BOOK REVIEWS


Since the end of the last war there has been a renaissance of industrial medicine in France, and through the setting up of a national industrial medical service a large proportion of the French medical profession has been occupied with research and its practical application in factories and mines. In fact, it is not putting it too high to say that France is now leading the world in this respect. This textbook on the occupational diseases of the lungs and bronchi is a distillation of the experience of four great schools of French medicine. Led by Professor Gernez-Rieux and Dr. Marchand of Lille, the other authors come from Paris, Lyons, and Nancy, and each school has contributions of particular merit to make.

The foreword says that because industrial workers are often exposed to air which is polluted by gases and harmful dusts and fumes, it is not surprising that their lungs and bronchi show pathological changes and that the "pneumopathies" take first place, after the dermatoses, in the list of occupational diseases. Amongst these the pneumoconioses occupy a pre-eminent place; but there are also many other occupational diseases of the lungs, a fact which is often overlooked. The authors have set out not to produce an encyclopaedia but rather a practical volume for the practising physician, and it is manifest that they have succeeded in doing so. The book is notable for its emphasis on the clinical approach to occupational diseases and for its broad grasp of the many facets of the subject, including the industrial, legal, and social.

There are seven chapters of unequal length but of comparable value. The first, by Marchand, is devoted to a description of the agents which attack the lungs of industrial workers, such as dust, fumes, fog, smog, aerosols, rays, and so on. This is followed by a chapter on the basic physio-pathological processes in the evolution of occupational pulmonary disease. The main author of this chapter is the doyen of French pathology, Professor A. Policard. It is a summary of Professor Policard's outstanding and pioneer work on the pathology of the pneumoconioses. There is also a section on the anatomical lesions of the dusty lung by P. Galy. In the clinical studies, silicosis takes first place and Professor Gernez-Rieux has dealt with this comprehensively, beginning with the subjective, general, and physical signs leading on to the radiographs and the classification of abnormal shadows. He also describes adequately what he calls "para-clinical" investigations such as bronchoscopy, bronchography, lung function tests, angio-cardiography, biological examinations, and pre-scalene gland biopsy. He then goes on to discuss pure silicosis and silicosis due to mixed dusts. Other conditions are reviewed by Champeix (asbestosis), Tolot (berylliosis), and the metallic dusts are dealt with by Sadoul, Marchand, and Gernez-Rieux; whereas the affections due to the vegetable dusts, chemical "broncho-pneumopathies", infections, parasites, and the mycoses are described by Marchand. He deals fully in this chapter with such conditions as brucellosis, leptospirosis, Q fever, ornithosis, and bilharzia. He also discusses the damage to the lungs which can be done by oil and petrol.

The traumatic lesions of the lungs and bronchi are dealt with by Mounier-Kuhn and Gernez-Rieux, who also discusses fully the occupational asthmatic, chronic bronchitis, and emphysema and carcinoma of the lungs.

A long and important chapter is devoted to a detailed discussion of the diagnosis of the occupational diseases of the lungs and bronchi, and it is, in effect, a symposium of various aspects of the subject by no less than eight distinguished authors. Gernez-Rieux takes the clinical and radiological aspects, Mounier-Kuhn and Mereaud deal with bronchoscopy and bronchography, and Sadoul deals with disturbances of lung function found in the occupational lung diseases. He gives the results obtained in his excellent physiological laboratory at Nancy and explores successively pulmonary ventilation, alveolar exchange of gases, and ergometry. There is a useful Table of what might be regarded as the normal findings in pulmonary function tests, but care is taken to point out that there is a wide range even in figures for normal subjects. The cardiovascular reactions produced by occupational diseases of the lungs and bronchi are dealt with by Pauchant and Fournier, and Policard writes about the part played by histology and chemistry in the diagnosis of these diseases. Galy discusses the anatomical diagnosis of tuberculosis and tuberculo-pneumoniosis.

Roche of Lyons gives the general principles of the French laws relating to the prevention of occupational pulmonary diseases and then goes on to discuss in detail the practical measures taken in the factories for the prevention of asbestosis. In the same chapter Gernez-Rieux, Balgairies, and Fournier describe coal-miners' pneumoconiosis and its prevention; similarly Truche deals with the ceramic industry, and Mereaud with the metallurgical, textile, and chemical industries. Cassan takes as his subject silicosis in public works and building operations.

The last chapter on the medico-legal aspects and also on compensation has been entrusted to Roche, and he
gives a concise survey of the many French laws and regulations on the subject. This will interest English readers who are students of comparative international legislation and it might be added that the system of the regional "colleges" which have been set up for the diagnosis and compensation of pneumoconiosis, and particularly as appeal tribunals, could well be adapted for use in this country.

The volume is well produced, though its paper cover is not likely to withstand the constant use which it should get; it is well illustrated with histological and X-ray plates, though the "positive" reproductions are not as useful as "negative" ones. There are some good colour prints of large lung sections. The bibliography is comprehensive (and international), and there is a good index. No comparable book on occupational diseases of the lungs is to be found in the English language, its German counterpart being Worth and Schillers' *Die Pneumo- koniosis*. Both these books could usefully be translated into English, particularly because our proposed entry into the Common Market should make our ties with these countries closer.

A. I. G. McLAUGHLIN


This, the tenth of an annual series of publications in which statistics relating to pneumoconiosis are assembled, is in a new form suggested by a Working Party set up by the National Joint Pneumoconiosis Committee.

Before this issue, the Digest only included information on pneumoconiosis in Mining and Quarrying, but it now includes similar information for all other industries except one. Many of the tables have been considerably modified, others have been omitted and some new ones added. Some tables now cover the years 1955 to 1960, and comparison with earlier years is easier than when the tables covered one year only. The table relating to pneumoconiosis deaths has been expanded to give, for each of the six years covered, the figures by age and industrial group in a two-way break-down (in earlier issues there were separate analyses only). Similarly the table listing the disablement benefits in force has been enlarged to show the percentage assessment for those with partial disablement. The tables which referred to miners re-employed in more suitable dust conditions have now been omitted.

This Digest, in its much improved form, makes available valuable data suitable for further analysis by those who are interested in the problems of compensation for pneumoconiosis raised under the Workmen's Compensation and Industrial Injuries Acts. Many of the criticisms of the earlier issues of the Digest have been met, but some remain to be made. First, it would be valuable if the tables distinguished simple and complicated pneumoconiosis, because of the great difference which exists in relation to mortality and degree of disability. Secondly, possible different explanations of any trends found and reasons for the care necessary in interpreting these trends are set out clearly in the Introduction; yet, in two of the tables, there is a column showing the rate per thousand wage-earners at which pneumoconiosis was first diagnosed at boardings under the Industrial Injuries Act. The numerator is the number of cases diagnosed irrespective of whether or not they are still employed in coal-mining, and the denominator is the number of wage-earners without indication of whether surface workers are included. It would be more in line with the rest of the report if these columns gave the numbers of wage-earners and a definition of wage-earner. Thirdly, in previous issues of the Digest the source of each table was shown, and although the Introduction gives acknowledgement to the Ministry of Pensions and National Insurance and the National Coal Board, it is always desirable to know the origins of each table and these should still be given.

In conclusion, although the Digest does now include information on pneumoconiosis in most industries, it still does not include cases of byssinosis. This exception means that 10% of cases of pneumoconiosis are not included in the Digest. Thus during 1960, there were diagnosed under the Industrial Injuries Acts 3,279 pneumoconiosis cases in coal-mining, 403 in cotton (byssinosis), and 375 cases in all other industries combined. (Ministry of Pensions and National Insurance, Annual Report, 1960. H.M.S.O. 1961.)

C. E. ROSSITER


This book is the verbatim report of a symposium in five sections held at the University of California School of Medicine at which some 30 internationally recognized scientists met to discuss, from an ecological viewpoint, the interaction of the atmospheric environment and the health of man.

The first section deals with the "normal" atmosphere and its variation and includes comprehensive review papers on "Climatic Stress" (L. P. Herrington), "Altitude" (Nello Pace), and "Capsule Climates—Underseas and Space" (A. R. Behnke); more attention might have been drawn in the paper on climatic stress to the different mechanisms of thermal breakdown in man to recent British work on this subject.

The second and third sections deal with industrial and urban air pollution problems respectively. T. F. Hatch gives us new data on the inhalation and retention of dust, and T. F. Mancuso provides a useful and well-balanced epidemiological study of the effects of chemical irritants. R. R. Newell gives an exciting account of the peaceful uses of atomic energy (for example, does the reader know that a hurricane might be destroyed by damaging its pattern of stability by use of a nuclear explosion?). The papers by L. A. Chambers and T. J. Kent deal mainly with fog problems peculiar to California, but R. A. Prindle and Patrick Lawther have wise words to say on the