

No. 617,946.

Patented Jan. 17, 1899.

G. B. BASSETT.
WATER METER.

(Application filed Apr. 27, 1895.)

(No Model.)

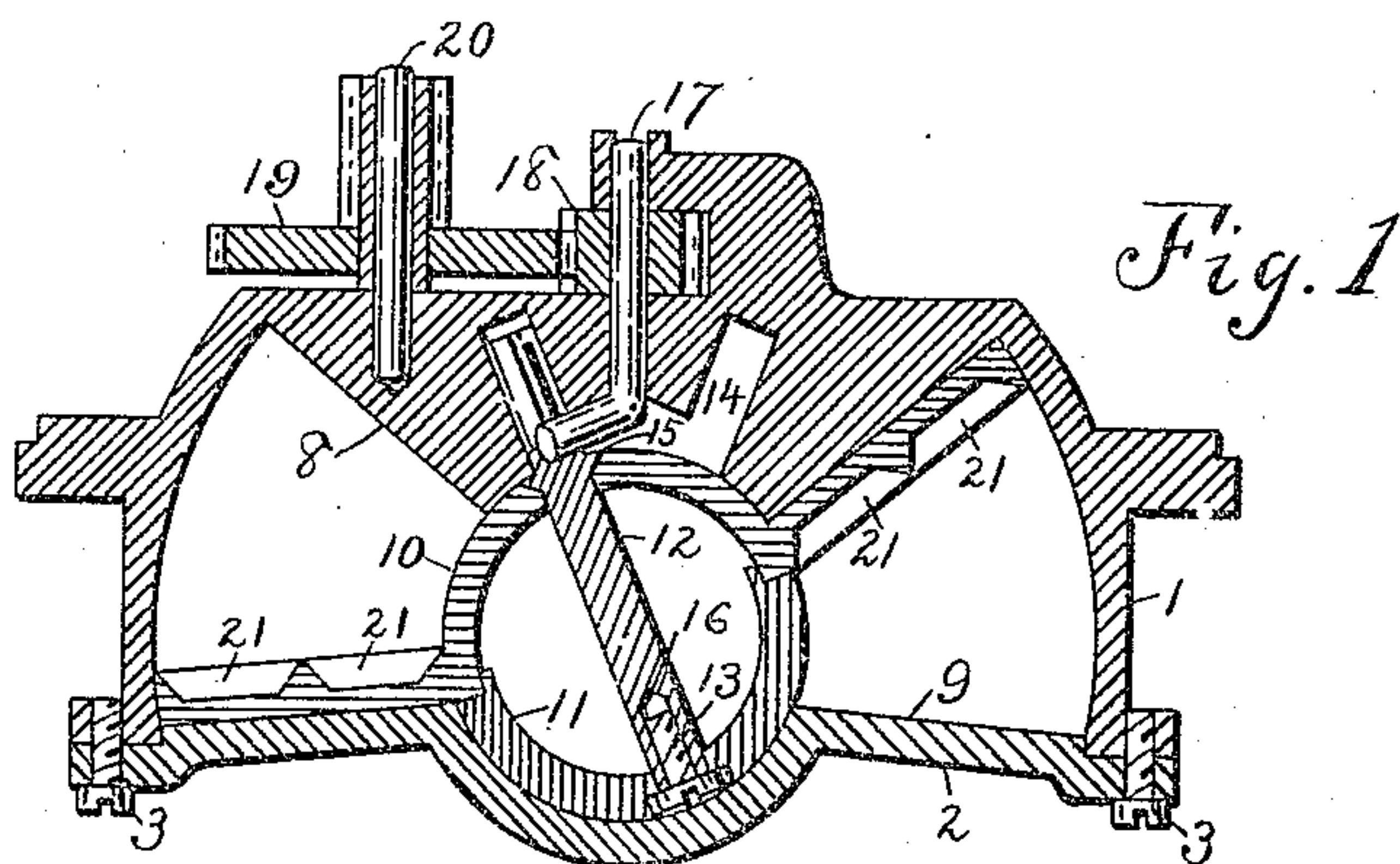


Fig. 1

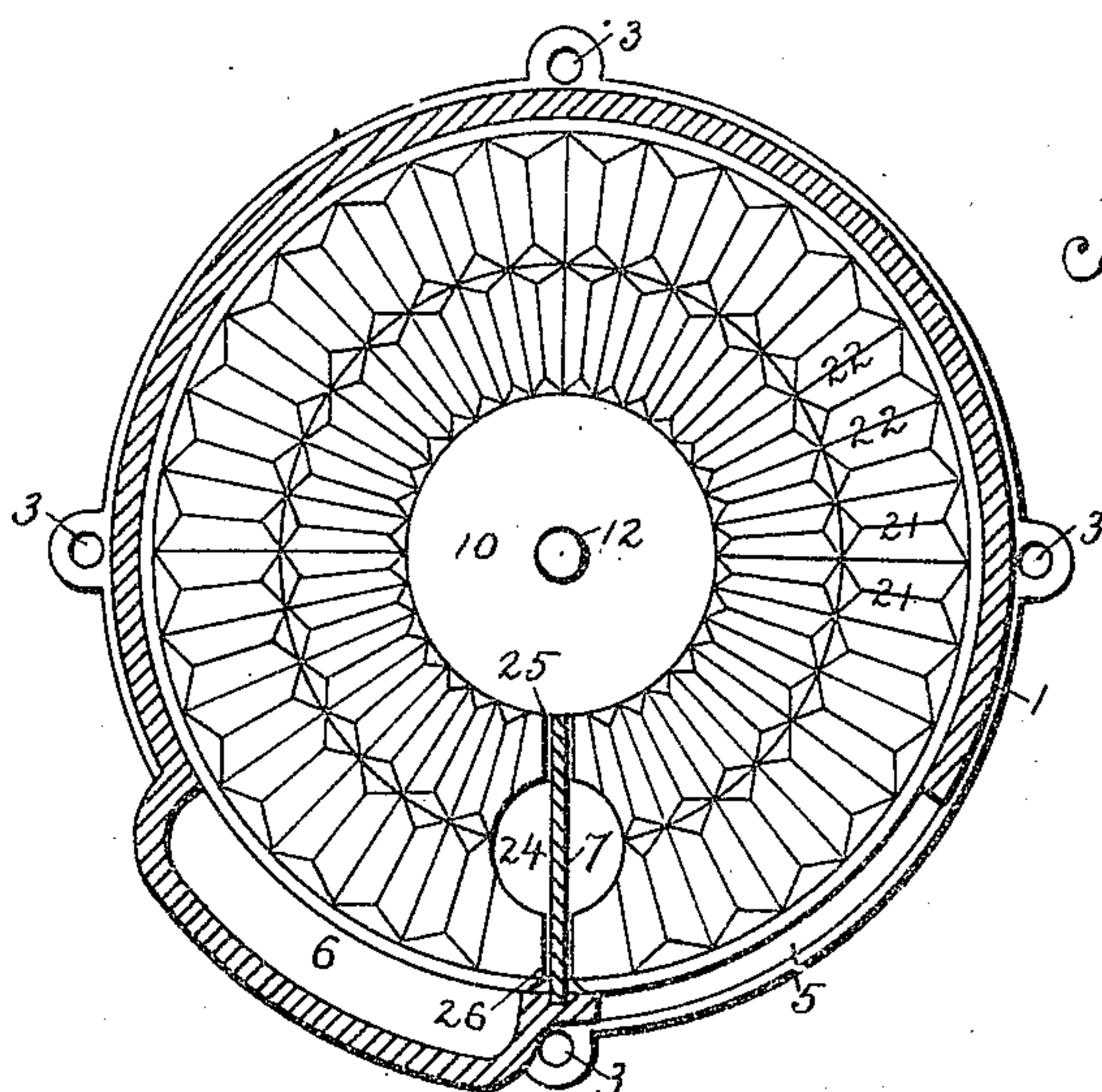


Fig. 2

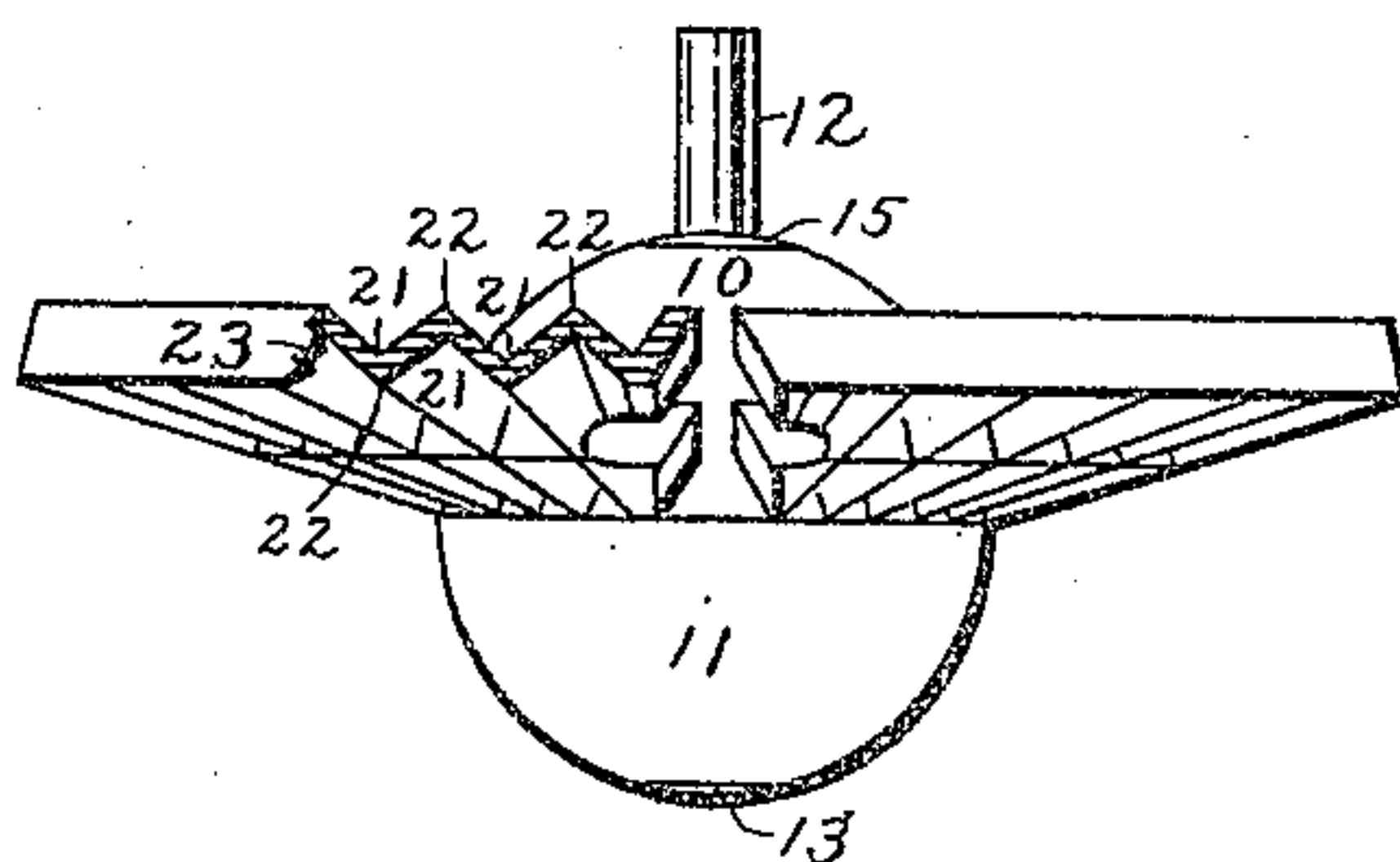


Fig. 3

Witnesses

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GEORGE B. BASSETT, OF BUFFALO, NEW YORK.

WATER-METER.

SPECIFICATION forming part of Letters Patent No. 617,946, dated January 17, 1899.

Application filed April 27, 1895. Serial No. 547,352. (No model.)

To all whom it may concern:

Be it known that I, GEORGE B. BASSETT, of Buffalo, New York, have invented a new and useful Improvement in Water-Meters, which improvement is fully set forth in the following specification.

This invention relates to improvements in water-meters, and more particularly to disk water-meters of that class as shown in Letters Patent No. 501,203, granted to me on the 11th day of July, 1893.

The objects of my present invention are principally to improve the construction and arrangement of the disk and disk-chamber and other points in the construction of these meters for the purpose of reducing the cost of manufacture, allowing the more ready assemblage and separation of parts, increasing the durability and efficiency, and other advantageous results.

I will now proceed to definitely describe the manner in which I have carried out my invention and then claim what I believe to be novel.

In the drawings, Figure 1 is a central vertical section of my improved disk and disk-chamber. Fig. 2 is a horizontal section of the disk-chamber, showing a top view of my improved disk placed in a level position for convenience of illustration. Fig. 3 is a side view of my improved disk with the web shown partly in section.

The disk-chamber in use sets in an outer surrounding case, on which is mounted an indicator. The outer case and indicator (not forming a part of this invention) are not shown in the drawings, but may be of any convenient form, as shown in the aforesaid Letters Patent No. 501,203.

Referring to the drawings, the disk-chamber is formed of two parts 1 and 2, held together by the screws 3. In the spherical side wall of part 1 are located the inlet and outlet ports 5 and 6, between which is permanently secured the diaphragm or partition 7. The interior surfaces of the upper cone or end 8 and lower cone or end 9 are smooth, and at the apex of each is a spherical socket, forming bearings for the ball of the nutating measuring-disk.

In the measuring-disk one side of the ball and the web are formed in one piece 10, which

may be cast, pressed, or machined out of metal, and to which the other side 11 of the ball, which may be formed of a non-metallic substance, as hard rubber, is fastened by means of the pin 12 and screw 13. Pin 12 is controlled in its circular path by the slot 14 in cone 8 and is provided with the projecting collar 15 and a threaded hole 16 at the lower end to receive the screw 13, whereby the two parts of the disk-ball are held together.

On the upper part 1 of the disk-chamber is mounted the intermediate gearing. The lower part of shaft 17 is bent and engages with pin 12. Pinion 18 is permanently fastened to shaft 17 and engages intermediate gear and pinion 19, which rotates on pin 20, permanently fastened in top of part 1 and engages the stuffing-box spindle and indicator. (Not shown.)

In both sides of the disk-web are formed the recesses 21, between which are the radial ribs 22, that come in or nearly in contact with cones 8 and 9, thus forming, with the recesses 21, a water-packing between the web and cones. Another object of the ribs 22 is to strengthen the disk without greatly increasing its weight, and another object of the recesses 21 is to lessen the weight of the disk without greatly decreasing its strength. A still further object of the recesses 21 and ribs 22 is that they very materially lessen the liability of foreign substances, as sand or gravel, catching between the web of the disk and the cones 8 and 9 and blocking the action of the disk.

At 23 in Fig. 3 a portion of the disk-web is cut away, making a section showing the recesses 21 on one side of the web coming opposite the ribs 22 on the other side, making a very light yet strong construction of the disk-web.

In the disk-web are cut the hole 24 and the radial slots 25 and 26, in which is received the diaphragm 7, the edge of the disk-web at slot 25 bearing against the part of the diaphragm next to the disk-ball and the edge of the disk-web at slot 26 bearing against the part of the diaphragm next to the outer wall of the disk-chamber, thus forming an inner and outer bearing for the disk-web on the diaphragm 7, and thereby lessening the wear and liability of the disk and diaphragm to become cramped

and also at the same time affording an outlet through hole 24 for the water that may become trapped in the corners between the disk-web, diaphragm 7, and cones 8 and 9.

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

10 1. In a disk water-meter, a nutating measuring-disk comprising a sectional ball and web, one section of the ball being integral with the web, the two parts of the ball when assembled forming a closed sphere, and a pin passing centrally through the two sections of the ball approximately at right angles to the web for locking the two parts together.

20 2. In a disk water-meter, a nutating measuring-disk comprising a ball and a web, the web and one half of the ball being formed integral of one piece of metal, the other half of the ball being formed of a non-metallic substance, as hard rubber, and a pin passing centrally through the ball approximately at right angles to the web, substantially as set forth.

25 3. In a disk water-meter, the combination with a nutating measuring-disk having a hollow ball and a web provided with recesses, the walls of said recesses being rigid and unyielding, of a disk-chamber having smooth ends, substantially as set forth.

30 4. In a disk water-meter, the combination

with a nutating measuring-disk having a hollow ball and a web provided with recesses, the walls of the recesses being rigid and unyielding, the web and one side of the ball being in one piece, and the other side of the ball being in a separate piece, of a disk-chamber having smooth ends, substantially as set forth. 35

5. In a disk water-meter, a nutating measuring-disk having a hollow ball and a web provided with radial or nearly radial rigid or unyielding ribs, the web and one side of the ball being in one piece, substantially as described. 40

6. In a disk water-meter, the combination with a nutating measuring-disk having a central ball and a web provided with a multiplicity of recesses located between the edge of said web and said ball-bearing, and having a circumferential rib on its outer edge, the walls of said recesses being rigid and unyielding, of a disk-chamber having smooth inner ends, substantially as set forth. 50

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

GEORGE B. BASSETT.

Witnesses:

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GEO. ADSIT.