remote, that is to say, at the two extremities of their elliptic orbits, or what are termed their perihelion and aphelion. By far the great majority approach it at their perihelion near enough to arrive within the earth's orbit —very many within that of Venus, or even of Mercury —and not a few attain an extreme proximity to the actual surface of the sun, while on the other hand only four or five among the vast number of recorded comets (those of 1747, 1826, 1835, 1847) have failed to arrive within twice the earth's distance, or within the orbits of those small planets called asteroids; and one only has had a perihelion distance exceeding four times the earth's distance (that of 1729), still falling short of the orbit of Jupiter. Probably, however, a comet, which should always remain outside of the latter planet's orbit, would have no chance of ever being seen by us. As to the extreme distances to which they recede from the sun, it is only in comparatively few instances that it can be even estimated—their ellipses being in general so elongated as to be undistinguishable from that extreme and limiting form which is called a parabola, which never returns into itself at all. The form of this curve is that which a stone thrown into the air describes, or which a jet of water thrown up obliquely by a smooth round pipe assumes in the air, being very much curved or bent about the point which is called the vertex, and less and less so in the ascending and descending branches.

(13.) Comets, we have said, are wild wanderers, and despise beaten tracks. No way confined, as the planets are, to move in planes nearly coincident with the ecliptic,