

CHAPTER XVI

INDUSTRIAL HYGIENE AND THE CONTROL OF OCCUPATIONAL DISEASES

INDUSTRIAL hygiene has been defined as the science of the preservation of the health of workers.¹ Included in its scope are such important activities and functions as the prevention of industrial accidents and the promotion of industrial safety; the prevention and control of occupational diseases; the general promotion of the personal hygiene and environmental sanitation of the workers; and the provision for adequate medical, surgical, hospital, nursing, nutritional, and first aid services for industrial employees.

These objectives of industrial hygiene are accomplished by scientific attention to such matters as physical examinations of workers, proper control of plant sanitation and industrial health hazards, education of employees in personal hygiene and safety, and the organization of industrial hygiene services consisting of physicians, nurses, engineers, and chemists under the supervision or stimulation of state and local public health and industrial officials. These objectives are accomplished, furthermore, by means of mandatory or permissive legislation enforced by responsible public authorities.

The Need for Industrial Hygiene

The need for industrial hygiene is shown by the fact that there are estimated to be in the United States some 52,000,000 persons who are gainfully occupied. Of this number, nearly one-half are said to be entitled to medical service for injuries, accidents, and diseases under federal and state workmen's compensation laws.² Of these 52,000,000 workers, about 15,000,000 are employed in manufacturing, mining, and mechanical industries, while approximately 10,000,000 are employed in agriculture, 4,000,000 in transportation and communication, and the remainder in miscellaneous industrial pursuits. Of the 52,000,000 employed persons, normally about one-fifth (or more) are women.

In 1935 in the United States, accidents ranked fifth as a cause of

1. R. R. Sayers and J. J. Bloomfield, Public health aspects of industrial hygiene, *J.A.M.A.*, 111:679, August 20, 1938. C. O. Sappington, *Essentials of Industrial Health*, Philadelphia, Lippincott, 1943. B. J. Stern, *Medicine in Industry*, New York, Commonwealth Fund, 1946.

2. M. N. Newquist, *Medical Service in Industry and Workmen's Compensation Laws*, Chicago, American College of Surgeons, 1938.

death but were in second place as the cause of death of males. About one-third of the 110,000 accidental deaths occurring annually in this country are caused by accidents in the home, an equal number are due to motor vehicle accidents, some 20,000 are attributed to other public causes, while 18,000 to 19,000 have their origin in industry.³ In addition to this high mortality, nearly 11,000,000 disabling injuries are estimated to occur annually in American industry, with an average loss in absenteeism of about half a day per employee per year. Approximately ten days are lost by the average employee every year from illness, and at least 2 per cent of all workers are incapacitated all of the time on account of sickness, although such illnesses are generally due to non-industrial causes.

Occupational diseases, or diseases arising out of and in the course of general employment or diseases which are peculiar to and characteristic of a particular occupation, apparently account for about 2 per cent of the total disabilities arising from industrial causes. The most prevalent of the occupational diseases is dermatitis, or inflammation of the skin, but tenosynovitis (inflammation of a tendon and its sheath), lead poisoning, chrome ulceration, and bursitis (inflammation of a sac between movable parts of the body) are also common. In some parts of the country, silicosis, a lung disease due to inhalation of finely divided silica particles, is a serious occupational problem.

Organization of Industrial Hygiene

Provision for adequate industrial hygiene services is in the first instance the moral and commercial responsibility of industry itself. State laws generally require certain safeguards and precautions in dangerous occupations, and workmen's compensation laws in force in practically all of the States impose liability upon employers for accidents and injuries to employees, but laws do not, as a rule, make mandatory a complete industrial hygiene program in private industries, except that certain types of activities may be necessary as incidental to proper compliance with existing legislation.

In most of the larger industrial companies, however, provision has been made for industrial hygiene and programs of employee health. Many of the labor organizations also have health services. Industrial health activities are less extensive in the smaller industrial companies, which generally need the guidance of public health authorities.

3. *Accident Facts*, Chicago, National Safety Council, issued annually. *Industrial Injuries in the United States During 1936* (by Max D. Kossoris and Swen Kjaer), Serial No. R. 775, U.S. Bureau of Labor Statistics, 1938 (reprinted from *Monthly Labor Review*, July 1938).

Where a physician is employed by an industrial concern to make physical examinations of workmen and the employees to be examined are aware of this service, the physician does not violate the confidential relationship of physician and patient by making a report to the employer, and is, in fact, legally bound to do so. Such an industrial medical record is retained by the employer who may utilize it for purposes of classifying the worker, for defense against claims arising out of the employment, or for other legitimate matters concerned with the employment relationship. Such a record may also be made available to the worker at his request, but it cannot be made available to private parties, since such a revelation would be an infringement of the worker's right of privacy. The record must, however, be produced on demand of an official administrative agency having a proper interest in it, or in response to a subpoena of a court.

Although a Division of Industrial Hygiene and Sanitation was established in the United States Public Health Service as early as 1915, the growth of administrative interest in this subject was slow until the time of the passage of the Social Security Act of 1935. In 1915 only two States had organized divisions of industrial hygiene, and in 1935 there were only five such divisions. Since that time, practically all of the States and many of the larger cities have established divisions or bureaus of industrial hygiene, which operate in close cooperation with the Division of Industrial Hygiene of the National Institute of Health of the Public Health Service. In a number of States these divisions are connected with the departments of labor or labor and industry, but in most States they are under the jurisdiction of the health department.

The Federal Government is concerned with the administration of industrial hygiene through laws affecting federal employees, through grants-in-aid to the States, and through laws which empower the inspection and investigation of mines and other establishments, the products of which are produced for or are transported in interstate commerce.

Since 1882 provision has been made by acts of Congress for compensation for disability of certain federal employees, although a general law covering all civil employees was not passed until 1916, when the Employees Compensation Act was adopted (39 Stat. 742, 5 U.S.C. 751). This law, which was amended in 1941 and 1942, is administered by the United States Employees' Compensation Commission, formerly an independent establishment of the national government, which became a part of the Federal Security Agency in 1946.

An act of Congress of 1927 (44 Stat. 1424, 33 U.S.C. 901-50) pro-

vides for workmen's compensation to longshoremen and harbor workers in private enterprise while engaged in maritime employment upon the navigable waters of the United States, and in 1928 the provisions of this law were extended to private employments in the District of Columbia.

By the terms of the Social Security Act of 1935, funds have been allotted to the States for industrial hygiene and sanitation. In 1936 Congress passed the Public Contracts Act (49 Stat. 2036, 41 U.S.C. 35-45), by the terms of which provision was made for safety and health, as well as for wages and hours, in industrial plant operations in the States where persons are employed on work involving government contracts. The act also prohibits child labor in such plants. This law, popularly known as the Walsh-Healey Act, is enforced by the Wage and Hour and Public Contracts Division of the United States Department of Labor. It has been upheld as valid by the United States Supreme Court.⁴

Since its organization in 1910 (36 Stat. 369, 30 U.S.C. 1), the Bureau of Mines of the United States Department of the Interior (in the Department of Commerce from 1925 to 1934) has investigated and endeavored to prevent mine accidents, and has conducted health studies, particularly with reference to atmospheric contaminants in mines and smelters. The Coal Mine Inspection Act of 1941 (55 Stat. 177, 30 U.S.C. 4f) authorizes and empowers this bureau to make or cause to be made inspections and investigations in certain types of coal mines in the States, in order to reduce accidents and ill health among the employees.

A National Bituminous Wage Agreement was executed on May 29, 1946, at the White House in Washington. This agreement, made between the Federal Government as administrator of the coal mines and the United Mine Workers of America, provides for a mine safety program including the development of a Federal Mine Safety Code, a mine safety committee, coverage of employees with the protection of workmen's compensation and occupational disease laws, a health and welfare program including a medical and hospital fund, and various other welfare facilities.

In addition to the Public Health Service, the Bureau of Mines, and the Public Contracts Division, other federal bureaus concerned in some way with industrial hygiene include the Bureau of Labor Statistics, the Women's Bureau, and the Child Labor Division, all of the

4. *Perkins v. Lukens Steel Co.* (1940), 310 U.S. 113, 60 S. Ct. 869, 84 L. Ed. 1108.

United States Department of Labor; the National Bureau of Standards of the Department of Commerce; and the War, Navy, and Post Office Departments.

*State Workmen's Compensation Laws*⁵

Under the rules of the common law applying to master and servant, an employer was liable to an employee for injuries arising out of the course of his employment. This simple rule was so modified by court decisions of a century or so ago, however, that recovery could be obtained only if it were shown that the employer had been negligent, that the employee was free from contributory negligence, and that the injury was not due to the act of a fellow servant. Because of the difficulties in proving his case under the burden of these legal technicalities, the employee or his heir rarely recovered at common law for an injury.

The harsh rules of the common law, which had evolved in an era of small and scattered industry and were not adapted to the industrial progress of modern times, have been superseded wholly or in part by our modern workmen's compensation laws. In 1897 the Parliament of Great Britain passed an act imposing the liability upon employers in certain dangerous trades to pay compensation to an injured employee, or in case of death to his dependents, regardless of the existence of any negligent act by the employer or his employees. This law was amplified in 1906.

In the United States, the first comprehensive law providing for workmen's compensation was passed in New York in 1910, and was promptly declared unconstitutional by the courts,⁶ whereupon the state constitution was amended and another act was passed in 1914. This law was upheld as constitutional by the United States Supreme Court,⁷ which has also sustained⁸ the workmen's compensation laws

5. W. F. Dodd, *Administration of Workmen's Compensation*, New York, Commonwealth Fund, 1936. C. F. Sharkey, *Principal Features of Workmen's Compensation Laws*, Serial No. R. 1090, U.S. Bureau of Labor Statistics, 1940.

6. *Ives v. South Buffalo R. Co.* (1911), 201 N.Y. 271, 94 N.E. 431. See *State ex rel. Davis-Smith Co. v. Clausen* (1911), 65 Wash. 156.

7. *N.Y. Central R. Co. v. White* (1916), 243 U.S. 188, 37 S. Ct. 247, 61 L. Ed. 667, L.R.A. 1917 D 1, Ann. Cas. 1917 D 629.

8. *Hawkins v. Bleakly* (Ia. 1916), 243 U.S. 210, 37 S. Ct. 255, 61 L. Ed. 678. *Mountain Timber Co. v. Washington* (1916), 243 U.S. 219, 37 S. Ct. 250, 61 L. Ed. 685, Ann. Cas. 1917 D 642, 13 N.C.C.A. 927. *Southern Pacific Co. v. Jensen* (1917), 244 U.S. 205. *Middleton v. Texas Power and Light Co.* (1918), 249 U.S. 152. *Arizona Employees Liability Cases* (1919), 250 U.S. 400, 39 S. Ct. 553, 63 L. Ed. 1058, 6 A.L.R. 1537.

of other states. The State of Washington enacted a workmen's compensation law in 1911, and since that time similar laws have been adopted in virtually all the States.

While all these laws provide for compensation to employees who are injured or suffer accidents in the course of their employment, there is little uniformity in their provisions. In some States, the law is mandatory upon all employers or employers in certain types of industries, but in many States the employer may elect to accept the benefits and responsibilities of workmen's compensation. In cases where he definitely rejects, the law often declares that the rules of common law liability in favor of the employer shall be abrogated. In some of the States there are state funds for insuring payments, but in most States there may be self-insurance or insurance by private companies under state supervision. Under self-insurance, the employer produces evidence of solvency that is satisfactory to the state authorities, although sometimes a bond is required of such employers.

The workmen's compensation laws are administered by state industrial commissions, boards, or departments. These agencies are quasi-judicial in character, since they make decisions as to the amount of disability, based on medical reports.⁹ From these administrative decisions an appeal may be taken to the courts, although the courts will usually uphold findings of fact by the commissions.

Innumerable legal questions of a highly technical nature have arisen under workmen's compensation laws. Where, for instance, an employee has worked for several employers and develops a disease such as silicosis which is due to prolonged exposure to injurious dust, which of the employers is liable for compensation? As a rule, the last employer is responsible, unless there was no hazard from silica dust in his plant.

Despite the existence of workmen's compensation laws, an employee may have an action at law against his employer for injuries or accidents due to working conditions. Such actions must, however, be brought within a certain time, otherwise they may be barred by statutes of limitations. The time when statutes of limitations begin to run is sometimes a difficult problem, but in general it has been held that a cause of action arises and the statute of limitations begins to operate on the date of the negligent act of the employer and not when the disability or injury becomes apparent. Statutes of limitations may be

9. *Medical Relations Under Workmen's Compensation*, Chicago, American Medical Association, 1938. H. H. Kessler, *Accidental Injuries: The Medico-Legal Aspects of Workmen's Compensation and Public Liability*, Philadelphia, Lea & Febiger, 1941.

for three or five years, at the expiration of which time no legal action can be brought.

Where both parties, the employer and the employee, have accepted a workmen's compensation act, suits for damages are generally forbidden. If the employer accepts the act but an employee rejects it, the employee may sue, but the employer is entitled to the common law defenses. If the employer fails to secure payment of compensation or fails to provide the insurance required by the act or fails to pay the premiums, the laws generally provide that the employee may sue for damages. Most of these laws are also extraterritorial in operation, applying to accidents occurring outside the jurisdiction.

*Occupational Diseases*¹⁰

Occupational diseases were unknown to the common law, but in some of the early American cases the doctrine was laid down by the courts that an employee can recover from his employer for a disease incurred in the course of his employment where the employer was negligent¹¹ and that failure of the employer to furnish a safe place in which to work may be considered negligence.¹² On the other hand, this right of action has been denied in some States,¹³ while in others it has been held that it is the duty of the employer to warn the worker of unusual hazards, and if he fails to do so he will be liable for the

10. R. W. Goldberg, *Occupational Diseases*, New York, Columbia University Press, 1931. C. O. Sappington, *Medicolegal Phases of Occupational Diseases*, Chicago, Industrial Health Book Co., 1939.

11. *Span v. Ely* (1876), 8 Hun (N.Y.) 255. *Kriegel v. Attkin* (1896), 94 Wis. 432, 69 N.W. 67, 35 L.R.A. 249, 59 A.S.R. 901. *Nickel v. Columbia Paper Stock Co.* (1902), 95 Mo. App. 226, 68 S.W. 955. *Hewett v. Womans Hospital Aid Ass'n* (1906), 73 N.H. 556, 64 A. 190, 7 L.R.A. (N.S.) 496. *Pigeon v. W. P. Fuller Co.* (1909), 156 Cal. 691, 105 P. 976. *Hurle's Case* (1914), 217 Mass. 223, 104 N.E. 336, L.R.A. 1916 A 279, Ann. Cas. 1915 C 919, 4 N.C.C.A. 527. *Madden's Case* (1916), 272 Mass. 487, 111 N.E. 379, L.R.A. 1916 D 1000. *Wiseman v. Carter White Lead Co.* (1916), 100 Neb. 584, 160 N.W. 985, 13 N.C.C.A. 1083. *Jellico Coal Co. v. Adkins* (1923), 197 Ky. 684, 247 S.W. 972. *Donnelly v. Minneapolis Mfg. Co.* (1924), 161 Minn. 240, 201 N.W. 305. *Midland Coal Co. v. Rucker* (1925), 211 Ky. 582, 277 S.W. 838. *Jones v. Rinehart & Dennis Co.* (1933), 113 W. Va. 414, 168 S.E. 482. *General Printing Corp. v. Umback* (1935), 100 Ind. App. 285, 195 N.E. 281. *Allen Gravel Co. v. Curtiss* (1935), 173 Miss. 416, 161 So. 670. See 105 *American Law Reports* 80.

12. *Wolf v. Mallinckrodt Chemical Works* (1934), 336 Mo. 746, 81 S.W. (2d) 323.

13. *Adams v. Acme White Lead & Color Works* (1914), 182 Mich. 157, 148 N.W. 485, L.R.A. 1916 A 283, Ann. Cas. 1916 D 689.

disease contracted by the employee.¹⁴ If an employer fails to comply with a public health law or other statute, negligence will be presumed if disease occurs in a worker.¹⁵

None of the early workmen's compensation laws provided for benefits for occupational diseases. In a number of instances the courts ruled, however, that certain diseases contracted as a result of working conditions were "accidents," for which compensation was allowed in the statutes. Thus, phosphorus poisoning was held to be an accident under the Maryland law,¹⁶ and typhoid fever contracted from drinking water furnished by the employer,¹⁷ tuberculosis contracted under certain conditions,¹⁸ and various other diseases have been held to be accidents. Where the law has used the term "injury" instead of accident, occupational diseases have been quite generally, although not invariably, construed to be injuries.

Occupational diseases are recognized by law in about two-thirds of the States and in the federal compensation acts.¹⁹ In some of these laws, all occupational diseases are included by general reference, while in others various occupational diseases covered by the law are enumerated in the workmen's compensation acts. In some cases the term "injury" has been defined to include occupational diseases and infections. The inclusion in these laws of diseases proximately caused by employment has been upheld by the courts on a number of occasions.²⁰ Occupational diseases are likewise included in the workmen's compensation laws of the Canadian provinces.

14. *Wagner v. H. W. Jojne Co.* (1892), 147 Pa. 475, 23 A. 772, 30 A.S.R. 745. *O'Keefe v. Nat. Folding Box and Paper Co.* (1895), 66 Conn. 38, 33 A. 587. *Fritz v. Elk Tanning Co.* (1917), 258 Pa. 180, 101 A. 958, 15 N.C.C.A. 698. *Atlantic Coast Line R. Co. v. Wheeler* (1926), 147 Va. 1, 132 S.E. 517, 136 S.E. 570. *Feola v. Nat. Brass Mfg. Co.* (1935), 284 N.Y.S. 242, 246 App. Div. 678. *Brown v. Tenn. Consolidated Coal Co.* (1935), 19 Tenn. App. 123, 83 S.W. (2d) 568. *Davis v. N.J. Zinc Co.* (1936), 116 N.J.L. 103, 182 A. 850.

15. *Thayer v. Kitchen* (1911), 145 Ky. 554, 140 S.W. 1052. *Gay v. Hocking Coal Co.* (1918), 184 Ia. 949, 169 N.W. 360.

16. *Victory Sparkler and Specialty Co. v. Francks* (1925), 147 Md. 368, 128 A. 635, 44 A.L.R. 363.

17. See page 270.

18. See Chapter IX, on Tuberculosis, pages 158-160.

19. *Occupational Disease Legislation*, New York, American Public Health Association, 1931. M. N. Newquist, *Medical Service in Industry and Workmen's Compensation Laws*, Chicago, American College of Surgeons, 1938. W. Fowler, *The Reportable Diseases; Diseases and Conditions Required to be Reported in the Several States*, Reprint No. 2544, U.S. Public Health Service, 1944.

20. *Industrial Commission v. Roth* (1918), 98 Oh. St. 34, 120 N.E. 172, 6 A.L.R. (Continued on next page.)

Occupational diseases scheduled in the various compensation acts include some or all of the following:

Lead poisoning	Asbestosis
Mercury poisoning	Anthrax
Phosphorus poisoning	Glanders
Arsenic poisoning	Compressed air sickness
Carbon bisulphide poisoning	Radium necrosis
Wood alcohol poisoning	Dermatitis venenata
Carbon dioxide poisoning	Hookworm disease (mining)
Brass and zinc poisoning	Silicosis
Benzol, nitro, and amido compounds	Pneumoconiosis
Gasoline and petroleum poisoning	Epithelioma
Chrome ulceration	Cataract (glass workers)
	Various miners' diseases

Other diseases such as poisoning by nitrous fumes, nickel carbonyl, dope (tetrachlor-methane), formaldehyde, methyl chloride, carbon monoxide, and other chemicals, are often included in the laws, which also generally state that the sequelae of such poisonings are compensable.

Typhoid Fever as an Accident

Since 1915 the question as to whether typhoid fever contracted by a worker from a water supply furnished by an employer is an accident or injury entitling the worker to compensation has been before the courts in numerous instances. With few exceptions, the courts have ruled that disease incurred in this manner is an accident.²¹ To the

1463, 17 N.C.C.A. 342. *Schaefer v. Industrial Commission* (1924), 185 Wis. 317, 201 N.W. 396. *Employees Mutual Liability Insur. Co. v. McCormick* (1928), 195 Wis. 410, 217 N.W. 738. *Boll v. Condit-Bray Glass and Paint Co.* (1928), 321 Mo. 92, 11 S.W. (2d) 48. *Seattle Can Co. v. Dept. Labor and Industry* (1928), 147 Wash. 303, 265 P. 739. *Dillingham's Case* (1928), 127 Me. 245, 142 A. 865. *First Nat. Bank of Ottawa v. Wedron Silica Co.* (1933), 351 Ill. 560, 184 N.E. 897. *Bishop v. Comer and Pollock* (1937), 297 N.Y.S. 946, 251 App. Div. 492.

21. *Vennen v. New Dells Lumber Co.* (1915), 161 Wis. 370, 154 N.W. 640, L.R.A. 1916 A 273, Ann. Cas. 1918 B 293, 10 N.C.C.A. 729. *Ætna Insur. Co. v. Portland Gas Co.* (1916), 229 F. 552, 144 C.C.A. 12, L.R.A. 1917 D 1027. *Wasmuth-Endicott v. Karst* (1922), 77 Ind. App. 279, 133 N.E. 609. *Frankamp v. Fordney Hotel* (1923), 222 Mich. 525, 193 N.W. 204. *Ames v. Lake Independence Lumber Co.* (1924), 226 Mich. 83, 197 N.W. 499, 23 N.C.C.A. 778. *Christ v. Pac. Mut. Life Insur. Co.* (1924), 312 Ill. 525, 144 N.E. 161. *Brodin's Case* (1924), 124 Me. 162, 126 A. 829. *Scott Lumber Co. v. Industrial Commission* (1924), 184 Wis.

(Continued on next page.)

contrary have been decisions in Kentucky,²² Ohio,²³ Oregon,²⁴ and Texas,²⁵ sometimes on the rather specious grounds that the disease, while contracted during employment, did not arise out of it. Where the typhoid fever has not been definitely proven to have been caused by an industrial condition, as where a workman contracted the disease a year after he had suffered a traumatic injury, the claim for compensation has been denied.²⁶ Compensation for typhoid was refused in Minnesota because it was not covered in the existing legal definition of an accident.²⁷

In one case an injury to a workman resulting from the injection of antityphoid serum by a company nurse was held to be an accident under the workmen's compensation law of Louisiana.²⁸

Other Diseases as Accidents

Interpretations by the courts as to what is an accident or injury under the terms of workmen's compensation laws have been as lacking in uniformity as the laws themselves. On the whole, however, communicable diseases and other maladies contracted as a direct and indisputable result of employment have been held to be accidents or injuries, for which compensation will be granted.

Amebic Dysentery. An award for amebic dysentery, contracted by an employee from water furnished on the job by his employer, has been upheld, and an increase of 50 per cent in the compensation al-

278, 199 N.W. 160. *Rissman & Son v. Industrial Commission* (1926), 223 Ill. 459, 154 N.E. 203, 26 N.C.C.A. 1. *Fidelity and Casualty Co. v. Industrial Accid. Comm.* (1927), 84 Cal. App. 506, 258 P. 698. *State v. Smith* (1931), 93 Ind. App. 83, 175 N.E. 146. *Chase v. Industrial Commission* (1932), 81 Utah 141, 17 P. (2d) 205. *Bobertz v. Township of Hillside* (1940), 125 N.J.L. 321, 15 A. (2d) 796. *Permanent Const. Co. v. Industrial Comm.* (1942), 380 Ill. 47, 43 N.E. (2d) 557.

22. *Mills v. Columbia Gas Const. Co.* (1932), 246 Ky. 464, 55 S.W. (2d) 394.

23. *Industrial Commission v. Cross* (1922), 104 Oh. St. 561, 136 N.E. 283.

24. *Blair v. State Ind. Accid. Comm.* (1930), 133 Ore. 450, 288 P. 204.

25. *Buchanan v. Md. Casualty Co.* (Tex. 1926), 288 S.W. 116.

26. *Texas Empl. Insur. Ass'n v. Burnett* (Tex. 1935), 77 S.W. (2d) 742; rev. in 105 S.W. (2d) 200. *McDonald v. Belle Terre Lodge* (1935), 279 N.Y.S. 752, 244 App. Div. 855; rev. in 268 N.Y. 663, 198 N.E. 546. *Pattiani v. Indus. Accid. Comm.* (1926), 199 Cal. 596, 250 P. 864, 49 A.L.R. 446. *Loudan v. H. W. Shaull & Sons* (1940), 140 Pa. Super. 106, 13 A. (2d) 129. *Hoffman v. Consumers Water Co.* (1940), 61 Id. 226, 99 P. (2d) 919.

27. *State ex rel. Faribault Woolen Mills Co. v. District Court* (1917), 138 Minn. 210, 164 N.W. 810, L.R.A. 1918 F 855, 15 N.C.C.A. 520.

28. *Smith v. Brown Paper Mill Co.* (La. App. 1934), 152 So. 700.

lowed according to law, because the disability was due to the serious and wilful misconduct of the employer.²⁹

Anthrax. While anthrax is now generally included among the occupational diseases in the States whose laws cover occupational diseases, it is not mentioned in all of the workmen's compensation laws. In several such instances, anthrax occurring in tannery workers has been held by the courts to be an accident arising out of employment.³⁰

Botulism. The death of a worker from botulism caused by ingestion of a meal served by his employer, where he received wages and board in payment of his services, has been held to be compensable.³¹

Cancer. The compensability of cancer alleged to be due to trauma is discussed in Chapter XIX (page 321).

Cerebrospinal meningitis. Where a steamship from the Orient had on board a number of Filipino steerage passengers afflicted with cerebrospinal meningitis, which was subsequently contracted by a pipe fitter working on the vessel, this was held to be an accident under the Federal Longshoremen's and Harbor Workers' Act (33 U.S.C. 901-50).³²

Glanders. Infection of a stableman with glanders, contracted from a diseased horse, has been ruled compensable in Massachusetts³³ but not in New York.³⁴

Gonorrhoeal ophthalmia. Compensation for an eye malady alleged to have been due to an infection with gonorrhoea from a toilet in a workshop has been denied on the grounds that the source of infection was not proven.³⁵

Kerato-conjunctivitis. Awards of compensation to shipyard workers who contracted the eye disease, kerato-conjunctivitis, were upheld by the Supreme Court of California on the grounds that the disease arose directly out of the course of employment.³⁶

29. *Parkhurst v. Indus. Accid. Comm.* (1942), 20 Cal. (2d) 826, 129 P. (2d) 113.

30. *Helers v. Hull & Co.* (1917), 164 N.Y.S. 767, 178 App. Div. 350. *Chicago Rawhide Mfg. Co. v. Industrial Commission* (1920), 291 Ill. 616, 126 N.E. 616. *Houston Packing Co. v. Mason* (Tex. 1926), 286 S.W. 862.

31. *Meyer v. Roettele* (1935), 64 S.D. 36, 264 N.W. 191. See *New York Life Ins. Co. v. Mariano* (1938), 102 Colo. 18, 76 P. (2d) 417.

32. *Todd Dry Docks v. Marshall* (1931), 49 F. (2d) 621.

33. *H. P. Hood & Sons v. Md. Casualty Co.* (1910), 206 Mass. 223, 92 N.E. 329.

34. *Richardson v. Greenberg* (1919), 176 N.Y.S. 651, 188 App. Div. 248.

35. *Standard Accid. Insur. Co. v. Ritchie* (Tex. 1935), 89 S.W. (2d) 498.

36. *Bethlehem Steel Co. v. Indus. Accid. Comm.* (1943), 21 Cal. (2d) 742, 135 P. (2d) 153.

Pneumonia. Pneumonia resulting from working conditions has usually been held to be compensable where there has been sufficient evidence to prove the connection between the disease and the nature of employment.³⁷

Rocky Mountain spotted fever. In the case of a lumberman who was bitten by a tick with resulting death from Rocky Mountain spotted fever, this disease was held to be an accident due to employment.³⁸

Scarlet fever. An employee in a hospital cafeteria who contracted scarlet fever from a student nurse was denied compensation on the grounds that a contagious disease is not an industrial accident.³⁹

Tuberculosis. The status of tuberculosis as a compensable disease is discussed in Chapter IX, on tuberculosis.⁴⁰

Tularemia. Persons whose occupations have required them to handle and dress rabbits, and who contract tularemia as a result of this work, have been granted compensation in several cases.⁴¹

Undulant fever. A dairy employee who contracted undulant fever while working with cows has been held to have suffered an accident and to have been entitled to compensation.⁴²

Industrial Sanitation

State laws frequently require employers to install, operate, and maintain proper sanitary facilities in industrial plants and to provide suitable methods, devices, and means to promote safety and prevent occupational diseases. Such a state law, requiring "approved and adequate" means to prevent disease, was sustained by the Supreme Court of Missouri in a decision in which it was held that the words "approved and adequate" were not so vague as to be ineffective and meaningless, but were intended to mean those measures generally recognized by

37. *Galuzzo v. State* (1930), 111 Conn. 188, 149 A. 778. *Brown v. Moss* (1936), 120 Pa. Super. 336, 182 A. 777.

38. *Reinoehl v. Hammacher Pole and Lumber Co.* (1931), 51 Id. 359, 6 P. (2d) 860. *Salt Lake County v. Indus. Comm.* (1941), 101 Utah 167, 120 P. (2d) 321.

39. *Basil v. Butterworth* (1936), 272 Mich. 499, 262 N.W. 281. *Connelly v. Hunt Furniture Co.* (1925), 240 N.Y. 83, 147 N.E. 366.

40. See page 158. M. G. Mack, *Medical and Legal Aspects of Tuberculosis as an Occupational Disease and as an Accidental Injury*, New York, National Tuberculosis Association, 1938.

41. *Metropolitan Casualty Insur. Co. v. Crenshaw* (1931), 44 Ga. App. 354, 161 S.E. 649. *Great A. & P. Tea Co. v. Sexton* (1932), 242 Ky. 266, 46 S.W. (2d) 87. *Great A. & P. Tea Co. v. Wilson* (1933), 48 Ga. App. 34, 171 S.E. 827.

42. *Crowley v. Idaho Training School* (1933), 53 Id. 606, 26 P. (2d) 180.

the public as suitable.⁴³ An Illinois statute requiring employers to provide reasonable and approved devices and methods to prevent industrial diseases was, however, held to be invalid for failure to set up an intelligent standard of conditions, and also as an improper delegation of legislative power to an administrative officer.⁴⁴ On the other hand, the power of a director of a state department of labor and industry to declare, after a hearing, that certain occupations or work are extra-hazardous has been upheld as a constitutional delegation of the police power of the State.⁴⁵

State laws requiring employers to provide washing facilities in certain industries, such as coal mines, foundries, steel mills, and machine shops, where smoke, dust, grime, and grease are so prevalent that lack of facilities for cleanliness would endanger health and cause a nuisance, have been upheld by a number of courts of last resort.⁴⁶ The first statute of this type to come before the courts was held unconstitutional by the Supreme Court of Illinois because it applied only to owners of coal mines,⁴⁷ but later legislation which included other industries in the State was sustained as valid.⁴⁸

The constitutionality of a state law requiring mine owners to furnish washing facilities on petition of twenty or more employees was upheld by the Supreme Court of Indiana⁴⁹ and on appeal was sustained by the United States Supreme Court.⁵⁰ Such a classification was declared not to deny equal protection of the laws, but to be a valid exercise of the police power in the interests of the public health and comfort. Similar laws have been pronounced valid in Kansas⁵¹ and

43. *Boll v. Condie-Bray Glass and Paint Co.* (1928), 321 Mo. 92, 11 S.W. (2d) 48. *People v. Smith* (1896), 108 Mich. 527, 66 N.W. 382, 32 L.R.A. 853, 62 A.S.R. 715.

44. *Vallat v. Radium Dial Co.* (1935), 360 Ill. 407, 196 N.E. 485, 99 A.L.R. 607.

45. *State v. Bayles* (1922), 121 Wash. 215, 209 P. 20. See *Schaezlin v. Cabaniss* (1902), 135 Cal. 466.

46. J. A. Tobey, Industrial cleanliness and the courts, *Am. J. Pub. Health*, 19:1119, October 1929.

47. *Starne v. People* (1906), 222 Ill. 189, 78 N.E. 61, 113 A.S.R. 389.

48. *People v. Soloman* (1914), 265 Ill. 28, 106 N.E. 458.

49. *Booth v. State* (1913), 179 Ind. 405, 100 N.E. 563, L.R.A. 1915 B 420, Ann. Cas. 1915 D 987.

50. *Booth v. Indiana* (1915), 237 U.S. 391, 35 S. Ct. 617, 59 L. Ed. 1011. See *Consolidated Coal Co. v. Illinois* (1902), 185 U.S. 203, 22 S. Ct. 616, 46 L. Ed. 872.

51. *State v. Reaser* (1915), 93 Kan. 628, 145 P. 838.

Tennessee,⁵² but in Kentucky the Court of Appeals concluded that a statute making mandatory the installation of washing facilities in various dirty industries upon request of 30 per cent of the employees was inconsistent with a provision of the state constitution prohibiting the enactment of a law to take effect upon approval by authority other than the legislature.⁵³

State laws requiring owners of mercantile establishments, factories, and other places of employment to provide proper toilet facilities,⁵⁴ adequate lighting⁵⁵ and ventilation,⁵⁶ sanitary drinking facilities,⁵⁷ and various other equipment and appurtenances necessary for the health, safety, and comfort of workers, are in general force. Such laws represent a legitimate exercise of the police power of the State for the common welfare.

State laws requiring employers to provide adequate ventilation in their factories, so as to prevent the air from becoming injurious to the health of the employees, or requiring that respirators and gas masks be furnished, have been upheld in a number of recent decisions.⁵⁸ In an action for lead poisoning brought by a worker in a casket factory, the court in awarding damages stated that a master must warn a servant of conditions under which he is employed which may engender disease, that the master is chargeable with knowledge of the fact that the fumes given off in the processes are poisonous, and that the servant will not be held as a matter of law to have known that inhalation of fumes, dust, and particles of lead will cause an incurable disease, so that he can be charged with the assumption of risk.⁵⁹

State laws imposing restrictions or limitations upon the number of hours that industrial employees may work in certain trades are now

52. *Sun Coal Co. v. State* (1928), 157 Tenn. 522, 11 S.W. (2d) 893.

53. *Commonwealth v. Beaver Dam Coal Co.* (1922), 194 Ky. 34, 237 S.W. 1086.

54. *The Installation and Maintenance of Toilet Facilities in Places of Employment*, Bulletin No. 99, U.S. Women's Bureau, 1933.

55. Marie Correll, *State Requirements for Industrial Lighting*, Bulletin No. 94, U.S. Women's Bureau, 1932.

56. State laws relating to heating and ventilating industrial buildings, *Heating and Ventilating*, 28:76, March 1931.

57. *Sanitary Drinking Facilities*, Bulletin No. 87, U.S. Women's Bureau, 1931.

58. *Illinois Steel Co. v. Fuller* (1939), 216 Ind. 180, 23 N.E. (2d) 259. *Blittschau v. Am. Car and Foundry Co.* (1940), — Mo. —, 144 S.W. (2d) 196. *Holliston Mills v. McGuffin* (1940), 177 Tenn. 1, 145 S.W. (2d) 1.

59. *Middlebrooks v. Atlanta Metallic Casket Co.* (1940), 63 Ga. App. 620. 11 S.E. (2d) 682.

generally recognized as a constitutional exercise of the police power, whether such laws are applicable only to women and minors or to both men and women of various ages, and whether they apply to dangerous occupations such as mining or to all occupations where the health of the workers will be promoted and protected by these limitations.⁶⁰ Maximum hours of work for employees engaged in the production and transportation of goods in interstate commerce are also set in the Federal Fair Labor Standards Act of 1938. The constitutionality of minimum wage laws as health measures is discussed in Chapter III.

60. See page 54 and cases cited. *In re Boyce* (1904), 27 Nev. 299, 75 P. 1. Legal restrictions on hours of labor of men in the United States, as of January 1, 1933, *Monthly Labor Review* (U.S. Bureau of Labor Statistics), 36:1, January, 1933. J. Goldmark, *Fatigue and Efficiency*, New York, Russell Sage Foundation, 1917.