

attention of beginners to such matters generally results in preventing them from learning those parts of the subject which it is desirable that they should master at this stage.

There are two other criticisms on points of detail. The word "proportionally" is used on page 29 before the definition of proportion has been given. In this case a footnote, identical with that on each of the two following pages, was unfortunately omitted.

The second criticism relates to the accidental omission of the single but important word "concurrent" in the definition of four harmonic lines. This omission I greatly regret.

I have now dealt with the whole of the criticisms, and leave it to those who may be interested to determine whether they justify the charge that "In some of the details the book is almost incredibly careless."

There is one matter left which is of interest to teachers :

The reviewer says : "Parts of Euclid are undoubtedly too difficult for beginners, and the book before us attempts to remove the greatest of these difficulties, the theory of proportion. In American books we seek to reach this end by an appeal to the analogy of algebra, but herein we depart entirely from Euclid's pattern." I have not been able to determine the exact significance of the words "an appeal to the analogy of algebra," but I believe that those who will take up the fifth book of Euclid and examine how readily the ideas of the irrational number as developed by Dedekind can be used in connection with its results, will find that in rigor it far surpasses the modern attempts to turn the difficulties which Euclid faced and overcame.

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May 31, 1902.

NOTES.

WITH the issue of the present number of the BULLETIN, Professor E. O. LOVETT and Dr. C. L. BOUTON retire from the editorial board. The Committee of Publication takes this opportunity to express its sense of obligation to the retiring editors for their faithful and valuable services.

THE third (July) number of volume 3 of the *Transactions* of the AMERICAN MATHEMATICAL SOCIETY contain the following papers : "On the group defined for any given field