

circuit of the world, and, by continuing in an invariably onward course, eventually returned to their place of departure.

It was MAGELLAN who first achieved this glorious enterprise. Sailing, in the month of September 1519, from the coast of Portugal, he discovered, early in the following year, the strait which bears his name, and is situated at the southern extremity of South America. He afterwards fell in with the fertile archipelago of the Philippines, where he perished in an engagement with the natives. His lieutenants, continuing their westward voyage, regained Europe in safety. Were the earth a level surface, this return to the point of departure would have been impossible.

But proofs of the earth's rotundity are easily multiplied. One of the most common is the following. If walking across a level country, we draw near a village, we perceive at first the summit of the church-spire, then the roof of the church, and finally the lowest buildings. We must conclude from this fact that in walking towards the village we ascend a curved line, instead of preserving always the same level with reference to that point.

[The curvature of the surface of the sea is very strikingly manifested. Suppose yourself on land, at the summit of a high tower, a hill, or on a steep rocky shore ; a vessel appears on the horizon, you see only the tops of the masts, the highest sails ; the lowest sails and the hull are invisible. As the vessel approaches, its lower part comes into view above the horizon, and soon the whole of it appears. The curvature of the ocean being the same in every direction, it follows that the earth has really the form of a sphere, or differs but slightly from it.

Another proof is seen daily in the movement of the stars, which set on one side of the horizon, to re-appear, twenty-four hours afterwards, on the opposite side.

A star of the northern heavens—the Pole-star—remains nearly immovable, and at the same height in the heavens above the horizon of any given place. Now, when we move towards the south, it gradually approaches the horizon ; while, on the other hand, it rises if we approach the north.

“This is a fact,” remarks Guillemin,* “which can be explained very naturally by the convexity of the earth's surface, for if this change of height were held to be the result of a real approach of the traveller to, and removal from, the observed star, the known distance of the stars from the Earth shows that the displacement of the observer is, so to speak, indefinitely small, compared to the distance of the star, and

* Guillemin, “The Heavens,” pp. 95, 96.