In 1617, the Dutch astronomer SNELLIUS measured, by means of a series of continuous triangles, the terrestrial arcs comprised between the towns of Alkmaar, Leyden, and Bergen-op-Zoom, and compared their length with the number of degrees they obtained.

But here we are obliged, in order to render intelligible the remarks that will follow, to pause for a moment, and enter into a few explanatory details respecting *latitude* and *longitude*—that is, the geographical relations of any particular locality.

What is to be understood by the latitude of a place? Suppose that we wish to indicate with precision the position of a point of the Earth situated, let us say, on the equator itself. It will suffice for this purpose to make known its distance in regard to a certain fixed point on the equator, adopted, once for all, as the point of departure or return, specifying whether the distance from it is calculated in the direction of west to east or east to west.

The Equatorial Circle is divided, like every other circle, into 360 degrees (360°), and every degree into 60 minutes (60′), the minutes into 60 seconds (60″)—that is, until at some future time we return to the decimal and centismal division of a quarter of the circle.

We should say, then : such and such a place is distant from the fixed point of departure so many degrees, minutes, and seconds, counted towards the east, or towards the west. This distance is called the *longitude* (east or west) of the place which we wish to indicate.

Now suppose a series of circles to traverse the Earth from pole to pole, cutting the equator at equal intervals : these we call the *terrestrial meridians*. One of these meridians must be taken for the *first*, and the point where it bisects the equator will be the origin or starting-point of the longitudes. All the terrestrial points situated on the first meridian will have the longitude of Zero (0°). All the points situated under any other meridian have the longitude of the point where that meridian cuts the equator.
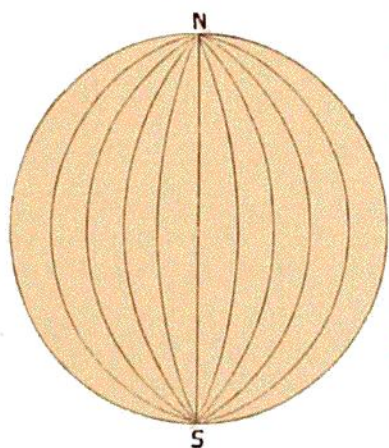

FIG. 29.—LONGITUDES OF THE GLOBE.

In England, and by all States of English origin, the first meridian is assumed to be that which passes through the great observatory of Greenwich, and the longitude of a place is said to be so many degrees east or west of Greenwich. France, and some other European countries, assume as the first meridian that which passes through the observatory of Paris. The point where the Parisian meridian cuts the equator is situated in the Atlantic at a short distance from the Guinea coast. The Dutch formerly adopted as their start-