

Todd's hatching factor is eclectic, not eclectic acid. Of omissions I will refer only to the 1950 publication of the Dutch worker, M. Ootenbrink, which would seem to show that, under strict supervision in regard to both increase and decrease of cysts in the soil, a controlled potato culture can be maintained in infected land. Another 'treatise-like' section is that devoted to virus disease. In the main the data on the relation of virus to plant, and the nature of the virus particle, are derived from F. C. Bawden's book on "Plant Viruses and Virus Diseases", and duly acknowledged. Would it not have been wiser to refer readers to Bawden's well-written book and leave it at that?

The value of the work is greatly enhanced by its good index, and its full bibliography in which there are remarkably few important lapses. It is unfortunate that one of them should be a special favourite of mine, namely, my discovery in 1909 of blight resistance. In conclusion, it can be said that this work gives the reader a just and comprehensive account of the importance of the potato as a subject of scientific inquiry, in which respect it probably has no rival.

R. N. SALAMAN

VALVES AND TELEVISION RECEIVER DESIGN

Data and Circuits of Television Receiver Valves (Philips' Technical Library; Electronic Valves Series: Book III C). By J. Jager. Pp. xi+216.

Television Receiver Design Monograph 1: I.F. Stages (Book VIII A). By A. G. W. Uitjens. Pp. x+177.

Television Receiver Design Monograph 2: Flywheel Synchronization of Saw-Tooth Generators (Book VIII B). By P. A. Neeteson. Pp. x+156.

(Eindhoven: N. V. Philips' Gloeilampenfabrieken; London: Cleaver-Hume Press, Ltd.; New York: Elsevier Press, Inc., 1953.) 21s. each volume.

THESE three volumes form part of a series on "Electronic Valves" in the Philips' Technical Library. They may also be regarded as companion volumes to the book on "Television" in the same Library (see *Nature*, 172, 471; 1953). Although in the experimental stages of television development conventional radio and amplifying valves were used, the mass-production of television receivers has created a demand for valves specially designed to meet the requirements of the various stages of such receivers.

The first volume gives complete details, with characteristic curves, of the series of television receiving valves developed by the Philips organization during the past two or three years. Considerable technical information is given of the function of each type of valve and of the circuit arrangements in which it can be used. Similar information is given for three types of cathode-ray tubes, or "direct-viewing picture tubes" as they are termed, made for use in television receivers. In later portions of the book, more detailed technical descriptions are given of some special circuit arrangements; and the book concludes with a complete design of a television receiver developed for the reception of vision and

sound programmes according to the 625-line standard of the International Radio Consultative Committee (C.C.I.R.) now in use in various European countries.

The second volume deals with the intermediate-frequency stages of a television receiver, bearing in mind that such stages may operate at any frequency between 10 and 100 Mc./s. The book is largely analytical in nature and describes the special problems of design encountered in obtaining response and amplification over a wide band of frequencies, while at the same time the noise-level is kept down to the minimum attainable.

In television reception, the picture is built up by making the electron beam scan the fluorescent screen of the cathode-ray tube. The method of scanning now generally adopted consists of rapid horizontal movements of the beam across the picture, with flyback between the lines at a much higher speed; and then superimposed on these is a much slower vertical movement for the field or picture scan, with again a more rapid fly-back at the end of each field. These scanning movements are controlled by the voltages produced by a saw-toothed generator, the oscillations of which have to be synchronized with the appropriate signals sent out by the transmitter for the purpose. The third volume under notice describes in considerable detail the principles and circuit arrangements of these saw-toothed generators and the application of the so-called 'flywheel synchronization' technique in television receivers. While some portions of the book are of an analytical nature, the mathematics involved is very straightforward and will be easily followed by the prospective designer.

The production of all three volumes is of a high standard, and the engineer and scientist engaged in the design and development of television receiving technique will find them most useful in connexion with their work.

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LECTURES ON GENERAL PATHOLOGY

Lectures on General Pathology delivered at the Sir William Dunn School of Pathology, University of Oxford

Edited by Sir Howard Florey. Pp. xiii+733. (London: Lloyd-Luke (Medical Books), Ltd., 1954.) 63s. net.

THE subject-matter of this volume has been contributed by no less than ten authors, and like all books written under such conditions it lacks a logical sequence. For example, the chapter on healing occurs some 340 pages after those on inflammation. The work is well written, easy to read for those with some previous knowledge of pathology, and the illustrations are excellent and well chosen. To each chapter is appended a carefully selected bibliography.

The book is a real scientific work and, as such, is a contribution to the subject worthy of the Sir William Dunn School of Pathology, Oxford, from which it has originated. The patient and his diseases, however, have rather been neglected. It sheds light on many controversial problems in general pathology, as each of the authors has freely expressed his opinion as a result of his own experimental work in the field in which he is an expert. Unfortunately, as Sir