

JOSEPH W. CREMIN.

Improvement in Water-Meters.

No. 115,937.

Fig. 1.

Patented June 13, 1871.

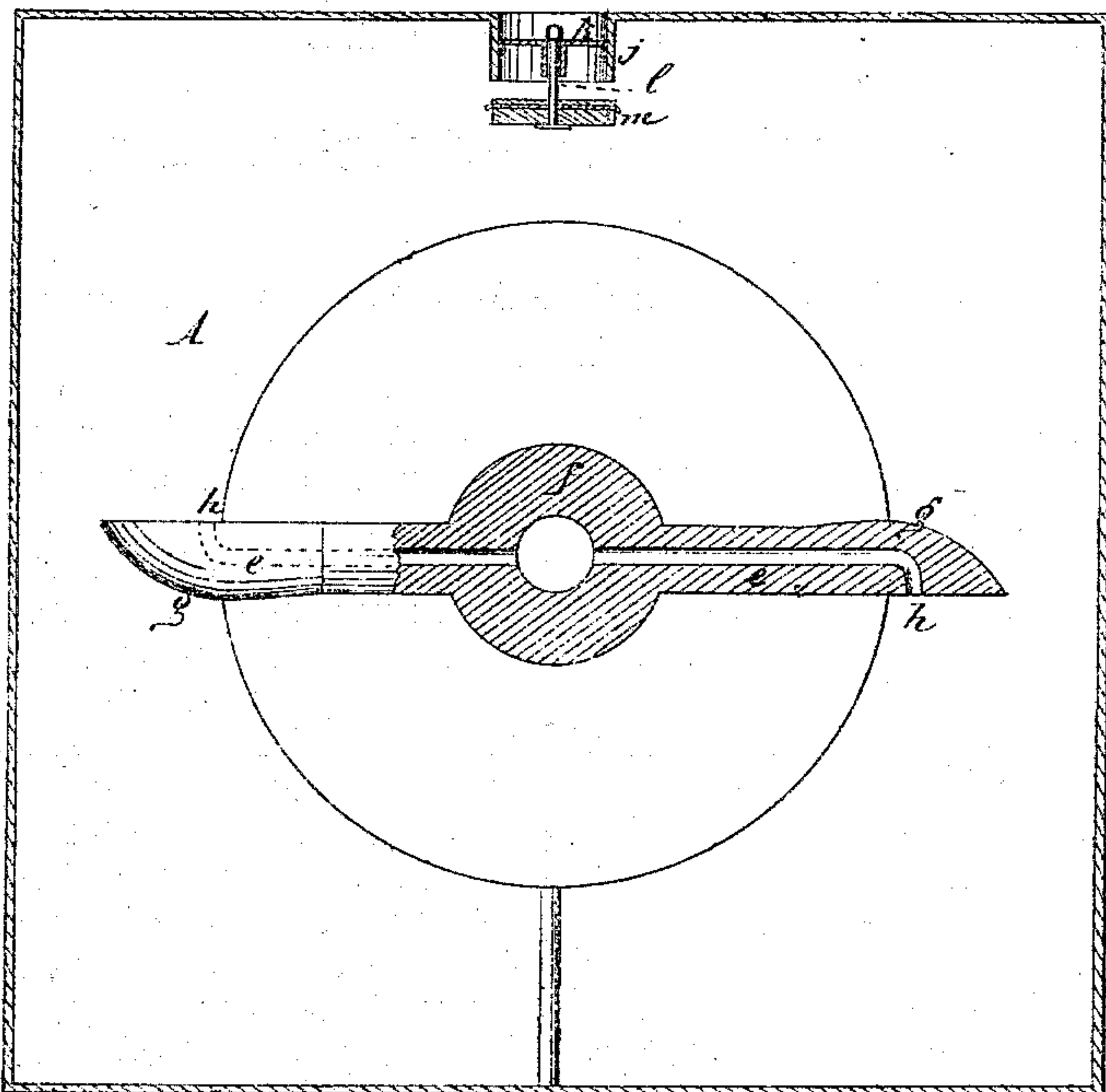
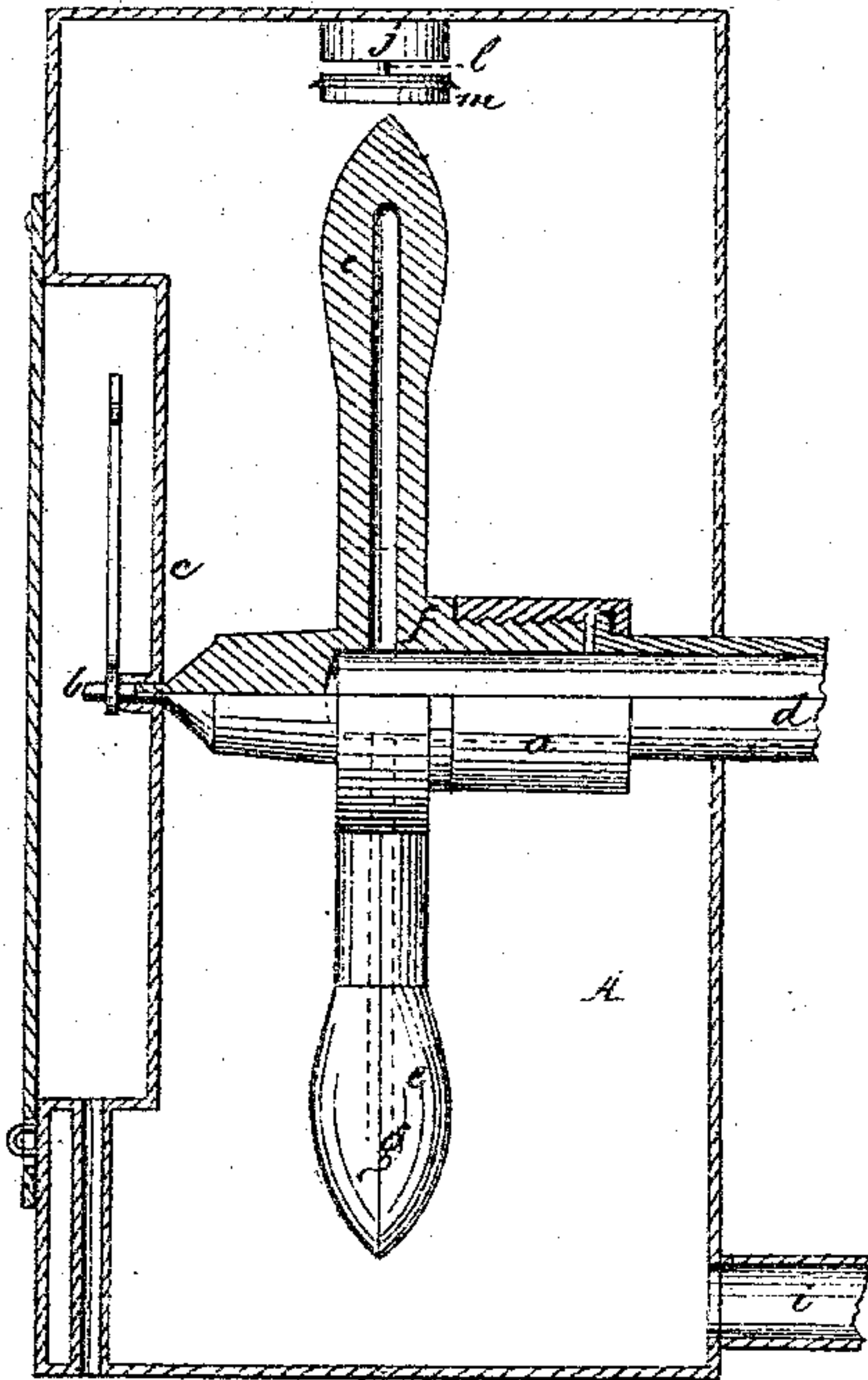


Fig. 2.



Witnesses:

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# UNITED STATES PATENT OFFICE.

JOSEPH W. CREMIN, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF HIS  
RIGHT TO GEORGE H. FAIRCHILD, OF BRIDGEPORT, CONNECTICUT.

## IMPROVEMENT IN WATER-METERS.

Specification forming part of Letters Patent No. 115,937, dated June 13, 1871.

*To all whom it may concern:*

Be it known that I, JOSEPH W. CREMIN, of New York, in the county of New York and State of New York, have invented a new and improved Water-Meter; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a longitudinal, and Fig. 2 a transverse sectional elevation.

This invention relates to the application of the device known as Barker's centrifugal mill to a water-meter, the revolving hollow arms being placed within a case and mounted on a hollow shaft extending crosswise thereof, said shaft connecting at one side of the chamber with the supply-pipe and at the other side with the registering clock-work, which is worked by the turning of the shaft through the agency of the water rushing into the arms and out at holes in or near the ends of the latter in the ordinary way of operation of the centrifugal mill.

Referring to the drawing, A is the case; *a*, the hollow transverse shaft having at one end a spindle, *b*, that enters a bearing formed at the center of the back plate *c* of the inclosed cylindrical box that surrounds the registering clock-work which receives motion from the spindle *b*. The supply-pipe *d* enters the case A at the side opposite the clock-work, and supports the adjacent end of the shaft *a*. The hollow arms *e* are affixed to a ring, *f*, which is secured to the outside of the shaft *a*. The arms *e* are of the construction described in my patent of May 2, 1871, No. 114,415—that is to say, they have the back sides flat and the front sides convex, both lengthwise and crosswise, with a sharp central longitudinal ridge or

cutting-edge, *g*. In the flat sides of the arms, and near their outer ends, are the holes *h*, through which the water that enters the arm by the supply-pipe *d* and shaft *a* finds vent, causing thereby the arms and shaft to rapidly revolve. All the water that issues from the arm *e* is duly registered through the agency of the spindle *b* and clock-work. The cutting-edges of the arms enable them to force their way through the water in the case A easily, and the flat back sides tend to create vacuums behind them, which, the water rushing in to fill, effect the propulsion of the arms. The water escapes from the case through the pipe *i*. If any water leaks out the case it is nevertheless registered. A short tube, *j*, is attached at its upper end to the top of the case A, said tube extending downward within the case, and having a bridge, *k*, placed across it, through which bridge passes the stem *l* of the valve *m*, that hangs beneath the bottom of the tube *j*. When the case becomes filled with water above the level of the bottom of the tube *j* it closes the valve, but in so doing some little water escapes above the valve. Whatever water escapes the tube *j* receives, and the escaping water is thus prevented from spreading over the top of the case, as it would do if the valve were not in the top.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A water-meter, in which is combined the case A, shaft *a*, ring *f*, and arms *e*, as specified.
2. In combination with the foregoing, the case A, tube *j*, and valve *m*, as set forth.

JOSEPH W. CREMIN.

Witnesses:

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