

SECTION II.

Demonstration on Reflected Light by a Looking-glass and Candle. Observations on the same may be demonstrated by the Sun, Moon or Stars. A man in front of a Looking-glass. Experiment upon Vision by the use of Poles. Observations thereon.

It has always been considered that when a person looks at a mirror he sees the image of some object that light has brought to the glass and reflects back to the eye, but after various considerations I find that light neither brings the image of objects to the glass, nor reflects them back to the eye, it merely illuminates the object, and the light of the eye, performs that office of reflection at the glass, and falling back upon the object where it takes its perception.

Suppose I take a looking-glass and lay it flat upon a table, and place a candle on the opposite side of the table, at some distance from the glass, and somewhat elevated above it, and then place myself on the other side of the table in such a position that I can clearly see by reflection the flame of the candle by looking at the surface of the glass, and then I procure some person to assist me. First I shut my left eye and direct my assistant to make a mark upon the glass where the flame of the candle is seen by my right eye; next, I hold my head steady and shut my right eye, and direct my assistant to make a mark upon the glass where the flame of the candle is seen with my left eye. Next, with a steady head and both my eyes open, I tell my assistant to make a mark where the flame of the candle is seen with both my eyes, having done thus, I perceive