on much firmer ground when they discuss the safety measures which should be put into operation in places where the acid is handled and transported, and also the methods of preventing fire and explosion. There is a particularly full account of the various materials which are acid-resistant and so can be used for acid containers, pipes, and joints. These materials range from the metals and alloys to glass, enamels, rubber, ebonite, and the various plastics, including polyvinyl chloride and polytetrafluorethylene (P.T.F.E. or teflon). The authors state that it resists sulphuric acid of all strengths and oleum (20%) up to high temperatures. Its only disadvantage, they say, is its high cost. Perhaps it would have been better to define what is meant by high temperatures, because in the region of 200°C. P.T.F.E. begins to decompose and give off toxic gases.

The methods of storing, handling, and transport of sulphuric acid are given in great detail, and in the section on tank wagons reference is made to the manual on acid handling issued in 1950 by the Imperial Smelting Co. of Avonmouth. The dangers of emptying acid from such wagons by compressed air is emphasized and the special I.S.C. tank-wagon designed for emptying by gravity and pumping is commended.

A final chapter describes the principles of construction and maintenance of factories in which sulphuric acid is made and handled. An appendix gives details of the laws and regulations in force in France relating to the corrosive acids. The book is well produced and arranged, and for those who understand technical French terms it is clearly written. It is illustrated with 71 photographs and line drawings, some of them in colour. Of unusual interest are the photographs of an insect *Sirex Gigas* L. and a lead acid container through which it has burrowed. The insect is found in regions where conifers grow, and lays its eggs in these resinous woods. The insect, after maturation, forces its way out by tunnelling through the wood, and if a lead pipe or container is in the way it will go through the lead as well. Leakages of acid have been reported as a result of the insects' activity, and it is recommended that all resinous wood used in chemical factories to support lead containers and pipes should be treated with insecticides.

The authors say in their concluding paragraph that the book is designed to be read by management, foremen, and workers; but it would be equally useful for other groups of people who are concerned with industrial hygiene. It is obvious that if it is to be widely read in this country, it should be translated into English.

A. I. G. McLAUGHLIN

Recent Outbreaks of Infectious Diseases. By S. Leff. (Pp. ix + 408; 2 figures. 35s.) London: H. K. Lewis. 1957.

Among the most exciting parts of the history of medicine are the stories of epidemics. Cholera in Broad Street or Hamburg, the odd escapes of the brewers who probably drank no water, or of the classy inhabitants of Altona are as good an introduction to epidemiology as is the Devonshire colic story. Devotees of Snow or George Baker are often reluctant to admit that the epi-

demics of today are exciting too. Dr. Leff's book should convince them that they are. It is divided into three parts: recent outbreaks of virus disease, of bacterial disease, and some good examples of disease due to relatively inert substances, lead poisoning, and atmospheric pollution. The inclusion of this latter section (a new and welcome departure in a book of this type) is not reflected in the title which is in consequence misleading.

Among the infections pride of place is given to the big threat of smallpox and most of the really interesting facts about recent explosions are described. Localized outbreaks of polio, Q fever, psittacosis, and Bornholm disease follow. The enterics and food poisoning are given a large section and diphtheria a relatively short description, though the fascinating series of cases in South Staffs in the early 1950s are described in detail.

Outbreaks of non-infectious disease are often just as much of a challenge to the epidemiologist as are the infections. Exciting examples, such as retrolental fibroplasia, are not hard to find and it is a pity that the author has limited himself to lead and to fog. Almost all of these community case histories have been published before and Dr. Leff is clear in his references, but it is the bringing together of stories so dissimilar yet with so many common features that is the particular usefulness of this book.

There are two conflicting features which the author has tried to reconcile: one is the "text book" aspect of the book, the formal description of the disease, its diagnosis and treatment. The other, and much more interesting aspect, is the description of the outbreaks themselves. It is possible that some details (and even some descriptions) may have been sacrificed for the sake of providing a bit of text book revision. This is a pity for the main work is exciting and useful.

E. M. BACKETT

Industrial Health: A Survey in Halifax. A report by H.M. Factory Inspectorate and recommendations of the Industrial Health Advisory Committee. (Pp. 20. 1s. 6d.) London: H.M. Stationery Office. 1957.

In this country advances in occupational health and welfare have usually followed the raising of standards set by the more enlightened employers. After a time lag of variable duration the legislature has accepted these standards as minimum requirements but in the interval further progress by the enlightened has been made. It is therefore not unexpected that there should be a wide disparity between environmental conditions and medical services in the good and not so good factories and it is not surprising that the progress of industrial health should be a series of steps rather than a continuous steady trend.

The report by H.M. Inspectorate of a survey of industrial health in Halifax illustrates how poor conditions in many factories and workshops can be and there is reason to believe that conditions in Halifax are not untypical of those existing throughout the country. This report is at one and the same time a criticism of the Inspectorate that the conditions revealed could be so bad, and a tribute to its integrity that no attempt has been made to suppress or gloss over information which the

survey has revealed. Quite obviously this department of the Ministry of Labour is grossly understaffed for it has, for a long time, been common knowledge amongst industrial medical officers and appointed factory doctors that conditions, especially in many small factories, are deplorable, and that many of the provisions of the Factories Acts are not being met. The Halifax Report therefore is valuable in that it officially discloses the facts on which to base decisions for future action. One omission, however, concerns the statutory examination of young persons. Apparently no attempt was made to determine whether the law in this respect is being universally respected. Many appointed factory doctors can testify that to their knowledge some occupiers, especially of small factories and workshops, overlook or ignore their responsibilities to have their young people examined within a fortnight of entry to their employment and thereafter at yearly intervals until the age of 18. It was perhaps outside the scope of the enquiry to comment on the value of these examinations as at present conducted, but such a discussion must surely soon be initiated.

One issue which seems to arise rather acutely from the Report is that of the nature of medical supervision in industry. Tribute is paid to much of the excellent work which is done in Halifax but the comment is made that the "supervision tended to be a clinical one... while observations on environmental conditions and of individuals actually at work,..." were much less in evidence. Elsewhere the suggestion has been made that the Public Health Service might undertake much of this work, but the failure of that service generally to carry out its statutory duties with regard to the inspection of sanitary arrangements in factories suggests that medical officers of health and their colleagues are insufficiently interested in the problems of industrial health to be entrusted with further responsibilities in this field. This then poses the problem of the organization of an industrial medical service, its function and nature, and the training of the doctors and auxiliaries engaged in it. It is greatly to be hoped that these questions will be answered on the merits of the case put forward and not on preconceived doctrinaire notions. The facts as presented in the Halifax Report together with those we may expect from a survey of the potteries will make a notable contribution to this discussion.

JAMES A. SMILEY

The Practice of Industrial Medicine, 2nd ed. By T. A. Lloyd Davies, with a chapter on the *Hazards of Coal Mining* by John Rogan. (Pp. vii + 282; 15 figures. 30s.) London: J & A. Churchill. 1957.

The second edition of this book fulfils the need even better than the first for a concise guide to those entering industrial medicine or nursing. The aims, philosophy, and day-to-day practice of industrial medicine are ably and wisely presented. Nearly half the book is devoted to the common clinical and environmental problems of the doctor and nurse in industry as opposed to the specific occupational diseases which, in practice, are much less time consuming. There is no attempt to treat individual subjects exhaustively, but comprehensive bibliographies

follow each section which mention most of the authoritative literature. Two notable omissions in the bibliographies are "The Functions of an Occupational Health Service in an Industrial Organization" published by the Association of Industrial Medical Officers, in the section dealing with the duties of an industrial medical officer, and the valuable hygiene guides published by the American Industrial Hygiene Association in the section on diseases due to chemical causes.

The weakest section is that on absenteeism and illness. There is no mention of the modern developments in the recording of industrial sickness absence statistics, of the International Statistical Classification of Diseases, Injuries, and Causes of Death (W.H.O., 1958), which for all practical purposes has replaced other classifications, or of the opportunities for epidemiological research in industry. It is misleading to suggest that older workers have less sickness absence than younger workers when most published work supports the opposite view.

There is, however, one general criticism of an otherwise valuable book. By the stress on the grossly unsatisfactory working conditions and the resistance by industrialists to improvements in the "bad old days", the impression is given that the industrial medical officer's main problem is still to persuade employers of the necessity and value of improvement. In practice, a common difficulty is to persuade the employees, and especially their representatives, of the desirability of change. The author continually and rightly emphasizes the impartiality of the doctor in industry, but this impartiality must also recognize that faults which doctors can help to correct are not now all on one side.

P. A. B. RAFFLE

Tenth Annual Report 1956-57 and a Review of the First Ten Years. (Pp. 76; illustrated.) The Slough Industrial Health Service Ltd. 1958.

This report is a remarkably full one and describes in greater detail than usual the varied work carried out during the year. The firm is a non-profit making limited company with charitable objects; the governing council includes representatives of the Slough Trades Council, the Ministries of Health and of Labour, the Nuffield Foundation, the University of London, and industrial managements.

The aim throughout has been to meet the industrial health needs of those working locally in both small and large firms. Special objectives were to investigate and control environmental hazards, to provide good rehabilitation, and to blend with the other health services generally available. Although there have been some minor disappointments, which are acknowledged in the report, it is clear that a high measure of success has been reached. Good liaison with the local hospitals, particularly in respect of injuries, has led to sharing with them many facilities, including x-ray examinations, physiotherapy, and chiropody, while certain hospital specialists have been appointed to the Service in a part-time capacity. The general practitioners in the district, after some early difficulties had been overcome, now largely welcome the help that the Service can provide for their patients.

A particularly interesting section of the report deals