

No. 664,375.

Patented Dec. 25, 1900.

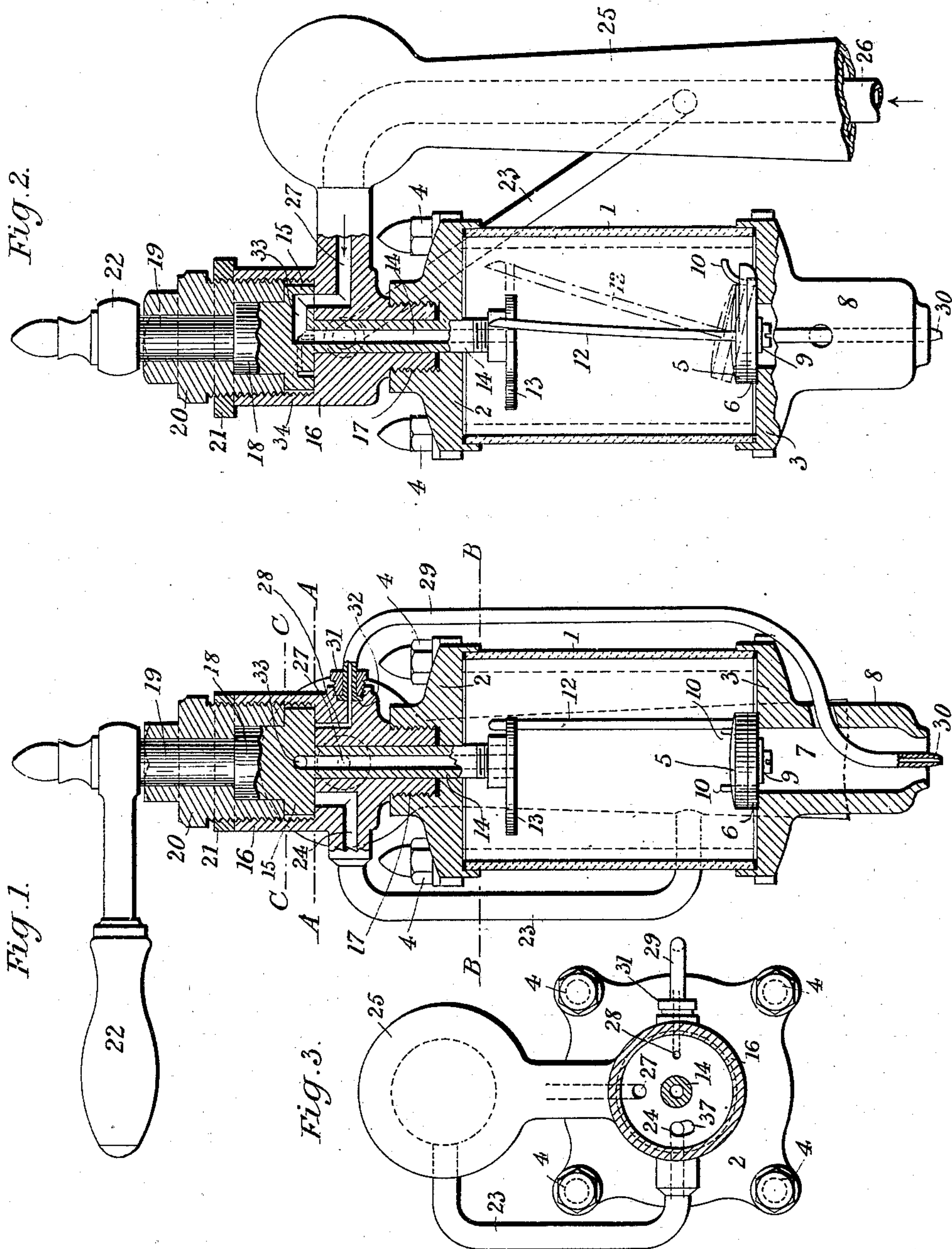
B. BARON.

DRAWING TAP FOR AERATED OR CARBONATED WATER.

(Application filed July 2, 1900.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES.
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Fig. 4.

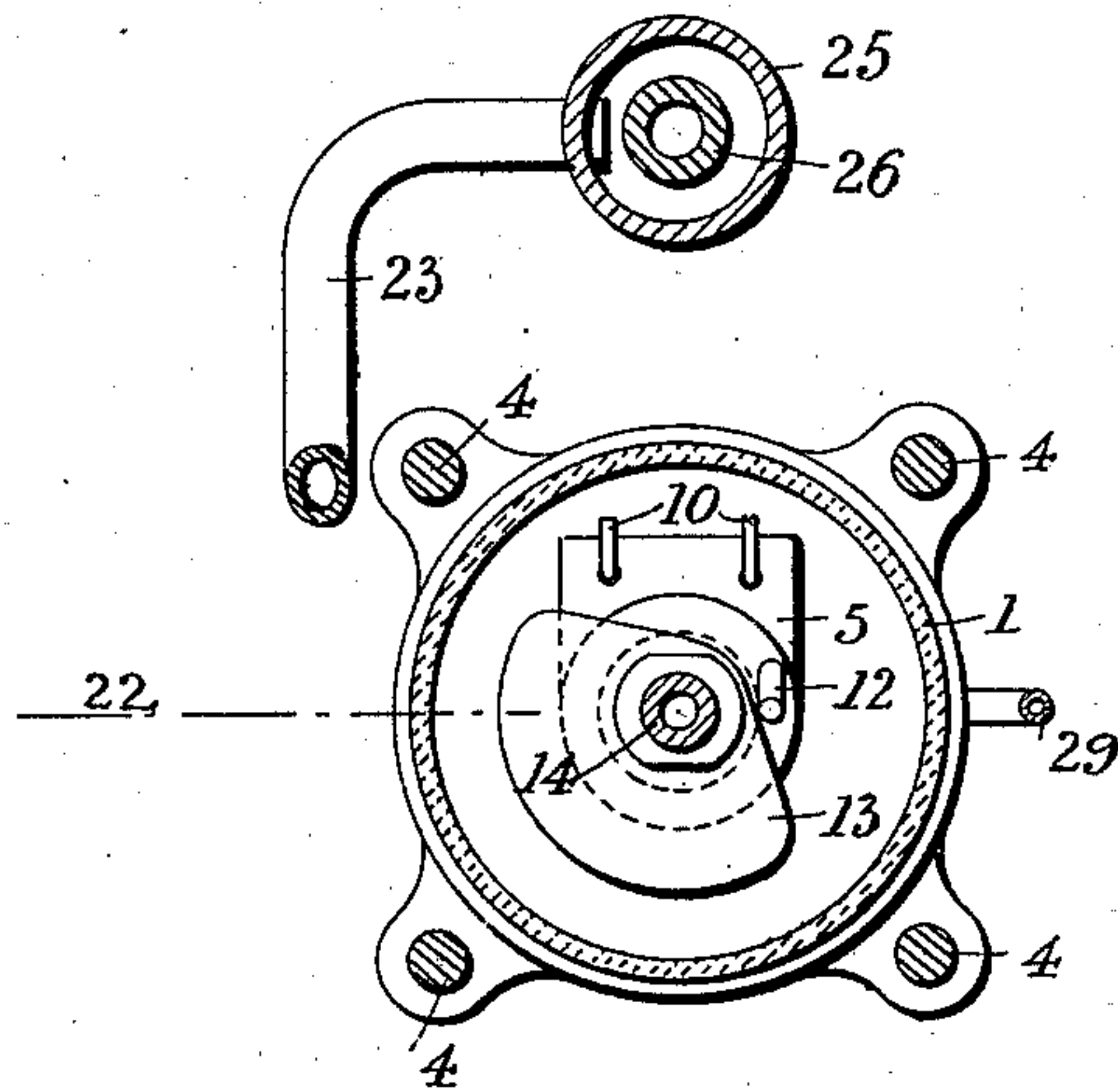


Fig. 5.

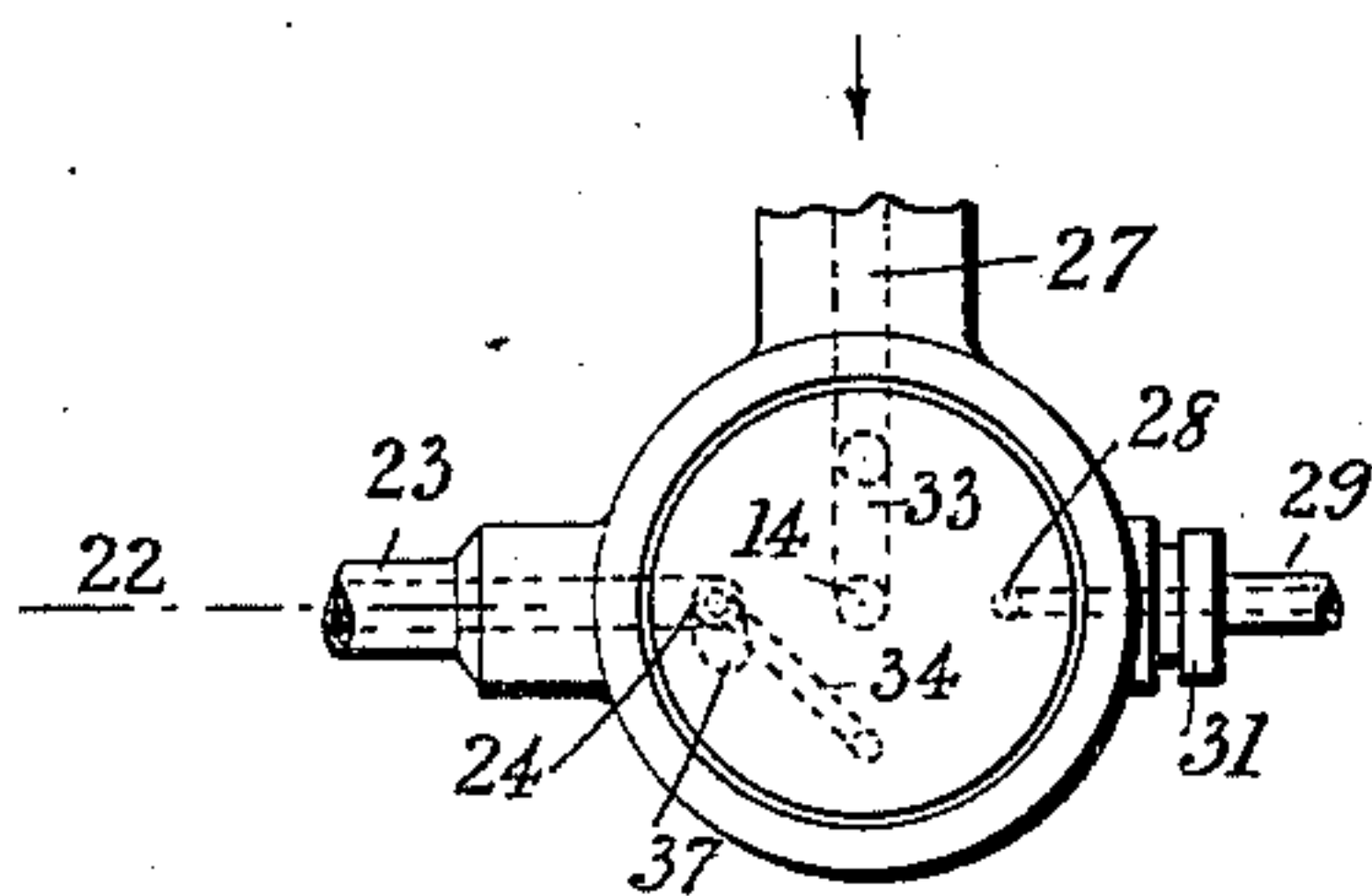


Fig. 6.

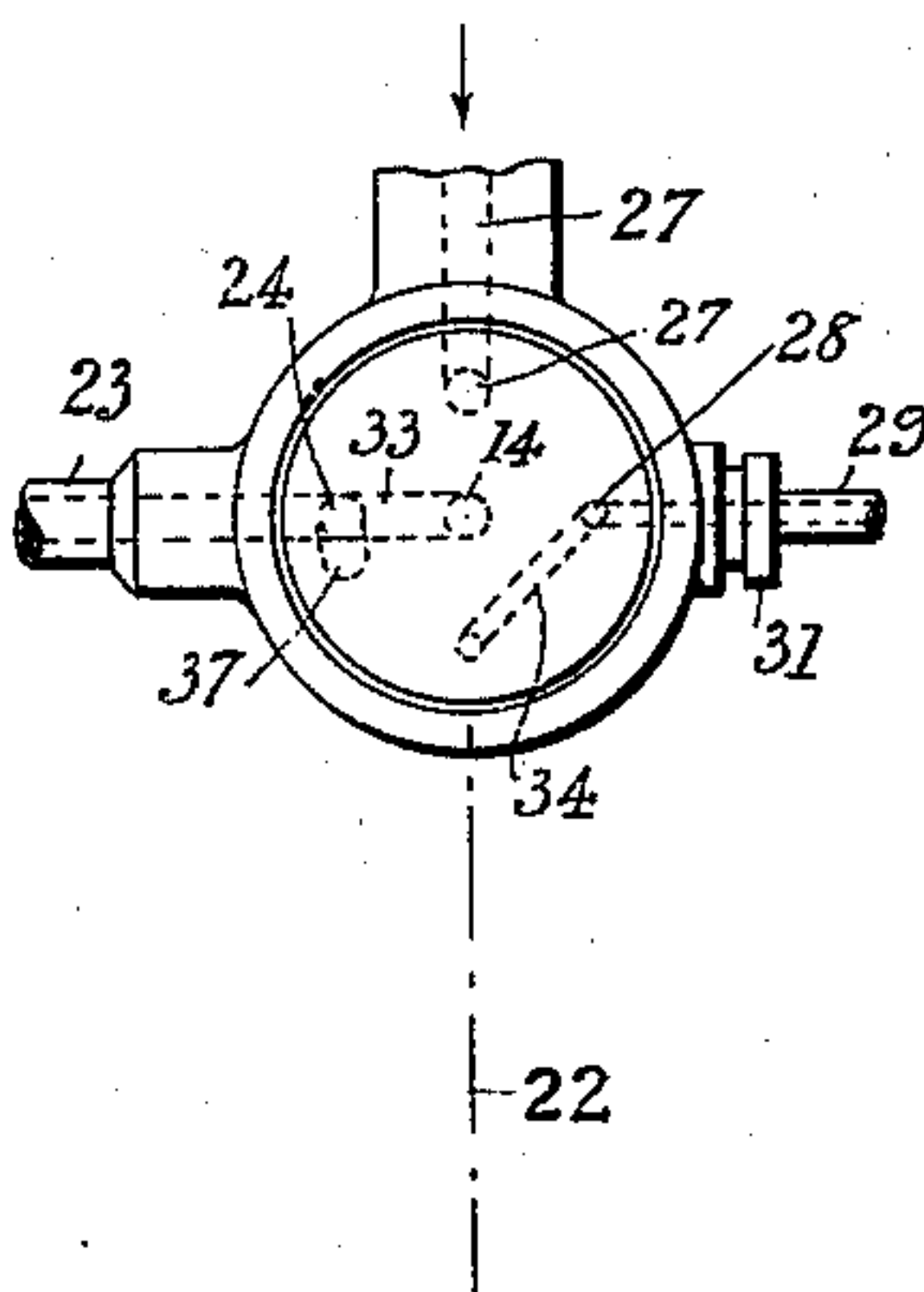
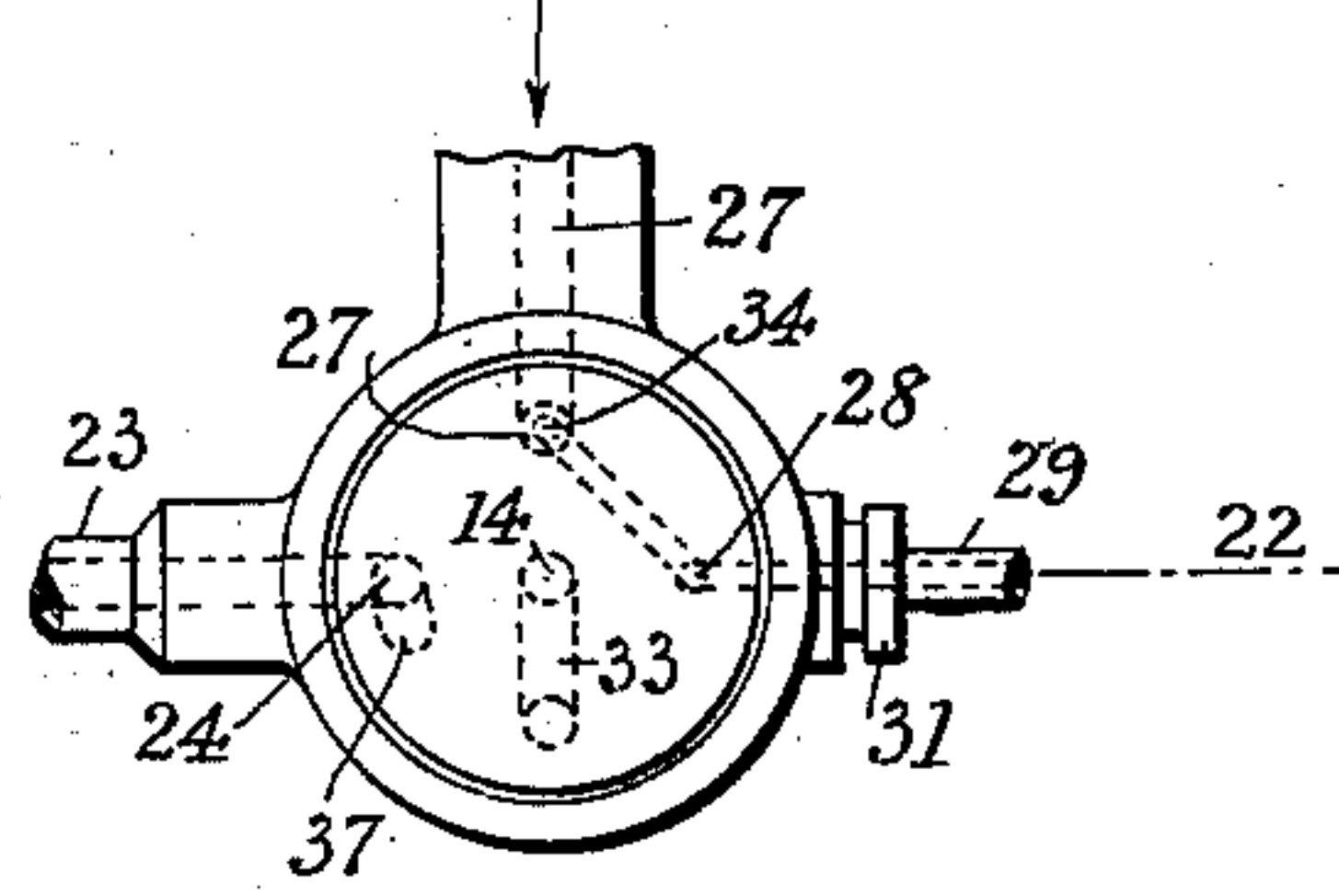


Fig. 7.



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UNITED STATES PATENT OFFICE.

BERNHARD BARON, OF LONDON, ENGLAND.

DRAWING-TAP FOR AERATED OR CARBONATED WATER.

SPECIFICATION forming part of Letters Patent No. 664,375, dated December 25, 1900.

Application filed July 2, 1900. Serial No. 22,321. (No model.)

To all whom it may concern:

Be it known that I, BERNHARD BARON, a citizen of the United States, residing at London, England, have invented a certain new and useful Improvement in Drawing-Taps for Aerated or Carbonated Water, of which the following is a specification.

My invention relates to improvements in drawing-taps for aerated or carbonated waters and the like.

For drawing off aerated waters, particularly where such are made on a large scale, as by machines which aerate or carbonate water drawn directly from the main or an intermediate vessel by bringing it into contact with the gas, so that it may be taken off at once for consumption, it is desirable to use a drawing-tap in which the liquid is allowed to first enter a chamber, after which a snifting-valve is opened to let off the gas from the top of such water, and finally an outlet-tap is opened to allow the water to flow out into the glass or receptacle, which it does quietly and without having its contained gas knocked out of it by its rapid rush into the receptacle. My invention relates to this kind of drawing-tap, its objects being to simplify the construction of the parts, to render the outlet-valve automatically closing by the pressure of the liquid and gas in the chamber, and to provide a mixing jet or device which is useful when the aerated water is drawn or discharged into a glass or receptacle in which has been placed syrup or other flavoring or medicated matter, by which means a very effective mixing is obtained without the use of a spoon or other means.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 is a sectional elevation of the apparatus looking from the front. Fig. 2 is a sectional elevation taken at right angles to Fig. 1. Fig. 3 is a sectional plan on line A A, Fig. 1. Fig. 4 is a sectional plan on line B B, Fig. 1; and Figs. 5, 6, and 7 are diagrammatic views about on the line C C, Fig. 1, to show different positions of the inlet-valve.

The apparatus consists of a cylinder 1, preferably of glass, held in upper and lower metal caps 2 3 by means of screwed rods 4, which are provided with nuts by which this upper cap may be removed. The lower cap carries the outlet-valve, which according to my present invention consists of a flap 5, of metal

and preferably of some little weight, provided with a rubber or other suitable facing 6, which may be affixed to it by a screw and washer 9, such flap being adapted to cover a passage 7 in an extension 8 of the lower cap. The valve 5 is loosely hinged to the cap 3 by means of two curved pins 10 10, secured at their lower ends in the cap, each pin passing somewhat loosely through a hole in the flap, so that by lifting (when the lower cap is removed) the flap and turning it back it can be entirely removed from the free ends of the pins 10, thus rendering it convenient to clean the valve, the chamber or the passage 7, and also providing a freely-working valve. Such valve carries a more or less vertical rod 12, the length of which is such that it will reach up to and abut against the edge of a horizontal cam 13, carried by a tubular extension 14 of the inlet-valve plug 15. This plug 15 seats in a recess in a head 16, through which the extension 14 also passes. The head 16 is screwed to the upper cap 2 at 17. The plug is provided with a reduced part 18 and a stem 19, which are surrounded and held in the head 16 by a collar 20, screwed into such head and secured by a locking-nut 21. The stem 19 is provided with a handle 22. The head 16 is provided with a pipe 23, connecting a passage 24 therein with the interior of a pillar 25, which carries a pipe 26 for a liquid-supply under pressure. Such pipe 26 communicates with another passage 27 in the head 16, and the head also has a further passage 28, communicating with a pipe 29, which passes down to the lower cap 3, enters the discharge-passage 7 in the extension 8 of same, and terminates in a nozzle 30. The passage 24 where it opens into the recess in head 16 is enlarged or lengthened, as shown at 37, Fig. 3, for a purpose hereinafter explained. The pipe 29 is adapted to be disconnected, so that it may be removed when the chamber is to be taken to pieces, and I effect this by means of a nut 31, surrounding such pipe and abutting against a head 32 of same to hold it in a recess of the head 16 when the nut is screwed into same.

The plug 15 contains a passage 33, one end of which forms part of the passage in the tubular extension 14, while the other is so formed that it opens onto the lower face of the plug 15. Said plug also carries a further smaller passage 34, which is so formed that each end

of same opens on the lower face of the plug 15. When the handle is in the position shown in Figs. 1 and 5, the passage 33 connects the liquid-passage 27, through the tubular extension 14, with the interior of the chamber 1, the outlet-valve 5 being closed by the pressure of water and gas, as its rod 12 lies then against the non-operative edge of the cam 13. A movement of the handle then brings the passage 33 into the position shown in Fig. 6, where it connects with the passage 24, so that the gas-pressure on the top of the water in the chamber 1 is relieved through the tubular extension 14, passage 33, passage 24, and pipe 23 and snifted or discharged into the pillar 25 or otherwise discharged into the air. A continued onward movement of the handle brings the operative edge of the cam 13 against the rod 12, thus tilting same and raising the outlet-valve 5, so that the liquid in the chamber is discharged quietly into the receptacle. The enlargement or slot 37 of the passage 24 allows the snifting to take place during the continued forward movement of the handle, so that time is allowed for it to be effectual, and there is no fear with a rapid movement of the handle of its being cut off too quickly. A further onward movement of the handle to the opposite position to that shown in Fig. 1 brings the outlet-valve into the position shown in Fig. 7, where the small passage 34 is placed in communication with the aerated-water passage 27 and the passage 28 and pipe 29, so that a small but powerful jet of water under full pressure is discharged through the nozzle 30 into the receptacle, thus thoroughly mixing or stirring the contents of same. A return movement of the handle allows the outlet-valve to fall back by its own weight into its closed position. It will be seen that such valve closes by its weight and is held closed by the gas-pressure and is opened positively by the simple mechanism described; but I do not confine my invention to the particular means by which such opening is effected, nor do I confine my invention to the particular arrangement of passages whereby the mixing is obtained, as such jet may be otherwise obtained from the main supply during the operation of the handle of the drawing-tap.

What I claim is—

1. In a drawing-tap, and in combination, a receptacle for holding liquid having a suitable inlet and outlet, and a hinged valve on the outlet automatically closing by its own weight and held closed by the pressure of liquid thereon.

2. In a drawing-tap, and in combination, a receptacle for holding liquid, a water-inlet and gas-snifting valve, a flap-valve forming an outlet-valve automatically closing by its weight and held closed by the pressure in the chamber and means controlled directly by the water-inlet valve for positively raising said outlet-valve.

3. In a drawing-tap, and in combination, a

liquid-receptacle a water-inlet and gas-snifting valve, a flap-valve forming an outlet-valve automatically closing by its weight and held closed by the pressure in the chamber, a rod carried by said outlet-valve and a part carried by the water-inlet valve for tilting said rod and raising said outlet-valve.

4. In combination a liquid-receptacle, a water-inlet and gas-snifting valve, an outlet-valve automatically closing by its weight and held closed by the pressure in the chamber, an extension carried by the inlet-valve, a cam operated by the movement of same and a rod carried by the outlet-valve and adapted to be tilted to open same.

5. In combination a liquid-chamber, a water-inlet and gas-snifting valve, a tubular extension to such valve, a horizontal cam carried by such extension, a tilting outlet-valve and a rod carried by same adapted to be acted on by the edge of the cam to open same.

6. In a drawing-tap and in combination, a liquid-chamber, an inlet-valve having a passage in same adapted in one position of the valve to be placed in connection with a supply of liquid under pressure and with the chamber and a supplementary passage also adapted in another position of the valve to be placed in connection with the liquid-supply, an outlet-valve, means carried by the inlet-valve for controlling same, and a pipe with which the supplementary passage is adapted to connect, whereby a jet of liquid under pressure is produced after the outlet-valve has been opened and the contents of the receptacle discharged.

7. In a drawing-tap and in combination a receptacle for holding liquid, an inlet-valve having a passage in same adapted in one position of the valve to be placed in connection with a supply of liquid under pressure and with the receptacle, a supplementary passage also adapted in another position of the valve to be placed in connection with the liquid-supply, an outlet-valve, means for operating same, an extension below said valve forming part of the receptacle and having a passage in same and a pipe having a jet-opening passing into said extension and adapted to connect with the supplementary passage to produce a jet of liquid after the outlet-valve has been opened to discharge the contents of the receptacle.

8. In combination a liquid-chamber, a lower cap 3, a head 16 having passages 24, 27 and 28 in same, a valve in such head having passages 33, 34, and a pipe connected with passage 28 and with an outlet-passage 7 in cap 3 for the purpose described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

BERNHARD BARON.

Witnesses:

ALLEN HARRY JONES,
HERBERT ARTHUR MARSHALL.