

LINEAL MEASURES,

English, French, and Spanish.

Eng. Inches.

THE most accurate standard of the yard, is that called the Parliamentary Standard, made by Bird in 1753, equal to 36·00023

On a measurement by the late Dr. Maskelyne, astronomer-royal, of two French standard toises, exhibited by M. de la Lande in London, the one was found to be equal to 76·732

And the other to 76·736

The medium 76·734 English inches for the toise of 6 feet, or 72 inches French, is adopted by Biot in his *Astronomie Physique*, 1810. According to this medium proportion, one inch, foot, fathom, or toise, English, is to one inch, &c. French as 1 : 1·06575 *precisely*. Or, making the French measure the unit, the English measure will be 0·938 of that unit *very nearly*.

In the end of 1801, Professor Pictet, of Geneva, carried over from London to Paris a brass scale, of 49 inches in length, made by Troughton. On a most accurate comparison of that scale, by Members of the Institute, with the platina and iron standard *mètres*, the *mètre* was found to be (at the the temperature of melting ice) equal to 39·38272
Which, reduced to the English rule of comparison, 62° of Fahrenheit, is 39·371

The *mètre* being the ten-millionth part of a quadrant of the meridian, a sexagesimal degree of a great circle must be equal to 57·012 French toises, or 60,760·54 English fathoms, equal to English miles 69·046

The late eminent nautical mathematician Captain Mendoza y Rios furnished this rule for converting Spanish into English measures, and *vice versa*.

From the logarithm of the number of Spanish feet, fathoms, &c. subtract the constant logarithm 0·0384544, and the remainder will be the logarithm of the corresponding number of English feet, fathoms, E. in. &c.

Hence the Spanish foot is equal to 10·98318

————— *vara*, or yard, equal to 32·94954

————— *braza*, or fathom, equal to 65·89908

And 12 Spanish brazas are within a small trifle of 11 English faths.

N.B.—The French *brasse* contains only 5 French feet, and is therefore only equal to 63·945 English inches, equal to 5 feet and nearly 4 inches English.