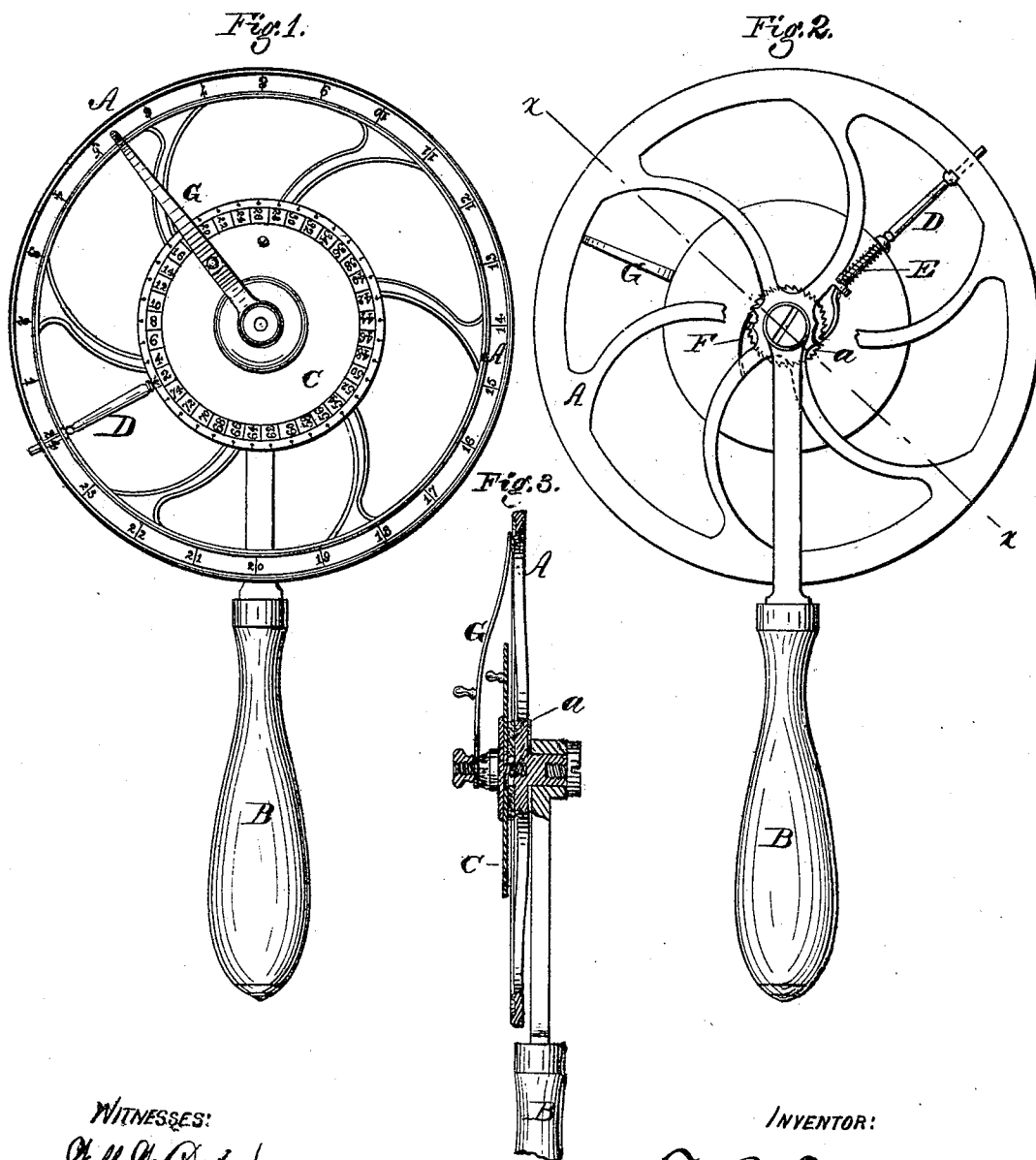


T. R. WAY.
MEASURING-WHEEL.

No. 175,797.

Patented April 4, 1876.



WITNESSES:
Hill H. Dodge.
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UNITED STATES PATENT OFFICE.

THOMAS R. WAY, OF SPRINGFIELD, OHIO.

IMPROVEMENT IN MEASURING-WHEELS.

Specification forming part of Letters Patent No. 175,797, dated April 4, 1876; application filed March 18, 1876.

To all whom it may concern:

Be it known that I, THOMAS R. WAY, of Springfield, in the county of Clarke and State of Ohio, have invented certain Improvements in Measuring-Wheels, of which the following is a specification:

My invention consists in providing a measuring-wheel with an automatic register having no connection with the handle by which the wheel is manipulated, the object of the invention being to produce a wheel for measuring curved and irregular surfaces, which will register accurately the number of its revolutions regardless of the position in which its handle may be held.

Measuring-wheels having registers of various kinds are, I am aware, in common use; but owing to the manner in which they are constructed it is necessary to hold the handles by which they are operated in a certain relative position to the surface being measured, so that it is a difficult matter to measure curved or uneven surfaces with accuracy. It is to remedy this trouble, and insure an accurate measurement without reference to the position in which the handle may be held, that my device is intended.

The essential feature of my invention is the application of an automatic register to the wheel, in such manner that it shall be free and independent of the handle or frame by which the wheel is carried.

The register may be constructed and operated in various ways without departing from the limits of my invention; but I prefer to employ the arrangement shown in the accompanying drawing, in which a register-dial provided with a ratchet-wheel is mounted on the face of the main wheel, and operated by a sliding dog, which has one end extended out through the periphery of the wheel, so that it will be pressed inward by coming in contact with the surface over which the wheel is rolled.

Figure 1 represents a face view of my device; Fig. 2, a back view of the same; Fig. 3, a central cross-section of the same.

A represents an ordinary measuring-wheel,

mounted so as to turn freely on the end of a handle or arm, B, by which it is manipulated, as usual. C is a dial-plate, provided on its back with a ratchet-wheel, *a*, and mounted centrally on the face of the wheel A, in such manner as to turn freely thereon. D is a radial sliding rod, mounted on the wheel A, with its outer end protruding beyond the edge of the same, and its inner end formed into a spring-pawl, and arranged to engage with the ratchet-wheel *a*. E is a spiral spring, arranged to push outward the rod D, which has its movement limited by a shoulder or stop, as shown. F is a spring-pawl, secured to the wheel A, and engaging with the ratchet-wheel *a*, in order to prevent the dial-plate from turning backward. G is a pointer or hand, pivoted at the center of the wheel A, and arranged to sweep around over the face of the same. This pointer is secured by a thumb-nut, and is entirely independent of the dial-plate, which latter turns without affecting the pointer. The edge of the dial-plate is provided with graduations, corresponding in number with the teeth on the ratchet-wheel *a*, while the edge of the wheel A is graduated in inches and fractions, commencing at the point where the sliding pin projects beyond the periphery.

In using the device, the zero-point on the dial-plate is set in line with the sliding pin D, the pin placed at the starting-point on the surface to be measured, and the wheel rolled forward. As the wheel completes each revolution, the pin, coming in contact with the surface on which the wheel bears, is forced inward, and caused to turn the dial a distance equal to one of its graduations, so that upon referring to the dial the number in line with the sliding pin will indicate the number of complete revolutions made by the wheel. When the wheel reaches the finishing-point the pointer is placed in line therewith, and fastened, so as to indicate, in inches, the distance traveled over in the last fractional revolution.

It is obvious that, instead of the dial-plate, any suitable registering device may be applied to the wheel; that, instead of the sliding rod, any other appropriate operating de-

vice may be employed, and that by giving the dial-plate sufficient friction on its pivot the necessity for the pawl F may be overcome.

Having described my invention, what I claim is—

1. The combination, substantially as shown and described, of a measuring-wheel, a handle or frame having the wheel mounted thereon, and an automatic register attached to the

wheel, and having no connection with the handle.

2. The combination of the handle B, wheel A, dial C, provided with ratchet-wheel *a*, and sliding rod D, with its spring E.

THOMAS R. WAY.

Witnesses:

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