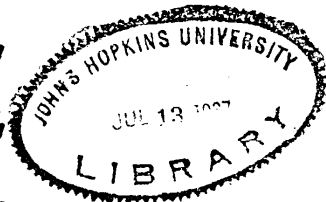


1	Pennsylvania Labor & Industry Review	January 1949
2	Pennsylvania Labor & Industry Review	August 1947
3	Pennsylvania Labor & Industry Review	July 1942
4	Pennsylvania Labor & Industry Review	January 1942
5	Pennsylvania Labor & Industry Review	January 1941
6	Pennsylvania Labor & Industry Review	March 1940
7	Pennsylvania Labor & Industry Review	May 1937

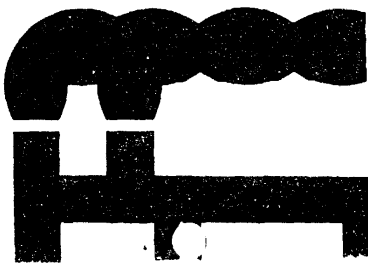
**PENNSYLVANIA'S
LABOR PROGRAM**

THE LABORGRAPHIC
MAY / 1937



*Pennsylvania Dept of Labor and
Industry*

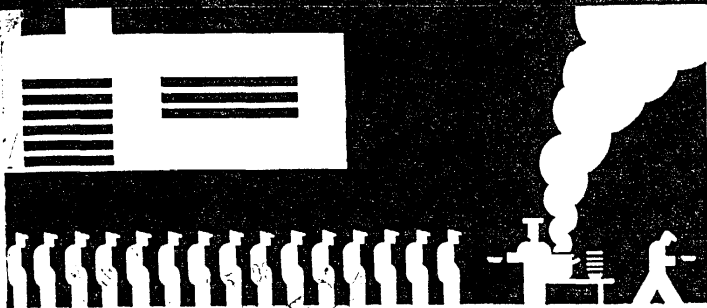
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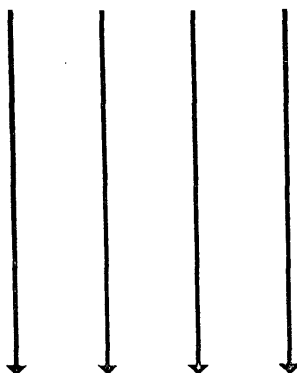
PENNSYLVANIA'S

LABOR PROGRAM



LABOR AND INDUSTRY DEPARTMENT
PENNSYLVANIA
LABOR GRAPHIC
JUNE 1937 FEATURING

UNEMPLOYMENT COMPENSATION



LIFE

REC-102 PL-1A
U.S. POST

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Persons desiring to have their name placed on the Laborgraphic mailing list may do so by writing the Department of Labor and Industry, Harrisburg, Pennsylvania.

Occupational Disease—one resulting from the occupation of the employe—is a danger facing an estimated one-third of Pennsylvania's workers.

More occupational disease hazards are created continually as new processes are developed in industry. A Metropolitan Life Insurance study lists 900 occupations having industrial disease hazards; many kinds of dust and 94 poisons are named.

A partial survey of establishments in Pennsylvania disclosed 672,000 employes exposed to industrial disease hazards. But there has never been any compensation for such injuries. Until January 1, 1938, workmen's compensation will cover only injury by accidents—not physical damage taking place slowly which might cause tuberculosis, insanity, blindness or death.

Dramatic incidents focused national attention on two neighboring states.

A number of young women, painting luminous watch dials, pointed brushes with their tongues and were poisoned by radium in the paint. They did not know the danger until too late.

Men drove a tunnel for a power dam through rock with little or no protection from the silica dust. They did not realize until large numbers died that breathing the dust was almost certain death.

Pennsylvania has many more workers facing industrial disease hazards than both of these states, but wide attention has seldom been brought to specific situations.

Some employers have spent large amounts of money to provide the greatest possible protection by equipment, devices and careful training of workers. But they have had to compete with other employers who ignored the danger, told their employes at first they had minor ailments, and discharged them when they were no longer fit for work.

There was no penalty for the careless employer. The employe had to bear the loss in wages and pay for medical treatment. If he couldn't pay, the public did—by institutional care, relief, or widowed mother's pension.

OCCUPATIONAL DISEASE HAZARDS



Occupational Disease Compensation for Pennsylvania employees will begin January 1, 1938. Pennsylvania will then join 20 other progressive industrial states, including all neighboring states, which provide protection for this kind of injury.

Pennsylvania's law specifically names the causes of industrial disease which may be compensated. It includes

Poisoning from:

Lead, mercury, arsenic, manganese; phosphorus; methanol, carbon bisulphide, hydro-carbon distillates, halogenated hydrocarbons; benzol and its nitro, amido or amino derivatives; radium, X-ray; chromic acid, bichromate of ammonium, potassium or sodium (compounds are included);

Infection from:

Tar, pitch, bitumen, mineral oil, paraffin, oils, cutting compounds, lubricants, dust, liquids, fumes, gases, vapor, anthrax;

Injury from:

Asbestosis, silicosis or anthraco-silicosis (miners asthma); caisson disease (compressed air illness).

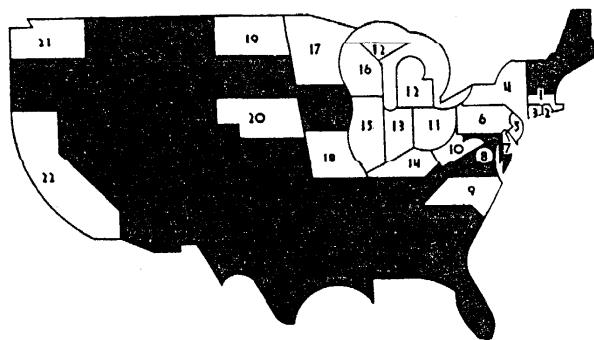
This law is an addition to the Workmen's Compensation law which will provide increased benefits beginning January 1, 1938, \$12 to \$18 per week and more adequate medical allowance. It will be administered by the Workmen's Compensation Bureau and Board.

Silicosis, anthraco-silicosis and asbestosis will not be compensable for temporary or partial disability; employers liability may not exceed \$3600 in any one case. These limitations do not apply to the other industrial diseases named.

The cost will bear more heavily on the industries having the greatest industrial disease hazards in the same way that compensation for other injuries bears more heavily on industries with large numbers of accidents. It is the natural and fair extension of the principle that injury to employees is a cost of business operation.

STATES WITH OCCUPATIONAL DISEASE COMPENSATION LAWS

J U L Y 1, 1 9 3 7



- | | | |
|-----------------|------------------------|-----------------|
| 1 Massachusetts | 8 District of Columbia | 16 Wisconsin |
| 2 Rhode Island | 9 North Carolina | 17 Minnesota |
| 3 Connecticut | 10 West Virginia | 18 Missouri |
| 4 New York | 11 Ohio | 19 North Dakota |
| 5 New Jersey | 12 Michigan | 20 Nebraska |
| 6 Pennsylvania | 13 Indiana | 21 Washington |
| 7 Delaware | 14 Kentucky | 22 California |
| | 15 Illinois | |

Lead Poisoning is a modern industrial hazard found in 52 occupations and 54 industries. An estimated 160,000 workers in Pennsylvania are exposed to this hazard.

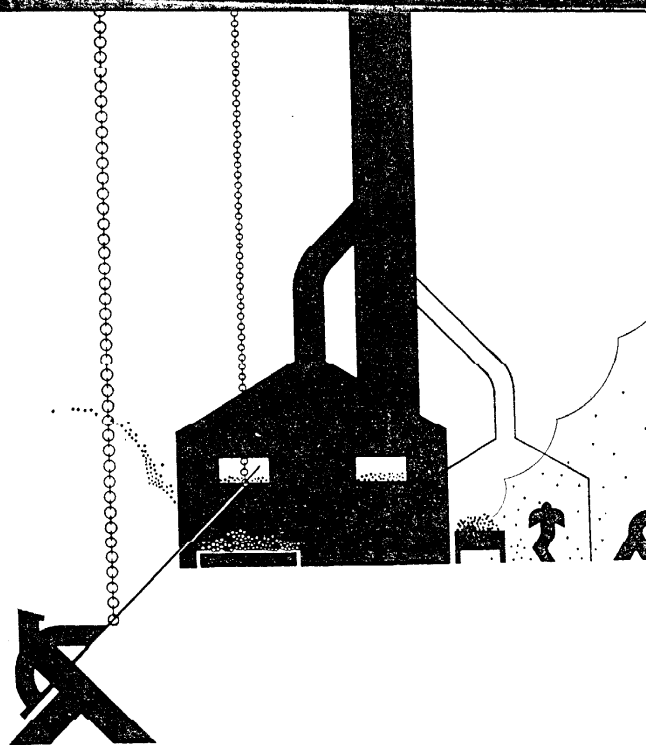
Known as an industrial poison for over one hundred years, lead may be absorbed by breathing the dust, by eating food which has come in contact with lead, or through the skin. Manufacturing and smelting of lead, manufacturing of storage batteries and paints, painting and printing are common sources of lead poisoning.

Lead poisoning may have several different results. It may cause loss of appetite at first, later indigestion and "lead" or "painters colic"—severe stomach cramps. It may attack the nervous system causing paralysis of the muscles used most. If the forearm becomes weakened, it is called "wrist drop." The "grip test" is a common method of determining whether a worker is poisoned. Similar paralysis may attack other muscles. If the brain is affected, inflammation may cause death. Often internal organs are affected and death or disability results from them directly—lead poisoning being the real cause. It is generally believed that after recovering from lead poisoning, the worker should leave the industry. Studies show he generally remains.

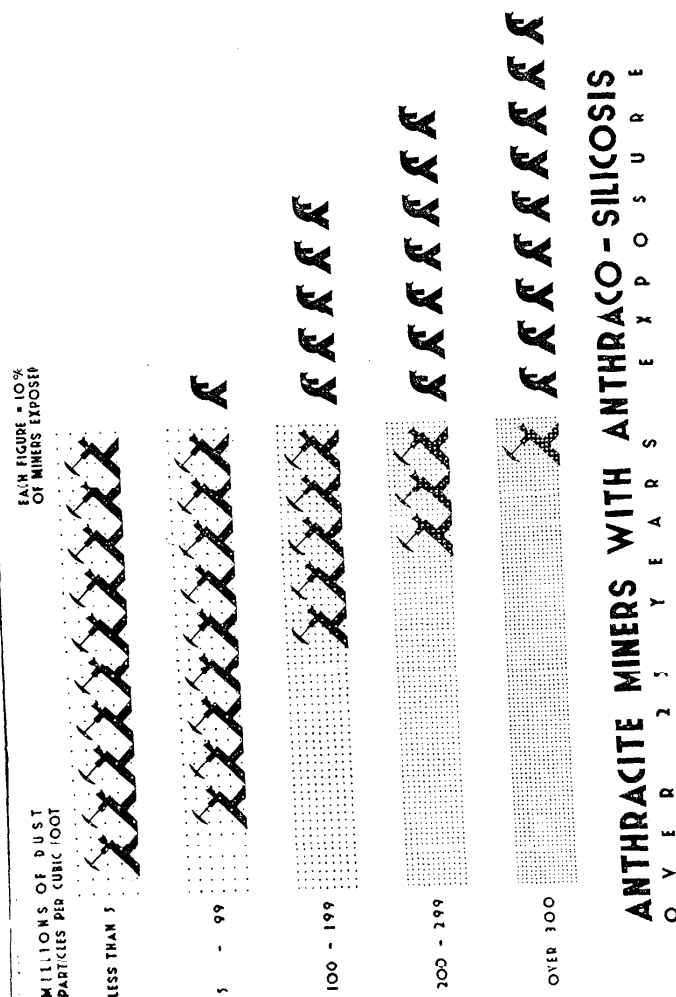
In the plants surveyed, conditions could have been much improved with a resulting reduction in exposure. Furnace operations were not always well hooded with properly constructed and adequately powered exhaust fans. Cracks in floors contained lead oxide which entered the air as dust—particularly when dry swept instead of being wet swept.

Lead oxides were dried in the open shop. Clothes worn at work were not left in the plant to be laundered. If clothing was changed, the street clothing was not protected from dust. In many cases lunches were eaten without hands being carefully washed, and daily showers were exceptional.

European lead industries have reduced their injuries to a minimum. The conclusion of those making the survey was that great reduction was possible here through efforts of both employers and employees. Occupational disease compensation should be an incentive to that end.



Comparison of the different methods of mining disclosed clearly that the dust danger was very greatly reduced by wet mining methods in drilling, loading and cleaning. Those making the survey came to the conclusion that although better ventilation and mechanical loading would aid, the greatest possible use of wet mining would be the most important single preventative of anthraco-silicosis.



Sand Blasting, molding, mining, quarrying and many other dust producing operations result in breathing silica dust which causes the industrial disease, silicosis. Anthracosis is the name applied to the disease in anthracite mining. An estimated 425,000 Pennsylvania workers are exposed to this hazard in addition to 270,000 miners.

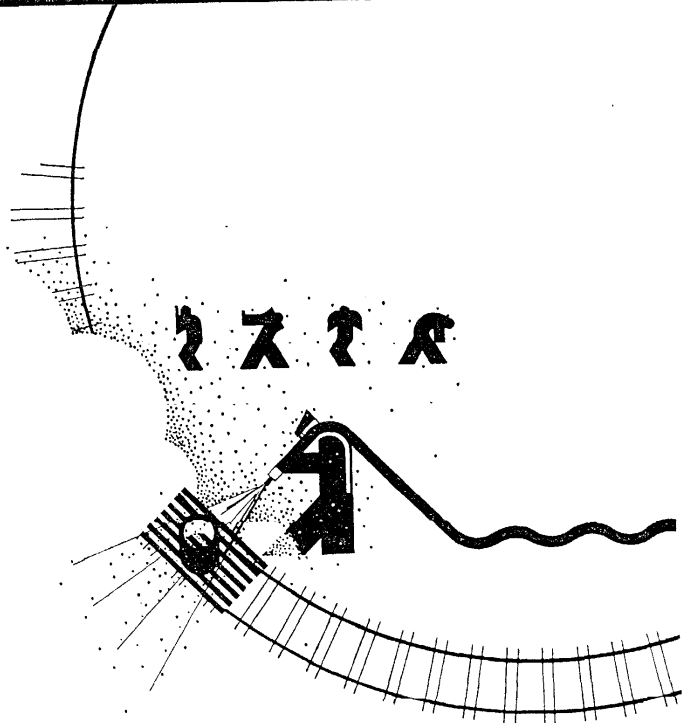
Medical men believe that seldom, if ever, does a silicosis victim die of silicosis alone; but the lungs are in such condition that they are easy victims of tuberculosis, pneumonia and other lung diseases.

Silica is one of the most dangerous of dusts. It generally requires a number of years of exposure before results are noticeable and the worker is often unaware of the danger. Few anthracite miners show effects under 15 years of exposure. Granite workers and rock workers in mines show effects much more quickly.

Prevention of dust exposure is possible in much greater degree than is often found in general industrial practice. Sand blasting is being done in open shops with the dust being blown over unprotected workers; or the building in which it is being done permits escape of much of the dust. Wet mining has great possibilities of dust prevention, but is not yet used to nearly as great an extent as it might be.

Exhaust hoods have been developed for rock drills; curtains and streams of water played on stone grinding and similar operations have reduced the dust content of the air below the danger line. Personal protective devices have been developed which fully protect the worker in operations where dust is unavoidable.

Other dusts which are dangerous include asbestos. Particles of this material are breathed into the lungs and the result is a condition similar to silicosis. Asbestosis, silicosis, and anthracosis are limited to benefit payments for permanent disability and death. The employers liability in any one case is limited to \$3600.



OCCUPATIONAL DISEASE COMPENSATION BENEFITS

EXCEPT ANTHRACO-SILICOSIS, SILICOSIS, ASBESTOSIS
JANUARY 1, 1938

		WEEKS										
		100	200	300	400	500						
FATAL		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	→
PERMANENT DISABILITY		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	→
PARTIAL DISABILITY		\$	\$	\$	\$							
TEMPORARY DISABILITY		\$	→									

LARGE DOLLAR = FULL COMPENSATION
SMALL DOLLAR = REDUCED COMPENSATION
ARROW = FOR LIFE OR UNTIL RECOVERY

COMPENSATION BENEFITS FOR ANTHRACO-SILICOSIS SILICOSIS, ASBESTOSIS JANUARY 1, 1938

		WEEKS										
		100	200	300	400	500						
FATAL		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	→
PERMANENT DISABILITY		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	→

LARGE DOLLAR = FULL COMPENSATION
SMALL DOLLAR = REDUCED COMPENSATION
ARROW = FOR LIFE OR UNTIL RECOVERY



REGULATIONS . INTERPRETATIONS . DEFINITIONS

APPROVED BY INDUSTRIAL BOARD
AND PROMULGATED BY
SECRETARY OF LABOR AND INDUSTRY

Approved December 9, 1937

GENERAL 44 HOUR WEEK LAW AND WOMAN'S 44 HOUR WEEK LAW*

DEFINITIONS

EXECUTIVE

An executive is one who is responsible for the managing of a business or a subdivision thereof and who directs or supervises subordinates and earns at least \$25 a week.

SECRETARY

A secretary is a person who renders services which are of a private and confidential nature and are a component part of the work of an executive as defined in the regulations of the Department.

EMERGENCY

An emergency is a situation resulting from fire, flood, storm, epidemic of sickness, Act of God, or other causes which require labor for longer than eight hours a day or 44 hours a week, in order that life, property, health or the public service may be preserved, or that normal employment may be uninterrupted.

*These regulations supersede all previously approved regulations on the same subjects.

GENERAL REGULATIONS

MINORS UNDER 18 YEARS OF AGE

Rule G-1

Regulations permitting variations from maximum hours established by law shall apply only to employes eighteen years of age or over. Nothing contained therein shall be deemed to authorize the employment of any person under the age of eighteen years for more than eight hours during a spread of ten consecutive hours in any one day or more than five and one-half days in any one week or more than 44 hours in any one week.

REGULATION GOVERNING EMERGENCIES

Rule G-2

In any situation falling within the interpretation of an emergency, as approved, employers may permit employes whose duties are directly connected with such emergency, to work more than eight hours in one day and more than five and one-half days in one week and more than 44 hours a week for the period of the emergency.

HALF DAY OF WORK

Rule G-3

The half day of work provided by the Act shall be considered to be not more than five consecutive hours.

FIVE DAY WEEK

Rule G-4

Any employer who employs persons on a schedule of not more than five days in any one week may permit employes to work for not more than 10 hours in any one day, but not in excess of 44 hours in any one week. Where an employer's operations are regularly scheduled in accordance with this regulation, no overtime payment for hours over eight in any one day shall be required.

SIX DAY WEEK

Rule G-5

Employers may permit employees to work for not more than six consecutive hours if they are then dismissed and if they are not permitted to work during any other part of the day, provided they are allowed a 15 minute rest period. Employers who permit their employees to work regularly on this schedule for six days a week are deemed to be conforming with the five and one-half day provision of the law.

SPREAD OF HOURS

Rule G-6

The hours of work in any working day shall be performed within a spread which is not greater than two hours more than the hours of work permitted by the laws or regulations of the Commonwealth.

REGULATION FOR SECRETARIES

Rule G-7

Secretaries to executives who are exempt under the provisions of the labor laws of the Commonwealth are not subject to the hour provisions of such laws provided they earn at least \$25 per week.

UNION CONTRACTS

Rule G-8

Existing contracts covering hours of work or conditions of employment may be permitted to stand until their termination provided that they were negotiated prior to December 1, 1937 and are the result of bona fide collective bargaining as interpreted by the National Labor Relations Act, the Federal Railway Labor Act, or the Pennsylvania Labor Relations Act and further provided that in all cases affected by this rule the schedule of hours of work shall revert to the prescribed schedule set forth in the laws and regulations administered by the Department after termination of existing contracts.

SEASONAL AND INVENTORY PERIODS

Rule G-9

- (a) During inventory and seasonal periods employers may permit employees to work more than eight hours but not in excess of ten hours in any one day or forty-eight hours in six days in any week for weekly periods not to exceed in the aggregate five weeks in any calendar year, provided that said employers file in advance with the Secretary of Labor and Industry the schedule of hours they propose to work during such weekly periods. All hours worked over eight in any one day or 44 in any one week during such periods shall be paid for at the rate of one and one-half times the regular rate per hour, provided that this shall not apply to employees paid on a salary basis whose compensation is constant throughout the year and is not subject to deductions for absences such as holidays, vacations, sickness, or other temporary causes.
- (b) Upon application, the Department of Labor and Industry may grant such additional weekly periods as are required to avoid unnecessary hardship.

WATCHMEN, JANITORS, STATIONARY ENGINEERS, FIREMEN, BOILERMEN AND FURNACEMEN

Rule G-10

Employers may permit watchmen, janitors, stationary engineers, firemen, boilermen and furnacemen to work in excess of eight hours per day, but not to exceed 48 hours in six days of any one week.

MEAL AND REST PERIODS

Rule G-11

Employers may permit employees to work the total daily hours allowed by laws or regulations, without a scheduled meal or rest period of thirty minutes, in industries where manufacturing processes involve continuous or shift operation; in industries in which the processing of products once begun is required to be completed with-

out delay to avoid spoilage; and employees in other occupations when performing their regular duties away from the factory, office, or depot, provided such employees are permitted time to eat without danger to health.

CONTINUOUS OPERATIONS IN MANUFACTURING AND PUBLIC UTILITY INDUSTRIES

Rule G-12

- (a) Employers in continuous and multiple shift or tour manufacturing and public utility industries working eight hours or less per shift or tour may interpret the day to be the calendar day and the week the calendar week, provided that such employees have a rest period of at least eight hours between successive days of work.
- (b) An employer may permit an employee to work one additional shift or tour of duty per cycle in these industries provided at least eight hours intervene between shifts or tours and further provided that such change in shifts or tours will result in each employee working in a period of twenty weeks, not more than forty-four hours per week on the average.
- (c) Where the failure of an employee to report for work in a particular shift or tour would result in the unemployment of others in that shift or in the possible destruction of property or failure of service or result in danger to employees, an employer may employ a worker from the previous shift or tour until the absent employee is replaced. This replacement must be made as soon as possible.
- (d) Where employers in continuous or multiple shift or tour industries grant vacations with pay to employees they may permit the remaining employees to work an additional shift or tour of eight hours or less per week during such vacation period.

EMPLOYERS OF THREE OR LESS PERSONS

Rule G-13

Pending a study by the Department of Labor and Industry of the probable effect of a strict application of the schedule of hours provided by the laws and regulations, employers of three or less persons may permit their employees to work not more than nine hours per day or more than 54 hours in six days of any week.

OUTSIDE WORKERS

Rule G-14

Employers of outside representatives may permit such employees to work in excess of eight hours per day and of forty-four hours and five and one-half days per week.

SKILLED WORKERS

Rule G-15

Where a shortage of skilled labor exists in any industry the Department of Labor and Industry, upon application by the employer, may vary the schedule of hours as specified in the law and regulations of the Department, provided that if such variation is approved, time and one-half shall be paid for the excess hours.

POSTING OF SCHEDULE OF HOURS

Rule G-16

Employers who maintain for inspection a comprehensive system of time and payroll records and who find it impossible to fix definitely in advance the hours of employment of the individual worker may dispense with the posting of the schedule of hours.

LEARNED PROFESSIONS

Rule G-17

Employees in occupations determined by the Department of Labor and Industry to be learned professions are exempt from the provisions of the act provided they are engaged solely in the work of their professions.

STUDENTS

Rule G-18

Students engaged on a part time basis in educational institutions in which they are enrolled, may be permitted to work beyond the regulatory spread of hours and may work more than five and one-half days per week, provided actual working time shall not exceed eight hours in any one day or forty-four hours in any one week.

OUTSIDE WORK

Rule G-19

Employers may permit employees engaged in or immediately connected with outside work, to average 44 hours per week over a period of one calendar month and to work six days per week, where weather and climatic conditions have caused interruption of regular employment.

REGULATIONS FOR SPECIFIC INDUSTRIES

OFFICE BUILDING OPERATIONS AND MANAGEMENT

Rule S-1

Employers may permit employees engaged in the operation and maintenance of office buildings to work for not more than eight hours in any one day or forty-four hours in six days in any one week.

MAIL ORDER INDUSTRY

Rule S-2

Employers in the Mail Order Business may permit employees to work for not more than eight hours in any one day or forty-four hours in six days in any one week, except that such employees may be permitted to work for not more than ten hours on one selected day of the week. All hours worked over eight on any such selected day shall be paid for at the rate of one and one-half times the regular rate per hour.

RETAIL TRADE

Rule S-3

Employers in Retail Trade may permit employees to work for not more than eight hours in any one day or forty-four hours in six days in any one week; except that such employees may be permitted to work for not more than ten hours on Saturday, and on the day immediately preceding a legal holiday on which employees are not permitted to work. All hours worked over eight on any such long day shall be paid for at the rate of one and one-half times the regular rate per hour.

CANNERIES

Rule S-4

Employers engaged in the canning, processing and packing of perishable fruit or vegetable products may employ persons during the canning season beyond the hours specified in the law provided that the conditions of employment conform to the following:

- (a) That hours worked per day over eight shall be paid at a rate of at least one and one-half times the regular wage scale for such period of overtime.
- (b) Employees shall be allowed at least one-half hour lunch period for each five hours of employment.
- (c) No more than six consecutive hours shall be allowed for employment without a lunch period.
- (d) In the case of female employees all work performed shall be within the hours between 6 A. M. and 10 P. M. except that females between eighteen and twenty-one years of age shall not be employed after 9 P. M.

NOTE: (This variation is not applicable to minors under the age of eighteen inasmuch as they are subject to all the provisions of the Child Labor Law.)

- (e) Application for permission to apply the privileges extended under this regulation shall be filed annually by each establishment at least thirty days in advance of the season, the same to be accom-

panied by a statement indicating the regular wage scale for that season and it shall be unlawful for any person to place into effect a schedule of hours at variance with the strict provisions of the law until such application has been filed and approval of the Department obtained.

NEWSPAPER PUBLISHING

Rule S-5

In any period which requires employment in excess of eight hours a day in order to prevent a sudden and unreasonable termination of service to the public, employers may permit employees whose work is directly connected with such period to work additional hours in any one day, but not to exceed forty-four hours in six days in any one week, provided that in towns of 50,000 or less, employees may be permitted to work forty-eight hours per week in six days. All hours worked over eight hours in any day during such period shall be paid for at the rate of one and one-half times the regular rate per hour.

BANKING AND BROKERAGE INSTITUTIONS

Rule S-6

Pending the completion of a study of the hour problem connected with banking and brokerage institutions, the following regulation is approved:

Banking and brokerage institutions shall be permitted to average forty hours (instead of forty-four) per week over a thirteen week period beginning December 1, 1937 (Total 520 hours in 13 weeks). Such hours of employment shall not exceed ten in one day or fifty-four in one week. This shall apply only to employees who are paid on an annual salary basis and who are not laid off without pay during slack periods. Tax specialists employed in banking institutions and brokerage houses who are exclusively engaged in tax work may be permitted to average forty hours per week over a six month period beginning December 1, 1937 and may be permitted to work six days per week.

HOTELS AND RESTAURANTS

Rule S-7

- (a) Employers in the hotel and restaurant industries may permit service employees to work more than eight hours in any one day and more than forty-four hours but not in excess of forty-eight hours in six days in any one week, provided that such employees, except front office employees paid on a salary basis who work split shifts, be paid time and one-half for all hours worked in excess of eight in any one day and forty-four in any one week.
- (b) Housekeeping employees may be permitted to work not more than eight hours in any one day and not more than forty-four hours in six days in any one week.
- (c) The spread of hours may not exceed thirteen in any one day except, that for front office employees working split shifts the daily spread of hours shall be determined by averaging over a two day period.

ADDITIONAL DEFINITIONS AND REGULATIONS

APPLYING ONLY TO

THE WOMAN'S LAW

DEFINITIONS

ORPHAN'S HOME

An Orphan's Home is an institution for children where the majority of the children under care are orphans or half orphans.

INDUSTRIAL SCHOOL

An Industrial School is an institution to which minors are committed by legal proceedings and in which they are educated for participation in industry.

GENERAL REGULATIONS

UNION CONTRACTS

Rule WH-1

Existing contracts covering hours of work or conditions of employment may be permitted to stand until their

termination provided that they were negotiated prior to September 1, 1937 and are the result of bona fide collective bargaining as interpreted by the National Labor Relations Act, the Federal Railway Labor Act, or the Pennsylvania Labor Relations Act and further provided that in all cases affected by this rule the schedule of hours of work shall revert to the prescribed schedule set forth in the laws and regulations administered by the Department after termination of existing contracts.

REGULATIONS AND INTERPRETATIONS

APPROVED UNDER OTHER LAWS ADMINISTERED BY THE DEPARTMENT

REGULATIONS

1. REGULATIONS FOR PROTECTION FROM FIRE AND PANIC
Construction, Installation and Maintenance of Gas Shut-off Valves.
(Copies are available upon application to the Department)
2. REGULATIONS FOR BOILERS
(A) Rule M-20 of the Miniature Boiler Section was amended to read as follows:

All boilers referred to in this section shall be plainly marked with the manufacturer's name, maximum allowable working pressure, which shall be indicated in Arabic numerals followed by the letters "lb.", the serial number and a Pennsylvania Standard or National Board number. All boilers built according to these rules shall be stamped in the presence of the inspector with the symbol shown in Fig. M-1.



Fig. M-1. Official symbol for stamp to denote the American Society of Mechanical Engineers Standard.

These stamps shall be arranged substantially as

shown in Fig. M-2. Stamps for the official symbol shown in Fig. M-1 are obtainable from the American Society of Mechanical Engineers.

	
(Manufacturer's Serial Number)	Name of Manufacturer
.....lb. (Max. Allowable Working Pressure)	
..... (Penna. Std. No.)	
..... (Water Heating Surface)	
..... (Year Built)	

No accessory or part of the boiler shall be marked A.S.M.E. or A.S.M.E. Std. unless so specified in the Pennsylvania (ASME) code. The markings required on a boiler shall be stamped with letters and figures at 3/16 in. in height on some conspicuous portion of the boiler proper, or placed on a nonferrous plate to be permanently attached to every boiler. When a casing or other form of cover applied to a boiler is so arranged that it is not desirable to provide an opening through which the required stamping of the boiler parts may be viewed, the required stamping shall also be placed on a nonferrous plate, not less than 3 in. by 4 in. in size, irremovably attached to the front portion of the casing, or it may be stamped in the metal of the casing itself.

Individual shop inspection is required for miniature boilers in the same manner as for power boilers.

After obtaining the stamp to be used when miniature boilers are to be constructed to conform with this section of the **Pennsylvania (ASME) Boiler Code**, a state inspector, or an inspector employed regularly by an insurance company and who is qualified under the rules of the **Commonwealth of Pennsylvania** to inspect boilers, shall be notified that an inspection is to be made; and he shall inspect such boilers during construction and after completion.

Manufacturers of miniature boilers built for use in Pennsylvania shall be required to register their names and addresses with the Department of Labor and Industry.

A manufacturer of miniature boilers for use in Pennsylvania shall immediately forward to the Department of Labor and Industry a data report (on forms to be furnished by the Department), one report for each lot of boilers manufactured in series but not to exceed one hundred, when boilers are built for stock.

Any boilers built for immediate shipment to a definite location, a separate data report shall be filed immediately with the Department giving the name and address of the purchaser of the boiler.

Where a boiler is shipped for resale the name and address of the purchaser/user, if located in Pennsylvania, shall be immediately reported to the Department.

- (B) Section 5, Paragraph A-62 was amended to read as follows:

"Where repairs are necessary which in any way affect the working pressure or safety of a boiler

an inspector commissioned by the **Department of Labor and Industry** shall be called for consultation and advice as to the best method of making such repairs and after such repairs are made they shall be subject to final inspection and approval by an inspector commissioned by the **Department of Labor and Industry**.

"Where repairs are made by means of riveted patches the instructions set forth in the Administrative Section of the Appendix covering this subject shall be applied in so far as they affect design, calculations, material, workmanship and test."

- (C) Paragraph H-61 and I-114 were amended by addition of the following paragraph:

"In the case of single pass boilers the lowest permissible water level for low pressure heating boilers of the fire tube type shall be the same as required in paragraph P-291 of the Power Section. For multipass boilers the top row of tubes shall be completely submerged at all times."

- (D) Revisions relative to jurisdiction of Department.

- (1) Revision of Paragraphs P-331 and P-332, also L-81 (c) by deleting the words "municipal inspectors".
- (2) Revision of Section I, paragraph (b), by deleting the following: "those operating in cities having boiler inspection departments established prior to January 14, 1923".
- (3) Revision of Section I, paragraph (j), by deleting "such boilers being not located in a city having a boiler inspection department now established by ordinance."

- (E) Rule P-332, sixth paragraph was amended by addition of the following:

"and a facsimile of such stamping shall be for-

warded to the Department with the manufacturer's data report."

- (F) Amendment to Section on Low Pressure Heating Boilers:

Paragraphs H-50 and H-103 amended by substitution of present paragraphs H-50 and H-103 (1937 edition) of the A.S.M.E. Code.

3. REGULATIONS FOR ELEVATORS

- (A) Rule 217 was amended to read as follows:

- (a) (A1) "Metal plates, with the permissible load in pounds marked thereon, shall be posted in a conspicuous place in the cars of all elevators.
- (b) (A1) Metal tag, on which shall be stamped the diameter, stranding and material of cables, shall be attached to all hoisting and counterweight cables.
- (c) (A1) Where more than one elevator is located in a building, numbers shall be placed thereon for permanent identification."

- (B) Rule 239 (j)-(N1) was amended to read as follows:

- (i) (N1) "Where pent houses are provided over fire-resistive freight elevator shaftways, they shall be constructed of approved fire-resistive materials and a permanent means of entrance thereto shall be provided **other than through the shaftway**. Pent house doors shall be locked at all times, except when repairs are being made or when the machinery is being inspected or oiled."

- (C) Rule 242 (a) (A1) was amended by addition of the following paragraph:

"Such landing doors, excluding those for auto-

matic control and double button control elevators, shall be equipped with latches arranged so that they can be unlocked only from the inside, except that the main or lowest landing door may be arranged to also open from the outside of the shaftway by means of a removable key."

INTERPRETATIONS

1. REGULATIONS FOR INDUSTRIAL HOME WORK

"It is interpreted that the regulations for Industrial Home Work do not apply to merchant tailors who operate their own shops and who give out some portion of the work in the making of a garment to other tailors who do the work in their own shops."

ENSATION

1937			1936
Apr.	Mar.	Total first 5 mos.	Total first 5 mos.
12,130	10,350	52,291	40,712
6,125	6,105	28,185	20,645
950	820	3,661	3,399
126	76	421	804
2,213	2,238	.....	.....
994	970	4,252	4,508
861	916	4,087	4,113
43	79	168	530
2,303	2,213	.....	.....
100	11	390	387
10	.....	52	52
25	3	155	187
.....	.....	2	3
.....	4	28	62
6	1	17	24
7	1	23	36
.....	.....	0	2

TABLE IX
ANALYSIS OF 1935-1936 ACCIDENT
PREVENTION CONTEST¹

SHOWING FREQUENCY AND SEVERITY RATES²

INDUSTRIAL GROUPS	FREQUENCY RATE			SEVERITY RATE		
	1935	1936	Percent Change	1935	1936	Percent Change
TOTAL—ENTIRE STATE..	13.01	15.61	+19.98	.998	1.250	+25.25
Construction and						
Contracting	65.40	40.51	-38.06	3.602	1.780	-50.58
Manufacturing—Total ...	12.98	15.42	+18.80	.882	1.197	+35.71
Metals	13.49	18.01	+33.51	1.293	1.702	+31.63
Textiles and Clothing..	6.74	7.83	+16.17	.183	.324	+77.05
Foods and Tobacco....	15.87	16.57	+ 4.41	.573	.850	+48.34
Clay—Glass—Stone ..	16.84	19.53	+15.97	.683	1.715	+151.10
Lumber and Furniture..	28.14	22.67	-19.44	2.202	1.113	-49.46
Chemicals	13.50	14.60	+ 8.15	1.269	1.413	+11.35
Paper and Printing....	17.06	14.70	-13.83	.379	.537	+41.69
Other Manufacturing ..	12.99	16.22	+24.87	.522	.467	-10.54
Quarrying and Non-Coal						
Mining	22.12	23.75	+ 7.37	2.488	3.613	+45.22
State and Municipal....	25.60	26.34	+ 2.89	1.983	1.712	-13.67
Trade	9.07	8.81	- 2.87	.537	.315	-41.34
Hotels and Restaurants..	15.02	17.51	+16.58	.209	.224	+ 7.18
Trans. and Public Utilities	8.18	10.27	+25.55	1.449	1.669	+15.18
Miscellaneous	10.93	15.69	+43.55	1.005	.795	-20.90

¹Contest conducted by Accident Prevention Division, Department of Labor and Industry. Man-hours worked represent approximately one-third of total for the entire state.

²American Standards Formula.

TABLE X
ANALYSIS OF 1935-1936 ACCIDENT
PREVENTION CONTEST¹

SHOWING SEVERITY OF INJURIES

INDUSTRIAL GROUPS	FATAL ACCIDENTS			LOST TIME INJURIES ²		
	1935	1936	Percent Change	1935	1936	Percent Change
TOTAL—ENTIRE STATE..	162	234	+ 25.93	19,608	26,447	+ 34.88
Construction and						
Contracting	1	2	+100.00	175	644	+268.00
Manufacturing—Total ..	97	154	+ 58.76	14,289	18,890	+ 32.20
Metals	70	105	+ 50.00	7,019	11,378	+ 61.39
Textiles and Clothing..	3	11	+266.67	1,454	2,163	+ 48.76
Foods and Tobacco	5	12	+140.00	1,585	1,851	+ 16.78
Clay—Glass—Stone	3	9	+200.00	837	815	- 2.63
Lumber and Furniture..	5	3	- 40.00	566	643	+ 13.60
Chemicals	7	8	+ 14.29	593	591	- .34
Paper and Printing....	1	3	+200.00	1,110	931	- 16.13
Other Manufacturing ..	3	3	00.00	1,125	568	- 49.51
Quarrying and Non-Coal						
Mining	8	9	+ 12.50	555	560	+ .90
State and Municipal....	17	23	+ 35.29	1,808	2,849	+ 57.58
Trade	7	3	- 57.14	1,004	817	- 18.63
Hotels and Restaurants..	..	..	.....	226	220	- 2.65
Trans. and Public Utilities	29	39	+ 34.48	1,279	1,722	+ 34.64
Miscellaneous	3	4	+ 33.33	272	745	+173.90

¹Contest conducted by Accident Prevention Division, Department of Labor and Industry. Man-hours worked represent approximately one-third of total for the entire state.

²A lost time accident is one in which an employe is injured to the extent that he is unable to return to his next shift of work.

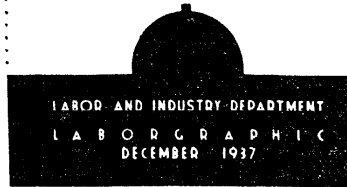
TABLE XI
ANALYSIS OF 1935-1936 ACCIDENT PREVENTION CONTEST¹
SHOWING MAN HOURS WORKED AND DAYS LOST

COMMONWEALTH OF PENNSYLVANIA
LABOR AND INDUSTRY DEPARTMENT
H A B I S B B C

NOVEMBER 1937

NEW WORKMEN'S COMPENSATION LAW

OCCUPATIONAL
I S E A S E
COMPENSATION LAW



\$



SIC 163 R, LANE B.
U.S. POSTAGE
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PERMIT NO. 491

Pennsylvania workers, injured in the course of their employment, have received compensation for their injuries ever since the original Workmen's Compensation Act became effective January 1, 1916. But the worker disabled by occupational disease—as much a victim of his employment as his co-worker who sustains a physical injury—has thus far received no compensation for his disability.

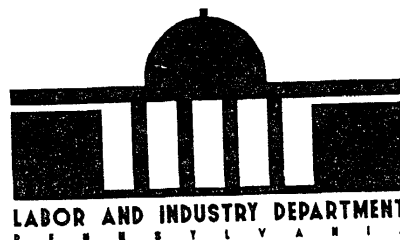
It has been only within recent years that society has come to recognize its obligation to workers disabled by industrial disease. Assumption of the obligation has followed recognition—20 other states, including most of the industrial states, now have occupational disease compensation laws. In Pennsylvania, in addition to such common industrial hazards as lead, benzol and carbon disulphide, there is the serious problem of anthraco-silicosis among the anthracite miners.

Recognizing its obligations, the administration drafted an occupational disease supplement to the Workmen's Compensation Law, which was introduced by Representatives Eugene A. Caputo, of Beaver County, and Arthur R. Schor, of Philadelphia County. A digest of the new law, together with some of the results of investigations of industrial disease hazards, are featured in this issue of the Bulletin.

Walter M. Beshore

Secretary of Labor and Industry

Harrisburg
December, 1937





PENNSYLVANIA
LABOR AND INDUSTRY



PENNSYLVANIA
LABOR AND INDUSTRY

TABLE I.
PENNSYLVANIA EMPLOYEES EXPOSED TO INDUSTRIAL DISEASE HAZARDS*
ESTIMATED TO BE COVERED BY OCCUPATIONAL DISEASE COMPENSATION ACT
PENNSYLVANIA INDUSTRIAL GROUPS

Paragraph of Law	Occupational Disease Hazards	Grand Total	Food Products	Textiles	Metal Products	Lumber Products	Paper and Printing	Leather, Rubber, Goods Composites	Clay, Glass, Stone Products	Chemical And Allied Products	Wholesale and Retail	Transportation	Public Utilities	Mines and Quarries	Construction, Contracting	Hotels and Restaurants	Service	Miscellaneous
A.	Lead	30,174	669	699	10,357	834	6,329	422	815	1,229	91	79	953	50	151	25	2,557	4,914
	Mercury	1,003	10	79	36	..	2	41	13	72	19	..	..	..	..	..	31	700
	Arsenic	536	..	..	62	..	225	77	32	131	..	..	..	..	..	..	3	6
	Manganese	950	..	..	930	1	..	..	9	..	..	..	..	..	..	..	3	6
	GROUP TOTAL	32,663	679	778	11,385	835	6,556	540	869	1,432	111	79	953	50	151	25	2,594	5,626
B.	Phosphorus (Includes phosphates)	165	17	1	1	23	..	4	..	118	..	..	..	..	..	..	..	1
C.	Methanol	2,734	19	211	766	513	9	85	23	78	8	3	..	..	17	4	112	886
	Carbon Bisulphide	1,430	..	1,342	..	2	1	74	..	11	..	..	..	..	..	..	..	..
	Naphtha	5,252	33	45	166	17	4,803	45	25	62	4	..	..	..	1	1	9	41
	Halogenated hydrocarbons	1,676	50	105	754	18	25	128	55	92	20	1	1	..	..	..	310	115
	GROUP TOTAL	11,092	102	1,703	1,688	550	4,838	332	103	243	32	4	1	..	18	5	431	1,042
D.	Benzol	549	5	63	66	2	11	85	17	113	5	1	..	..	..	..	179	2
	Benzol Derivatives	3,348	1	2,710	33	1	173	263	..	33	..	..	..	..	..	..	81	53
	GROUP TOTAL	3,897	6	2,773	99	3	184	348	17	146	5	1	..	..	..	..	260	55
E.	Caisson Disease	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
F.	Roentgen-Rays (X-Rays)	4	..	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..
G.	Chromium Compounds	1,470	6	22	1,104	17	66	11	143	2	..	..	1	..	..	..	4	94
H.	Tar	8,849	44	252	1,440	45	6,413	214	53	159	8	..	8	9	1	1	43	159
	Pitch	176	67	..	3	29	..	..	67	7	..	..	..	..	..	..	..	3
	Bitumen, Mineral Oil	4,898	124	252	2,803	48	53	435	216	238	9	15	40	62	42	..	190	371
	Paraffin	102	..	52	49	..	1	..	..	..	..	..	..	..	..	..	..	..
	GROUP TOTAL	14,025	235	556	4,295	122	6,467	649	336	404	17	15	48	71	43	1	233	533
I.	Oils	23,645	251	1,526	17,941	105	335	242	627	487	47	59	150	190	45	11	440	1,189
	Cutting Compounds	31,468	288	888	22,578	267	274	983	165	601	54	51	126	177	67	10	1,132	1,807
	Lubricants	4,489	149	102	1,400	18	364	59	157	1,144	18	43	84	45	12	1	133	760
	Dust	202,098	1,559	160,808	11,355	2,066	583	7,471	912	1,140	1,602	82	322	1,244	26	59	2,781	10,008
	Liquids	38,426	647	4,995	11,901	2,888	1,504	1,805	019	1,314	219	81	398	9	190	37	4,523	4,894
	Fumes	1,796	345	30	769	4	33	38	54	356	2	4	97	3	..	1	23	37
	Gases	33,884	7,146	3,404	13,023	267	851	447	359	1,404	46	114	723	546	106	51	2,186	1,211
	Vapor	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	GROUP TOTAL	335,806	10,385	171,753	78,967	5,615	3,944	11,045	293	6,446	2,068	434	1,900	2,214	446	170	11,218	21,908
J.	Anthrax	2,884	984	400	4	3	..	1,236	..	200	7	..	..	..	..	1	7	42
K.	Silicon Dioxide	23,976	87	212	12,830	1,605	81	750	334	381	44	14	103	597	67	10	165	1,696
	Other Silicates	18,910	40	207	7,254	57	45	388	221	475	13	3	32	1,531	36	..	25	583
	GROUP TOTAL	42,886	127	419	20,084	1,662	126	1,138	555	856	57	17	135	2,128	103	10	190	2,279
L.	Asbestos	779	2	19	300	2	1	6	70	18	2	..	..	..	2	..	3	27
	GRAND TOTALS	445,671	12,543	178,424	117,931	8,832	22,182	15,308	2,714	9,865	2,299	550	3,038	4,463	1,632	212	14,940	31,607

*Data compiled from "Survey of Industrial Disease Hazards in Pennsylvania." Field Work was tabulated and analyzed by a Works Progress Administration project. The 14,000 industrial establishments surveyed represented a coverage of about 75%. The total number of employees found to be exposed to industrial disease hazards was 672,010 of whom it is estimated that 445,671 will be covered by the Occupational Disease Compensation Act.

TREND OF EMPLOYMENT AND PAYROLLS IN PENNSYLVANIA INDUSTRIES 1934-1937

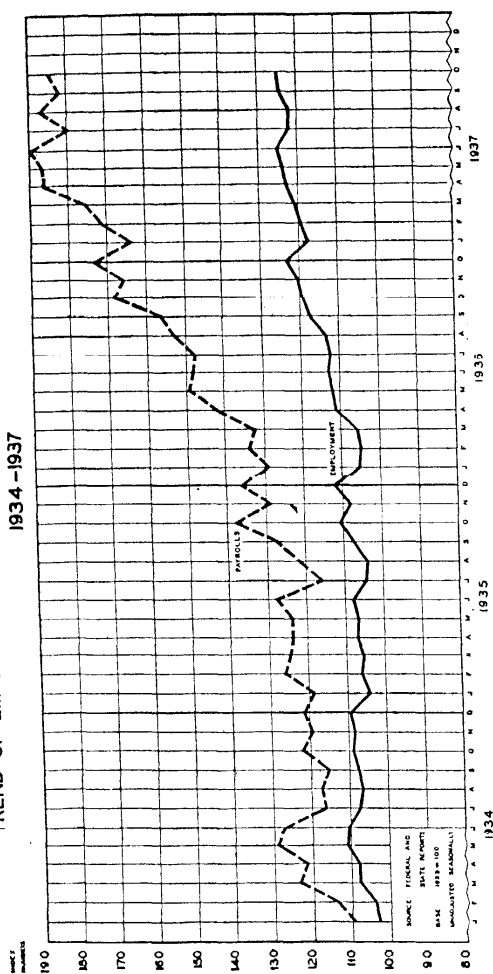


TABLE II.
INDICES OF EMPLOYMENT IN PENNSYLVANIA
INDUSTRIES¹
October, 1937

Industry	No. of firms reporting	Employment				
		No. of wage earners week ending Oct. 15 1937	Index numbers 1933 = 100			
			Oct. 1937	Sept. 1937	Aug. 1937	Oct. 1936
TOTAL—ALL INDUSTRIES ²	8,910	937,755	124.7	124.2	121.6	119.9
TOTAL—MANUFACTURING INDUSTRIES ²	2,340	586,251	136.8	138.6	138.1	132.4
Iron and steel and their products	509	266,054	176.5	180.2	181.0	156.2
Non-ferrous metal products	69	13,272	159.5	167.5	170.5	148.2
Transportation equipment	90	52,198	140.6	141.4	137.5	141.4
Textiles and clothing	585	115,054	111.2	113.7	112.4	117.8
Food products	276	29,959	122.5	121.4	119.8	121.6
Stone, clay and glass products	169	31,172	150.7	152.2	150.7	145.9
Lumber products	86	5,890	122.7	125.1	128.5	125.3
Chemicals and allied products	185	19,329	127.6	126.6	125.7	120.1
Leather and its products	76	13,571	105.3	107.0	110.0	112.5
Paper and printing	239	26,356	120.2	119.1	117.6	115.3
Other manufactures	48	13,396	116.2	114.0	113.8	115.5
TOTAL—NON-MANUFACTURING INDUSTRIES ²	6,570	351,504	113.9	111.5	106.9	108.8
Anthracite mining ³	114	71,273	98.6	93.3	79.7	96.6
Bituminous coal mining	292	74,392	122.0	119.3	118.6	120.6
Quarrying and non-metallic mining	147	5,885	131.7	133.7	135.1	125.8
Crude petroleum producing	10	436	126.1	126.4	126.9	125.5
Construction and contracting	801	13,960	108.2	109.0	106.9	95.2
Street railways, bus and taxi	60	17,206	108.3	107.4	107.1	103.4
Motor-freight, docks and warehouses	36	3,184	113.2	112.3	120.1	119.3
Telephone, telegraph and broadcasting	510	20,791	97.9	97.6	97.4	89.8
Light, heat and power	222	29,919	120.5	119.8	118.3	111.8
Retail trade	2,592	61,552	120.6	115.2	107.1	117.2
Wholesale trade	937	18,625	122.4	121.3	120.5	117.1
Banking and brokerage	526	12,678	103.3	103.9	104.8	106.4
Insurance and real estate	152	9,247	110.6	111.2	111.0	107.9
Dyeing and cleaning	36	1,666	111.6	111.7	107.3	108.8
Laundries	27	1,756	115.7	117.6	116.2	108.7
Hotels	108	6,934	123.4	121.0	117.8	115.0

¹Prepared by the Department of Labor and Industry in cooperation with the Federal Reserve Bank of Philadelphia and the U. S. Bureau of Labor Statistics. These data are not complete industrial totals but are based on reports submitted by a representative list of firms in each industry.

²Weighted.

³Reported by the Anthracite Bureau of Information.

TABLE III.
INDICES OF PAYROLLS IN PENNSYLVANIA
INDUSTRIES¹

October, 1937

Industry	Total weekly payroll week ending Oct. 15, 1937	Payrolls			
		Index numbers 1933 = 100			
		Oct. 1937	Sept. 1937	Aug. 1937	Oct. 1936
TOTAL—ALL INDUSTRIES ²	\$24,781,759	184.5	181.9	187.0	168.2
TOTAL—MANUFACTURING INDUSTRIES ²	14,934,240	215.6	220.3	235.0	198.2
Iron and steel and their products	7,486,278	317.5	338.6	372.0	269.0
Non-ferrous metal products	335,334	230.9	242.7	250.2	199.8
Transportation equipment	1,597,571	221.5	211.2	223.4	224.8
Textiles and clothing	2,073,882	145.7	143.9	145.4	154.6
Food products	721,822	157.1	156.1	159.4	142.5
Stone, clay and glass products	803,069	259.5	252.1	262.4	233.3
Lumber products	123,535	184.9	187.3	200.3	185.2
Chemicals and allied products	566,860	177.9	178.9	188.9	153.6
Leather and its products	241,014	117.6	124.7	144.3	137.8
Paper and printing	739,325	151.8	148.8	146.3	141.2
Other manufactures	245,550	158.8	151.2	154.3	143.7
TOTAL—NON-MANUFACTURING INDUSTRIES ²	9,847,519	154.4	144.8	140.7	139.0
Anthracite mining ³	2,076,743	111.2	68.5	59.3	105.7
Bituminous coal mining	1,996,349	246.0	223.4	216.9	226.3
Quarrying and non-metallic mining	151,528	253.5	264.3	281.5	247.8
Crude petroleum producing	13,261	146.4	150.8	147.3	142.8
Construction and contracting	411,014	193.0	190.9	185.3	161.3
Street railways, bus and taxi	520,207	130.3	123.6	123.2	114.2
Motor-freight, docks and ware-houses	60,492	194.3	202.0	201.8	154.8
Telephone, telegraph and broadcasting	667,220	118.1	120.8	117.2	110.2
Light, heat and power	1,035,332	136.5	133.2	130.8	120.3
Retail trade	1,402,710	142.4	137.2	130.9	130.3
Wholesale trade	581,836	133.4	131.9	133.8	121.4
Banking and brokerage	389,379	114.5	115.0	115.9	111.9
Insurance and real estate	344,922	118.3	118.8	120.9	112.2
Dyeing and cleaning	33,147	148.7	144.8	135.5	136.3
Laundries	31,016	145.7	146.9	146.9	128.3
Hotels	132,363	153.8	148.0	142.6	141.6

¹Prepared by the Department of Labor and Industry in cooperation with the Federal Reserve Bank of Philadelphia and the U. S. Bureau of Labor Statistics. These data are not complete industrial totals but are based on reports submitted by a representative list of firms in each industry.

²Weighted.

³Reported by the Anthracite Bureau of Information.

TABLE IV.
AVERAGE WEEKLY AND HOURLY EARNINGS
PENNSYLVANIA INDUSTRIES¹

October, 1937

Industry	Week ending Oct. 15, 1937					
	Earnings and hours					
	Av. weekly earnings		Av. hourly earnings		Av. hours per week	
	Oct. 1937	Oct. 1936	Oct. 1937	Oct. 1936	Oct. 1937	Oct. 1936
TOTAL—ALL INDUSTRIES ²	\$26.80	\$25.19	\$.718	\$.630	37.4	40.0
TOTAL—MANUFACTURING INDUSTRIES ²	25.47	23.85	.707	.590	36.6	40.9
Iron and steel and their products	28.14	26.84	.787	.633	35.8	42.4
Non-ferrous metal products	25.27	24.00	.643	.661	39.3	43.5
Transportation equipment	30.61	28.03	.790	.692	38.7	40.4
Textiles and clothing	18.03	18.27	.550	.504	33.3	36.6
Food products	24.09	21.95	.571	.487	41.6	44.5
Stone, clay and glass products	25.76	23.61	.695	.599	37.4	37.6
Lumber products	20.97	20.55	.511	.462	41.5	44.9
Chemicals and allied products	29.33	25.97	.782	.669	38.0	39.4
Leather and its products	17.76	19.61	.539	.484	32.4	40.3
Paper and printing	28.05	26.99	.684	.627	39.1	41.8
Other manufactures	18.33	16.76	.489	.442	37.7	38.1
TOTAL—NON-MANUFACTURING INDUSTRIES ²	28.09	26.49	.730	.672	38.3	39.1
Anthracite mining ³	29.14	28.30	.912	.843	31.4	33.2
Bituminous coal mining	26.84	24.80	.916	.810	29.4	31.1
Quarrying and non-metallic mining	25.75	24.88	.620	.529	42.4	46.9
Crude petroleum producing	30.42	28.51	.721	.671	42.5	42.7
Construction and contracting	29.44	26.91	.742	.709	39.8	38.1
Street railways, bus and taxi	30.23	28.52	.682	.639	45.4	45.9
Motor-freight, docks and ware-houses	19.00	17.40	.743	.611	24.4	27.4
Telephone, telegraph and broadcasting	32.09	31.94	.845	.814	30.2	39.3
Light, heat and power	34.60	32.55	.846	.765	40.3	41.2
Retail trade	22.79	21.27	.558	.493	41.5	43.4
Wholesale trade	31.24	29.74	.728	.696	42.0	42.3
Banking and brokerage	30.71	29.88	(a)	(a)	(a)	(a)
Insurance and real estate	37.30	35.70	(a)	(a)	(a)	(a)
Dyeing and cleaning	19.90	19.35	.468	.448	40.9	41.2
Laundries	17.66	16.61	.429	.371	41.1	44.7
Hotels	14.82	13.98	.312	.283	47.8	50.1

¹Prepared by the Department of Labor and Industry in cooperation with the Federal Reserve Bank of Philadelphia and the U. S. Bureau of Labor Statistics. These data are not complete industrial totals but are based on reports submitted by a representative list of firms in each industry.

²Weighted.

³Reported by the Anthracite Bureau of Information.

(a) Data not available; not included in total.

TABLE V.
INDICES OF EMPLOYMENT IN MANUFACTURING
INDUSTRIES BY PENNSYLVANIA
INDUSTRIAL AREAS¹

October, 1937

Area	No. of plants re- port- ing	EMPLOYMENT				
		No. of wage earners week ending Oct. 15 1937	Index numbers 1923-25 = 100			
			Oct. 1937	Sept. 1937	Aug. 1937	Oct. 1936
Allentown—Lehigh (3 counties).....	164	39,014	98.2	97.5	97.2	91.2
Altoona (2 counties).....	28	13,826	85.8	85.9	86.2	87.2
Chambersburg (3 counties).....	15	2,525	93.9	121.6	116.0	95.9
Clearfield (4 counties).....	39	5,175	82.3	82.6	84.7	80.1
Erie (2 counties).....	95	17,843	114.8	117.1	113.8	97.1
Harrisburg (3 counties).....	64	18,697	103.1	105.0	104.3	92.7
Johnstown (3 counties).....	32	17,849	141.6	142.9	142.3	120.0
Kane—Oil City (5 counties).....	42	5,021	66.2	69.6	70.4	67.2
Lancaster (1 county).....	67	14,183	124.4	127.0	126.0	122.6
Lewistown (3 counties).....	8	2,705	72.9	81.4	85.6	59.9
Philadelphia (5 counties).....	866	166,641	104.1	104.0	103.6	99.9
Pittsburgh (8 counties).....	366	174,607	91.3	92.9	93.2	86.3
Pottsville (2 counties).....	44	7,515	125.5	127.4	126.7	118.4
Reading—Lebanon (2 counties).....	158	39,896	106.8	108.4	109.5	106.5
Scranton (5 counties).....	65	6,005	90.0	89.6	92.4	89.9
Sharon—New Castle (2 counties).....	35	18,301	85.5	89.1	89.1	72.0
Sunbury (4 counties).....	33	5,698	66.5	73.0	70.6	79.3
Wilkes-Barre (3 counties).....	68	17,114	79.3	79.7	77.4	74.8
Williamsport (5 counties).....	65	9,166	114.5	113.9	111.4	112.6
York—Adams (2 counties).....	101	12,392	83.4	82.6	81.8	87.9

¹Compiled by the Philadelphia Federal Reserve Bank.

TABLE VI.
INDICES OF PAYROLLS, AND AVERAGE WEEKLY EARNINGS IN MANUFACTURING
INDUSTRIES BY PENNSYLVANIA INDUSTRIAL AREAS¹

October, 1937

Area	Payrolls		Average weekly earnings	
	Total weekly payroll—week ending Oct. 15 1937	Index numbers 1923-25 = 100	Week ending	
			Oct. 15, 1937	Oct. 15, 1936
			Sept. 15, 1937	Aug. 15, 1937
Allentown—Lehigh (3 counties).....	\$ 917,030	106.2	\$23.51	\$26.27
Altoona (2 counties).....	449,262	97.4	32.49	33.23
Chambersburg (3 counties).....	48,107	99.9	19.05	18.50
Clearfield (4 counties).....	122,505	82.1	23.67	24.11
Erie (2 counties).....	486,728	118.1	27.28	26.56
Harrisburg (3 counties).....	422,461	107.2	22.60	23.63
Johnstown (3 counties).....	464,379	166.8	30.76	32.71
Kane—Oil City (5 counties).....	121,092	65.3	24.12	22.59
Lancaster (1 county).....	281,123	107.2	19.82	20.00
Lewistown (3 counties).....	71,934	80.5	26.59	24.47
Philadelphia (5 counties).....	4,332,287	103.4	25.52	26.61
Pittsburgh (8 counties).....	4,898,209	120.2	28.19	31.86
Pottsville (2 counties).....	162,197	111.1	20.37	22.15
Reading—Lebanon (2 counties).....	879,475	108.5	21.22	22.80
Scranton (5 counties).....	126,952	100.9	20.42	20.37
Sharon—New Castle (2 counties).....	540,538	116.5	30.07	34.39
Sunbury (4 counties).....	89,783	71.5	15.76	17.10
Wilkes-Barre (3 counties).....	303,108	42.3	17.71	17.44
Williamsport (5 counties).....	198,754	108.5	20.75	16.55
York—Adams (2 counties).....	235,968	110.4	19.04	20.88

¹Compiled by the Philadelphia Federal Reserve Bank.

LIVING COSTS IN PENNSYLVANIA 1930-1937

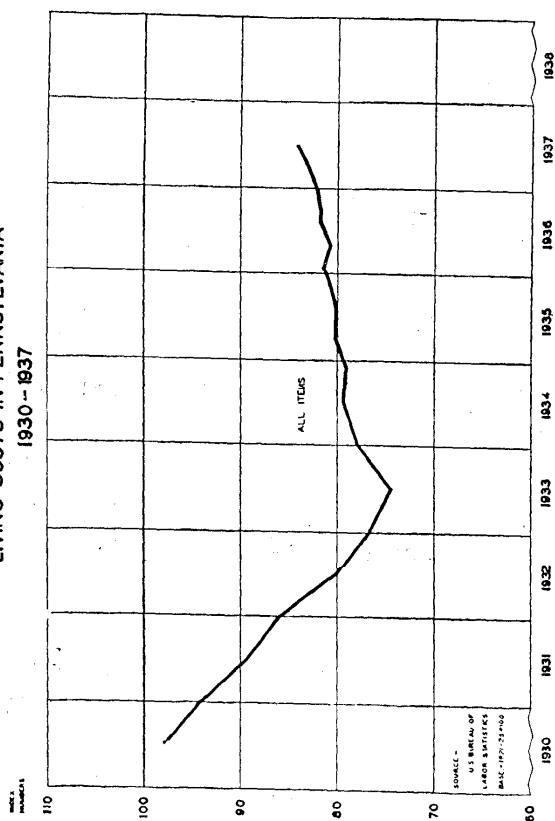


TABLE VII.
INDICES OF LIVING COSTS¹
PENNSYLVANIA²
1923-1925 = 100

Date	All items	Food	Clothing	Rent	Fuel and light	House-furnish-ing goods	Miscel-laneous
1930 June	97.9	101.5	91.0	93.2	97.3	89.7	103.0
1930 Dec.	94.2	92.1	87.9	91.8	100.8	85.6	102.6
1931 June	89.3	83.4	83.7	88.3	94.9	80.0	101.8
1931 Dec.	85.9	77.9	76.5	85.4	99.3	75.2	101.3
1932 June	80.0	68.7	72.4	80.0	89.5	70.0	99.2
1932 Dec.	76.7	64.6	68.5	75.6	90.8	65.1	97.4
1933 June	74.5	64.7	67.1	69.2	86.8	63.0	95.6
1933 Dec.	77.9	70.6	74.0	66.5	92.6	72.4	96.3
1934 June	79.4	76.5	75.3	65.0	89.0	74.3	96.0
1934 Nov. 15	79.2	75.9	75.5	65.0	88.4	75.1	95.7
1935 Mar. 15	80.2	79.5	74.7	64.6	88.7	75.3	95.6
1935 July 15	80.2	80.8	74.5	64.6	81.5	75.6	96.0
1935 Oct. 15	80.7	80.7	74.6	64.6	87.7	76.5	96.3
1936 Jan. 15	81.5	83.1	75.1	64.6	87.7	76.5	96.2
1936 Apr. 15	80.8	80.7	75.5	64.5	87.4	76.9	96.1
1936 July 15	81.8	84.7	74.8	65.1	85.0	76.5	95.8
1936 Sept. 15	81.8	84.3	75.1	65.3	86.7	77.1	95.6
1936 Dec. 15	82.2	84.5	75.7	65.7	87.6	77.7	95.8
1937 Mar. 15	83.1	86.2	77.1	66.0	88.1	81.5	95.5
1937 June 15	84.2	88.0	78.6	68.0	84.4	83.8	95.5

PHILADELPHIA

Date	All items	Food	Clothing	Rent	Fuel and light	House-furnish-ing goods	Miscel-laneous
1930 June	97.6	101.3	91.3	91.0	96.1	89.9	103.5
1930 Dec.	94.3	92.5	88.7	89.3	100.9	86.0	103.1
1931 June	89.7	84.8	84.8	86.1	93.0	80.1	102.1
1931 Dec.	86.3	79.7	76.4	82.9	98.8	75.6	101.7
1932 June	80.4	70.1	71.8	79.0	80.3	70.0	97.6
1932 Dec.	76.8	65.4	67.9	74.3	88.6	64.6	97.5
1933 June	74.9	65.6	66.5	69.5	83.9	62.1	95.6
1933 Dec.	78.4	71.6	73.6	66.6	90.5	72.0	96.3
1934 June	79.9	78.1	74.6	65.3	85.8	73.8	95.7
1934 Nov. 15	79.6	76.9	74.8	65.6	85.1	74.7	95.5
1935 Mar. 15	80.4	80.3	73.7	65.2	85.5	74.8	95.3
1935 July 15	80.4	82.0	73.6	65.2	76.1	75.1	95.7
1935 Oct. 15	80.9	81.5	73.6	65.3	83.9	76.3	95.9
1936 Jan. 15	81.9	84.5	74.3	65.3	83.9	76.3	95.9
1936 Apr. 15	81.3	82.1	74.8	65.2	84.1	76.9	95.9
1936 July 15	82.1	85.9	73.9	65.6	80.8	76.4	95.5
1936 Sept. 15	82.1	85.5	74.1	65.9	82.6	76.5	95.4
1936 Dec. 15	82.5	85.9	74.6	66.4	83.8	77.1	95.5
1937 Mar. 15	83.4	87.3	75.9	66.8	84.7	80.9	95.2
1937 June 15	84.0	89.1	77.3	67.3	79.9	82.7	95.2

¹Prepared by the U. S. Bureau of Labor Statistics.

²Computed from Philadelphia, Pittsburgh and Scranton indices weighted according to population.

TABLE VIII.
INDICES OF LIVING COSTS¹
PITTSBURGH
1923-1925 = 100

Date	All items	Food	Clothing	Rent	Fuel and light	House-furnish-ing goods	Miscel-laneous
1930 June	98.6	101.9	89.8	98.5	101.8	88.2	101.8
1930 Dec.	93.8	90.7	85.1	97.8	101.4	82.9	101.3
1931 June	88.4	80.0	80.2	93.7	100.7	78.0	100.9
1931 Dec.	84.7	73.1	76.7	91.0	101.1	72.8	100.0
1932 June	78.7	65.0	73.5	81.2	99.9	66.5	97.9
1932 Dec.	76.0	62.3	69.7	77.3	97.6	64.5	96.7
1933 June	73.2	62.4	68.4	66.3	97.3	63.7	95.3
1933 Dec.	76.0	67.7	74.3	64.0	100.5	71.6	96.0
1934 June	77.7	72.8	76.0	61.8	100.0	73.6	96.5
1934 Nov. 15	77.8	73.8	76.3	61.1	99.1	74.3	95.8
1935 Mar. 15	79.2	78.1	76.6	60.8	99.2	75.2	96.0
1935 July 15	79.1	78.1	76.1	60.9	98.4	75.3	96.3
1935 Oct. 15	79.6	78.9	76.2	60.7	99.3	75.5	96.8
1936 Jan. 15	79.9	80.1	76.4	60.7	99.3	75.3	96.7
1936 Apr. 15	79.1	77.6	76.6	60.7	99.4	75.2	96.2
1936 July 15	80.7	82.1	76.5	62.0	99.0	75.0	96.0
1936 Sept. 15	80.8	81.9	76.9	62.1	100.3	77.1	95.9
1936 Dec. 15	80.8	81.1	77.0	62.1	100.2	77.0	96.3
1937 Mar. 15	82.1	83.8	79.3	62.3	100.6	81.7	95.9
1937 June 15	84.6	85.4	81.3	69.1	100.6	85.5	96.1

SCRANTON

Date	All items	Food	Clothing	Rent	Fuel and light	House-furnish-ing goods	Miscel-laneous
1930 June	99.0	101.7	93.3	97.5	92.4	94.2	102.7
1930 Dec.	95.2	92.2	91.0	96.7	95.8	91.0	102.4
1931 June	88.7	79.5	85.4	93.1	93.0	88.4	101.4
1931 Dec.	85.5	75.2	76.4	92.2	97.7	80.2	101.4
1932 June	80.1	66.8	74.4	87.4	83.8	77.6	99.3
1932 Dec.	78.0	63.5	70.6	85.4	88.4	75.5	98.6
1933 June	75.8	63.9	69.8	79.1	77.0	72.9	96.7
1933 Dec.	80.0	69.5	78.7	76.9	85.0	80.8	97.9
1934 June	80.8	71.6	80.8	75.2	80.1	83.5	98.5
1934 Nov. 15	80.6	71.5	80.3	74.6	83.0	83.6	97.9
1935 Mar. 15	81.9	75.9	79.4	74.3	82.4	83.5	98.1
1935 July 15	82.1	77.6	79.5	73.5	76.1	83.4	98.5
1935 Oct. 15	82.8	77.5	79.7	73.2	84.2	84.2	99.0
1936 Jan. 15	83.2	78.8	79.8	73.2	84.5	84.2	98.7
1936 Apr. 15	81.8	76.5	80.1	73.0	75.8	83.9	98.6
1936 July 15	83.2	80.6	79.9	73.0	77.5	83.9	98.4
1936 Sept. 15	83.2	80.4	80.1	72.9	79.9	84.8	97.7
1936 Dec. 15	83.7	81.1	81.5	72.8	81.1	85.0	97.7
1937 Mar. 15	84.0	82.0	82.4	73.1	75.1	89.6	97.1
1937 June 15	84.9	84.5	83.4	73.1	70.8	91.4	97.3

¹Prepared by the U. S. Bureau of Labor Statistics.

TABLE IX.
STATUS OF THE
UNEMPLOYMENT COMPENSATION FUND

January 1-December 1, 1937

Date	Number of employers registered ¹	Amount of contributions received ²
January 1, 1937	.....	.....
January 15, 1937	4,000	\$ 284,494
February 1, 1937	24,082	3,027,300
February 15, 1937	59,810	7,148,699
March 1, 1937	75,714	11,867,587
March 15, 1937	112,252	24,856,878
April 1, 1937	117,865	25,331,408
April 15, 1937	123,771	25,898,127
May 1, 1937	128,044	26,750,403
May 15, 1937	130,269	26,003,959
June 1, 1937	131,489	27,364,435
June 15, 1937	132,792	36,557,860
July 1, 1937	133,881	39,155,610
July 15, 1937	135,084	39,343,017
August 1, 1937	136,424	42,170,245
August 15, 1937	136,935	53,337,489
September 1, 1937	137,649	54,394,814
September 15, 1937	138,247	54,569,366
October 1, 1937	138,746	54,756,468
October 15, 1937	139,083	55,179,149
November 1, 1937	139,254	59,644,248
November 15, 1937	139,503	68,946,996
December 1, 1937	139,693	69,758,784

¹Number registered in 1936 as subject to the law.

²Contributions revised and rounded off to nearest dollars. Amount received for 1936, and first, second, and third quarters of 1937, including interest earned on Trust Fund to September 30, 1937.

TABLE X.
WORKMEN'S COMPENSATION
October, 1937

	1937				1936
	Oct.	Sept.	Aug.	Total first ten months	Total first ten months
BUREAU					
Accident reports filed.....	8,097	10,867	13,259	109,132	89,338
Compensation agreements and awards examined, approved and filed.....	5,932	4,196	5,273	54,873	45,347
Petitions received, docketed and referred to referees.....	1,100	800	600	7,911	7,204
Applications and financial statements of employers requesting exemption from compulsory insurance received and passed upon.....	87	64	45	943	1,110
REFEREES					
Cases on hand at beginning of month.....	2,739	2,691	2,652	....	....
New Cases assigned.....	1,189	761	645	8,773	8,765
Cases disposed of.....	837	701	593	7,719	8,154
Cases reassigned.....	65	12	13	288	657
Cases on hand at end of month.....	3,026	2,739	2,691	....	....
BOARD					
Opinions and Orders					
Referee affirmed.....	125	103	16	693	908
Referee reversed.....	18	9	4	88	110
Rehearings granted.....	37	33	12	248	370
Records returned to court.....	..	..	1	3	7
Cases withdrawn.....	3	2	2	46	95
Amended awards.....	16	17	3	61	48
Findings of referee modified.....	..	1	..	27	72
To file exceptions.....	..	..	..	..	2

TABLE XI.
COMPENSATION AWARDED IN DISABILITY
AND DEATH CASES

October, 1937

	1937				1936
	Oct.	Sept.	Aug.	Total first ten months	Total first ten months
FATAL					
Number of cases.....	88	95	71	979	762
Amount of compensation... \$	304,726	\$299,820	\$ 208,741	\$ 3,267,366	\$2,637,325
PERMANENT DISABILITY					
Number of cases.....	352	228	334	2,985	2,525
Amount of compensation... \$	355,139	\$231,745	\$ 311,846	\$ 2,847,741	\$2,441,435
TEMPORARY DISABILITY					
Number of cases.....	5,932	3,074	4,868	50,910	42,413
Amount of compensation... \$	544,016	\$358,800	\$ 539,646	\$ 4,956,207	\$4,118,942
TOTAL					
Number of cases.....	5,932	4,197	5,273	54,874	45,700
Amount of compensation... \$	1,204,091	\$889,375	\$1,058,253	\$11,071,314	\$9,197,702



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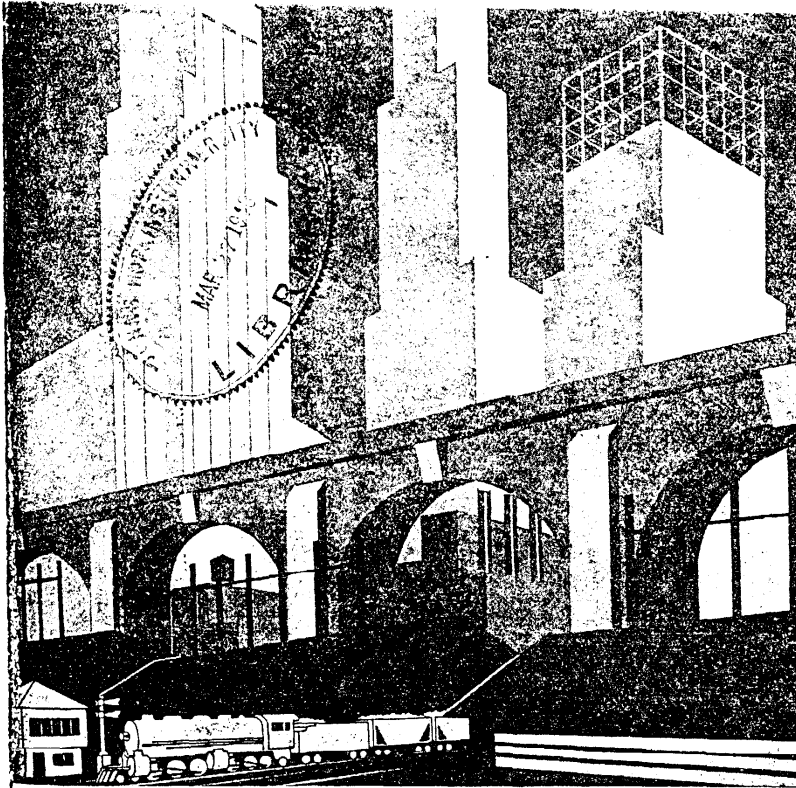
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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF LABOR AND INDUSTRY
ARRISBURG



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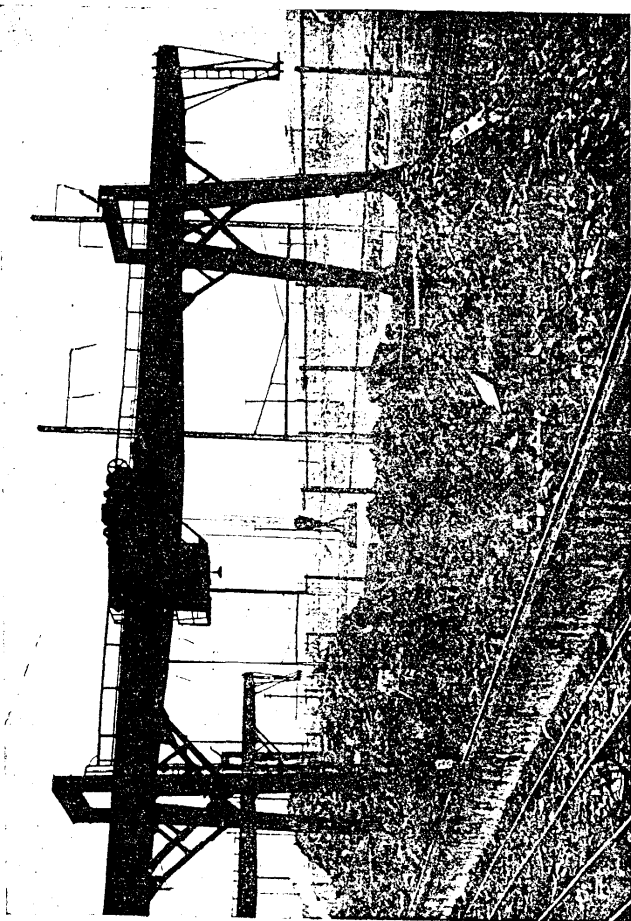
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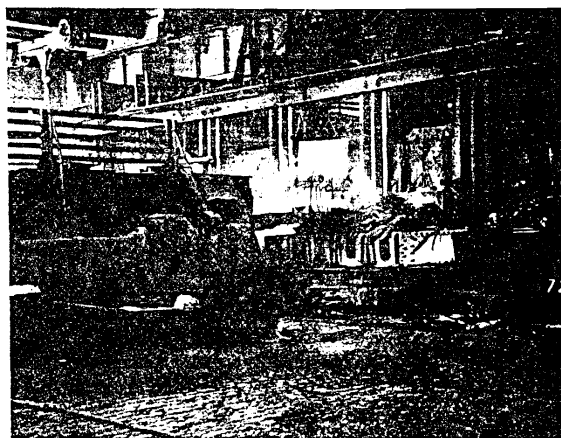
Tons of scrap metal to be used for making steel. Scrap is loaded onto cars, by means of magnet, seen hanging below crane's cab, and then transported to furnaces.

STEEL IN THE MAKING

FIELD INSPECTION DIVISION
BUREAU OF INSPECTION

STEEL in the making is a more interesting story today than in the Middle Ages. Although modern chemistry has been applied to iron and steel there is as much magic surrounding them in our machine age as in the early centuries.

The making of steel is an ancient craft. It has been called the oldest art and the newest science. The pioneer fleeing to the deepest woods of



Charging machine shoving two-ton box of scrap into open hearth furnace.

the prairie relied upon an axe, a rifle or a plow. And in the Middle Ages when the smith worked with steel to make weapons and armor he was looked upon as a magician. Drawing a curtain over what is known of the chemistry and the advances made in metallurgy much of the magic and mystery of the making of steel still remains.

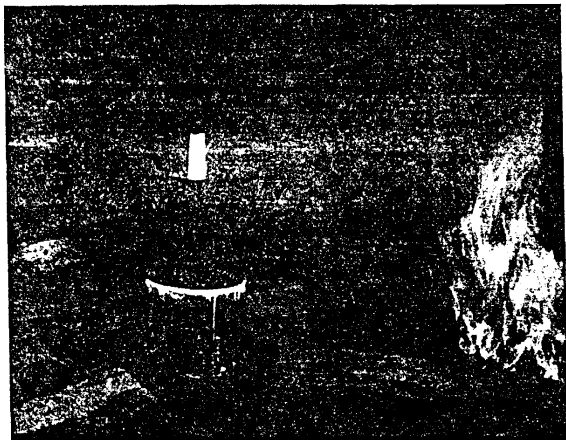
One could hardly imagine an industrial State, such as Pennsylvania, without steel. It is part of every phase of our modern industrial life. It forms the arteries of transportation, the structure of our buildings and the very bone and sinew of our cities are built on a framework of

steel. Cut off the supply of steel for six months and the modern world would be faltering on its foundations.

At an iron and steel plant in central Pennsylvania 1700 men working on three shifts are going resolutely about the business of making steel. Steel for railroad cars, steel for locomotives, steel for building construction, steel for flooring and ships. Steel for today's America.

An Inferno of Molten Metal

Furnaces are charged, cranes operated, railroad trains shifted, molten steel poured and rolled and laboratory tests made. Whistles are blowing as shifting trains pass, bells ring on charging machines in the open



Molten steel pouring from ladle into ingot mold.

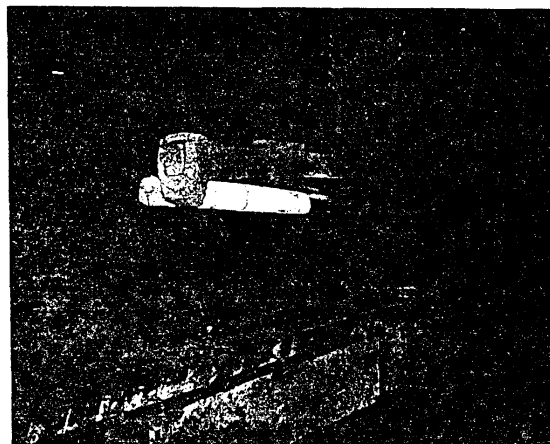
hearth, the roar of loaded conveyors, the booming of hot metal crashing through the rolls and the noise of shifting cranes overhead, are all significant sounds in a busy steel plant.

Five open hearths were in operation. In the open hearth yard engines were shifting railroad "buggies" carrying the charging boxes filled with scrap. A 5-ton charging machine picks up one of the 2-ton boxes and deposits the scrap in the furnace placing the box back on the railroad "buggie" again. A 4-ton magnet is then lowered from a height of 30 feet and picks up the remaining scrap.

An open hearth is built of steel and brick, and towers approximately 20 feet and is 70 feet long. Look in the peephole at the base of the furnace and you see the fires of creation, an inferno of incandescence over a bubbling, boiling mass of white-hot metal lying at 2200 degrees Fahrenheit. The temperature of the metal is read by means of a pyrometer.

eter. The scale of the pyrometer registers the exact temperature to the operator.

A worker carrying a long rod with an attached dipper on the end goes to the peephole of the furnace and dips out a sample of molten metal. This sample is poured into a small mold and cooled for testing. Then by reducing or increasing the carbon and adding manganese and lime the process of steel is in the making. The impurities being lighter than the purified steel are drawn off the top of the molten mass. Samples are sent immediately to the laboratory for analysis. If the sample is of the required chemical specifications the steel is ready to be poured.



White-hot ingot of steel being placed on conveyor leading up to rolls.

In the final process a fiery sheet of flaming metal is being rolled on the conveyor rolls. A 25-ton crane is shifting overhead. As the steel finally passes through the smoothing rolls it is cooled and rolls on to the measuring room where it is sheared and stamped for shipping.

Every Man a Safety Man

Safety cannot be superimposed on a steel plant like a "gadget" on a machine. If it is to fulfill its purpose, it must be made a part of the plant and of the men who work in it.

The realization of this fact is apparent at the plant visited. The men wore goggles of a combination blue and white glass for protection against radiant energy and safety goggles suitable for operations endangering eyes. In flying particles; protective clothing of asbestos jackets and leggings and safety shoes. Screams are heard on mechanical parts.

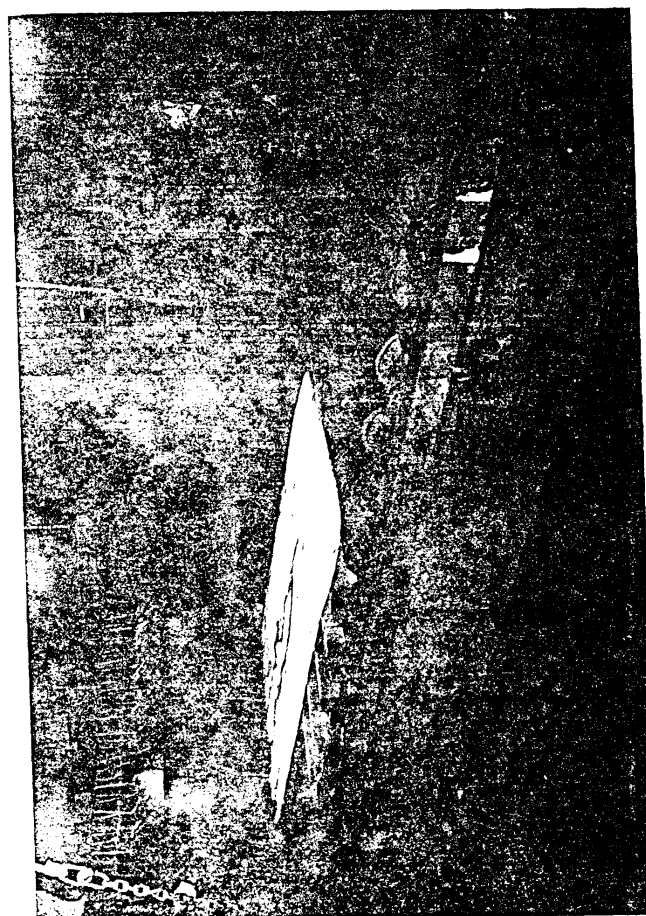
ment where they are needed. Traffic aisles are clear. Modern shower and locker rooms are kept clean, and there is a completely equipped first aid room. To dovetail with the safety meetings held weekly by the Safety Engineer, a program of well being on the part of the employe is promoted.



Picture of ladleman ready for his job.

A number of safety posters from the Department of Labor and Industry may be seen in conspicuous places.

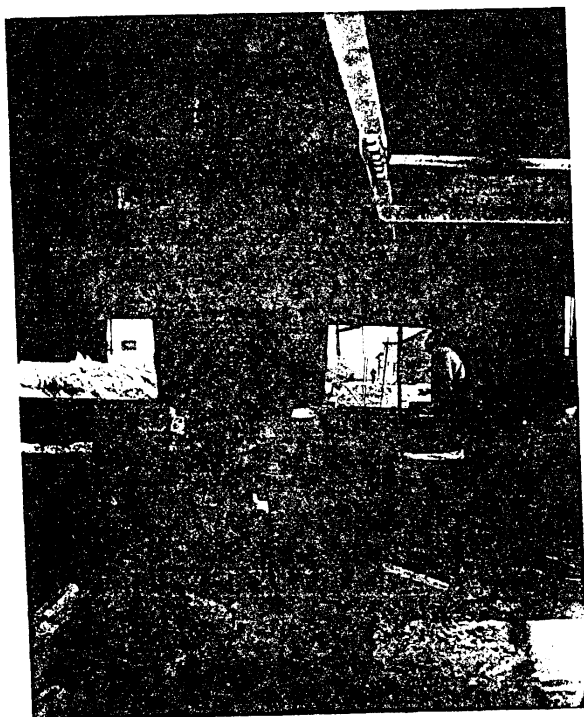
The Safety Engineer, who for 12 years was an inspector for the State Bureau of Inspection, said: "Safety at steel plants has been found valuable, not only as a humanitarian standard, but as a vital element in production and economics."



White-hot ingot being rolled into steel plate.

Advances Made in the Making of Steel

Advances in metallurgy have produced steels more perfectly adapted to the demands of the engineers—hence more efficiency. The auto fender for which formable steel has been developed is leading to great economies in manufacture. Another is steel cable for bridges which has increased



Ingot molds lined up preparatory to receiving molten steel.

in tensile strength from 160,000 pounds per square inch in 1870, when the Brooklyn Bridge was undertaken, to 225,000 in 1927, when the George Washington Bridge in New York was built—a development which has brought about longer spans and heavier loads.

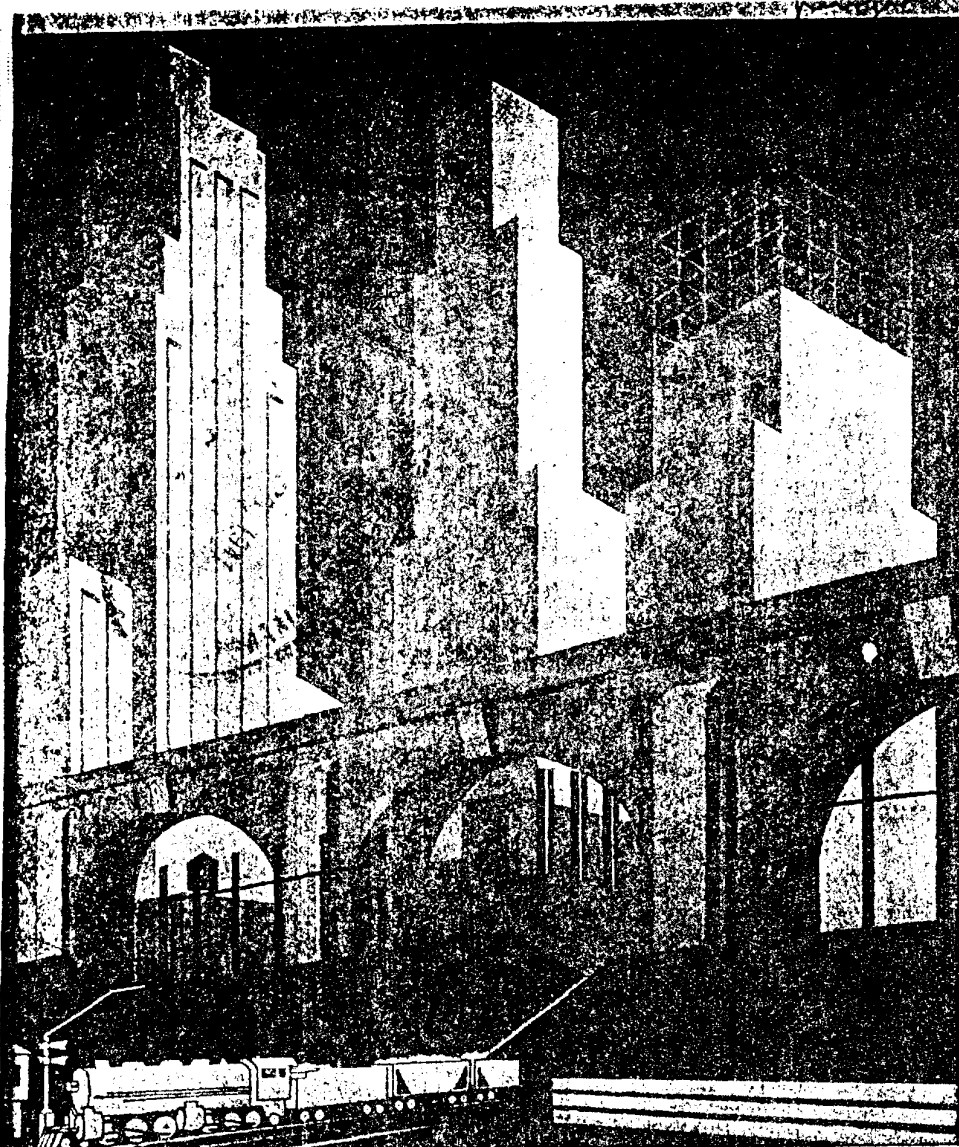
Iron is the basic raw material of industry for it actually enters into the mechanics of practically every form of industrial energy production. During the period, from about 1850 to 1890, the nation was busy laying

of iron and other tonnage materials and it drew its energy almost entirely from coal. The country was primarily agricultural and the wonders of industry were considered to be no more than adjuncts to an old order.

The supply of iron scrap has reached 245 pounds per capita per annum, and while this is not enough to provide for all industry, it is enough to furnish about 40 per cent of the net domestic requirements.

The United States is not great by nature or by accident. It is great by the act of man. It has become the greatest agricultural nation on earth, ranking first, second or third in most of the basic commodities, producing a third of the world's iron ore; and 27 per cent of the steel.

The measure of civilization is the individual's power to consume—to make use of—the resources of nature. In our present industrialization we have created the possibility of an entirely new era for mankind.



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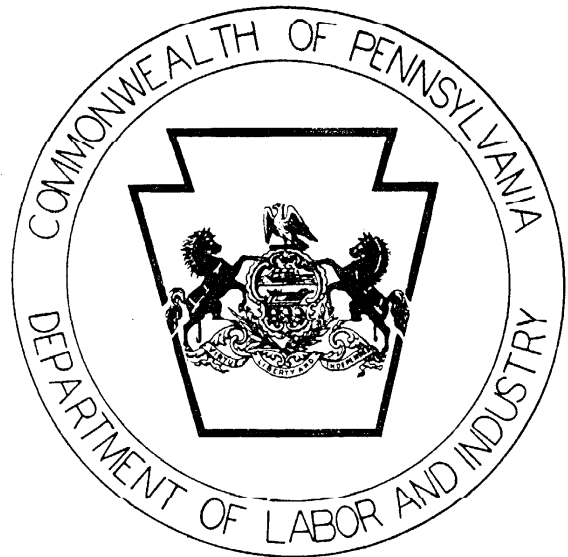
PENNSYLVANIA
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REVIEW



JANUARY
1941

PENNSYLVANIA LABOR AND INDUSTRY

REVIEW



ARTHUR H. JAMES

Governor of the Commonwealth

LEWIS G. HINES

Secretary of Labor and Industry

Harrisburg

January 1941

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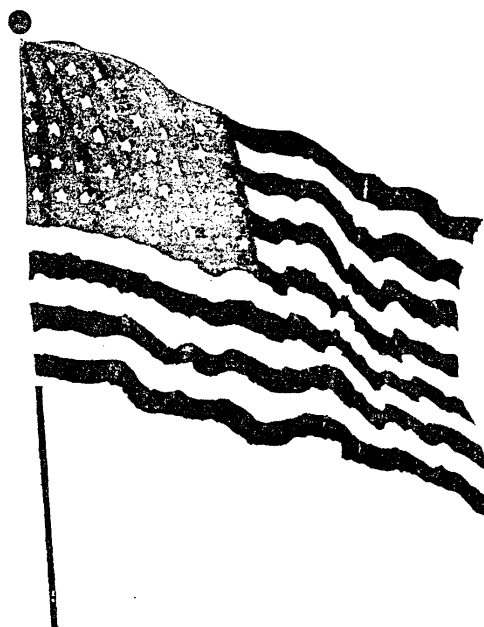
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Ernest Kelly.....Director of Employment and Unemployment
Compensation Service

William E. Collier, Associate Director of Unemployment Compensation

H. Raymond Mason, Associate Director of Employment Service



PLEDGE OF ALLEGIANCE TO OUR FLAG

I pledge allegiance to the flag of the United States of America,
and to the republic for which it stands:—One nation, indivisible, with
liberty and justice for all.

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played the game without fear or favor. I want to say that the least I could say—the most appropriate, I know you will say—is that he is a square fellow. I want to give you Mr. Boylan, your permanent chairman."

* * * * *

W. H. CAMERON, Managing Director, National Safety Council, Inc., expressed the feeling of the conference when he said: "Today safety men everywhere know that they can definitely and successfully solve their accident problems."

"The First Line of Defense" about which he spoke, he considered to be the problem of producing equipment for soldiers and sailors and of protecting all of the many other persons whose activities are essential to the defense of the country. He said that these persons, the workers, can reach the ideal of maximum productivity only when they are working with complete efficiency and complete safety.

Paragraphs from Mr. Cameron's talk are as follows:

"I am well aware that many of our industries have used their special safety knowledge to build up excellent accident prevention records. Nobody admires these good safety records more than I do. It is creditable indeed that the 4,700 plants reporting to the National Safety Council, in the period since 1926, have reduced the average frequency of accidents by 69 per cent and the average severity of accidents by 50 per cent.

"But we must take account of two significant facts. First, we must emphasize that these are 'average' rates. All of the plants are trying to reduce accident losses, it is true, but these rates include both the plants that have perfected a high degree of safety organization and also those plants where safety organization is not so good.

COUNCIL RECORDS ACCIDENT FACTS

"In the second place, only some 4,700 selected plants are included in the group reporting regularly to the Council. Outside of this group there is a vast number of industrial establishments whose accident experience is not covered by these records. Some of these plants, doubtless, are doing some safety work; but we know that the great majority of them—particularly the smaller shops and work-places—have very little idea of what organized safety work is.

"These are the essential reasons why fatal accidents in all industry last year took 15,500 lives. And this is why the crippling and other disabling injuries among our country's workers ran to a total of 1,250,000.

"We have a right to be encouraged because the losses were smaller than in each of the two years before. Fatalities in 1939 were reduced by 500 over the total in 1938, and by 3,500 as compared with 1937. Injuries also were considerably fewer.

"But more than 90 per cent of all industrial establishments in our country have fewer than 100 employees each. In most of these there is no real understanding of the menace of accidents. A serious accident may happen rarely. Records are seldom kept of those which cause

merely a temporary injury, or the loss of equipment or tools. Too often it is believed that the insurance premium covers all the accident hazard, and there is no comprehension of the "hidden" or indirect costs.

"Yet these smaller plants of our country, despite their relatively few employees compared to the great industries, are charged with about 40 per cent of all industrial accident losses. The measurable money costs to them last year were some \$240,000,000; the similar measurable costs of accidents to all industry were \$600,000,000.

SIX MEASURES IMPORTANT TO MANAGEMENT

"Above all, there must be a definite and comprehensive accident prevention program, which has been laid out, scrutinized and approved in detail by the highest management. A very important part of it will deal with those personal causes of accidents, which, management knows, result in from 75 per cent to 80 per cent of all disabling injuries.

"There are at least six important measures that management employs in the elimination of personal accident causes. I will sketch them briefly:

- "1. Proper placement of men.
- "2. Job training.
- "3. Supervision.
- "4. Discipline.
- "5. General safety education.
- "6. Safety contests, rewards, etc.

NEW RECOGNITION OF ACCIDENTS "OFF-THE-JOB"

"Once industrial management paid little heed to what happened to workmen after they left the plant. But a workman killed or disabled is a definite loss, both to his employer and his country, no matter where he may be struck down. Studies show that in some plants the ratio of 'off-the-job' accidents to those occurring in the course of work is as high as two to one. Last year in all plants while work accidents took ten lives, sixteen others were killed in off-the-job accidents.

"Industry is rightly the chief support of our community safety council. Industrial executives are alert to promote the passage of drivers' license laws, to improve the local regulations for the control of traffic hazards, to encourage better administration of the safety laws, and to show their forceful support of conscientious public officials who cooperate in the State and National safety program.

"The first five years—or even ten years—are the easiest, not the hardest. In starting an industrial safety program, any plant—large or small—should be able to lay out a plan, use the standard methods of safety organization, and cut its accident losses 50 per cent in the first year or two. But all old safety men know that the farther we go along the safety road, the harder it is to increase the safety gains."

* * * * *



JAMES A. WILSON, Labor Relations Counsellor, International Labor Office, with headquarters in Washington, D. C., and a native Pennsylvanian, expressed his appreciation at being invited to address an industrial safety conference in his home State. "Safety and the International Labor Organization" was the subject of his talk. In it he told how three of the Organization's treaties, dealing with longshoremen and seamen; and a fourth, referring to safety of workers in the building industry, are meeting with success. He also told of how the Recommendations on Safety adopted by the I. L. O., while they do not have the force of treaties, have enjoyed wide acceptance by the member states and have had their provisions worked into National legislation.

Following are excerpts taken from the address of Mr. Wilson:

"The record discloses that much progress has been made in reducing the number of accidents and the days lost through accidents. The co-operation of labor and industrial management (together with their education and their cooperation) in conjunction with the State Department of Labor has been responsible in large measure for the progress that has been made.

"What you have been doing here in Pennsylvania to safeguard the lives of your working population is analogous to the world-wide efforts of the International Labor Organization in that direction.

WORLD PEACE THROUGH SOCIAL JUSTICE

"The International Labor Organization, as its title might suggest, is not a labor union nor a federation of labor unions. It is the semi-official voice of nearly 50 nations to which is added equal representation from national labor and employer organizations. These three groups—government, employer and worker—are brought together in the organization for the express purpose of establishing world peace based upon social justice. The United States has been a member of the organization since 1934 and the three groups from this country have cooperated to the fullest extent.

"While the Office cannot under its Constitution dictate to the member states what they shall and shall not do in the matter of industrial safety, it is in a unique position to study national methods of technique, safety propaganda and instruction, and to determine what methods are most likely to give the maximum benefits to the workers.

INDUSTRIAL SAFETY COMMITTEES

"An important and indispensable part of the set-up of the International Labor Office is its system of committees, made up of experts on the particular problems with which the Office is faced. In this way, the Office is able to consult the best thought in any given field. In the field of safety, this system has been of inestimable value.

"The International Labor Office has published safety monographs dealing with individual problems of accident prevention in such industries as hydro-extractors, metal-working presses, acetylene, celluloid, spray painting, and elevators.

As a result of the work of its committees of experts in the field of safety, the International Labor Office has adopted four Draft Treaties and seven Draft Recommendations dealing with safety problems. The treaty, of course, has the force of law when ratified by the member countries; the Recommendation, as its name implies, informs member states what is the best way to handle a given safety problem and suggests that they follow the form laid down in the Recommendation in drafting National legislation on the subject.

"Real progress can only be made with the cooperation of all parties—Governments, employers, workers, engineers, scientists, teachers, statisticians, psychologists, and others. Use must be made of regulations, inspections, technical devices, education and propaganda. To further this cooperation and the use of these means throughout the world is the task before the Safety Service of the I. L. O."

PAYING a tribute in memory of the late Judge Elbert H. Gary, former Chairman of the United States Steel Corporation, Carnegie Corporation, Vice-President of Carnegie-Illinois Steel Company (Lorraine Division), addressed the conference under title of "Then and Now." Mr. Burton traced the history of that great corporation's success in the field of industrial safety from the pioneering days of Judge Gary to their present-day huge expenditure for accident-prevention work.

He told of how Judge Gary instilled a feeling of safety consciousness into industry and how the U. S. Steel Corporation were among the first in industry to accept the responsibility for the methodical hospitalization of their casualties. At the same time they instituted and regularized the provision of an income for the family bereaved by a fatal accident or during the disability period of the breadwinner. This before there were laws to enforce or regulate these provisions for injured employees and their households.

Following are excerpts from Mr. Burton's address:

"By common consent, we, of this day and generation, have come to understand and adopt the philosophy whereby industry is bound and properly bound, to a responsibility for its casualties. Certainly an industry incapable of sustaining the financial burden of a competent program of accident prevention fails to demonstrate its right to exist in organized society. This conclusion flows logically from the fact that accident prevention work is an element of production cost, and if that industry's consuming trade is incapable or unwilling to pay enough for that industry's goods, in terms of profit, to sustain its capital structure, it is thereby condemned to justified economic extinction.

"Organized accident prevention on a large scale was first undertaken by the United State Steel Corporation in 1906. In 1906 and again in 1908 it called together the casualty managers of all its subsidiary companies to consider the problem of reducing accidents. At the second of these meetings the late Judge Gary, then Chairman of the Board, expressed U. S. Steel's seriousness of purpose when he stated:

"We should like to take a prominent part, leading part, in any movement and in every movement that is calculated to protect our



Seated at the speaker's table at the luncheon meeting—from left to right are: Judge Lois McBride, Mrs. Mary Rice Morrow, Mrs. Margaret M. Menner, and Mrs. Sally Harris. Standing from left to right are: Mrs. John Y. Huber, Miss Mary Anderson, Miss S. M. R. O'Hara, Miss Louise Stitt and Miss Marion Conner.

...different corporations in which we are interested, and any requisition which is made for the expenditure of money to install equipment to protect our people will be honored."

ACCIDENT PREVENTION IN U. S. STEEL CORP.

"Let us go back to the year 1912. The casualty records of U. S. Steel showed that in that year the number of their disabling accidents per million man hours worked was 79.43. During the years of the World War, the trend downward was interrupted by a substantial uptick—occasioned by new men, no doubt, that gives force to the Labor Department's warning of things to come. In 1939 the Corporation had reduced the number of disabling accidents per million man hours from the figure 79.43 in 1912 to 6.84—a reduction of 91.4 per cent in 27 years. During this same period they spent for safety something over \$28,000,000.00.

"Let us take for my further illustration of 'Then and Now,' excerpts from experience in accident reduction at the U. S. Steel subsidiary plant wherein I have carried certain management responsibilities. It is quite an old institution, as manufacturing establishments go, and had its beginning back in the eighties. It employs, normally, about 2,000 men. The top accident rate in our plant was as high as 125 lost-time accidents per year during the period to which we are referring as 'then.' In the year 1939 we had but three.

"Industry's problem has been and is, not the unguarded machine, but the unguarded moment. The need is to superimpose upon the individual's mind a consciousness of responsibility for his own and other's safety—a consciousness keen enough to keep him alert in the presence of accident hazards—in spite of his home troubles or what-have-you. If a man is too preoccupied otherwise, he would better be sent home for his own safety.

"Back in April, 1915, we began physical examinations in our plant. The greater benefits of these physical examinations soon became apparent and they have been continued ever since to the general satisfaction of all concerned. Then too, through these physical examinations, it has been found possible oft-times to warn men of serious ailments impending that they might go to their own physician in time and ward off what, in extreme cases, might have resulted in sudden death—heart condition, blood pressure, etc.

"In our safety work, above all things else, we have to have—must have—a soul, a human sympathy, an understanding mind and a will to do something about it before we can expect ever to approach a reasonable goal of safety. We have to feel the urge. We have to love our fellow man if we expect to save lives and limbs and souls."

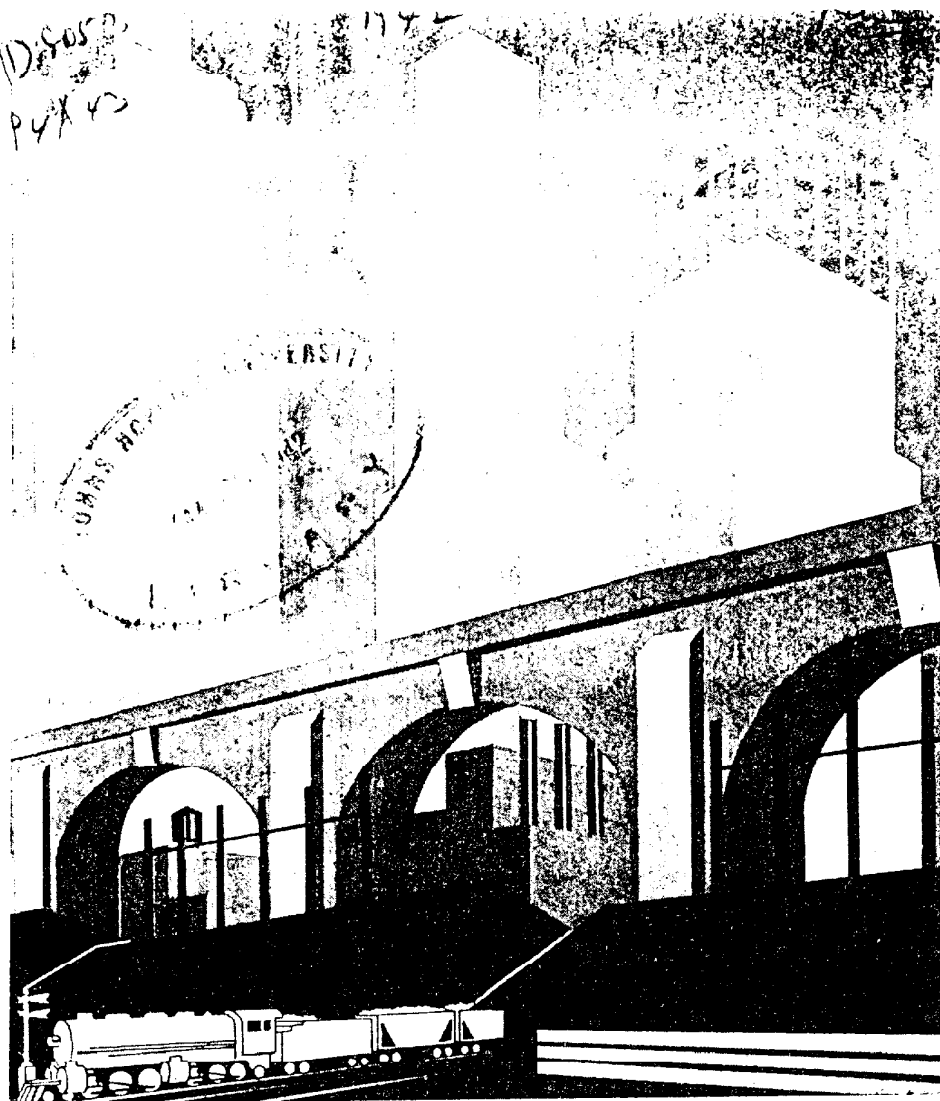
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LUNCHEON MEETING

After the morning session the Conference went to the Penn Harris Hotel for luncheon. Mary Rice Morrow, Director of the Bureau of Women and Children, was Chairman for the luncheon meeting.



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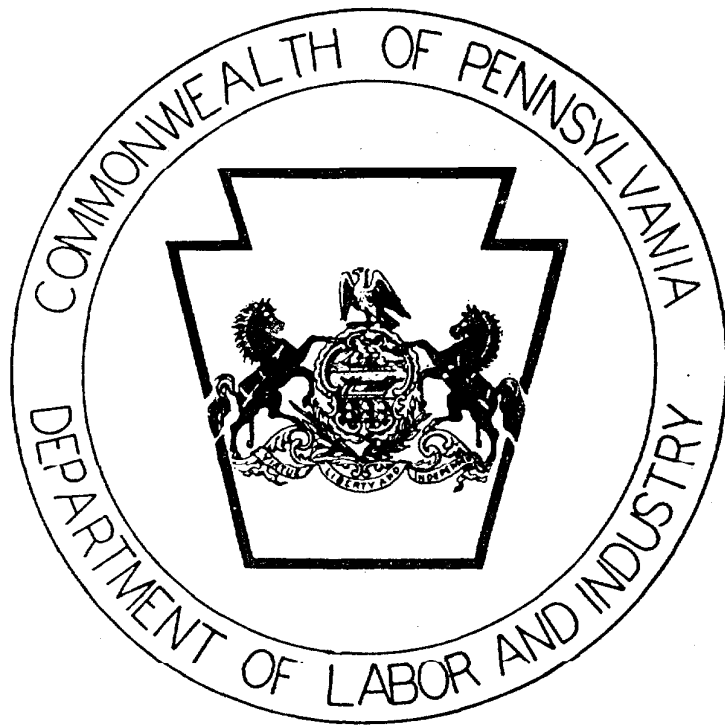
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1942

HEALTH IN INDUSTRY NUMBER

Department of Labor and Industry

PENNSYLVANIA LABOR AND INDUSTRY REVIEW

HEALTH IN INDUSTRY NUMBER



ARTHUR H. JAMES

Governor of the Commonwealth

LEWIS G. HINES

Secretary of Labor and Industry

Harrisburg



January 1942 -

October 1942

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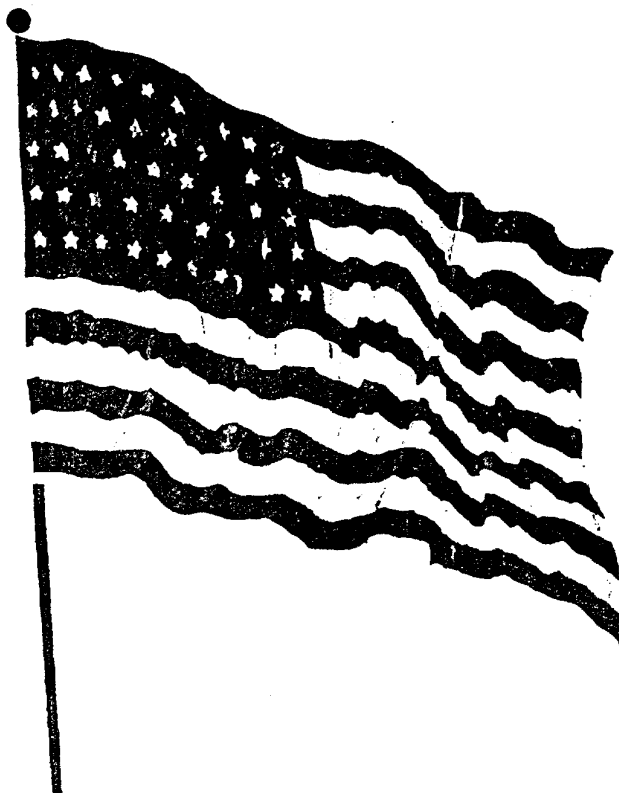
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Unemployment Compensation
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PLEDGE OF ALLEGIANCE TO OUR FLAG

I pledge allegiance to the flag of the United States of America,
and to the republic for which it stands:—One nation, indivisible, with
liberty and justice for all.

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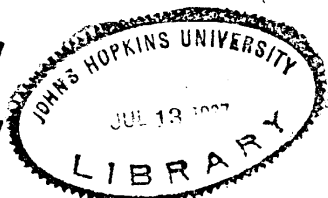
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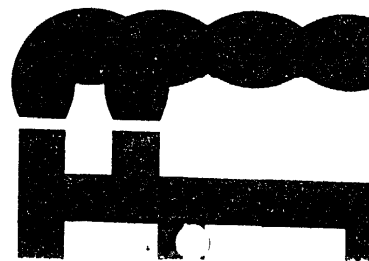
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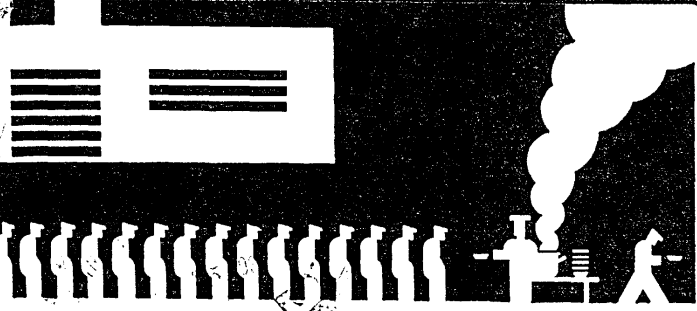


MAY 1937

PENNSYLVANIA'S

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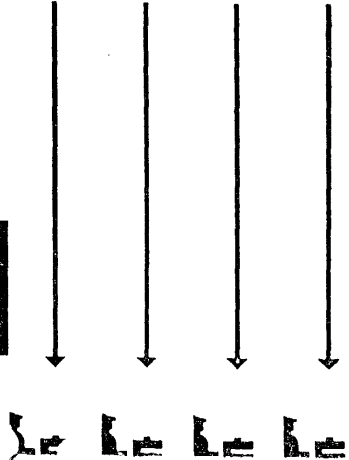


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Persons desiring to have their name placed on the Laborgraphic mailing list may do so by writing the Department of Labor and Industry, Harrisburg, Pennsylvania.

Occupational Disease—one resulting from the occupation of the employe—is a danger facing an estimated one-third of Pennsylvania's workers.

More occupational disease hazards are created continually as new processes are developed in industry. A Metropolitan Life Insurance study lists 900 occupations having industrial disease hazards; many kinds of dust and 94 poisons are named.

A partial survey of establishments in Pennsylvania disclosed 672,000 employes exposed to industrial disease hazards. But there has never been any compensation for such injuries. Until January 1, 1938, workmen's compensation will cover only injury by accidents—not physical damage taking place slowly which might cause tuberculosis, insanity, blindness or death.

Dramatic incidents focused national attention on two neighboring states.

A number of young women, painting luminous watch dials, pointed brushes with their tongues and were poisoned by radium in the paint. They did not know the danger until too late.

Men drove a tunnel for a power dam through rock with little or no protection from the silica dust. They did not realize until large numbers died that breathing the dust was almost certain death.

Pennsylvania has many more workers facing industrial disease hazards than both of these states, but wide attention has seldom been brought to specific situations.

Some employers have spent large amounts of money to provide the greatest possible protection by equipment, devices and careful training of workers. But they have had to compete with other employers who ignored the danger, told their employes at first they had minor ailments, and discharged them when they were no longer fit for work.

There was no penalty for the careless employer. The employe had to bear the loss in wages and pay for medical treatment. If he couldn't pay, the public did—by institutional care, relief, or widowed mother's pension.

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THE PENNSYLVANIA OCCUPATIONAL DISEASE ACT

Several of the more important as well as more descriptive portions of the act are here presented in an effort to acquaint the public with its general provisions.

THE present Act was approved by Governor Arthur H. James, on June 21, 1939, and amended June 12, 1941.

It applies to disabilities and deaths caused by occupational disease as defined in the act, resulting from employment within this Commonwealth, irrespective of the place where the contract of hiring was made, renewed, or extended, however, it does not apply to any such disabilities and deaths resulting from employment outside of the Commonwealth.

The term "occupational disease," as used in this act, means only the following diseases:

- (a) Poisoning by arsenic, lead, mercury, or manganese, their preparations or compounds, in any occupation involving direct contact with, handling thereof, or exposure thereto.
- (b) Poisoning by phosphorous, its preparations or compounds, in any occupation involving direct contact with, handling thereof, or exposure thereto.
- (c) Poisoning by methanol, carbon bisulphide, hydro carbon distillates (naphthas and others), or halogenated hydro carbons, or any preparations containing these chemicals or any of them, in any occupation involving direct contact with, handling thereof, or exposure thereto.
- (d) Poisoning by benzol, or by nitro, amido, or amino derivatives of benzol (dinitro-benzol, anilin, and others), or their preparations or compounds, in any occupation involving direct contact with, handling thereof, or exposure thereto.
- (e) Caisson disease (compressed air illness) resulting from engaging in any occupation carried on in compressed air.
- (f) Radium poisoning or disability, due to radio-active properties of substances or to Roentgen-ray (X-rays) in any occupation involving direct contact with, handling thereof, or exposure thereto.
- (g) Poisoning by, or ulceration from, chromic acid, or bichromate of ammonium bichromate of potassium, or bichromate of sodium, or their preparations, in any occupation involving direct contact with, handling thereof, or exposure thereto.
- (h) Epitheliomatous cancer or ulceration due to tar, pitch, bitumen, mineral oil, or paraffin, or any compound, product or residue of any of those substances, in any occupation involving direct contact with, handling thereof, or exposure thereto.

- (i) Infection or inflammation of the skin due to oils, cutting compounds, lubricants, dust, liquids, fumes, gases, or vapor, in any occupation involving direct contact with, handling thereof, or exposure thereto.
- (j) Anthrax occurring in any occupation involving the handling of or exposure to wool, hair, bristles, hides, or skins, or bodies of animals either alive or dead.
- (k) Silicosis or anthraco-silicosis (commonly known as Miner's Asthma and hereinafter referred to as anthraco-silicosis) in any occupation involving direct contact with, handling of, or exposure to dust of silicon dioxide (SiO_2).
- (l) Asbestosis in any occupation involving direct contact with, handling of, or exposure to the dust of asbestos.

According to the act, no compensation shall be paid when the disability or death is caused by the employee's violation of law, but the burden of proof of such fact shall be upon the employer.

The maximum compensation payable for disability and death resulting from silicosis, anthraco-silicosis, or asbestosis shall not exceed the sum of thirty-six hundred dollars (\$3,600), which shall be full and complete payment for all disability, present or future, or for death from such occupational diseases arising out of employment by any and all employers in this Commonwealth.

The right to receive compensation under this act is not affected by the fact that a minor is employed or is permitted to be employed in violation of the laws of this Commonwealth relating to the employment of minors, or that he obtained his employment by misrepresenting his age.

Compensation for the occupational diseases enumerated in this act are paid only when such occupational disease is peculiar to the occupation or industry in which the employee was engaged, and not common to the general population, and occurring within one year after the date of his last employment in such occupation or industry. Wherever death is mentioned as a cause for compensation under this act, it shall mean only death resulting from occupational disease and occurring within three years after the date of his last employment in such occupation or industry.

Compensation for silicosis or anthraco-silicosis, and asbestosis, shall be paid only when it is shown that the employee has had an aggregate employment of at least four years in the Commonwealth of Pennsylvania, during a period of eight years next preceding the date of disability, in an occupation having a silica or asbestos hazard.

Compensation shall not be payable for partial disability due to silicosis, anthraco-silicosis, or asbestosis. Compensation shall be payable, as otherwise provided in this act, for total disability or death caused solely (as definitely distinguished from a contributory or

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If it be shown that the employee, at or immediately before the date of disability, was employed in any occupation or industry in which the occupational disease is a hazard, it shall be presumed that the employee's occupational disease arose out of and in the course of his employment, but this presumption shall not be conclusive.

The employer liable for the compensation provided by this article shall be the employer in whose employment the employee was last exposed to the hazard of the occupational disease claimed, regardless of the length of time of such last exposure: Provided, That when a claimant alleges that disability or death was due to silicosis, anthraco-silicosis, asbestosis or any other occupational disease which developed to the point of disablement only after an exposure of five or more years, the only employer liable shall be the last employer in whose employment the employee was last exposed to the hazard of such occupational disease during a period of six months or more after the effective date of this act; and in such cases an exposure during a period of less than six months after the effective date of this act shall not be deemed an exposure. The notice of disability or death and claim shall be made to the employer who is liable under this subsection, and his insurance carrier, if any.

When compensation is awarded because of disability or death caused by silicosis, anthraco-silicosis, asbestosis, or any other occupational disease which developed to the point of disablement only after an exposure of five or more years, the compensation for disability or death due to such disease shall be paid jointly by the employer and the Commonwealth (out of moneys to the credit of the Occupational Disease Fund hereinafter created in the State Workmen's Insurance Fund), in accordance with the following provisions: If disability begins between October 1, 1939, and September 30, 1941, both dates inclusive, the employer shall be liable for and pay fifty per centum of the compensation due and the (Occupational Disease Fund) Commonwealth fifty per centum thereof. Thereafter, depending upon the date when disability begins, the proportions of compensation for which the employer and the (Occupational Disease Fund) Commonwealth shall respectively become liable shall be: If disability begins between October 1, 1941, and September 30, 1943, the employer sixty per centum and the (Occupational Disease Fund) Commonwealth forty per centum; if between October 1, 1943, and September 30, 1945, the employer seventy per centum and the (Occupational Disease Fund) Commonwealth thirty per centum; if between October 1, 1945, and September 30, 1947, the employer eighty per centum and the (Occupational Disease Fund) Commonwealth twenty per centum; if between October 1, 1947, and September 30, 1949, the employer ninety per centum and the (Occupational Disease Fund) Commonwealth ten per centum. The employer shall pay the full amount of compensation provided in this act for disability or death in all cases where disability begins on or after October 1, 1949.

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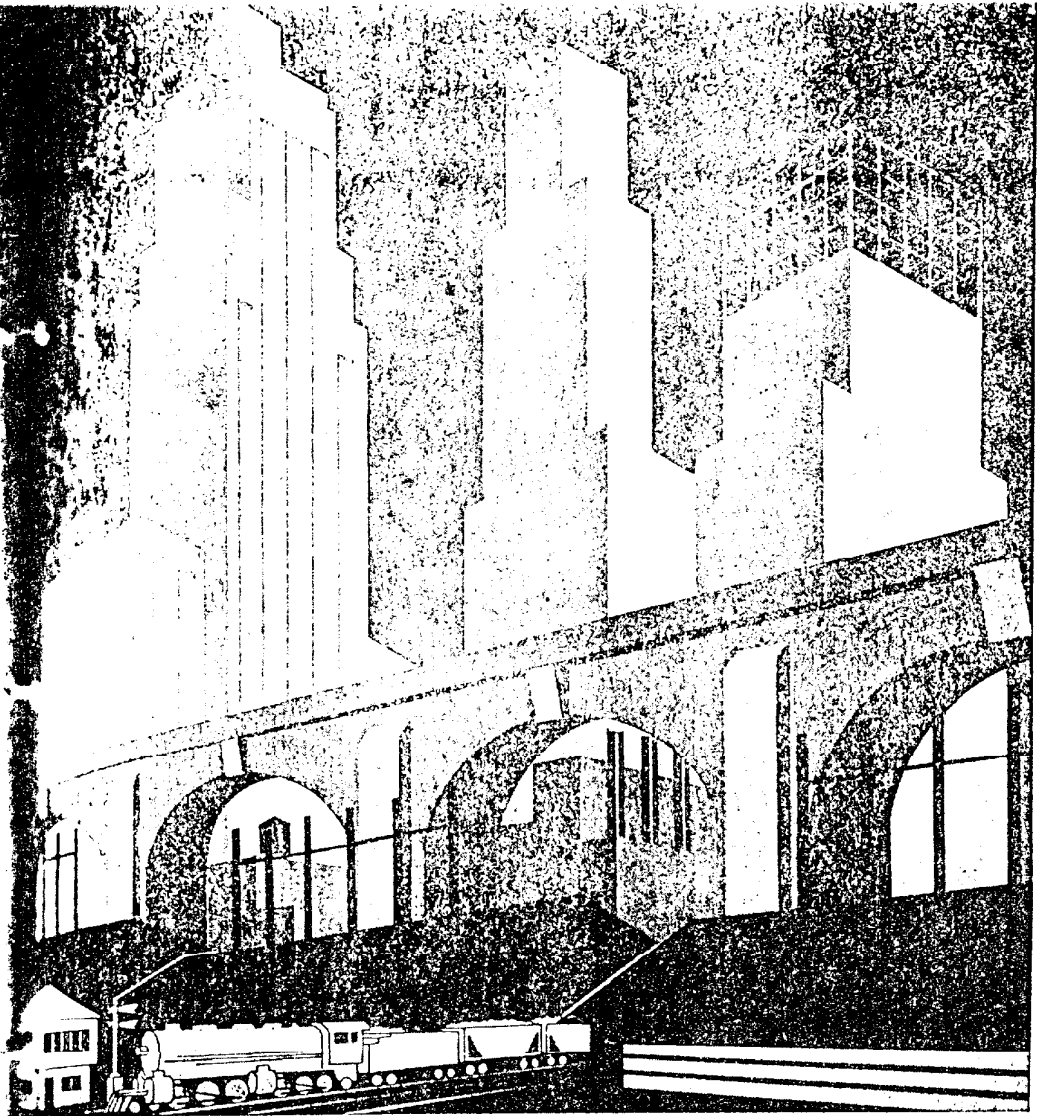
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Harrisburg

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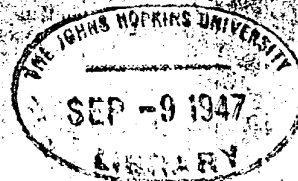
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LABOR & INDUSTRY
REVIEW

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FOREWORD

WITH THIS ISSUE, the Department of Labor and Industry resumes publication of the Quarterly Review. Due to the exigencies of wartime, including manpower and paper shortages, it was deemed advisable temporarily to discontinue publication. It was gratifying, however, to learn, from the wide inquiries received, that the Review had in the past been instructive and helpful to citizens of Pennsylvania.

With resumption of the periodical, every member of the Department will bend all effort toward improving it in whatever manner may be possible.

To that end, I invite criticism and suggestions, not only from employees of the Department of Labor and Industry, but from readers everywhere, and all citizens of Pennsylvania.

WILLIAM H. CHESNUT
Secretary of Labor and Industry

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Designed and assembled under the direction of LEWIS V. DAVIS

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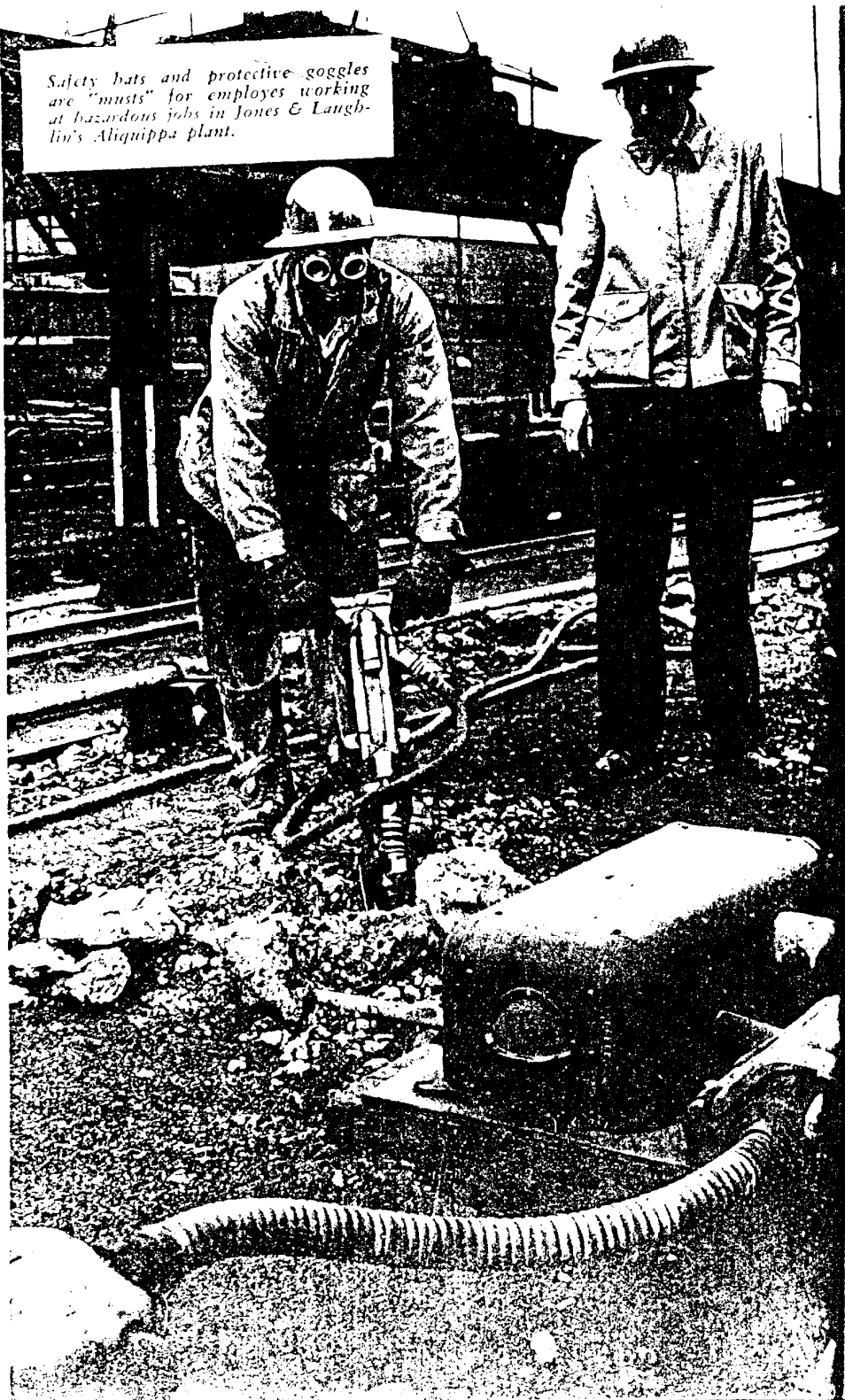
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Governor
James H. Duff



Safety hats and protective goggles are "musts" for employes working at hazardous jobs in Jones & Laughlin's Aliquippa plant.

(JONES & LAUGHLIN S

Safety

A SMALL iron works acquired Brownsville, Pennsylvania the year 1850 by Benjamin Franklin Jones, when the word surge of industry had been passed beyond the Allegheny was the origin of the present Jones and Laughlin Steel Corporation.

Jones & Laughlin has expanded from that single unit at Brownsville until today it holds fourth place among the steel producers of the United States. Its Pittsburgh Works, employing over twelve thousand people, extends along the north and south banks of the Monongahela River for a distance of approximately 10 miles. The Corporation has other large manufacturing plants; one is the Otis Works in Cleveland; the other is the J & L Aliquippa Works. In addition, J & L has a wire rope plant in Munster, Pa., a fabricating plant at McKeesport, Pa. and an Electric weld tube plant in Oil City, Pa.

During the period between 1850 and 1900, taking advantage of the developments in iron and steel and the natural growth of the country, the business expanded in the Pittsburgh area until 1905, it was realized there was no available large acreage in Pittsburgh for the development of additional steel products. Accordingly in that year a large tract of land consisting of several farms and an amusement park



JONES & LAUGHLIN SHOWED THE WAY . . .

Safety in Steel

A SMALL iron works acquired in Brownsville, Pennsylvania, in the year 1850 by Benjamin Franklin Jones, when the westward surge of industry had barely passed beyond the Alleghenies, was the origin of the present Jones and Laughlin Steel Corporation.

Jones & Laughlin has expanded from that single unit at Brownsville until today it holds fourth place among the steel producers of the United States. Its vast Pittsburgh Works, employing over twelve thousand people, extends along the north and south banks of the Monongahela River for a distance of approximately 3½ miles. The Corporation has two other large manufacturing plants; one is the Otis Works in Cleveland; the other is the J & L Aliquippa Works. In addition, J & L has a wire rope plant in Muncy, Pa., a fabricating plant at McKeesport, Pa. and an Electric-weld tube plant in Oil City, Pa.

During the period between 1850 and 1900, taking advantage of the developments in iron and steel and the natural growth of the Country, the business expanded in the Pittsburgh area until in 1905, it was realized there was no available large acreage in Pittsburgh for the development of additional steel products. Accordingly in that year a large tract of land consisting of several farms and an amusement park

were purchased at Woodlawn (now Aliquippa) on the Ohio River, twenty miles below Pittsburgh.

In December 1909, the first of five blast furnaces was completed in the new steel plant to be known as the Aliquippa Works, named for the Indian queen, who was friendly to the British during the French and Indian Wars. Since the beginning in 1909, three Bessemer converters, and five Open Hearth furnaces have been added to produce the steel used in the various finishing mills in the manufacture of pipe, tin plate, rod and wire products and structural shapes. Three batteries of by-product ovens produce the coke used in the blast furnaces.

This modern Plant employs some ten thousand men and women.

It is interesting to note that the Jones and Laughlin Steel Corporation was one of the original organizers of what is now known as the National Safety Council and that it was also the first steel Company in the United States to employ the full time services of a safety director, indicating early recognition of a responsibility regarding the safety of its employees.

Supervision at this Plant is charged with the definite responsibility of preventing all occupational injuries and disease hazards to employees and to members of

the general public who may be in and about plant property.

In order to achieve both quantity and quality of production together with the safety of the employees, supervisors are required to train and educate employees in safe working methods and practices in accordance with established programs.

To accomplish these objectives and to assist the supervisors, there is a Safety Department composed of a well-trained functioning personnel, as follows:

- 1 Superintendent of Safety & Welfare.
- 1 Assistant Superintendent of Safety & Welfare.
- 2 Safety Inspectors.
- 2 Fire Marshalls.
- 3 Clerks.
- 1 Social Worker.
- 1 Full time Doctor.
- 9 Full time Registered Nurses.

The Safety Program, as promoted by the Safety Department, is designed to cover the three E's of Safety—Engineering, Education and Enforcement—for all employees, whether supervisors or workers.

Safety Meetings are an important part of the Safety Educational Program. A Central Safety Meeting is held once each month, chairmanned by the Superintendent of Safety & Welfare, who meets with a representative of the General Superintendent's Office, the various department heads and the Supervisor of Safety. At this meeting accident experiences and statistics, current hazards and matters pertaining to policy and the progress of the Safety Program in general are discussed.

Since the Supervisor is the key-stone, insofar as the success of any safety program is concerned, it is important that he be fully informed in regard to accident prevention. Consequently, the Safety Department conducts monthly Foremen's Safety Discussion Meetings which provide the supervisor with information as to current accidents, means of prevention and also discussion of some previously selected timely safety subject.

Probably the most important safety meetings held are those which the supervisor conducts with his men. He is required by the management to hold sufficient number of safety meetings to enable him to cover all of his employees at least twice each month. These meetings are all held on the Corporation's time.

It has long been recognized that a person trained in First Aid instinctively becomes interested in accident prevention work and for that reason first aid training in transportation, artificial resuscitation, control of bleeding and shock is a part of the Safety Program.

Preliminary safety instruction is given to all new employees by means of induction lectures, contact with the employment office interviewer and the department foreman at the time the new employee reports for work.

From time to time safety instruction sheets, covering safety procedures for specific jobs, are issued by the Safety Department to all department heads and supervisors. Safety Department

Newsletters are also a Safety Program. These are issued once each month to supervisors and provide them with information. Safety Booklets and Cards are distributed to all employees on or about overhead cranes and burning operations, outlining safe methods and requirements.

The Safety Department conducts regular Plant sanitation inspections.

Consistent with good theory and practice throughout industry, the policy at Quippa Works has been to provide or make available protective equipment which will enable employees to do their work free from exposure to health

A foreman conducting a safety meeting.
Jones



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Newsletters are also a part of the Safety Program. These letters are issued once each month to all Supervisors and provide timely safety information. Safety Instruction Booklets and Cards are distrib- uted to all employes doing work on or about overhead electric cranes and burning and welding operations, outlining safe working methods and requirements.

The Safety Department con- ducts regular Plant safety and sanitation inspections.

Consistent with good judgment and practice throughout the steel industry, the policy at the Ali- quippa Works has been to pro- vide or make available to em- ployes protective equipment and clothing which will enable them to do their work free from injury and exposure to health hazards.

Employees over the years have been encouraged to wear toe pro- tection. Many have taken ad- vantage of the protection afforded by safe-toe shoes. In consequence, the number of lost time accidents, by reason of injured toes, has been materially reduced. Records at this Works bear witness to a num- ber of toe injuries which have been prevented—the following of which is an example:

Department—Welded Tube— Electro Galvanizer.

Occupation—Inspector.

Detail—Employee was handling a 10 3/4" line coupling weigh- ing about 36 pounds when it fell about three feet, landing on the toe of his safety shoe. The only damage done was a cut on the leather cap of the shoe. His toe was not injured in any way.

Eye protection, provided with- out cost to employees in the form

A foreman conducts one of the regularly scheduled safety meetings in Jones & Laughlin Welded Tube Department.



of goggles, spectacles, face shields, masks and others, have been the means of preventing many serious eye injuries, such as attested by the following incident:

Department — Seamless Ship-
ping.

Occupation—Car Loader.

Detail—Employee was driving a nail into a piece of hard blocking timber in a gondola car when the nail flew and struck and shattered the left lens of his goggles. His eye was not injured in any way.

Protective clothing of wool, asbestos and leather coats, shirts, pants and leggings worn to guard against hot metal splashes have been most helpful in accident prevention over the years.

Adequate and modern equipment for detecting concentrations of explosive and toxic gas and for protecting employees against these elements is available.

Three emergency hospitals, staffed by nine full-time registered nurses and one full-time Doctor, so located as to assure prompt and convenient service to injured employees, are located at this Works. Hospital facilities, with a special staff for J. & L. patients are available.

That this program has justified itself is evidenced by the progress in the prevention of accidents over the years.

Accident statistics at the Aliquippa Works were first placed on a frequency and severity basis in

1923. An average for the first five years, 1923 to 1927, shows the following as compared with the five year average, 1942 to 1946, which included the greater part of World War II activity.³

These figures show a gratifying improvement; but in spite of this, it is appreciated by those responsible for the prevention of accidents that so long as injuries occur at this Plant, every possible effort must be made through the medium of Engineering, Education, Enforcement and Enthusiasm to bring about further improvement.

In the labor contract recently signed by the Union and the Jones & Laughlin Steel Corporation, the importance of Safety and Health received particular emphasis. This new contract makes provisions for the safety and health of its employees during hours of employment, for protective devices, wearing apparel and equipment, for the settling of disputes arising out of claimed unsafe or unhealthy working conditions and the establishment of Joint Safety Committees. Cooperation by Labor and Management in furthering the interests of accident prevention should result in a continued reduction of Frequency and Severity Rates at this Plant.

For additional illustrations of the up-to-the-minute safety work in this Jones & Laughlin plant, see pages 24 and 25.

*Years	Partial Permanent Disability	Fatals	Lost Time Cases	Frequency	Severity
1923—1927	12	8	671	27.95	3.09
1942—1946	10	4	172	7.48	1.63
Percent of Improvement	16.2/3%	50%	74%	73%	47%

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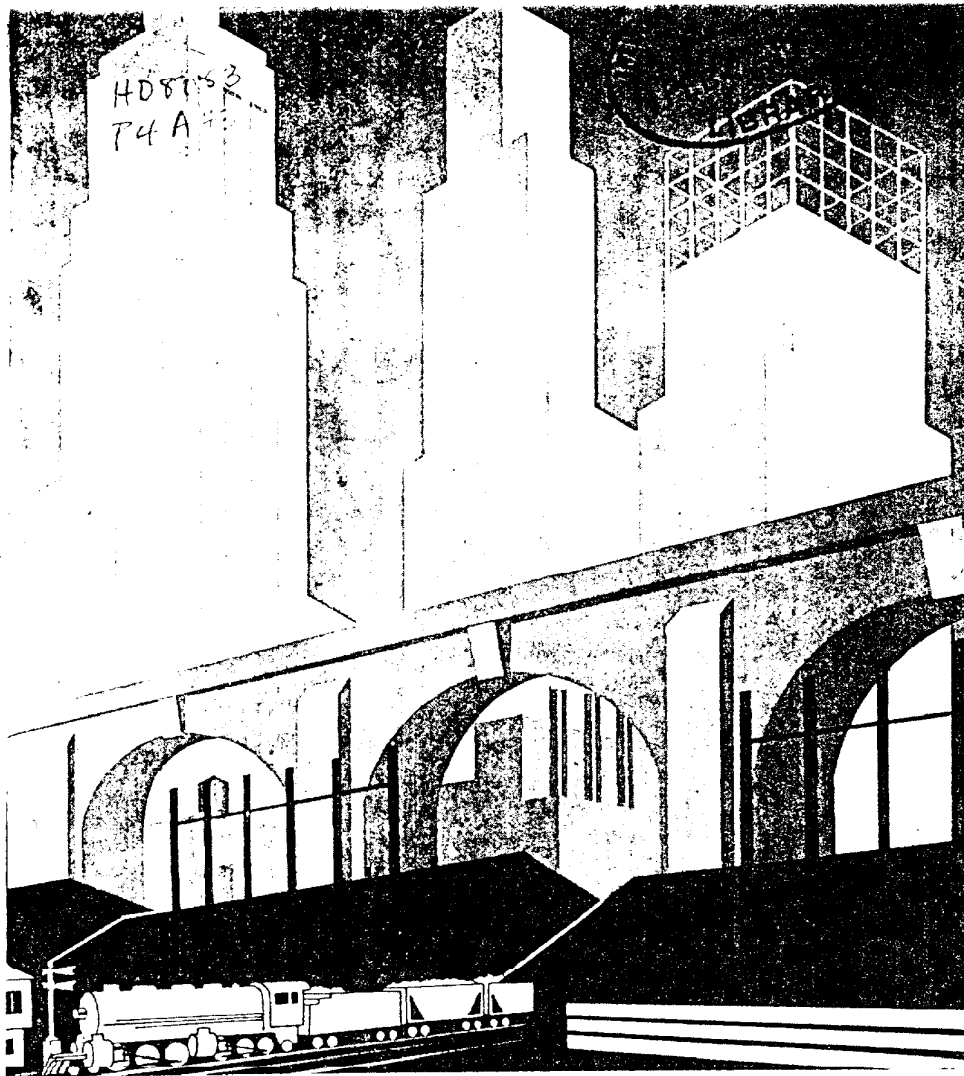
THE strict enforcement of the Employment Agency war born placement has brought a record number of licenses during two years. Today there are employment agencies licensed 167 Non-Fee Agencies. Previous high in agencies in 1927. In 1941 there were 104 agencies.

Since June 1, 1945, the opening of the fiscal year new licenses have been issued. These, 104 new licenses issued since June 1, 1946.

The end of the war has brought many new agencies both domestic and theatrical. The lack of industrial production resulted in many women turning to domestic work, although there was a hesitancy in accepting a difference in wages. There was a shortage of domestics in. Many veterans who were in charge of company or entertainment in foreign countries turned with a few veterans and started in the business. Only a few have the keen competition.

From the war also came the commercial "baby sitter" before the war baby si

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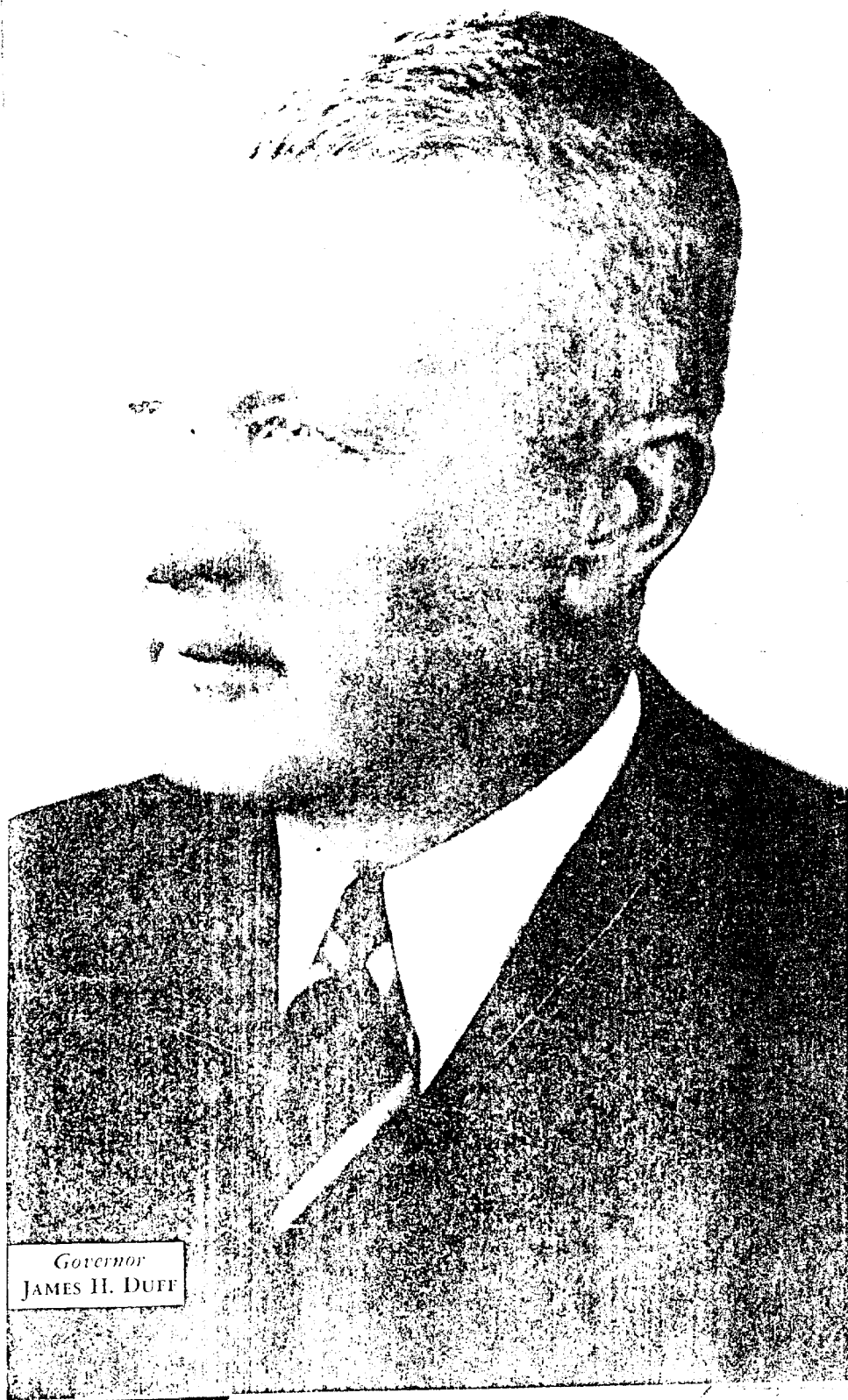
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LABOR & INDUSTRY

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JANUARY
1949



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SAFETY SPECIAL

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FOREWORD

ONE OF the principal means of advancement for industrial safety is the safety conference. At these meetings, experts in various fields of industry gather for interchange of new ideas and methods.

The cause of industrial safety, in Pennsylvania as well as throughout the Nation, is more important today than ever before, for two reasons.

First, these are times when the appalling waste of manpower and production caused by industrial accidents must be reduced to a very minimum, because a hungry world needs all America can produce to insure its continued physical existence, and to preserve the ideals of freedom everywhere.

Second, with more than 6 millions of workers employed in the United States to satisfy this unprecedented demand for goods and services, industrial accident hazards are at a new all time high. In the cause of humanity, it behooves us to bend every effort toward maximum preservation of life and limb.

Pennsylvania, being the Union's second industrial State, finds this problem especially acute.

During the annual Pennsylvania State-wide Accident Prevention Conference at Harrisburg recently, the foremost experts in the field of scientific safety gathered for a frontal attack upon their common foe. They represented such outstanding and civic-minded groups as the Philadelphia Safety Council, the Western Pennsylvania Safety Council, the Lehigh Valley Safety Council, the Erie Safety Council, and other groups.

Their meeting constituted a significant forward stride in industrial safety in Pennsylvania, and every delegate returned home richer in knowledge and firmer in determination to make Pennsylvania safe. It was an inspiring meeting of the foremost minds in the field of safety.

Therefore, by popular request, in the current issue of the *Labor and Industry Review* of the Department of Labor and Industry, the deliberations of the various experts constituting the panel are re-printed herewith in full. Together, they constitute a valuable handbook in safety, of interest to every employer and every worker in our Commonwealth.



Secretary of Labor and Industry

A SAFETY COUNCIL C

HARRY I

Mr. Brainerd Is District
S.

MANY plants, and we are here to say most of them in Western Pennsylvania, have very conspicuous places throughout their offices, plaques and certificates, signifying their great accomplishments in safety. It seems that hardly a week goes by that some company in this Commonwealth is not honored by such recognition for its safety record. This is an indication of the thinking of the President, the Chairman of the Board, the Foreman and all your management supervisors as to the importance that is put upon accident prevention.

It is interesting to review what has happened over the past quarter of a century in industrial accident prevention.

All of you know better than I do how we started out with the idea that if we could guard our machines, make mechanical changes, we'd cut our losses from accidents. After spending many millions of dollars, we soon found that all we are dealing with is people and it is the errors that people make that are the basis for unnecessary loss as a result of an accident. When we step away from the plant, we have a parallel situation in the community. In the end, after all, the community is made up of people old and young. We can tell pretty nearly by riding through any given area what the number of people are there, what is the

HARRY H. BRAINERD

Mr. Brainerd Is District Manager of the Western Pennsylvania Safety Council

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Manuel

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All of you know better than I do how we started out with the idea that if we could guard machines, make mechanical changes, we'd cut our losses from accidents. After spending many millions of dollars, we soon found that after all we are dealing with people, and it is the errors that people make that are the basis for the unnecessary loss as a result of accident. When we step away from the plant, we have a parallel situation in the community. For, after all, the community is made up of people old and young. You can tell pretty nearly by riding through any given area what type of people are there, what is their

earning power, do they have initiative, ambition, are they trying to better themselves. And if you find that, you'll find a community that has well paved streets, school buildings, new homes. And if you look further you will find they have a minimum of traffic and other hazards that would rob the lives and result in injuries to the citizens in their community.

To have a good safe community you have to have leadership. Someone has to spearhead the movement. Someone has to stimulate everyone and make them conscious that their individual actions, whether it be at home, walking on the street or highway, driving an automobile, riding a bicycle or roller skating as our youngsters do, that they have an individual responsibility to the safety and welfare of the community in which they live. And I think by and large, that is pretty much the aim of the National Safety Council, the Philadelphia Safety Council, and all the other local safety councils that are working day and night to try to bring about fewer accidents to the people in any community.

You have driven through communities where you find the streets badly in need of repair, houses unpainted, lawns unkept, and you wonder why. Then you look around to see what sort of a business center it has and you

usually find that there are one or two, maybe small, but nevertheless plants of some manufacturing nature that by themselves, just to look at them, indicate that they have not come up to the 1948 standard in thinking. By that I mean they probably pay very close attention to what people are doing when they are on the job, but they let the whistle blow and forget about those people when they go out into the community.

I will bet they have trouble within their plants—unrest and not a very harmonious feeling between their employees while they are on the job. Consequently, I think that industry's part in this community safety program is to provide the leadership in these communities to make them a better place in which to live. Over a period of years, industries have done that. Proof of it is written in the history of the National Safety Council. They financed it, they operated it, and so on through the years they have carried the major burden of accident prevention.

Unfortunately,—and this is entirely personal—because some of my directors may not agree: I hope they do—unfortunately, there has been a tendency in the minds of people that industry ought to pay the bill and consequently they have been called upon time and time again to dig down in their pockets and finance the community safety programs. I have never found a businessman, an industrialist, that isn't ready and willing to admit that they have a large part in the safety

program of a community and that they have a specific responsibility and they admit that it costs money and more money than has ever been given to any agency for that work and as time goes on it seems as though it will need more and more. At the same time they do not believe they should carry the whole burden. And personally, I do not believe they should either.

The Community Safety problem is what? You can apply every principle that is found in an industrial program. It deals with children through the schools, playgrounds, etc. It deals with the home, which we all know is the most hazardous place on the face of the earth. It deals with traffic, fire prevention, etc., and you and I as individuals ought to carry the major portion of the community program. We should be able, as leaders, to impress our employees with their full sense of responsibility towards the community safety program. If you do that on your job—with your employees while they are on the job—you are going to find benefits directly accrued through the development of better safety consciousness on the part of every individual employee. That does not cost money. That is effort and that is what I mean by leadership.

Let's look at the other side. For sometime, my officers and directors in the Western Pennsylvania Safety Council believed that our greater task as an organization is to indoctrinate the members of the communities in which we operate with a fuller sense of

their individual responsibility, and along with that, to bring about a responsibility of helping to pay for the program from which they will benefit. There are several approaches that can be taken. We decided that the old adage of trying to teach an old dog new tricks was in effect right, so we thought we'd start with the youngsters. If we can start with the youngsters when they become school age, even pre-school age and continuously impress them as they grow older that we will eventually have a more safe minded group of individuals in the community.

We started that out—some of you have probably heard of the Green Pennant Program which we operated last year in Allegheny County as a try-out. Some people termed it the Cradle to the Grave Program. It is no more than the adaption of an industrial program that proved to be an outstanding stimulus for the reduction of industrial accidents, particularly prevalent during the war when everyone was after "E" Awards. It is identically the same program made applicable to school children in a community. We were faced with the same problem as every other agency. It cost money. Where are we going to get the money. We refused to go back to industry and say "Give" because we believed that you can have an active program which will stimulate a desire to participate.

We went to work, started a program, awarded pennants. Instead of "E" Pennants, we called them Green Pennants. The young

community and that specific responsibility must be placed on it. It costs more money than has been paid to any agency for as long as time goes on. Although it will need to be maintained. At the same time we believe they should not be a burden. And perhaps we do not believe they

Community Safety problem can apply every where it is found in an industrial area. It deals with the schools, playgrounds, and the things we all know is the place on the face of the earth. It deals with traffic, industry, and you and me. We ought to carry the responsibility of the community should be able, as we express our employees sense of responsibility to the community. If you do that with your employees on the job— you get benefits directly in the development of consciousness on the part of individual employees that does not cost money. And that is what we want.

On the other side, many officers and men of the Western Pennsylvania Council believed that it was as an organization to instill the communities in which they live a fuller sense of

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We went to work, started a program, awarded pennants. Instead of "E" Pennants, we called them Green Pennants. The young-

sters had to have a thirty-day period free of traffic accidents and they won the pennant, and we continued with monthly awards to keep them stimulated. At the end of the year there was a permanent award. When we got through, we looked back to see what we had done. What was the result? How much did it cost? We knew the bills were paid and we thought we'd check up to see where the money came from. The leadership which industry gave to the start of that program did not cost them money. My Board of Directors underwrote and said, "make it self-supporting. It is a good program and if you do the job the people in the community will appreciate it and will help." That proved to be the case.

We asked the adults to join the children in the Green Pennant Program with a sticker for a dollar. We collected not quite enough to pay the whole bill. How could we keep from going back and asking some individual group, business or industry for a hand-out? We staged a benefit baseball game between the Philadelphia A's and the Pittsburgh Pirates. Why did they do it? Because they saw a program in operation benefiting the children and each of the ball clubs told us they want to be a part of the community. Their welfare and future depend upon a good community. They want to be a part of it. If they can do it by playing a game, they wanted to do it. Without a program they wouldn't have let us in the front door. I am convinced that in all areas of accident pre-

vention in your community particularly, a good active program will be self-supporting. So, consequently, I cannot agree with some people who have talked about industry's stake in the community as being, as one council manager said, Vitamin C—CASH. It isn't. It is leadership and it is active leadership. It isn't serving on a Board of Directors or being an officer. I think that industry should urge their men to participate in community affairs. I think if there is a chance for any representative to serve on a traffic committee in a community they should be given every opportunity to do it. If they can serve on the school board in any capacity let them do it. Urge them to do it. Somebody will say that costs money, they take the time away from the plant. That is true but as the individual in leadership finds, most of those things happen when they aren't on the job anyway. They can participate without too much loss of time. If we'll do that I don't think we will have to subscribe to the cash basis that everyone seems to think industry must provide for the safety movement. Sure, they have to help but I would like to re-emphasize that it is leadership, active participation in all of the various programs in the community that is the major part for the contribution of a better community.

If you will pardon a personal reference again, we just finished at a county fair what I think is

one of the nicest exhibits we ever had. It is called Safety Town. We had streets marked off in a segregated area where we had police women. In the City of Pittsburgh, we have found police women serving as school guards at school crossings are doing 99-44 100% better job than the average police officer who is called away for other duties. The children like them. They look pretty snappy in their uniforms. Somebody must be picking them for their looks. But these women came out and directed traffic for these children. We gave them automobiles to create the traffic, and demonstrated what they should do at crossings.

Now, how did we put that exhibit on? It cost somewhere in the neighborhood of \$3,000 for a five-day period. My council isn't any different from any other safety council. We didn't have \$3,000, but we had industry willing to continue to provide the leadership. We had a program that was acceptable and everybody knew what it was. The American Cable and Wire, the Pittsburgh Plate Glass Company, paint, The County of Allegheny paved the place, the Fitch Conservatory the floral decorations, Gulf Oil, the gasoline stations, Pittsburgh Sun-Telegraph bought the automobiles. I went out and worked with the police women, the nicest part of it. It was in dollars and cents around \$3,000. We did an actual prevention job in those five days.

LABOR'S PART IN SA

JAMES

Mr. McDevitt Is President

AS A SPOKESMAN for the American Federation of Labor here in Pennsylvania I thought I'd like to say a few words to you with respect to our responsibility in the labor-manager picture and the efforts over years to prevent accidents. I think most of you know the kind of work done by the leadership on our side of the fence in promoting safety, and the conducting meetings with shop stewards, mess agents and other officials on the labor movement on the subject of safety, so that they could get to the benches directly to the workers, the stories we had to deliver with respect to accident prevention.

I think we have had a great deal of success with the cooperation of the Department of Labor and Industry in that direction as evidence of that I believe the report of the Department indicates quite clearly that we had that kind of cooperation. There is a great deal needed, and when it is all boiled down there are only two factors involved.

One is that very important matter of equipment, and two, education. When the equipment is there, it is then alone the question of educating the worker, making him conscious of the dangers involved and the need

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LABOR'S PART IN SAFETY

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I think we have had a great deal of success with the cooperation of the Department of Labor and Industry in that direction, and as evidence of that I believe the report of the Department indicates quite clearly that we have had that kind of cooperation. But, there is a great deal needed yet and when it is all boiled down, there are only two factors involved.

One is that very important matter of equipment, and two, education. When the equipment is there, it is then alone the question of educating the worker, making him conscious of the dangers involved and the need for

thinking. That is certainly a difficult task, but I believe great strides have been made in that direction. I don't think any plant in our state is not safety conscious. Maybe a few—but relatively so.

In looking over the records of the complaints we have had over our desks over the year, the greatest number have to do with dust hazards. We seem to be experiencing considerable difficulty on that score, and while I am mindful of the tremendous problem our leaders in industry face with respect to dust hazards, I am also mindful of the tremendous increase in the number of diseases from dust. As an example, we had one plant in the central part of our State just about two years ago that didn't have a blower—no one. Of course, when that was called to the State's attention, the matter was corrected and within a month or five weeks, the reports we now have covering that plant indicate that we haven't had one case develop in the last two years. What a saving that represents to that company.

But our big headache is with the dust problem. We are too mindful of the fact that there are some conditions that cannot be overcome. But I refer only to those that can be overcome and those, of course, that can be

eased to some extent. So we are calling on industry, particularly those of you who represent companies engaged in work and further study to that problem. That is the thing that worries us more than anything else. It is a thing on the constant increase and with the perfection of new materials, the hazards of course are increased. As for our part in the labor movement, I do want to assure you we are going to continue with all the resources at our com-

mand, to educate our people of the importance of stopping to think when their lives are in jeopardy.

I am going to conclude and once again assure all of you of our intense interest in the safety campaign and our desire to be of assistance to you at any time you feel we may be able to lend any effort in our capacity and to assure the Department of Labor and Industry of our continued cooperation.

SAFETY AND PRODUCTION

WILLIAM C. LANDIS

Mr. Landis Is Vice-President of the Western Union Switch and Signal Company

I WOULD like to re-emphasize some of the things we all know or should know, and have known about the practical effects of safety on production. I am going to ignore the human side of safety. We are all conscious of it. We are all willing to do our parts to keep lives from being lost and fingers and eyes from being lost. But that's another phase of the question, the same as Harry Brainerd's angle having to do with community safety and the responsibility we have in that respect.

I am going to look at safety work from the dollars and cents aspect of the economics of operating an industrial establishment. I'd like to say first that I don't think safety is an end to be accomplished in an industrial plant. It is a means to an end. The

reason we have a plant, or a company, or an enterprise or business of any sort is to produce something. We can't ever lose sight of the fact that production is the objective of our working every day life.

So safety in a plant is not a philanthropic venture, or something to do for charitable reasons. Safety in an industrial plant is a tool of production, and it is either a good or a bad tool, depending upon how it is set up and administered. The safest plant in the world wouldn't necessarily be a good place to work. It might be bankrupt, it might never get started. The thing that makes that plant and company continue is that continuing flow of business and an organization of good workmen and good supervisors and

good technicians who keep that business coming in.

We are dealing with other men's money in an organization of that sort, and dealing with other men's money in a way which means we have to continually progress in order to keep that money at work and in order to continue to have an operating institution and continue to have jobs both for ourselves and for all of those who are associated with us.

Thus, a safety program in an industrial institution is one of the marginal factors that contribute to the production.

I say the objective of a manufacturing plant is to Produce. I like to put it that it means putting into a freight car and freight truck materials that customers will buy, of a quality that is satisfactory, at a cost that is reasonable. And to do all those things best, we must do them safely. I don't have to go into a lot of detail to remind you that every-one of those requirements of a plant's operation are affected by safety or lack of it. The cost most certainly is. Little things like compensation payments represent spending somebody's money.

The maintenance of the facilities, the safety equipment, the protective medical facilities and all of the people who have to do with it—those things represent money. The biggest loss though, I think, of money in safety work in a plant comes with the loss of time. Because, Time represents Money. Every minute of time in a plant is paid for and if that time is lost, it represents an economic

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waste and a loss of money that
can't be replaced. It goes into
the final cost of the product and
it becomes a very important ele-
ment in that cost.

The supervisor and the plant
manager and the plant executive
who is interested in costs can't
ignore the safety factor. Quality,
I think, is affected very materially
by whether or not we have a safe
place to work. If I'm standing
alongside of a pouring track in
a foundry, I always find myself
wondering how soon some of that
metal is going to splatter on to
me. If I'm standing by a machine
in a shop or walking down the
aisle, I'm wondering always which
one of those chips is going to land
in my eye and I find myself doing
that all the time and when I'm
thinking about that, I'm not think-
ing about my job. That must be
true of others—perhaps every-
one. Because, in ignoring a part
of the job that they are supposed
to be doing at the time because
they are worrying about personal
safety, they can't be putting their
best into the work, getting the
utmost in quality. They must be
wasting some time and, therefore,
some money.

So that to the extent that we
can make a plant safe, we make
it more economically sound as an
operating institution. We can
never hope to make a plant en-
tirely safe. We are dealing with
people too, as I said before, and
no one can predict what one per-
son will do or another person will
do, but we can do our best to
make the plant as safe as we can.
In order to do that, we must, of
course, have a safety department,

an organization which keeps up to date on all of the latest devices, that is aggressive in promoting them and in encouraging their use, that has enough go-gettiveness to persuade the executive management of the plant to be interested, and to get the supervisors and the workmen and everyone else to work with them. We need that safety department as a spearhead. We must have it. It is a MUST.

But no safety department will make the plant safe. No plant and management can make a plant safe. The plant management must be sympathetic, must encourage safety, must put its weight behind it. But not alone. Everybody has got to be safety conscious—every supervisor, every workman. They have to think all the time about doing everything in the way that will be the least hazardous. One of the ways in which that can be done is by promoting good housekeeping, orderliness. Things that are stacked properly don't fall over. If there is no rubbish pile, you can't trip over it. Not only do housekeeping and orderliness promote good production and workmanship, but they promote safety.

So I would think that the very first move in trying to make a safe place to work would be to do a good job of housekeeping. Then from there on, keep everything in mind, that anything that can cause an accident is a potential hazard, not only to the physical well-being but to the economic investment with which we are surrounded. And if we could school ourselves to do that

and school everybody in our organization to do that, we will probably come as close to the ultimate in having a safe place in which to work as anyone could come.

Safety programs are supposed to improve morale. I don't know what morale is. Some people think it is having music with your work, and others have different formulas. But to me morale is mostly made up of being satisfied with the place in which you work, having confidence and respect for the people you work with—your supervisor having respect for the workman, and workmen having respect for the supervisor. And all of us can have more respect for the other fellow in our organization. It is to feel that he has an interest in our welfare and our safety and that he is doing something all the time to try to make our work place a better place in which to work.

In talking with our foremen and superintendents, I always try to break down overhead and other abstract things around a manufacturing plant, into terms they can understand. I try to represent the lights that are burning, the machines we buy for them to use and it represents all the brass hats and it represents too many brooms when they don't use them in the right way. It represents little things and safety in the same way represents little things. It may mean that you take a side step sometime instead of stepping forward and you step into an unsafe position instead of a safe one.

It is something that just can't be talked about in big, broad figures or abstract terms. It is something that is dependent upon every move we make, every direction of our walking through the plant. It may mean a question as to whether we come to work this morning or stay at home. Little things—little practical things—are the things that determine whether or not we are working safely or not working safely. And so, if we just try to think about it that way, try to make ourselves conscious of the importance of every last thing we do, of every move we make, every thought we have, and try to make each moment as safe a moment as we can, we are more likely to come out at the end of the line with an aggregate of safe practices rather than unsafe practices.

Q SAFETY IN A DECENT

G. E.

Mr. Morse is Director of Emporium Corporation.

THE PRACTICE of decentralization of operations has given at Sylvania a brand new point of view with regard to safety accident prevention. By watching the scene, a bit of theory may be helpful. Prior to World War, we had two plants in Pennsylvania—one at St. Mary's and the other at Emporium.

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To get back to the subject—
What a Good Safety Program Can
Do for Production—I'd put it this
way: That a good safety program
not only can do something for
production, you've got to have one
in order to have good production.
It is a must; it is a production
tool that can't be ignored. One
of the more important things—
we must have a management
which is sympathetic and under-
standing in that direction, must
be given supervisors and work-
men who have been trained to be
safety conscious and have the in-
telligence to proceed in that man-
ner. Must have a safety depart-
ment that is active and efficient
and able to keep everybody else
steamed up. Then you are bound
to have a relatively safe plant,
and if you do you will be making
the most of your economic invest-
ment and will have shown your-
selves to be good managers.



Q SAFETY IN A DECENTRALIZED OPERATION

G. E. MORSE

Mr. Morse is Director of Employee Relations, Sylvania Electric Products Corporation, Emporium, Penna.

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tory may be helpful. Prior to the
War, we had two plants in Penn-
sylvania—one at St. Mary's and
the other at Emporium. They

were close enough to be operated
as a single unit, as far as safety
and accident prevention work is
concerned. Over the period of
years we had been in business,
we developed a rather formal,
carefully planned, well estab-
lished, smoothly functioning
safety program.

Looking back upon that period,

we can understand why that system worked so well. We had two major products—incandescent light bulbs and radio receiving tubes. The simplicity of the problem was not the reason our program went so smoothly. Behind it was the fact of an on-the-spot top management with an interest in safety work. In operating with a regard for the hazards to life and limb involved in industrial operations, not only were they on-the-spot, but they knew personally from experience, day to day, week to week, year to year the personnel, equipment, and process, so the program had a personality to it that stemmed from the very top reaches of the organization and helped to make it of importance equal with other aspects of the job. Then came the War with its terrific demand for expansion. In fact the War experience upset us completely—especially our safety and accident prevention work.

First, there was the tremendous influx of new employees. Not only the added ones to meet war-time orders, but the terrific turnover we experienced during that period. The draft and the spreading out of supervision contributed to the break up of our experience pattern. The threads of the past were gone. The personal know-how, the individual familiarity with operations, with possible sources of hazards and accidents were broken and, in many instances, lost. Top management went on the road or moved away to new locations or jobs. Overcrowded conditions increased the problems. New products moved

in. We had a lack of help. We could not hire the people we wanted, even when we scraped the bottom of the barrel. The need for new materials—the need to be self-sufficient—the pressure to get out the war production—all affected the change.

It was out of an almost actual breakdown of our operating system that we developed a new point of view and a new plan—the plan to decentralize operations. That plan is of interest because, while Sylvania in toto is counted as a large company, the decentralization process broke us down to small operating units, many brand new, many well below 100 employees total, so our experience has meaning now for the small or average sized firm. It has meaning for the large firm which, like Sylvania, is decentralized with regard to its manufacturing facilities.

Decentralization of operations forces a centralization of administration and service functions. It forced us to centralize our safety and accident prevention work. We were fearful of the change initially because, added to all the burdens of these war-time changes, we were a little alarmed that we would be so far removed from any personal contact, with front line management out at the finger tips of the decentralized organization; that our program would be a paper program; that we would talk a good game of accident prevention, but really would fail to have a workable one.

We feared that the write-up, the chart, the forms, all the procedures would look good, but the

accidents would crowd in on us—people would be hurt, injured, would have their health damaged, because no one was on the spot representing top authority to take a personal interest in this phase of the work—a phase all too easy to abandon in meeting of the need of a war-time schedule.

We made a radical change in the organization set-up of our safety program. Previously it had been part and parcel of manufacturer reporting to the top operating executive. With the decentralization of operations and with the emphasis on centralization of services—safety and accident prevention, industrial hygiene, employee health—were grouped together under the Personnel or Industrial Relations Department. How could we, in making such a move, still carry the prestige of top management blessing to our safety work? It was decided to give it a try by putting it in the top reaches of our Industrial Relations Department.

Unfortunately it fell to me to head the program. I say unfortunately because, in spite of the fact of my engineering background—and ten years actual experience at that time with the Company, I was not a safety man. I was not even a qualified inspector. There was only one way to bridge that gap. The safety program, while normally under the direction of the Industrial Relations Department, was given a direct channel to top management, to the President of the Corporation, so he saw a safety problem without delay. An in-

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spector's report or a recommenda-
tion from the State of Pennsyl-
vania, or a suggestion by the
insurance company would not be
road-blocked, but could if neces-
sary travel freely and effectively
right to the top of our Company.
On the other hand, by being tied
in with the rest of our personnel
program, we had an open door
into every nook and cranny of the
organization, in spite of war-time
security limitations, in spite of
accounting niceties which tend to
put things in little pockets and
not allow a free interchange of
information between activities.

Under a Service Department,
which affected everyone, through
top management and every branch
of the organization, and with the
channel clear to the operating
executive for the Company as a
whole, we started out. That
sounds fine. That's the paper
program. But what happened is
what counts. The credit for the
success of that operation goes to
the men in the field, particularly
to Jim Lawler, our Area Safety
Engineer in Pennsylvania. The
success of our program stemmed,
not from the top or the bottom,
but from an intelligent, experi-
enced, effective inspection, fol-
low-up and guidance program,
through the hands and mind of
our Area Safety Engineer.

The problem we faced was a
terrific one. We had new prod-
ucts; we began to make metal
parts for ourselves; we started in
the wire business because wire
was a critical material and we
could not buy it. We made com-
plicated mechanical equipment,

manufactured gases, and transported them. Finally we got into a war-time program that almost swept us away—our part in the manufacture of that wonderful little fuse that was so effective in turning the tides of the War—the variable time fuse which helped win the Battle of the Bulge and proved to be our answer to the Kamikaze suicide raiders in the Pacific. Purchasing agents who ordered parts by the hundred were dizzy when orders came through by the millions. We had to hire someone—anyone from the community—for the job of handling dangerous materials that we knew little or nothing about. Employees operated machines who never had done that work before, and yet Jim and the safety men in the plants were able to lick those problems.

In attempting to analyze why it worked and to take out of that analysis some hint as to how governmental inspection services or individual industrial safety organizations can call upon those same sources for day to day effectuation of safety and accident programs in peace time is worth a moment's consideration.

First we leaned heavily on the State and Federal agencies at hand, particularly the State. We liked Pennsylvania. While it is true that half of our company had its beginnings here and some element of nostalgia entered into our selection of Pennsylvania for expansion, it was even more important that we had a good industrial experience here. We found state agencies that were under-

standing, helpful and cooperative—found industrial neighbors willing to share our problems and give freely of their experience to help us out. In a short period of time, we increased to eighteen plants in eleven cities and towns in this State, with a flock of subcontracting operations acting as feeders to our own operations. In almost every instance, we were employing people untrained, unfamiliar with industrial work—the ideal group to get into trouble. Just the group we and you would expect to have a poor accident record.

By leaning on the experience—by calling for the help of the State Inspector's Departments (men already overburdened by the war-time demands placed on them), we nevertheless were able to give those new organization personnel a quick support, a quick indoctrination, a very prompt and helpful sharing of many years of experience and specific know-how. We called heavily upon the services of our insurance company and there's a clue for many of us—we pay good money in premiums and count carefully our compensation costs, the results of our over-all program in loss, or accident prevention, but all too often we let lie dormant the tremendous resources of the insurance organizations which are more than willing to be of service if we will only help them to apply their abilities and their facilities to our specific problems—if we regard them as an aid, an ally—if we regard their facilities as tools of ours, rather than to treat them or regard them as outsiders

—as a hindrance—as an annoying interference with our own program.

The next thing we did was call upon the State through its educational program. We just did not have the man-power or the skill to train first line supervision in the simple elements of safety work or accident prevention. And so we made out of the personnel and the training material of the State enough to get at least the beginnings of an understanding of what constitutes safe practice into the minds of our crop of new supervision.

Sounds fine, doesn't it? But looking back at it there is an element we must not forget. To describe a program like that almost makes the task look easy, and you and I who have been close to the problem of maintaining a safe and sane operation know that it just isn't easy. The hidden factors that helped to make this burden bearable; that helped to make this challenge meetable, were, first, the newness for many of the people involved.

Here the very thing we feared, we must recognize was helpful to us. The new employee operating a gigantic machine with open fires, handling glass which might cut him, handling wires that might puncture him, was genuinely scared, and his fright helped to make him more susceptible to routine safety instruction. The appeal to patriotic elements at that time was an effective one. A competitive spirit was developed.

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Jim and his crew, by so simple a
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ing reportable accidents, lost-
time accidents, frequency, and
severity figures, plant by plant,
developed an interest in safety
that almost approached the en-
thusiasm for a baseball series or
a bowling series. Within the plant
itself large accident boards were
installed right on the work floor.
We had the advantage in most
places of having all our opera-
tions in a single room, or at least
a great part of them, and the
safety board was set apart de-
liberately. Other posters, notices,
signs were taken down, so that the
safety board would stand out, and
on it was kept the score, depart-
ment by department. That too
helped to create and maintain a
spirit of competition so that safety
became a conscious part of the
day to day operation of the indi-
vidual employe, and not just a
program that the inspector was
held accountable for.

We found that the in-plant
problem was not our only one.
Just as we felt we were getting
somewhere, we were deluged with
a rush of outside accidents. Re-
member during the war period
how difficult it was to get some-
one to repair the leak in the roof
or mend that broken pipe in the
cellar, and we found our em-
ployes, although adequately keyed
up to an appreciation of safety on
the job, were getting themselves
hurt after working hours.

Under war-time working hours,
employes played hard to offset
their hours of working hard, and
we suffered through everything
from broken legs as a result of
skiing in the winter to broken
arms as a result of soft ball com-

petitions in the summer. And again, our accident man, Jim, and his crew came through. They tied an after-hours safety with the necessity of the employees being on the job. In their educational program they worked on the fact that the employee thinks first and foremost of job security. They showed that job security in terms of pay or seniority or work rules has little meaning if it is thrown out the window by a careless accident while at play. The plan worked. A remarkable record you will agree, but what does it mean now?

When the end of the war came, we in Sylvania breathed a sigh of relief. We felt we could uncross our fingers. We said, "Now we will go back to our former time-tested program. Now we will have experienced employees. Now we will have adequate depth of supervision—supervision by men who know the hazards involved, and who have had years of safety experience; they should be better than before the war because of their experience." That was a wrong guess. After V. J. Day, our experience got steadily worse. The pressure was gone. A man down-graded as a result of post-war contraction wasn't the safety conscious experienced supervisor of work that we expected. He was careless. Psychologically something like this was going on in his mind—"I have had ten times that many machines. I've supervised ten times that many people. I've handled much more serious problems than that. These problems are easy." The old bugaboo of familiarity breeding con-

tempt made our accident experience steadily grow worse. We just could not carry on the old way. The old program did not work.

When we took a quick look at our status, we found we had not returned to two plants, St. Marys and Emporium—we were left with fourteen plants in nine different localities in Pennsylvania. We said, "It worked before. Let's go back to the old war-time razzle dazzle." But that failed, too. The money wasn't there for one thing. The patriotic elements were not there for a second. The need for a competitive point of view, rather than a throw-the-manpower-in-and-get-it-out-the-door point of view was another factor that had changed.

A quick review of the plan convinced us there was no easy solution and that there is no easy continuing solution to operating a safety program. That's true either in a single location or in multiple decentralized location such as we have. Nevertheless, we had to act fast. We were about to sink ourselves with accident losses in one plant. We were holding our breath for fear employees would refuse to come to work. We had a toxicity problem that could break at any time in that community and make people say they would give up their jobs at Sylvania; that they could readily get better jobs with less hazards elsewhere. We had another situation where although guards were available and we know the solution to the problem, people were having fingers chopped off because maintenance crews were too busy doing reconversion of machinery and

making the changes required by peacetime orders, where instead of Uncle Sam's millions, one customer wanted a hundred, another wanted a dozen, another six.

We decided we had only one course of action—that was to pick the best we had learned from the two prior experiences—our pre-war experience and our actual war-time experience.

First we decided that safety and accident prevention work and health work needed to be centralized. We recognized that we gained an advantage by having for that program a free channel to the top of the organization. So today our Central Medical and Safety Department, although it still appears on the organization chart in industrial relations or personnel (so that the door is open to all locations and activities), has a supplemental line direct to the president of the corporation.

Second, we reasoned that the use of outside help would be the only answer, that it would be possible for us to still meet budget limitations and pressure of competition on our cost and our overhead expense. Therefore, we have attempted and we hope we have succeeded in gaining the very real help the State has to offer. At least that's the direction Sylvania wants to go in—the direction of closer, effective cooperation with State agents. We regard a State inspector as an ally, an assistant, a man we cannot afford for ourselves.

Similarly, we have continued to call upon the resources of our insurance carrier. This is just a little secret between you and me.

our accident experience grow worse. We just try on the old way. Sam did not work. I took a quick look at it and found we had not so many plants, St. Marys—we were left with plants in nine different Pennsylvania. We tried before. Let's go back to the old war-time razzle-dazzle that failed, too. It wasn't there for one patriotic element, it was for a second. The competitive point of view was another thing that had changed. Now of the plan, there was no easy solution, there is no easy connection to operating a plant. That's true either in one location or in multiple locations such as we have, nevertheless, we had to act. We were about to sink our accident losses in one place where we were holding our dear employees would come to work. We had a problem that could not be solved in that community in that community make people say they are up their jobs at Sylva. They could readily get away from less hazards elsewhere. We had another situation where guards were available. We know the solution to it, people were having problems because main-tenance was too busy doing work on machinery and

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Similarly, we have continued to call upon the resources of our insurance carrier. This is just a little secret between you and me.

We almost lost our insurance carrier, not because we weren't using his services, but because we were having such a poor experience. We are convinced now that the two tie together. A good experience cannot be obtained by the trick of trying to lift yourself by your boot straps. Two heads are still better than one, and a good experience comes, I'm sure, in an operation like our own, in calling upon and making use of the facilities and abilities of our insurance company.

Third, and most important of all, is the appeal to the individual. We just find it impossible to go back to the pre-war circumstances where we had a personal relationship all up and down the line. On the other hand, we have lost the extras, the excitement of the war-time fury, but we recognize that we need a personal interest on the part of every employee if there is to be an effective accident prevention program.

To gain that, we have selected in every plant a safety man. We can't afford a full-time man, especially in those units with less than 100 employees total. But whatever other job a safety man has, first and foremost the amount of time allotted to him for his safety work is absolutely inviolate. If it is only ten per cent of his time, that ten per cent for the accident prevention program must and does come first. Every employee in that plant counts the safety man as his friend; also as his team mate in building a completely whole job security. Second, we have tried to tie in our accident and safety work with our

health program. I don't know why it is, but it's a strange quirk of human nature that you and I are much more concerned about the intangible than about the thing we can see.

Expressed very crudely, if I were on a trip through the jungles of Africa, I would much rather be attacked by a man-eating tiger and killed in his jaws than to be stung by a tiny little fly and die of sleeping sickness. Why? I don't know. You and I think there's some justice when we fall off a ladder and break an arm. We understand that. If an infection sets in, we don't even know how we got the scratch, and yet we lose a finger or an arm. We don't understand or accept that. Of great importance in getting personal interest in the program is the psychology that surrounds the typical American's interest in his health.

We have attempted to tie our

safety and accident prevention work in with the work of our trained nurses in the plant's first-aid room and to tie it in with the work of our part-time consulting doctors in the towns in which we operate, so that the concern for the intangibles of good health is used to create and maintain individual interest in our safety program.

We don't pretend to have a perfect record. The remarkable results we have shown go to the men on the firing line—Jim Lawler, our Area Safety Engineer, and the men in our plants throughout the State. We are glad to share our experiences, both good and bad, with you. If you want to write or visit Jim in Emporium, the name is J. J. Lawler, Sylvania Electric Products, Emporium, Pennsylvania, and that's not a free gift. There's a catch to it. If you talk to Jim, he will get as much from you as you do from our experience.

☛ ☛ ☛ DUST CONTROL IN ASBESTOS INDUSTRY

B. W. LUTTENBERGER

Mr. Luttenberger Is Plant Manager, U. S. Asbestos Division, Raybestos-Manhattan, Inc., Manheim, Penna.

WE HAD a job to do in the asbestos industry and we've done a fairly good job, but we are still at it and have been at it for thirty years.

Mr. McDevitt has mentioned dust being one of the main complaints of his organization. It's the biggest hazard we have in our plant, or in any asbestos plant.

Asbestos is the only known mineral fiber. Chemically it is silicate of magnesium. Physically it is fibrous, soft and silky, yet is in rock form. The history of its use goes back to Biblical time, in fact it is claimed that the wicks of the lamps of Vestal Virgins were made of asbestos. So also is it claimed that the cloth which

Charlemagne threw in the flag to cleanse was made of asbestos.

Commercially asbestos has been in use less than one hundred years. It is found in every State in the Union, but the only sources used commercially in the United States are found in Arizona, Vermont. The main sources of supply are from the Province of Quebec, Canada, and in South Africa.

Asbestos fibers are received in bags, partially fiberized. Processes employed to convert these fibers into finished clothes, tapes, yarns, etc., are substantially the same as used in the wool textile industry. The fibers are opened, fluffed, cleaned, carded, spun, plied and woven into textile products. Asbestos fibers short to spin are used in various building materials—shingles, siding, mill board, insulation. Short fibers are also used in molded products in the electrical, automotive and other fields.

Whenever and wherever asbestos is processed it creates dust unless it is thoroughly wet. Asbestos dust when breathed into the lungs is hazardous to the tissues of employees. This hazard has been recognized for many years by the manufacturer and the medical profession. Long before asbestosis was declared an occupational disease and non-compensable by law January 1, 1938, in Pennsylvania, the industry kept pace with the engineering progress in the control of the dust.

The first attempt at control at that time seemed quite adequate and modern but looking back thirty years, such systems of

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crude and inadequate. I can tell
you, twenty-five years ago, stand-
ing in any asbestos plant, twenty-
five feet away you wouldn't recog-
nize an employe due to the con-
centration of the dust.

These first installations
amounted to little more than a
crude means of ventilation. The
air was changed and the dust
particles reduced, but the dust
was allowed to escape into the
room and usually the travel of air
was directly past the breathing
zone of the operator. Crude, un-
comfortable and ineffective dust
masks were supplied but it was
almost impossible to get the em-
ployees to use them. I might say
the facilities made available now
are very much improved, but we
are still up against the problem
of nature, of how to fasten these
dust masks onto a person's face.
Nature put the ears there, or
where would you put your glasses?
But that is not true of a dust
mask. They preferred a piece of
gauze or muslin tied over the
nose, which medical men declared
entirely ineffective. In succession
came the open hoods, then en-
closed burlap houses — each
change tending toward trapping
the dust and collecting it at its
source before it ever got into the
room or the breathing zone of the
operator.

I have hurriedly skipped over a
good many years of headaches,
heartaches, trial and error meth-
ods which cost many thousands of
dollars, yet most of the members
of the industry were willing to do
this to control the dust and re-
duce the hazard.

Today we are proud of the progress made—I speak mostly for our own two plants—the United States Asbestos Division at Manheim with 1,300 employees and the General Asbestos Division at Charleston, South Carolina, with 1,000 employees. I speak also of Johns Manville, Keasby and Mattison, Union Asbestos and Rubber Company, General Electric and many others who have spent much time and expense to control a bad hazard.

In every process that can be controlled, something has been done about it. The first approach is to collect the dust at its source—take it out of the machine and building, filter it or wet it down—and our policy is not to return the filtered air to the department. In fact, we are now exhausting from our plant at Manheim about 300,000 cubic feet of air per minute and not one cubic foot is being returned. We agree with our Department of Labor and Industry that this filtered air is not sufficiently free of dust particles.

Another problem is after we get it out of the department—years ago cyclones were the accepted units for disposal and separation of the dust from the air—dust laden air was discharged into the atmosphere. Today we use either burlap filters for the textile dusts and wet collectors for the grinding dust. In certain processes in the manufacture of asbestos, it is almost impossible to collect the dust at its source. I refer to weaving, spinning, twisting and braiding. Our solution to weaving and braiding is water sprays to dampen the yarns sufficiently to

allay the dust—eight to ten per cent will do the trick. For years damp weaving was frowned upon by chemists and some customers because it was more difficult to impregnate these damp woven products. Most of these difficulties have been overcome by new methods of impregnation.

Spinning and twisting of asbestos yarns is today our worst problem to control. We are now working with the engineers of the Moraine Company, a division of General Motors. We hope this will be our answer.

We believe that the designers and builders have a responsibility in the construction of their machines so that exhaust equipment is part of that unit. This is just as important as safety guards for moving parts. Over a period of twenty-five years, we have so controlled the dust that the concentration of dust has been reduced from a range of 10, 15, 25, 40 up to 75 and more million particles per cubic foot. Today the average is well under five million, which is considered a safe concentration. We are not satisfied that five million is safe, therefore we continue to reduce the count to an absolute minimum. Our efforts have shown results, not only in the cost of the compensation cases, but as a humanitarian reason. We have had no cases of asbestosis develop in any employee who was hired in the last twelve years.

We have our own Medical and First Aid Department. All employees are required to take a pre-employment medical examination, including a chest X-ray. Periodically chest X-rays are

taken of the employees and read by Dr. R. D. Swab, the diagnoses of which are available to the employees' family physician.

Many of our problems would not today be solved were it not for the help and cooperation of various organizations. Let me give credit and thanks to the following:

Dr. A. J. Lanza, Dr. W. J. McConnell and Mr. J. W. Fehnel Industrial Health Service of the Metropolitan Life Insurance Company, and Dr. L. W. Gardner, of Saranac Laboratory, who have worked with us since 1929;

Dr. Walmer and Mr. Hemeon of the Industrial Hygiene Foundation of the Mellon Institute;

United States Federal Department of Health;

ACCIDENT PREVENTION

WILLIAM

Mr. Kearns Is Service Superior & Company

THE subject of Accident Prevention Training, as discussed here will be in two parts. The first is a definite packaged training program by that name and the second phase is a recently innovated "safety clinic," which is for supervision.

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United States Federal Department of Health;

Members of the Asbestos Textile Institute;

Turner-Newall of Rochdale, England;

British Belting and Asbestos Company;

and last but not least the cooperation of the Health Hygiene Bureau of the Pennsylvania Department of Labor and Industry. I refer particularly to Dr. Shilen, Messrs. Dooley, Koppenhaver, Cole and Draude—all of these men have been of inestimable value in our efforts to control a serious hazard. And to our own Managers and Board of Directors, many thanks, for they have certainly been enthusiastic.

Dust can be controlled. It is a continuing job day after day, month after month and year after year.



ACCIDENT PREVENTION TRAINING

WILLIAM W. KEARNS

Mr. Kearns is Service Superintendent, E. I. duPont de Nemours & Company, Philadelphia

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Accident prevention training has always been a very important part of all duPont training since one of the first company powder plant explosions in 1818. The company was willing to assume

the responsibility for safeguarding employees from occupational hazards. Likewise, they assumed the responsibility for occupational injuries. As a result of this explosion in 1818, the families of the victims were subsidized with payments from the company. Now this was practically one hundred years before a majority of the States had any Workmen's Compensation Act, but you can realize that with two different explosions—two officers of the company

killed—it was a very important problem.

Therefore, you can see that for a very long period of time we have had what we thought was well-developed safety thinking. Safety was considered as the first and most important responsibility of all supervision. Therefore, active inspectional and directional safety and fire protection committees were operating in all our locations. This system seemed to be working very well. Our severity rates and our frequency rates were something to be proud of. In safety competition we had succeeded in getting more than our share of the trophies.

So, up to the time of the preparedness program for World War II, our program had been very satisfactory. When the United States became interested in assisting the invaded countries, our company was asked to furnish military goods. Like most companies, this meant a very hurried engineering and construction program. I can say "hurried" because I was in one of the Manhattan deals the company was involved in and we had a construction camp of 70,000 people. The products which we were to make—and for the present we are confining ourselves to explosive products—were familiar to us, but we did not have a very large percentage of employees to pass on their knowledge or experience to others.

Due to the fact that TNT, RDX and other items such as smokeless powder are very unstable, it was necessary that our safety training be of the highest caliber.

The government acquired the plant sites; the plants were built; top skeleton and training supervisory forces were recruited from our own commercial operations; and local personnel were hired for lower supervisory and operator jobs. We will discuss here one such plant which was in the southwestern United States.

The safety record during the construction and production start-up phases had been very good, despite the fact that the type of personnel available had not been subject to personal restrictions, regulations, etc.—only 35 per cent of them were literate, and the majority were American Indians.

Our crew, then, was not naturally familiar with strict operating procedures or used to living a well-regulated life. Over half of the employees lived on an Indian reservation and represented six different Indian nations. Certainly we would not say that life in a tepee or wigwam qualifies one as an operator on a TNT line.

Production was started and made very satisfactory progress. A very intensive program of J. I. T. instruction and training, plus a very close supervisory follow-up had paid off by our making our production schedules. The largest amount of credit for these attainments was given to the thorough training of our supervision. They had also operated at a good safety level. The personnel had learned to highly respect the manufacturing processes. They could understand the dangers involved in fires and explosions.

However, many of the ordinary

mine-run, nonoperating duties were beginning to be done in a slipshod, careless manner. Supervision became aware of the problem, but despite good precautions, we started having a series of lost-time injuries. Some of these injuries were most extraordinary, and I beg your indulgence in allowing me to cite one case.

On a reservation of several thousand acres, with many separated and isolated operating buildings, sanitary facilities are sometimes centralized. The Indian people, who were used to the freedom of the prairie, could not see the sense of the white man's custom. This careless abandon resulted in severe burns to an Indian Princess, who unfortunately came too close to a steam outlet in a French drain. In following through on the investigation of this injury, the decision was that supervision had failed to properly impress on the employees our company's sanitary problems and the necessary rules. As a result of similar injuries, we decided that something must be done to impress our people with the necessity of following the established safety procedures.

The J. I. T. system had been so successful production-wise that it was decided that all operations should adopt this method to sell safety procedures. It would be the responsibility of each foreman to make a hazard breakdown analysis, step to step, of each operation on each job. This whole

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procedure soon became known as our Accident Prevention Training or A. P. T. program.

After every job was analyzed, each operator was briefed on the safety aspects. It was the operator's responsibility to see that each helper was briefed on his responsibilities, and it was the duty of the foreman to see that the safety aspects of each job were periodically reviewed and that the safety job standards were kept up to date. These write-ups and check lists were in considerable detail as our injuries had been caused by situations which we had not given sufficient emphasis in the face of the most serious hazardous operations, such as TNT lines.

With each operator and operation being reviewed and studied every six months, our safety record immediately improved from a lost-time injury every two hundred thousand exposure hours in 1944 to one every five and a half million exposure hours in 1945. When the borrowed supervisory help came back home to the commercial plants after the war, this A. P. T. procedure, as we call it, was made a part of our commercial operations. Anyone who had worked with it was thoroughly sold on it because of the impression it made both on the supervisory and the operating forces.

Our present plan at the Philadelphia plant—we have 1,300 employees there—is to have each foreman cover the safety aspects of

each job with each man under his supervision every six months, twice a year. The procedure is covered by a write-up on a standard check list form which is filed as a follow-up for the next safety interview. Each foreman must review and study each job before he discusses it with the operator. Therefore, the job is investigated by the foreman, the operator is interviewed and makes his suggestions, and the foreman follows through on any necessary changes which are agreed upon.

We realize that this is a complicated, yet a complete procedure. We have found that it works. If you have poor safety morale, and an unsatisfactory injury experience, we recommend it heartily.

The second phase of our Accident Prevention Training program is what we call our "Safety Clinic." It follows the line of an ordinary medical clinic. We have found that even supervision can be in error. Sometimes someone may seem a little arbitrary on safety procedures, and the foreman, those overworked, downtrodden and forgotten persons, really appreciate an opportunity to blow off their safety tops.

Realizing this, our safety supervisor devised the novel procedure of having a clinic to diagnose our current mental safety ills. Advertised as a means to diagnose safety problems, this conference type meeting was put on for all

foremen. The result was an indictment of everyone who had been or now was a bottleneck. If top supervision had not supported the foremen, or safety maintenance orders did not get proper preference, or not enough safety shoes had been kept in stock, or there was a shortage of proper goggles, all these situations ended up on the conference leader's chart. As a result, we wound up with many safety problems coming to the fore, not only in the form of gripes, but also in the form of confessions. Top supervision was presented with the results in our monthly Major Safety Committee meeting and in jocular parlance "the foremen had given them something to remember them by."

This procedure was done in good humor and good faith. It brought a lot of situations out into the open. But most of all the foremen were so impressed with the success of these clinics in their own foreman groups, that they have asked for help in conducting such clinical meetings with their workmen. Our foremen have asked for assistance in their own safety program. Our answer is that shortly the experts will start conducting a course for them on Conference Leadership Training.

We do not contend that these procedures are a cure-all for all situations. They did fill a need in our own program. We recommend them for your consideration.

ACCIDENT PREVENTION

B. M.

Mr. Walter Is 1
ACF Brill M

THE value of the work of engineers is not measured by the saving of man-power, and materials alone. It is measured primarily in the reduction and elimination of human suffering. To place the emphasis on the dollar and cent is not to minimize or ignore the human side, but rather there is disagreement about the need to view any safety program in terms of human happiness.

Accidents result in loss of time and money. They are an excessive waste of production. It is a waste which any sound safety program must strive to eliminate.

Safety is everybody's business. It affects everyone in a way, whether the individual worker is aware of this fact or not. It is not enough for the worker to worry about his welfare, or for the foreman to be concerned only for his workers, or for the company to plan for the physical well-being of its employees. Safety is a combination of all these. It is the concern of everyone.

What should be the aim of an accident prevention program? What objectives should it seek to attain? How can these objectives be achieved? Let me tell you briefly about a safety program which we have found works successfully.

A successful safety program

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ACCIDENT PREVENTION PAYS

B. M. WALTER

*Mr. Walter Is Director of Industrial Relations,
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A successful safety program we

feel must stem from management. The safety policies must be established at the top in the same way as other company policies pertaining to sales, engineering, manufacturing and the administration of the company.

One person must be charged with the over-all responsibility of the program, and with the coordination of the efforts of everyone concerned. We have found that the committee system works well, because together with the safety engineer as the key man in the program, the committee system brings all persons concerned into an unbroken line of communication from top to bottom.

With the committee system, the function of the accident prevention program is coordinated by three committees. The Executive Committee which establishes the policies, the Foreman's Committee which enforces the policies, and the Worker's Committee which distributes the safety information to the workers throughout the plant.

It is the function of the Executive Safety Committee, with the safety engineer as its secretary and the vice-president in charge of manufacturing as its chairman, to formulate the safety policies for the company. Circumstances will alter the arrangement—for example, the chief inspector, fac-

tory manager, or even the president of the company might serve as chairman of the Executive Safety Committee, which establishes the rules, determines the penalties for infractions and sets the guide posts in place.

When the program has been established, the results are passed on to the Foreman's Safety Committee or Supervisory Safety Council. Again the safety engineer serves as secretary with plant foremen or superintendents as rotating chairmen. The Foreman's Safety Committee is charged with the responsibility of enforcing the safety policies throughout the departments of the plant. Subcommittees, composed of supervisors, investigate all accidents and all unsafe practices, conduct the good housekeeping plan, and correct any unsafe conditions.

The enforcement of safety rules and regulations is specifically the direct responsibility of the employee's immediate supervisor. No program should place this responsibility for enforcement anywhere except with the foremen. To administer the policies and establish sound safety practices based on these policies throughout the shops must be the heart of any sound safety program. One or two safety engineers in a plant cannot successfully operate the safety program, even though it be the finest program in the world. But several hundred supervisors in all departments believing alike in the value and need for safety can make the program a success.

We have found worker's committees effective for the dissemination of safety information. We

advocate periodic showing during working hours of films released by the National Safety Council, and such films as "The Eyes Have It," "Grime Does Not Pay" and others on accident prevention which will serve to bring before the worker his part in the program. We believe that Workmen's Safety Committees cannot be placed in the dual responsibility of prosecutor and defendant. At no time should the Worker's Safety Committee be required or expected to enforce safety policies. To fortify a worker with a safety committee badge is not enough. He is not paid to enforce company policy. It is not his job to do so. He should not be required to do so regardless of the situation.

It is the coordinated effort of all in harmonious teamwork which will tend to reduce the potential unsafe practices to a minimum and result in a reduction of both minor injuries and lost-time accidents. Safety is achieved through teamwork.

The bulk of industry today recognizes the National Safety Council Standards of Accident Frequency and Severity and most plants measure their safety in these terms of lost-time injuries. Frankly, I believe that we are kidding ourselves by measuring our accident prevention, our safety records and accident cost computation on the basis of lost-time injuries alone. Recently, we reviewed our first aid cases and we found that we have approximately two hundred and ninety nonlost-time injuries for every lost-time accident.

No doubt your operations are similar to ours. We require that a worker report to the dispensary regardless of how slight his injury may be. We encourage repeat visits and insist that any serious case must be discharged by the nurse or doctor on duty. But as every safety engineer knows, every scratch or cut or bruise is a potential lost-time injury. Careful attention to the causes of the two hundred and ninety nonlost-time injuries will aid the safety engineer in correcting unsafe or hazardous conditions.

Always astounding is a comparison between the national accident ratio and the war casualty totals. All accidents, both industrial and nonindustrial, in the United States during the single year 1947 reached the staggering total of 49,000 deaths and 2,650,000 injuries.

But these totals become even more unbelievable when compared with the total killed and wounded in the American armed forces, including the Army, Navy, Marines and Coast Guard, during the entire period of World War II from Pearl Harbor to VJ Day, a period of nearly four years. Remembering that these figures are for one year—the national accident ratio—while the war totals are for almost four years, you will note the comparison of per-

In the September 1948 issue of "Labor and Social Forces" a editorial from the "Sunbury Daily News" was quoted upon the conscientious worker whose regular contributions make possible the Unemployment Compensation Act. The editorial was in error.

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sons killed accidentally in peacetime is only slightly less than the number killed in combat, while the number of persons injured in accidents is nearly fifteen times as high as the combat injuries.

I realize there is a considerable difference of opinion on how safety campaigns should be inaugurated and conducted. In one type the approach is sympathetic and appealing—an educational campaign to persuade the worker rather than to tell him. This might be considered the indirect method.

The second is a mandatory safety program in which rules and regulations are established and rigidly enforced with severe penalties invoked for violations. This we might term the direct method.

Companies must be hardboiled in safety matters for the workers' own protection. There can be no compromise with safety. Either a plant has a safety program or it does not have one. Either rules are enforced or they are not enforced, in which case you might as well not have any. The positive approach to accident prevention is by far the better.

All the safety rules and regulations in the book, all the safeguards and mechanical devices ever invented will be of no avail if employees are permitted to disregard the rules.

Accident prevention really pays.

In the September 1948 issue of "Labor and Industry Review" on page 33, an editorial from the "Sunbury Daily News" was quoted as follows: "That is purely a fraud upon the conscientious worker whose regular contribution in the form of payroll deductions make possible the Unemployment Compensation Fund." Workers do not contribute toward the Unemployment Compensation Fund and this statement therefore was in error.

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Specifications for Standard Fire Escape
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Operation of Motion Picture Projectors
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