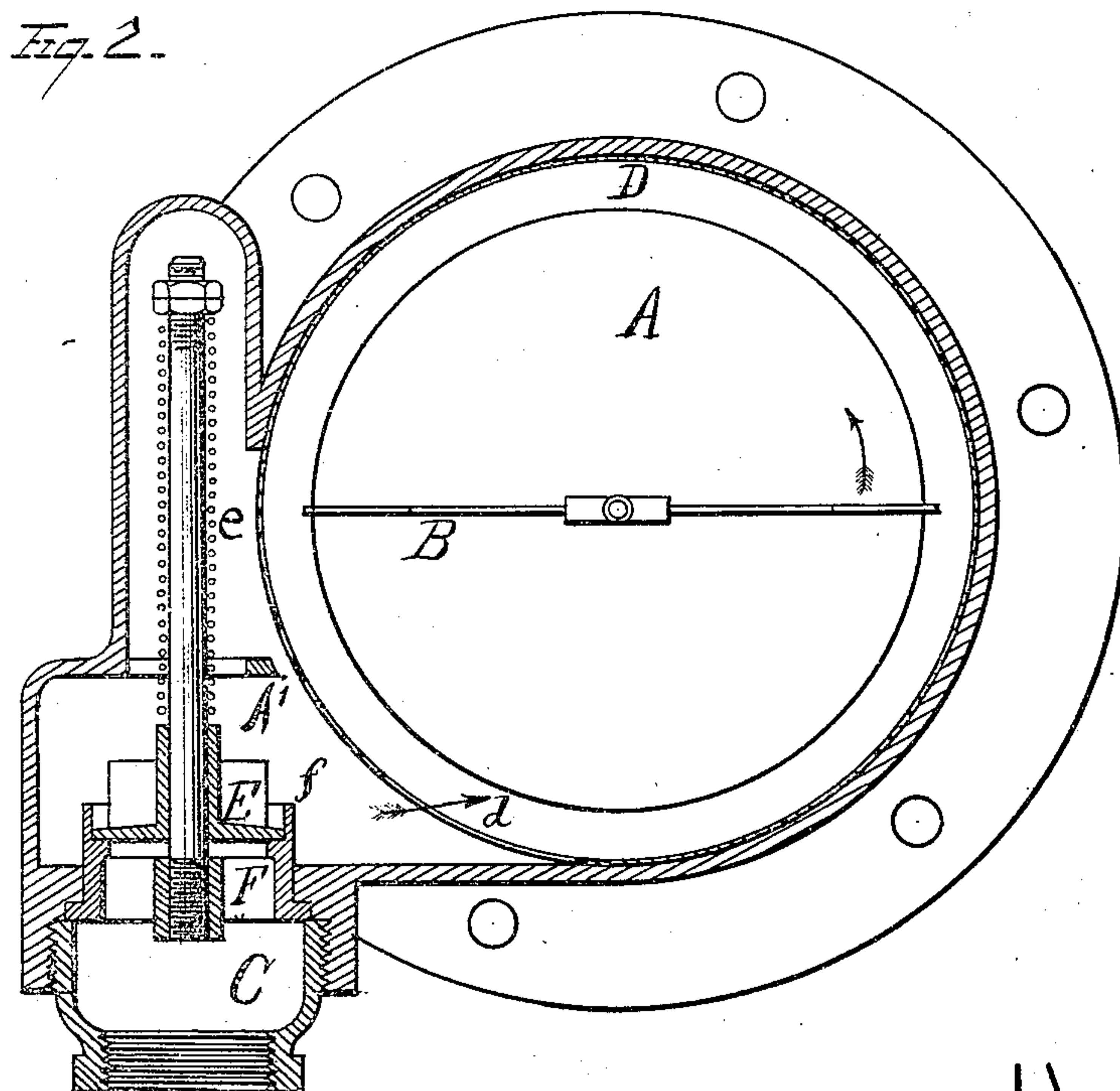
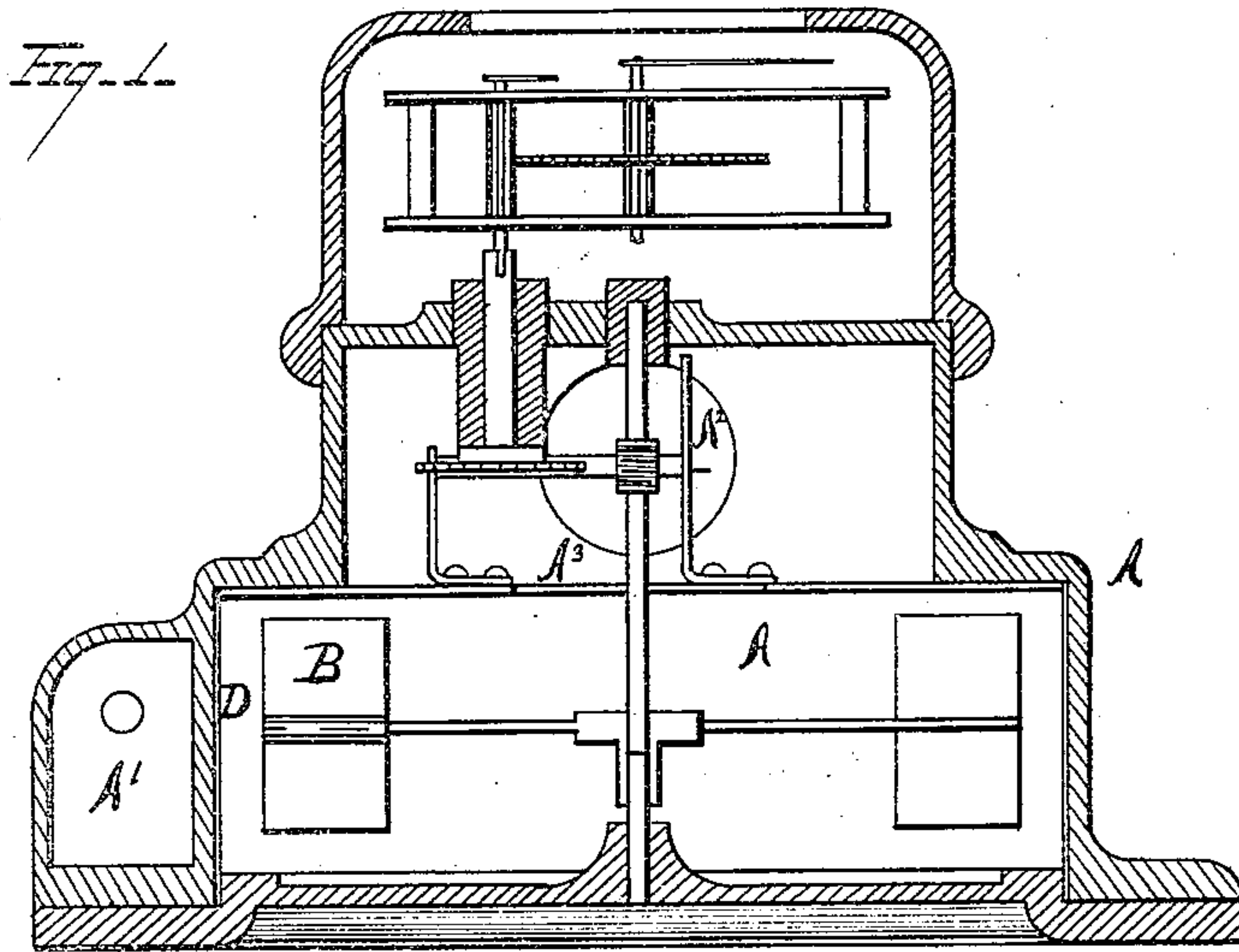


R. C. GRAY.
Water Meters.

No. 153,482.

Patented July 28, 1874.



WITNESSES

W. J. Newman,
Robt M. Barr.

INVENTOR

Robert C. Gray.
By Leggett & Leggett
Attys

R. C. GRAY.
Water Meters.

No. 153,482.

Patented July 28, 1874.

Fig. 3

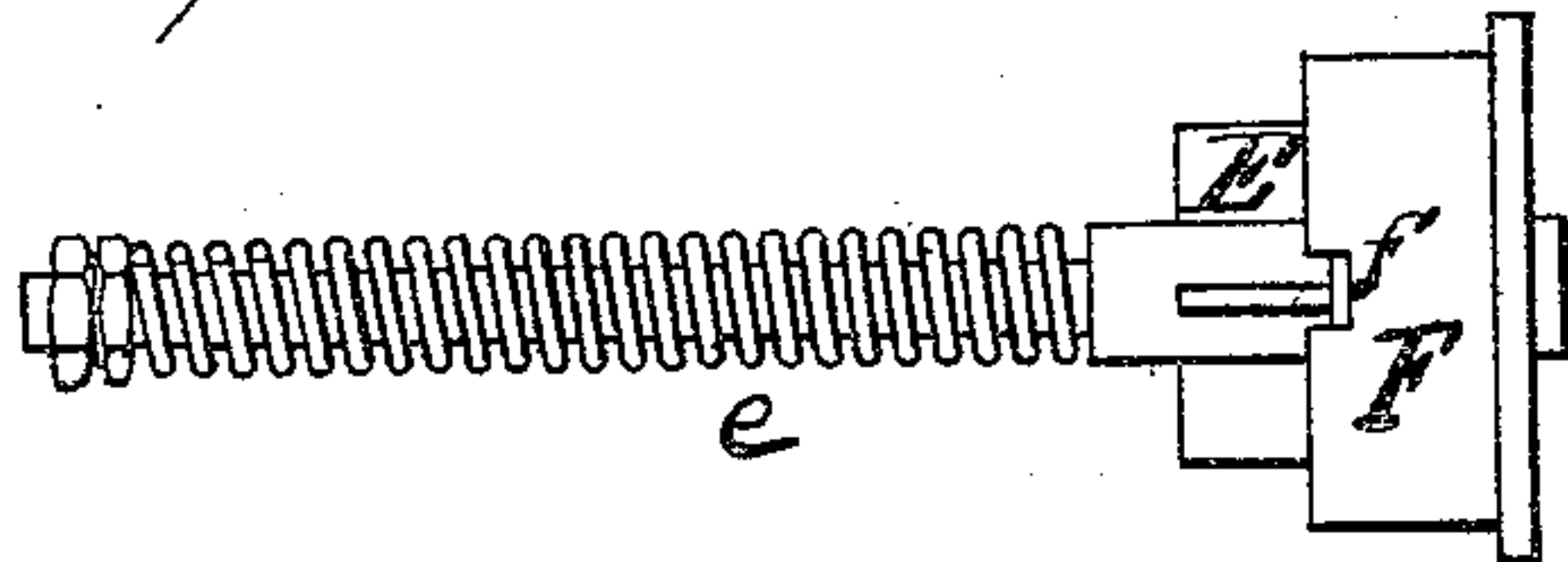
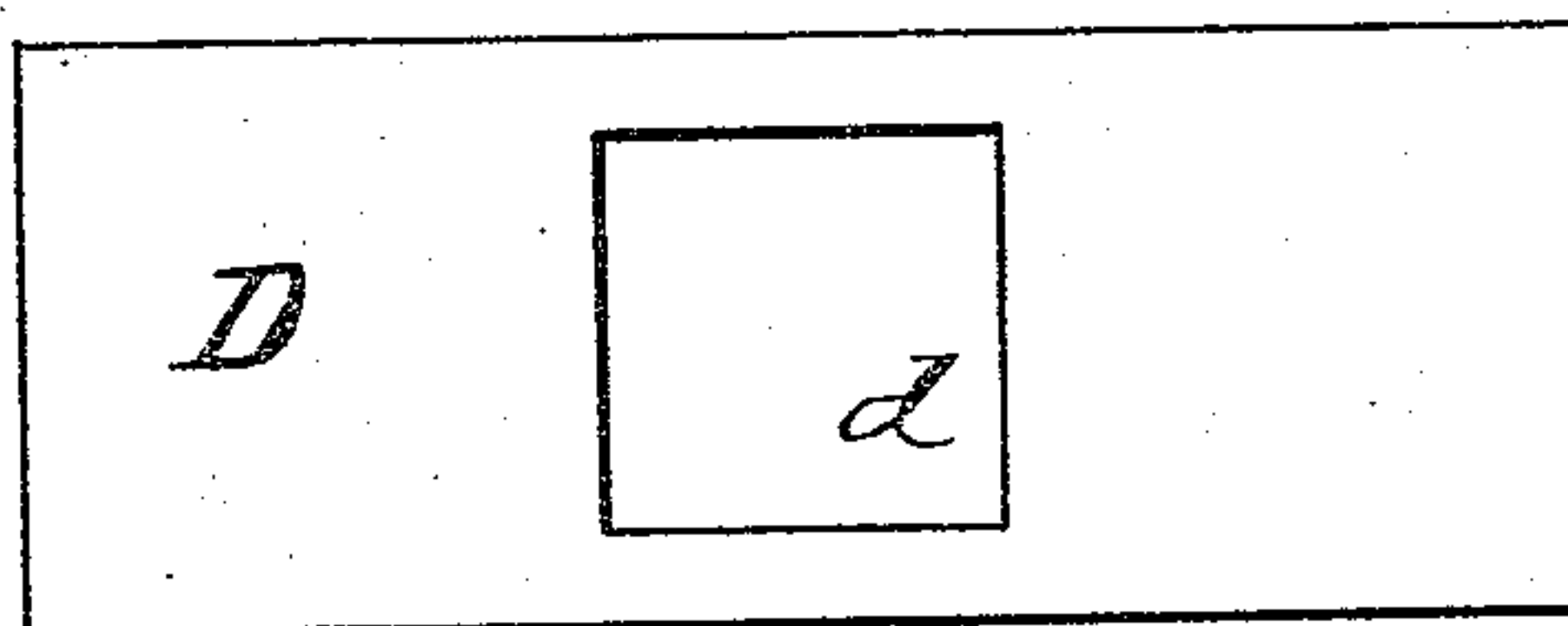


Fig. 4-



WITNESSES.

W. J. Newman,
R. M. Barr.

INVENTOR.

Robert C. Gray
By Leggett & Leggett
Attys

UNITED STATES PATENT OFFICE.

ROBERT C. GRAY, OF NEW YORK, N. Y., ASSIGNOR TO HENRY W. PUTNAM,
OF SAME PLACE.

IMPROVEMENT IN WATER-METERS.

Specification forming part of Letters Patent No. **153,482**, dated July 28, 1874; application filed
May 16, 1874.

To all whom it may concern:

Be it known that I, ROBERT C. GRAY, of New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Water-Meters; and I 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.

My invention relates to an improvement in water-meters, and more particularly to that class of meters in which the water acts upon a revolving paddle, and the water is measured by the number of revolutions that are made by the said paddle. My invention consists in a movable cylindrical case surrounding the said paddle, by which the supply of water to the paddle may be regulated; and, also, in a check-valve arrangement, whereby a small amount of water may be supplied to the paddle at a sufficient velocity.

In the drawings, Figure 1 is a central vertical section of my improvement. Fig. 2 is a horizontal section, taken through the paddle. Fig. 3 is a separate view of the check-valve and its case. Fig. 4 is a side view of the movable cylindrical case, showing the inlet-port for the water.

The following is a description of my invention: A is the chamber containing the revolving paddle B. This is surrounded by a movable case, D. The case D is furnished with a supply-port, *d*. By removing the bottom plate of the case A and revolving the case D, this supply-port *d* may be made to present a larger or smaller opening for the admittance of the water into the case D. C is the supply-port at which the water enters. E is a check-valve, held down in its seat by the spring *e*, that surrounds the valve-stem. This valve is seated in a tube, F, which is provided on its upper side with a slot, *f*.

If a large supply of water is admitted through the port C, it will lift the valve E, and will pass through the tube F into the chamber A¹, and from thence it will pass through the opening *d* in a tangential direction against the paddle B, which paddle will be moved upon its axis, in the ordinary manner, in the direction indicated by the arrow. If the supply of water is not very great, it may be discharged against the paddle B at a considerable velocity by simply decreasing the aperture *d* by revolving the case D, so as to diminish the size of the aperture *d*. If the supply of water should be very small, it will simply raise the valve E, and will be discharged through the slot *f* in the side of the tube F, and will pass from this small orifice, in a direction through the orifice *d*, at a velocity sufficient to operate the paddle B in the proper direction. After the water has entered the chamber A, it passes up through the opening A³, and out at the exit-port A².

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

1. In a water-meter, the movable casing D, provided with supply-port *d*, arranged to direct the supply of water against the paddle in a tangential direction, the capacity of the said port *d* regulated by the revolution of the casing D upon its axis, substantially as set forth.

2. In combination with the movable case D, the check-valve E, constructed with the tubular valve-seat F and slot *f*, whereby the supply of water to the interior of the meter is governed, substantially as and for the purpose described.

In testimony that I claim the foregoing I have hereunto set my hand this 5th day of May, 1874.

ROBERT C. GRAY.

Witnesses:

HENRY W. PUTNAM,
GEORGE F. PARKER.