While simple matters of mechanical detail are carefully explained, the theoretical discussions contain many serious gaps and fail to make skilful use of the knowledge the reader is supposed to possess.

Moreover, the reader's confidence in the author is severely shaken by a piece of grossly illogical reasoning on pages 37 and 38. The author asks: "Is it possible to subtract in such a way that the result is given on a scale graduated with the same unit as the one begun with?" His answer is: "No! If we examine Fig. 4 and Fig. 14 (the only two nomograms which give the result of subtraction, the former by $b = x - a$, the latter by $x = a - b$) we see that in each case the final unit is different from the first unit." Not only is the logic faulty, but the conclusion itself is incorrect. Fig. 19 on page 35, although designed to be used for the addition $x = a + b$, obviously is equally useful for the subtraction $a = x - b$, and the unit for a is the same as the unit for x. Hence the book, although very useful for some purposes, cannot be regarded as wholly satisfactory.

R. D. Beetle

Un Théorème de Géométrie et ses Applications. By Georges Cuny. Paris, Vuibert, 1923. $6 + 102$ pp.

Let us denote the cross ratio of the four lines OX, OY, OM, ON by R_M. Let OX and OY meet an algebraic curve C_n in $A_1, \ldots, A_n$, and $B_1, \ldots, B_n$, respectively. Let C_n meet an algebraic curve C_p in $\alpha_1, \ldots, \alpha_{np}$. Let C_p meet $A_i B_i$ in $\beta_1, \ldots, \beta_{np}$. The theorem is that the product of the R_α's is equal to the product of the R_β's. As a special case, if C_n has a multiple point of order $(n-1)$ at 0, this product is a function of p alone.

No one can fail to be impressed by the bewildering array of well known theorems which appear as special cases of this remarkably general theorem. As examples we note two general theorems on algebraic curves due to Newton, Pascal's hexagon theorem, Pappus' theorem, Carnot's theorem, Poncelet's theorem on the intersections of a cubic and conic, Frégier's theorem, Cazamian's theorem; examples selected from among scores of familiar projective and metric theorems. The methods of polar reciprocation, of inversion, and Laguerre's projective definition of angle are most happily employed. Extensions to three dimensions are briefly indicated.

The book should be of great value, especially to the younger graduate student. The reviewer believes that the possibilities of the theorem are by no means exhausted. Further investigations might well be incorporated in masters' theses. The subject matter is admirably adapted for student lectures in a course on modern geometry.

B. H. Brown