

the mass of the comet will be more or less considerable; but if the fall of the comet is in a very oblique direction, which will most frequently happen, then the comet will only graze the surface of the sun, or slightly furrow it; and in this case it may drive out some parts of matter to which it will communicate a common motion of impulsion, and these parts so forced out of the body of the sun, and even the comet itself, may then become planets, and turn round this luminary in the same direction, and in almost the same plane. We might perhaps calculate what quantity of matter, velocity, and direction a comet should have, to impel from the sun an equal quantity of matter to that which the six planets and their satellites contain; but it will be sufficient to observe here, that all the planets, with their satellites, do not make the 650th part of the mass of the sun,* because the density of the large planets, Saturn and Jupiter, is less than that of the sun; and although the earth be four times, and the moon near five times more dense than the sun, they are nevertheless but as atoms in comparison with his extensive body.

However inconsiderable the 650th part of a whole may be, yet it certainly at first appears
to

* Vide Newton, page 405.