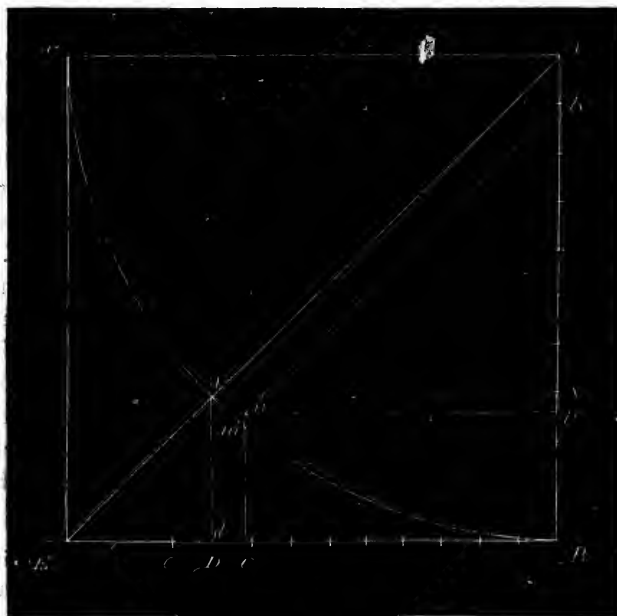## Prop. A.—Theorem.

If an arc containing one-eighth of a circle, be applied upon a straight line, and, from the terminal extremity of the arc, a perpendicular be drawn intercepting the straight line, and if from the arc one-tenth thereof be cut off, then, if the remaining arc (to wit, the arc containing nine-tenths of the whole arc,) be rolled upon the straight line, the point of contact shall be the same point on the straight line intercepted by the perpendicular drawn from the terminal extremity of the whole arc.

Fig. 1. Let the arc *B. M.*, containing one-eighth of a circle and described with the radius *A. B.*, be the arc applied upon the straight line *B. E.*, and let *M. D.* be the perpendicular drawn from *M.* intercepting the straight

line at *D.* And let the arc *B. m.*, nine-tenths the length of *B. M.*, be the arc cut off from *B. M.* If the arc *B. m.* be rolled upon the straight line until *m.* arrive at the straight line, the point of contact shall be the point *D.* intercepted by the perpendicular *M. D.*