

of one conic into another, called *per subtensas* (by chords), which, in the opinion of Bopp, "even now would be serviceable for didactic purposes" (page 307), which "holds *in nuce* the entire analytic geometry of conics" (page 295) and "is fit to place him, Gregorius, among the founders of analytic geometry" (page 309). While, in our opinion, Bopp claims too much for this method, it is doubtless of historic interest. To gain an idea of it, take the following example: In subjecting the parabola to the transformation "by chords," Gregorius in one place draws a chord from the vertex to any point of the parabola and takes the length of this chord as the ordinate of a point having the same abscissa as the chosen point on the parabola. This new point lies on the equilateral hyperbola whose transverse axis lies in the geometric axis and is equal to the latus rectum of the parabola. By this process the hyperbola can be constructed by points. It is shown how to derive, *per subtensas*, the hyperbola from the ellipse and also how the hyperbola may be transformed into itself. Similarly for the other conics.

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THE *Annuaire* has been published continuously since 1796, and the present volume is the 112th of the series. This publication has been so often reviewed in the "Shorter Notices" that a notice of the special features for the current year is sufficient. In accordance with the plan adopted in 1904, it contains the tables and explanations of physical and chemical constants, those of geographical and statistical constants being inserted only in the odd-numbered years.

The special articles at the end of the volume are five in number. The first and longest is a popular account, by M. G. Bigourdan, of the methods used for obtaining the parallaxes and distances of the heavenly bodies. The author adopts a chronological treatment and gives a fairly complete historical summary without at any time wearying the reader. M. Deslandres gives an account of the meetings at St. Louis, Oxford, and Meudon of the international union for solar research, from which it is easy to see how the systematic study of a branch of physics may elevate the subject into a science. The observatory of Montsouris in France exists for educational purposes only: M. Guyon explains its methods and equipment. Many