There are a few misprints; in volume 5, p. 61, lines 15 and 16, sin 2α and cos 2α schould be sin α and cos α respectively; p. 74, line 4 from end, Gegenseiten should read Gegenwinkel; and p. 85, line 16, 1675 should be 1765.

The seventh and final volume is to contain Stereometry and a complete index. The appearance of this index will be impatiently awaited, as it will increase the value of the set many fold. Even as it is, the six volumes are indispensable for the teacher or student of the history of elementary mathematics.

R. B. McClenon

Principles of Geoemtry. By H. F. Baker. Vol. II: *Plane Geometry, Circles, Non-Euclidean Geometry.* Cambridge University Press, 1922. xv + 243 pp.

This book, in continuation of the first volume, aims to present the main theorems of plane geometry and to develop logically the results of the principles explained in the first volume. In both purposes the author has succeeded admirably.

The preliminary chapter of the present text reviews in a brief manner enough of the matter of the first volume to enable a reader to use the present volume without reference to the first one, provided he has an elementary knowledge of projective geometry. In both volumes the treatment is first synthetic. The fundamental notation is that of projective, or (as the author calls them) related ranges. The notions of distance and congruence are not assumed. These notions and coordinate systems are developed later with a study of the logical principles underlying them.

In chapter one of the present volume, the general properties of conics are deduced from their definition as the locus of the intersection of the corresponding rays of two projective pencils and a wealth of theorems are presented.

In chapter two the relation of geometric figures to two given points of reference are studied. Let us assume any two points I and J as the absolute. Then if a line AB meets the line IJ in a point K, the point C which is the harmonic conjugate of K with respect to A and B is the midpoint of AB. Two lines which meet on IJ are parallel, and two lines are perpendicular if they meet IJ in two points which are harmonic conjugates with respect to I and J. A circle is a conic through I and J. From these definitions the usual properties of circles are deduced and a discussion of coaxial circles, inversion on a circle and the like are given. Similarly, projective definitions of foci of a conic, of a rectangular hyperbola, of a parabola and the like may be given, and the so-called metrical properties of conics obtained.