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inspection to be really more formidable—viz., there is no assignable cause of restraint and no reason has been shown why the earth's orbit (or the orbit of any other planet) should be and continue to be in an undeviating horizontal plane. If there was no apparent cause for deviation it would be incumbent upon us to show positive cause, but, with so many centres of attractive force above, below, and in every angular direction vertical and oblique to the orbital plane—it is almost inconceivable that the earth (or other planet) throughout its entire orbit should not be subjected to some vertical attractive force: and to counteract such an influence however slight, no restraining force whatever has been shown, nor is there any known force or influence which can be assigned as operating to prevent such a motion of vertical deviation above or below the orbital plane. Even if we put aside the supposition of a vertical or oblique perturbing influence, the difficulty is not much diminished; for it is scarcely conceivable, for instance, that the earth can revolve around the sun at a distance of 95 million miles in an orbital plane perfectly coincident with the equatorial plane of the sun, deviating neither above nor below that plane in any degree without any positive cause to prevent its ascending or descending: and yet it must be supposed to keep constantly in this horizontal path notwithstanding that its axis is inclined to the pole of the ecliptic, that its form is not perfectly spherical but ellipsoidal, that its hemispheres are unequally heated and cooled during the progress of its revolution, and that internal changes are continually taking place which may, at least temporarily, disturb in some slight degree the equality of gravitating effect above and below the horizon. This however must be not only conceived to be possible but must be admitted as established fact before we can accept the theory of the equatorial plane inclined to the plane of the ecliptic, and of the planetary revolution in a perfectly horizontal orbit without vertical deviation