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J. T. MORE, Secretary,
SOUTHWESTERN MINE SAFETY ASSOCIATION,
Ray, Arizona.

Enclosed please find ^{money} order for Three Dollars (\$3.00)
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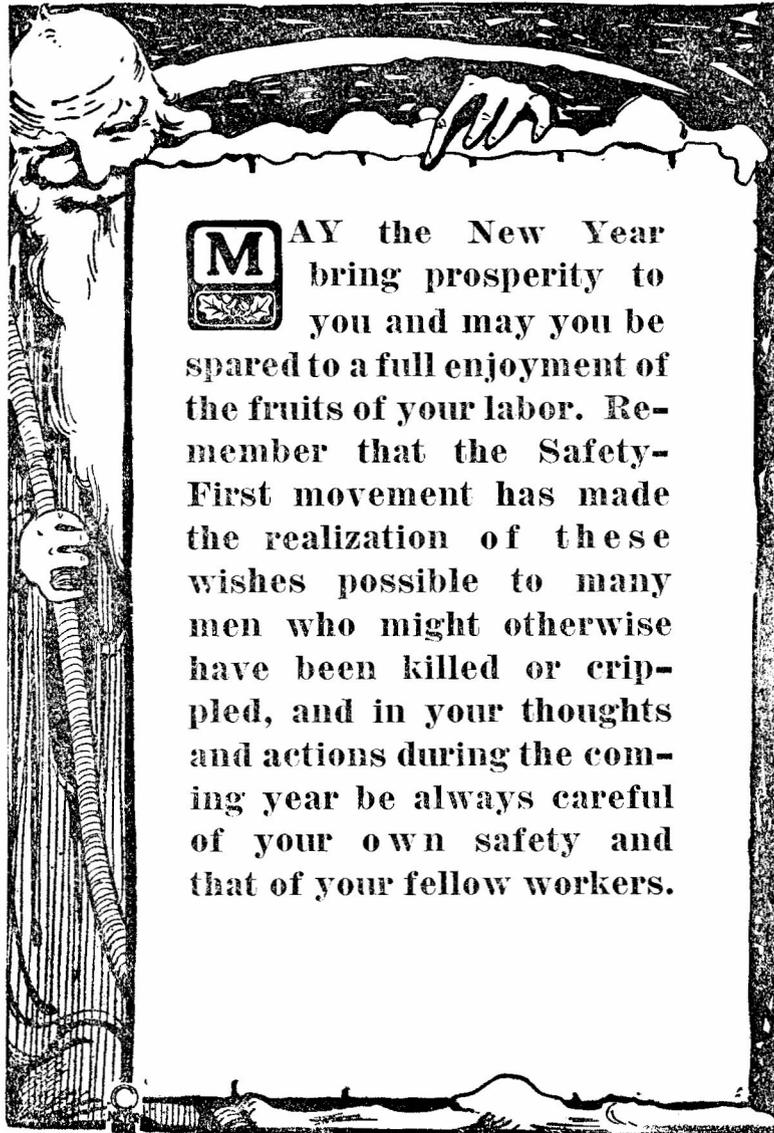
State Safety News

Safety

Efficiency

SAFETY SERIES NO. 14

JANUARY 2, 1917



MAY the New Year bring prosperity to you and may you be spared to a full enjoyment of the fruits of your labor. Remember that the Safety-First movement has made the realization of these wishes possible to many men who might otherwise have been killed or crippled, and in your thoughts and actions during the coming year be always careful of your own safety and that of your fellow workers.

TAKING INVENTORY.

January is the month when business men take inventory and many people make new resolutions. It is probably well to have one time of the year to do this, but have you thought it is quite as proper to take an inventory of human qualifications as of stocks and goods. The greatest assets each man has, whether rich or poor, lie within himself, and he should analyze these assets so that he may see where he is weak so as to make himself strong.

Health is the principal asset of every man and should be jealously guarded. All bad habits should be avoided and clean lives lived in order to conserve this great blessing.

Perfect bodies and organs are necessary to take a man's part in the world's work. Therefore each man should promote safety and avoid accidents in order to save lives, prevent mutilations of the body and loss of eyes, arms, legs or other parts of the body.

Reputation for honesty, truthfulness and fairness does much to advance men to higher positions of trust and responsibility.

Training is necessary to develop the resources of the body and create health. Each man should utilize his spare time preparing for the job ahead by doing his work in a better way every day.

We'll never get anywhere unless we think some.

THIRD ANNUAL MINE RESCUE CONTEST.

The stellar attraction at the Arizona State Fair on November 14th was the annual First Aid and Mine Rescue contest given under the auspices of the Southwestern Mine Safety Association. The contest started at 9 o'clock, many being present to witness the demonstration which was considered the best ever attempted since this work was initiated in the mines throughout the state.

A mine constructed of heavy timbers was located on the fair grounds in such a way as to illustrate mine shaft tunnels, and other parts of underground workings, in order to have the contest take place under as practical conditions as possible.

Orr Woodburn, one of the prominent directors in the work, brought both a first aid and mine rescue team from the Old Dominion mine at Globe. J. T. More, the hustling secretary-treasurer of the Southwestern Mine Safety Association was always in evidence, with J. F. Newton, who had direct charge of the Ray men. Wallace (Safety) McKeehan was in charge of the Bisbee

crew. A. S. Livingston was a booster for the abilities of the Detroit Copper Co. team. Tom Cowperthwaite was there with the Calumet and Arizona rescue team, and S. F. French with the C. & A. first aid men.

These men represent the backbone of a movement which is financed by the operating companies of the state in a serious effort to reduce, not alone the dangers of mining, but also the suffering from injuries obtained during these operations.

The Old Dominion teams took honors, winning the first place in the mine rescue contest and second place in the first aid contest. These teams were as follows:

1st aid team: C. E. Griswold, A. S. Gifford, D. W. Cheney, H. W. Payne, A. Mugfong and L. Tabb.

Mine rescue team: Sam Boreland, Al. Wilkins, William Dennis, William Cowling, Charles Philips and Charles Askew.

The following are the scores in each of the contests:

	Mine Rescue Contest
Old Dominion.....	99 per cent
Calumet & Arizona.....	98.4 per cent
Detroit Copper Co.....	98 per cent
Copper Queen.....	90.8 per cent
	First Aid Contest
Calumet & Arizona.....	98.5 per cent
Old Dominion.....	97.75 per cent
Ray Consolidated.....	97.75 per cent
Copper Queen.....	97.1 per cent
Detroit Copper Co.....	95.45 per cent

The third annual contest was a success in every way, and the demonstration of the work done was highly commended by those present. The judges of the contest were Major Murray, Captain McClellan and Captain Parce of Douglas; J. C. Roberts, formerly of the U. S. Bureau of Mines; George W. Salisbury of Jerome, and H. H. Sanderson of Seattle.

*Aiming high is all right. But the careful
aimer is the one who is sure his gun is not
loaded with blanks.*

THE MAN WHO DELIVERS THE GOODS.

There's a man in the world who is never turned down, wherever he chances to stray; he gets the glad hand in the populous town, or out where the farmers make hay; he's greeted with pleasure on

desert sands, and deep in the aisles of the woods, wherever he goes there's the welcoming hand—he's *the man who delivers the goods*.

The failures of life sit around and complain, the gods haven't treated them white, they've lost their umbrellas whenever there's rain, and they haven't their lanterns at night; men tire of the failures who fill with their sighs the air of their neighborhoods; there's a man who is greeted with love-lighted eyes, he's *the man who delivers the goods*.

One fellow is lazy and watches the clock, and waits for the whistle to blow, and one has a hammer with which he will knock, and one tells a story of woe, and one, if requested to travel a mile, will measure the perches and rods, but one does his stunt with a whistle and smile—he's *the man who delivers the goods*.

One man is afraid that he'll labor too hard—the world isn't yearning for such, and one man is ever alert, on his guard, lest he put in a minute too much, and one has a grouch or a temper that's bad, and one is a creature of moods, so it's hey for the joyous and rollicking for—for *the one who delivers the goods*.—WALT MASON.

*'Tis not birth, nor rank, nor state—'tis get up
and get that makes men great.*

GERMS AND FILTH ARE CLOSELY ALLIED.

Because germs can not be seen it is difficult to protect ourselves from them. If it were easy, there would be much less sickness. One precaution that is perhaps more helpful than any of the others is to avoid all things unclean. Real cleanliness means many things. It means clean water, clean yards, clean milk, clean food, clean houses, clean air, clean bedrooms, and clean bodies. Long before we had any knowledge of germs instinct warned us to avoid unclean conditions. Now we have learned that germs and uncleanliness are closely related.

The throwing off of waste poisons is one of life's processes. Not only must the waste poisons get out of the body, but they must be kept away. They should be removed from all possible contact with the body. Man can not flourish in his own defilement.

In early times people did not remain in one place very long. They hunted and fished and then moved on, leaving behind their defilement.

If people can not move away from the defilement they cause, it must be moved away from them. The wholesomeness and healthfulness of the dwelling site depend upon how quickly the wastes are removed from near it.—W. S. B. OF M. BULLETIN.

NECESSITY FOR ORGANIZATION.

The accident prevention problem involves two essential elements—*Safeguarding* and *Education*—in each of which there is more or less detail work. Experience in the past decade has conclusively proven that safeguarding and educational work in any plant is not a “one man job”; that satisfactory results can only be secured through the highest measure of co-operation between the employer and his employees, and this only by means of organization. The employer himself must be vitally interested in the work if he expects to educate his men to share the responsibility with him. The men must be given a part to perform in it, if their interest is to be aroused and maintained. The problem must touch them somewhere, and they must be brought into direct relationship with their employer. It is only through organization that this is possible.

THE WORK OF AN ORGANIZATION.

The form and character of any organization must naturally vary as the work to be performed varies; hence the work to be done by a safety organization should first be considered before determining what the form of organization should be.

Safeguarding and *Education* comprise the task of any safety organization, all of which naturally requires efficient planning, direction and supervision.

In *Safeguarding* there are involved among others the following essential elements:

1. A study of hazards incidental to the use of equipment and machinery.
2. Adoption of standards.
3. Inspection for—
 - (a) *Need of safeguards.*
 - (b) Installation of safeguards.
 - (c) Maintenance of safeguards.
 - (d) Use of safeguards.
4. In new construction or replacement, checking in drafting room or purchasing department.

In *Educational* work there are involved among others the following essential elements:

1. A study of hazards incidental to operations.
2. Adoption of operating rules covering safe method of doing work.
3. Instruction of new men as to hazards and rules.
4. Interesting the men.
5. Providing bulletin boards, in the several departments, for the posting of Safety Orders, Rules and Information.

FORM OF ORGANIZATION

The existing working force of every industrial or transportation concern, whether large or small, is adaptable very readily to an accident prevention organization.

In any form of organization created the following elements are essential:

1. A safety inspector (who in a small plant may perform other duties). He should—
 - (a) Inspect—
 - (1) For need of safeguards.
 - (2) For installation of safeguards.
 - (3) For maintenance of safeguards.
 - (4) For use of safeguards.
 - (5) For unsafe practices.
 - (6) For plant cleanliness.
 - (b) Have charge of details of all safety work.
 - (c) Receive all reports, recommendations and suggestions.
 - (d) Keep all necessary records.
2. A central committee of safety composed of plant superintendent or his assistant (chairman), safety inspector (secretary), and three or more high grade department superintendents, foremen or workmen, which should—
 - (a) Have general charge and supervision over safety work.
 - (b) Pass on all matters of controversy.
 - (c) Gather all available information.
 - (d) Establish standards for safeguards.
 - (e) Promulgate rules for safe operation.
 - (f) Outline educational campaign.
3. Workmen's committees; consisting of three to five workmen, appointed and changed periodically. They should—
 - (a) Make inspections.
 - (b) Investigate accidents in their several departments.
 - (c) Render written reports on forms provided for that purpose.
4. Foremen: Each foreman should—
 - (a) Enforce safety rules adopted.
 - (b) Be held responsible for the safety of his men.
 - (c) Investigate accidents, reporting causes and suggestions for method of preventing recurrence on forms provided for that purpose.
 - (d) Make frequent inspections of his department.

- (e) Render weekly written reports on forms provided for that purpose.
- 5. Meetings of foremen—held monthly to discuss safety matters.
- 6. Workmen: Each workman should be educated and interested in safety matters. This work involves—
 - (a) Instruction of new men.
 - (b) Familiarizing of men with rules.
 - (c) Interesting the men through bulletin boards, prizes, etc.
 - (d) Discipline.

In smaller plants and factories the development of the workmen's interest in safety and the utilization of his power of safety inspection can doubtless be obtained by a much simpler committee system.

Some people are dissatisfied with everything except the satisfaction they get out of being dissatisfied.—Dr. Push.

BOOZE ONE BUSINESS HELPED.

"If any man here," shouted the temperance speaker, "can name an honest business that has been helped by the saloon I will spend the rest of my life working for the liquor people."

A man in the audience arose. "I consider my business honest," he said, "and it has been helped by the saloon."

"What is your business?" yelled the orator.

"I, sir," responded the man, "am an undertaker."

*Teach the new man how to avoid accidents.
He may have a wife and family who love him.*

SOME FACTS ABOUT CARBIDE AND ACETYLENE.

Carbide is not inflammable.

Carbide is not explosive.

The residue from the used carbide is not explosive.

The gas from carbide is not exploded by concussion.

Acetylene gas is not poisonous.

Breathing small quantities of acetylene is not injurious to health.

The products of combustion of acetylene are not poisonous gases.

*A city can get along without some men, but
it cannot get ahead without them.*

ACCIDENTS AT COPPER METALLURGICAL PLANTS.

As the mills and smelters treating copper ores represent such an important part of the metallurgical industry of the United States, Tables 1 and 2 have been compiled from the reports of a number of selected companies whose records appear reasonably complete, and where efforts are being exerted to maintain safety organizations. These figures represent 16 ore-dressing plants and 20 smelters in various parts of the country, employing 8,056 men at mills and 9,417 at smelters. The fatality rate at these plants is reasonably low and the nonfatal injury ratios are seemingly not much in excess of those at quarries and the surface plants of mines. These figures are given in order that more specific information may be available concerning this important branch of the metallurgical industry.

TABLE 1.
SUMMARY OF ACCIDENT DATA AT COPPER METALLURGICAL
PLANTS, 1915.

	Mills	Smelters
Number of plants	16	20
Men employed	8,056	9,417
Number of 300-day workers	8,838	10,438
Total days' labor (shifts).....	2,651,313	3,131,577
Days worked during year	329	332
Number killed	10	15
Number injured	1,009	1,686
Fatality rate per 1,000, 300-day workers.....	1.13	1.43
Injury rate per 1,000 300-day workers.....	113.03	161.52

TABLE 2.
ACCIDENTS, BY CAUSES, AT COPPER METALLURGICAL PLANTS, 1915

	Mills		Smelters	
	Killed	Injd.	Killed	Injd.
Haulage system (cars, motors, etc.).....	1	51	3	150
Railway cars and locomotives .....	...	9	...	12
Crushers .....	...	6	...	3
Rolls or stamps .....	...	10	...	...
Tables, jigs, etc. ....	...	32	...	...
Cranes .....	...	...	2	23
Other Machinery	1	103	2	110
Falls of persons	3	146	2	167
Suffocation in ore bins	1	2	1	7
Falling objects (rocks, timbers, etc.).....	1	111	1	316
Cyanide or other poisoning .....	...	5	...	...
Gas (burning or asphyxiation) .....	...	...	...	2
Scalding (steam or water) .....	...	7	...	17
Electricity	1	19	1	24
Hand tools, axes, bars, etc. ....	...	133	...	219
Nails, splinters, etc. ....	...	57	...	49
Flying pieces of rock from sledge or crusher .....	...	40	...	...
Burns from matte, slag, or molten metal .....	...	...	2	201
Hot-metal explosions .....	...	...	1	53
Other causes	2	278	...	333
Total	10	1009	15	1686

THE KNOCKER.

There is a type of man who derives more pleasure from pulling down than in building up; in saying the unkind thing, rather than the kind; the sort of man who goes gladly forty miles out of his way if he thinks he can "put one over," says T. & T. Imprint. It takes a peculiar mental construction to gloat in "knocking"—a sort of self-hypnosis which makes the knocker think he is doing himself good by doing another fellow harm. The knocker believes that others like to hear his tale, that others take his story at its face value. But note the consistent knocker. He is seldom in business for himself; or, if he is, he hardly ever stays there. When he gets a job, he doesn't hold it; when he has a friend, he loses him. He has to buy for cash, for the knocker has no credit. Nobody trusts him, nobody believes him. The knocker does a lot of harm, but in the long run, it is only to himself. The man who knocks is always among the down-and-outs, the has-beens, the never-to-bes. The successful man ignores the knocker. He is too busy doing things.

I think that saving a little child and bringing him to his own is a derved sight better business than loafing around the throne.

ATTENTION, MARRIED BOOZE FIGHTERS!

To the married man who thinks he cannot get along without his drinks, the following is suggested as a solution to the bondage of his habit:

FIRST—Start a saloon in your own house.

SECOND—Be the only customer and you'll have no license to pay. Give your wife two dollars to buy a gallon of whiskey, and remember, there are sixty-nine drinks in one gallon.

THIRD—Buy your drinks from no one but your wife, and by the time the first gallon is gone she will have eight dollars to put in the bank and two dollars to start business again.

FOURTH—Should you live ten years and continue to buy booze from her, and then die with snakes in your boots, she will have money enough to bury you decently, educate your children, buy a house and lot, marry a decent man and quit thinking about you.

The only safe place to put your money is in the bank where it is safe from fire, burglars, or your own extravagance.

WHAT IS FIRST AID?

BY FRED B. KILMER.

"The editor of "Coal Age" has submitted this question, "What is first aid?" Perhaps I can answer the query in part by stating what first aid does not embrace.

First aid in emergencies does not include the diagnosis and treatment of disease, the application of therapeutics or the practice of medicine or surgery. Persons skilled in all of these arts may practice first aid, but in practising and in applying these arts they are not exercising true first aid according to its correct definition.

As a matter of fact many eminent practitioners of medicine misunderstand the true meaning of first aid and either condemn it, or, in practising it and in imparting it to others, overstep its true sphere. Modern first aid as applied in the factory, workshop, mine, store, household or wherever it may be needed in simple life is a complement to first aid on the battlefield.

First aid to the injured from the viewpoint of the industrial worker has been aptly described as a bridge between the accident and medical and surgical assistance, and this bridge should always be kept in mind when speaking of first aid or when applying it. Over this bridge the injured person is to be carried from the place of injury to a place of treatment, and once the bridge is crossed and the injured person placed in the hands of a medical attendant or in the hospital, first aid is at an end. Thus we see that the true office of first aid is to relieve the injured person from immediate suffering and to prevent further injury.

FIRST AID WORK DOES NOT INCLUDE DIAGNOSIS.

Action of this character is first aid, whoever may render it. A person trained to this end, such as a mine worker who has had special instruction and who is perhaps a member of a first aid team, a physician or a nurse, may render such aid more skilfully than an untrained person, but in either instance the action here outlined is first aid in its beginning and in its end. It will therefore be seen that the permanent treatment and care of injuries, administration of medicine, the diagnosis and treatment of disease are not parts of first aid, and it is for the lack of a clear conception of that work as here outlined that much prejudice has arisen against the movement, and first aid has failed to make the progress to which it is fully entitled. In short, it has been overloaded and complicated and what it needs at the present time is to be stripped of the non-essential and brought down to its first and underlying principles.

The great apostle of first aid, the immortal Von Esmarch, invented the well-known triangular bandage, which is simply a triangular piece of cloth. This was used by him as the sole application for rendering first aid on the battlefield, and today efficient aid can be applied in all walks of life by the use of one of these simple pieces of cloth. Indeed, there are many systems in successful operation in the railways, mines, industrial institutions and in the armies and navies of the world the beginning and ending of which consist of the well-known first-aid packet which contains this triangular piece of cloth, a bandage and a few safety pins. There are few injuries encountered in the ordinary walks of life which cannot be treated with this simple application. In other words, the triangular bandage, or at times the first-aid packet, is all the first-aid worker really needs. Thus we see that even the hospital is out of place in mine or factory as an essential part of a first-aid equipment. In fact, it would be my judgment that a hospital should not be installed as a part of the equipment unless it is also supplied with a skilled staff of physicians, surgeons and nurses. The best use for a hospital in industrial institutions is as a place for rest and the rendering of medical and surgical treatment. It should be kept locked and made inaccessible except to a qualified attendant.

IN FRANCE A PAD AND A TRIANGULAR BANDAGE.

Experience in France during the present great conflict has shown that the most successful application of first aid is the covering of the injury with a pad and the application of the triangular bandage, leaving all other manipulation of the injured person for skilled attention at the hospital, which may be many leagues away.

Complications have arisen in first aid by reason of the various laws and regulations enacted by over-zealous but unenlightened legislators. Hence we have a law in one State which requires a first-aid equipment containing a given number of items, sometimes including dangerous and poisonous medicines and applications; on stepping over the line we meet another set of laws and regulations requiring an entirely different outfit. The legislation as to what should constitute a first-aid equipment passed by the State of Illinois marks what should be specified, though perhaps it is a minimum requirement. That State has prescribed that at least six regulation first-aid packets be provided for train service.

Owing to the misconception of true first aid and to the complicated systems which have been introduced in mines and industrial institutions, many men who might otherwise render efficient first-aid serv-

ice have become scared at the complicated array of equipments, rules, regulations, and instructions, and in consequence do nothing. Others, having acquired a little but dangerous knowledge, overdo the matter and become involved in the whole realm of diagnosis, treatment, therapeutics, medicine and surgery.

The point which I have attempted to impress in this article is that we should simplify our first-aid equipment and our instruction, service and application. The first aim is the immediate care of the injured in order that no extension of the injury may take place; the second aim is to transport the injured person as soon as possible and place him in the hands of a skilled medical attendant. This is where first aid becomes an adjunct to safety first—safety to the injured person, safety in the method of handling the injured person, safe transportation to a place where the injured person may receive proper treatment.—QUEENSLAND MINING JOURNAL.

Accidents are preventable only as the seed of caution is sown and men think and act in a safe way.

AMBITION.

It is not the lack of ambition that causes most of the inefficiency.

Ambition is common enough, for we find it everywhere, in every man, no matter how low his state.

The trouble is that ambition frequently exceeds energy or ability.

With the average young man who enters a business, his ambition runs riot with his capacity to apply himself.

His ambition is always ahead of his immediate occupation.

He does not allow what he is doing to catch up with his ambition.

His mind is away from the immediate thing and thus we find inefficiency in the immediate thing.

For instance, the bundle boy in the big store: He is ambitious enough to become a clerk, and he is so busy thinking about the clerk's occupation that he neglects his own task and gets the articles in the wrong bundles. He is so intent on watching his superior, the clerk, that he will criticize a clerk's action in his method of handling a customer.

For instance, we nearly always find the inferior traveling salesman continually complaining of his sales manager and the policy of his house.

—ILLINOIS STEEL COMPANY SAFETY BULLETIN.

TEN COMMANDMENTS.

TO PREVENT ACCIDENTS AND PROMOTE SANITATION

1. Get the safety habit. Don't take chances. Learn all the rules; understand your work thoroughly. Study the dangers incident thereto and avoid them. Think before you act.
2. Do not work with defective chains, cables, tools, or appliances of any kind, or in an unsafe place. Carefully examine same and report dangerous conditions to your foreman.
3. Never work on a crane, trolley or other machinery until you have notified the operator and attached a sign, "Danger. Do not move," bearing your name, at the point where the power is turned on. No man except the man who placed it should remove such sign.
4. Do not turn on any electricity, gas, steam, air, acid or water, or set in motion any machinery, or throw down any material, without first seeing if anyone is in a position to be injured, and all safety guards are in their proper place.
5. Do not go onto an overhead crane runway, for any purpose, without permission from your foreman, and then not until the crane-men have been notified and a sign, "Danger. Men on Crane Track," hung in cage before crane-men. After notifying crane-men, attach bumping block to crane rail between where you are working and cranes. Use same precautions when working near crane tracks.
6. Wear goggles when working around circular saws, chipping, handling acid, cutting cables, working at emery wheels, etc.
7. Do not ride on, or operate engines, cars, cranes, elevators or other moving bodies, or tamper with electrical apparatus, unless authorized to do so. Never leave your regular place of work except when required by your duties.
8. If you make an opening, or remove the cover from any opening, in floor, ground, valve pit or sewer, guard that opening so no one can fall into it.
9. Do not pile any material so high that it is liable to fall, or cause any other pile to fall, or allow it to lean against walls too weak to bear the pressure.
10. Commit no nuisance, be clean and help to keep the plant clean. Conduct your private life so that you are at all times in the very best of physical condition, wide awake and active.

Learn from your mistakes, but don't cry over them. We best redeem the past by forgetting it.—Elbert Hubbard.

THE PROPER SLOGAN.

BY BERTON BRALEY.

This business of diggin' the copper
 Is risky, at best, an' that's straight,
 Which makes it exceedin' improper
 To take extra chances with fate.
 The man who with danger is flirtin'
 Is lightin' a mighty short fuse,
 Don't gamble with death, for it's certain
 That sooner or later you'll lose!

Up at the collar or down in the stope,
 "Safety First" is the wisest dope!

If timbers seem doubtful an' quaky
 Don't "guess they will do for the day,"
 If ground up above you is shaky
 Don't reckon it "maybe will stay."
 You want to watch out what your'e doin'
 In manway or crosscut or drift,
 Or else you may totally ruin
 Yourself—or the feller next shift.

Out at the station, or in at the stope,
 "Safety First" is the wisest dope!

There's many a widow in mournin'
 There's many a sweetheart who cries,
 Because of a man who was scornin'
 The rules an' precautions that's wise.
 So listen, you boys, to my carol,
 So I won't be wastin' my breath,
 Don't monkey with danger an' peril,
 Don't gamble so reckless with Death!

For up in the smelter or down in the stope
 "Safety First" is the proper dope.
 —BY COURTESY OF "THE ANODE."

A careless man is dangerous to himself, his fellow workers and society. Eliminate him.