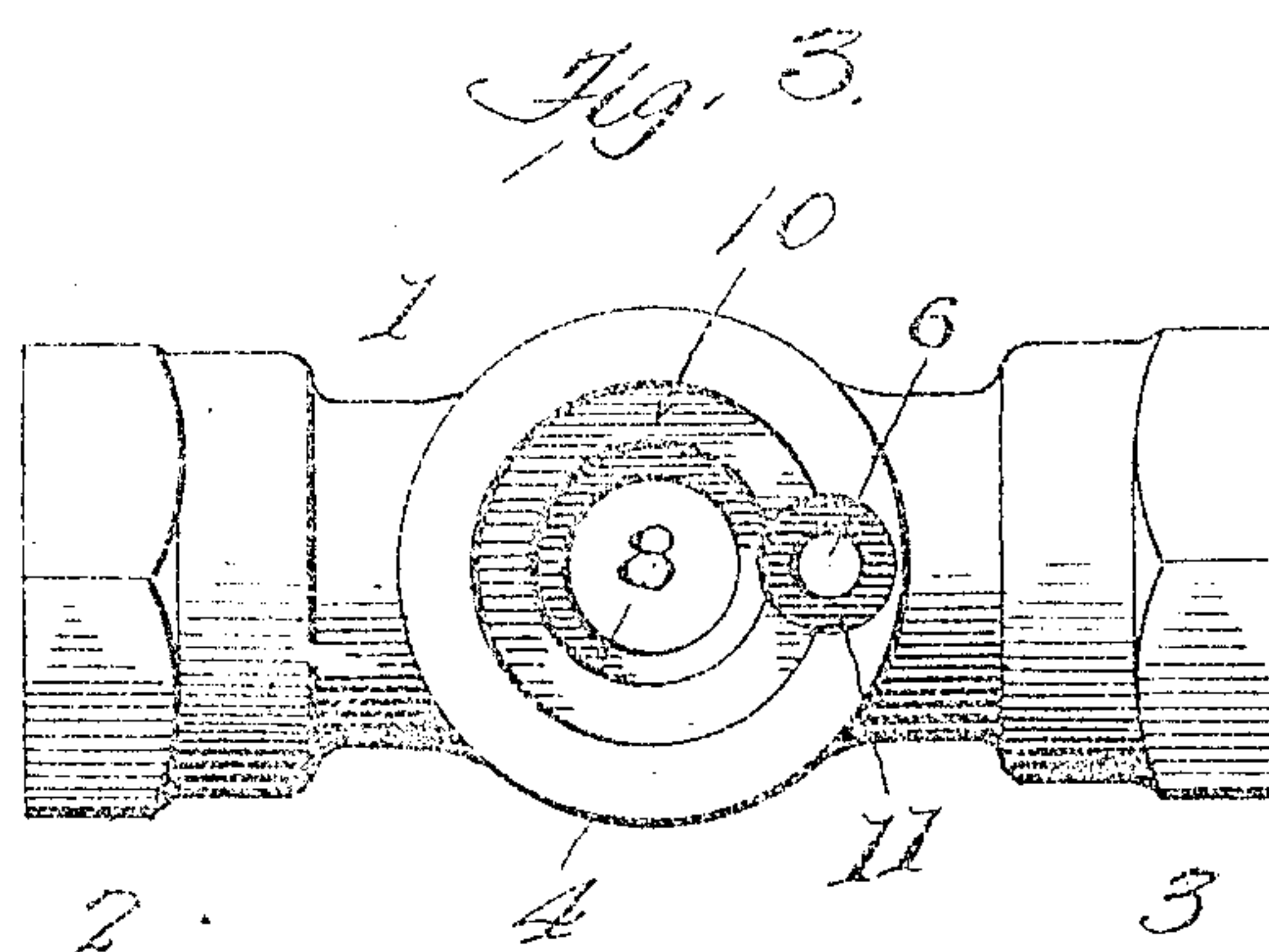
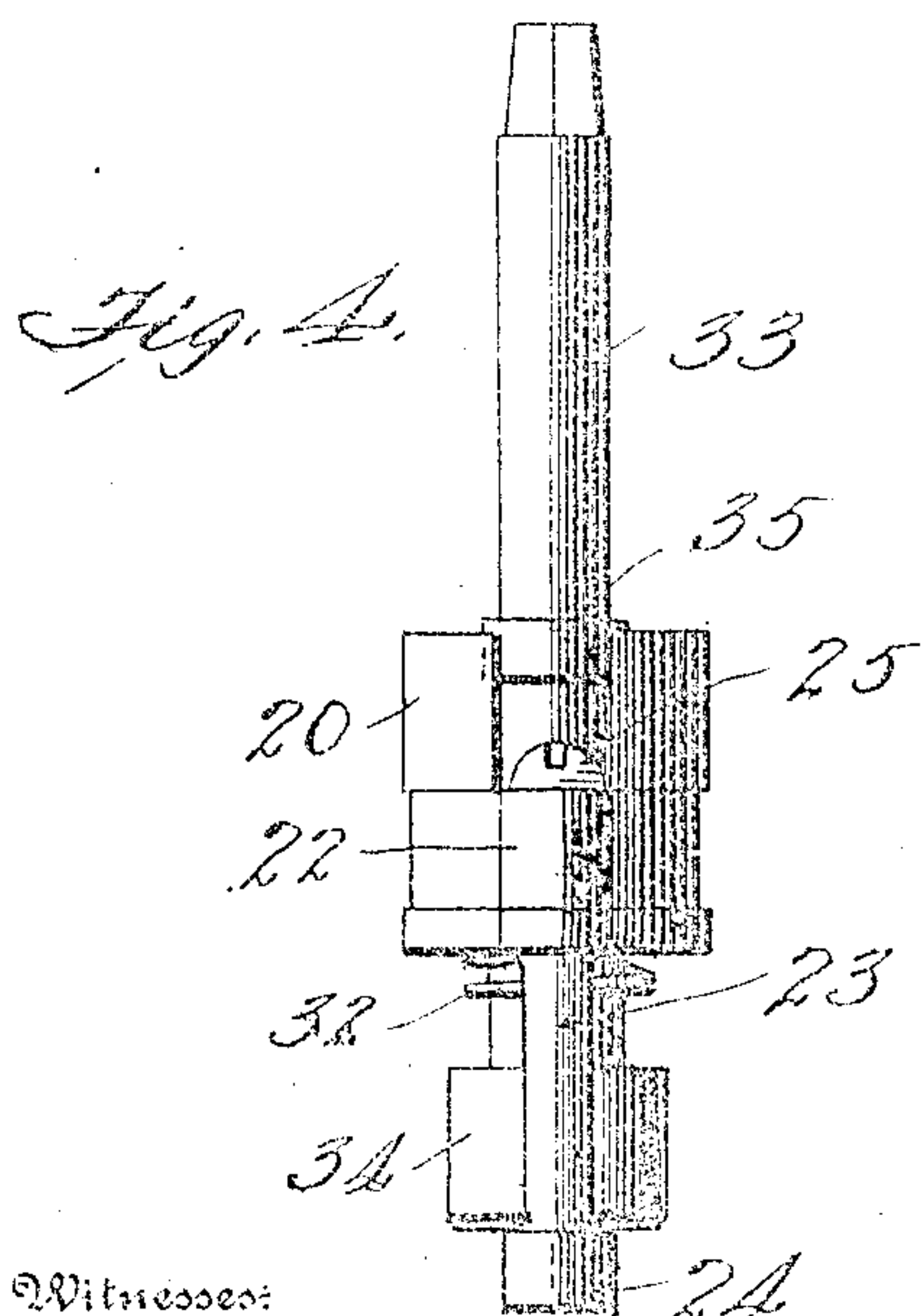
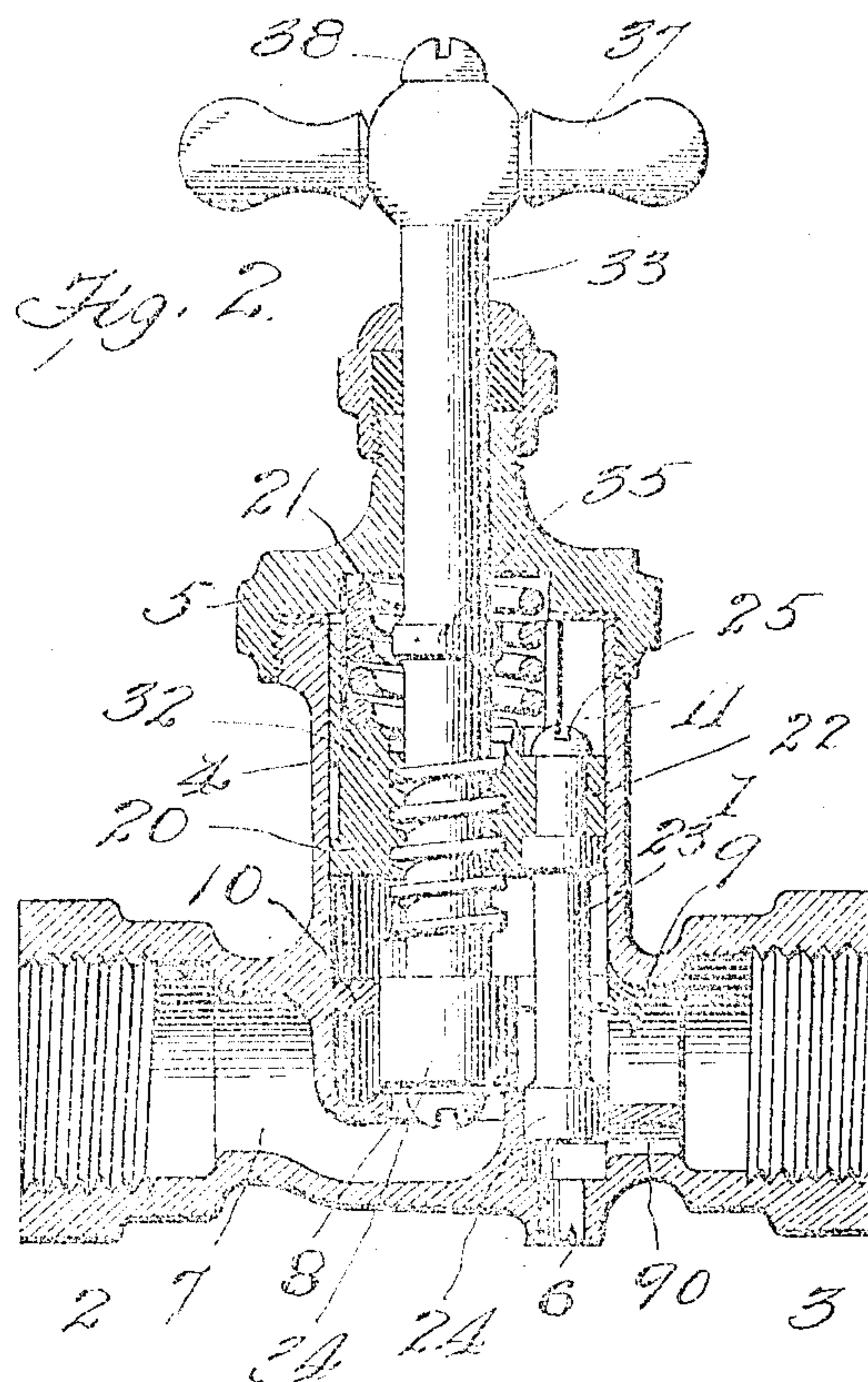
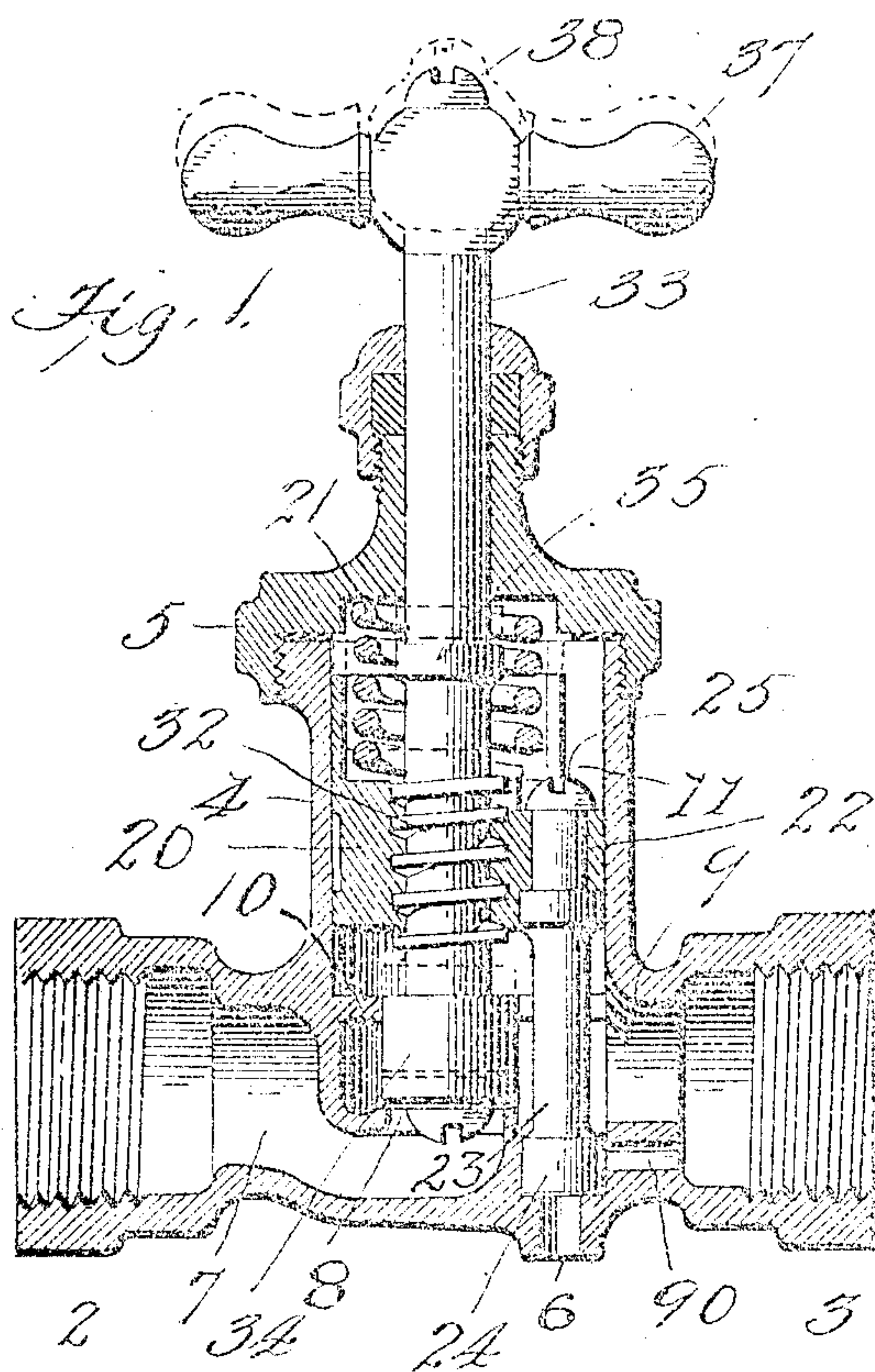


No. 875,696.

PATENTED JAN. 7, 1908.

W. P. DEVERELL.
COMPRESSION STOP AND WASTE COCK.

APPLICATION FILED APR 10, 1907.



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UNITED STATES PATENT OFFICE.

WELDON P. DEVERELL, OF DECATUR, ILLINOIS.

COMPRESSION STOP AND WASTE COCK.

No. 875,698.

Specification of Letters Patent.

Patented Jan. 7, 1908.

Application filed April 10, 1907. Serial No. 367,460.

To all whom it may concern:

Be it known that I, WELDON P. DEVERELL, a citizen of the United States, and resident of Decatur, in the county of Macon and State of Illinois, have invented certain new and useful Improvements in Compression Stop and Waste Cocks; and my preferred manner of carrying out the invention is set forth in the following full, clear, and exact description, terminating with claims particularly specifying the novelty.

This invention relates to water distribution, and more especially to cocks and faucets; and the object of the same is to produce an improved compression and waste cock wherein either the main stem or the waste stem is forcibly closed and the cock operates against the pressure of the water or other fluid agent flowing therethrough.

To this end the invention consists in the construction of parts set forth herein, claimed below, and shown in the accompanying drawings, wherein—

Figure 1 is a longitudinal section through this cock showing both valves in full lines as closed and the main valve in dotted lines as open. Fig. 2 is a similar view showing the waste valve open and the main valve closed and held in that position. Fig. 3 is a plan view of the casing. Fig. 4 is a rear elevation of the nut and stems.

The casing as a whole is designated as 1, and it has inlet end 2 and outlet end 3, an intermediate upright barrel 4 threaded for the cap 5, and a bottom outlet or waste orifice 6 here shown as between the outlet and the axial line of said barrel. Interiorly it is cored to admit the liquid at 7 to the lower end of the barrel below the main valve seat 8, and to let it out at 9 above said seat. Above the outlet opening 9 the bore of the barrel has a guide 10 for a purpose to appear hereinafter. Partially into one wall of the barrel is cored a passage 11 intersecting the outlet 9 and in direct line and communication with the orifice 6, as seen in Fig. 3; and below the outlet 9 is preferably formed a supplemental opening 90 communicating with this passage. The casing thus far described is preferably in one casting.

Fitting loosely but closely within the barrel above the guide 10 is a nut 20 preferably cupped at its upper end to receive an expansive spring 21 which stands between the nut and the cap. The nut has an ear 22 projecting from its rear side (see Figs. 3 and 4), and

through this ear passes the upper end of the stem 23 of the waste valve 24, the latter number designating the head which is adapted to be forced downward upon and close the waste orifice 6. The stem may be held in the ear by any means, as by screws 25; and stem and ear and valve move vertically within the passage 11. Threaded through the nut as at 32 is the stem 33 of the main valve 34, the latter number designating the head which is adapted to be forced downward upon and close against the main valve seat 8. Above the threads 32 the main stem has a shoulder 35 adapted to strike within the cap 5; and, as usual, the stem projects through the latter and carries a handle 37 which is removably attached thereto, as by a screw 38.

With this construction, the operation is as follows: When the cock is entirely closed, all parts stand as seen in full lines in Fig. 1. To open the main valve the handle 37 is so turned that the threads 32 draw the main stem upward through the nut, raise the main valve from its seat and allow the liquid to flow, and lift the shoulder 35 against the cap. The latter movement presses the nut downward and closes the waste valve upon its seat. To again close the main valve, the operation is reversed. But in this reverse operation the rotation of the main stem finally seats the main valve upon its seat, after which a further rotation of this stem raises the nut within the barrel until the upper end of the nut strikes the cap and the main valve is ground upon its seat, whereas the waste valve is open. Thus it will be seen that the rotation of a single stem within certain limits opens one valve and closes the other or vice versa, permits both valves to remain closed assisted by the spring, and allows the latter to offset the water pressure. Rotation of this stem beyond these limits grinds the main valve upon its seat, the grinding assisted by the spring and positively opposed by the cap.

What is claimed as new is:

1. In a cock, a casing having inlet and outlet ends and a lateral orifice in one of them, a barrel between said ends and having openings into them and to said orifice, and a valve seat in the barrel; combined with a nut movable within the barrel, a main stem threaded through the nut and having a head adapted to contact with said seat, and a secondary stem carried by the nut and having a head adapted to close said orifice.

2. In a cock, a casing comprising a barrel having inlet and outlet and an orifice in one of them, a valve seat in said barrel, and a cap; combined with a nut movable within the barrel, a main stem threaded through the nut and having a head adapted to contact with said seat, a secondary stem carried by the nut and adapted to close said orifice, and a shoulder on the stem, the shoulder abutting against the cap when one valve is closed and the other open and the upper end of the nut abutting against the cap when the position of the valves is reversed.

3. In a cock, a casing comprising a barrel having inlet and outlet and an orifice in one of them, a valve seat in said barrel, and a cap; combined with a nut movable within the barrel and having a cupped upper end, a spring between the cup and cap, a main stem threaded through the nut and having a head adapted to contact with said seat, a secondary stem carried by the nut and adapted to close said orifice, and a guide in the barrel

toward which the nut is normally borne by said spring.

4. In a cock, a casing having inlet and outlet ends and an intermediate barrel with openings into said ends and a valve seat between them, one wall of the barrel having a passage parallel with its axis and intersecting the outlet opening, and a waste orifice communicating with said passage; combined with a nut movable in the barrel and having an ear movable in its passage, a main stem threaded through the nut and having a head adapted to contact with said seat, a secondary stem carried by said ear and having a head adapted to close said orifice, and means for turning the main stem in either direction.

In testimony whereof I have hereunto subscribed my signature this, the fifth day of April A. D. 1907.

WELDON P. DEVERELL.

Witnesses.

CHARLES WINEGARDNER,
WILLIAM BONIX.