value of an Arabic mile? An Arabic mile contains 4000 *aunes* of 24 inches each, and each inch equals 6 barleycorns. What is the value of a barleycorn? To this question no exact reply can be offered, but most physicists estimate the Arabian mile at 1200 yards (nearly); and this estimate would give somewhat more than 42,000,000 yards for the perimeter of the earth as calculated by the Arabs.

It was a French physician who, in the middle of the fifteenth century, took up the question of our planet's dimensions at the point where the ancients had left it. FERNEL* enjoys an immortal reputation in the annals of medicine, as the restorer of the writings of the Arabs and Galen, as himself an elegant writer and profound dialectician; and, in general history, he is known as the physician of Diana of Poitiers and of Henry II. of France, whom he accompanied to the siege of Calais. But what is not generally known is the operation, truly astonishing in its results, which it was his good fortune to carry out for the measurement of the terrestrial meridian. The means which he employed is so simple, one might almost say so rude, that one is still constrained to ask oneself how much of chance and guess-work it may conceal.

Fernel fitted to his carriage a regulator, to record the number of revolutions made by the wheels. Then he measured the length of a degree on the road from Paris to Amiens, noting, with the help of his calculator or pedometer, the number of rotations of his carriage-wheels. And it is singular enough that this rough mode of calculation gave him for the value of a degree 57,070 toises (364939.8220 English feet), a value not far removed from that determined by the latest geodesical researches.†

At the commencement of the seventeenth century, astronomers for the first time began to apply to the ingenious method introduced by Eratosthenes all the resources of their largely extended science.

* [JEAN FERNEL was born in 1497; died April 26, 1558. He early acquired a distinguished reputation as a physician, and was remarkable for the boldness of his views and the originality of his practice. He was the teacher of Vesalius, whom he inspired with his own passion for anatomical study. His principal work, "Medicina," was published in 1556. It has passed through more than thirty editions, and been translated into French.]

† [M. Figuier, in the text, falls into the error, made by other French writers, of assuming that Fernel employed in his measurements the Parisian foot, contrary to his own distinct statement. The fact is, his result was much further removed from the truth than even that of Eratosthenes.—See article "Weights and Measures" in the *Penny Cyclopædia*.]