APPENDIX TO SUPPLEMENT D.

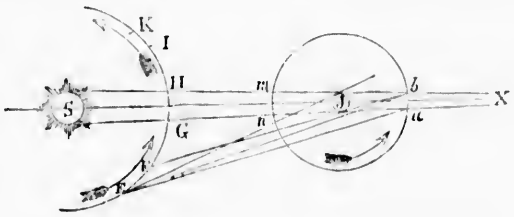
PART SECOND.

—o—

Herschel's Outlines of Astronomy.

(537) "These eclipses (of Jupiter's satellites) moreover, are not seen, as is the case with those of the moon, from the centre of their motion, but from a remote station, and one whose situation with respect to the line of shadow is variable. This, of course, makes no difference in the *times* of the eclipses, but a very great one in their visibility, and in their apparent situations with respect to the planet at the moments of their entering and quitting the shadow."

(538) "Suppose *S*. to be the sun, *E*. the earth in its orbit, *E.F.G.K.*, *J*. Jupiter, and *a.b.* the orbit of one of its satellites. The cone of the shadow, then, will have its vertex at *X*. a point far beyond the orbits of all the satellites; and the penumbra, owing to the great distance



of the sun, and the consequent smallness of the angle (about 6′ only) its disc subtends at Jupiter, will hardly extend, within the limits of the satellites' orbits, to any perceptible distance beyond the shadow—for which reason it is not represented in the figure. A satellite revolving from west to east (in the direction of the arrows) will be eclipsed when it