the diff. *C. d.* and together with the diff. *d. D.*; (thus . . . *C. O.* includes the advance of *n.* through *C. d.*, of *M.* through $C.\,d. + \frac{C.\,d.}{9}$ and the distance *d. D.*) But *B. C.* and *C. d.* taken together equal *B. d.* which is equal to *n. p.* And *M. N.* is to *n. p.* as ten to nine. Therefore $B.\,d. + C.\,d. + \frac{C.\,d.}{9}$ is to *B. C.* + *C. d*, as ten to nine. By the assumption *B. O.* contains (*B. C* + *C. O.*) $B.\,d. + C.\,d. + \frac{C.\,d.}{9} + d.\,D.$, and therefore the ratio of *B. O.* to *B. d.* is greater than the ratio of *M. N.* to *n. p.* by the distance *d. D.* Now, it is manifestly impossible that *B. M.* can increase by advancing in a greater ratio of proportion to the increase of *B. n.* than the proportion of the sine *M. N.* to the sine *n. p.*, because *B. M.* and *B. n.* are similar arcs; therefore the distance *C. d.* cannot be less than the distance *C. D.* By similar reasoning it may be shown that the distance *C. d.* cannot be greater than *C.D.*, because then the advance of the arc *B. M.* would be proportional to the advance of the arc *B. n.* in a ratio of proportion less than the ratio of the sine *M. N.*, to the sine *n. p.*, to suppose which would be absurd. Wherefore it is demonstrated that the point of contact of the lesser arc *B. n.* on the straight line *B. E.*, indicated assumptively by *d.*, is the same point *D.* at the extremity of the perpendicular *M. D.*

Q. E. D.

(5.) Again—Fig. 3 (repeats the construction of Fig. 1.) Produce *D. M.* through *M.*, and make *F. D.* equal to *A. B.* With centre *F.* and radius *F. D.* describe the arc *D. N.* equal and similar to the arc *B. M.*, produce the straight line *E. B.* through *B.* indefinitely, and upon the line so produced roll the arc *D. N.* from *D.* in the direction *D. B.* until the extremity *N.* of the arc becomes in contact upon the line at *T.* Now the distance *B. T.* is manifestly equal to the distance *D. O.*,