21 countries in the O.E.C.D., the Netherlands, Sweden, the United Kingdom, and the United States. These, it is claimed, may be taken to represent different economic and political structures and collective bargaining situations. This may be so but the reviewer would dearly love to have seen such a thrusting country as Japan or such a powerful economic nation as Germany included.

There is little of particular interest to industrial doctors although the book may form interesting background to their daily work. Any doctors who regard their work as a company-financed service to the employees will be disappointed; scant attention is paid to this fringe benefit. More space is devoted to the provision of insurance-type services which entitle an employee to private medical treatment or hospital services. The reviewer, whose particular interest is in pensions and similar financial fringe benefits, has less reason for pique although a vast range of benefits in this field are not mentioned at all. But this is the specialist looking at the work of a general worker, and it must be accepted that omissions are inevitable in such a short book on such a general subject. There can be little doubt that within a relatively small compass the author has set down the products of a very comprehensive piece of research.

The book has no index but has an extensive list of contents and an excellent bibliography. There are a number of misprints scattered about the book and, whilst none of these is serious, they are rather irritating. Even so, the book must represent a useful addition to the library of anyone concerned with staff administration whether it be at plant, company or national level.

A. A. JENKINSON

The Role of Medical Inspection of Labour. (Pp. 111; 15s. 6d.) Geneva: International Labour Office. 1968.

There is no need to ask for whom this book is intended. On the first page its purpose is clearly set out. 'To provide a handy guide for young medical inspectors and all those responsible in one way or another for protecting workers' health and for accident prevention . . . suitable for use in the developing countries as well as in the industrialized ones. In fact it is in the former that the book will in all likelihood prove more useful . . .'

In 1963 the I.L.O., in co-operation with the W.H.O., held an International Symposium on Medical Inspection of Labour attended by experts from 21 countries. This revealed clearly that in many countries (and not only in developing ones) facilities for specialized training of medical inspectors were inadequate; this finding prompted the production of this book.

There are three parts: 'Inspection Services and Medical Inspectors', 'Inspection Techniques and Methods', and 'The I.L.O. and Labour Inspection'. There is an interesting background note giving a brief historical account of medical inspection which remarks that it was 'really born' in England.

Based as it is on the conclusions of a symposium the book inevitably bears the signs of being a compilation. The different standards of training, duties, and powers in many countries (not singled out by names) are added together to produce a kind of composite picture of the ideal medical inspector, whose range of training, special skills, knowledge, powers, and personal qualities add up

eventually to a somewhat dauntingly accomplished individual. (One medical inspector found, on going steadily through the book, that his normal sense of inadequacy was growing alarmingly.) But these somewhat flippant comments should not be taken seriously and allowed to detract from the many virtues of the book. It contains a great deal of useful guidance about all aspects of medical inspection, which in some countries goes far beyond anything we are used to in Britain. Many important principles, including those to do with the relations of the medical inspector with other 'labour inspectors' and with works medical officers are set out; they are wise, stimulating, and, in some fields, controversial. And even where, from its nature, the book tends to be prolix and repetitious, one constantly comes on the hard, down-to-earth practical comment or advice that shows the hand of the experienced medical inspector.

A. H. BAYNES

The Evolution of Preventive Medicine in the United States Army, 1607-1939. By Stanhope Bayne-Jones. (Pp. 255; 39 illustrations; \$2.50) Washington, D.C.: Superintendent of Documents, United States Government Printing Office; Washington, D.C., 20402. 1968.

In this slender volume the main events relating to the development of preventive medicine and administration in the Medical Service in the United States Army are treated in chronological order. There is probably no one more competent to deal with this topic than Brigadier-General Bayne-Jones. As one of six young American medical officers who joined the British Army within a month after the United States of America entered the First World War, he served as Medical Officer to the Eleventh Battalion of the Sherwood Foresters in the Ypres Salient and was awarded the Military Cross for gallantry in action, to serve subsequently in the Third United States Army during the Occupation. In the Second World War he was Deputy Chief of the Preventive Medicine Service and Technical Director of Research in the Office of the Surgeon-General, United States Army, and was closely associated with the early years of the Army Epidemiological Board (after 1953 the Armed Forces Epidemiological Board), the most potent weapon for research on the control of communicable diseases in the Armed Forces which has ever existed. He was appointed Commander of the British Empire by His Majesty King George VI for outstanding achievements.

This careful summary of several years reading in the National Library of Medicine of the United States Public Health Service, Washington D.C., and elsewhere and of a life-time's experience of an outstanding contributor to military preventive medicine in the 20th century speaks for itself. There is a generous acknowledgment to the lessons learnt by the colonists from the British between 1607 and 1775 and particularly from Pringle (1707-1782), with whom several medical officers of the Revolutionary Army served previously, Lind (1716-1794), and Brocklesby (1722-1797). The subsequent narrative shows how this was followed by the closest association over the succeeding years between the British Army and the United States Army and their civilian consultants and colleagues.

The author recounts the origins of inoculation with live smallpox inoculum in the United States Army, strongly advocated by Cotton Mather, a Fellow of the Royal Society of London since 1713, in the 'Angel of Bethesda', a volume which was never published but of which the manuscript survives today in the archives of the American Antiquarian Society at Worcester, Massachusetts. In the 'Angel', Mather also remarked 'seeing how liable Marines are to scurvy one cannot but encourage them in their pease diet and the use of "limons"' (when James Lind was but a child). Probably a more important 'first' for Cotton Mather was his recognition of the need to prove the efficacy of variolation by the statistical approach. He reported to the Royal Society during the severe Boston epidemic of 1721 'that more than 1 in 6 of all who took the disease in the natural fashion died, but that out of 300 inoculated only 1 in 60 died'. By the time of the American Revolution variolation with live smallpox matter was practised in the Colonies as it was in England, and General George Washington made it mandatory for all those serving and for all new recruits in the spring of 1777, together with many other wise instructions for preserving the health of his soldiers; which shows that he recognized the maxim generally accepted today that preventive medicine is primarily the responsibility of the Army Commander to whom the medical officer acts as an advisory and executive officer. After 1798, when Jenner published his discovery that active immunization of man against smallpox could be achieved by vaccinating him with cowpox matter, a much less hazardous procedure, 'vaccination' was substituted for 'inoculation' in the United States Army in 1812. According to the writer it was during this period that the brilliant success of Jenner's vaccination inspired the concept of the eradication of communicable diseases.

This monograph contains many lessons for the present and for the future, not only for medical men but also for those concerned with the military and social history of the English-speaking peoples during this period. This is military 'industrial' and 'occupational' medicine at its very best.

F. P. ELLIS

Lung Function. Assessment and Application in Medicine. 2nd Ed. By J. E. Cotes. (Pp. 604; illustrated; 90s.) Oxford and Edinburgh: Blackwell Scientific Publications. 1968.

The first edition of this book which appeared in 1965, filled a great need in providing, in one authoritative text, accounts of basic respiratory physiology, the principles and methods of measurement of pulmonary function and their interpretation, and the major functional disorders which occur in clinical practice. The book was understandably very successful.

Its continued success is ensured with the second edition, which has incorporated the major advances which have appeared in the interval. The main area of advance has been in understanding the way in which blood and inspired gas are distributed between themselves and between different parts of the lung, and this is clearly explained. There has also been considerable rewriting and replacement of older references.

Unlike most others, this book has succeeded in meeting the widest possible range of interests in this field. It gives the newcomer to the subject a clear account of basic mechanisms and principles and through its descriptions of techniques and interpretation of laboratory methods, its review of normal values and the effects upon them of age and environment, it is a source of reference to the established worker in the field. It is of special interest to the clinician through its review of lung function in disease, where Dr. Cotes has produced a balanced account of a wide range of disorders including disturbances of acid-base relationships. Disorders of pulmonary function in association with different occupations receive special attention. There are certain details over which disagreement might be felt, e.g., the relationship of changes of airways resistance to the genesis of symptoms in byssinosis, but these are minor in this context in relation to the total excellence of the book, which is likely to remain the standard text on this subject for a long time to come.

J. B. L. HOWELL

Toxikologie und Arbeitsmedizin (Toxicology and Occupational Medicine). By W. Grund (Pp. 207; with 23 tables and 30 figures; 47s. 2d.) Schriftenreihe der ärztlichen Fortbildung (Editors H. Redetzky and H. Thiele) XXXVII. Copyright 1968 by VEB Verlag Volk und Gesundheit, Berlin. 1968. Printed in the German Democratic Republic.

This volume contains 22 of the papers given at a course, arranged by the German Academy of Medical Further Education, on the toxicological problems of the metal industry (1965), chemical industry (1966), and clinical toxicology of occupational poisoning (1967). These papers vary in length from two pages to one of nearly 20 pages. They are all in German, without even an English summary, and six of them have no references at all. Contents and subject indexes are given.

It is difficult to say whether this volume fills a particular need felt by the authorities and medical advisers in industry in East Germany. In the preface the editor is confident that it is useful and will be welcomed by medical inspectors of factories, industrial medical officers, and even by lecturers of occupational hygiene. It fails, however, to be a complete or comprehensive work, and only the articles on Toxic injury of the parasympathetic system; Relationship between morphology and function after toxic exposure of the kidneys; and Psycho-diagnostic tests in occupational poisoning by neurotoxic substances demonstrated by chronic carbon disulphide poisoning, seem to be of general value.

In the circumstances, I cannot recommend this book for serious scientific workers.

W. DIECKMANN

Smoking, Health and Behaviour. Edited by Edgar F. Borgatta and Robert R. Evans (Pp. 288; \$10.75.) Chicago: Aldine Publishing Company. 1969.

This book, in four main parts, is largely concerned with the social and psychological aspects of smoking. There is background material on legislation, advertising, and ad-