

few months as the first, and often the last book, of reference. This review, therefore, is based not on reading the book but on using it.

E. KING

**The Story of the Progress in Medicine.** By C. F. V. Smout. (Pp. 168; illustrated; 30s.) Bristol: John Wright. 1964.

The writing of history has many purposes, such as tracing a line of thought or series of ideas, studying the effects of circumstances on persons or situations, or studying the influences of a person or a group on the times in which they lived. Some history can justly be an interesting story giving pleasure and food for thought to the reader.

This new addition to the accounts of the progress of medicine traces the story of medicine from the Creation to the National Health Service. Obviously it has to be selective, and this requires an underlying idea or warp thread to run through the book. It also requires courage, courage to cut persons, places or events right out if they do not fit in. A brief reference, or, worse, a series of brief references, breaks the narrative and contributes little. Thus, we are told of Sir Charles Bell:

'A great surgeon of this period was Sir Charles Bell (1774-1842), whose discoveries are rated next to Harvey's in importance. He confined his researches to the nervous system and carried considerably further some of Galen's original ideas.'

Industrial physicians will turn to the chapter on 'Victorian Medicine' and will be disappointed to find a number of misleading statements. Students of industrial medicine would be advised not to learn their history from these pages.

This book is well produced. It is profusely illustrated and is printed in clear type. Although in places the writing is a little stilted, there is a deal of interesting information. It is a handy little book which can be dipped into but should not be regarded as authoritative.

W. R. LEE

**Vanadium: Toxicology and Biological Significance.** By T. G. Faulkner Hudson. (Pp. 140; illustrated; no price stated.) Barking: Elsevier. 1964.

The existence of vanadium has been known since the early years of the nineteenth century, but it was not until 1869 that it was isolated in the metallic state. It has held the interest of chemists and metallurgists for a long time. Recently there has been a quickening and widening of interest in it, by biologists and pharmacologists, because of its presence in trace amounts in many plant and animal tissues, and by doctors and others engaged in preventive medicine because of its being increasingly encountered in industry. This book, telling the fascinating story of vanadium from the medical viewpoint, is therefore timely.

Although it cannot as yet be accepted as essential to plant and animal life, vanadium certainly profoundly influences several important processes, including the metabolism of sulphur and cholesterol. Its various

actions are described, and these include, for example, its effects on liver function, the lowering of the cystine content of the hair and nails, the depression of cholesterol synthesis, and mobilization of cholesterol deposits.

As regards toxicity, vanadium is definitely poisonous, although the alarming descriptions of its ill effects given by earlier writers are not completely justified. It has, when inhaled, a marked inflammatory action on the entire respiratory tract. A variety of acute and subacute lesions can be produced, but no fibrotic changes or specific chronic lesions are described in the lungs. By whatever route of administration, however, vanadium is toxic to the liver and kidneys.

The concluding five chapters, almost half of the book, deal with the industrial sources of vanadium, its application to industry, the occupations which carry a health risk, the clinical effects, and prevention. The author considers that the present accepted level of 0.5 mg./m.<sup>3</sup> as the maximum permissible concentration of vanadium pentoxide is too high, and that it should be lowered, probably to 0.1 mg./m.<sup>3</sup>

This compact volume, like the others of the Elsevier Monographs of Industrial Toxic Agents, is excellently produced on fine quality paper and contains a good index. The author is medical adviser to the Imperial Smelting Corporation Ltd., and lecturer in Industrial Hygiene in the University of Bristol. He states that his intention to describe the toxicological aspects and to summarize our present knowledge of vanadium has led him to make excursions into various fields of study, such as botany, marine zoology, biochemistry, pharmacology, and metallurgy. The large number of references at the end of each chapter testifies to his diligence, and a helpful feature is the footnote on each right-hand page indicating where the appropriate references are to be found. The information is presented in an entirely palatable form, and one lays down the book with a pleasant feeling of having read something important and interesting, and with an appetite whetted for news of further advances in the uses and effects of vanadium.

A. DOIG

**Particulate Clouds: Dusts, Smokes and Mists**, 2nd ed. By H. L. Green and W. R. Lane. (Pp. 471 + xxii; 84s.) London: Spon. 1964.

The new edition of this standard introductory text on aerosols is enlarged by some 50 pages, and the number of references has increased by 37% to over 1,300. It is a valuable source of information and a good starting point for a search of the literature on any specific aspect of particle science.

About two-thirds of the book deals with the physics of aerosols, including sampling, and one-third with applied aspects among which is a 48-page chapter on health hazards. After a brief introduction to the pneumoconioses, inhalation of dust, and particle size, there are sections on maximum permissible concentration, sampling methods and measurement of surface area and mass of particles. Individual protection is reviewed, and an account is given of the testing of respirator filters. Radioactive particles, microbial aerosols, and tobacco smoke