

## EUCLID'S ELEMENTS.

*Euclid und die sechs planimetrischen Bücher.* Mit Benutzung der Textausgabe von Heiberg. Von DR. MAX SIMON. Leipzig, Teubner, 1901. 8vo. vi + 141 pp.

*The Contents of the Fifth and Sixth Books of Euclid.* Arranged and explained by M. J. M. HILL, F.R.S. Cambridge University Press, 1900. 4to. xix + 243 pp.

It is probable that, whether we are glad of it or not, Euclid has been banished from our American schools, never to return. Yet there is a real need for better professional knowledge among our teachers of geometry, and for this reason we welcome Dr. Simon's book, which fairly bristles with remarks helpful even to those teachers who rely upon the most iconoclastic of our text-books.

The book begins with a short account of Euclid's writings, and an elaborate bibliography of the "Elements." The choice of books to which reference is made, seems a little arbitrary. For instance, the author mentions (page 14) the fifteen editions of Legendre, published between 1794 and 1852, under the head of "Efforts to supersede Euclid," but passes over in silence such important work as the "Syllabus" of the "Association for the Improvement of Geometrical Teaching," not to speak of any more recent literature. In fact, he seems to have cared little for English sources, except Simson; for, though he mentions Hoüel's defence of Euclid against Legendre, he has no word for that most truly charming bit of textbook criticism, Dodgson's "Euclid and his modern rivals."

The introduction is followed by the twenty-two definitions of book I, with a note to each. In referring to the complaint frequently urged that some of Euclid's definitions would be no help to any one who had previously no idea of the objects in question, the author quotes from Lambert to the effect (page 25) that Euclid was doubtless aware of this, and in giving the definitions he was merely acting as the artisan who shows his apprentice around the shop, telling him the names of the various implements. The remarks upon the definitions are for the most part good, especially those which deal with the "point." In defining the angle, Dr. Simon uses the word "Biegung" instead of the more common "Neigung," and defends the innovation at some length. We are not convinced, however, that this is a change for the better, for an idea of cur-