

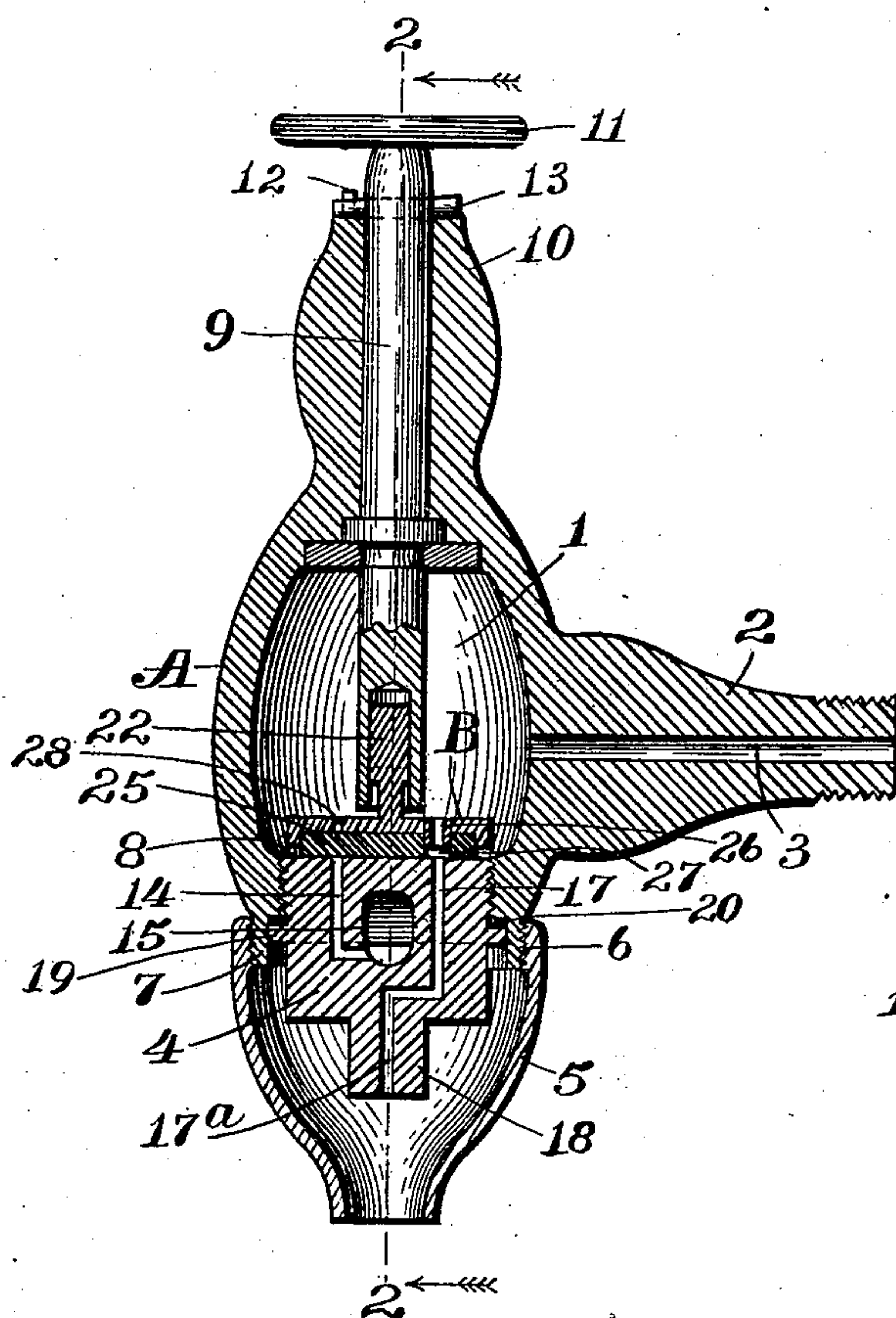
No. 711,755.

Patented Oct. 21, 1902.

G. A. BLAKE.
FAUCET.

(Application filed Mar. 15, 1902.)

(No Model.)



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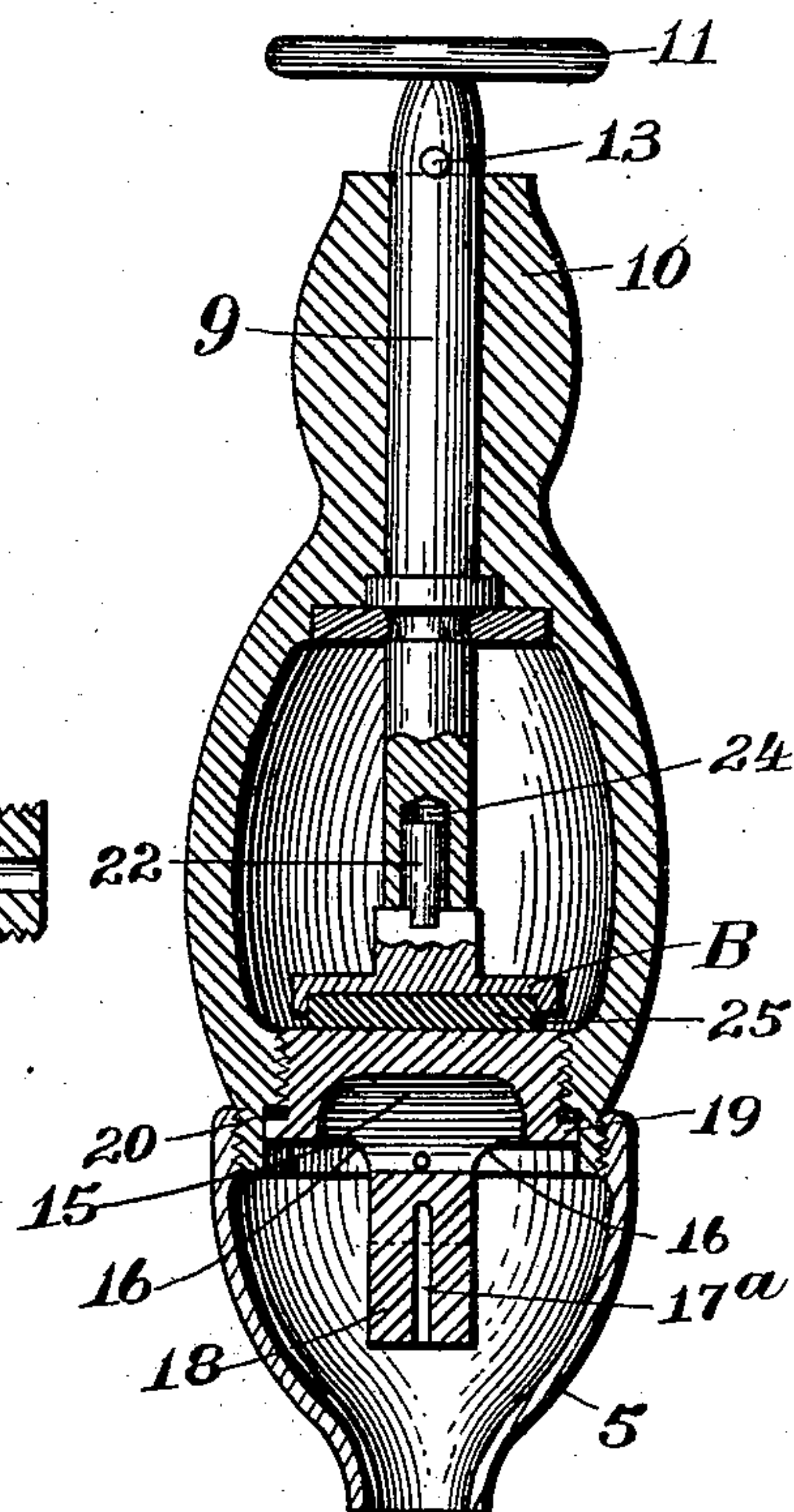


FIG. 2.

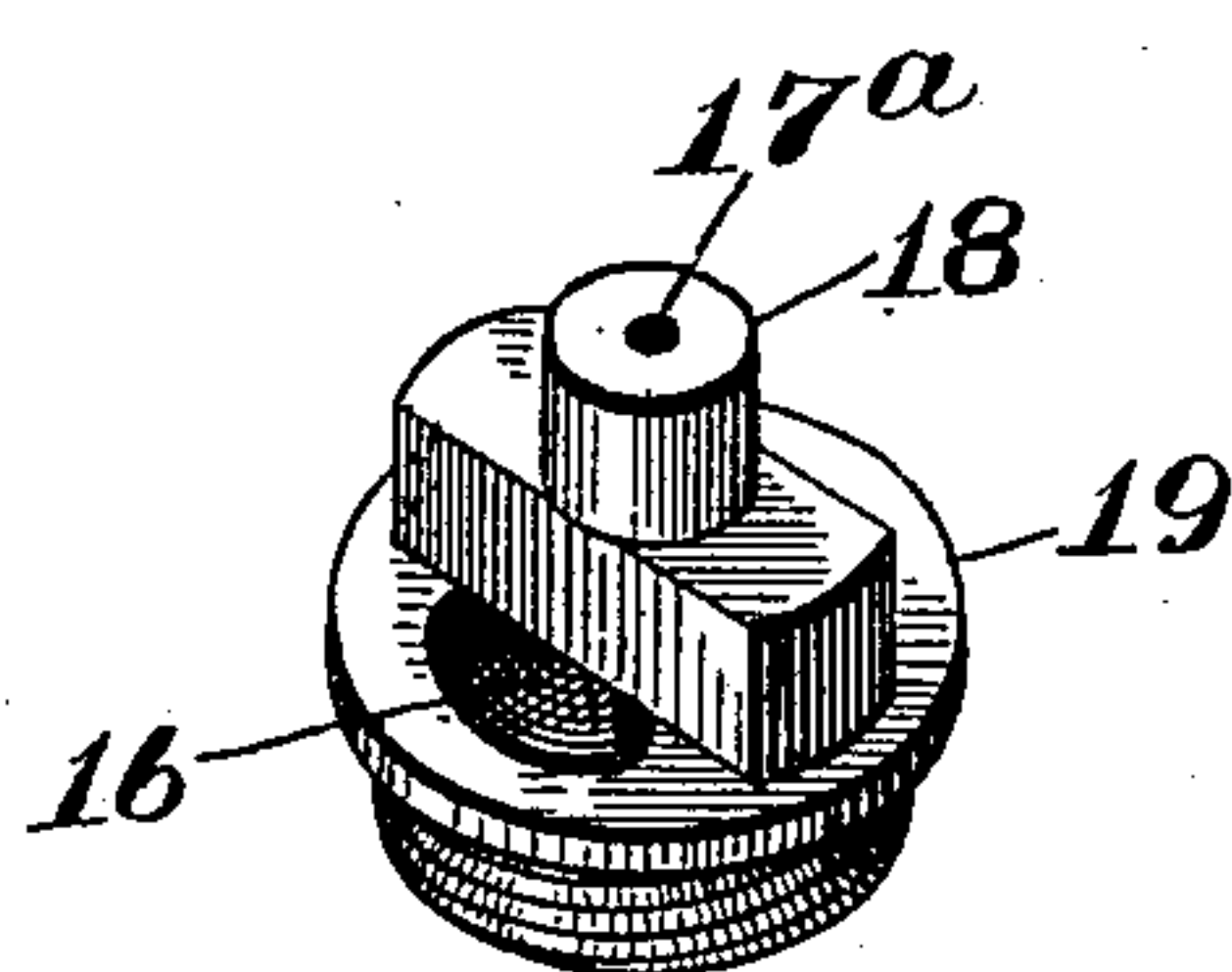


FIG. 2.

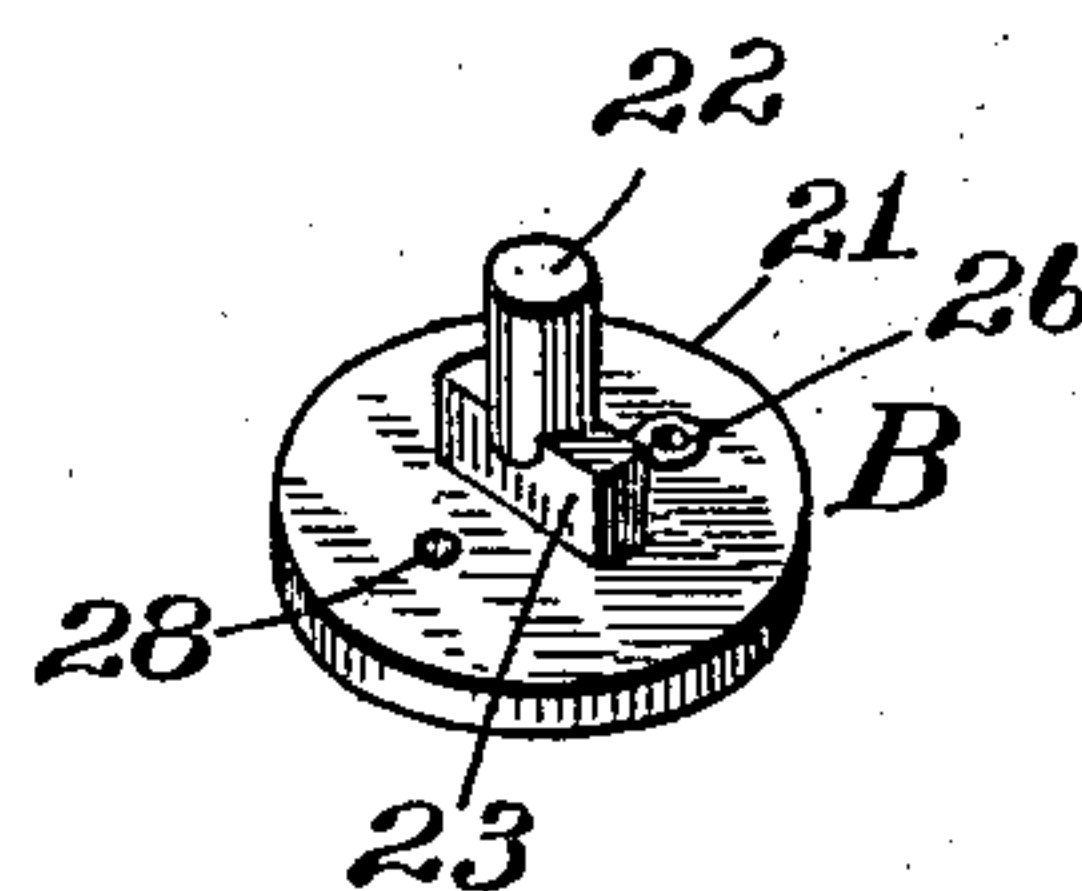


FIG. 4.

Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE A. BLAKE, OF NEW BEDFORD, MASSACHUSETTS.

FAUCET.

SPECIFICATION forming part of Letters Patent No. 711,755, dated October 21, 1902.

Application filed March 15, 1902. Serial No. 98,356. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. BLAKE, a citizen of the United States, residing at New Bedford, in the county of Bristol, State of Massachusetts, have invented certain new and useful Improvements in Faucets, of which the following is a specification.

This invention comprises improvements in that class of soda-water fountains in which by the operation of a single valve carbonated liquid may be drawn from the faucet in either a fine continuous stream or a broken stream or spray; and it includes in particular the arrangement of the valve for producing this result.

In the accompanying drawings, Figure 1 is a central vertical section through the faucet. Fig. 2 is a section on the line 2 2 of Fig. 1. Fig. 3 is a perspective view, inverted, of the plug which forms the valve-seat and contains the exit passage-ways for the liquid. Fig. 4 is a top perspective view of the valve.

Referring to the drawings, A indicates the faucet-casing, the main portion of which is hollow, as indicated by numeral 1. A threaded tap 2 is integrally connected with the casing and adapted to connect the faucet with the source of liquid-supply through a tubular opening 3, formed in the tap. A plug 4 is screwed into and closes the lower end of the casing, and surrounding this plug is a nozzle 5, which is connected by a threaded joint 6 to a flange 7 upon the lower end of the casing. The top 8 of the plug forms a seat for a valve B, which valve is operated by means of a rotatable valve-stem 9, extending through an upper tubular portion 10 of the casing and into the hollow interior 1. The valve-stem may be turned by means of a hand-wheel or other equivalent device 11. A stop-pin 12 projects upwardly from the tubular portion 10, and this stop-pin limits the turning movement of the valve. For this purpose a cross-pin 13 is fitted within a transverse opening in the valve-stem, the opposite ends of said cross-pin extending laterally beyond the stem, so that the valve-stem cannot be turned more than a half-revolution in either direction by reason of the engagement of said cross-pin with the stop-pin.

The plug 4 has a passage-way 14 extending downwardly from the valve-seat at some dis-

tance from the center and communicating with a cavity 15 in the interior of the plug, which cavity has lateral openings 16 on either side communicating with the interior of the nozzle 5. A passage-way 17 also extends downwardly through the plug from the valve-seat at a point diametrically opposite from the passage-way 14 and at the same radial distance from the center. The lower portion 17^a of this passage-way extends through a central projection or nozzle 18, which depends centrally from the body of the plug. The plug is provided with a flange 19, and a water-tight joint is maintained between the plug and the valve-casing by means of a packing-ring 20, interposed between said flange and the casing.

The valve B comprises a metallic cap 21, having on its upper side a central stud 22 and a rectangular projection or key 23, extending laterally on opposite sides of the stud. This stud 22 fits within a tubular opening 24 in the lower end of the valve-stem, and the key 23 fits within a vertical slot formed in said lower end. By this means the valve may be positively turned by the rotation of the valve-stem. The valve proper consists of a flexible disk 25, which fits within the flange of the cap 21 and is rotatable with the cap. As shown, a short tube 26 extends downwardly through the crown of the cap and into a perforation 27 in the disk 25, and when the cap is turned by means of the valve-stem the disk also turns by reason of the engagement of the tube with the disk. When the valve is in the position shown in Fig. 1, liquid may enter the passage-way 17 through the tube 26, while the passage-way 14 will be closed. A half-turn of the valve-stem will bring the tube 26 into register with the passage-way 14, thereby admitting liquid to said passage-way, and the passage-way 17 will be closed. The liquid flowing through the passage-way 17 will emerge from said passage-way in a fine stream, while when the liquid is admitted to the passage-way 14 and thence to the cavity 16 the liquid is broken into a fine spray by the walls of the cavity and thence passes out through the nozzle 5 in a broken stream.

When the valve-stem is turned to its mid-position, of course both passage-ways will be closed. It is desirable in order to keep the

flexible valve firmly to its seat to admit pressure immediately to the back of said disk. For this purpose a small perforation 28 is formed in the crown of the cap, and the whole force of the liquid is thereby applied to the back of the disk, holding it to its seat.

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

10 1. In a faucet for carbonated liquids, a hollow valve-casing having a valve-seat therein and exit-openings in said seat, in combination with a valve comprising a flexible disk arranged upon the valve-seat and a rotatable cap extending over said disk and arranged to turn the latter, said disk and cap having registering openings adapted to register with the openings in the valve-seat, and said cap having an opening or openings therethrough for admitting the liquid to the back of the disk, and a valve-stem arranged to turn the cap.

25 2. In a faucet for carbonated liquids, a hollow valve-casing having a valve-seat therein and exit-openings in said seat, in combination with a valve comprising a flexible disk arranged upon the valve-seat and a flanged cap extending over said disk, said disk and

cap being rotatable and having registering openings adapted to register with the openings in the valve-seat, and said cap having a tubular projection extending into the opening in the disk and an opening for admitting the liquid to the back of the disk, and a valve-stem arranged to turn the cap.

35 3. In a faucet for carbonated liquids, a hollow valve-casing, and a plug fitting one end of the casing and having a flat inner surface forming a valve-seat and passage-ways leading from said seat through the plug, in combination with a valve comprising a flexible disk arranged upon the valve-seat and a rotatable cap extending over said disk and arranged to turn the latter, said disk and cap having registering openings adapted to register with the openings in the valve-seat, and said cap having an opening therethrough for admitting the liquid to the back of the disk, and a valve-stem arranged to turn the cap.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE A. BLAKE.

Witnesses:

JAMES E. BLAKE,
F. F. FRANCIS.