Short Reviews

(1) *Wörterbuch der Kolloidchemie.* Von Dr. Alfred Kuhn. Pp. iii+179. (Dresden und Leipzig: Theodor Steinkopff, 1932.) 8 gold marks.

(2) *Pocket Technological Dictionary in Three Languages.* By H. Offinger. Part 1, Vol. 1: *German–English–Spanish.* Tenth edition, revised and improved by H. Krenkel. Pp. viii+322. (London: George Allen and Unwin, Ltd., 1931.) 6*s.* net.

ALTHOUGH both these publications would fall within the category of what Lamb called "biblia abiblia" or "books which are not books", yet each should prove very useful in its own sphere. In some respects they are superior to more pretentious volumes, for they contain no redundancies, every word pulling its weight; matter sought for can be easily found; and the published prices are well within the purchasing power of the scientific worker even in these times of financial stringency.

(1) Colloid chemistry, as we all know, has acquired a language—the 'die-hards' call it a jargon—of its own, and this, although easy enough to those who move in the jigsaw world of neglected dimensions, is nevertheless a source of difficulty to many. Dr. Kuhn's dictionary will therefore be welcomed by workers in such subjects as biology, medicine and pharmacy. His book is, however, not a mere dictionary of technical terms, for it contains within a small compass plenty of explanatory matter, and at the same time it serves as a useful guide to the original literature. It is too limited in scope to admit many references to technical applications, and its chief merit lies in the simplicity and directness with which it treats the fundamental concepts of this important branch of physical chemistry.

(2) Offinger's pocket dictionary should be valuable to the small, but we hope increasing, number of technical men who realise the value of a knowledge of German. In the part before us the equivalents of technical terms are given in the order, German-English-Spanish. A majority of the words seem to belong to engineering in its various branches, but metallurgical terms are quite abundant.

Chemistry is treated somewhat cavalierly, for, although chemical engineering and to a less extent laboratory apparatus have been fairly well covered, most of the chemical words given are simply the names of well-known substances. We note, in passing, that a glass "Destillierkolben" (distilling-flask) is rendered as "matrass, cucurbite", and that the useful word "eindampfen" (to boil down or concentrate by evaporation) is omitted. Biological and agricultural terms have no place, but there are references to vegetable fibres, and certain commercial terms are given. The word "technological" is vague, and its use alone in the title of such a book is apt to be misleading; but in this respect the author does not sin alone, for the titles of scientific and technical books are often much too general. E. H. T.

(1) *Handbuch der Physik.* Zweite Auflage. Herausgegeben von H. Geiger und Karl Scheel. Band 22, Teil 1: *Elektronen, Atome, Ionen.* Redigiert von H. Geiger. Pp. vii+492. 44.70 gold marks. (2) Band 22, Teil 2: *Negative und positive Strahlen.* Pp. iv+364. 34.70 gold marks. (3) Band 23, Teil 1: *Quantenhafte Ausstrahlung.* Redigiert von H. Geiger. Pp. iv+373. 34.70 gold marks. (Berlin: Julius Springer, 1933.)

To anyone seeking to know the present stage of development in any branch of physics, the "Handbuch der Physik" probably provides the readiest source. There is no attempt at continuous authorship, as each section of each volume is written by someone whose name is well known in connexion with the work described. The completeness of the whole work is thus assured and continuous revision brings it always to date. The later part of the work described in these three parts of the second edition refers to work published in the autumn of last year. The great extent of the work covered renders it impossible to give any detailed review, but it may be said that details of the mathematical work are not generally given, but rather the general place of any work in the scheme of growth of the subject. References are given, and to the convenience of the reader, they are given on the page to which they apply, instead of being collected in a mass at the end.

(1) The first volume before us is in five chapters dealing with a critical account of the determination of the fundamental charge, e, and the ratio, e/m. Atomic nuclei, nuclear structure, changes produced in bombardment by α-rays, and neutrons; radioactive changes ending with an application of their effect on our ideas of the age of the earth; ions in gas, mobility, diffusion and the periodic system are dealt with.

(2) The second volume deals with the passage of electrons, of canal rays, and of α-rays through matter. Effective cross-section of gas molecules for slow electrons and ions is described. This chapter is fuller in treatment than the others. It opens with a theoretical account and the reason for choosing 'cross-section' rather than 'mean free path' in presenting the results. Diffraction of material rays, with a short account of de Broglie's work and a comprehensive summary of the experimental work, are given.

(3) The third volume opens with a chapter on the determination of h, giving the best value as $(6{\cdot}547 \pm 0{\cdot}009) \times 10^{-27}$. The rest deals with production of quanta by impact, collision, energy levels, light emission caused by radiation, fluorescence, phosphorescence, resonance radiation and spectra, photochemistry.