constellations and stars as they exist to the eye on any evening, and are found in every modern catalogue and collection of maps of the stars in the passing age.

NEXT.—In describing the different mechanical appendages which form the structure of this celestial instrument it has to be particularly observed there are four distinct mechanical factors employed in its use, namely :—First. A semicircle placed from pole to pole of the sphere. It is meant to exhibit an outer sidereal solar meridian that moves annually in the ecliptic circle of the sphere, and carries at the same time the sun's supposed centre, which points off on the calendar of days all the right ascensions of our great luminary. This is an important arrangement as it serves the same purpose in the private parlour study of astronomy that the right ascension circle does, which is attached to the axis of the equatorial mounted telescope placed in all the public observatories.

SECOND.—Exhibits another meridian which revolves below and within the first just allu[illegible] to. It is introduced to rotate round the Sphere every twe[illegible]-four hours, representing the *axial rotation of the earth* and any place selected upon it. This part forms geometrically the great *exhibit* of the entire *terrestrial topography*, and is graduated on both sides from the equator up to the poles of the earth.

It may be mentioned here, to a juvenile observer of the stars, that as every place on the earth's rotundity is correctly determined by its latitude and longitude; those two important elements are correctly obtained from the foregoing structure and place of the terrestrial meridian. Its graduations give readily the *latitude* from both the terrestrial poles, and its position as traced by the index on the twenty-four hour-circle determines the *longitude* of the place where the observer is standing with the hour circle, the longitude can be determined to 10 seconds of arc.