

might have been described at greater length. The new mechanics is not treated with the same wealth of detail as the earlier subjects. This is reasonable, as the book is in no sense a mathematical treatise. The table of relationships between the atomic and the c.g.s. units is useful, and the student can exercise himself and at the same time revise his knowledge by working through the set of some 150 questions at the end of the book.

Elementary Dynamics: for Students of Science and Engineering. By Dr. R. C. Gray. Pp. xi+211. (London: Macmillan and Co., Ltd., 1934.) 5s.

THIS little volume has been specially written for students beginning a university course in engineering or applied science. It aims, therefore, at giving a useful introduction to the principles of applied dynamics. The subject matter is divided into two main sections: one dealing with the particle, and the other with rigid bodies. The latter ends with a very valuable chapter on gyroscopes. The whole course is not only well arranged, but also abounds in practical applications, which are clearly explained and quite interesting.

The mathematical side has only been dealt with so far as is necessary in the discussion of the principles underlying applied science. The author points out that no calculus has been used as few students have previously studied it. The book is well supplied with suitable exercises of a practical nature, and these are chiefly arithmetical. Although the mathematical treatment is slender—and not without some very faulty statements—the course is quite a good one and admirably suited to the needs of the students for whom it was written.

The Kinetic Theory of Gases: being a Text and Reference Book whose Purpose is to Combine the Classical Deductions with Recent Experimental Advances in a Convenient Form for Student and Investigator. By Prof. Leonard B. Loeb. Second edition. Pp. xx+687. (New York: John Wiley and Sons, Inc.; London: Chapman and Hall, Ltd., 1934.) 36s. net.

STUDENTS of the generation which fared dryly on such treatises as Watson's would scarcely recognise their subject in the new edition of Prof. Loeb's treatise. The classical developments are all there for the nourishment of the student of the elements, but due regard has been taken of the astonishing changes which we associate with the name of quantum mechanics. At least a third of the original text has been rewritten, and the sections which deal with specific heats, with equations of state, with dielectric constants and with magnetism, have suffered radical changes.

The book needs no description or recommendation to students of kinetic theory, and it is sufficient to say that, in its revised form, it amply fulfils its claim to be a "Text and Reference Book whose Purpose is to Combine the Classical Deductions with Recent Experimental Advances in a Convenient Form for Student and Investigator".

A. F.

Lumineszenz-Analyse im filtrierten Ultravioletten Licht: ein Hilfsbuch beim Arbeiten mit den Analysen-Lampen. Von Prof. Dr. P. W. Danckwortt. Dritte, erweiterte Auflage, mit einem Beitrag von Dr. J. Eisenbrand über "Quantitative Messungen". Pp. viii+190+16 plates. (Leipzig: Akademische Verlagsgesellschaft m.b.H., 1934.) 8.50 gold marks.

THE first edition of Prof. Danckwortt's book appeared in 1928, and the third is mainly distinguished from its predecessor by the addition of an entirely new section on the quantitative measurement of fluorescent radiation emitted by bodies when exposed to ultra-violet light, contributed by Dr. J. Eisenbrand, and a further list of references to original work. The apparatus and technique for qualitative observations, photography, microscopy and photomicrography are fully described. The excellent set of plates included in the book bears witness to the wide range of usefulness of ultra-violet light examinations, and the thousand or so references to original papers emphasise the need of a guide such as this book provides.

Technology

Photo-Engraving. By A. J. Bull. Pp. viii+100+15 plates. (London: Edward Arnold and Co., 1934.) 9s. net.

THIS is an excellent little book. It has been written with the object of providing a concise but accurate account of the various methods of photo-engraving. It is intended for students; for those who are in the printing trade and may be familiar with one branch it will serve to provide a general survey of their craft, and for a wider class of students it will teach the outlines of the various methods so that their own work may be more fruitful. The latter group will include advertisers, commercial artists and others who must use photo-engraving as a means to their particular ends. The author's experience, both as a teacher and a research worker, has enabled him to make the book a model of clarity. To the general reader, not the least interesting part is the historical outline of the application of photography to printing.

The Kingdom of the Camera. By T. Thorne Baker. Pp. xvii+209+64 plates. (London: G. Bell and Sons, Ltd., 1934.) 7s. 6d. net.

THE applications of photography to general science and industry have now become so numerous that few people, even among those who use photography in their daily work, have any idea of the vast variety of its possibilities. For many years Mr. Thorne Baker has been associated with photographic inventors and their work; moreover, he can write a good story about things he has met with in his wide experience. In this exuberant book he gives a short survey of most of the outstanding applications of photography. Profusely illustrated with good half-tone plates, it provides a very interesting, though necessarily very brief, account of the subject.