKS

The third area extremely dangerous is kickbacks due to jamming saws which are one of the main causes of accidents at the edger. The board through the edger is cut on the bias, because of poor mill layout. But equally as important was the dangerous working situation. Once an edgerman tried to slow down his end by holding it. One-half slammed back against the end of the mill just missing the sawyer. The mistake was in placing the edger too close to the headsaw. The edgerman did not have room enough to handle long boards. Not only was this a definite hazard, it greatly reduced mill production because the sawyer had to wait until the edgerman was out of the way.

A hazard that small sawmill operators do not recognize is failure to shield moving shafts, pulleys, and belts. The small mill is not the main offender, either, for many larger mills are equally at fault. Often the end of the saw mandrel and the driven pulley are practically "ready to reach out and grab" a loose piece of clothing. Even more hazardous are keys that stick out from pulleys attached to the ends of shafts.

AID MILL OWNERS

Until this past year practically no concentrated safety effort has been made to help small sawmills. They occasionally received safety literature, and a few operators posted it at their mills; but such cases were the exception rather than the rule. Nor does that material constitute a safety training program. Responsible for safety programs among these small operators is of course, the mill owner. But how can he start a

safety program when he does not know how to go about it? He needs help.

This past year I asked at each of the 30 sawmill clinics how many had had safety inspections from any organization or agency. In 26 clinics only scattered hands were raised; at a few, there was no show of hands at all. At the last clinic I attended, only 3 of 25 attending raised a hand—and that was in a state with one of the highest accident frequency rates.

If safety inspections at such mills are just casual visits, how can you expect them to have a safety training program?

Small operators may well ask whether, if they start a safety training program, they will get their insurance rates reduced. If not, they may not understand how they will benefit. Someone must show them, and there must be concrete evidence that their efforts are being appreciated.

Some effort was made this past year; nothing in the way of a broad safety program, but still a start in the right direction. The Northeastern Logging Congress, spearheaded by Fred Simmons, logging and sawmilling specialist of the Northeastern Forest Experiment Station of the U. S. Forest Service had a panel discussion on small sawmill safety as a part of its program this spring.

Kenneth Compton, professor of wood utilization at the State University of New York's College of Forestry, devoted a section of his small sawmill short course early this fall to sawmill safety. These are excellent starts, but unfortunately they are only "a drop in the bucket" compared to the need that exists.

SAFETY SAWMILL CLINICS

Not only that, but safety is not the primary work of either of these men. They are doing this because they recognize the tremendous need. However, there is a great, immediate need for safety men to spearhead some of this work. Possibly this should not be done strictly as safety training sessions but rather as overall sawmill clinics in which good safety practices are given the spotlight.

These small operators are not going to be converted overnight. One thing that must be avoided if possible is the mandatory attitude of "do it or we shut you down." Regulatory measures have been with them for years, and to clamp down suddenly or to initiate new measures would only hamstring the industry.

These operators work on a small profit margin, and if another burden were placed on them, one which they do not understand, many would shut down. These men need to be shown that good safety practices pay off, and helped to accomplish it.▲

DEVELOPING SAFE WORK METHODS

by WILLIAM E. HUIE

personnel & safety supervisor, Crossett Lumber co., div.
The Crossett co., Crossett, Ark.

Regardless of whether or not our plants undertake a *methodical job-safety analysis* in the near future, we will benefit from a description of something about the techniques and its purposes and how they are accomplished. Within relatively few years, accident prevention has progressed from a hit-or-miss proposition to a technique closely approaching the scientific method.

The humanitarian appeal to management and workers is not as great today as yesteryear. Today, methods are employed which isolate and identify the causes of accidents and which permit direct and positive action to be taken to prevent their recurrence. Accident prevention must be based on facts which clearly identify the problem.

The techniques approaching the scientific method work nearly 100 per cent with the exception of lumber industry—I am talking about southern sawmilling. Due to the type of labor employed in our sawmills, it would

pose a big problem to get away from the humanitarian appeal to these workers. Although we as supervisors understand the technical side of our problems, we *must,* appeal to the humanitarian side of our employees.

There are four steps in a "Job-cycle":

"JOB-STEPS"

A "job-cycle" is a unit of work, from the time it begins to the time it is completed. A foreman or supervisor must analyze an operation to some extent before he can come to any sound conclusions about safe work practices, guards, or protective equipment. In some jobs, such as inspections or assembly work, the basic work cycle may be completed in minutes. In others, such as certain milling machine operations, the cycle is quite complex, sometimes involving two or three days time.

However simple or complex the cycle, the objective is to list, in logical sequence, every step taken in completing the unit of work you have set out to analyze. Include every single element, every action, every inspection, every delay, everything that is involved in accomplishing the job purpose. The more complete the breakdown, the better the chance for improving the operation from the safety or health standpoint.

Once you have the whole pattern down on paper, double check it with the most experienced employee performing that particular job. By combining your knowledge and observation with his, you should be able to break the job down to its finest details.

The next move is to list after each step in the job cycle, every exposure to potential danger, every health hazard that is involved. Indicate the exact cause and its source. Keep looking, questioning, experimenting, imagining, analyzing, until you are positive that you have combed out every potential hazard for every step in the job cycle.

"ACCIDENTS CONTROL"

Looking over the entire job pattern, ask the following of every detail: Is it necessary? What is the purpose? Can it be eliminated through substitution or change? Can it be combined with other details to reduce exposure, cut down on handling, storage or transportation? Can any details be rearranged for smoother sequence, to make the job easier and simpler? Can any details be simplified to reduce or eliminate the danger?

Searching questions such as these are all important, because in this questioning process ideas for improvement are usually generated. The ideal action, of course, is to wipe out the exposure if at all possible: substituting a safe material or process for an unsafe one; replacing manual with automatic feed; changing the design or operation procedure to eliminate handling, and smooth out a dangerous kink or erase an unnecessary job step.

Sometimes the only answer will be to guard an exposure, fencing off a hot spot with a barrier guard, developing some adequate way of keeping the operator's hands away from danger. For unavoidable exposure, protective equipment is often the best control: goggles, face shields, safety shoes, ear protectors, aprons and gloves.

After you have exhausted all physical controls, there is still the possibility of special instruction, warning, and retraining as control devices. If the exposure cannot be eliminated or safely walled off, the employee must be taught the best possible method to avoid injury, and it will take persistent education and supervision to see that he uses this method.

"FOLLOW-THROUGH"

When the analysis brings about changes in equipment, arrangement, operating methods or work practices, you must thoroughly sell the employee on these revisions. It is important that he clearly understands the reasons for the change. Those employees who assisted in the analysis and the planning of controls will have a natural enthusiasm for seeing that the new method is constantly in effect. This is one of the valuable benefits of "job-safety-analysis" work.

Finally, remain alert to the necessity of keeping job safety breakdowns up to date. Changes in materials, processes, and equipment often create new exposures, and the necessity for new controls. There is a need for constant analysis in industrial supervision, for change and progress are the natural laws of our existence.

In accident prevention, and in the general business life, we never have the final answers to anything—there will always be a better way and a better result.▲

DOES SAFETY TRAINING PAY?

by A. R. MOBBS

manager industrial relations, Abitibi Power & Paper co., Ltd. Toronto, Canada

As the largest section of our operations is located in Ontario, I will concentrate my next few remarks on that province.

The Ontario Workmen's Compensation Board administers the Workmen's Compensation Act. The original Act came into force on January 1, 1915. An article entitled "The Workmen's Compensation Act, How It Works," published in *ABITIBI*, our employee magazine in April 1929, was written by Victor A. Sinclair, K. C., who was then chairman of the Ontario Compensation Board.

"The Act was passed in the year 1914 but came into force on the first of January 1915, and so accustomed have workmen become to the fact that the Act is in force and that they can rely on its provisions that practically all except the older workmen have forgotten the conditions which existed prior to the Act being brought into effect, when the workman in case of being disabled by accident in the course of his employment either had to depend on such voluntary contributions as were made by his employer to him or had to endeavour to procure damages by an action at law.

DIFFICULT VERDICTS

"If an action were brought, usually he might be delayed from six months to a year in getting his action tried and having any appeals which might be taken disposed of, accompanied by large legal costs, and in the end. if he were successful, so much would be taken up in costs that the actual amount received by the workman would be small, even in cases of serious injury.

"There was also the difficulty of recovering any verdict in such action because in the first place he had to establish that his employer had been guilty of some negligence, either in the plant itself or in the machinery used in it or in his method of carrying on the business, and that there was some carelessness on the employer's part which caused the accident.

"Also the employer had a number of defenses, such as contributory negligence, which would deprive the workman of his verdict if he had in any way contributed by his own carelessness to the accident, or if the accident had been caused by the negligence of a fellow-workman who was not in the position of superintendent or foreman he would not collect. So that the workman had little real compensation for injuries received in the course of his employment."

This was written 28 years ago.

The Workmen's Compensation Board endeavours to administer justice to the injured man, speedily and humanely, and it has three main motivations:

- The prevention of the accident in the first place.
- Failing this, the paying of maximum benefits at the least possible cost to the employers.
- The return of the injured workman to employment in the shortest possible time and with the minimal permanent disability. This of course requires first-class medical and hospital treatment.

Their schedule of benefits to the injured workman is not exceeded anywhere and the administration costs are low; on the average 92 cents of the employer's dollar is spent in one way or another on the injured workman. Maximum weekly compensation is $72.11.

The average rate charged in all indutsry, from mining and heavy logging to the needle trades, is approximately $1.19 per $100 of payroll. As the Act forbids litigation, there is no wastage on lawyers' fees.

PERMIT INDUSTRY SAFETY GROUPS

Another important feature of the Act is the provision to allow the Board to assist all Ontario industries in accident prevention by permitting companies in the same industry to form an association to promote and carry on the work of prevention of accidents. The Board may make financial grants to assist them.

The pulp and paper industry in Ontario has its own, the Ontario Pulp and Paper

Makers' Safety Association, non-profit and without share capital. This Association is governed by a Board of Directors consisting of 20 top-ranking executives of member companies. Together these companies make up 96 per cent of the total payroll in the industry.

A new Board of Directors is elected each year at the annual meeting of members. The directors in turn choose the president and vice-president from their number. The only paid officer is the efficient secretary-engineer, D. B. Chant.

STEERS CLEAR OF AUTHORITY

This Association believes that accident control in industry is primarily a management function, inseparable from other duties and responsibilities of productive organization and leadership. The Association avoids any attempt to perform that function for its member companies and confines itself to activities designed to encourage, stimulate and assist them to do a good job of controlling work injuries in their operations in frequency, severity and cost. It employs no inspectors or field men and does not try to maintain a routine inspection service.

The Association believes that accident control is one of management's responsibilities and should be carried out with the same efficient attention to detail as is given to all other operating functions.

We in Abitibi have always been interested in accident prevention. In fact, in our mill labor agreements, one of the clauses reads: "The mutual interest of employer and employee is recognized by this agreement for the operation of the entire plant under methods which will promote to the fullest extent: safety to the employee, economy of operation, quality and quantity of output, cleanliness of plant and protection of property."

FIGHTING HAZARDS

In labor agreements with our woods workers we say: ". . .. and to ensure to the utmost extent possible the safety and physical welfare of the employees, economy of operation, quality and quantity of output and protection of property."

In 1953 in most of our mills and woods operations we had safety first committees on which hourly workers and supervisors served with great interest, discovering unsafe conditions, pointing out dangerous practices, studying accident causes and devising ways to prevent them. We had machinery guarded and encouraged the use of goggles, respirators, masks, hard hats, safety shoes, buoyant vests and gloves. But in spite of everything, our lost-time accidents in 1953 in the mills were 191 and the woods 937.

Late in 1953, our president, D. W. Ambridge decided that he would concentrate his close attention on accident prevention and safety. Besides the human suffering and loss of earnings to the injured, he was sure that accidents were causing us increased production costs.

Authorities on the subject today estimate that the indirect cost of accidents are at least four times the known costs. Indirect cost items are: confusion and loss of production at the time of the accident, training new workers with loss of production and quality, possible equipment damage at time of accident or in training, cost of safety programs and other miscellaneous items.

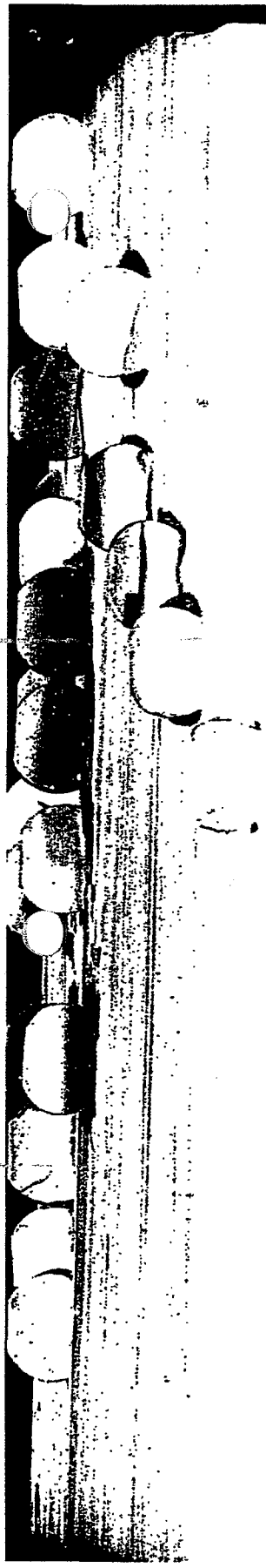
We have a Quarter Century Club in our company with nearly 1,000 active members. On the occasion of their 1953 annual banquets in the company, Ambridge in his message to them, said: "The number one problem in our industry is safety and I can think of no better or more challenging one for your group to take on.

TARGET FOR THE YEAR

"Let this be your target for the coming year—to eliminate the needless human suffering caused by accidents. I would like each member of the Quarter Century Club to make a realistic effort to assist wherever and whenever he can in this most humane cause. You set the example for those who do not have your quarter century of experience.

"Take an active part on safety committees. Form a committee of your own and tell us what we need to do to make safety work. Consider yourselves 'commissioned' as of now to point out to individuals hazards and any unsafe act you see being committed. Make safety a religion and your efforts will have the blessing of all."

He also talked to Toronto office officials and to all mill and woods managers, stating that their responsibility for safety was as important as operations.



He also told presidents of the International Unions with whom we have labor agreements of our campaign. They replied in turn endorsing the work. Copies of their letters went to all the locals. Safety committees in the mills and woods were organized or improved. They included members of supervision and workmen.

For the first time, a safety committee was organized in our Toronto office to keep close tab on the mill and woods activities and to advise and act as a clearing house for all safety information between the mill and woods divisions of the company.

So, in 1954, Abitibi Safety Year was launched.

MEETING OF DIVISIONS

It is our custom each year to hold a labor-management meeting in Toronto to which we invite a delegate from each of our union locals and their international officers and company representatives from our divisions. At these meetings we have frankly discussed problems of interest to all of us. So in March, shortly after our campaign had started, we held the 1954 Conference.

The subjects were "Economics" and "Safety." The principal speaker on safety was Al E. Brown who at that time was vice-president and regional director of the International Brotherhood of Paper Makers, now the United Papermakers and Paperworkers, on the west coast. Brown told us of the good work being done by the industry on the Pacific coast, and following his address there was a challenging question and answer period.

As proceedings of our Conferences are printed and distributed to all employees, this conference also played its part in highlighting safety and accident prevention.

Also about that time, after a survey of film libraries, we found that there were not many safety films available in Canada dealing directly with mills and woods operations. So we produced two films—one, the use of hold cards on machinery when shut down for repairs or inspection, which we called "It's In The Cards" and the other, for the woods operations, portraying the use of safety equipment, shoes, hats, buoyant vests and gloves. It is called "Saga of Safety Sam." This film was produced in English and French.

The preparation of the scripts and shooting of these films all helped to highlight safety and they were well received by our employees. They are still in service—refreshing older employees' memories and instructing new employees. The film "It's In The Cards" was awarded top honors by the National Safety Council's National Committee on Films for Safety in the Occupational Field for Non-Theatrical Films on Safety Produced in 1954.

NEED POWER SAW FILM

Today, if we were making a similar woods film, we would have to include scenes showing the handling and maintenance of power saws. In our woods operating year 1953-54 when the films were being made, wood cut by power saws was only 12 per cent but last season it had increased to 82 per cent and I am sure that it will be higher again this season.

There is no doubt that the introduction of power saws to woods operations has created additional hazards and problems and we try to make sure that our employees recognize them. In fact, at one of our divisions, we have had experienced men go through the woods inspecting and examining power saws in the same manner as a highway traffic officer inspects automobiles for defective brakes. If the saw is in good order, it is so tagged. If not, and if adjustments cannot be made there and then, the man must return to the camp and get his saw fixed.

EFFORTS PROVE EFFECTIVE

Before 1954, we had trained many of our foremen in job safety. We again gave them and many members of ther crews J.S.T. Courses. We utilized every device we could find to keep safety continuously in front of our employees. We used our employee magazine, *ABITIBI;* held more St. John Ambulance First-Aid Courses and held contests in the mills and woods. In the woods we gave a turkey dinner each month for the camp with the best lost-time accident record in its division.

This combined effort by all of us from the president down, ended by reducing the number of lost-time accidents in the mills from 191 in 1953 to 98 in 1954, and in the woods from 937 to 648 the same year.

The 1954 results proved what sustained effort can do—and I mean sustained—be-

cause accident prevention must be everlasting and we in Abitibi are continuing on that basis. Since then we have continued our efforts to eliminate accidents. For instance, last year some men attend a Lateiner method of accident control course and they, in turn, have instructed all mill foremen.

Briefly, our record of lost time accidents to date has been:

	1953	1954	1955	1956	First half 1957
Mills	191	98	101	102	49
Woods	937	648	531	476	237

I have not confined myself entirely to training because we think that our other activities are equally important but we are convinced that the only effective way to approach accident prevention is from the top and all management, from the president down, must consider safety on the same basis as every other important business function.

Does safety training pay? We believe that it does and that a good accident experience reflects an efficient operation and both together add up to lower costs.▲

TRAINING FOR SAFETY ATTITUDES

by GLENN F. GRIFFIN

director, Industrial Training, National Safety Council, Chicago

Attitudes of people are undoubtedly the most important factor in the prevention of accidents. For this reason we should give much serious thought and study to attitudes to understand them and do something about them.

There is danger that the term "attitude" will fall into misue, that it will come to cover many unexplained or difficult to explain kinds of conduct, something like the word careless which is so carelessly used.

For example, a man neglects to lock out an electric switch when he is working on a line. He knows he should lock the switch but he doesn't. So we say, it's his attitude. Another hurries too much to get a job done and doesn't secure a ladder and falls. He has been told. He knew better. Then why did he do it? Attitude.

The American Standard Code for Classifying injury causes lists the several improper attitudes thus:

—Willful disregard of instruction
—Violent temper
—Absent-mindedness
—Willful intent to injure
—Nervous, excitable, etc.
—Failure to understand instruction
—Improper attitudes not elsewhere classified

"Violent temper, absent-mindedness, nervous, excitable, etc."—they are not attitudes. To call them attitudes, to think of them as attitudes is harmful, because we tend to concentrate our efforts on these overt manifestations and miss entirely the real attitudes which underly them.

UNSAFE ATTITUDES

What is an attitude? Again, I am not searching for a dictionary definition, but for one that most of us accept and use in everyday conversation. An attitude is a belief, a way of thinking or feeling about things, a principle, a conviction, a usual way of reacting. Literally, an attitude is a position we take.

President Dearborn, a few years ago, drew up a list of unsafe attitudes which he called seven deadly beliefs.

1. I'll get it when my number comes up.
2. It can't happen to me.
3. It's the law of averages.
4. Danger is the price of progress.
5. An accident is an act of God.
6. I'm tough, I don't bruise easily.
7. Safety is sissy stuff.

And here are a few I have added:

1. Resentment of authority.
2. I don't like my boss.
3. They can't teach me anything about this job.
4. Practicing safety slows me up.
5. The other fellows will laugh at me.

6. It looks smart to take a chance.
7. Slogans and posters and contests and safety meetings are for kids.

A man who holds any or several of these attitudes is likely to disregard instructions, fail to learn safe practices or to follow them when he does learn them. He may lose his temper and blame bad luck or somebody else for his own mistakes. In short, he is likely to act unsafely and hurt himself and others.

SAFE ATTITUDES

This paper began by discussing attitudes for safety and now the subject is attitudes for accidents. Let's change that. Here is a list of attitudes for safety. If we expect other people to develop safe attitudes, indeed, if we want to develop them ourselves, we must know what the safe attitudes are.

—Accidents can be prevented.
—Preventing them is more important than blaming the people who cause them.
—The company I work for is sincerely trying to prevent accidents.
—The safety regulations are reasonable and important.
—The foreman is for safety.
—The fellows I work with will respect me for practicing safety.
—Safety is a mark of intelligence and skill.
—It's dumb to take chances.
—I have a responsibility to correct any hazard I see.

Because management attitudes are important too, here are three especially for management:

1. Safety is good business.
2. Safety promotes efficiency.
3. We can't afford to have accidents.

ACCEPTING THE PRINCIPLES

Simple, aren't they? If we could get these attitudes universally accepted, we might have the accident problem licked. How can we do it?

Can we give a course in attitudes? Can we tell people how they should feel about things and have it take? For supervisors, there are many good courses, but workers and supervisors, too, we need to think of training as something a good bit broader and deeper than the classroom. Training is forming or shaping, giving direction to, stimulating the growth of a person in the way we want him to go.

The first, and possibly the most important influence in training is the environment. New attitudes develop in an environment favorable to them. Many things make up the environment: physical surroundings, the boss and the other employees.

By physical surroundings I don't mean new buildings and air conditioning. I do mean that the work area should be clean and orderly. The comfort and safety of the employees should be considered. Unnecessary noise, smells and extremes of temperature must be eliminated. Good attitudes can develop in a place like that. They don't stand much chance in the other kind of work place.

EMPLOYEES' BEHAVIOR ESSENTIAL

The boss is part of the environment. And fellow employees are an important part of the environment. Their influence is probably greater than that of the boss, company management or the safety engineer. Think how much time employees spend together, compared to the amount of time the foreman or any management person spends with them.

Tell a new man the importance of some safe practice, wearing safety glasses for example. He agrees and looks around to see what the other fellows are doing. If they are not wearing glasses, you know what happens. But if they are wearing glasses, the new man will go along.

If you want to build favorable attitudes don't overlook the crew and their influence on one another. Get them into the act. If you have a gang with pretty nice attitudes, treasure that possession, cultivate it, and don't let any person or any incident spoil it.

Attitudes are influenced strongly by two kinds of examples. First is the boss who practices what he preaches, who, if he says you should wear safety shoes or a hard hat wears them himself. The second kind of example is that set by the management, the foreman and the safety engineer, who think safety is important. If a safety suggestion is made it gets prompt attention. They are willing to spend money for safeguards or safety activities. Never forget that a guard does more than keep hands out of danger. It shows everybody that the boss thinks

keeping hands out of danger is important. And that goes a long way toward building good safety attitudes.

INSTRUCTION REAPS RESULTS

Given a favorable environment, and a good example, the next thing that influences attitudes is instruction. Instruction starts with the first introduction when a man comes to work. He needs to be told what the company believes and practices about safety. You can't assume that he knows and you can't leave it up to a printed book or posters on the bulletin boards. You need to tell him, simply and earnestly, without a lot of phony preachments.

The old timers who weren't told this when they came to work. should be told also. Make a project of it. You'll be amazed at how much they will appreciate it and how many will tell you they never heard it before.

The next kind of instruction is, of course, job instruction on every job and repeated as often as necessary. This is not off the subject of attitudes. Knowledge and skill are one thing and good attitudes are another. But we can not have the attitudes without knowledge and skill.

If a man knows a job thoroughly, his attitude is likely to be good. Moreover, when a foreman gives good, careful job instruction he gives evidence that he thinks the man and the job are important. That's a strong support for a good attitude toward the job, the foreman, and safety.

SUPERVISION BENEFICIAL

Instruction leads to supervision. If every man has been carefully instructed about every job, the foreman needs to correct any worker who does the job unsafely or in a manner differently from what he was taught. And he needs to do it every time he observes it. Two great weaknesses of supervision are reluctance to correct people for wrong work methods and lack of skill in correcting them.

I know foremen who get scared or angry because they see things getting out of hand, but more often than not, these situations come from letting wrong work get by because the foreman doesn't want always to be griping about something.

Bad attitudes develop where supervision is lax and men are never quite sure how much they can get away with. Then, when laxness leads to a serious mistake or a bad accident, comes the big blow-off. Good attitudes develop in a department where supervision is firm and consistent and decent.

Finally, good attitudes about safety are formed by talk. I don't mean preaching. Irving Lee said that preaching is the great instrument for strengthening beliefs that people already hold, but for changing beliefs, preaching is such a direct assault on the personality that it arouses resistance.

LET'S NOT PREACH

No, I don't mean preaching, I mean lots of talk in small meetings and with individuals about accidents and safety. Supervisors should talk with workers in the same way we safety people talk among ourselves, the subject being, "How can we prevent these accidents, or this accident."

They should consider the whole problem, the unsafe condition, the unsafe act, the wrong method, and they should agree upon remedies and help to carry them out. When they do that, every worker tends to become a safety man. When their minds turn to the subject of how we together can prevent accidents, we will have achieved what we have hoped for in their acceptance of good safety attitudes.

SAFETY IS PROFITABLE

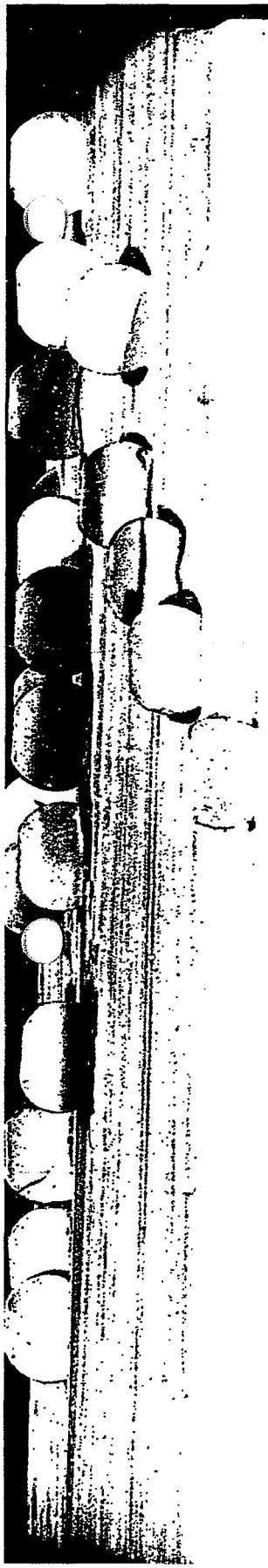
To build safety attitudes we need to know what the safety attitudes are. It is profitable to spend time discussing them with associates.

The first requisite for attitude building is a favorable environment. Management and supervisors must set an example of safe practice and an example that they think safety is important.

Instruction, the great cure-all for social problems is necessary to build attitudes; instruction in management safety policies, instruction in how to do every job.

Supervision follows instruction. Bad attitudes grow out of lax supervision. Good attitudes develop where supervision is firm and fair and consistent.

Finally, taking people into our confidence, talking out our mutual problems with them, giving them something to do for safety, getting them onto the team, is the ultimate goal. When we do that we quit worrying about attitudes for safety. The attitudes will be OK.▲



USING AMERICAN STANDARDS IN SAFETY TRAINING

by HENRY G. LAMB

safety engineer, American Standards Assn., New York city

Training can be simplified by the use of standards. Some people have defined a standard as a solution to a recurring problem. A standard solution available for instructors saves him the time and effort of finding a solution of his own, and helps him to get on with the job.

In any training program there must first be standard tools, standard processes or procedures for doing the job, and lastly standard procedures for training.

American Standards are just one of many working tools for the instructor. Like any other workman with any other tools, he should know their strengths and their weaknesses.

American Standards are agreements reached after discussions and consultations between the representatives of the various national organizations which have an interest in the problem. The best experts in an organization meet with the experts of other national organizations. When these representatives come to an agreement, it is approved as a standard. It, therefore, seems safe to say that an American Standard on any one subject probably represents the best group thinking of the best experts on that particular subject.

HOW STANDARD IS DETERMINED

One weak point of an American Standard is that too frequently a standard simply states a specification, but does not tell why this is required, or how the committee came to this conclusion.

There are many situations when the committee actually bases its final decision upon long and expensive research on the subject, but there are other times when the committee just has to use its best judgment in coming to a given figure or value.

Whenever a training instructor tells an employee what he should do, he should also explain why it is important for him to take that particular action.

To overcome this difficulty, several American Standards now include an appendix which provides a discussion of the standard, and sometimes includes why a certain value was selected. The latest development on this point is the newly approved American Standard Safety Code for the Use, Care and Protection of Abrasive Wheels, B7.1-1956. Here an entirely new format was used. The left-hand column printed in bold face type states the specific requirements of the standard. In the right-hand column on the same page, appendix and explanatory material in light face type tell why certain provisions were included or give helpful information on how to achieve the objective of the standard.

SAFE PRACTICES IN STANDARDS

Much of the American Safety Standards is devoted to specifications for machines and physical conditions. These may not be of too much help to the training program. Even from the very beginning, however, provision has been made to include safe practices in these American Standards. A safe practice included in the standard should be considered as important as physical requirements, and should be specifically stated to determine easily whether or not the safe practice is observed.

B7.1-1956 on Abrasive Wheels.

This standard includes special instructions on handling abrasive wheels. These are fragile and therefore, it is important not to drop them or give other sudden impact. This standard also provides for the inspection of wheels and instructions concerning their mounting on arbors. For instance, it is important to pick the right wheel for the right job.

Accidents have occurred when a slow speed wheel was accidentally mounted on a high speed shaft. Needless to say, the wheel exploded. There are also instructions con-

cerning the flanges and the tightening of the mounting nuts. It is surprising how minor details, such as a sprung flange, can affect the safety of these abrasive wheels.

A14.1 and A14.2, Safety Codes for Ladders.

A14.1 concerns portable wood ladders, and A14.2 portable metal ladders. The bulk of these standards is devoted to specifications for the ladders themselves. These specifications are important to decide whether or not a particular ladder is safe, or may now be defective.

In addition, each of these standards includes a separate section on the use, care and storage of these ladders. They include suggestions on the proper angle for placing straight ladders. For instance, in the metal ladder standard one specific recommendation warns against using these ladders in locations where the ladder may possibly come in contact with electric wires.

Several American Standards contain provisions for minimum age of operators, to protect operators on hazardous machines, and protect other workmen when the actions of the operator might affect other employees, such as in the operation of cranes, derricks, hoists, elevators and industrial power trucks.

CODES FOR TRUCKS AND MACHINERY

B56.1-1955, American Standard Safety Code for Industrial Power Trucks.

In addition to the qualifications of operators just mentioned, this standard includes 35 specific safety rules for operators, and provides a firm foundation for any training program for industrial truck operators.

O1.1-1954, American Standard Safety Code for Woodworking Machinery.

This standard concerns specifications for guarding woodworking machinery, but Section 7 of this standard is devoted to operating rules. For instance, it is important to select a suitable tool or machine for the job. There are certain jobs which are far safer on a band saw than on a circular saw.

These operating rules also require the removal of cracked saws. This may not be as important a problem with small saws as it is in logging operations or other operations where some of the circular saws may be as much as five or six feet in diameter. When one saw costs a large sum of money, it is not practical to discard it as soon as one crack appears in a single gullet. Therefore, the standard recommends the correct procedure for repairing cracked saws, and it also discusses the causes of saw cracking and how to prevent these.

P1.1-1956, American Safety Standard for Pulp and Paper Mills.

This safety standard is one of the latest of interest to the wood products section. It includes safety requirements for piling pulp logs at the mill to prevent the pile from sliding and to provide the proper clearance for cranes, trains, and equipment so employees will not be caught between the equipment and log piles. This standard also includes four safety rules which could apply to many operations as well as paper mills:

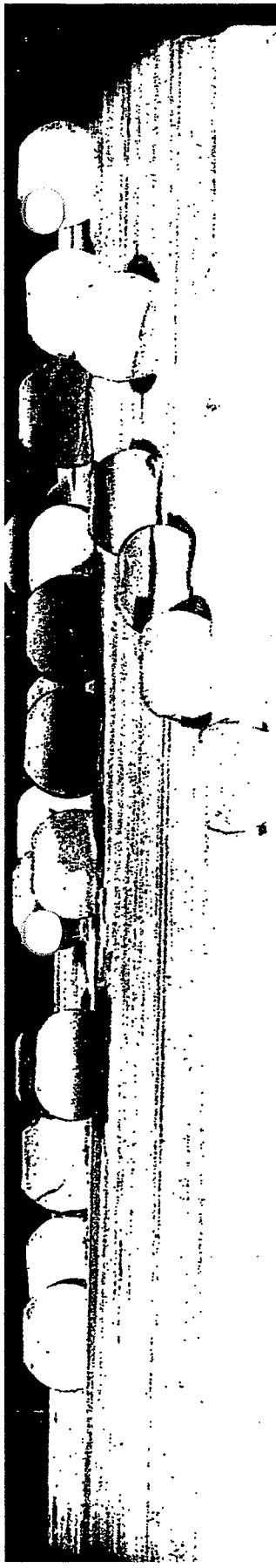
1—Wearing safety shoes in handling logs or other heavy equipment;

2—Using cranes with booms near overhead electric wires;

3—Providing for life lines and the two-man rule where one employee has to enter a tank, a pit or some other space where it is difficult for the employee to climb out by himself;

4—Providing the lock-out practice for both electric motors and pipe lines where an employee has to crawl inside equipment to clean or repair it.

These are just examples of some of the safe practices contained in American Safety Standards which should be of real help to instructors in training employees.▲



REHABILITATION IN ONTARIO, CANADA

by DR. BRUCE H. YOUNG
superintendent, Hospital & Rehabilitation Center, Malton, Ont., Canada

The aim of our program of treating the injured workman is to prevent accidents and subsequent disability and loss of skill to industry. To accomplish this, the united effort of legislators, management, labor and medicine is required.

The immensity of the problem is seen in the statistics of Ontario, where more than 120,000 work accidents occurred resulting in more than 70,000 persons being off work for more than five days. The answer to this problem is sought through the combined effort of the legislators, management, labor and medicine, with legislation interpreted by the Workmen's Compensation Board, consisting of three members. It is within this framework that we can accomplish some success in rehabilitation.

I shall discuss our work in cases where an accident has occurred and injured the workman. Our program considers the injured person as its key.

AIM OF PROGRAM

A definition of rehabilitation is "the process of returning an injured workman to a normal and healthy position in his community." The basis of our process is rehabilitation, and to be successful it must be continuous from the first aid station to the return of the injured workman to suitable and gainful employment. In the majority of injuries the patient's own community is where this program should be carried out. Consequently, we strive to utilize the community's resources in medicine to their maximum.

There is a point in the injury when more than the supervision of a doctor, physical therapist or any other single person is necessary. There is also a point in the process of the patient's recovery when the patient's belief in himself begins to wane. To deal with this set of circumstances the Ontario Workmen's Compensation Board provides a Hospital and Rehabilitation Center.

At this Center are the various skills to accomplish our objective, and to superimpose leadership towards recovery for the man by a team. The needs of any given individual vary. Consequently the services offered by the various representatives of this team will vary, depending upon the individual patient requirements. Thus, we provide a program that may be fitted adequately and suitably to an individual's needs.

LADIES GUIDE MEN

We do no active surgical care at our Center. Ours is the care of the patient after the initial medical and surgical therapy. The members of our team are staff doctors, occupational therapists, physical therapists, remedial gymnasts, rehabilitation officers, psychologists, nurses, recreational officer, part time teacher and an administrative staff to see that the overall unit functions smoothly and without delay. In addition, we have the various elements of a maintenance staff, such as cleaners, kitchen and dietary personnel, making a total of 225.

Only male patients are treated at our Center. Therefore, we choose a good percentage of female therapists, since it is my firm belief that we are all notoriously lazy and selfish, and have a natural instinct to exhibit our talents in front of members of the opposite sex.

In this way we have an atmosphere which is void of any militant routine and one in which the necessary element of patient cooperation is stimulated. The young ladies on our staff are particularly skilled in the approach to our workmen, and in obtaining a maximum performance under a given set of conditions.

Our program is basically to gain the maximum physical performance which a man will do. Any program under any circumstances, is only an observation what a man will do, not what he can do, for none of us really know what we can do in terms of physical output, but we all are aware of what we will do. We will do best only what we want to do (the selfish side of our nature), and in our own time (the lazy side of our being).

Certainly the old adage that "you can lead a horse to water, but you can't make him drink" applies in our work. It must be remembered that the sum total of this program is the assessment of the individual from start to finish, and this assessment is only on the basis of what a man will do, not what he can do. In ascertaining the physical capacity of an individual, we must have the patient's full co-operation. This can only be achieved by gaining his confidence.

GAIN MEN'S CONFIDENCE

At the outset we attempt to gain the patient's confidence by a thorough discussion of his problems with a staff doctor. This discussion is then followed by a complete examination of the injured part. We must remember we are treating an individual, not merely an injured part.

Therefore, during this interview and examination we relate the man to his injury. Our patients frequently remark this is the first time they have had an opportunity to discuss their problems thoroughly with a doctor. This initial period also gives the doctor an opportunity to understand the patient's problem, and from this a program of active treatment, based on physical function, is assigned.

There is a saying at our Center that if the man remains with us for four days he will remain willingly until his treatment is completed, because he observes the staff's personal interest as well as his own opportunities for improvement. He also talks with fellow patients and they impart to him knowledge that we try to assist him in getting better.

PHYSICAL THERAPY

Just as it is essential to have the patient's co-operation, it is equally important for the patient to see the actual benefit from his treatment. Most of our patients feel the only form of treatment which benefits them is physical therapy. This is the application of heat to a given part to ease discomfort, the use of massage for relaxation and to ease discomfort, the applications of electrical therapy, or the use of the full length water bath for relaxation.

Any one or all of these methods are interpreted by the patient as being active and useful treatment. These various forms of therapy by easing discomfort, facilitate the next step of the rehabilitative treatment—functional treatment.

In this treatment various occupations offer the necessary use of muscle co-ordination to increase strength so the patient will gain confidence in his own ability and make progress. The use of these methods prepares the man for the work he has to do. I try to explain this to my staff by using the analogy of taking a quinine capsule. None of us would take a spoonful of quinine and drink it down with water, even though we knew the results would be beneficial, because of the extreme bitter taste of quinine.

However, in a capsule it is easy to take and we obtain the same beneficial results. So, with the passive forms of treatment, these act as a capsule around the next step —obtaining proper muscle action individually and in a group manner, thereby increasing strength, as well as re-establishing patterns of movement. It is in this particular field that our Center has made its unique contribution.

PATIENT SELECTS ACTIVITY

We use occupational therapy to develop and re-establish muscle patterns, adapting a craft or activity to a production function. In choosing an activity for the patient, we find if a patient chooses to make a product he or his wife or mother might be interested in, then we have the first evidence of good co-operation. We follow this, with direction by the occupational therapist, into that activity which will produce the most benefit for his injured part.

The activities which we use of a lighter nature are arts and crafts, of a moderate nature we use carpentry, handling projects made from wood, and in our heavy program we use gardening, or simulate or duplicate the man's activity. For example, if it were a hand case, we may want a fine movement such as a needle and thread activity.

However, we go over a list of projects with the patient to find out what he would like to make for himself, or others. His choice will be guided so that making the article will require proper functional use of his hand. It will have the interest necessary, because our patient is doing something he wishes to do, and he will also be exercising his hand properly, regaining its proper co-ordination with other parts of the body.

In this way we have rugged lumbermen, miners and construction workers accept light, unrelated activities with enthusiasm. Certainly a few patients are not interested in this project, so we must look further to find what will satisfy their desires and our requirements. It is necessary that the patient understand his activities.

CASE HISTORY

I like to mention the case of John, hospitalized at our Center after an amputation of his right arm above the elbow joint. On the first day of his hospitalization, he came to me in my office to say in a very belligerent manner, "I don't see any reason for staying here at all. That girl in green gave me, if you can imagine it, a ball to throw, and horseshoes to pitch with my left arm." He said, "I certainly see no reason why I should be required to do this, nor am I going to stay any longer to find out."

After discussing his problem for one hour, he was convinced that although we were going to fit him with a prosthesis and that the prosthesis would help him in holding and carrying activities, he would have to utilize his minor hand and arm to a greater degree than before. The principle behind having him throw a ball and play horseshoes was the first step in gaining co-ordination of this part into a new muscle pattern, and gradually finer skills could be introduced for this previously little used hand.

REMEDIAL GYMNASTS

This patient was the secretary of a local press plant union, and in a week he became one of our staunchest advocates. One's greatest support comes from the opposition who have been converted, because he has been converted by reason. By the same token, men with shoulder injuries work on looms, working at the level of the shoulder, which requires increasing range and muscle power to hold the arm in its new position, and all the time the arm is exercised in its proper manner.

In this stage, to gain muscle power we utilize resistance exercises through the guidance of male therapists. These therapists are called "remedial gymnasts." In this field we consider the male represents a better leader than the female. Under the remedial gymnasts we also have group exercise activities graded into classes. These classes are organized on an anatomical basis, for example, the back class, shoulder class, foot class, hip and knee class and special hand class. In these classes we have group morale development which stimulates the patient. Here the patient sees those about him who are much worse off physically. It is generally true that the more severely handicapped put forth a greater effort, and, in truth, shame those less severely handicapped into a greater degree of co-operation and performance. After a patient says he feels he can go back to work if so-and-so, who is much worse off than he, can perform the way he does. He sees no obvious reason why he should not be able to carry on at his former gainful occupation.

MEN, GARDEN, PAINT, PLASTER

In this group of classes we also have an obstacle course, which is a means of increasing physical exertion, as well as a lot of friendly competition among our more advanced patient groups. As the patient progresses with his program, we try to increase his activities so that he is putting forward an effort as near to the maximum as possible. To do this we utilize a variety of media.

We have 12 acres of grass to cut, and purposely do not have power motors. We have our patients with various types of injuries push the lawnmowers in groups, and thereby keep the lawns in shape. We have flower gardens prepared, planted and maintained by patients. We paint the insides of our buildings, not once, but many times by patients who are painters by trade, or require shoulder activity on their particular job. By graduating these activities the patient gains confidence in his ability to handle his own work.

WORK ON BOXCARS

We have the shortest railway in Canada, which is frequently raised and lowered by injured railway personnel. For the plasterer, we have an area of wall which is continually being plastered to test the man's skill in plastering; for the bricklayer we use the bricks of his trade and allow him to re-establish the fact that he can bend, if he is a back case, or lift and handle bricks, if he is an arm or shoulder case.

He may also carry the hod to gain confidence in ladder climbing. We also have provided a boxcar for those railway men who have to climb and walk, and otherwise handle a boxcar. All these activities are used on a graduated basis to regain the conditioning of the workman for his previous occupation.

If a medical or surgical consultant is required on case, we refer these men to specialists. In our particular area we utilize the staff of the University of Toronto to assist us in sorting out the difficult problems regarding treatment. One year ago we acquired the services of two highly skilled psychologists to evaluate a man's potential for work, to give aptitude tests to those who must change occupations, and assist us in counselling patients who are not responding to the program. We represent as large a psychological unit as there is in this type of work, because our program stimulates psychological health.

A question commonly asked us is, "Do you have out-patients at your Center?" The answer is, "We do not." We can better rehabilitate the patient if he remains for the entire treatment day. By doing this we can control his daily routine.

In addition, we provide him with recreational facilities during the off hours and evenings. A patient who takes our program is required to maintain a reasonable habit as far as work hours are concerned. He is up at 7:30 a.m. for breakfast at 8:00, and commences his daily six hour program by 8:30 p.m.

WALK 2-3 MILES DAILY

Every patient is required to walk a minimum of two to three miles a day. Actually most of our staff cover the same distance. This is true without any other treatment consideration—about five to 10 times the distance he would walk while at home. There are no places nearby to obtain food other than that provided at the Center.

Consequently, our patients are reasonably prompt at meal hours, and this keeps them in touch with the type of control most are accustomed to in industry. The program is on a timetable basis, which requires their attendance—and their attendance is checked. This, again, is supervision comparable to that in industry.

When the patient is sufficiently improved to return to employment, we arrange his discharge from the Center. Approximately 80 per cent of our patients return immediately on discharge. This is arranged through our industrial placement officers during the patient's stay at the Center. They contact the patient's employer and try to give him an idea when the man will be available for work. From the medical side, the original attending doctor is informed by a full medical report on his particular patient every two weeks.

No matter what type of program is set up, we cannot really duplicate all aspects of a man's occupation, and therefore, return to work represents the fourth stage in the man's recovery.

THE REAL TEST

The fourth stage means returning to old friends, to areas where his skill was used before, but where he tests his real ability in competition, and must not only co-operate, but co-operate and produce at the same time. This is an added factor which is most difficult to duplicate.

We, therefore, ask our employers to consider this fact, and many patients receive some form of work modification. The duration of the modification varies with the individual case.

The employers in our province assume a moral obligation in the vast majority of cases to take back their injured workmen. This is a purely moral obligation, because no employer is, by law, forced to accept a workman after injury. We feel that those who do not return to work represent the failure from the Center, even though they may have recovered sufficiently to become independent.

We like to feel that there is a place back in industry, since each of these men came from industry. We do not want to see a scrap pile of broken, unproductive bodies, which represents people whose whole aim in life has been shattered by an industrial accident. However, some end this way despite all our efforts.

The greatest contribution to lessening serious industrial disablement is preventing the accident which has caused the disablement. If it does occur, however, I have

described a program of activity led by a team of dedicated people, from the sweeper to the doctor, whose only interest is locating a solid road to recovery for the injured workman.

We do our utmost to abolish disability which can be abolished by treatment. But if this is impossible we then assist the patient in accepting his disability, and attempt to motivate him to come out with an accepted disability with which he will meet his future in the industrial world.▲

SAFETY TRAINING FOR FIRE PROTECTION FORESTERS

by JOHN F. SHANKLIN

staff assistant, U. S. Dept. of Interior, Washington, D. C.

An official report transmitted by the Bureau of Land Management to the Secretary said of the bad fire situation which existed in Alaska this past summer:

"As a result of a combination of factors, the Bureau of Land Management is experiencing a serious fire situation in Alaska. The driest year in the interior since 1906, coupled with the normal difficulties of vast areas, isolation and rough terrain has created a "bust" fire suppression condition. To combat this situation the Bureau has expended Emergency Fire Funds at a rate of 15 to 20 thousand dollars per day during the month of June. Such expenditures are continuing this current fiscal year and will probably continue through July unless normal rainfall occurs.

"Approximately 400 fire fighters have been mobilized and dispatched to going fires, 12 supervisory personnel were drawn from Area 1, Portland, for assistance in directing fire fighting during June, and 12 replacements have been obtained from Area 2 at Salt Lake and Area 3 at Denver for similar aid during July. Extra tools and equipment have been purchased through GSA at Seattle and flown to Fairbanks. In addition to the six BLM owned and operated aircraft, light planes and helicopters have been chartered from private sources. The military forces have provided excellent cooperation on an emergency basis by providing helicopters and manpower. In addition, the military has assisted the logistic situation by flying gasoline and other supplies into air strips being used as fire operations bases.

THREE FIRES DAILY

"An average of three or four new fires has been and is being reported daily. Most of the fires are lightning caused and appear to have started high on the ridges in spruce timber. During the initial period of the fire fighting season simultaneous lightning fires at great distances apart forced the Bureau immediately to commit its full fire fighting resource to its physical limit. Continued dry weather, increasing hours of daylight, and exhaustion of manpower soon created a lag in the number of fires reported and the number upon which initial action could be taken.

"To meet this continuing demand, the Area Fire Control Officer was forced to establish areas of priority within which initial action could be taken consistent with existing transportation and communication facilities. Manpower has not been the critical item. Once a fire crew was committed to action on any one fire, additional demand immediately developed for the air transportation of relief manpower, additional tools and supplies. The air transportation of these items thus became the limiting factor.

"Action on all new fires occurring outside of the limits of air service had to be postponed or ruled out. It is for this reason there has been an average of approxi-

mately 40 fires burning daily with about half of them being manned. Complete control action without rainfall on fires in excess of 40,000 acres appeared to be physically impossible. By July 1 an increasing smoke pall from the several large fires in excess of this acreage had made aerial reconnaissance and regular fire line service practically impossible in some areas."

During that period contact was lost with fire fighters for as long as three days at a time, due to the tremendous volume of smoke. Difficulty was experienced in dropping food supplies and additional fire fighting equipment. More than five million acres were burned over. The tremendous and hazardous operation to bring these fires under control has a direct relationship to the training in safety instituted by the Department of the Interior.

To understand the problems confronting the Department in its safety training program as related to the forest resources administered by the Department requires first, an understanding of our responsibilities.

EXTENT OF RESPONSIBILITY

The Department of the Interior has a total of approximately 57 million acres of forest and woodland in the continental United States. In Alaska it is responsible for some 125 million acres of forest and woodland, including 40 million acres covered by mature timber and 85 million acres of woodland most of which has been devastated by fire and in various stages of natural revegetation. There is an additional 225 million acres of range, marsh and timber requiring protection.

The annual utilization of timber from forests administered by the Department has been averaging approximately 1½ billion board feet in volume and with a value of nearly 25 million dollars. The average number of fires for the past 10 years has been slightly less than 2400 and our average fire loss for the past 10 years has been slightly more than one million acres.

Four Bureaus of this Department are concerned with land management and especially with forest administration; the Bureau of Land Management, the Bureau of Indian Affairs, the Bureau of Sport Fisheries and Wildlife and the National Park Service. Wide differences exist between these Bureaus as to their basic objectives.

The National Park Service administers approximately six million acres of forest lands in the States and approximately one-half million acres in the Territories of Alaska and Hawaii. The obectives of management are primarily to maintain the forests as nearly as possible in their natural undisturbed condition. These forests are cherished for their aesthetic and scientific values. Portions of them are heavily used for recreation.

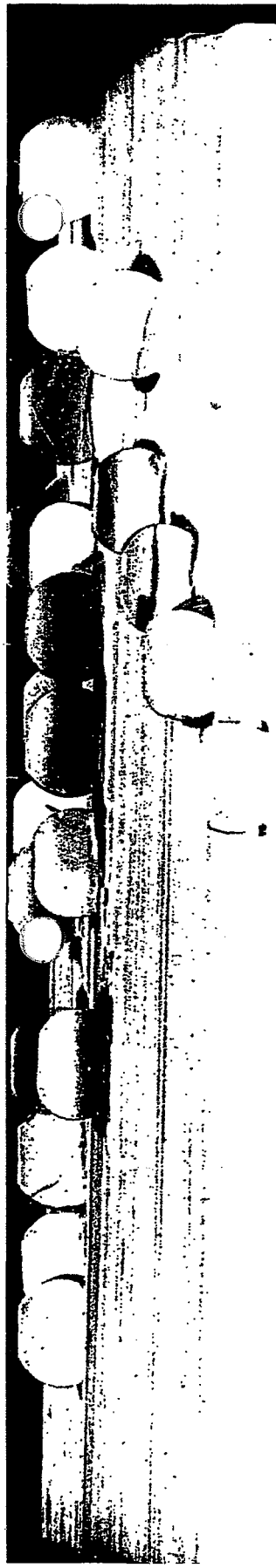
CARES FOR WILD LIFE

The basic problem of management is to devise ways and means of handling the increased visitor load to the parks safely and at the same time conserve the forests in their natural state. A total of 55 million people visited our national parks and monuments in the calendar year 1956.

The Bureau of Sport Fisheries and Wildlife administers about ¾ million acres of forest lands of which ½ million acres are considered as commercial forests. The timber lands found on the national wildlife refuges are managed to demonstrate practical means of developing and maintaining optimum game populations, to produce removable surplus wildlife species for restoration projects undertaken by other Federal and state agencies, to determine the practicability of research findings in the management of forest habitat, to explore means of managing wildlife population, for removal of animal increment through regulated public hunting and, consistent with these objectives and in accordance with sound forest management practices, to obtain the maximum timber yield and return from the refuge forests.

OPERATED FOR INDIANS

The Indian forests, of which 6½ million acres are considered commercial, have the distinction of being managed under the first Federal legislation in the United States in which the practice of sustained yield management was definitely prescribed. The management of the Indian forests is directed towards the same objectives sought in the managament of a public forest. However, there are certain



fundamental difficulties which give rise to radically different management problems.

Indian lands are private property held in trust for the Indians by the United States. As such, the timber resources must be managed for the best benefit of the Indian owners. Moreover, by reason of the fact that the Indian forest property is so closely interrelated with the welfare of the Indians themselves, forest management plans must recognize the general Indian problem and be coordinated with the whole program of social and economic betterment for the Indians. This necessitates a far greater flexibility in long-term forest management plans than is ordinarily required or considered ideal from a purely technical viewpoint.

Generally speaking, the first objective of Indian forest land management is to obtain high level timber production. The second is to obtain for the Indian owners the highest possible income not only through the sale of stumpage but also through the direct employment of Indians.

The forest lands administered by the Bureau of Land Management fall into three major categories. The first, the revested Oregon and California railroad grant lands and reconveyed Coos Bay Wagon Road grant lands in western Oregon, commonly referred to as the O & C lands. Second, the public domain forest lands in the continental United States, and third, the public domain forest lands in the Territory of Alaska.

TOP AMERICAN FORESTS

Forestry on the O & C lands presents one of the most challenging problems in American timber management. On these lands are some of the finest stands of original timber left in this country. Their economic and social importance both locally and nationally places them in the front rank of American forests. In accordance with basic legislation, it is the policy of the Department to restrict cutting timber on these lands to their sustained-yield capabilities.

It is the policy of the Department to direct all timber cutting operations under approved rules of forest practice. Moreover, it is the policy of the Department that these rules of forest practice shall be established only after full consultation with a local advisory board consisting of citizens of the State of Oregon who represent the lumber industry, the forestry college, conservation associations, labor unions, grazing mining and agriculture.

The management objectives for the approximately three million acres of commercial public domain timber in the West are much the same as for the O & C lands. However, these plans are subject to the establishment of policy determinations as to whether the lands should be retained under the jurisdiction of the Federal Government or should be disposed of to public agencies, private citizens or corporations.

In addition to these commercial timber lands there are 25 million acres of woodlands on the public domain. These are found chiefly within the grazing districts and are of considerable importance locally as a source of fence posts and related material for use by the range industry. The management of these lands is definitely keyed to the objectives sought in the management of the range lands.

FIRE SAFETY MAJOR PROBLEM

In the Territory of Alaska a major problem confronts the Department in determining proper management for the tremendous extensive areas of forest and woodlands. To date the objective has been to provide something approaching adequacy of protection from fire. This has not been entirely achieved, as reference to my opening statement in this paper will show. But the future appears to be much brighter due to a better understanding by the citizens of Alaska of the need to exclude fire from the Territory.

To relate safety training for fire fighters to the fire situation referred to in the opening paragraphs of this paper, let us look at exactly how the Bureau of Land Management provides safety training.

The Bureau at the present time does not have either a safety manual or any specific safety instructions issued solely for training in safety with respect to forest management. General instructions per-

taining to the entire work of the Bureau have been prepared by several of their field offices. All field areas use safety material issued by other agencies, Federal, state and private.

The Bureau does not have a safety committee functioning at its national level, but each of its major regional offices has a functioning committee. None of these regional, or area offices as they are termed by that Bureau, nor any of its state offices have made any special safety studies in the field of timber management, and no analyses have been made of accidents occurring in the timber management field alone.

TRAINING SESSIONS

However, each year training sessions are held for fire control and timber cruising. Such programs always include training in first aid and safety.

The Bureau has approximately 300 permanent foresters and 60 temporary foresters. It operated during the past year 18 fire training schools at which approximately 250 employees were present. It also operated five timber cruising schools at which approximately 100 employees were present. Furthermore, 24 Bureau employees attended some six training schools supervised by other agencies.

All employees are required to follow certain safety practices including those employees concerned with forest management. These safety practices include:

1. Equipping all of the Government vehicles with fire extinguishers and first aid kits.
2. All fire fighters are being equipped with hard hats as rapidly as sufficient funds are made available.
3. On all project fires a first aid station is manned by qualified first aid attendants.
4. All employees are encouraged to take the essential courses in first aid.
5. It is general practice not to permit single persons to work in an isolated area. Two or more are always assigned.
6. Radio communications are being installed as a safety measure in fire control.

As examples of the exact safety program, two states will be described quite comprehensively.

IDAHO SAFETY PROGRAM

The Bureau's program in Idaho is fairly well organized. It so happens that the Area Fire Control Officer is also the chairman of the safety committee. Accordingly, he also handles the safety programs at the fire training schools. All Bureau vehicles in this state are equipped with a safety packet which includes a first aid kit and instructions for first aid treatment together with the necessary forms required for accident reporting.

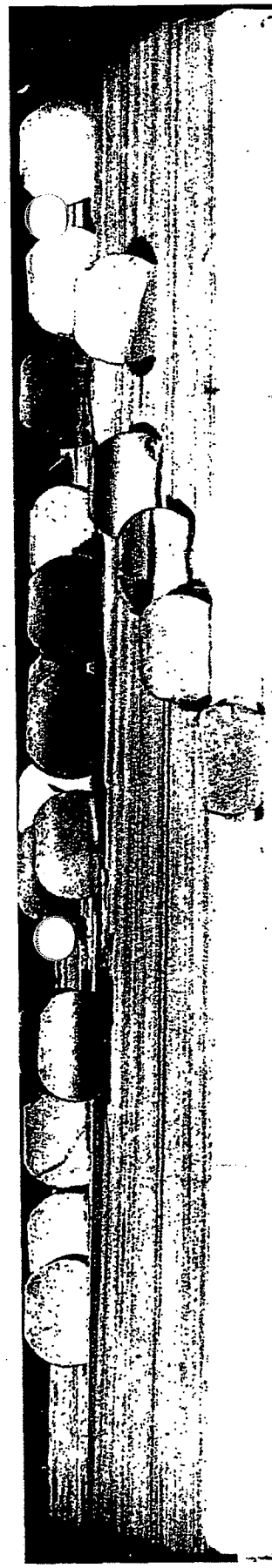
All grazing districts in this state are equipped with a very high frequency radio communications network. A base station is located at strategic high points to insure communications to mobile units operating in other parts of the state. From a safety viewpoint, radio communications are very necessary.

Second, the Territory of Alaska. In Alaska, as we have already indicated, special problems confront the Bureau in safety training. In Alaska, two foresters serve on the Territorial Safety committee. All permanent and temporary foresters and temporary fire guards are required to take first aid training. This training includes instructions on survival in the Arctic. To insure the safety of employees working on fires, cruising timber or on routine inspection, it is mandatory that the crews consist of two or more.

USE CHECK-OFF LIST

In order to insure the safety of all employees involved in air operations in connection with the fire control and timber sale programs of the Bureau, the Civil Aeronautics regulations are followed explicitly. This includes the use of a printed chek-off list before each takeoff.

The Bureau has developed picnic areas along the highways in Alaska especially at those points where the highways either cross streams or are close to lakes. This was done essentially as a fire hazard reduction measure. Campers, picnickers and travellers who stopped along the highways to cook a meal usually found heavy debris and deep organic material. To clear out a place for cooking or warming fire was quite discouraging. Many times fires were built on wet organic material that was in some cases mistaken for



mineral soil. Many fires have originated from such a situation. However, with the development of over 30 picnic areas by the Bureau, the incident of man-caused fires along the highways was measurably reduced.

Comparable training is given in the Bureau of Indian Affairs. However, there is a very interesting development in the field of fire safety training which involves the Indians under the administration of this Department. We have what is called the Red Hat Program in which several hundred Indians from the Southeastern states are annually trained. These Indians, it has been found, make the finest fire fighters of any personnel in the United States, and their services are utilized by all forest fire services both in this Department and in the Department of Agriculture as well as by state agencies.

LOW ACCIDENT RATE

This training program, initiated by the Bureau of Indian Affairs, includes training by the Forest Service and the National Park Service. The training afforded these Indians has certainly paid off well, not only in bringing fires under control but in taking care of themselves while on fire lines with the least possible record of accidents of any group of forest fire fighters commonly used in this program.

The isolated nature of the installations maintained by the Bureau of Indian Affairs on each large reservation presents serious problems in protection and safety training. Many of the reservation agencies are in close proximity to extensive areas of forested land.

The protection and training of thousands of Indian children who attend reservation schools in programs designed for their safety are of special concern.

Fire hazards are high because the agency buildings are generally old. Consequently the wiring and heating systems are often inadequate by present day standards. Occupational hazards are ever present in the numerous garages and other service shops where power tools are in use.

In recognition of its special problems the Bureau has a safety committee functioning at the national level. Similar committees function at the Area and Agency levels. In all, there are over 100 safety committees. A Safety Director has been appointed to head up the program. Two safety engineers were hired within the year to provide guidance and impetus to it.

NATIONAL SAFETY COMMITTEE

The enthusiasm created in all ranks of personnel by these developments in the safety field insures that this program will take its rightful place among all the others carried on by this Bureau. The safety training of fire control personnel should benefit under the skilled direction now available.

Finally, let us look at a problem in safety training which is allied with our management work. Recreation is considered one of the multiple uses within the over-all forest management programs of most land managing agencies. For example, more than 55 million visits were made to the national parks and monuments last year, and while these visitors are on Department lands every effort is made to insure that the visit includes a safe experience.

SAFETY FOR VISITORS

Here are some of the activities in health and accident prevention which are applied to visitor activities and also to employees in general by the National Park Service. In order to insure visitor health, many types of actions are required including:

a. Provision for potable water.
b. Provision for sanitary rest rooms.
c. Provision for adequate garbage disposal and camp ground cleanliness.
d. Provision for first aid facilities.
e. Provision for inspections of eating and lodging facilities in order to insure adequate sanitation.
f. Provision for hospitalization and medical care.
g. Periodic inspections of bathing and swimming facilities.
h. Elimination of noxious insects, plants and animals in public use areas.

Many things are done for the safety of vistors. Highway safety practices are included in the design, construction and maintenance of park roads. Hazardous trees such as leaning or dead trees are removed from the public use areas and road sides. Elevators, used principally in those parks with caves, are regularly inspected.

All structures within the National Park System are given regular periodic fire hazard inspections. Fire control facilities for all structures are available and building fire brigades trained in structural fire control. The Service maintains regulation and inspection of all mountain climbing activities. It maintains regulation and inspection of many water activities. It inspects ski lifts and tows and provides for safe practices for winter use activities. The Service trains and provides lifeguards, patrols and rescue teams.

It provides for safe walking surfaces, including hand rails and guard rails at hazardous points within the parks. It provides boardwalks in the thermal areas and enforces all visitor activities pertaining to enjoyment of bear and deer. The Service insists that safety features be followed in the designs of new public use structures. It also has regulations for the installation of automatic sprinklers in multiple story hotels.

EMPLOYEE PROCEDURES

As employee safety has a direct relation to visitor safety, the National Park Service has developed many specific general employee safety procedures. It has safety committees at all field and regional levels and follows the dictates of the Department requiring Government drivers' licenses.

It provides orientation training and on-the-job training for employees, including training in safe practices. All employees' quarters and working structures have regular periodic structural fire hazard inspections. First aid training is required of all protection personnel. It requires training of all personnel involved in structural fire control, water activity protection, and all mountain and winter sports personnel.

The Bureau of Sport Fisheries and Wildlife has an over-all safety program which applies to the management of its forest resources as well as all other activities. The program is based on the Bureau's safety policy which, in essence, states that safety is an integral part of every task. No job is so important or no service so urgent that sufficient time cannot be taken to perform them safely.

Each employee is directed to give safety the same serious thought and consideration that he gives other phases of his work. The rules for safe operation of motor vehicles and certain other equipment and tools as well as safety in construction work are set forth in a Safety Requirements Handbook and other instructions.

EQUIPMENT STANDARDS

The Branch of Engineering is responsible for the establishment of standards in respect to the acquisition, operation, maintenance and review of operating methods for all equipment from the standpoint of job adaptability and safety, industrial safety, fire prevention, public and employee safety and provides technical assistance to the regional safety committees in evaluating the causes of accidents and making recommendations for remedial actions.

Each Regional Office has a safety board and a fire board responsible to the Regional Director for program development, directed toward improving safety conditions and reducing fire losses. The fire board is specifically directed to assist the Regional Director in determining responsibilities, developing programs to prevent fire losses and in improving fire pre-suppression and suppression.

The National Wildlife Refuges and Fish Hatcheries hold monthly safety meetings and on-the-job training in their respective work activities, including timber management and fire suppression. Periodic fire inspections are made on all buildings and facilities. Over-all safety inspections are required of Regional Supervisors on each visit.

Public education and active participation in fire pre-suppression and suppression are sponsored in those areas of high

fire hazard and extensive public utilization. Radio communication facilities are used extensively in the National Wildlife Refuges to facilitate patrol and for directing fire fighting activities. Controlled burning is practiced as a means of wildlife management and to reduce fire hazards in certain areas. Slash disposal and other fire safety requirements are written into timber cropping contracts. Each National Wildlife Refuge and Fish Hatchery has a fire plan appropriate to its problems.

The Department provides for safe working conditions for employees and where functions are hazardous, provides the necessary training to alert employees how to handle themselves safely.▲

HOW TO SET UP AN INDUSTRY SAFETY TRAINING CONFERENCE

by W. C. CREEL

safety director, North Carolina Dept. of Labor, Raleigh, N. C.

Safety training is one of the greatest needs in accident prevention work. While this need is generally recognized, very little has been done on an industry basis to promote safety training. One idea used successfully by one section of the National Safety Council is to use the conference method to promote safety training.

The leaders of the fertilizer section of the National Safety Council promote safety training for the fertilizer industry. They believed that the need for safety training was so great that a special committee was set up to promote safety training.

The committee further felt the greatest need was on the supervisory level, and therefore, set up the Supervisory Training committee. This committee, with the full assistance of the entire fertilizer section has conducted two successful industry safety training conferences.

MUST TRAIN SUPERVISORS

The first objective in setting up an industry safety training conference, is to sell the industry on the idea. In the fertilizer section, the selling job started with the entire executive committee of the section. The proposals of the Supervisory Training committee were explained, and suggestions were received at a regular executive committee meeting. After complete plans were approved, the executive committee was asked to endorse the plans, and give full cooperation. Securing this cooperation was probably the most important step in assuring the success of the safety training conferences.

The great need for safety training in the fertilizer industry is on the supervisory level, as is true in the wood products section and the pulp and paper section. Once the level of the conference was established, emphasis was placed on making the conference as practicable as possible. With these ideas in mind, it was decided the conference should be in the form of a training course—more of a school than a social get-together.

The general idea for the meeting was to instruct fertilizer industry supervisors in the latest techniques of accident prevention and to train them in setting up their own plant safety programs. The importance of a supervisor in a plant safety program and the ways he could reach the worker was stressed throughout the program.

The topics on supervisory safety training included "Safety and the Foreman," "Know Your Accident Problem," "The Human Element," and "Safety Education and Training."

Besides the topic of supervisory training, basic subjects in a plant safety program were presented. These included "Safety Organization," "Materials Handling and Storage," and "Housekeeping."

A special session on "Practical Problems in Supervisory Safety Training" was held to allow all participants to take part in an open discussion.

The course was based on the needs of the industry and followed the suggestions in the National Safety Council's Supervisory Safety Training Manual. In fact, this was one of the two textbooks used for the course. The other was the Safety Subjects, revised 1956, U. S. Department of Labor.

The agenda for the meeting was planned so that a wide variety of methods of safety training could be used. The straight lecture was used only in combination with some other method.

DISCUSS MAJOR HAZARDS

A most important part of the two day program was a planned group discussion on major hazards in fertilizer plants.

Each student was asked to designate on a card the group discussion section he wished to attend. Assignments were made on the basis of these requests and each student attended one of the three group meetings where the leaders presented the problems and lead an open discussion. At the end of one hour the groups met together and a designated person reported for each of the groups.

The audience participation plan was used in the "The Accident Problem" presentation. Each student received a series of 12 questions to answer. At the end of the period the instructor gave the correct answers. The questions covered basic information on the accident problems in the fertilizer industry.

The audience participation method was also used in the presentation of the topic on "Plant Inspection." Each student was given a flow chart showing the steps in the operations of a dry mixing plant and asked to mention hazards with which they were familiar. The instructor then summarized likely hazards for the important fertilizer plant operations.

MOCK SAFETY MEETING

A mock safety meeting was used as one form of panel discussion. The instructors acting as members of a plant safety committee actually conducted a plant safety meeting. The instructor briefly gave the fundamental ideas of a safety committee before the mock demonstration, and summarized the safety committee's part in a plant safety program after the mock demonstration.

The instructors for the safety training course were selected to give variety to the sessions. A college professor presented the basic ideas of training, and an industrial safety engineer with teaching experience gave the basic ideas on accident prevention. Discussion leaders from the industry were selected to give prestige and guidance for the meeting. The idea of balance, as well as variety, was stressed throughout.

The accepted basic methods of presentation were used, including some from our visual aids. In every unit, one of the best received visual aids material was the new National Safety Council series of training films, "Safety and the Foreman." This series is recommended for any safety training course.

The committee went to great lengths to plan details for the meeting. Besides the usual name badges, banquet and local newspaper publicity, two or three different ideas were successfully used for instruction. At the mid-morning and mid-afternoon breaks, cokes were provided saving time and offering an opportunity for fellowship. In addition, all participants were given an opportunity to meet with one of the industrial leaders for an individual conference, on their specific problems.

The two conferences were attended by 94 people representing 56 plants. Each participant received the basic ideas of safety training and instructions and materials to set up a safety training program for their individual company or plant. Other regional conferences are being planned for the fertilizer committee. The executive committee of this section has completed a successful project and has done much on an industry wide basis for the cause of accident prevention.

I believe the following conclusions will be of interest and benefit to all engaged in industrial safety.

- There is a real need for supervisory safety training in the fertilizer industry as well as the wood products and pulp and paper industry.
- The industry recognizes the need for supervisory training and will send plant

representatives to a regional safety training conference.

- Full cooperation of the National Safety Council, state agencies, and safety leaders can be obtained for conducting supervisory safety programs.

The fertilizer section of the National Safety Council is comparatively new. The wood products section, and the pulp and paper section are not only much older, but are larger and more influential. It is a real challenge to you as individuals and representatives of your section to do something about the need for safety training in your industry. If you want to make a lasting contribution to the cause of accident prevention in your industry, urge the executive committee of your section to start immediate plans for safety training.▲

PROMOTING WOODS SAFETY

by J. KENNETH PEARCE

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In considering what I, an amateur in safety, could say to you professional safety men who represent firms with excellent safety programs and award-winning safety records, my thoughts wandered back to my laboring days in the woods. Thirty-seven years ago I was hired as a third rigger on a Lidgerwood skidder out of Union Mills, Washington, now a ghost town. I had worked on ground lead and high-lead yarding crews but had no experience with skylines.

My first morning on the job the head rigger handed sledge hammers to me and another green young third rigger and told us to go knock the tail hold on the skyline loose. That was all the instruction we received. We proceeded to the back end where the one and one-half inch diameter wire rope skyline was wrapped around a stump and fastened with railroad spikes. One thousand feet of skyline was suspended 100 feet in the air between head tree and tail tree shoes.

SAFETY ORIENTATION

The surplus length of the skyline lay stretched out on the ground to one side of the stump. We started knocking out spikes, and soon the skyline started to run. The wraps sizzled and smoked around the stump and the loose end flailed around like a snake. How we got out of there alive I don't know.

That incident typifies the "let him learn the hard way like I did" attitude toward the green hand coming into a logging camp in those days. No one told him how to do the job safely. Great progress has been made in woods safety since those days. In the operations today safety goes hand-in-hand with production and safety-minded foremen keep a watchful eye on the training of the green hand. But are you doing all that could be done to promote safety at the time the worker is most receptive, most eager to learn? This time is when a young man first comes to work in the woods, or in your operation.

Many of my senior logging engineering students have worked one or more summers in logging labor jobs. Some have worked for companies with outstanding safety records. When I asked the students what orientation or safety training they received, all replied that they started right to work with the whistle the morning they reported. Any orientation they received came from their immediate supervisor.

They felt it was just luck if they started under a helpful, safety-minded supervisor. (Of course it was good management, but they did not realize it at the time, and no one told them this was part of the safety program.) The concensus of the students said that the weakest part of the safety and labor-relations program of the

employer was how they were handled when they first went to work in the woods.

Some executives in the Pacific Northwest logging industry have felt concern that young men from communities which traditionally furnished woods labor are going instead to aircraft and other industries. One deterrent to recruiting the active, intelligent young men is the accident record of the logging industry, well known in woods communities.

ACCIDENTS DISCOURAGE WORKERS

Not so well known is the fact that logging accident statistics show the highest accident frequency rate among the youngest age class and the group with the least number of months experience. Efforts are being made through Junior Logging Congresses, vocational talks to high schools, and industry films, to attract young men to the logging industry. A good safety record could be a potent recruiting aid.

The book "Safety Subjects" published by the Bureau of Labor Standards, U. S. Department of Labor, used as a textbook in my class "Safety Practices in Forest Industries," makes a distinction between safety education and safety training. Education is defined as broadening of knowledge and understanding; training as the development of skill in performance. Safety training is usually competently handled by the safety-minded supervisor. But what about the safety education, particularly of the new employee? Is this a weak link in the chain of woods safety promotion?

University authorities have found it worth while to take the first one, two or even three days at the start of the new academic year for the orientation of the freshman and other new students. If college students need orientation, is the man in the same age group entering industry any less in the need of orientation?

SAFETY EDUCATION PROGRAM

The following program of orientation, and initiation of safety education, is suggested for groups of new employees of large operations. It embodies suggestions from students as to what they would have liked to have had when they first started to work in the woods, as well as my own ideas, as an ex-logger, foreman and superintendent.

1. *Orientation Session.* The first morning they reported the new men would be brought together for an orientation session. The Logging Superintendent would tell them of management's interest in safety and other company policies. An organization chart of the operation and authority might be shown.

Opportunities for advancement in jobs with the development of skills and learning by experience would be explained. The timekeeper would explain pay periods and procedure, deductions and insurance plans. The forester or fire warden would emphasize the importance of fire prevention and the organization for fire-fighting, since every man in the woods is a potential fire-fighter.

2. *Safety Education Session.* Following the orientation session, the safety supervisor would take over, and tell them of the safety program, first aid facilities and the training program. Safety training films are available from the various Loggers Associations, the American Pulpwood Association, State Safety Departments and the National Safety Council.

REPETITION VALUABLE

Booklets or cards covering job safety instructions would be issued and discussed. The value of repetition cannot be over-emphasized. Even college students can learn only by the repetition of reading the textbook, taking notes on the lecture, and writing the examination.

Ample opportunity and encouragement to ask questions should be given. Time for private talks with the personnel man should be made available for men who have a question or problem they do not want to voice in the group sessions.

3. *Observation.* Opinion among my students was divided as to how the first afternoon should be spent. Some thought that a tour of the whole operation, and observation of the various operations, such as yarding and loading, felling and bucking, road construction, and the shop to give the whole picture, would be helpful. Others thought that the afternoon might be better spent by observing the particular activity or job in which they

are to work, in company with their foreman, who would point out the safe and efficient way to do the job.

The foregoing orientation and safety education program is obviously not suggested for boomers or drifters who will hit the road with their first paycheck. Rather it is intended for the "home guards" who can be expected to stay on the job long enough to justify the time and money expended on them. It would be followed up at intervals with evening safety education sessions, using audio-visual aids.

Since the average 20 to 24 minute film teaches more lessons than can be absorbed, combining the running and re-running of short sections of a training film with the discussion-conference technique, is advocated. As an example, the Rarig Motion Picture Company of Seattle reproduces the sound-color film "Hauling Logs" which they made for the British Columbia, Pacific Northwest and Redwood Loggers Associations, in six four-minute sections. They publish a film guide of questions and answers for each section and a "Conference Leaders' Manual" to accompany the films.

The small operation, or the one to which new men come singly, presents more of a problem. However the same objectives of orientation and safety education, accomplished by individual discussion, rather than group sessions, would improve labor relations and promote woods safety. This is only a preliminary to the most important on-the-job safety training under a safety-minded supervisor.▲

TEXTILE SECTION

TRIAL BY SURVIVAL

(A Skit)

WITNESS NO. 1

Q. Name?

A. Don Maynor.

Q. Do you work in Gullyjumper Mill?

A. No, I was fired.

Q. Why were you fired?

A. I had an accident.

Q. What was your job?

A. Baler in cloth room.

Q. When did the accident happen?

A. Last Wednesday.

Q. How did it happen?

A. Tells about falling in oil slick, etc.

Q. How long had it been there?

A. Ever since I started work.

Q. Why didn't you wipe it up?

A. Nobody ever told me to.

Q. Didn't your second hand ever tell you to clean up?

A. No, only to keep it off the cloth.

Q. Don't you know that good housekeeping is the first law of safety?

A. No.

Q. Weren't you instructed in safety when you came to work?

A. No. Nobody ever said anything to me.

Q. Wasn't your job explained?

A. Yes sir!

Q. Wasn't safety also explained?

A. No.

Q. Don't the inspection committee report things like oil on the floor?

A. We don't have any that I know of.

Q. Are you really hurt?

A. Yes sir, I knocked one of those little things, etc.

Q. Who saw you fall?

A. Nobody—I guess.

Q. Did you report it to your second hand?

A. No. The boys told me I'd get fired if I did.

Q. Did you see a doctor?

A. Yes sir.

Q. When?

A. That night. I got to hurting, etc.

Q. Does it still hurt?

A. Yes sir.

Q. Where?

A. Right here. I have to walk all bent over like this.

(JUDGE: "How did you walk before the accident?"

Defendant illustrates—cocky walk across stage and back.

JUDGE: "That will be all.")

Q. Who is your second hand?

A. Mr. Ed Dickert.

Q. Who was the doctor?

A. Dr. Cuttem.

Q. Show me again how you have to walk since you got hurt.

PROSECUTOR: "Your honor—I'd like to call Dr. Cuttem in order to determine if this man is really hurt. I think he is malingering."

WITNESS NO. 2

After being sworn in:

Q. Now, doctor, give the court your full name.

A. Gladly sir, Doctor I. Cuttem, M.D., Ph.D., BVD.

Q. Dr. Cuttem, what do those degrees mean and where did you get them?

A. Well, sir, the M.D. and Ph.D. I got from medical college and the BVD I got from Sears Roebuck.

Q. Doctor, are you what is commonly called a bone doctor?

A. Yes, you might say I am a bone doctor. In fact I worked my way through college with bones (pulls out some dice and rattles—try to work up a game).

(Prosecutor and Doctor get on knees—Judge breaks it up.)

Q. But, doctor, did you study about the human bones?

A. Oh yes, I know all about them things.

Q. Now will you tell the jury what you know of the injury of Don Maynor? He says you treated him after he got hurt down at the Gullyjumper Mill.

A. Yes, this young fellow came to my house and woke me up about 3 o'clock in the morning the other day and wanted me to treat him—said he got hurt. Well, after I had time to get a credit rating on him, got him to sign over his car to me, promised me his Christmas Savings at the Mill, just a precautionary measure or two, I decided to look at him—and BOY what a sight—what a wreck—this fellow must have been hit by a train!

Q. Doctor, can you tell us exactly what is wrong with him?

A. Oh sure, but I'll have to call in my partner for a demonstration, my silent partner. (Pull out skeleton.) (Go through a routine with Ralph holding skeleton for me—using terms—also using song, "Dry Bones"). Finally getting around to the back and bringing out that the injured has a dislocated intertube in his sacrocrackerjack.

Q. Doctor, is this serious?

A. Tell about one out of ten gets along fine and this fellow has a good chance since my last nine patients died.

Q. Doctor, after getting this man to give you all the security you mentioned and after the examination you made, do you think his present condition is a result of an accident on the job?

A. (Thinking out loud) I'll get more money from a compensation case. Yes, that's my opinion.

WITNESS NO. 3

Q. Name?

A. Ed Dickard. (Have a handful of papers.)

Q. What is your job?

A. Second hand—cloth room—Gullyjumper Mill.

Q. Do you know that man?

A. Yep—I know him.

Q. Where did you know him?

A. He worked as a baler in the cloth room.

Q. You mean he is not there now?

A. No. We had to let him go.

Q. Why?

A. He couln't run his job.

Q. Do you know why he can't run a job?

A. Yeah—he claims he got hurt.

Q. Did he get hurt on the job?

A. I dunno whether he did or not.

Q. You mean you don't care. Your attitude is not so good.

A. I can't be bothered about guys like that. All I ever hear is my overseer on my back about getting out the work. Quality and production and seconds is all I hear around here. What am I doing here anyhow? I was called off the job and was told to come down here with no explanation.

Q. You are here to determine if this man had an accident. Now, did he report his accident to you?

A. No.

Q. Did he go to the nurse?

A. We don't have a nurse.

Q. How do you give First Aid?

A. I just slap a little iodine on 'em.

Q. Do you have a department safety committee?

A. Heck no. We don't have time for that stuff.

Q. Doesn't your overseer make you keep a safe department?

A. Goodness no. All he cares about is production and baseball.

Q. You mean you don't have any kind of a safety program at Gullyjumper?

A. I guess that's right. If they've got one I never heard of it.

Q. Who is your overseer?

A. Mr. Owens, who is also manager of the Mudhens.

"Call Overseer"

WITNESS NO. 4

Q. What's your name?

A. Red Owens.

Q. Where do you work?

A. Gullyjumper Mill.

Q. What's your job at the mill?

A. Cloth room boss and manager of Mudhens ball team. What y'all want with me? I was called from the ballfield, etc.

Q. How many employees do you work?

A. 18 working and four ball players.

Q. What are your duties?

A. My biggest job is getting out production, etc., ball team.

Q. Do you know that man—there—who got hurt in your department?

A. I've seen him around.

Q. Do you have a report of his accident?

A. Nope. I didn't even know he got hurt till the super told me to come here. I need to get back to the ballfield.

Q. Do you agree with his statements?

A. Heck no. They are a pack of lies.

Q. Do you have any kind of a departmental safety program in your department?

A. No. We don't have time to take people off the job for that stuff, etc.

Q. Hasn't your superintendent told you to start some safety activities in your department? Hasn't he told you what to do?

A. He told me what to do all right—not to have any seconds. He says that safety stuff ain't worth a darn.

Q. Who is your superintendent?

A. Mr. Fred Thackston.

"Call Superintendent"

WITNESS NO. 5

Q. What's your name?

A. Fred Thackston.

Q. What's your job?

A. Superintendent.

Q. How long have you worked at Gullyjumper?

A. 25 years.

Q. How many employees do you work?

A. About 600.

Q. Do you have a personnel department?

A. No, it would cost too much money.

Q. Well, who hires your help?

A. Overseer.

Q. Does he explain any safety rules to the *employee?*

A. No, he doesn't have time.

Q. Do you have a cost department?

A. Yes, we have a cost department.

Q. Why do you have a cost department?

A. Because it is necessary to know what it costs to make a yard of cloth.

Q. Well, why don't you have a safety program?

A. We carry insurance to take care of our accidents. We can't see where it would save us any money.

Q. Do you know what your insurance costs you?

A. Yes, it costs about $15,000 per year.

Q. Has the insurance company ever sent their safety engineer around?

A. Yes, some little college engineer came around. He wanted to tell me how to run my plant; wanted me to spend $10,000 to change my elevators, cables, etc.; and they have been running for the last 20 years and no one has gotten killed yet. He wanted me to put a guard on every motor; even wanted me to change all the electrical outlets; said somebody could get electrocuted. So, I just told him to get his little handbag and go back where he came from. I didn't have time to fool with him.

Q. Whom do you take your orders from?

A. From Mr. Sawyer up in Massachusetts.

Q. Has he ever told you anything about having a safety program in this mill?

A. No, all he is interested in is how much money I make for him each year. He expects me to make him money and if I don't do it, he will get somebody that will.

Q. Who is in charge of safety?

A. Nobody.

Q. Who keeps records of accidents?

A. Don't keep any.

Q. What is your frequency?

A. I don't know what you are talking about.

Q. Do you have a nurse?

A. No.

Q. Do you have a physical exam when you hire new people?

A. No.

Q. Do you hold any safety meetings with your overseers?

A. No—only production meetings.

"Call Owner"

WITNESS NO. 6

Q. Could I have your name?

A. J. A. Sawyer.

Q. Are you the owner of the Gullyjumper Mill?

A. Yes, I own that mill.

Q. Would you tell us where you live?

A. I live on Beacon Hill in Boston, Mass.

Q. Now tell me, is it true that everything that is done or goes on in the Gullyjumper Mill is your personal responsibility—all decsions, all new machinery, all maintenance, etc?

A. In general that is true. I only get to the mill about five times a year but in general I do make all the major decisions.

Q. Now in this trial we have been trying to find out who was responsible for the accident to this poor claimant sitting here. All the other persons have told this court that they were following their orders and they all appear to be doing just as they have been told. Is that about right?

A. That may be true but I've never told them to get anyone hurt.

Q. You personally don't like to see anyone hurt, do you?

A. No, of course not!

Q. Do you at this time or have you ever taken any personal interest in the prevention of accidents at Gullyjumper Mill?

A. No, that's not part of my job or my responsibility. The people down there have got to look out for themselves. Our job is production—not worrying about who might get hurt.

Q. Do you know how much you are paying for W. C. insurance?

A. I don't know exactly—I do know it's too high.

Q. Have you ever discussed the cost of accidents or insurance costs with your superintendent?

A. No.

Q. Have you ever instructed the superintendent to install a safety program, or to make sure he runs a safe mill?

A. No.

Q. One last question, don't you agree that if you personally have never expressed any interest in the prevention of accidents, that the superintendent and all his overseers could easily have the same opinion?

A. I am afraid that I cannot go along with your reasoning. What I say or do has no connection with an accident that happens at Gullyjumper Mill. People have to look out for themselves. We can't waste our time worrying about a spot of oil on the floor.

Q. Do you believe in good working conditions for your employees?

A. Yes. We will do anything to get out production and improve our work.

Q. Do you ever discuss safety with superintendent?

A. No. His job is productioin.

Q. Do you ever mention costs of accidents to superintendent?

A. No. His job is production.

Q. All the testimony you have given shows that no program has been injected in Gullyjumper Mill for anything but production and costs. Nothing for the safety of your people, which means that you are overlooking the best possible way of reducing cost: reducing seconds and therapy increasing efficiency and production.

A. Now wait a minute. I don't see how all this is any business of yours. Dragging all these witnesses down here etc., etc.

Q. Your Honor, I rest my case, as I have proved without a doubt that all supervisory personnel are guilty of this man's accidental injury, and I demand a verdict of guilty and the supreme penalty of conviction. I would now like to put my case before the jury.

JUDGE: You may charge the jury.

Prosecutor to Jury
(Face Audience)

Ladies and Gentlemen of the Jury. You have heard the injured explain how he got hurt. He worked in a mill utterly devoid of feeling for the worker. He was driven to seeking medical attention on his own hook because the mill provides nothing in the way of a medical program. For his trouble he was fired for not being able to run his job.

You have heard the second hand explain that he had no time to operate a safe shift. He stated he was driven constantly for production and quality.

You have heard that ignorant overseer testify that his only interest was in the baseball team. He hardly knew his own employee. Production and baseball was all he cared about.

You have heard the superintendent testify that he took no active interest in the welfare of his employees and that he didn't have time for safety.

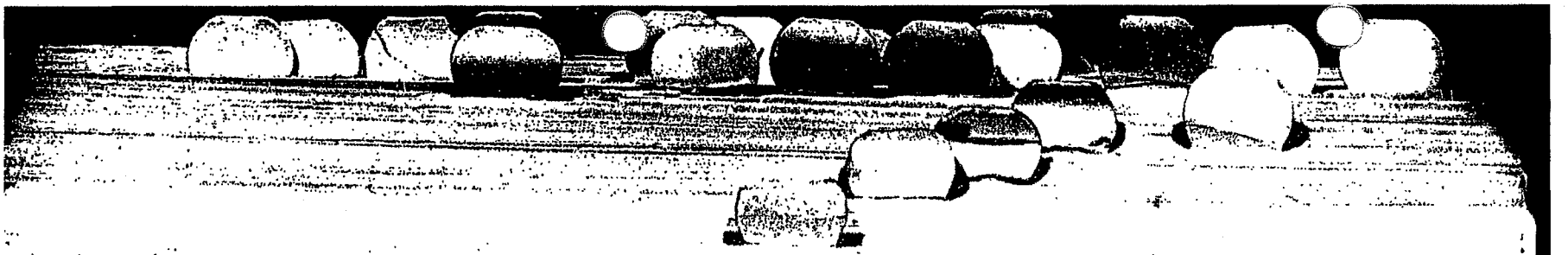
You finally heard the owner state that his only interest was in money and that he felt no obligation to provide even the rudiments of good working conditions for his employees.

Such a history of buck passing I have never seen. Not one of these men has proven himself fit to run a mill.

I ask you to return a verdict of *guilty* in the first degree. I ask this court to invoke the extreme penalty on all of these men. I demand that they make full restitution to this poor man and that they be required to operate in the future according to the strictest Safety Code.

I rest my case.

Judge charges the jury and finds that they are all guilty and sentences them to one full year of having a safety program in their respective plants. Then asks if they think each individual is guilty and brings them up before the bench to be tied by the bailiff and carried out to jail.▲



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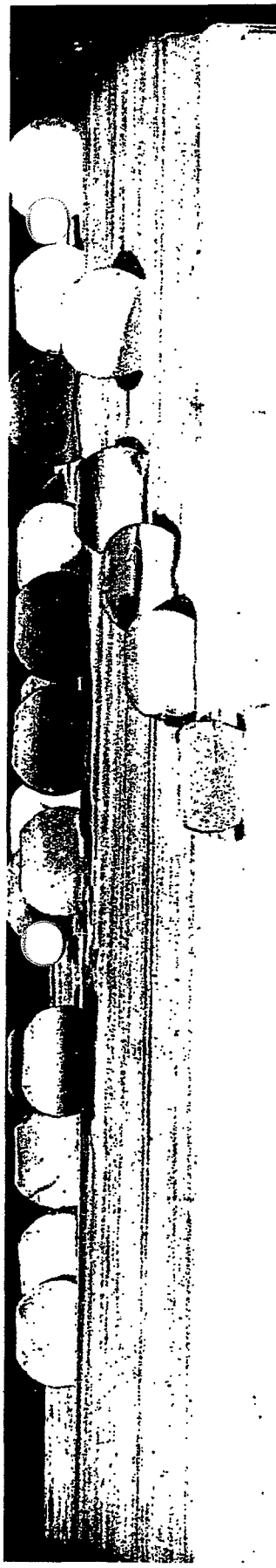

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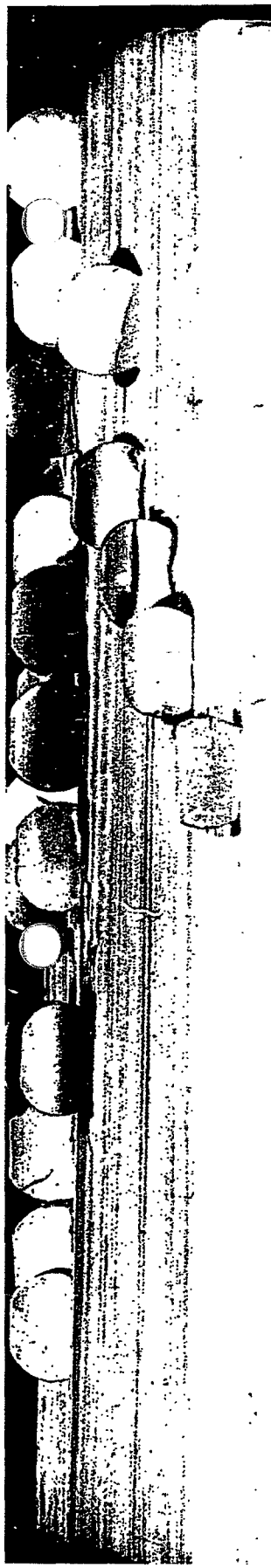

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