

**DUBLIN UNIVERSITY PRESS  
SERIES. THE PARABOLA,  
ELLIPSE, AND HYPERBOLA,  
TREATED GEOMETRICALLY**

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**ROBERT WILLIAM GRIFFIN**

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THE  
PARABOLA, ELLIPSE, AND HYPERBOLA,  
*TREATED GEOMETRICALLY.*

BY

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## P R E F A C E .

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LONG experience has proved to me that it would be a great practical advantage for the general class of students to acquire a knowledge of even the elementary Geometrical properties of the Parabola, Ellipse, and Hyperbola—a knowledge which may be attained, in a very short time, by any one acquainted with the six Books of Euclid, though many have neither the ability nor the perseverance necessary for the Analytical investigation.

In the following Treatise I have endeavoured to demonstrate, on strictly geometrical principles, the most useful properties of these curves. In the definition of a tangent I have avoided the notion of a limit, adopting, in preference, Euclid's definition; and the demonstrations depending thereon will, I think, be found somewhat new and interesting.

The similar properties of the three curves will be found to be treated in such a manner as to need scarcely any change of either words or notation.



In Chap. III. Proposition XIX. *et seq.* and Corollaries, I have traced the analogy between the properties of conjugate diameters of the Hyperbola, and those of the Ellipse, further than has been done in any other Treatise.

To the Board of Trinity College I owe my grateful thanks, for extending to me that liberal support with which they have ever shown themselves ready to assist the humblest efforts.

ROBERT WM. GRIFFIN.

19, TRINITY COLLEGE,  
*September, 1879.*

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