

No. 626,518.

Patented June 6, 1899.

G. B. BASSETT.
WATER METER.

(Application filed July 6, 1897.)

(No Model.)

2 Sheets—Sheet 1.

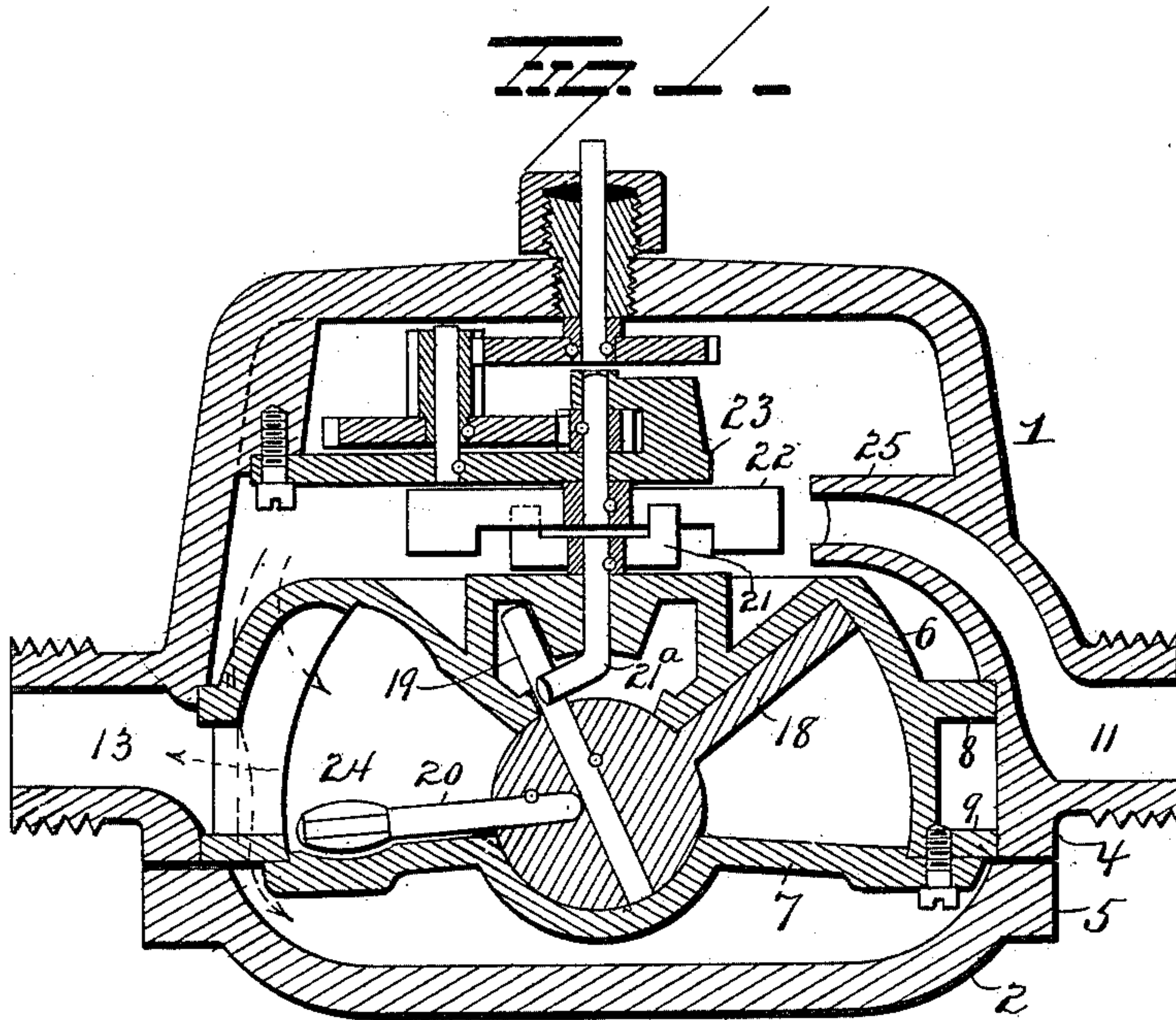
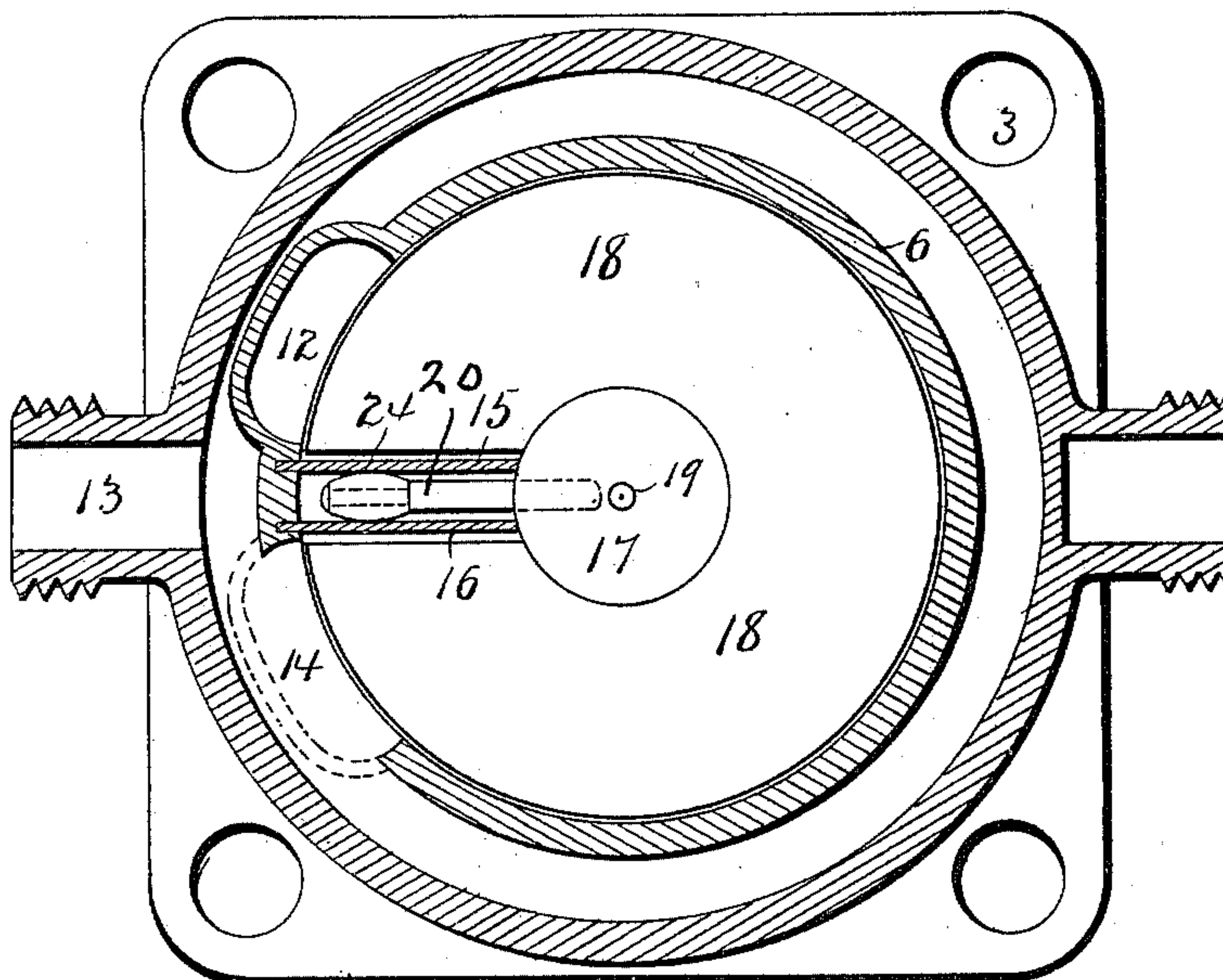


Fig. 1.



Witnesses
E. I. Nottingham
G. F. Downing

Inventor
G. B. Bassett
By H. A. Seymour
Attorney

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2 Sheets—Sheet 2.

Fig. 3

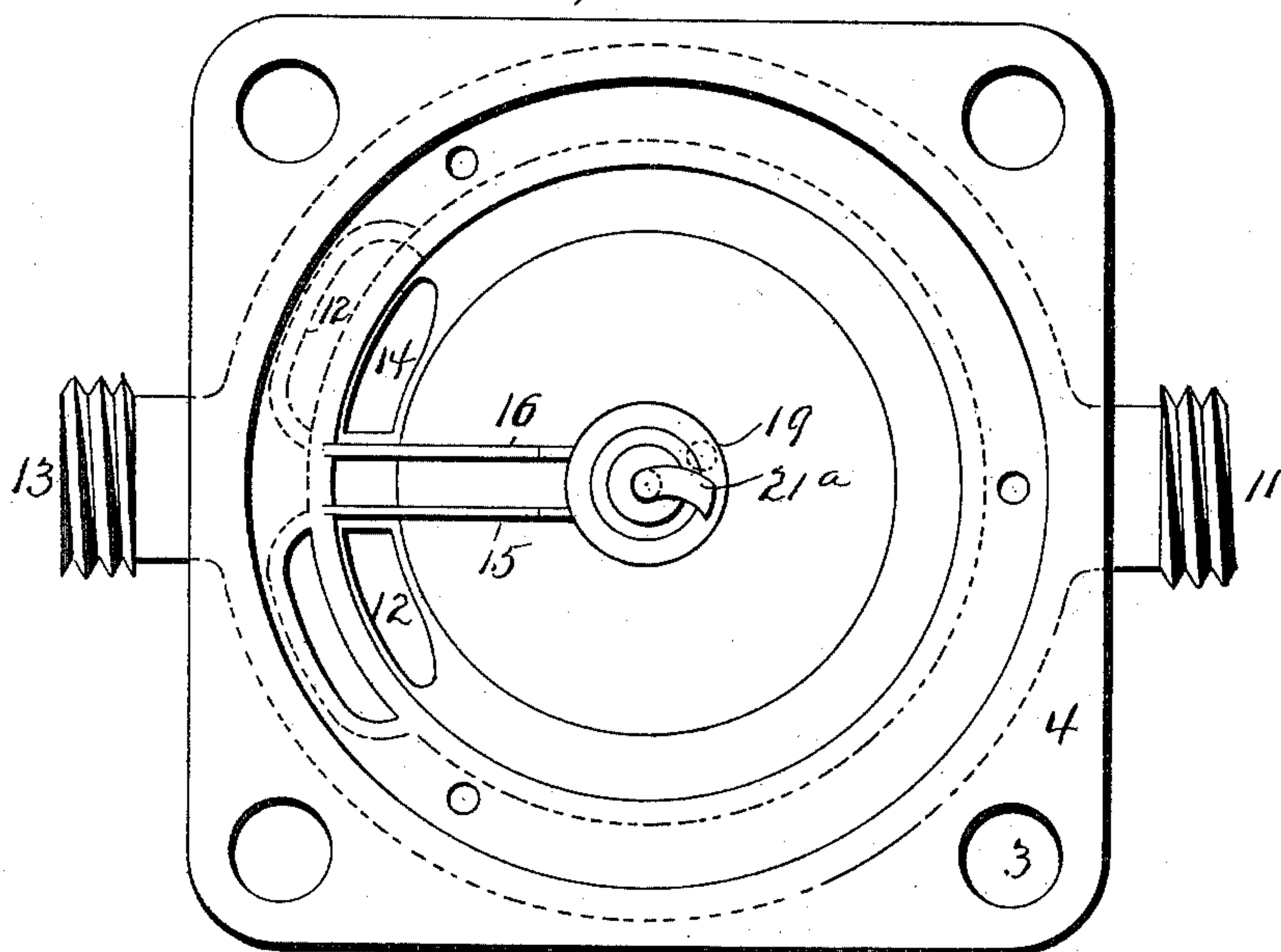
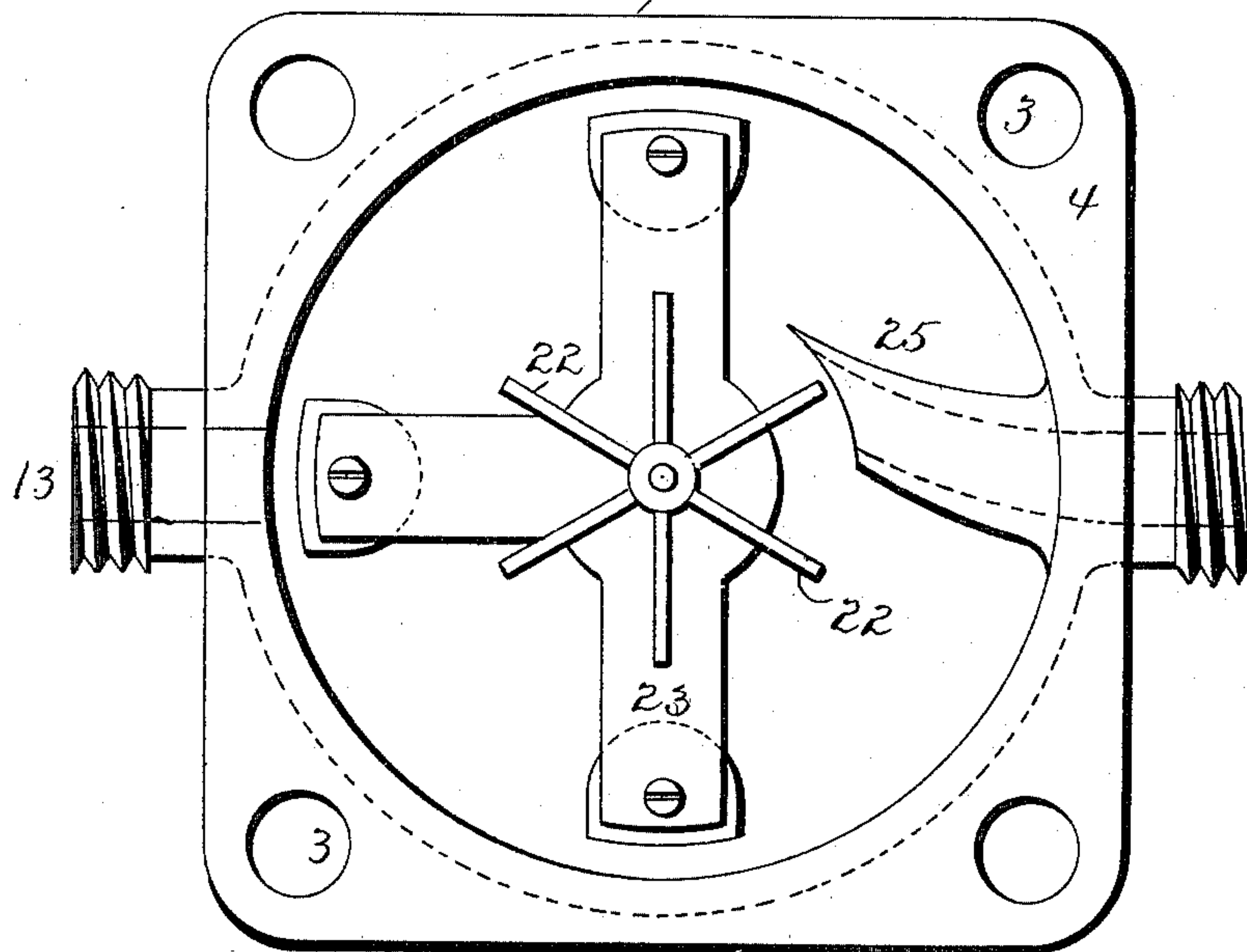


Fig. 4



Witnesses
E. J. Nottingham
G. F. Downing

Inventor
G. B. Bassett
By *H. A. Seymour*
Attorney

UNITED STATES PATENT OFFICE.

GEORGE B. BASSETT, OF BUFFALO, NEW YORK.

WATER-METER.

SPECIFICATION forming part of Letters Patent No. 626,518, dated June 6, 1899.

Application filed July 6, 1897. Serial No. 643,607. (No model.)

To all whom it may concern:

Be it known that I, GEORGE B. BASSETT, a resident of Buffalo, in the county of Erie 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 appertains to make and use the same.

My invention has reference to the construction of water-meters, and in particular to meters of the disk type illustrated in Letters Patent No. 501,203, granted to me July 11, 1893.

The invention includes various improvements in the construction of such meters tending to simplicity in construction, certainty in operation, durability, lessening of wear, accuracy, and other desirable results.

The invention includes certain details of construction and combination of parts, which will be described in detail and then specifically pointed out in the claims.

Certain new improvements are also herein shown which are not claimed in this application, but are shown and claimed in my application for water-meters, filed March 12, 1897, Serial No. 627,179.

In the accompanying drawings, which form part of this specification, Figure 1 is a central vertical section of my improved meter. Fig. 2 is a horizontal section of my improved meter, showing the disk set level for purpose of illustration. Fig. 3 is a plan view of the inside of the top half of outer case and inside of measuring-chamber, and Fig. 4 is an inside plan view of the top half of outer case with measuring-chamber removed.

The outer casing is composed of two detachable parts 1 and 2, which may be fastened together by bolts passing through holes 3 in their meeting flanges 4 and 5.

The measuring-disk chamber is composed of two parts 6 and 7. It is entirely separate and removable from the outer casing and is provided with two projecting annular flanges 8 and 9 on its spherical side, by which it is secured between outer case 2 and an annular seat cut in outer section 1 of the casing.

The disk-chamber and its annular flanges

8 and 9 divide the space surrounding the disk-chamber in the outer case into three compartments, one above the disk-chamber in outer casing 1, containing the intermediate gearing and impact-wheel 22 and communicating with inlet-spud 11 and disk-chamber inlet-port 12, the other below the disk-chamber in outer casing 2, communicating with inlet-port 12, and the third between the annular flanges 8 and 9, which last space communicates with the outlet-spud 13 and outlet-port 14 of the disk-chamber. Secured between inlet-port 12 and outlet-port 14 within the disk-chamber are the two partition-plates 15 and 16.

The measuring-disk is composed of a pivot-ball 17 and web 18 and is provided with two controlling-spindles 19 and 20, rigidly secured in the ball 17. On the top surface of the measuring-chamber 6 and secured to bent spindle 21^a is the clutch 21, which engages with the impact-wheel 22, suspended from the under side of gear-plate 23. The office of spindle 19 is to keep the disk-web 18 in contact with the ends or cones of the disk-chamber, and the office of clutch 21 and its bent spindle 21^a is to form a connecting-link between the disk and its spindle 19 and the intermediate gearing and its impact-wheel 22. The disk-web 18 is slotted, so as to straddle the partition-plates 15 and 16, and in the slot and between said partition-plates extends spindle 20, on the outer end of which is journaled the hard-rubber roller 24, which bears against one or both of said plates. The office of spindle 20 and roller 24 is to keep the edges of the slot in the disk-web from bearing on the partition plate or plates and becoming cramped or broken.

Inlet-spud 11 is extended into the chamber in which impact-wheel 22 moves and is turned to one side, as shown in Fig. 4, to form the nozzle 25, through which the inflowing water acts on the impact-wheel 22, and thus operates the intermediate gearing with a force proportionate to the amount of water passing through the meter. The inflowing water acting tangentially also causes the water contained in the impact-wheel chamber to take a circular motion in the same direction as that in which the impact-wheel is moving, which does

away with any retarding action such water might have on the annular motion of the impact-wheel.

In the operation of my invention the measuring-disk is largely or entirely relieved from the labor of driving the intermediate gearing and counter of the meter and is thus able to perform its measuring functions to the best advantage. The measuring-disk fitting loosely in the measuring-chamber and having its joints therewith water-packed floats with the water as it passes through the measuring-chamber and acts as a regulator to the impact-wheel 22, slightly retarding it or accelerating it, as varying conditions of flow may require.

Modifications of the construction herein shown and described may be made in the details of construction of the various parts without departing from the spirit of my invention, and some of the improvements described may be used without the others.

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

1. In a water-meter, the combination with a current-motor device for operating the meter, of a positive displacing device for measuring the flow.

2. In a water-meter, the combination with an impact-wheel for operating the meter, of a positive displacing device for measuring the flow.

3. In a water-meter, the combination with a current-motor device for operating the meter, of a nutating disk and disk-chamber for positively measuring the flow.

4. In a water-meter, the combination with an impact-wheel for operating the meter, of a nutating disk and disk-chamber for positively measuring the flow.

5. In a water-meter, the combination with a nutating-disk piston of a current-motor coupled to the disk to actuate the registering mechanism.

6. In a disk water-meter, a disk-chamber having two annular supporting-flanges whereby said disk-chamber is supported in the outer case, a partition-plate, a port on one side of the partition-plate opening into the space between said flanges, and the port on the other side of said partition-plate opening above or below said flanges, substantially as set forth.

7. In a disk water-meter, a disk-chamber having two annular supporting-flanges whereby said disk-chamber is supported in the outer case, a partition-plate and the port or ports on one side of the partition-plate opening between said flanges, and the port or ports on the other side of the partition-plate opening both above and below said flanges, substantially as set forth.

8. In a disk water-meter, an outer surrounding case and a disk-chamber with two annular flanges whereby said disk-chamber is supported in the outer case, dividing the space between said disk-chamber and said case into three compartments, substantially as set forth.

9. A disk water-meter having three compartments, one communicating with the inlet-spud of outer casing and inlet-port of disk-chamber, one communicating with the outlet-spud of outer casing and outlet-port of disk-chamber, and the third compartment communicating with the passage-way to the inlet-port of disk-chamber so that it will catch any gravel carried by the water to the said inlet-port, substantially as set forth.

10. In a disk water-meter, a disk-chamber having two annular supporting-flanges, an outer case having an annular seat in one part and an inlet-opening and outlet-opening wholly in the same part, one of said openings communicating with the space between said supporting-flanges and the other opening communicating with the space outside of said supporting-flanges, substantially as set forth.

11. In a disk water-meter, an outer case in one part of which is wholly contained the inlet-passage and the outlet-passage, and having an annular seat situated between said passages, a disk-chamber with two annular flanges, one flange being held in said seat by the pressure of the other part of the outer case against the other annular flange, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

GEORGE B. BASSETT.

Witnesses:

M. E. WARWICK,
F. A. KLINGNER.