

U. S. DEPARTMENT OF LABOR

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WOMEN'S BUREAU

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THE EMPLOYMENT OF
WOMEN IN HAZARDOUS INDUSTRIES
IN THE UNITED STATES

Summary of State and Federal Laws
Regulating the Employment of Women in
Hazardous Occupations : 1919

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WOMEN'S BUREAU
PART A. REPORTS

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THE EMPLOYMENT OF WOMEN IN HAZARDOUS INDUSTRIES IN THE UNITED STATES.

Laws prohibiting employment of women in certain industries.

The employment of women in mines is prohibited by law in 17 of the States—Alabama, Arizona, Arkansas, Colorado, Illinois, Indiana, Maryland, Missouri, New York, Oklahoma, Ohio, Pennsylvania, Utah, Washington, West Virginia, Wisconsin, and Wyoming. The law in Alabama, Colorado, and West Virginia relates specifically to coal mines.

Laws regulating the employment of women only.

Handling lead.—The employment of women in handling “any dry substance or dry compound containing lead in any form in excess of 2 per cent” is prohibited by law in Pennsylvania and New Jersey.

Using abrasives.—The employment of women is prohibited “in operating or using any emery, tripoli, rough corundum stone, carborundum, or any abrasive or emery polishing or buffing wheel where articles of the baser metals or of iridium are manufactured” in New York State.

In Ohio women are not allowed to “operate or assist in operating emery wheels or belts of solid emery, leather, leather-covered felt, canvas, linen, paper, cotton, or wheels or belts rolled or coated with emery corundum, or cotton wheels used as buffs.”

Oiling moving machinery.—Women are not permitted to oil or clean moving machinery in four States—Louisiana, Minnesota, Missouri, and West Virginia.

Making cores.—New York, Ohio, and Pennsylvania have laws which regulate the employment of women in core making. The New York law provides that “no woman shall be employed or permitted to work in any brass, iron, or steel foundry at or in connection with the making of cores where the oven in which the cores are baked is located in or operated in the same room or space in which the cores are made.” In Pennsylvania and Ohio no woman is allowed to handle cores which have a temperature of more than 110° F.

Lifting weights.—In Ohio and Pennsylvania a woman may not handle cores when the combined weight of core, core box, and plate at which she is working exceeds 15 pounds. In Massachusetts, any boxes, baskets, and other receptacles which with their contents weigh 75 pounds or over and which are to be moved by female employees

in any manufacturing or mechanical establishment must be provided with pulleys, castors, or some other mechanical device so that they can be moved easily. In New York women in the core rooms of foundries are prohibited from lifting more than 25 pounds.

In addition to these provisions which actually prohibit women from working under certain conditions or in certain industries, each State has many laws and rulings which prescribe the conditions under which women should work, covering such matters as the lifting of weights, provision of seats, and proper provision for sanitation and comfort.

Laws regulating the employment of all workers in hazardous industries.

The use of white phosphorus in the manufacture of matches is prevented in this country by the imposition of a Federal tax of 2 cents per hundred on all matches manufactured with this material. The importation of matches made from white sulphur is prohibited.

Rulings for various hazardous industries, affecting both the men and women workers, are found in many States. Industrial commissions in six States—Colorado, Montana, New York, Pennsylvania, Utah, and Wisconsin—have the power to make regulations for the health and welfare of workers. The California, Oregon, and Washington commissions have power to make regulations only for women and minors, and the Kansas commission for women, minors, learners, and apprentices. The Colorado commission has the power to make regulations only to enforce existing laws.

In addition to the rulings of the industrial commissions, which are too vast in number and minute in detail for quotation, the laws of several States contain special regulations for all workers, with certain specified dangerous or poisonous materials or in certain hazardous industries. Employees in Illinois, Missouri, New Jersey, Pennsylvania, and Ohio are required to provide for employees working in certain processes which are mentioned below—

1. Proper working clothing, which shall be kept in good condition.
2. Respirators, where employees are exposed to noxious or poisonous dusts.
3. Medical examination by a competent physician at least once a month.
4. Dressing rooms with separate compartments in which workers may keep street clothes, and lavatories with adequate washing facilities. Clean towels and soap.
5. Suitable provision for enabling employees to take their meals outside of the workrooms where poisonous substances or injurious or noxious fumes, dusts, or gases are present.

6. Sanitary drinking fountains.

7. Special ventilating and cleaning systems for carrying off injurious dusts and gases.

The processes for which these regulations are made vary slightly in the different States. The laws in Pennsylvania, Ohio, and New Jersey cover "every work or process in the manufacturing of white lead, red lead, litharge, sugar of lead, arsenate of lead, lead chromate, lead sulphate, lead nitrate or fluosilicate * * * in which the workers are exposed to lead dusts, lead fumes, or lead solutions." New Jersey, however, also specifies "every work or process in the manufacture of pottery, tiles, or porcelain enamel sanitary ware, where employees are exposed to heat, dusts, lead, fumes, or lead solutions." This is the only case in which the pottery industry is specifically mentioned.

Missouri stipulates these conditions for those working in the "carrying on of any process, or manufacture or labor in which antimony, arsenic, brass, copper, lead, mercury, phosphorus, zinc, their alloys or salts or any other poisonous chemicals, minerals, acids, fumes, vapors, gases, or other substances are generated or used, employed or handled by the employees in harmful quantities or under harmful conditions or come in contact with in a harmful way."

The Illinois law includes "any process of manufacture or labor in which sugar of lead, white lead, lead chromate, litharge, red lead, arsenate of lead, or Paris green are employed, used, or handled, or the manufacture of brass or the smelting of lead or zinc."

Laws regarding compulsory reporting of industrial diseases.

Fifteen States have laws making it compulsory for physicians to report some or all occupational diseases to either the State board of health or the State labor department. In addition to these 15, in California, Wisconsin, and Hawaii industrial diseases come under the workmen's compensation act, which makes the reporting of these diseases compulsory. In 12 States—Connecticut, Massachusetts, Michigan, Minnesota, Maine, Maryland, New Hampshire, New Jersey, New York, Ohio, Rhode Island, and Wisconsin—every physician who attends a patient suffering from any or from certain specified occupational diseases must report to either the State board of health or the State labor department. In the other 3 States—Pennsylvania, Missouri, and Illinois—this reporting is only required of the physicians conducting the examination required by law in certain hazardous occupations.

Ten States among these 15 require that all occupational diseases shall be reported, while Michigan, Minnesota, and New Jersey specify only cases of poisoning from lead, phosphorus, arsenic, mercury, or their compounds, or anthrax, or compressed-air illness. The New

York law enumerates as being reportable these same diseases, and also brass and wood alcohol poisoning. Wisconsin also enumerates the same diseases, but omits anthrax. In 5 States—Connecticut, Massachusetts, Michigan, Minnesota, and New York—reports must be made to the State labor department; in Pennsylvania and Ohio reports must be made to both the State labor department and the State board of health; in Wisconsin reports must be sent to the State board of health and the bureau of vital statistics; and in Maine, Maryland, Missouri, New Hampshire, New Jersey, Illinois, Rhode Island, reports are made to the State board of health.

Workmen's compensation laws which include industrial diseases.

In only three cases—California, Hawaii, and Wisconsin—out of the 38 States and 3 Territories which have workmen's compensation laws does the law specifically include industrial diseases. In Massachusetts, however, although the law requires that the injury for which compensation is claimed must be caused by "accident," the courts have decided that occupational diseases shall be included. In Illinois a similar ruling has been made by the industrial commission. In Michigan, after the industrial commission interpreted the law as including occupational diseases, the court ruled to the contrary.

The workmen's compensation act for the civilian employees of the Federal Government authorizes compensation "for 'the disability or death of an employee resulting from a personal injury sustained while in the performance of this duty,' excluding cases of willful misconduct, etc. The commission administering the law took the view that the term 'personal injury' as used in the act covers 'not only accidents as ordinarily defined, but also any bodily injury or disease due to the performance of duties and causing incapacity for work.'" ¹ In New Mexico any employee in any smelting works who becomes disabled and unfit for work because of lead poisoning must be provided by his employer with medical attention and sustenance during the period of his disability.

Need for definition and understanding of industrial hazards for women.

Although legislation on the subject shows that some attention has been given to special hazards to which women are exposed in industry, it also shows that there has been little, if any, real attempt to discover what are the special hazards for women.

Expert observers, both in this country and abroad, have held that women are more susceptible than men to the effects of lead. The more serious danger for women in occupations in which they are exposed to lead poisoning is due to the effect of lead on the generative organs. Those who have suffered from lead poisoning are

¹ U. S. Department of Labor, Bureau of Labor Statistics, Bul. No. 243, Workmen's Compensation Legislation of the United States and Foreign Countries, 1917 and 1918.

more likely to be sterile or to suffer miscarriages, or to bear dead children; or to lose their children as infants. Lead poisoning in men has not been known to have any ill effects upon the offspring, but for women the poison affects not only herself but her children in the future, and these serious results occur more frequently if she works in the lead industries after her marriage. Dr. Alice Hamilton, one of the foremost authorities in this country on the subject of lead poisoning, has recommended that women should not be employed in—

Lead smelters.—Tending and discharging Hunting-Heberlein pots, tending and discharging hand-rabbed reverberatory furnaces, tapping blast furnaces, working on Scotch hearths or open hearths, working in the flues and bag houses.

Lead refineries.—Doing furnace work or handling dross.

Manufacturing white lead.—Stack setting in blue beds when old buckles are used; stack stripping—"stripping the white beds;" dry-pan room; packing dry white lead; grinding white lead in oil; on Carter process, except in packing lead nicil.

Painting trade.—Dry rubbing down of lead paint; mixing dry lead compounds with paint; using dirty drop cloths; chipping off old lead paint.

In the manufacture of storage batteries—*Manufacture of storage batteries.*—Mixing paste and applying it to the plates.

Compounding rubber.—These recommendations were only made after a careful study of all the processes in the various industries. It is interesting and significant to note that even in face of the special danger to women in the lead industry Dr. Hamilton has not recommended the prohibition of the employment of women in the entire industry, but rather that, except on certain processes so dangerous as to make the safeguarding of the worker extremely difficult, the industry should be made safe for both men and women.

And yet in face of the definite assurance that lead poisoning is particularly dangerous to women, only two States in the Union have laws prohibiting or regulating women's employment in industries where they are in danger of lead poisoning. In fact, in most cases the laws which prohibit their employment have little bearing on the real hazards to which they are exposed. If a woman's hand may get crushed while she oils moving machinery, so may a man's, and his hands are as valuable as hers. If a man can be taught to oil that moving machinery so that he will not be injured, a woman can learn the same method; but if safety can not be assured, then the machine should be adequately safeguarded so that neither man nor woman will run the risk of injury. Prohibiting the employment of women on certain dusty processes does not solve the problem of any industrial disease in a community. Men also are liable to contract pul-

monary diseases from exposure to dusts. Dusty processes and machines should be ventilated and hooded, so that men and women both may work at them with impunity. It is very possible that under the guise of "protection" women may be shut out from occupations which are really less harmful to them than much of the tedious heavy work both in the home and in the factory which has long been considered their special province. Safe standards of work for women must come to be safe standards for men also if women are to have an equal chance in industry. Only in cases where conditions are more harmful to women than to men should their employment be prohibited. Except for the lead industry, so little information exists in this country as to the special effect on women of the various industrial poisons that it would seem essential, in order to guarantee that the women workers of the country be protected but not discriminated against, to make extensive investigations before recommending the exclusion of women from any industries or processes.

Laws making it obligatory to report industrial diseases such as exist already in one form or another in 15 States are the first step in establishing a satisfactory policy regarding the employment of women in hazardous industries. A further step will be the inclusion of industrial diseases under the workmen's compensation law. The operation of this law will stimulate management to make progress in the engineering problems of safety and sanitation, and will insure more effective health supervision while the facts disclosed will furnish information on which to base conclusions as to the greater liability of women to industrial poisons, and as to the more serious effects of such poisons.