the earth and Jupiter, they happen eight minutes thirteen seconds later. These results can only be accounted for by admitting the progressive motion of light; and light, requiring about $16\frac{1}{2}$ minutes to cross the orbit of the earth, consequently travels at the rate of 192,500 miles a second. Roemer's observations have been since confirmed by the results obtained by Bradley, in his calculation of the aberration of the fixed stars, more especially of χ Draconis, which fixes the velocity of light at 191,515 miles in a second.

2. *Light moves in straight lines.* If we take a series of metallic plates or cards, each plate having a small aperture, we shall not be able to see through the holes unless they are placed in a right line, nor can we see through a bent tube; in this respect light differs from sound. The form of the shadows of bodies also proves that light moves in straight lines; for when they are received on plane surfaces they have a figure similar to the section of the body which casts them.

3. *Light proceeds in all directions and from every part of the luminous body.* Thus, if a ray of direct light pass from a luminous body through an aperture upon a screen in a darkened apartment, a representation of that body will be formed upon the screen, so that rays of light are thrown in every direction and from every part of the luminous substance.

It has been stated that light moves in straight lines; but there are certain circumstances under which it may be affected by forces dependant on the constitution of bodies, and compelled to deviate from the paths it would otherwise take. Light may, in fact, be either reflected or refracted; it may be arrested in its progress, and thrown back into a direction opposed to that in which it was moving; or it may be bent from its right line, and compelled to move in some other right line or in a curve.

REFLECTION.

The fact that light is capable of reflection was known from a very early period. In the writings of Moses, mirrors or looking-glasses are mentioned as being constructed of brass, and used by the Israelitish women. The Greeks are well known to have been acquainted with the reflection of light by polished surfaces. Callimachus, the Cyrenean, says in his Hymn to Pallas, "She never looked into water or a mirror