

Islands, made prisoner by the Spaniards, then thrown into servitude on the coast of Barbary, restored to liberty through diplomatic intervention, and, finally, how he returned home, after so many mischances, in possession of his instruments and papers.

The new measurement of the arc of the meridian which traverses France, gave for the length of a quarter of the meridian 5,130,740 toises.\* This number served as the base of the metrical system, legally constituted in 1799.

The mètre (= 39.3079 inches Eng.), the fundamental unit of the present system of weights and measures, is the ten thousandth part of the quarter of the meridian; its length has been fixed at 0.513074 toise, or 3 French feet, 11 lines. We are compelled to add that the figure obtained for the length of the meridian has since been somewhat modified. If the mètre is no longer, in strictness, the natural unit, it does not the less remain a measure perfectly defined by the fundamental standard (*étalon*), and the system of which it is the base must always be regarded as one of the finest conceptions of the human mind.

The metrical system is now in operation in France, the Low Countries, Italy, Switzerland, Spain, and Portugal, and its introduction into England and America will probably not be long delayed.

Cassini de Thury, the third of his name [born, 1714; died, 1784], the same who laid down the great map of France, conceived the idea of measuring the parallel which extends from Strasbourg to Vienna, by means of thirty-eight gunpowder signals, whose respective positions should be previously decided upon; but this great operation was not carried out until our own times.

In 1804, the French Government commissioned Colonel Henry, who had skilfully executed the triangulation of Switzerland, to perform the experiment. As the point of departure of his operations, Henry measured a base of remarkable length. He afterwards laid

\* [The toise is here the length of the *étalon de fer* (or iron standard), which Condamine and Bouguer had employed in measuring the meridian of Peru; it is called the *toise du Pérou*.]