Propositions of one-dimensional geometry, of ranges of points upon a straight line, can be made simpler and less algebraical by considering the line as derived by projection from a conic, or, more generally, from the normal curve of order n in space of n dimensions. Circle geometry in the plane, with all its complication and apparent haphazardness, appears as an ordered whole when regarded as obtained by projection from the geometry of plane sections of a quadric. The reviewer well remembers his astonishment when it was first pointed out to him, in lecture, that Wallace's theorem of the common point of intersection of the four circumcircles of the triangles formed by four straight lines was essentially the same, from this point of view, as the theorem about Möbius tetrads, mutually inscribed and circumscribed—a proposition involving only points, lines, and planes. Also the theorem of the Hart circle of three given circles, which is such that the four circles are all touched by four other circles, becomes much more interesting and instructive in three dimensions.

All this, and very much more, is packed into the 244 pages of this volume. The book naturally suffers from the compression and is not one to be read in an arm-chair; indeed, any one page will furnish matter for several hours' cogitation by the ordinary mortal. But it is a fascinating study, and British mathematicians may well be proud of such a splendid mine of geometrical lore as is to be found in the four volumes of "Principles of Geometry."

(2) The "Géométrie du compas" of M. Quemper de Lanascol is a book of quite another kind. There is a mathematical interest in showing that every geometrical problem which can be solved by ruler and compasses can be solved by compasses alone, but this is not a difficult matter. One has only to show that (*a*) the point common to two straight lines and (*b*) the points common to a straight line and a circle, where a straight line is given by two of its points, can be found without a ruler and the thing is done. Alternatively, one can proceed by the method of Adler, by showing how to find with compasses only the inverse of a point with respect to a given circle, and remarking that we have then only to invert the ordinary construction with ruler and compasses, which involves straight lines and circles, to get a construction involving circles only. For an adequate account of both methods reference may be made to the article by E. Daniele in "Questioni riguardanti le matematiche elementari" (1914), t. 2, pp. 25-48; Coolidge in his "Treatise on the Circle and the Sphere" does the whole thing in a couple of pages (pp. 187-8).

But Mascheroni, whose "Geometria del compasso" (Pavia, 1797) is the *locus classicus* of the subject, did not confine himself to the theoretical aspect. He maintained that the practical difficulties of making a perfectly straight edge rendered it important to avoid the use of such an instrument, and his book is filled with ingenious constructions, as simple as may be, for all the problems of elementary geometry, obtaining each point of the figure as an intersection of two circles. He also gave approximate constructions, by the same means, for problems of higher than the second degree and for transcendental problems, the duplication of the cube, the quadrature of the circle, and so on.

The present volume contains all that is in Mascheroni and, in addition, gives a section on inversion. The material has been rearranged, much new matter has been added, from various sources, and the result is a great improvement on the prolixity of the "bon abbé." The book will appeal to the mathematical amateur who delights in what the author deprecatingly terms "une sorte d'acrobatie géométrique," especially when he reads how Napoleon lectured his band of savants on this very subject, evoking from Laplace the remark: "Nous attendions tout de vous, général, sauf des leçons de mathématiques." F. P. W.

Our Bookshelf.

Male Infibulation. By Eric John Dingwall. Pp. vii +145. (London: John Bale, Sons and Danielsson, Ltd., 1925.) 10*s.* 6*d.* net.

THIS work is the first volume of a series which the author is undertaking in connexion with some of the more obscure customs of antiquity and the Middle Ages related to the sexual life of man. The book consists of three chapters dealing respectively with three forms of the practice to which the term infibulation has been applied, namely, the Roman form, the Greek form, and phallus curvatus. In the Roman form, where alone the term is applicable, a ring or similar object is attached to the prepuce. The operation was chiefly performed on singers, musicians, and slaves, the principal object being to preserve the quality and tone of the voice, which was supposed to be corrupted by sexual indulgence, while the subsidiary reason was to prevent masturbation. In the Greek form, which was principally adopted by athletes and is represented on Greek statues and vases, the practice consisted in tying up the prepuce with a small band, either because the Greeks were ashamed of a short foreskin associated with uncovering of the glans, or because they believed that physical strength could better be preserved in this way. The phallus curvatus, which is often depicted on the vases and statues of antiquity, especially among the followers of Dionysus, the Sileni, and Satyrs, and was by no means uncommon among revellers and caricatures, is regarded by the author as symbolic of a life of sexual excess, and therefore as having no possible connexion with infibulation. The work, which has obviously involved an immense amount of literary and artistic research, is a valuable contribution to the sexuological department of anthropology.