measured in the northern hemisphere of the Earth, at increasing latitudes—that is to say, at gradually increasing distances northward from the equator :—

	MEAN LATITUDE OF ARC.	LENGTH OF ONE DEGREE IN ENGLISH FEET.
India	12° 32′ 20″	362,956
India	16° 8′ 21″	363,044
America	39° 12′ 0″	363,786
Italy	42° 59′ 0″	364,262
France	44° 51′ 2″	364,572
England	52° 2′ 19″	364,951
Denmark	54° 8′ 14″	365,087
Russia	56° 3′ 55″	365,291
Sweden	16° 20′ 10″	365,744

The lesson taught by these differences is one which the dullest and most prejudiced mind cannot refuse to accept. Their relative smallness, however, proves that the polar compression is not very great, as may be seen from the following figures, which give the polar and equatorial diameters respectively :—

Equatorial diameter ... ... 41,852,864 feet.
Polar diameter ... ... 41,738,710 „

The surface of the Earth contains about 196,626,000 miles, and its mass 259,800,000,000 cubic miles. That is : conceive a cube, exactly a mile in length, breadth, and height. It would take 259,800,000,000 of such cubes to form a globe of the same magnitude as that on which man lives, and moves, and dies. The mean equatorial diameter of the Earth, according to the new value, is 7901 miles.]

Among the great achievements of triangulation, the most celebrated is that which was completed in France towards the close of the last century, by the " Bureau des Longitudes," with the view of fixing a basis for the present metrical system. In this new system, designed to replace all the ancient weights and measures, an exact fraction of the length of the meridian was required for unity. It was needful, therefore, to determine that circumference with the utmost possible precision, and, consequently, to measure for a third time a portion of the meridian of Paris. To DELAMBRE and MECHAIN* was entrusted the task.

And it was a task neither easy nor without peril which these two intrepid geometers undertook. For at this epoch the French revolution had filled every mind with a feverish, vehement restlessness, which regarded with cruel and suspicious eyes the slightest move-

* [Jean Baptiste Joseph Delambre, author of the " History of Astronomy, was born at Amiens, 19th December 1749, and died at Paris, 19th August 1822. Pierre François André Mechain was born in 1774; died. 20th September 1805.]