

of orichalcum," the word orichalcum being usually translated a dark-coloured brass. In those ancient poems ascribed to Homer, frequent allusion is indirectly made to the effects produced by the reflection of light. To take but one example, we may refer to the poet's beautiful description of the lance and breastplate of his hero Achilles, in the twenty-second book—

"The Pelian javelin in his better hand
Shot trembling rays, which glittered o'er the land;
And on his breast the beamy splendour shone,
Like Jove's own lightning or the rising sun."

In one of the fables of Æsop an optical effect is described, which of itself might lead us to imagine that the Greeks were better acquainted with the science of optics than might be imagined, had we not evidence of their knowledge. There is a result well known to opticians, that images reflected from a plane surface appear as far behind that surface as the body itself is before it. Æsop must have been acquainted with this fact when he wrote the beautiful fable of the dog and his shadow.

Aristotle supposed twilight to be occasioned by the reflection of solar light by the atmosphere, and maintained that a similar reflection prevents shadows from appearing totally black. This celebrated philosopher also stated that rainbows and haloes were produced by the same influential cause.

Euclid of Alexandria, who lived one hundred and eighty years before Christ, wrote a work on catoptrics, or the reflection of light, which is supposed to be lost, as the volume that bears his name is not characterized by that elegance and accuracy which distinguish the works of the author of "The Elements of Geometry."

In mentioning the names of some of the most celebrated ancient philosophers who were acquainted with the reflection of light, we cannot omit that of Archimedes, for his burning mirrors will never be forgotten as long as science is esteemed by men. Some writers in modern times have treated the story as a fable; but the united testimony of Lucian, Eustathius, Zonares, and others, is sufficient evidence to remove the most scrupulous doubts. An ancient historian says, "When the fleet of Marcellus was within bowshot, the old man, Archimedes, brought an hexagonal mirror, which he