

4-30-1932

Industrial Safety Bulletin April 1932

Maine Department of Labor and Industry

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INDUSTRIAL SAFETY BULLETIN

APRIL 1932

Prompt treatment of all minor injuries is an important factor in safety work. Such injuries if not promptly attended to often result in something of a more serious nature, and are not only expensive but are a cause of much suffering.

A visit to the Plant Hospital is an expression of confidence in the Safety program. Mutual understanding between industrial workers and their employers is the basis of a well balanced Safety Organization.

(Signed) GEO. B. MORRILL
President
Burnham & Morrill Co.

Issued by
THE DEPARTMENT OF LABOR AND INDUSTRY
Augusta, Maine

APR 30 1932

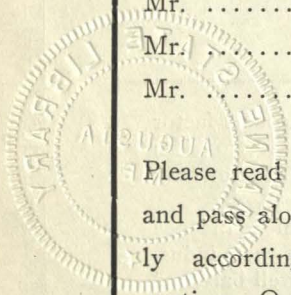
Plant Routing:

Superintendent
Master Mechanic
Steam Supt.
Electrical Supt.
Maintenance Supt.
Safety Director
Plant Nurse
Chairman, Safety Com.
Mr.
Mr.
Mr.
Mr.
Mr.
Mr.

Please read thoroughly
and pass along promptly
according to this
routing. One idea thus
gained may save a life.

S-A-F-E-T-Y
spells
GOOD BUSINESS

We suggest that this cover
be folded back on heavy line
and clipped. Check names of
those you wish to read the
material in this Bulletin.



INDUSTRIAL SAFETY BULLETIN

DEPARTMENT OF LABOR AND INDUSTRY - - AUGUSTA, MAINE

CHARLES O. BEALS, Commissioner

Walter J. Brennan
Edward K. Sawyer
Minnie E. Hanley

Safety Engineer
Inspector
Woman Factory Inspector

Vol. I

April 1932

No. 9

THE TEXTILE INDUSTRY'S PROBLEM

Thousands of dollars will be saved in compensation penalties and a tremendous amount of suffering will be eliminated when high authority in our textile mills sees fit to establish and adhere to a policy with regard to cleaning, repairing and adjusting moving machinery that could as well be shut down.

On another page in this Bulletin is a list of such injuries, typical of the accumulation that can be had over any two weeks of the year by those who study the state-wide accident experience. In nearly every case the operation was one that had its origin in a bad habit. Each instance proves that the employee either ignored the plant rule or felt that compliance with safe practice was optional; in other words, these instances prove that the safety work is not reaching the employee to the extent that their actions are governed by plant rule, rather than by personal whims.

To respond that "employees have been repeatedly told" is obviously insufficient and the penalties imposed upon the persons of workers and purses of management insinuate that the admonitions of supervisory forces are not taken seriously. Often this is an outgrowth of a lack of emphasis, employees feeling that such instructions are merely gestures and not really meant. Perhaps this has been contributed to by an indifference on the part of supervisors.

Can it be overcome? Most certainly it can, there being many other industries whose machines are as numerous and far more vicious who rarely suffer a "caught in moving machinery" penalty. Textile manufacturers should ask themselves "Why do our employees report for work on time each day?" and "Why do we have but little trouble over the 'no smoking' rule?" The answer is that employees know that violations of these rules will not be tolerated and in view of this concede their acquiescence. Thus are safety battles won.

When this same thought is instilled in the heads of workers with regard to moving machinery a ghastly, costly and generally deplorable toll will be written off the books of one of our largest industries.

DOWEL MACHINE HAZARDS

The sight of a worker was recently jeopardized and multiple injuries about the face inflicted when pieces of a Hawker Dowel Machine or stock flew to break the worker's glasses.

Apparently a dowel bar containing knots or burlled areas was fed into the machine. With the cutting knives tearing at the end of such a dowel it seems that the wood broke back of the feed rolls because of such imperfections, the fragment of dowel being thrown violently upward to drive the cutter head housing back on its hinge and the tie bar (connecting the two vertical shaft housings across the feed rolls) into the worker's face.

It is recommended that both tie bars and cutting head housing be provided with fastenings such as will prevent dislodgment of the tie bars and housing. Great care should be given stock about to be fed into the machine for the elimination of imperfect pieces. Such pieces should be culled out and sent to the saws for cutting, only perfect pieces being put through the dowel machine.

NEW COVER-ALL GOGGLE

Up to the present there has been but one goggle for use over spectacles that was outstandingly good. Recently another has been placed on the market and those interested can get complete information regarding both from this Department.

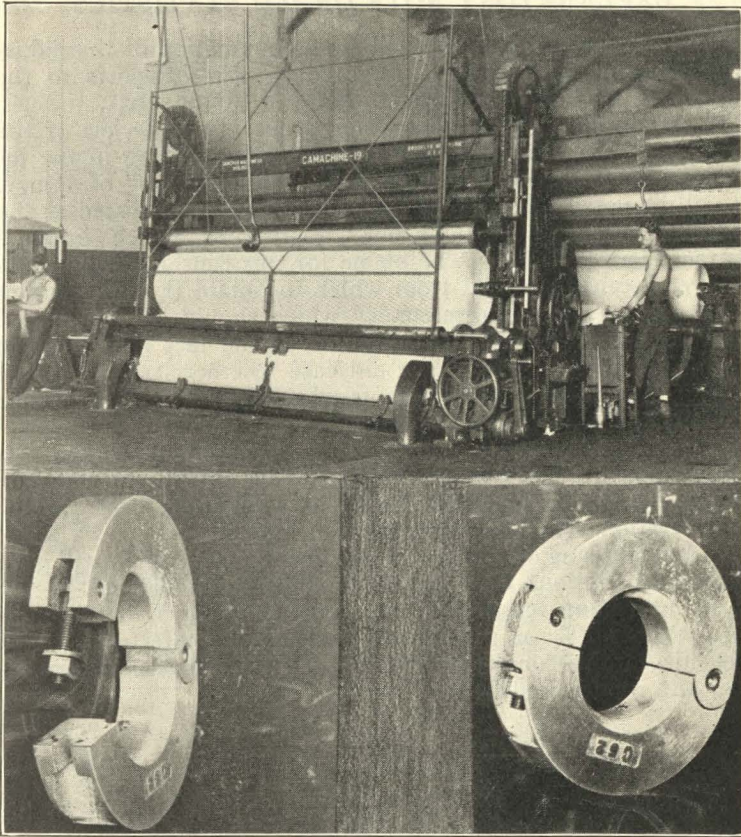
SAFETY POSTER DISPLAYS

Are your posters "getting over" to the workers or are they simply taking up space with no apparent effect upon the habits of crews?

Those who are getting maximum effectiveness from their bulletin board displays have a highly-developed sense of advertising values. Their boards are strategically located, well illuminated and kept in perfect order. No bulletin is left on these boards sufficiently long to get "stale" and by a system of poster change the displayed material is scientifically routed throughout the plant.

If your poster displays fail to get results it is probably because the posters themselves carry no "punch," are displayed in a hit-or-miss fashion or because there has accumulated such a mass of pictures and warnings as to make each board a bewildering hodge-podge.

A day's work in safety is not sufficient. An accident on the street or in the home may eliminate you from the payroll. Be careful always.



The photo at the top of this page shows a very excellent gate guard used to shield the vicious nip of a paper machine winder. This guard is counterweighted and lifts readily in tubular guides.

The two small pictures below show the details of an aluminum safety collar for a paper machine winder shaft. This ingenious device is an admirable substitute for the dangerous rope sometimes used to guide paper on winders.

These photos are furnished through the courtesy and cooperation of the Great Northern Paper Company, Millinocket, Maine.

You may be dubious about that prosperity just around the corner, but you can bank on it that there is an accident hazard lurking there.

EXPLANATORY NOTE ON 1931 STATISTICS

On the opposite page you will see a compilation of the industrial accident experience as reported on First Reports to the Industrial Accident Commission, State of Maine, 1931.

A certain amount of explanation is necessary in view of the fact that there is a deplorable lack of understanding in the industries as to "causes" of injury and "descriptions" of injury. It will be noted that among the "causes" of injury listed at the top of the report are found a few "descriptions" which seriously detract from its value. The blame for this can be attributed to the very scanty material from which to obtain the information we desired. Another discrepancy which should be appreciated by those who are using these figures is the fact that whereas some plants report every first-aid case whether it goes to lost time or not, there are other plants who only report cases whose lost time has exceeded seven days.

These discrepancies I call to your attention by way of an explanation of that which is certain to be obvious to many of our readers; this material should only be used after careful consideration of its shortcomings.

A different sort of analysis is now being made which will give causes, descriptions, days lost and compensation claimed.

An interesting feature of this report is the fact that it indicates that 7.81% of all injuries went to the infected state, a most deplorable condition indicative of a sad lack of appreciation of a modernized first aid policy.

BORING MACHINE STRANGLES OPERATOR

A woodwork manufacturer recently was found dead in his shop, he having been found strangled when his necktie was caught by the revolving bar of a wood-boring machine.

The body was found by friends who went to search for him when he failed to return home at night.

Neckties, long sleeves, loose pant cuffs all take their toll and can bring grief to your plant if a "take a chance" policy exists.

The C. B. Cummings Company of Norway has applied some of the ingenuity that has made their plant machinery famous to their problem of "kick-backs" on the dowel machine. The first and last dowels made from each plank are invariably "rejects" because of the bark edge and often kick back into the machine. The stripping of such rough pieces through the hands of the operator results in many vicious splinter punctures. A friction device now permits but one-way progress through the machine.

Fraser Companies Limited of Madawaska reports five perfect months.

ANALYSIS—INDUSTRIAL INJURIES

as reported to Maine Industrial Accident Commission
January 1st—December 31st, 1931

First Reports of Injuries Only (See discussion on opposite page)

INDUSTRY	Falling	Falling & Fly- ing Objects	Elevators	Misc.	Belts & Shafting	Machine	Electrical	Scalds & Burns	Crushed	Vehicle	Bends	Explosion	Slipping	Lifting & Carrying	Lacerations & Punctures	Totals	Infection Fol- lowing Injury
Pulp & Paper	59	425	2	189	11	79	3	42	106	4	0	2	122	96	383	1523	76
Lumber Mills	16	72	7	15	4	8	0	0	17	1	0	0	16	12	93	261	15
Shoe & Leather	20	116	1	47	8	89	0	13	24	1	0	0	15	12	294	640	115
Cotton	25	110	2	58	2	28	3	9	27	0	0	1	63	35	133	496	48
Woolen	29	147	1	60	12	63	2	18	29	1	0	0	49	36	278	725	65
Wood- working	27	185	0	51	7	77	6	10	51	2	0	0	41	25	335	817	66
Mercantile	40	56	2	40	0	6	0	9	21	9	0	0	50	32	249	514	60
Public Utilities	27	82	0	47	0	3	8	9	23	8	0	2	27	30	89	355	11
Canning	12	47	0	17	1	11	1	12	11	0	0	0	15	4	99	230	52
Can Mfg.	0	1	0	0	0	2	0	0	0	0	0	0	0	1	1	5	1
Road Work	42	248	0	81	1	6	5	23	70	24	0	5	30	30	139	704	23
Woods Operations	5	17	0	2	0	0	0	0	9	0	0	0	3	5	22	63	1
Shipbuilding	23	208	0	131	0	5	0	60	29	0	0	0	19	22	126	623	48
Boats & Canoes	4	24	0	4	0	3	0	2	7	0	0	0	3	1	24	72	2
Quarrying & Finishing	10	184	0	20	0	1	0	3	27	0	0	3	5	9	36	298	13
Lime & Cement	2	35	0	15	0	0	0	8	4	0	0	0	4	5	10	83	5
Bldg. Con- struction & Repairs	108	307	1	101	0	10	2	34	119	14	1	0	62	63	308	1130	51
Bridge Bldg.	9	24	0	9	0	1	0	3	7	0	0	0	3	1	24	81	2
Structural Steel	6	24	0	12	0	0	0	6	4	1	0	0	3	2	13	71	2
Clay Products	0	1	0	0	0	0	0	0	3	0	0	0	1	0	1	6	0
Foundry & Machine	14	242	0	68	0	7	0	54	32	0	0	0	13	27	111	568	36
Laundries & Cleansers	6	4	1	11	2	3	0	11	9	1	0	0	3	7	27	85	13
Printers & Binders	8	35	0	21	1	17	1	5	19	6	0	0	7	10	42	172	7
Hotel & Restaurant	32	31	2	25	0	9	1	72	8	3	0	1	37	15	172	408	46
Garage	13	206	0	54	0	10	0	16	48	17	0	1	29	26	186	606	46
Public Em- ployees	34	124	0	57	0	1	0	24	33	41	0	4	46	24	102	490	26
Misc.	172	644	2	312	5	68	3	104	179	87	0	4	224	195	887	2886	257
TOTAL	743	3599	21	1447	54	507	35	547	916	220	1	23	890	725	4184	13912	1087

PROTECTIVE EQUIPMENT FOR GAS AND ELECTRIC WELDING

By J. J. Whitehead, Jr.

Whitehead Metal Products Co. of N. Y., Inc.

In the following data we will endeavor to set forth information concerning welders, the hazard to which they are exposed and their protection. This is free from technical phrases and should be readily understood by workmen engaged in welding operations.

The use of figures in discussing the various dangerous rays and their effects would mean little to the layman, therefore, in as simple a manner as possible we will try to point out facts which we hope will result in a better understanding by the welder and those who are required to purchase protective equipment for welding.

To those who are not unfamiliar with the peculiarities of light from a welding arc we might mention that only a very small portion of the light is actually visible to the naked eye. Every precaution should be taken in protecting the eyes and to do that a glass is required which will allow the greatest possible amount of visible light and at the same time absorb the dangerous ultra-violet and infra-red rays.

It must be borne in mind that welding has made rapid strides within the last few years and with those developments there has been a steady advance in the amount of heat generated in arc welding which rendered previously efficient protective colors quite obsolete. From this it will be seen that protective glasses which were considered quite adequate a few years ago would not offer sufficient protection against the rays encountered in present day welding.

Electric Welding

There are numerous types of electric welding. The most commonly used being Arc, Butt, Seam, and Spot welding. They all produce an eye hazard of a three-fold nature (1) Injurious rays, ultra-violet and infra-red. (2) Glare caused by heat temperatures. (3) Flying particles of molten metal and sparks. The most serious of the three is the first mentioned, the ultra-violet and infra-red rays being very dangerous to the eye. These harmful rays will penetrate through common glass and effect the retina of the eye.

In Electric Welding it is necessary to protect the head and neck of the operators as well as the eyes. Therefore, masks, helmets, and shields are used. Goggles are only used by helpers, or workmen near Electric Welding not actually engaged in it. They are properly protected by using goggles having a proper shade glass. It is necessary that this glass permit proper vision so that they may see to do their work, when the arc is not on. Helpers, holding material for welders are subjected to the same hazards as the welder. A helper's mask can be had which drops in working position by the nod of the head leaving the workman's hands free at all times to hold material.

(To be continued)

PORTABLE WOOD-SAWING MACHINE HAZARDS

Recently the flywheel on a portable wood-sawing machine ruptured, throwing a 23-lb. fragment of the rim a quarter-mile to penetrate the walls of a house and jeopardize the safety of its occupants. The same day a circular saw ruptured and a flying fragment nearly severed the leg of the operator, the man dying the following day.

These instances are but a few of the many reported during the winter just over and indicate the death-dealing potentialities of such machines. There can be no finer project instituted by those who have to do with the safety in our industrial plants than to bring to the attention of the owners of such portable wood-sawing equipment the necessity for a consideration of the safety factors.

Many of these wood-sawing rigs are made up of cast off parts of automobile engines and from mill scrap. The choice of pulleys is often governed by that which can be had and not that which should be used to keep the speeds within safe limits. Occasionally we hear of a wheel being badly out of balance or being weakened by having been exposed to fire. Cracked saws are common. Transmission of heat to saws from hot bearings produces unforeseen stresses and there exists an utter disregard for the hazards coming out of increased diameters in saws.

In assembling such machines the owners invariably come to industrial plants for machine work and for parts. By acquainting your personnel with the hazards usually associated with such rigs and by enlisting their assistance in locating the same, an excellent opportunity will be afforded to do some real accident prevention work. Even though the equipment is sound and operating within safe limits there is always an opportunity for guards over saws, pulleys, belts and fly-wheels. Assistance in the design of such safeguards takes but a few moments and may save a life.

DON'T PAINT LADDERS

The "finishing touch" to a fine ladder is too often a couple of coats of paint. Such practice is to be discouraged in view of the fact that cracks and faults developing later are hidden.

Treatment with oil will be equally as satisfactory a protection against time and the elements, offering in addition an opportunity to inspectors to better judge its condition.

When inclined to indulge in "horse play," remember that some other fellow may bear the brunt of your senseless stunt.

Lifting beyond your weight is just another way of tempting fate.

**ELEVENTH ANNUAL MASSACHUSETTS
STATE CONFERENCE**

**Industrial Safety Section, Wednesday, April 20, Ball Room,
Hotel Bradford, Boston**

**Chairman: Edwin S. Smith
Commissioner of Labor and Industries**

- 10:00 Opening address by the chairman.
- 10:15 "The Attitude of Management on the Curtailment of Safety Work."
Harry E. Gould, General Manager, Bethlehem Shipbuilding Corp., Quincy.
- 10:35 "Minor Injuries Resulting in Major Infections."
Dr. Warren L. Johnson, Maryland Casualty Co.
- 10:55 "Some Problems in the Conference Method of Safety Instruction."
O. G. Richards, Employment Supervisor, New England Tel. & Tel. Co.
- 11:15 "Does Sickness or Accidents Cause the Greater Lost Time?"
Herbert W. Moses, Edison Electric Ill. Co. of Boston.
- 11:35 "The Corn Popper."
A new safety kink feature introduced for the first time in any conference.
- 12:15 Luncheon Meeting, Lobby Salon, \$2.25.
Chairman: Walter C. Beckjord, General Manager, Boston Consolidated Gas Co.

SPEAKERS:

- Prof. Frederick K. Morris, Dept. of Geology, Massachusetts Institute of Technology.
"The Fishes of the Desert."
- Dr. Harold E. Edgerton, Dept. of Electrical Engineering, Massachusetts Institute of Technology.
"Stroboscopic Light and Some of Its Uses."

PAY ENVELOPE ENCLOSURES

To keep our safety work from "going stale" in the minds of workers we should be ever searching for new approaches. One of the best methods of driving home 52 safety thoughts each year is to use pay-envelope enclosures.

These small cards carry a brief safety thought, warning or cartoon and admirably supplement the regular bulletin board displays. Frequently they prove more effective because they are usually studied at home in an atmosphere of leisure and contentment.

There will be some who claim such cards would be scattered about the plant entrance to litter the grounds. By numbering such cards and holding a drawing for prizes some days later no trouble will be experienced. We can expect that such cards will be repeatedly read if kept in hopes of a prize.

Textile Mills--Attention!

The accidents listed below are of one type and are traceable to a common cause. The editorial on Page 1 of this Bulletin indicates that which must be done if further costly penalties are to be written off the books of our textile industry.

Employee was cleaning card. Cut finger in gear, badly crushing end.

Reaching into machine to pick out piece of waste, catching finger between lay sod and sweep shaft. Burst finger open.

Caught sweater sleeve in machine while making adjustment, suffering lacerations of right arm.

Employee wiping "flyings" from card, caught finger in gear on first breaker, suffering severe laceration.

Employee engaged in picking waste off back roll of gill box. Hand engaged in the fallers, injuring two fingers.

Loom fixer caught hand in loom while testing stop motion.

Employee stuck finger between gooseneck and iron on mule, cutting off end of finger.

Employee was cleaning back part of comber when index finger was caught by a half lap, severing finger.

Employee "picking ends" in slasher comb, caught shirt sleeves in drag-roll pulling right arm into machine.

Employee engaged in cleaning card, caught his left hand in doffer gear, injuring wrist.

Employee went back of loom to pick a piece of waste off the warp, suffering injuries when his hand caught between the shaft and drop wires.

While oiling draw-box of comber, waste caught in gear and pulled hand in, lacerating two fingers.

INDUSTRIAL FATALITIES IN MAINE—1931

By Industries and Causes

INDUSTRY	Slipping Falling	Infection	Falling and Flying Objects	Vehicles	Electrical	Handling Material (Burns)	Handling Material (Crushed)	Machinery	Belts and Shafting	TOTAL
Pulp-Paper	3							1	1	5
Municipal	2	2					1			5
Highway Cons.	3			1			1			5
Utilities	1			1	2					4
Mercantile	1	1	1							3
Woodworking	1		1							2
Lime			1							1
Clothing Mfg.	1									1
Cotton						1				1
Misc.	2			1				1		4
TOTAL	14	3	3	3	2	1	2	2	1	31