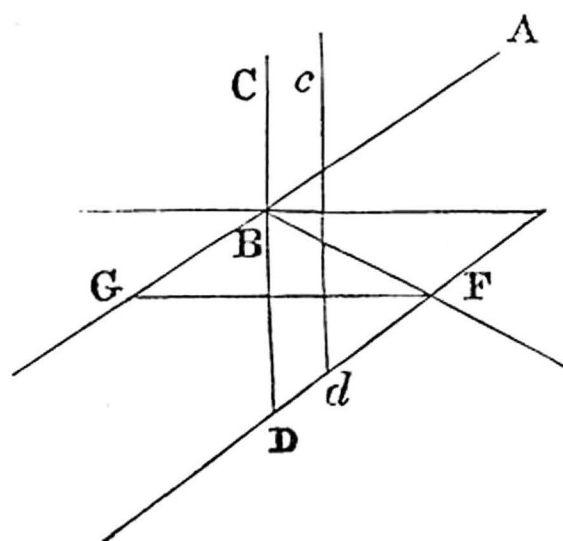


had previously prepared ; and at a proper distance from ~~this~~ he placed other small mirrors of the same kind, made to move in all directions on hinges, the which, when placed in the sun's rays, he directed on the Roman fleet and reduced it to ashes." Euseb^{ius}, the Archbishop of Thessalonica, in his commentary on Homer's Iliad, says, "Archimedes by means of a reflecting mirror burnt a Roman fleet at the distance of a bowshot." If any other evidence were necessary to prove that Archimedes did that which is attributed to him, the testimony of Zonares, the historian, might be adduced, who informs us that Proclus, in imitation of what Archimedes had done at Syracuse, burnt the fleet of Vittelion at the siege of Constantinople ; and that the instrument employed was a reflecting mirror, composed of twenty-four small plane reflectors, which, directing the rays of the sun to one point, excited an intense heat.

But if we had no written evidence of the attention paid by the ancient philosophers to the phenomenon of reflection, it would be impossible to suppose the early inhabitants of the earth to have been unacquainted with the fact. If they had been unattracted by every other natural appearance, they could not have failed to observe the rising and setting sun reflected from the peaceful bosom of lakes, rivers, and oceans.

The effects produced upon light by reflections from the surface of bodies, depend upon the form of the surface from



which they are reflected. There is, however, one general law by which the result is always governed ; for although parallel rays falling upon a concave surface are converged, and upon