F. A. HEBERLINE & A. BOSS.

Rotary-Measure.

No. 211,327. Patented Jan. 14, 1879.

Fig. 1.

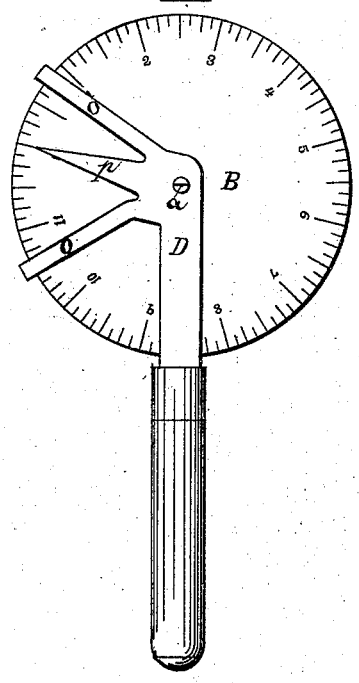


Fig. 2.

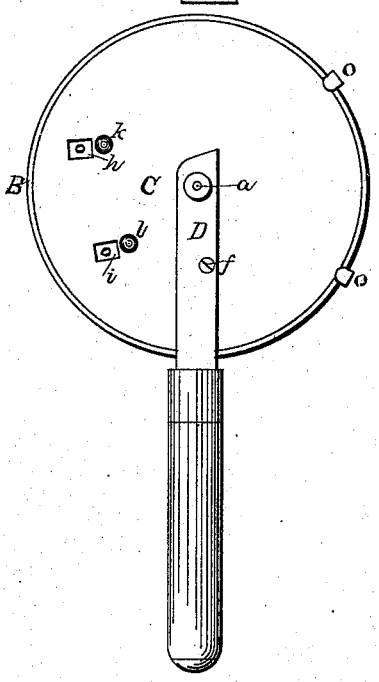


Fig. 3.

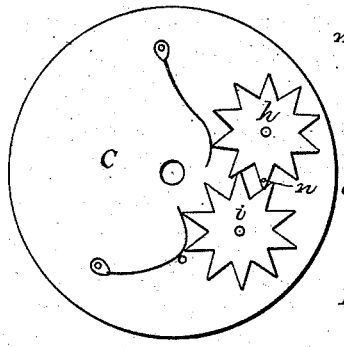


Fig. 4.

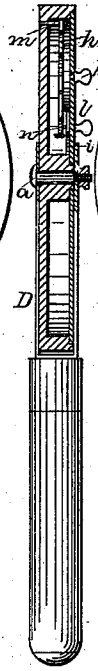
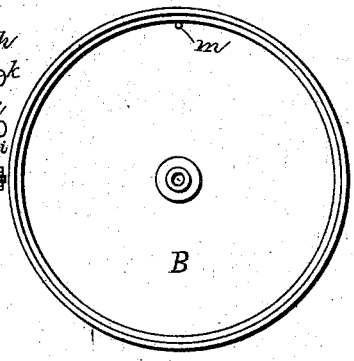


Fig. 5.



Witnesses:

J. W. Garner?

John Irwin, Jr.

Inventors:

F. A. Heberline,

Alb. Boss,

per

F. A. Lehmann,

Atty.

UNITED STATES PATENT OFFICE

FRED. A. HEBERLINE AND ALBERT BOSS, OF MANSFIELD, PENNSYLVANIA.

IMPROVEMENT IN ROTARY MEASURES.

Specification forming part of Letters Patent No. **211,327**, dated January 14, 1879; application filed September 19, 1878.

To all whom it may concern:

Be it known that we, FRED. A. HEBERLINE and ALBERT BOSS, of Mansfield, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Rotary Measures; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

Our invention relates to an improvement in rotary measures, and it is chiefly intended for the use of blacksmiths, wheelwrights, and those engaged in manufactures of articles of which the curvilinear outlines require accurate measurement. This instrument is, however, equally serviceable for measuring linear distances, and will be found useful in workshops and lumber-yards.

Our invention consists in a rotary circular box which has one side closed by a fixed plate having the counting mechanism secured to it, and which mechanism is operated by the rotation of the circular box in the bifurcated handle.

It further consists in forming the guards for the circular rotating box in a single piece with the handle, all of which will be more fully described hereinafter.

The accompanying drawings represent our invention.

B represents a circular box, of which the circumference measures one foot. This circumference is divided into twelve inches, and each inch again, as shown on the face of the box, is subdivided into any desired fractional parts.

The back of the box B is formed of a circular plate, C, which plate fits to the box without being fastened thereto, and remains stationary, while the box rotates upon a pivot, *a*, in its center, which pivot passes also through a bifurcated handle, D, in which the box rotates. By thus having the box to revolve and do the measuring, and having its side closed by the stationary plate C, it will readily be seen that only these two parts beside the mechanism are necessary to do the entire work.

To prevent the turning of the plate C with the box, a screw, *f*, is inserted through the fork of the handle into the plate.

At the inside of the plate C are two wheels, *h* and *i*, each provided with ten teeth, revolving with their pivots, which extend through to the outside, and terminate in knobs *k* and *l*. By these knobs the said wheels may be turned so that any desired figure marked upon the under side of the teeth will appear at the corresponding openings near the knobs *k* and *l*.

The wheel *h* is placed in such proximity to the interior circumference of the box B that a pin, *m*, there placed is at every revolution of the box brought in contact with a tooth of this wheel, and the wheel is pushed forward to the extent of the distance of one tooth from another, and consequently at the opening near the knob *k* the figures will follow one another while the box revolves.

At the end, under one of the teeth of the wheel *h*, is also a pin, *n*, which comes in contact with a tooth of the wheel *i* as often as it makes one revolution; hence this wheel *i* will make one revolution for every ten of the other, *h*, and indicate a multiple of ten, while *h* indicates units.

The wheels are held in position by springs attached to the inside of plate C.

The bifurcated handle D has its end on the side of the wheel B made wider and larger, so that the two guards *o* and index *p* between them may be stamped up in a single piece with the handle. These guards prevent the accidental displacement of the wheel by extending down around its lower edge, as shown. By thus forming these parts in a single piece the construction of the measure is greatly cheapened.

In the foregoing description of our invention, only two wheels marking the distance measured are mentioned; but a greater number may be introduced upon the same principle to indicate hundreds or thousands.

We are aware that distances have been measured by means of a wheel attached to a handle, and this we disclaim. Our invention consists in the peculiar construction and arrangement of parts above described.

Having thus described our invention, we claim—

1. A rotary circular box, B, having one side

closed by a stationary plate, C, having the counting mechanism secured thereto, in combination with a bifurcated handle, D, to which the circular stationary plate is rigidly fastened, the counting mechanism being operated by a pin, *m*, on the box B, substantially as shown.

2. The bifurcated handle D, having the guards *o* stamped in a single piece with it, substantially as described.

3. The bifurcated handle D, having both the guards *o* and pointer *p* formed in a single piece with it, substantially as set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 13th day of September, 1878.

F. A. HEBERLINE.
ALBERT BOSS.

Witnesses:
T. F. LEHMANN,
SAML. DIESCHER.