BOOK REVIEWS

Untersuchungen auf dem Gebiet der Staub- und Silikosebekämpfung im Steinkohlenbergbau, 4 Teil. (Investigations relating to the Control of Dust and Silicosis in Bituminous Coal Mines, 4th Issue.) (Pp. 160; illustrated; no price stated.) Published for the Minister of Economics and Trade, North Rhine-Westphalia. Detmold: Hermann Bossmann, G.m.b.H. 1963.

A study group for 'Dust and Silicosis Control' made arrangements for the research work reported in this publication to be carried out by six institutes and research bodies in Düsseldorf, Münster, Essen, Essen-Kray, and Dortmund. The 23 papers each refer to a definite problem concerning dust in coal-mines and indicate methods of investigation and in many cases show the results.

One half of the book is taken up by technical and engineering aspects of the dust problem, the remainder by studies of purely medical interest. The technical subjects range from laboratory studies of instruments for estimating the dust cloud to engineering methods for controlling dust underground by such means as water infusion. One contribution compares various types of thermal precipitators; the long-running thermal precipitator, Casella type, used in England is one which is studied. Another contribution gives an account of several series of animal experiments designed to obtain information as to safe limits of dust concentration. Various problems related to this are studied; the grade of coal, the content of quartz in the mineral dust of mines, and the level of dust in relation to the production of collagen. The paper contains a plea for the co-ordination of all such experiments being carried out in England, Belgium, and France.

The part of the book devoted to purely medical research has 10 contributions, nine of which are laboratory studies. The exception is a description of a method of demonstrating cor pulmonale without blood analyses. The laboratory studies include an exhaustive review of silicosis prophylaxis by medical methods. In this contribution, Dr. Schiller demonstrates by photographs of histological sections of bronchial and bronchiolar walls from experimental animals the changes produced by dust and the influence on fibrosis of various drugs, hormones, and vitamins. The conclusion, however, is that whatever favourable effect may be produced by hormone prophylaxis, much better prospects of the elimination of dust from the lungs and of the prevention of the destruction of macrophages can be obtained by polyvinylpyridine-N-oxide. The immune theory of silicosis is the basis of two articles. Drs. Antweiler, Schiller, and Baumann give the results of the subcutaneous injection of such adjuvants as dust and dead tubercle bacilli on the progression of quartz-induced fibrosis of the lungs. The presence of such adjuvant action was, however, not conclusively demonstrated. The other articles by Professors Schlipkötter and

Plüss use the fluorescent labelling of complement to decide if complement-fixing antigen-antibody complexes appear in the lungs of rats after the application of quartz, coal, and kaolin dusts. Other papers are concerned with the phagocytosis of dust in cell cultures, the retention and elimination of quartz dust after continued low dosage inhalation, and the action of dust on bacteria. All the contributions in the book are of a high standard, and although the title would suggest that they are concerned with coal-mining problems, many are of use in the problems associated with other types of dust hazard. The medical part is limited in its scope to laboratory work, but the names of such contributors as Kloster Kötter, Antweiler, and Schiller indicate the interest of the investigations.

CHARLES L. SUTHERLAND

Man at Work: Studies on the Application of Physiology to Working Conditions in a Sub-Tropical Country. No. 4. By E. Hohwü Christensen. (Pp. 49; no price quoted.) Geneva: International Labour Office. 1964.

This booklet gives a summary of the basic aims and principles of work physiology with particular, but not exclusive, reference to conditions in India. 'Hard work in hot climates' best describes the theme.

Summaries almost inevitably introduce an imbalance which reflects the opinions of the author. That some of these opinions are controversial is not, in some instances, sufficiently emphasized. This is, however, a minor criticism for a publication of this kind. *Man at Work* is a readable review which should be useful, as the author hopes, to a broad spectrum of those concerned with personnel aspects of increasing production.

It is sombre and provocative comment on the twentieth century that the author should feel constrained to remind his reader that '... people will survive on a decreased calorie intake but they can never reach normal productivity'.

G. R. C. ATHERLEY

The Practical Management of Head Injuries. By John M. Potter. (Pp. xv + 92; illustrated; 15s.) London: Lloyd-Luke Medical Books.

The appearance of a second edition of this book only three years after its original publication is proof of its excellence. Briefly, sanely, and lucidly, it outlines a simple and rational system of treatment of head injuries literally from the moment of their infliction until rehabilitation is complete. One might make a few suggestions for the third edition which will certainly be called for:

(1) Penetrating brain injuries, *e.g.*, with an entry wound on the face, are often not suspected until complications supervene. The special dangers of wounds known