



From the desk of—
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INDUSTRIAL HYGIENE DIGEST

Literature Abstracts

- MEDICAL
- ENGINEERING
- LEGAL --- decisions and trends

Industrial Health News

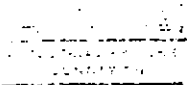


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FOUNDATION FACTS

Foundation Facts is a monthly newsletter sent to industrial and engineering organizations by the Industrial Hygiene Foundation. The Foundation is a combined research and service organization to protect the health of workers in industry.

Vol. 1.

No. 1

Autumn, 1948

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Annual Meeting Dates -- Nov. 10 & 11

The Eighth Annual Meeting of Industrial Hygiene Foundation will be held at Mellon Institute, Pittsburgh, on Wednesday and Thursday, November 10 and 11.

The Foundation's Board of Trustees, meeting in New York on August 25, voted unanimously for the annual meeting as a help in maintaining healthful conditions in war plants, which in turn helps maintain manpower.

With labor shortages slowing production in some industries, and with manpower demands rising, no workdays must be lost through failure to control toxic exposures in the work place. Manpower must be maintained and that demands the maintenance of a healthful plant.

More men and women must work harder to offset the manpower shortage -- work like the men in the armed forces. That demands top physical condition.

Practical, workable measures for the health maintenance of men and plants will comprise the program for the annual meeting.

Foundation members and general public are invited to send in their program suggestions and industrial health questions they wish answered.

August, 1943.
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Industrial Hygiene Foundation,
4400 Fifth Avenue,
Pittsburgh, Pa.

INDUSTRIAL HYGIENE DIGEST
Literature and News

News Items

733 Occupational Disease Cases.

Connecticut's occupational disease report for June, 1943 lists a total of 208 cases. Dermatitis from oils show 141, while acids, alkalis, chlorine, metal dusts, organic dusts, dyes and inks, poisonous plants, soaps and glues, and synthetic resins raise the total number of skin diseases to 179. Pneumoconiosis, including silicosis and tuberculosis, accounted for 14 cases. Poisoning from carbon tetrachloride, 1; abnormal pressure, 1; inorganic dust, 1; fumigants, insecticides and disinfectants, 1; lead, 1; solvents (N.O.C.), 2; and sulfur dioxide, 1.

734 Be Prepared for More Absenteeism.

We may anticipate that "absenteeism" will get worse before it gets better. For the simple reason that, as more and more "marginal" workers -- 'teen age youths, women, older persons and those with physical handicaps -- come into the field of industrial production, they may be expected to aggravate a situation which already is regarded in many quarters as critical. These classes of workers will bring with them their own peculiar sets of absenteeism-causing conditions, among them lower stamina, family difficulties and greater accident proneness. We can count on mandays being lost, too, by these groups for the same capricious causes which are estimated to have cost the war effort 35,000,000 man-hours last year, through "willful" or "voluntary" absenteeism. Unquestionably the biggest opportunity confronting industrial management is to reduce both voluntary and involuntary absenteeism by adopting and instituting simple, inexpensive health and safety measures in industrial plants and by educating both regular and "marginal" workers in proper health and accident-prevention practices for their off-the-job hours. -- American Mutual Magazine, May, 1943.

735 Watch For Malaria!

Returning servicemen and our native anopheles mosquitos may together give us cause for concern over the possibility of the spread of malaria in our civilian population. Since many men are serving in the tropics and sub-tropics, "malignant" malaria may become an acute problem. Laboratory workers should prepare themselves for this possibility by brushing up on the technics of examination and on the distinguishing features of the three malarial parasites. Remember

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that malaria is a group of three diseases, not one. A fourth parasite, *Plasmodium ovale*, not hitherto found in the United States, may put in its appearance. For adequate laboratory service, the thick blood film is perhaps more important than the thin film although both are needed in many cases. Laboratory workers should become familiar with the manner of making and staining both types of blood smears. A concise guide is National Institute of Health Bulletin No. 180, "Manual for the Microscopical Diagnosis of Malaria in Man," purchasable through the Superintendent of Documents, Washington, D.C., price 30 cents. -- Connecticut Health Bulletin, July, 1943.

736 Trigger Finger.

Two ailments are peculiar to women engaged in chipping or riveting with air guns. The first, chipper's palsy, is rare. It consists of weakness or atrophy of some muscles, and is probably caused by improper handling of the tool or a too vulnerable position of the nerve at the base of the thumb. The other, called "trigger finger" or "woman welder's hand," is the result of injury to the tendons of one or more fingers at the level of the knuckles. Bruising the tendon causes swelling which may become so great that the tendon does not pass easily through the opening in the ligament, and external force must be applied. Treatment involves splinting the fingers for a number of weeks. The tools should be redesigned to conform to a woman's hand, well-fitting gloves should be used, and easy-relaxed operation of the tools should be taught. -- Safety Eng., 86, 41-44 (July, 1943).

737 Tennessee Industrial Hygiene News.

Vol. 1, No. 1 of this periodical appeared March 1, in mimeographed form. It is issued quarterly by the Industrial Hygiene Service of the Tennessee Department of Public Health. A prominent item is "News About Industrial Nursing in Tennessee", containing excerpts from a paper presented by T.J. Bulger before a Tennessee State Nurses Association meeting. The desirable qualifications of an industrial nurse are given as personality, educational background, initiative and interest in the work, and ability to keep records. The number of industrial nurses in Tennessee on March 1, 1943 was 226. Other timely items are also reported.

738 Carbon Canisters Remove Gas From Biological Laboratory.

A large processing organization sought economical, efficient means of removing gaseous odors that were nauseous at a concentration of but 1/10 part per million parts of air. Several hundred perforated activated carbon filled canisters were arranged so that 13,000 cubic feet of recirculated air, to be decontaminated, flows through the multiple carbon beds every minute with an air resistance of only 2/10 inch of water. By the use of this method excessive equipment and fuel costs are avoided and the air conditioning plant is reduced to modest proportions. Reactivation of the saturated carbon made it possible to measure the amount of gaseous impurities extracted during the first 18 months of service. It came to 150 pounds, estimated at being sufficient to blanket half the city of Chicago to a depth of 10 feet. -- Chem. Equipment Rev., 6, 9 (March-April, 1943).

739 National Safety Congress.

The Transactions of the 31st National Safety Congress, held in Chicago October 27-29, 1942, have been issued in two volumes. Volume 1, 720 pages, includes the General Subject and Industrial Sections and Volume 2, 279 pages, the Street and Highway Traffic, Commercial Vehicle, Transit, Child Education, Home and Farm Safety Sections. Of especial interest in Vol. 1 are papers given in the sessions on dust, fumes, gases and vapors, pp. 55-75; gas and electric welding, pp. 95-102; industrial health, pp. 137-149; industrial nursing, pp. 151-166; occupational

diseases in munitions manufacture, pp. 167-178. Some of the papers on these subjects, or other papers by the same authors covering the same ground, have been presented in the Digest, and the others appear in this issue.

740 Paint Your Factory Floors for More Light.

The painting of walls and ceilings has been found to be an adequate means of improving lighting conditions without changing existing lighting equipment. Now, the painting of floors for greater light reflection offers interesting money saving possibilities. A survey was conducted by "Paint Progress," using small models to determine the efficiency of various paint colors for floors. White has the highest reflecting value. Values of other industrial interior colors are tabulated. -- Paint Progress (New Jersey Zinc Company).

Legal Developments

741 Federal Employers' Liability Act. Death Due to Excessive Heat in Power Plant of Railway Company. Safe Place to Work. Employer Not Negligent. Assumption of Risk.

Beamer employed by the Virginian Railway Company at its power plant, died a short time after having worked in intense heat in the plant for about two and one-half hours. His administratrix instituted an action for his death against the railway company under the Federal Employers' Liability Act, and recovered a verdict for \$10,000. The verdict was set aside and judgment was entered for the railway company on the ground that Beamer had assumed the risk of his employment which barred any recovery for his death. Beamer was originally employed by the firm which built the plant as a steam fitter in the construction of this power plant. He was taken over by the railway company when the plant was completed and he had worked in the same capacity for the latter company at this power plant continuously until his death. He was more familiar with the system of pipes in the plant than any other employee. Beamer had to repair a steam pipe near the ceiling in the basement. The air circulation around the pipes near the basement ceiling was poor and it was very hot. One hour after Beamer's death the temperature was 132 deg. F. Physicians testified that the heat was most likely the cause of his death. The defense of assumption of risk was the principal one. The jury was instructed and the case was tried upon this defense just as though Congress had not enacted the 1939 Amendment (53 Stat. 1404, c685, 45 U.S.C. par. 54) to the Federal Employers' Liability Act. The amendment obliterates from the law the doctrine of assumption of risk in any case where injury or death results in whole or in part from the negligence of the carrier. In this respect the case was tried upon a false theory. The fact that the court set aside the verdict upon an erroneous ground will not compel a reversal of the judgment if a correct result has been attained. If the railway company was not remiss in its duty to Beamer, no judgment against it should be allowed to stand. There remains the question whether or not death resulted from the negligence of the railway company. The railway company was not negligent in sending Beamer to work on the heat line under the turbine when it was very hot. This was a reasonably safe place for him to work under existing circumstances. The railway company was only required to exercise ordinary care in furnishing a safe place for Beamer to work. It was not hotter where Beamer was working than is required by standards of good practice for such plants. Judgment affirmed. Beamer v. Virginian Railway Co., Va. Supreme Ct. Decided June 14, 1943. (CCH).

742 Occupational Disease. Computation of Compensation Payable.

Appeal by claimant from that portion of a decision and award made by the Board which modified an award by the referee. Claimant, prior to the date of disablement, received as wages \$30.00 per week. He suffered an occupational disease and after a partial recovery was able to, and actually did, earn \$6.48 per week as a janitor. The Workmen's Compensation Law provides that if it shall be determined that an employee is able to earn wages at any other occupation and such wages do not equal his full wages prior to the date of disablement, the compensation payable shall be a percentage of full compensation proportionate to the reduction in his earning capacity. The referee computed the reduced earnings rate by awarding to the claimant two-thirds of the difference between his average weekly wages prior to the date of disablement and his actual earnings for the period covered by the award. The Industrial Board disregarded claimant's actual earnings and arbitrarily fixed his earning capacity at fifty per cent. The Board in reversing the referee sought to apply this statute. It did so, not upon evidence as to what the claimant was able to earn in any other occupation which should be neither unhealthful nor injurious, but upon medical evidence that the physician believed that he could go back to work, or if his general condition was built up a little, it might be possible for him to return to work. There was insufficient basis for the application by the Board of this statute. Award reversed and the matter remitted. Lapp v. Owl Laundry Service, Inc., et al. N.Y. Supreme Ct. App. Div., 3rd Jud. Dept. Decided May 5, 1943. (CCH).

743 Asthma Contracted by Employee in Soap Factory. Trial Court's Authority to Substitute Own Findings for Jury's Findings. Construction of Findings to Uphold Verdict.

This was an action for damages for personal injuries in which plaintiff alleged that while in defendant's employ he contracted asthma, an occupational disease, as a result of negligence of defendant. The jury answered special questions and returned a verdict for plaintiff for \$3,000. Defendant moved to set aside most of the special questions. This motion was sustained in part and overruled in part. Defendant also moved for judgment in its favor on the answers to the special questions notwithstanding the general verdict. This motion was sustained. Plaintiff has appealed from the adverse rulings on both motions. Plaintiff worked in several departments of defendant's plant. There were large quantities of soap dust in all these departments every time he worked there. The floor of one department was covered with soap dust. His lungs got tight and his breathing became difficult while working in the dusty departments. He coughed continuously during the last months of his employment. The jury returned its general verdict for plaintiff and answered special questions. The jury found, in answer to some of the special questions, that plaintiff's disease is an occupational disease incident to working in and about defendant's soap manufacturing plant, that the average employee working about a soap manufacturing plant suffers similar ailments, and that defendant knew of such a disease being contracted by other employees working in said plant, naming two such employees who had contracted asthma. The trial court set these findings aside. The trial court's powers extend no further than to approve or disapprove the verdict, or the answers to special questions. It has no authority to render a judgment contrary to the verdict nor to find an answer to a special question opposed to that returned by the jury. The court may not substitute its judgment for that of the jury. The trial court had no authority to make findings, which amounted to answers to the questions, contrary to those made by the jury, as the trial court's written rulings indicate was done. The limit of the court's authority was to approve or disapprove the findings. The question as to what other employees had contracted asthma should not have been submitted, for the reason it was impossible for the jury to have answered it from the evidence. The answers to the

special questions approved by the court are not so inconsistent with the general verdict that the latter cannot stand. The trial court erred in sustaining defendant's motion for judgment upon the answers to the special questions. The pleaded defenses of assumption of risk and contributory negligence were found against defendant, and rightly so, by the general verdict of the jury. Appellant asks that judgment be entered for plaintiff upon the general verdict. This may not be done for the reason the trial court has not approved the general verdict, and no judgment should be entered upon a verdict which has not been approved by the trial court. There is no specific order of the court in the record either approving or disapproving the general verdict. If the court approves the verdict, judgment should be rendered thereon for plaintiffs; otherwise, the court should grant a new trial. Judgment reversed with directions. Walker v. Colgate-Palmolive-Peet Co. Kan. Supreme Ct. Decided June 14, 1943. (CCH).

- 744 Occupational Disease. Compressed Air Tunnel Worker Disabled as Result of Compressed Air Illness. Section 40 of Workmen's Compensation Act Construed. Claimant was employed as a compressed air tunnel worker. Claimant became disabled as a result of compressed air illness or its sequelae. The Workmen's Compensation Law expressly provides coverage of this occupational disease. The sole issue raised by appellants concerns the question whether this occupational disease was contracted within the terms and conditions of Section 40 of the Workmen's Compensation Law. The Board found that claimant became disabled as the result of an occupational disease due to the nature of his employment, which was contracted by him while employed by the employer-appellant within twelve months previous to the date of disablement. Award affirmed. Connell v. Walsh Construction Company, et al. N. Y. Supreme Ct., App. Div., 3rd Jud. Dept. Decided January 13, 1943. (CCH).

- 745 Factory Employee Exposed to Gases and Dust. Resulting in Tuberculosis. Cross motions, by defendant for judgment on the pleadings pursuant to Rule 12(c) of the Rules and by plaintiff for leave to file and serve an amended complaint. Briefs have been presented on behalf of both parties and the matter submitted to the court for decision. Plaintiff was employed in a factory operated by the defendant. During such period of employment, the defendant violated certain provisions of the Labor Law as a result of which plaintiff was exposed to various gases and dust from which he contracted tuberculosis, silicosis, heart injuries and various aggravations thereof. Such diseases and injuries were not, at the time of the contracting thereof, within the purview of the Workmen's Compensation Law. Plaintiff's proposed amended complaint presents two causes of action. The first cause presents a claim for the disease of tuberculosis arising from the various gases to which the plaintiff alleges he was exposed, and the second cause alleges general injuries from the various dusts to which he alleges exposure. Under the complaint proposed to be amended, when considered in connection with the Bill of Particulars, proof can be made of tuberculosis, silicosis, or general injuries, and therefore the motion to amend should be denied. Defendant's motion for judgment on the pleadings is on three grounds: (1) that the action is barred by section 48(2) of the New York Civil Practice Act requiring actions on statutory liability to be commenced within six years from the accrual of the cause of action; (2) that the action is barred by Section 66, Article 4A Workmen's Compensation Act requiring "dust disease" actions to be begun within 90 days after April 16, 1940; (3) that this court has no jurisdiction over the subject matter of the action. With respect to the first ground, it is the court's opinion that in view of the wide latitude of evidence admissible under the complaint that decisions of this nature are more properly reserved until the evidence is presented. With respect to the second ground the complaint is sufficiently broad of scope to permit proof of gaseous inhalations and non-dust

diseases, and the plaintiff is entitled to present his proof at the trial and defendant's motion to the complaint is not well taken. Defendant contends that since plaintiff's employment extended from September 1, 1935, the Department of Labor has exclusive jurisdiction, as provided by the Act, where the last exposure to dust occurred after September 1, 1935. The common law right of action is preserved even though the employee continued to be exposed after September, 1935. The motion to amend the complaint is denied. The motion for judgment on the pleadings is denied. Conner v. E.I. duPont deNemours & Co., Inc. U. S. Dist. Ct., Western Dist. of N. Y. Decided March 10, 1943. (CCH).

746 Wrongful Death. Inhalation of Sulfur Dioxide Gas as Cause of Death. Former Workmen's Compensation Case.

In an action for wrongful death the testimony of a physician as to the possibility of a causal relation between the inhalation by decedent of sulfur dioxide gas and subsequent death is not sufficient, standing alone, to establish such relation. Prior to the institution of this action decedent's wife prosecuted a claim as surviving widow before the Workmen's Compensation Commissioner, which claim was denied on the ground that decedent's death did not occur as the result of his employment. It is now contended that because in that proceeding asserted that her husband's death was the result of a single exposure, plaintiff may not now be permitted to contend that decedent died from a disease incurred by being gassed over a long period of time. There is no merit in such position. Mrs. Hayzlett in her claim before the commissioner appeared as an individual, while in the instant case she sues as administratrix of decedent's estate. Moreover, the bases for recovery are entirely dissimilar in the two proceedings. The court reverses the judgment in remanding this case to the court of common pleas for further development, and enters judgment on the jury verdict. Hayzlett, Admx. v. Westvaco Chlorine Products Corporation. W. Va. Supreme Ct. of App. Decided May 11, 1943. (CCH).

747 Compensation Agreement. Discontinuing Compensation Payments Upon Employer's Filing of Petition for Review.

This cause is before the court for determination upon two questions certified by the superior court. The proceeding was begun by the employer's filing with the director of labor, a petition to review a certain preliminary compensation agreement, upon the ground that respondent's incapacity had subsequently ended or diminished. The questions certified to this court for determination are: Where an employee receiving compensation under the Act voluntarily returns to work with the employer from whom he has been receiving compensation, and earns wages equal to or greater than his average weekly wages at the time of the injury, but where no final agreement has been filed, is the employer obliged to continue making the payments of compensation while the employee is so employed or until a final agreement is filed; where the employee voluntarily returns to his work under the above stated conditions, but no final agreement has been filed, must the employer, before being permitted to proceed with a petition for review of the preliminary agreement, pay to the employee the compensation fixed in the preliminary agreement for the period during which the employee has been so employed? It was held that the first of these questions did not so affect the merits of the controversy as to justify certification, and consideration therefore will be confined to the second question. It is the court's finding that the legislature required that all compensation agreements must be approved by the director of labor in order to have the status of effective compensation agreements under the act. An agreement entered into by employer and employee and approved by the director of labor under the act has the force and effect of a decree of court; that until it is modified or terminated in accordance with the provisions of the act, it must be complied with and is enforceable as a

decree. The second certified question must be answered in the affirmative. A further confirmation of this conclusion is found in the statute which permits an employer, upon the filing of a petition for review, to cease, for a reasonable time, payments of compensation. The papers in the cause, with this court's decision certified thereon, are ordered to be sent back to the superior court for further proceedings. Brown & Sharpe Manufacturing Co. v. Giacoppa. R.I. Supreme Ct. Decided July 23, 1943. (CCH).

Book Reviews

- 748 Exploring the Dangerous Trades. By Alice Hamilton. Little, Brown and Co., Boston, Mass. Index, illustrated, 433 pp. (1943). Price \$3.00. Industrial hygiene has been granted a great service in this book, which is a biographical account of the last thirty years by an authority with a gift for interesting writing. Dr. Hamilton tells at first hand of the period from 1910 to 1920 when industrial medicine was frowned upon by the medical profession. From 1920 on it gathered impetus, while in the last 10 years the preventive aspects have assumed a permanent place in American industry. The humanitarian and social aspects of industrial health matters occupy a large part of the book. Dr. Hamilton has seen our nation emerge from a position of disgraceful backwardness in the control of industrial health to the present time, when we can take our place as a world pioneer. It is doubtful if there is any other person qualified by personal experience to write such a book. Few, if any, who could do it in so charming and interesting a manner.
- 49 Air-Borne Infection. Some Observations on its Decline. Dwight O'Hara. The Commonwealth Fund. New York. (1943). 114 pp. Price \$1.50. The book is a study of air-borne diseases, mainly from the standpoint of preventive medicine. The most common ones are given detailed consideration, usually a chapter to each, including smallpox, diphtheria, pneumonia, streptococcus infections, rheumatic fever, tuberculosis, the common cold, whooping cough, measles and influenza. In the discussion of the first two the author traces the evolution of our knowledge of immunity and the development of vaccination and of anti-toxin administration. From the other diseases we have as yet no such means of protection, and the author presents various facts and theories about the diseases and speculates on the possibility of their successful treatment. In the final chapters the general amelioration of health that has been progressing for number of years is discussed. The dependence of one disease on another is considered, but the decrease in some diseases in the absence of any preventive campaign, is credited to a better standard of living, including better medical care, rather than to unknown factors in immunity. Finally health is depicted as resultant of biologic constitution, emotional constitution and living standards, each appropriately subdivided. The final chapter deals with age and disease and their relations. The book is well worth reading for the viewpoints stated. However, the reader who is acquainted with industrial or general hygiene will be disappointed in the brief treatment accorded actual air transfer cases. In the chapter with that heading, the author describes the transfer of microorganisms in droplets set in motion by coughing, sneezing or talking. droplets and the germs they carry are always in the air when people gather. He makes the point that it is of no use to purify the air when it is immediately to be polluted. The actual disease reservoir for respiratory infection

is not in the exhaled vapors, but in our nasopharyngeal membranes, and the atmosphere is merely the vehicle by which the microorganisms move about. Moreover, the remedies that have been successful against these diseases have no relation to their transmission by air. These statements are largely true; yet the industrial hygienist reading the book would wish that the work of Wells and others in proving that disease-producing organisms are transmitted by air, showing how they are transmitted, and how they depend on moisture for their life; also that the use of ultraviolet light as a bactericide had been at least mentioned. In his foreword the author admits that his pages record speculation; so why not speculate also on the possibility of the elimination of disease transmission by air through developments along the lines that have been begun?

- 750 Creatine and Creatinine Metabolism. H.H. Board. Chem. Publishing Co., Inc., Brooklyn, N. Y. 376 pp. cloth \$4.00. (1943).
This monograph is a well written and inclusive summation of the biochemical literature on creatine, creatinine, and muscle metabolism in general. It is a necessary revision of Hunter's monograph which has been a classic for sixteen years. In addition to biochemists and students of muscle metabolism, this book should be of considerable interest to the clinician interested in myopathies. It should also be of interest to the industrial hygienist and physician, because it gives one a better understanding of muscle metabolism and shows the importance of adequate and proper nutrition for the production of a maximum amount of muscular work.
- 751 Medical Jurisprudence and Toxicology. J. Glaister. Williams & Wilkins Co., Baltimore, Md., 7th Ed. 671 pp. (1942). \$8.00.
There are few changes made since the 6th edition was published in 1938, when the work was extensively revised. The book has been primarily written for use in England and Scotland and the legal chapters will be of limited value to American readers. However, most of the book is medical, including 12 chapters on medical investigation of deaths and 8 on toxicology. A new appendix is devoted to medico-legal procedures in relation to deaths following air raids.

Industrial Health Hazards and Their Effects

- 752 Byssinosis - Report of Two Cases and Review of the Literature. H.L. Bolen. J. Ind. Hyg. & Tox., 25, 215-223 (June, 1943).
The term Byssinosis, derived from a Greek word meaning fine linen, identifies a form of respiratory disease affecting workers in cotton mills. Considerable dust is released in the processes which prepare the cotton for spinning and weaving. Following a description of the symptoms and progress of the disease, two case reports and a review of the literature are given, as indicated in the title. No specific treatment for the disease is known, but sensitization injections have been administered with some success. A special dust respirator has been devised in London and many plants are taking steps to control card-room dust.
- 753 The Physiologic Properties of Indium and Its Compounds II. G.C. Harrold, S.F. Meek, N. Whitman and C.P. McCord. J. Ind. Hyg. & Tox., 25, 233-237 (June, 1943).
Continuation of an investigation of the toxicity of indium leads to the following supplemental statements: Indium treated silver discs implanted in rabbits

(subcutaneously, intramuscularly, and intraperitoneally), induce only foreign body reactions in periods up to 156 days. The prolonged daily feeding of indium sulfate to rats produces no demonstrable changes at the 58 mg./kg. level. Higher amounts (116 mg./kg.) may produce poorly defined subnormal states after more than 40 feeding days. The equivalent daily dosage in man would be near 123 grains. Indium absorption after feeding is proved by the presence of indium in the urine and its relative absence in the urine of control animals. Diverse foods in contact with indium treated metal, remotely simulating indium treated metal food containers, present amounts of indium, which in the case of weak acetic acid dilutions, thus akin to pickled foods, are important and noteworthy. A chemical method for the analysis of indium in the presence of both organic and inorganic mixtures is described. No industrial applications of indium are now known to introduce serious exposures for workers.

- 754 The Effect of Arsenates on the Storage of Lead. L.T. Fairhall and others. Pub. Health Repts., 58, 955-959 (June 18, 1943).

A soluble arsenate, such as sodium arsenate, when fed to rats receiving lead carbonate, was shown to produce effects similar to those produced by lead arsenate alone. The administration of sodium arsenate with lead carbonate diminished the concentration of lead in the kidneys, while the concentration of arsenic amounted to only half that of the sodium arsenate group. More significant is the fact that arsenates in general definitely diminish the storage of lead in bone tissue. The amount of pathologic damage follows that observed in experiments previously described in which lead arsenate and lead carbonate were fed to animals for comparison of the relative toxicity of molecular components. In this study the spleen showed the most marked changes with sodium arsenate and the least with lead carbonate. Conversely, the kidney showed more marked changes with lead carbonate. The tissues from the animals receiving both sodium arsenate and lead carbonate showed changes of an intermediate degree. No pathologic changes of any significance were observed in the liver.

- 755 Effect of Lead Absorption on Blood Calcium. W.V. Jenrette and L.T. Fairhall. Pub. Health Repts., 58, 1001-1005 (July 2, 1943).

Investigation of the serum calcium content of animals ingesting large amounts of lead as well as animals receiving smaller doses over a longer period of time at different levels of calcium intake indicates that lead absorption does not appreciably affect the blood calcium level. -- Authors' summary.

- 756 Magnesium in Industry - Magnesium Burns. F.J. Jarzynka. Ind. Med., 12, 427-431 (July, 1943).

The rise in prominence of magnesium in industry has awakened much interest in the occupational hazards incurred in its fabrication. Burns are the most common injuries encountered and are usually severe and deep, as magnesium fires produce high temperatures. The fires arise from molten metal, or from the igniting of the metallic dust or swarf. The author gives a short history of the experience of his company with magnesium fires. A number of case histories are related. Treatment, which differs in no way from that of other thermal burns, is discussed briefly. Protective measures against magnesium burns are good housekeeping, instruction of employees in precautions to be observed, and wearing of protective clothing and plastic face shields or goggles.

- 757 The Physiologic Properties of Palladium. S.F. Meek and G.C. Harrold. Ind. Med., 12, 447-448 (July, 1943).

Palladium is one of the metals now enjoying wider industrial application in various fields. The sources, physical properties, some common compounds and their specific uses are given. These substances are not known to constitute a hazard

to exposed workers, but they have been found, from animal experiments, to cause damage, ~~when~~ injected intravenously in small amounts. The chief sites of damage appear to be the heart, kidneys, liver, bone marrow, and blood cells. Indications are that palladium is eliminated from the body chiefly through the kidneys.

- 758 The Threshold Toxicity of Gasoline Vapor. Philip Drinker, C.P. Yaglou and M.F. Warren. *J. Ind. Hyg. & Tox.*, 25, 225-232 (June, 1943).
In 1921 and 1927 the Bureau of Mines published reports on the threshold toxicity of gasoline vapors, using human subjects. The authors conducted experiments with the same general methods, but with larger groups of subjects, varying from 8 to 13. The gasoline concentration ranged from 0.015 per cent upward. The results on toxicity agree sufficiently with those obtained in the earlier work; real toxic symptoms developed when the gasoline concentration was 0.1%. Trial of gasoline fractions cut at 110 C gave substantially the same results. The threshold of detection of gasoline by odor was found to vary among individuals, but by many the odor was noticed at 0.015%. This figure is lower than those found by the Bureau of Mines. Such low concentrations produced slight degrees of gastro-intestinal disturbance in one or two persons out of 10. While gasoline may be detected at very low concentrations, it is very difficult to judge its concentration even roughly by the odor. This fact makes it possible to consider that serious complaints of gasoline odor may be referable to very low concentrations of gasoline in the air.
- 759 The Physiological Response of Rabbits to Cyclohexane, Methylcyclohexane, and Certain Derivatives of These Compounds. I. Oral Administration and Cutaneous Application. J.F. Treon, W.E. Crutchfield and K.V. Kitzmiller. *J. Ind. Hyg. & Tox.*, 25, 199-213 (June, 1943).
1. The minimum lethal doses of cyclohexane, cyclohexanol, and cyclohexanone, and their methyl derivatives, administered to rabbits in single doses by means of a stomach tube range from 1.1 to 5.8 g./kg. 2. The minimum lethal doses of the oxygenated compounds applied to the skin of rabbits range from 6 to 17.6 g/kg. Single and repeated application of the hydrocarbons failed to induce fatal poisoning in rabbits. 3. The compounds range themselves in decreasing order of toxicity as ketone, alcohol, and hydrocarbon, in both the methylated and non-methylated series and for both methods of administration. In all instances the methylated compounds are more toxic than the non-methylated.
4. Physiological effects, upon the animals, of the oral and cutaneous administration of these compounds, are given. 5. The pathologic findings in fatally poisoned animals were those of an acute toxic process lacking in specific characteristics, the damage having wide distribution by virtue of general vascular injury.
- 760 Carbon Tetrachloride. M. Bowditch. *Ind. Med.*, 12, 440 (July, 1943).
The "code for safe concentrations" to toxic exposures in Massachusetts plants gives the allowable maximum for carbon tetrachloride as 100 parts per million. The author believes that this figure is too high by 100%, and gives in support of his assertion, the evidence published by Elkins in 1942, which was deduced from a study of 11 separate plants. Elkins concluded that the correct value is not above 50 p.p.m. and probably not below 25 p.p.m. Atmospheric determinations for carbon tetrachloride made in 2 factories by the Massachusetts Division of Occupational Hygiene gave findings which warranted discarding the figure of 100. They ask cooperation in their quest for a standard which will insure the worker's well being without imposing undue burden on the employer.

- 761 Chlorinated Solvents - In Common Wartime Use. D.H. Byers. Ind. Med., 12 (July, 1943).

The most important of the chlorinated hydrocarbons, from the viewpoint of industrial health are carbon tetrachloride, ethylene dichloride (1,2 dichlorethane) and trichlorethylene. The toxicity of these compounds follows the order in which they are named, in descending order. The author discusses each solvent, giving chemical and physical properties, applications in industry, principal dangers of industrial poisoning, the effects of the compounds upon the body and safe atmospheric concentrations. Some precautions to be observed in the use of trichlorethylene as a degreasing solvent are given. The importance of instituting proper measures to prevent hazards in the use of hydrocarbons from reaching serious proportions is stressed. The use of air tests to determine the concentration of the solvents is recommended.

- 762 Hazards of Common Organic Solvents. H.P. Quadland. Occup. Haz., 5, 9, 27-28 (July, 1943).

Hazards in the use of organic solvents are: (1) Fire and Explosion; (2) Toxicity; (3) Bodily Contact. Financial losses from fires due to flammable liquids have increased from more than 7 million dollars in 1936 to 9 million dollars in 1941. Lists of common organic solvents which offer the hazards of fire and explosion and of those which are non-flammable and non-explosive are given. The "Table of Common Hazardous Chemicals," published by the National Fire Protection Association gives detailed information on proper safeguards against fire. F. Flury in "Toxicology and Hygiene of Industrial Solvents" makes a three-fold classification of the toxicity of common solvents: (1) Those which are harmless under ordinary conditions of industrial use, but dangerous if their vapors are breathed in high concentrations; (2) Those which cause secondary reactions in the body, from which a quick recovery is possible if the damage is not severe; (3) Solvents which may cause secondary effect which, when not fatal, may be irreparable. The last group must be handled with the greatest of care under the proper controls. The common organic solvents, in prolonged contact with the human skin will absorb the natural oils, leaving it dry and open to infection or they may be absorbed into the body through the skin. Personal cleanliness and the use of protective creams and solvent-resistant gloves are enjoined. Instructions of the manufacturers concerning the safe use of their products should be heeded.

- 763 Some Toxic Reactions of Common Explosives. J.H. Eddy, Jr. Ind. Med., 12, 483-486 (July, 1943).

The paper is intended particularly for private practitioners who are, in general, not familiar with the material treated. During this war there have been fatal cases of poisoning, due to T.N.T., both in this country, and in Europe. Evidences and results of exposure to T.N.T. are given, with methods of treatment and measures for prevention. The effects from tetryl while less serious than those associated with T.N.T., nevertheless call for similar preventive measures.

- 764 Industrial Sanitation. Anonymous. Industry, 8, 25-26, 50-51 (July, 1943).

The progress in the science of industrial hygiene and sanitation is noted. New exigencies induced by employment increases, multiple shifts, longer hours, and less recreation are being met by health authorities. Rules for sanitation and hygiene are fairly uniform throughout the country. An American Standard Code, sponsored by the U. S. Public Health Service is a minimum code, offered as a guide to States and to individual industrial plants. Some of the provisions of the Code are discussed.

- 765 Industrial Hygiene - In Synthetic Rubber Manufacture. F.S. Mallette. Ind. Med., 12, 495-499 (July, 1943).
"The vital importance and rapid expansion of the synthetic rubber industry provides an excellent opportunity for industrial hygiene activities. Of the four different types of synthetic rubber called for in the government program, Buna S is the most important and will be produced in the largest quantity. The almost complete enclosure of this process prevents exposure to all but low concentrations of vapor." Safe concentrations for butadiene, styrene, and acrylonitrile, ingredients of Buna S and Buna N rubber are given, with methods of determination of low concentrations. "In a series of several hundred blood examinations, no effect traceable to butadiene, styrene, or acrylonitrile could be found. The points of potential exposure in these processes are in the handling of raw materials, coagulation, centrifugation and drying." Means for avoiding or preventing these exposures are given. -- Condensed from the Author's summary.
- 766 Drinking Water on Construction Jobs. Industrial Data Sheet No. D.-Con.3. National Safety News, 47, 57, 99-101 (June, 1943).
Hazards in supplying drinking water on construction jobs are due either to use of polluted water or to contamination during handling. A thorough discussion of Sources of Water Supply, Testing and Treatment, and Dispensing is provided.
- 767 Bubbling Drinking Fountains. A.P. Hitchens and O.A. Ross. J. Am. Water Works Assoc., 35, 165-167 (February, 1943).
Studies of drinking fountains actually in use emphasize the need for serious attention on the part of health officers to fountains so constructed and used that they actually concentrate and distribute agents of disease. Large numbers of bacteria, among them, pathogens, were found in drain pipes. These are transmitted to users by splashing up of water in the bowl, which results from air bubbles caused by partial clogging of the drain. These findings are supported by bacteriological examination of material in the drain and by animal experiments.
- 768 Save Your Skin. L. Tulipan. Safety Eng., 85, 45-48 (June, 1943).
In normal times there are, on the average, about 250,000 cases of industrial diseases of the skin occurring annually in the United States. It is probable that the war has produced an appreciable increase in the number of cases. The prevention of dermatoses in the following industries are summarized: Explosives, electroplating, acids, cement, cyanamide, chromium, coal tar, petroleum, synthetic dyes, artificial silk, organic solvents, resins and waxes and rubber. A description of the general principles of treatment is also provided. The need for the study of skin disease by research dermatologists and the employment of specialists by industry are stressed.
- 769 Hypersensitivity to Adhesive Tape. Report of Four Cases Showing Its Variable Etiology. H. Keil. J. Ind. Hyg. & Tox., 25, 238-242 (June, 1943).
The protocols of 4 cases of hypersensitivity to adhesive tape are recorded. The results of patch tests with the various ingredients of adhesive tape are discussed, with particular reference to Beni Para rubber and so-called "pitch subcompound." The first example of hypersensitivity to commercial dehydrogenated rosin is recorded. The fundamental question of hypersensitivity to oxidized fractions in abietic acid is discussed. Preliminary data are furnished to show that a positive patch test to abietic acid may not be due to the acid itself, but rather to oxidized fractions, phenolic bodies and so forth. The etiology of hypersensitivity to adhesive tape is variable and each ^{case} requires study to determine the precise cause or causes.

- 770 Bronchial Asthma Due to Sensitivity to Gum Acacia. P.H. Sprague. Canadian M. A. J., 47, 253 (September, 1942).

The case is reported of a printer who experienced asthmatic attacks while at work. He was exposed to dust arising from an "offset" spray which contained gum acacia; this spray was a fine powder used to prevent the colored material from one sheet from being smeared on to the sheet below it. Masks were worn by the workers, but in one man the mask was not sufficient protection. He found his breathing becoming difficult, so that he had to leave his work in the early afternoons; shortly after leaving, his breathing improved. Investigation showed that it has taken almost four years for him to become thus sensitized to this substance, which is no longer being used. Others have found that acacia is a highly specific allergen which constitutes a definite industrial hazard. The affected man had an allergic rhinitis, his father had asthma, and a brother had eczema. With him, a simple scratch test with the powder gave a definite weal and an extensive flare.

- 771 Physiological Reactions Applicable to Workers in Hot Industries. F.C. Houghten, C. Gutberlet and M.B. Ferderber. Heat., Pip., & Air Cond., 15, 205-208 (April, 1943).

1. A study of the rise in body temperature and increase in pulse rate of workers at relative humidities of 30 per cent and lower shows the same reaction at a given effective temperature as previously found for higher relative humidities.
2. The body temperature rise correlates well with effective temperatures, indicating a possible maximum, plus or minus, departure of less than one degree in effective temperature at 30 per cent relative humidity on a given effective temperature line in the neighborhood of 95 deg. ET.
3. Rather conclusive evidence is reported to substantiate the earlier findings of the Laboratory, that a person is comfortable at a slightly higher effective temperature when standing and moving about at work than when seated at rest. -- Authors' summary.

- 772 Do Women Create More Problems in Industry than Men? C. Nash. Ind. Med., 12, 450-451 (July, 1943).

The closing paragraph summarizes the author's answer to the question, as follows: "In fairness to my sex, I would say women do not present any unusual difficulties but rather that the biggest and important problems lie in industry itself. After all, industry was not prepared for women workers on a large scale - machinery was set up at working heights for men, for one thing; washrooms were just washrooms, not rest rooms, and so on. It will take a little time and patience to make the necessary adjustments, but women have shown they 'have what it takes' and everything will come out all right."

- 773 Women's Wartime Occupational Hazards. Women's Bureau, U. S. Department of Labor. Ind. Med., 12, 486-487 (July, 1943).

Figures are given, showing increases from 65% to 90% in injuries to women in America and Great Britain. Need for more complete statistics on which to base prevention programs is indicated. Special accident problems of women war workers are listed. Industrial health problems, due to war conditions and the incident expansion of women's employment in certain jobs require the full use of medical and engineering control to prevent occupational diseases as well as the use of protective devices for the avoidance of accidents.

- 774 Fatigue - A Misnomer. H. Bartle. Ind. Med., 12, 436-438 (July, 1943).

The author points out that fatigue is a very general and indefinite term, and that its definition needs to be clarified in terms of modern concepts. He suggests the use of the words abnormal and normal as amplifiers and recommends studies to increase our knowledge of the mental aspects of fatigue.

- 775 Studies on the Duration of Disabling Sickness. IV. Duration of Disability from the Non-Respiratory - Non-Digestive Diseases Among Male Employees with Particular Reference to the Older Worker. W.M. Gafafer. Pub. Health Repts., 58, 969-979 (June 25, 1943).

This, the fourth of a series of papers on the duration of disabling sickness, is based on absences lasting 8 calendar days or longer, and presents principally an age comparison for males of certain pertinent indexes determined by specific non-respiratory - non-digestive diseases. Four specific causes are presented. These causes, which were the principal time losers among males 50 years of age and over, are diseases of the heart and arteries, the rheumatic diseases, diseases of the nervous system, and cancer, all sites. Thus the frequency of 8-day or longer absences on account of diseases of the heart and arteries among this older group of males was approximately 6.5 times the corresponding frequency for men under 50, the number of days lost per man from this cause being 8.5 times that for the younger group.

- 776 The 1942 Fire Record for Chemical Plants. L.F. Maar. Chem. and Eng. News, 21, 484-85, 530 (April 10, 1943).

In chemical plants large losses from fire marked the first year under war conditions. A list of special hazards that most often cause fires is given, with explosions at the top. Admonitions offered by the U. S. Office of Civilian Defense include: (1) Value of early discovery of a fire; (2) Proper maintenance and use of alarm equipment; (3) provision for suitable public and intraplant fire alarm services; (4) Knowledge of materials used and stored, with observance of safeguards for hazardous materials and general cleanliness; (5) Inspection of all fire appliances, including any private hydrants; (6) Weekly inspection of the entire plant, in cooperation with executives, safety director, medical officer, air-raid warden and other interested persons; (7) Cooperation in inspections by public fire and police departments, and fire protection engineers of the insurance interests.

Occupational Disease Considerations. E.R. Hayhurst. Ind. Med., 12, 443-446 (July, 1943).

See our Abstract No. 673, July, 1943 Digest.

Methods of Detection and Determination
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- 777 Determination of Small Amounts of Carbon Monoxide in Air and Blood. H. F. Holden. Australian J. Exptl. Biol. Med. Sci., 21, pt. 1, 9-12 (1943).

A description is given of two types of apparatus for determining carbon monoxide in small air samples (less than 25 cubic centimeters). A sensitivity of 1 part per 100,000 is claimed for the methods which employ a combination of carbon monoxide with hemoglobin. One apparatus may be employed for the determination of carbon monoxide in blood. It is said to be accurate for cases of slight poisoning.

- 778 Estimation of Reduced Degradation Products in Experimental Trinitrotoluene Poisoning. B.B. Westfall and M.I. Smith. Proc. Soc. Exptl. Biol. Med., 51, 123-124 (1942).

The compounds in the urine are diazotized with sodium nitrite and hydrochloric acid and coupled with N-(1-naphthyl)-ethylenediamine di-hydrochloride and determined colorimetrically. Tissues are extracted with acetone, the solvent is evaporated, and the compounds are determined in the residue after removal of unchanged TNT with ether.

- 779 Determination of Volatile Halogenated Hydrocarbons in Blood. H.E. Moran. J. Ind. Hyg. & Tox., 25, 243-248 (June, 1943).

A method and apparatus for the determination of dichlormethane in blood are described. The method consists of aerating the blood, passing the air containing the halide over heated platinum, and absorbing the resultant halide in alkaline sulfite solution. The halides are then determined by standard procedures. Analysis of prepared samples containing known amounts of dichlormethane indicate an error of less than 1/10 mg. of the material determined. It also was demonstrated that the same method can be applied to the analysis of less volatile halides, such as carbon tetrachloride and dichlorethane. The apparatus is modified so that the aspiration can be carried out at reduced pressure. Accuracy and precision of analysis are comparable to that of analyses of the more volatile dichlormethane.

- 780 Determination of Nitrous Gases. Karl Beyer. Z. Anorg. Allgem. Chem., 250, 321-30 (1943).

Nitrogen dioxide is absorbed in alkaline iodide solution and the nitrate and nitrite formed are reduced to ammonia. The method is suitable for high concentrations of air-borne nitrogen dioxide and control analyses indicate results within one per cent of the known value. A second more sensitive method employs absorption in alkaline iodide with the colorimetric analysis of nitrogen dioxide by means of Illosvay reagent. The second method requires less time for analysis and is also suitable for high concentrations. Control analyses gave results within one per cent of the known value.

- 781 Determination of Phosphine. Karl Beyer. Z. Anorg. Allgem. Chem., 250, 312-20 (1943).

Air containing phosphine is passed through a 10 per cent solution of mercuric chloride. The precipitate of $P(HgCl_2)_3$, formed in the sample bottle, is treated with excess standard iodine solution, one phosphine molecule being equivalent to 8 iodine. The excess iodine is determined with standard thiosulfate. The method is sensitive for air concentration as low as one mg. of phosphine per liter of air at a sampling rate of 600 liters per hour. Two auxiliary methods are described, both based on the oxidation of phosphine to ortho phosphoric acid by bromine or by a bromate-bromide mixture. The bromine oxidation is followed by determination of the phosphoric acid photometrically. When bromate-bromide is used, the excess is back titrated iodometrically.

Control Methods

- 782 Prevention of Butadiene-Air Explosions by Addition of Nitrogen and Carbon Dioxide. G.W. Jones and R.E. Kennedy. U.S. Bur. of Mines, Rept. of Invest., No. 3691, 11 pp. (March, 1943).

Knowledge of the explosion hazards of combustible gases and liquids used in the manufacture of synthetic rubber is especially important at present. This report gives in tabular and graphical forms the results of numerous experiments establishing the limits of inflammability of mixtures of air and butadiene to which various proportions of nitrogen and carbon dioxide were added. The graphs and tables indicate the limits of inflammability of complex gases containing butadiene and the percentages of oxygen that must not be exceeded to prevent mixtures containing butadiene from becoming inflammable. Full experimental details are given.

- 783 X-Ray Protection. M.B. Evans, Jr. Ind. Med., 11, (June, 1942).

The penetration of x-rays and other radiations is discussed briefly. Excessive radiation is injurious to the system. Local symptoms on the hands may or may not indicate excessive general exposure. The best test of exposure is the use of small photographic film carried on different parts of the body. Protective measures include confining within a suitable lead-lined room, absorbing screens, and making exposures in the absence of workmen. A table gives the required thickness of lead for various peak voltages. Other materials than lead, for instance concrete, are usable if loaded with barium sand, iron filings or iron ore. Otherwise the thickness must be very much greater than that of lead. Suggested safety precautions include regular examination of the installation, use of the test films as indicated, examination of circuit-breakers, and physical examinations of those who may be exposed.

Industrial Medical Practice

- 784 Medical Planning Research, Interim General Report - A Distinguished Report on a Proposed Reorganization of Medical Practice in Great Britain. Published in the U. S. by Medical Administration Service, Inc., New York. Pamphlet 32 pp.

The report, originally published in The Lancet of London is reprinted in pamphlet form for American readers. Only a few changes have been made, such as the omission of some sections applicable only to British problems, and minor condensations. Tables and charts have been converted into our monetary units. The representatives of the American publishers express the hope that the pamphlet will interest American physicians, members of the allied professions, sociologists, economists, hospital administrators, social workers and public officials. They are cognizant of the fact that such a report, prepared in and for another country can make no more than a general contribution to American medical planning; yet they believe that it warrants study and that it should point the way to a more forthright and non-controversial health planning than has been customary in the United States. The report was prepared by Medical Planning Research, an organization of 400 anonymous British physicians in widely divergent fields of practice, most of whom were under 45 years of age. Because many of the members were in the "Forces," only about 200 were able to make contributions, which have been used in preparing the report. The aim of the editorial group was to select the more constructive proposals and those most calculated to attract constructive criticism. It is in fact designed to test public opinion. Men in the "Forces" are urged to contribute to the discussion. The publishers in the United States would welcome American comment on the report.

- 785 How to Plan an Industrial Hospital. Anonymous. Occup. Haz., 5, 9,22 (May,1943).

In 1908 the Manhattan Rubber Manufacturing Division of Raybestos-Manhattan, Inc. was the first industrial plant in the busy Passaic, New Jersey, area to set up its own first-aid hospital. It is staffed by a physician, 5 nurses, a secretary, and a clerk. Equipment is of the latest type and includes examining, treating, operating and recovery facilities. The first American Red Cross First Aid Detachment to be organized in an industrial plant under the auspices of the Passaic chapter was recently formed at the Manhattan plant. The detachment is designed to function in disasters of any nature, including bombing, sabotage, explosions, fires, and floods and would assist the plant doctor and hospital staff. Ordinarily it would not leave the plant, but in event of an air raid causing many casualties in other localities it would be available for emergency calls. Employees forming the detachment are all Advanced First Aiders or Instructors and hold practice and drill sessions once each month.

- 786 War Medicine and Surgery. Chemical Warfare. Compiled under the direction of the Committee on the Survey of War Medicine of the National Health and Medical Research Council. Supplement to the Med. Jour. of Australia, no. 8, 29-32 (February, 1943).

The article is an outline of the now recognized war gases. The properties, methods of dispersal, toxic actions, pathological lesions, clinical picture, prophylaxis, decontamination, treatment and prognosis are given in detail for mustard gas and phosgene, and in outline for lewisite, arseniuretted hydrogen, hydrocyanic acid, hydrogen sulphide, lachrymators and sternutators. A gas decontamination center is thoroughly described. In brief, mustard gas is a "persistent" vesicant, with an insidious onset, affecting mainly the eyes, skin and respiratory tract. The effect upon the eyes is seldom permanent; the effect upon the skin is essentially a burn and should be treated as such; and the effect upon the respiratory tract is irritation of the mucous membranes with common development of septic bronchial pneumonia. Lewisite is similar in most respects, except that its action is swifter. Phosgene is essentially a "non-persistent" pulmonary irritant. The pathological and clinical effects are all the result of pulmonary edema. The other gases discussed are not so dangerous. Arseniuretted hydrogen is an hemolysin, and hydrocyanic acid and hydrogen sulphide affect tissue oxidation. Gas masks provide complete protection for all the gases mentioned except hydrocyanic acid.

- 787 Industrial Medical Service. H.J. Whitacre. Ind. Med., 12, 480, 482-3 (July, 1943) The program instituted by the state of Washington for promoting industrial health is discussed. A coordination committee, with two representatives each from the Department of Health, the Department of Labor and Industries, the medical profession, management and labor, was created to study the problem. The tentative program of this committee includes (1) industrial hygiene and safety engineering, (2) improved professional care of the sick and injured, (3) rehabilitation, (4) research. Considerable progress is reported in each of these fields. Subversive influences are management indifference, personal indifference, incompetence, selfishness and carelessness, but the medical profession continues to progress, despite these handicaps.

- 788 Stream-lined Pre-Placement Physical Examinations During Wartime. J.J. Prendergast Ind. Med. 12, 423-426 (July, 1943).

The author believes that less of the industrial physician's time should be spent in following the cut and dried procedure of pre-employment examinations and more in the medical department. Nurses should replace doctors in conducting the examination under fixed standards and the careful supervision of the physician. Stream-lining the examination would omit certain procedures, which though desirable in peacetime are expendable in time of emergency. Other basic indispensable procedures must be retained and even more rigidly inspected. A number of conditions discovered by the nurse performing the physical examination, in which the doctor should be called, are enumerated. A test devised by the A.M.A. committee on Ophthalmology in 1925 has proved helpful in determining central visual acuity. Criteria for accepting arrested tuberculosis cases are given. The use of "Nurses' Aides" to replace the nurses who are fulfilling the duties of examiners is suggested. The change in the significance of the pre-employment physical examination is pointed out -- examination is no longer for the purpose of rejecting the handicapped or sub-marginal worker, but rather for fitting these groups into the united effort of war production. The experience gained will be valuable in solving the post-war problem of placing soldiers and sailors when they return from overseas. The cooperation of the foreman is important in the employment of handicapped persons. A point emphasized in the discussion which follows the paper is that the nurse conducting the pre-employment examination assumes no responsibility for diagnosis. She acts as a screening agent for the physician and calls certain things to the attention of the physician, who makes the diagnosis.

- 789 Physically Handicapped Applicants Registered for Employment with the U. S. Employment Service in Ohio. Mimeographed 17 pp. W. Hammond, Director Office for Emergency Management, War Manpower Commission, U. S. Employment Service in Ohio. Reports and Analysis Section, Columbus, Ohio (January 16, 1943).
A report is made of a special inventory of physically handicapped persons registered for employment in the active file of the U. S. Employment Service offices in Ohio, made on January 16, 1943. The classification of handicaps presented a major problem, because of the lack of a generally-accepted classification of physical handicaps and of a satisfactory nomenclature of defects. The system followed represents a modification of existing classifications. Several limitations to the data reported are noted as follows: (1) Handicaps are those readily discernible or reported by the applicant (the handicap may or may not be based on medical diagnosis); (2) A subjective element is involved; (3) The severity of the defect is unknown; (4) There is little information as to the prospect of restoring the applicant to usefulness. In spite of those limitations, the findings give a significant perspective in a field, heretofore little explored. A larger proportion of men than women applicants were handicapped. The percentage of negro applicants with handicaps was somewhat lower than that of white applicants. Nearly one-fifth of the applicants who were war veterans had some physical defect. Other data presented were the percentages of skilled and unskilled laborers among handicapped applicants, the nature of defects, factors of age and education. The opinions of the local U.S. Employment Service managers as to prospects of employment for the handicapped applicants is given. The tightness of the labor market is one of the most important factors in determining those prospects. Eleven tables from which these and many other findings are deduced form part of the report.
- 790 Problems in Employing the Physically Handicapped. F.H. Albee. Illinois M. J., 83, 251-257 (April, 1943).
This forceful article should convince any doubting employer that the physically handicapped may, indeed must, be safely and profitably employed in industry. The greatest handicap faced by the cripple who desires to work is the illogical prejudice against him held by employers. Dr. Albee repeatedly cites instances where the average cripple (not just the unusual one) exceeds his fellow "normal worker" in excellency of work. Indeed the remarkable experiment by the Western Electric Co. (which relaxed for one year all restrictions against employing cripples) so convinced the company that the cripple employed in a job to which he is fitted could and did exceed the safety, attendance, production, wage increase and stability records of the "normal" worker, that they abolished those former restrictions and kept the cripples (300 of them) at their jobs. The cripple does not want sympathy, rather only a chance to prove his loyalty, so that he can earn a place in society. Humanity, national security and the industrialist's own prosperity demand that we scrap our prejudices and give the cripple this chance.
- 791 Employment of Physically Disabled Workers. Anonymous. Labor Information Bull., 10, 4-5 (June, 1943).
The article presents a new aspect of the matter of employment of handicapped persons in calling attention to the rapid growth in the disabled population due to the increase in industrial accidents and to war casualties. The large number of war jobs filled successfully by disabled workers gives assurance that men and women in the armed forces who return with handicaps, will be able to earn a good living.
- 792 The Physically Handicapped - Their Rehabilitation and Employment in Connecticut. J.H. Biram. Ind. Med., 12, 448-450 (July, 1943).
Connecticut is one of four states that have "waiver" clauses in their compensation act. This clause makes possible the employment of handicapped workers

without unjust penalty to the employer. The employee is protected against all occupational hazards except those pertaining to his specific disabilities. The author believes this is why Connecticut has been able to obtain cooperation of both labor and management in carrying out its rehabilitation program. This program includes a Vocational Rehabilitation Service, clinics to evaluate handicapped workers, a training program in connection with the State Trade School, a program for tubercular cases, a plan to provide assistance for needed surgical procedures. The program has been successfully administered through offices set up in the various manufacturing centers.

- 793 Employing the Physically Handicapped from the Employer's Viewpoint. G.P. Wardly. Illinois M. J., 83, 257-258 (April, 1943).

Three classes of physically handicapped persons are described: (1) Employees found handicapped by the company's medical examinations. These examinations often inform employees of latent or incipient ailments, leading to timely prevention of disability. Practical tests often show that these disabilities often need not exclude a man from his job. (2) Employees injured in plant accidents. This type of employee, formerly relegated to an unskilled job after an accident is now trained by the industry to do a job rating a wage rate as nearly equal as possible to his previous rate. One plant established a Plant Employees Rehabilitation Committee; five members and the Chief Surgeon of the plant decide whether the employee is physically fit for rehabilitation in his own division if possible, if not in another division of the plant. (3) Physically handicapped seeking initial employment. These people are the greatest problem since the plant has no direct responsibility for employing them.

- 794 Policies Regarding Youth Employment in Wartime. K.F. Lenroot. The Child. 7, 127-129 (March, 1943).

The article is a review of the policy of the War Manpower Commission concerning child labor. This policy sets an age limit of 16 years for factory and mining employment, and of 14 years for part-time work outside of school hours. Standards of maximum hours and conditions of labor recommended are a 48-hour six-day work week; no night work; adequate conditions of work; and adequate transportation of workers. The policy states that the activities of the school and the health and education of the student must not be placed under too great a strain if part-time employment is necessary. Finally the policy sets certain restrictions in regard to the recruitment of youth to work away from home.

- 795 Psychiatrist Looks at Industrial Truancy. L.S. Selling. Ind. Med., 12, 189-201 (April, 1943).

This article treats the problem of worker absenteeism - it discusses and lists the psychological reasons for absenteeism, and suggest ways for factory physicians and personnel officers to meet the problem. The author emphasizes the key role of the plant physician, for many of the new workers are mentally and physically second caliber, and it is impossible to hire competent full-time industrial psychiatrists.

- 796 The Role that Industry Can Play in the Elimination of Tuberculosis. W.A. Sawyer. N. Y. State Med. J., 43, 148-151 (January, 1943).

Although silicosis is the only industrial condition predisposing to tuberculosis, industry can help much in the control of this disease. The ideal procedure includes chest roentgenograms of all present employees and future applicants and periodic follow-up roentgenograms. Roentgenographic techniques in order of efficiency are 14" x 17" films, 4" x 5" films, 35 mm. films and the fluoroscope. Younger employees must be followed-up more frequently than those over thirty. Accurate bookkeeping is also necessary, especially in seeing that employees keep appointments for re-examinations. The best way for small plants to handle this

problem is for a group of plants to set up their own medical service, although arrangements may also be made through local physicians or hospitals. In a discussion following the article, Dr. Bridge points out that the cooperation of the employee is necessary and that this can be attained only through sympathetic treatment of the worker and his family, and, above all, by saving a job for him.

- 797 Tuberculosis in Industry. H.R. Edwards. Am. J. M. Sc., 205, 571-581 (Apr., 1943). The results of findings in the roentgenographic examination of 15,644 union workers in various industries in New York City are analyzed. There was found to be a prevalence rate of 0.61% with evidence of clinically significant pulmonary tuberculosis. The prevalence of chronic pulmonary tuberculosis of apparent arrest was 2.92%. The prevalence of healed primary lesions for the entire group was 12.43%. Surveys of this type are valuable in revealing the prevalence of chronic pulmonary tuberculosis and should be the basis for a definite program in medical care of the industrial employee. Such a service should provide pre-employment as well as periodic re-examination. The handling of the pulmonary phase of such services requires competent clinicians trained in chest pathology, otherwise over-emphasis may be placed on lesions of no importance as well as the reverse. If such work is properly handled, there is no reason to believe that the worker will be unjustly discriminated against because he presents a pulmonary lesion. The increased tempo of industrial production, with all the varied social and economic problems attendant in these times, is justification for the establishment of a tuberculosis control program in all industries. Such a program is greater than can be handled by the local Department of Health and is a responsibility that should be shared jointly by management and organized labor. - Author's summary.
- 798 Shock: The Physiologic and Clinical Aspects. E.B. Mahoney and J.W. Howland. Surgery. 13, 188-198 (February, 1943).
1. The early recognition of shock and its therapy depend on a knowledge of the physiologic changes occurring in the failing circulation.
 2. There is no single diagnostic criterion by which impending circulatory failure may be recognized and at the present time the diagnosis depends on a general evaluation of the patient. The inadequacy of single hematocrit and plasma specific gravity determinations has been stressed.
 3. The plasma specific gravity may decrease rather than increase in the early stages of shock.
 4. Adequate fluid therapy depends on the relative amounts of red cells, fluid, and protein which must be restored to the circulation.
 5. Fluid therapy is most efficient when instituted before the patient develops the classical signs of shock.
- 799 Shock. M.A. Barnard. N.Y. State J. of Med., 43, 228-230 (February 1, 1943). The report of a committee of medical men from Rochester hospitals, directed by the medical defense committee, is submitted in the form of a summary of the practical aspects of shock treatment at the site of the disaster. The need for such an emphasis of the practical rather than the theoretical aspects of shock treatment has been evidenced by the experience of the English medical personnel in this present war. A great responsibility rests on the casualty station surgeon and his personnel. The discussion of treatment of the patient in shock from severe trauma without hemorrhage considers sedation, fluid therapy, oxygen treatment, etc. The outline of treatment of shock in patients suffering from hemorrhage lists the indications and contraindications for morphine sulfate sedation, and chemotherapy in the form of adrenal cortex extract, and lists the composition of several fluids appropriate for fluid administration. The treatment required in the case of shock due to burns is presented in a like manner. If the burn exceeds 15% of body surface, fluid treatment, e.g. full strength plasma injections, should be begun whether or not the patient shows signs of shock during the early treatment.

- 800 Heat. Anonymous. Nat. Safety News. 47, 163-166 (March, 1943).

The subject of heat cramps and its prevention by addition of salt to drinking water is discussed briefly.

- 801 Health of Industrial Workers, 1942. Anon. Monthly Labor Rev., 56, 734-35 (Apr. 1943).

Comparative data, as found in the mortality record of the Metropolitan Life Insurance Statistical Bulletin for January, 1943 are given for the year 1942 and the years immediately preceding. Except for the last 3 months of 1942 when the death rates were somewhat in excess of those of the corresponding months of 1941, the mortality rate was slightly less than in 1941.

The favorable rate of the first 9 months was due largely to the decline in death rates at the early childhood ages and at ages over 55. The excess in rates for the last 3 months was particularly marked in the age groups of 15 to 19 and 20 to 24. In the latter age group a large percentage of deaths^{was} due to causes chargeable to the war; others to occupational accidents due to rapid expansion in industries. Rates for the principal causes of death reveal some interesting facts. There was no increase in the communicable diseases of childhood, as compared with extensive epidemics that occurred in the last war, which resulted from the concentration of large numbers of individuals who had not had these diseases in childhood. Influenza, pneumonia and tuberculosis showed declines in 1942. The rate for syphilis in 1942 for industrial policy holders is the lowest on record, which indicates that the organized efforts to control the disease are proving effective. The sharp rise in the birth rate helps to balance the war losses. The puerperal death rate has declined continuously since 1939. There was little change in the rate for the diseases of middle and later life. The rate for mortality from all forms of accidents was the same as in 1941. The report for 1942 demonstrates, it is stated, the value of the health work of past years as the decline in the mortality from the acute conditions counter-balanced the rise in war deaths and kept down the rate for the year.

- 802 How Can the Doctor Help in Occupational Disease Prevention? T.E.P. Gocher.

Occup. Haz., 5, 14-16, 30-31 (May, 1943).

The use of blood tests supplementing information obtained from dust counts and chemical analysis makes it possible to guard against occupational disease conditions. Several cases are cited which are striking examples of what can be done when the hazard is recognized. Good plant hygiene is needed in the control of exposures. Under a discussion of personal hygiene, a technique for washing is detailed and some faulty personal hygiene conditions found in industry are listed. Other factors which should be considered in relation to exposures to toxic or irritating substances are individual susceptibilities due to weaknesses or allergies. The following general instructions for occupational disease prevention are given: (1) Cooperation of the employer and employee with the medical and engineering staff; (2) The use of simple English in explaining hygienic rules; (3) Blood examinations; (4) Actual demonstration of correct washing.

- 803 Health Education for Industrial Workers. E.I. Perkins. Industry 8, 31-34, 36 (June, 1943).

Planned health education programs help to reduce absenteeism, aid in improving employee morale, and contribute, as a whole, to community health. The employment of large numbers of teen-age boys and girls and of women brings into industry new groups which need the advantages of health education. Methods which have already proved to be useful in many industries are discussed briefly. A planned health education program, designed to reach all personnel, and described as mass or group health education, supplements individual instruction. Practical suggestions, together with a number of sources of material, for developing such a program are given.

- 804 The Common Cold as an Industrial Problem. E.E. Brewer. Med. Bull., No.5 368-471 (April, 1943).

The common cold (excluding its numerous complications) is the most frequent reason for loss of industrial man-hours due to sickness. Bacteria, a filterable virus and allergies have all been accused of causing colds. The author recommends the following for treatment: Vaccines are of no use; ephedrine, benzedrine are useful; and sprays of 30% argyrol and hot alkaline nasal douches. Prompt application is essential. Also recommended is an active prophylactic campaign including: clinical histories of all workers; education as to prevention of colds, isolation of carriers and spreaders of germs, with early treatment. Inoculations are only of a minor psychological value, and are of no prophylactic value. Physiological well-being is all-important in prevention of common colds.

- 805 What Can We Do to Keep Employees at Work? C.D. Selby. Illinois M. J., 83, 242-246 (April, 1943).

Industrial physicians, under the impetus of the alarming amount of industrial "sickness absenteeism" have converted their health programs to (1) provide for safe employment of workers and (2) reduce number of lost man-hours due to sickness and injuries arising independent of employment. Intensive surveys of 150,000 employees, (one-eighth of them women) were undertaken. These showed an alarming sickness absenteeism in women which was four times the same rate in men. Explanations for this fact rest in (1) a great susceptibility of women to respiratory infections, especially tuberculosis. Numerous specific recommendations for prevention and cure of respiratory diseases are mentioned; (2) Digestive diseases, especially diarrhea and appendicitis, are very prominent and disabling in women. Education as to early signs and symptoms leading to earlier treatment would materially reduce hours of labor lost. (3) Chronic and acute diseases of the female sex organs, nervous diseases and breakdowns, and pregnancy all account for a large part of sickness absenteeism of women. It is thought that employment of a female physician or registered nurse would accomplish considerable in these latter fields.

- 806 The Problem of Absenteeism. K. MacRury. Conference Board Management Record. 4 pp. (April, 1943).

This article reports the studies of absenteeism made by the Conference Board. The author states that "original compilations were based upon record patterns and types of information suggested by the U. S. Public Health Service and the Industrial Hygiene Foundation of America, organizations which first promoted the use of absentee statistics." Changing conditions, as they affect absenteeism are discussed and remedial methods are suggested. The importance of the industrial hygiene survey is stressed.

- 807 Absenteeism in Canadian War Industries -- Data From Canadian Labor Gazette January, 1943. Monthly Labor Rev., 56, 683-686 (April, 1943).

Figures are given showing percentages of absenteeism in the varied Canadian war industries. Attention is called to monthly variations. Some causes of absence are discussed. The following recommendations are listed, as important in the control of absenteeism: (1) Improvement of labor relations between employer and employee in particular plants. (2) Establishment of joint labor-management production committees. (3) Inauguration of a system of recording absences and their causes. (4) Establishment of safety and health programs. (5) Plant campaigns, intelligently conducted, to publicize the importance of individual responsibility in unnecessary absences in terms of lost production vital to the fighting front.

- 808 Observations on Absenteeism. H. Earnheart. Ind. Med., 12, 367 (June, 1943). Various factors which affect absenteeism are considered and some remedies in use are ~~given~~ and others are proposed.
- 809 Ryan Hits at Absenteeism Thru House Organ Feature. Anonymous. Western Advertising, 42, 54 (March, 1943).
The use of advertising techniques to reduce absenteeism was demonstrated by the Ryan Aeronautical Company in San Diego. Hardboiled copy, of mail order advertising style, was used in the employees' magazine to shock the workers into the seriousness of the situation and make them realize the cumulative effect of their absence. A sharp decline in the absentee rate was noted in the week following the magazine's first attack. This was followed by a continuing decline during the next two months. The curve has now levelled off at an average rate of 23.96% below the former rate.
- 810 First Aid Treatment. Anonymous. Nat. Safety News. 47, 152-153, 158 (March, 1943). Full recommendations for first aid treatment are presented in compact form, including a list of furniture, instruments and supplies, number of rooms and general equipment necessary for various sized plants, emergency kits, departmental kits, portable kits for isolated groups.
- 811 First Aid for Heat Cramps. J.U. Buchanan. Nat. Safety News. 47, 25 (May, 1943). The loss of salt from the body fluids was found from clinical and laboratory study to be the cause of heat cramps and related conditions. A level teaspoonful of salt added to a gallon of drinking water is enough to make up the loss. Salt tablets are convenient to use, as they require no elaborate equipment. For the treatment of mild cases of heat exhaustion, a 0.1 per cent solution of salt added to charged water or soda pop is beneficial and more agreeable to taste. Patients suffering from severe cases of heat exhaustion are also given intravenous saline solution.
- 812 Educational Techniques in Industrial Nutrition. C. Kuh. Ind. Med., 12, 210-211 (April, 1943).
A six point program for solving outstanding nutritional problems is presented and the educational techniques in each of the six fields are discussed.
- 813 Communal Feeding: Preliminary Report. E.B. Gunson. British Med. J., 2, 753 (December 26, 1942).
The communal feeding of some 10,000 Royal Ordnance Factory workers (mostly girls) resident at hostels adjacent to the factories, according to Gunson, seems to improve notably the health of these residents. This improvement can be attributed in part at least to the manner and method of the feeding arrangements. In general the ~~types~~ of food necessary for health are well appreciated, and these are supplied to the limit to which they are procurable. The catering management is in good hands, but more precise direction in the preparation of some particular foodstuffs is desirable and would be welcomed. The communal meal is a practical and economic arrangement so far as Royal Ordnance Factory workers living in hostels are concerned.
- 814 Rationing Boosts "In Plant" Feeding. C. Cloyes. Domestic Commerce. 4,5,17 (May, 1943).
Industrialists are supplementing the home-rationed diet through providing war workers with one well balanced meal a day. The O.P.A. has made an amendment to its general food rationing order to make provision for plant food needs. The Technical Advisory Service of the Nutrition in Industry Section gives workable suggestions on how best to provide for in-plant feeding and the Nutrition in Industry staff supplies information on proper in-plant feeding. A news service

is being used by 1600 industrial editors in their company magazines. A folder entitled "U. S. Needs Us Strong - Eat the Basic Seven Every Day" and two booklets, Manual of Industrial Nutrition and Planning Meals for Industrial Workers are available on request. Twelve recommendations devised for Army Ordnance Plants and adaptable to industrial use are given. These or similar recommendations have been used successfully by many plants. Several examples of in-plant feeding programs are given. Education for home feeding is continuing through material issued by several electrical manufacturing companies and through War-time Nutrition Schools.

- 815 Training Safety Leaders. A Report to the Planning Panel on War Safety Training. National Committee for the Conservation of Man Power in War Industries. U. S. Department of Labor, Div. of Labor Standards.
A.W. Whitney, Chairman of the Planning Panel on War Safety Training, states the content of the report thus: "This report indicates in more detail the need for war safety training, the program developed to meet this need, the actual accomplishments already achieved under this program, and the job that lies ahead." Charts are reproduced which present figures on the standard basic course and the full time classes, showing the number of students, the number of classes, the number of colleges offering the courses, the progress of safety engineering training in the years 1941 to 1943, and the number of workers who will be equipped to wage war against industrial accidents as a result of the training received. An appendix gives outlines for two courses: (1) An intensive course offered under the direction of the U. S. Office of Education, in cooperation with the U. S. Department of Labor for Engineering, Science and Management Defense Training. (2) A course in Industrial Safety Engineering Defense Training.
- 816 Goodrich's "Good Housekeeping College" Pays Off. P.B. Plant. Occup. Haz., 5, 10-13, 36-40 (April, 1943).
The B.F. Goodrich plant, under the direction of a committee of six, headed by the author of the report and including five production superintendents, has been working on the project of overhauling the plant for salvageable material. They found it worth while to institute a thoroughgoing system of factory clean up. The good housekeeping campaign was so successful that it has become a permanent feature. The character and value of the program is expressed in the sentence, "Novel presentation plus intensive promotion established a good housekeeping program that could well serve as a national pattern." Facsimiles of tags and posters used in the campaign are reproduced.
- 817 No Plant Too Small. F. G. Bennett. Safety Eng., 85, 16-18, 20, 21 (April, 1943).
A safety organization is practicable in plants employing as low as 25 workers. General principles of safety organization applicable to any industry are offered. They include: (1) The manager or the operating head should be interested in safety. Usually, not more than 2 or 3 hours per month of a manager's time is required after a safety program is well started. (2) The job of safety inspector in large plants is a full time job, but in a small plant some employee with tact and the proper attitude toward safety could make frequent inspections of the premises as to conditions of stairways, elevators, etc. -- also of fire extinguishing equipment, sanitary conditions, and general housekeeping conditions. (3) A Safety Committee of about 5 persons, with the manager acting as chairman should investigate and deliberate upon any accident of consequence that occurs in the plant. (4) The use of bulletins, particularly those pertaining to public safety. Other considerations of importance in carrying out a safety program are: (1) The interest of the manager and the vigilance of the safety inspector; (2) the use of safeguards, after installation; (3) observance of the state's Industrial Commission code; (4) study of codes and bulletins on sanitation from

the State Department of Labor; (5) an annual dinner meeting of interested persons, with an outside speaker, if possible, to talk on accident prevention work; (6) installation of a standard first-aid station; (7) education regarding home accidents and highway safety. A few figures given relating to accidents in small plants emphasize the need for safety attention, no matter how small the plant.

- 818 Government's Obligation in Industrial Health. W.F. Draper. New England J. Med., 228, 177-179 (February 11, 1943).

Present day obligations of the U. S. Public Health Service include: (1) Assisting the War Department. (2) Assisting the State and local industrial hygiene units. (3) Recruitment and training of personnel. (4) War research problems. (5) Coordination of the health-conservation activities of industry, labor, medicine and interested government agencies. The necessity of reaching the home front is emphasized, the local health department being of invaluable aid here. Finally, the author states that if in the future, the community and plant physician are the same man, he must have full government support.

- 819 Physician and Surgeon. Relationship to the Compensation Carrier in Wartime. J.W. Vaccaro. Ind. Med., 12, 402-412 (June, 1943).

The relationship of the physician and surgeon to the compensation carrier is primarily legislative, secondly social and finally medical. All three of these relations are discussed at some length. Under the first are considered the legal definitions of injury and of industrial disease and the physician's handling of cases of simulated, exaggerated and pretended injuries. In such cases the responsibility of recognizing and distinguishing between the various categories of pretense rest upon the physician or surgeon. A third responsibility is that of determining permanent and temporary, partial and complete disability. In the social relationship, the author discusses especially the duty of urging an injured employee to undergo an operation when necessary to fit him for reemployment rather than accept compensation without employment, in which he is a social loss. In the medical relation, the question discussed is that of expert testimony. The compensation medical expert should always confine his testimony strictly to the realm of the facts which are before him without speculating on possible but improbable facts. The testimony must present a basis which is reasonable in nature and character.

- 820 Industrial Disease and the Insurance Carrier. R.N. Gray. Rocky Mt. Med. J., 40, 162-167 (March, 1943).

The practicing physician cannot be expected to be familiar with all the industrial diseases, but he should never make the mistake of diagnosing a case from a history of exposure alone. The state loses much money annually in this way, unless the physician is willing later to change his diagnosis. To aid diagnosis of industrial diseases, the physician should refer to a textbook of industrial diseases and to the recent American Medical Association Journals. Even better than this is the reference of such patients to specialists. The relative importance of various industrial diseases is discussed. Skin lesions are very numerous, but the average case is unimportant; other lesions are fewer but more serious.

- 821 The Nurse In Industry - Her Functions and Responsibilities. J.M. Johnson. Ind. Med., 12, 386-390 (June, 1943).

The author considers the fact that 10,000 registered nurses are employed in industry an indication that industry has a sincere interest in the welfare of its workers. She traces the progress of industrial nursing and names several contributing factors. The nurses part in the physical examination program is considered. A differentiation is made in the duties of nurses in small and large plants. Reasons for keeping records are given.

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