

resolved, parts of misty matter gradually fading away in the distance being distinguishable apart from the stars. No definite line can indeed be drawn to distinguish between clusters and nebulae. So great is the



Fig. 133.

number of these objects that a catalogue of them compiled by Sir J. Herschell contains no less than 5,079. As to their character and distance



Fig. 134.

we may derive some information from the observations of Sir W. Herschell. Most of the nebulae yielded to his Newtonian reflector of twenty feet focal distance, and twelve inches aperture, which plainly discovered them to be composed of stars, or at least to contain stars, and show every other indication of their consisting of them entirely. "The nebulae," says he, "are arranged into strata, and run on to a great length; and some of them I have been able to pursue, and to guess pretty well at their form and direction. It is probable enough that they may surround the whole starry sphere of the heavens, not unlike the Milky Way, which undoubtedly, is nothing but a stratum of fixed stars. And as this latter immense starry bed is not of equal breadth or lustre in every part, nor runs on in