stroke not be in the direction of the centre-should the line which joins the point of percussion to the centre, make an angle with that line in which the impulse was communicated, then the body is both made to go forward in space, and also to wheel upon In this way each of our planets may have its axis. had their compound motion communicated to it by one single impulse; and on the other hand, if ever the rotatory motion be communicated by one blow, then the progressive motion must go along with it. In order to have the first motion without the second, there must be a two-fold force applied to the body, in opposite directions. It must be set a-going in the same way as a spinning-top, so as to revolve about an axis, and to keep unchanged its situation The planets have both motions, and in space. therefore may have received them by one and the same impulse. The sun, we are certain, has one of these motions. He has a movement of revolution. If spun round his axis by two opposite forces, one on each side of him, he may have this movement, and rétain an inflexible position in space But if this movement was given him by one stroke, he must have a progressive motion, along with a whirling motion; or, in other words, he is moving forwards; he is describing a tract in space; and in so doing, carries all his planets and all their secondaries (their moons) along with him.

Another interesting tract of speculation has been opened to us by more recent observations of astronomy, in the discovery of the *Nebulæ*. And though it is but a dim and indistinct light which this discovery has thrown upon the structure of the universe, yet still it has spread before the eye of the mind, a field of wide and lofiy contemplation. Anterior to this discovery the universe might appear to have