

of points and signals and prevents conflicting signals from being given. The different kinds of signal are described and the reasons for their use explained. The arrangements required for single-line working are then described and the methods of operation discussed, English and Indian practice being compared. Double-line working and its rules are similarly dealt with. The arrangement and construction of signal cabins are described, and the connexion of the signals with the levers. The following chapters deal with point rod connexions, point locking and detection, and the methods of compensating the rods for temperature changes. An important chapter treats lucidly with the preparation of locking charts and tables. Consideration is then given to the problem of the interlocking of points and signals at junctions, special attention being paid to the interlocking of facing points. A useful appendix gives specifications for signalling materials.

The book is illustrated with numerous diagrams and will be found useful by the student of safe railway working as well as by the practical signal engineer.

E. A. FORWARD.

*Insect and Fungus Pests of the Farm.* By J. C. F. Fryer and F. T. Brooks. (*The Farmer and Stock-Breeder Manuals.*) Pp. 198. (London: Ernest Benn, Ltd., 1928.) 8s. 6d. net.

THIS volume represents an attempt on the part of expert plant pathologists to put before the farming community, in simple, non-technical language, an outline of our present knowledge with regard to insect and fungus pests of farm crops. It is recognised that no clear-cut rules can be given for dealing with each pest, as methods of treatment must inevitably vary with the local conditions associated with individual attacks. The aim is, therefore, to put forward the main principles of control in the hope that agriculturists of all types may be encouraged to attempt to apply them, and, by working in a spirit of co-operation, aid in the application of scientific principles to commercial conditions.

To this end, unnecessary technical details of life history have been omitted, and attention concentrated upon the phases directly responsible for damage to crops. The general symptoms accompanying attack afford a good indication of the insect or disease concerned, and weather has a much closer connexion with the severity or lightness of attack than is generally realised. At the present time direct offensive by chemical means is too expensive for general use, and control must chiefly be exercised by methods of prevention.

The diseases and pests dealt with are grouped according to the crops chiefly attacked, but a certain range of universal soil pests, including wireworms, leather jackets, slugs, etc., are omnivorous and may affect crops of very varied types. The authors also touch lightly on the same problem as it concerns horticultural crops, and the book concludes with a short bibliography and an indication of the whereabouts of the advisory entomologists and mycologists of the Ministry of Agriculture, from whom advice may be sought.

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*History of the Mongols from the 9th to the 19th Century.* By the late Sir Henry H. Howorth. Part 4: Supplement and Indices. Pp. iv + 378. (London: Longmans, Green and Co., Ltd., 1927.) 42s. net.

THE late Sir Henry Howorth was an indefatigable worker in many fields, and in certain circles his studies in the early history of the Church will always be highly appreciated. His name, however, will perhaps be best remembered as the author of a monumental history of the Mongols. A defect of that great work was the absence of an index, which the author had always deplored. Now, after his death, his sons have undertaken the publication of separate indices to Part 1 and Part 2, Divisions 1 and 2, and Part 3, which are issued together in the present volume. The author had also planned a new edition which should take into account the vast mass of material which had accrued in the fifty years since the original edition. Certain introductory chapters to Part 1 had already been written when the War and growing physical infirmities interrupted the work. These introductory chapters, however, are now issued as a supplement, substantially as they were left by the author, and with the indices form Volume 4 of the whole work. These chapters deal with the ethnography and zoology of Central Asia, the life of the Mongols, and their religion. The last-named chapter, in view of the increase of our knowledge of Lamaism in recent years and the comprehensive nature of the survey, will be found particularly helpful to the student.

*The Diseases of Sugar Beet.* Dr. Otto Appel. English edition edited by R. N. Dowling. The Work translated by C. Leslie Wood. Pp. v + 22 + 22 plates. (London: Ernest Benn, Ltd., 1927.) 6s. net.

THE increasing attention that is being given to the growing of sugar beet in Great Britain renders it advisable that growers should be forewarned as to the nature of the insect and fungus pests which are liable to attack the crop, and which might cause serious epidemics. With this object in view a translation has been made of Dr. Otto Appel's book, in which about a score of the worst pests are simply and shortly described, with hints as to prevention and cure. The letterpress is accompanied by excellent coloured illustrations (by A. Dressel), which convey a very clear idea of the morphological phenomena associated with each pest and which should render the task of identification less difficult to the grower.

*Air Ministry. Flying for Air Survey Photography.* By F. Tymms and Flight-Lieut. C. Porri. Pp. 46 + 4 plates. (London: H.M. Stationery Office, 1927.) 2s. net.

THIS small book on the methods of air survey is based on reports received from operators in different parts of the country to whom a lengthy questionnaire was sent. It thus records the practical experience of those engaged in aerial survey, but it makes no claim to be a manual of the subject or to deal exhaustively with instrument and methods. The book should prove useful to all aerial surveyors.