

some respects Euclid's prolixity, recalling over and over again propositions which have gone before, does much to fix them in the memory of the learner and prevent looseness in reasoning, and though we think Euclid's style admits with advantage of some pruning, we feel that Mr. Nixon, with overstrained regard to the examination hall, has used the knife too freely, and has run the risk by his style and free use of abbreviations and signs of letting the young pupil believe, as he is only too glad and ready to do, that mathematical work should be written after the fashion of a telegram, grammar disregarded, articles and little words omitted, and what should be sentences written without verb or copula.

Mr. Nixon has deliberately omitted the usual marginal references, on the ground that "learners (1) very generally ignore them; and (2) will gain greater benefit by having to hunt up the references themselves." We believe he has thereby seriously injured the value of his book. Because many boys, in the hands of a careless teacher and left to themselves, ignore the references, is hardly a good reason why they should not be supplied for those who would use them, or who would be required by their teacher to use them; and they would be exceptional pupils under exceptional teachers who could be depended on, or find it easy, "to hunt up the references themselves." Doubtless the exercise of doing this is excellent, but the beginner needs some help in doing it.

We have thought it would be most useful to dwell at some length on Mr. Nixon's revision of Euclid's text, and can only notice generally the exercises and addenda, which occupy more than half the book. The collection of exercises appears to be very well chosen and complete, though we should have been glad to see more of them interspersed among the propositions from which they naturally flow.

The addenda include all the more important developments of the elementary geometry, as well as an introduction to many of the methods of the higher geometry. As a collection of results in the geometry of the straight line and circle this part of the book appears to us from a cursory perusal to be excellent, giving a full account of the important relations of the triangle and its associated circles, centres of similitude, coaxial circles, &c.; while for methods the elementary notions and use of cross ratios, harmonic ranges, inversion, poles and polars are explained and applied to such an extent as to prepare the student naturally for their application to geometry beyond that of the straight line and circle. We fail, however, to find such prominence given to the great principles of duality and reciprocity as their importance, scarcely less in elementary than in the higher geometry, appears to us to demand.

The typography, and the accuracy and clearness of the figures, are to be commended as worthy of the Clarendon Press.

R. B. H.

OUR BOOK SHELF

Practical Histology and Pathology. By Heneage Gibbes, M.D. Third Edition. (London: H. K. Lewis, 1885.)

THE text in this edition does not, on the whole, differ much from that of the previous editions, some new useful formulæ of staining and a more comprehensive arrangement of the subject-matter being the chief differences.

The tables given at the end of the book as to the conversion of degrees of Centigrade into Fahrenheit and *vice versa*, as to the conversion of English weights and measures into French, are in some points incorrect, and might have been easily correctly copied from any standard work.

E. KLEIN

Farm Live-Stock of Great Britain. By Robert Wallace, F.C.S. F.H.A.S., &c., Professor of Agriculture and Rural Economy in the University of Edinburgh. (London: Simpkin, Marshall, and Co.; Edinburgh: Oliver and Boyd, 1885.)

WITHIN 200 pages octavo, of rather large type, does Prof. Wallace condense much useful information upon farm live-stock. It must, however, be evident that to treat of cattle, sheep, swine, and horses, from a biological, an agricultural, and an economical point of view would at least require double the number of pages, containing twice the number of words, and folded quarto. Brevity has been said to be the soul of wit; but in a work such as this we cannot but feel that it must be intended by its author either for those who know nothing or for those who know something of the subject. It appears to us to fall short of the requirements of each of these classes of readers. Four and a half lines—forty words, in fact—upon the Devon breed of cattle cannot be considered adequate, however terse and compressed they may be (and to the point they undoubtedly are), to giving a good word-picture of this race. Besides, Prof. Wallace must excuse us for differing from him as to his statements even in this very short description. He is wrong in saying "colour blood-red, no white." There is white upon the fore-udder in almost all Devon cattle, and it is unfortunate that there should be a manifest error in this very short description of an important breed.

The book aims at too much, and is too vague in its general plan. The writer is successful in being concise, but he is not free from errors, and a greater amplitude in his observations would have both conferred a greater general interest upon his pages, and been more satisfactory to an earnest student of agriculture. Let us hope shortly to see an enlarged edition.

Common-Sense Euclid. Books I. and II. Part I. By the Rev. A. D. Capel, M.A., St. John's College, Cambridge. (London: Joseph Hughes, 1886.)

THE object of this book, as the author tell us, is to point out, especially to teachers and those teaching themselves, the portions of the treatise which either present difficulties to the beginner or escape their notice altogether.

The propositions are explained in a very clear and concise way, some of them being even worked backwards and their analysis being made in every case; explanations are given, here and there, where they are most required, and are put in the easiest possible way. Problems, at the end of each proposition and also at the end of the book, are given, making a total of 300, followed by hints for their solution.

The figures are not placed opposite each proposition, as they are in most editions, but all together at the end. The plan adopted is a very good one, it being understood that the student must construct the figures for himself.

J.

Arithmetic for Schools. By the Rev. J. B. Lock, M.A. (London: Macmillan and Co., 1886.)

THIS is a carefully prepared school-book, forming, as to scope, a sort of arithmetic mean between Hamblin Smith's and Brook Smith's or Muir's. It contains the usual rivulets of text ending in seas of examples. In the purely arithmetical part of the book logical accuracy is attempted with considerable success. Want of grasp is much more evident in the part which deals with the applications. There the division into subjects is strangely illogical, and