

whether half-a-dozen travellers stray into this area in the course of a season.

Though the book is good throughout, some regions seem to lend themselves more conveniently to topographical treatment than others. Or it may be that a subtle attractiveness in some countries has not been without its influence upon both author and editor. If it be permissible to discriminate, we would mention the chapters devoted to the Dauphiné Alps and to the Graians as masterpieces of topographical description, as models of what they should be. At the same time, an occasional omission must be noted. A good deal of space is devoted to the Grivola, but no hint is given of the wonderful nature of the ascent by the south-west face from Valsavaranche—an ascent which cannot fail to impress the traveller as one of the most remarkable in the Alps. And there is the less excuse for this omission, as space is wasted by a wholly uncalled for foot-note (p. 307), in which Mr. Coolidge explains that Ball is too enthusiastic in his description of this mountain, as seen from the eastern edge of the Trajo glacier. "Remarkably stumpy and unimpressive" are Mr. Coolidge's words—to us, after several visits to the spot, the very reverse seems the truth, and we take our stand with Ball.

In conclusion, there are numerous ways in which Mr. Coolidge earns our gratitude. Every altitude quoted is given both in feet and metres, a luxury which the climber will not fail to appreciate. Then there is an exhaustive bibliography, and the index is more than satisfactory. Nor has he been unmindful of the historical associations which cling to the mountains. Old traditions, topographical fables, the early ascents of the Fathers of Mountaineering—all these and many kindred subjects are genially yet critically unfolded in the pages of this book. It is hardly necessary to say that blood-curdling stories of Alpine misadventure find no place here. The introduction of six new district maps, on a scale 1 in 250,000, specially prepared for the work, also demands recognition. These are unusually clear and easy to use, whilst the circumstances under which they have been prepared are a sufficient guarantee as to their accuracy. The botanical notes, which occur constantly throughout the pages of the original, have been retained, and additions have been made to them. It may be mentioned that the "general introduction" is not included with this volume; it is to be issued independently in the immediate future.

F. W. O.

OUR BOOK SHELF.

Psychology in the School-room. By T. F. G. Dexter and A. H. Garlick. Pp. viii + 413. (London: Longmans, Green, and Co., 1898.)

THE authors describe their book in the preface as an "attempt to apply the laws of mental and moral science to school work." If we can hardly look upon the result of this attempt as an unqualified success, it is because Messrs. Dexter and Garlick are by no means as well acquainted with the principles of "mental and moral science" as they evidently are with the practical requirements of the school-room. A psychologist who comes to them solely for practical hints as to methods of teaching,

will find much that is suggestive in their treatment of their subject; but we should hardly recommend a teacher who wishes to acquire a sound, even if elementary, knowledge of psychology to take them as his guides. It would, indeed, hardly be going too far to say that "Psychology in the School-room" is a treatise written by persons who know little psychology for readers who know less. Partly this is due to mere defects of information. Thus the account of the "muscular sense," on p. 63 ff., must have been written in ignorance of the important researches, fully described in so accessible a work as James's "Principles of Psychology," which have profoundly modified our estimate of the psychological significance of these once-vaunted sensations. The account of space-perception given in the same chapter, again totally ignores the "nativistic" doctrine of such eminent authorities as Hering, Stumpf, and James. It may be, as the authors say (p. 81), that "distance is inferred, not seen"; but, in the present state of the controversy, it is a gross piece of presumption to make the statement without explaining that it is denied by many of the best modern authorities. Still more unfortunate is the habitual inaccuracy and vagueness of the writers' terminology. They tell us, for instance, repeatedly, that "vibrations" of ether, air, &c., are transmitted to the brain, and there "interpreted" by the mind as sensations of colour, sound, &c. This is, of course, fiction, and fiction of the most misleading kind; as we are never aware of the "vibrations" at all, it is nonsense to call the sensations, to which they serve as physical antecedents, "interpretations" of them. The way in which, in the chapter on "judgment," judgment is said on one and the same page to be a "higher" process than conception, and to be already involved in conception, the very similar way in which in the following chapter definition is spoken of, first, as having to do with "words," then as concerned with "things," then once more as of "names," the double treatment of what are essentially the same facts, once in Chapter viii., under the head of "Association," and again in Chapter xiii., under the title of "Apperception," are a few instances, from among many, of the authors' inability to form consistent views of their subject, and to express those views with precision. Such looseness of thought and language is intolerable in any work, however elementary, that professes to describe the principles of a science.

A. E. T.

Physical Chemistry for Beginners. By Ch. M. van Deventer. Translated by R. A. Lehfeldt. Pp. xvi + 146. (London: Arnold.)

IN a preface written by Prof. J. H. van 't Hoff the object of this work is stated to be the presentation of physical chemistry to medical students in such a fashion as to avoid putting their physical and mathematical accomplishments to too severe a proof. The fundamental laws of combination are dealt with concisely and clearly, prominence being given to the experimental basis for each law. Chemical formulæ, however, are introduced so abruptly into the second chapter, that it is clearly the author's intention that the remarks given are to be considered as supplementary only, either to lectures or a text-book of systematic chemistry. The succeeding chapters deal with the behaviour of gases, thermochemistry, solutions, photo-chemistry, and the periodic system. In the chapter on the properties of gases, normal temperature and pressure are defined as 15° C. and 760 mm. of mercury, although later on in the same chapter the more usual 0° C. and 760 mm. are frequently used. The definition of atomic weight as obtainable from the experimental results is very clearly stated, an uncommon feature in an elementary text-book. The section dealing with thermo-chemistry occupies one-half