A TREATISE ON THE CONSTRUCTION, PROPERTIES, AND ANALOGIES OF THE THREE CONIC SECTIONS

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A Treatise on the Construction, Properties, and Analogies of the Three Conic Sections by B. Bridge

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ON THE

CONSTRUCTION, PROPERTIES, AND ANALOGIES

OF THE

THREE CONIC SECTIONS.

BY THE
REV. BOWICK BRIDGE, B. D. F. R. S.
FELLOW OF ST. PETER'S COLLEGE, CAMBRIDGE.

FROM THE SECOND LONDON EDITION,

WITH ADDITIONS AND ALTERATIONS BY THE AMERICAN EDITOR.

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ADVERTISEMENT.

The present edition of Bridge's Conic Sections is reprinted, with a few alterations, from the second London Edition. Such changes only have been made, as seemed necessary to adapt the work to the purpose for which it is intended, namely, that of furnishing a text-book for recitation in Colleges. To this end, the propositions have been enunciated without the use of letters and without reference to particular diagrams. As it is true, however, that a proposition is more readily comprehended, when it is asserted of the lines and angles of some particular figure, immediately before the eye, than when expressed in general terms; it has been thought proper to introduce the general enunciations at the close of the demonstrations to which they belong, and to leave the author's statements at the commencement of those demonstrations unaltered. In this respect the convenience of students has been consulted, rather than the usual practice of writers.

The demonstrations, as they stand in the original work of Bridge, are in general, so much distinguished for conciseness and simplicity, and leave so little to be supplied by the student, (a circumstance of great importance in a book designed for large classes,) that it has been thought best to vary from the author only in a very few instances. Alterations have, however, been made, when they seemed likely to be attended by any material advantage.

The number of the propositions has been somewhat increased, not for the purpose of completing the enumeration of particular properties of the Conic Sections, which, in a work like this, considering the fertility of the subject, would be equally impracticable and useless; but in order to exhibit to the student how far many truths may be generalized, which he is apt to consider as limited by particular circumstances. A few propositions, not of this kind, have been added, as

being among the more curious of those which Bridge has omitted to notice.

For the convenience of students, some references, particularly towards the close of the book, have been made to the mathematical treatises of President Day.

The original numbering of the Properties and of the Articles has been suffered to stand; and whenever any thing has been inserted in the body of the work, the number of the preceding article has been repeated with a letter annexed. The additional Properties are distinguished by the capitals A, B, C, &c. A few notes contain whatever else is peculiar to this Edition.

F. A. P. BARNARD.

Yale College, June 20, 1831.

CONTENTS.

CHAPTER I.

Introduction.

Pages.

Sect. I. On the nature of the Curves arising from the cutting of a Cone obliquely to its base, ... 1

II. On the mode of describing the Conic Sections upon a plane, ... 4

CHAPTER II.

On the Parabola.

III. Definitions, ... 10

IV. On the Properties of the Parabola, ... 11

CHAPTER III.

On the Ellipse.

V. Definitions, ... 26

VI. On the Properties of the Ellipse, ... 27

CHAPTER IV.

On the Hyperbola.

VII. Definitions, ... 49

VIII. Properties of the Hyperbola analogous to those of the Ellipse, ... 51

Page.

IX. On the Properties of the Hyperbola derived from its relation to the Asymptote, ... 65

X. On the Properties of the EQUILATERAL Hyperbola, . 73

CHAPTER V.

On the Curvature of the Conic Sections.

XI. On Curvature, and the Variation of Curvature, . . 77

XII. On the Curvature of the PARABOLA, ... 84

XIII. On the Curvature of the ELLIPSE, ... 86

XIV. On the Curvature of the HYPERBOLA, ... 89

CHAPTER VI.

On the analogous Properties of the Three Conic Sections.

XV. On the changes which take place in the nature of the Curve described upon the surface of a Cone, during the revolution of the plane of intersection, . . 91

XVI. On the mode of constructing the Three Conic Sections by means of a DIRECTRIX, and the Properties derived therefrom, ... 94

XVII. On the analogous properties of the Normal, Latus-rectum, Radius of Curvature, &c. &c. in all the Conic Sections, ... 103

CHAPTER VII.

On the method of finding the dimensions of Conic Sections whose Latera-recta are given, and of describing such as shall pass through certain given points.

XVIII. On the method of finding the dimensions of Conic Sections, whose latera-recta are given, . . . 109

Page.

XIX. On the method of describing Conic Sections which shall pass through three given points, ... 113

CHAPTER VIII.

On the Quadrature of the Conic Sections.

XX. On the relation which obtains between the areas of Conic Sections of the same kind, having the same vertex and axis; and on the Quadrature of the Parabola, Ellipse, and Hyperbola, ... 118

XXI. On the Quadrature of the PARABOLA, according to the method of the Ancients, ... 125