to the direct attraction of the moon, there will be *low tide.* (See Figure 216.)

The earth, in its rotatory movement, presents to the moon, in the space of twenty-four hours, all its meridians, which, consequently, find themselves each in due succession, and at an interval of six hours, now under the moon, and now at an inclination of 90° from that star. It results that in the space of a lunar day—that is, in the time which elapses between two consecutive passages of the moon over the same meridian—the waters of ocean will twice rise and twice sink over all the terrestrial globe. But the effect of the attrac-

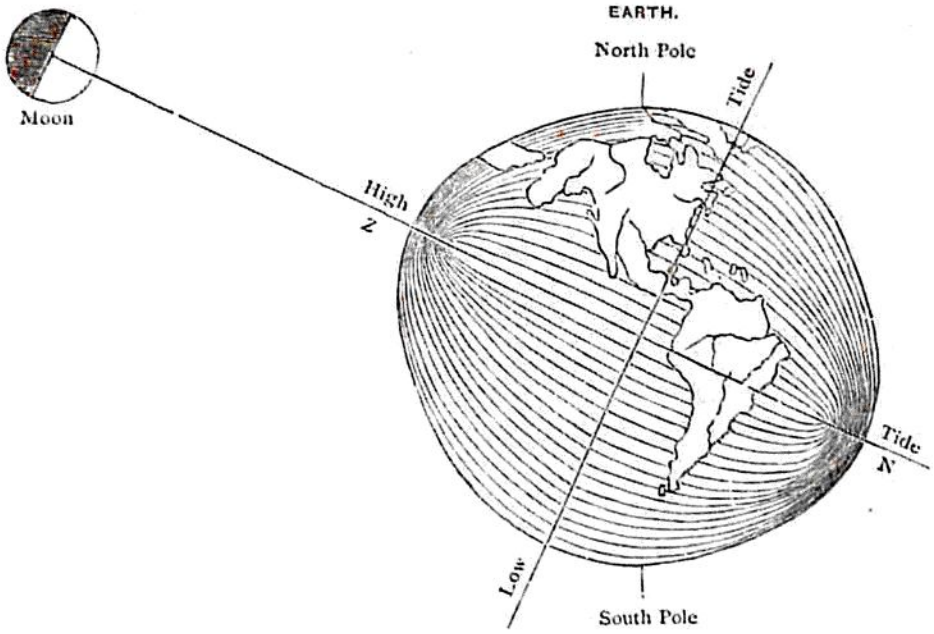

FIG. 216.—LUNAR TIDE.

tion is not instantaneously exercised, and the moon departs from the meridian before the elevation of the waters is complete; this is the reason the *flow*, or *flux*, does not attain its maximum until three hours after the culmination of the moon. The summit of the watery mountain upheaved by the flood follows the moon all round the globe, from east to west.

It is obvious, however, that the great inequalities of the ocean-bed, the presence of the continents, and the more or less rapid incline of their coasts beneath the waters—the different span of the channels and straits—finally, the winds, the ocean-currents, and a host of