its separation, behind the head, into two main streams with comparative darkness between them. This would be a natural and necessary optical consequence of the tail consisting of a hollow, conical envelope, streaming off on all sides around from the head, and presenting to the eye therefore a much greater thickness of luminous matter at its edges than at its middle. But in this comet the separation, when viewed through powerful telescopes, was singularly sharp ; and appeared as a clear, narrow, straight cut, or dark chink, originating close to the nucleus (as, indeed, on that explanation of the fact it ought). And this brings me to treat of the appearances presented by the head and nucleus under the inspection of powerful telescopes.

(45.) All considerable comets which have been examined with anything like what would in these days be regarded as a *powerful* telescope, have presented the appearance of a nucleus of more or less definable and condensed light, sometimes having a much brighter and almost stellar point in or near its centre, and at some distance, *in the direction of the sun*, a capping of light sometimes quite separated, as if some transparent atmosphere sustained it—more frequently connected by those fan-like jets of "flame," such as we have mentioned in the case of Halley's comet, and putting on the aspect of a "sector," or fan, opening out into a widening arc, and bounded internally by two crescents springing from the nucleus. Donati's comet exhibited this feature in perfection ; not, however, without striking variations and individual peculiarities. There was the same appearance