The Western Hemisphere which contains North and South America.

The Eastern Hemisphere which contains Eurasia, Africa, and Australia.

as the *Poles*. The pole nearest the North-star or Pole-star, is known as the *North Pole*. The opposite pole is the *South Pole*. If we watch the stars in the northern sky on any night, we see that certain stars, forming what is known as the Big Dipper, seem to swing around the Pole-star. The two stars, farthest from the handle are called the *pointers*, because a line connecting them always points in the direction of the Pole-star.
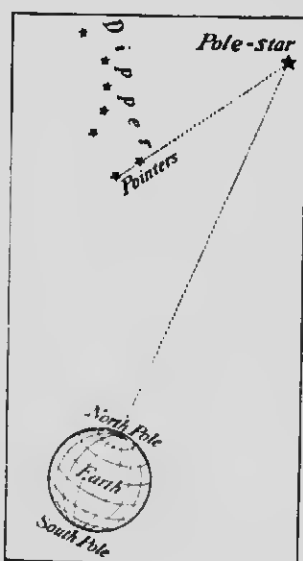
Either the sun and the stars must swing around the earth from east to west once every twenty-four hours, or the earth must rotate from west to east in the same time. For the following reasons, the latter supposition is the more probable. First, we have seen that the earth's rotation on its axis explains its present shape. Second, we know that the other planets rotate on their axes. Moreover, the earth's rotation may be proved as follows:—

If the earth turns from west to east, then the top of a high vertical tower must move faster than the base, and a body

The axis of the earth and the pointers are each in line with the Pole-star.

dropped from the top will fall a little east of a vertical line from the top to the base. Experiments have shown that this is actually the case.

The Equator; the Hemispheres. Half-way between the poles there is a line of places which have a faster rotary motion than any other part of the world. The imaginary line passing through these points, equally distant from the poles, forms the *equator*. The half of the world north of the equator is called the *Northern Hemisphere*, and the other half is known as the *Southern Hemisphere*.

Directions on the Earth. A line pointing toward the poles is a north-south line, and a line at right angles this is known as an east-west line. The points toward which these lines are directed, namely, north, east, south, and west, are called the *cardinal* points, and can be determined at night by finding the Pole-star, which always indicates the