

### Solid Circuits and Microminiaturization

Edited by G. W. A. Dummer. (Proceedings of the Conference held at West Ham College of Technology, June 1963.) Pp. 346. (London and New York: Pergamon Press, 1964.) 60s. net.

THE conference held at West Ham in 1963 made many sections of the British electronics industry more aware of the coming revolution in equipment design and technology. But too much must not be made of the implication, in the title of the conference, that the main driving force in the development of integrated circuits is the desire for large reductions in the size of equipment; reduced cost and increased reliability will often, singly or together, be greater incentives.

The *Proceedings* of the conference, informally written and informally presented to the reader, show a fair balance between the extension of the planar transistor technology to solid circuits, the relative merits of various logic circuits, the problems confronting the designer of analogue circuits, some new technologies such as electron beam machining, and several other important aspects of the subject. Packaging and interconnections, however, are less well dealt with.

American developments have long dominated the subject and were given attention mainly by authors working in the European laboratories of the subsidiaries of American firms. But the *Proceedings* must now be seen against a recent issue (December 1964) of the *Proceedings of the Institute of Electrical and Electronics Engineers* which devoted about 340 pages to integrated circuits, giving a fairly comprehensive picture for mid-1964. Although even now the scope for improvements in materials, processing and assembly, for new active devices and for new outlets is very large, the stage has been reached when the customers of the industry can sample the products of the already extensive development programmes and study on an adequate scale the advantages accruing.

The rapid rate of advance in the field makes fairly frequent conferences very desirable, but greatly reduces the period over which any conference *Proceedings* continue to be reasonably up to date. This volume may, therefore, already be of little more than historical value.

J. R. TILLMAN

### A Review of Sterilization and Disinfection as Applied to Medical, Industrial and Laboratory Practice

By Prof. Sydney D. Rubbo and Dr. Joan F. Gardner. Pp. xiii + 250. (London: Lloyd-Luke (Medical Books), Ltd., 1965.) 35s. net.

DURING the past ten years it has become increasingly obvious that many time-honoured methods used for sterilization in medical and hospital practice are either intrinsically inefficient or are rendered so by ignorance or inefficiency on the part of the operator. Nevertheless, very few hospital bacteriologists possess the necessary background knowledge to detect and correct these errors. It is for this reason that *A Review of Sterilization and Disinfection as Applied to Medical Industrial and Laboratory Practice* by Prof. Sydney Rubbo and Dr. Joan Gardner is all the more welcome.

Following chapters on the theoretical basis of sterilization, tests for its efficiency and the preparation of articles for sterilization, each of the usual sterilizing agents such as hot water, steam, hot air, radiation, filtration, gases and chemicals are described in considerable detail. The remainder of the book deals with special cases such as treatment of the hospital environment, the preparation of the skin or mucous membranes before operation, the treatment of pharmaceutical products and the sterilization of glassware and media used in bacteriological laboratories.

A great deal of useful information not easily obtainable is summarized in this way. This includes such diverse matters as tables giving the various indicators that may be used

to detect inefficiencies and the various faults that may develop in steam sterilizers, the methods used for the sterilization and preservation of pharmaceutical preparations, how to deal with discarded culture media and even a conversion table, which will be of particular value to anyone dealing with engineers who still persist in using the Fahrenheit scale.

Some of the opinions expressed by the authors may not be acceptable to everyone: this is perhaps inevitable, but adequate references are given to previous work so that anyone who is prepared to take the trouble can form his own.

The book is well produced, with a large number of diagrams and tables, together with an adequate index. It can confidently be recommended. R. HARE

### Germs and Ideas

Routes of Epidemics and Ideologies. By Andre Siegfried. Translated by Jean Henderson and Mercedes Clarasó. Pp. viii + 98. (Edinburgh and London: Oliver and Boyd, Ltd., 1965.) 15s.

THIS book is based on a lecture given by Dr. Siegfried at the Clinique Médicale Propédeutique of Paris in 1958. It is an interesting example of the new outlook brought to a well-known subject by a wide and lively intelligence which had received no previous formal training in this field. Siegfried lectured on the routes followed by germs in the process of infection. In the first part he considers the geographical factors which dictate the routes, by caravan, by sea or by aeroplane, along which men, goods and germs travel. The germs tend to start from centres of infection in India, China or South America and to travel outwards, assisted by the speed of modern transport, hindered by modern hygienic and public health control. The spread of infection is then illustrated by accounts of the world-wide epidemics of cholera, Asian flu, plague and yellow fever. These are clearly and interestingly described for non-medical readers (probably medical readers would doubt whether there is danger of yellow fever being spread by cargoes of bananas bitten by infected mosquitoes). In the fourth part, Dr. Siegfried makes an interesting development by passing from the spread of germs to the spreading of ideas and propaganda. There is almost a suggestion that these are equally pernicious, and if they cannot be exterminated in their primary focus (as Simon de Montfort exterminated the Albigensian heretics) then they can often be kept out by an effective quarantine at the frontier (as practised in the U.S.S.R. and China).

This booklet contains interesting ideas, set out with French clarity and brevity. Besides students of medicine it should interest students of geography, history and sociology, bringing to their notice medical information in an attractive and comprehensible guise. The translation is good and lucid. F. HAWKING

### Native Vegetation of Nebraska

By Prof. J. E. Weaver. Pp. 185. (Lincoln: University of Nebraska Press, 1965.) 4.75 dollars.

IN his latest book, Prof. Weaver, who is well known for his researches on prairie ecology, outlines for "the widest possible audience" the vegetation of the State in which he has worked for half a century. The native communities are straightforwardly described in turn, with a rather fuller ecological commentary for grasslands than for forests, and a final chapter is concerned with the cultivated crops of grassland soils. Vernacular names are used throughout, and their botanical equivalents are not given, not even in an appendix. There is no vegetation map, no index, and no list of the numerous illustrations.

D. R. HUNT