

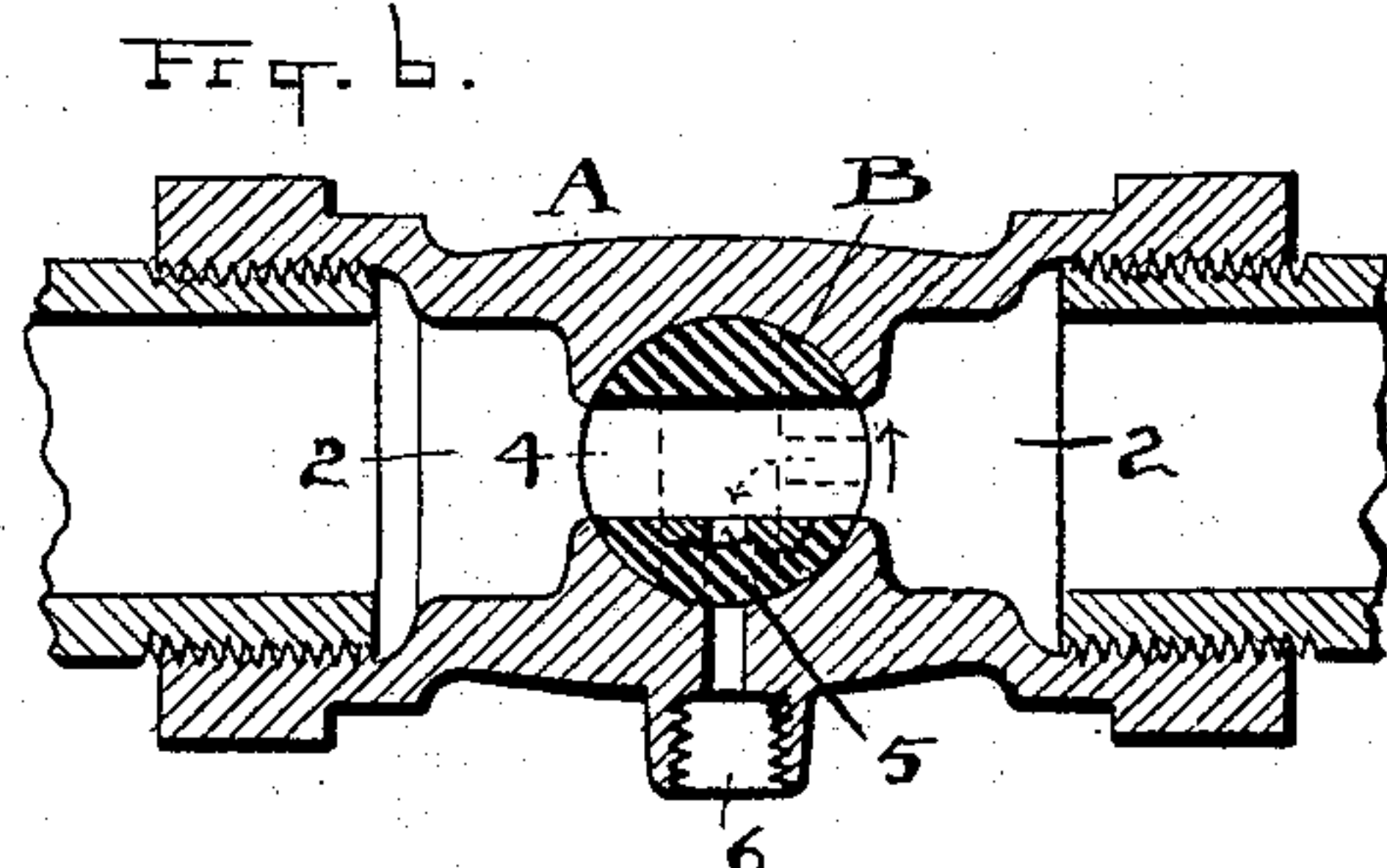
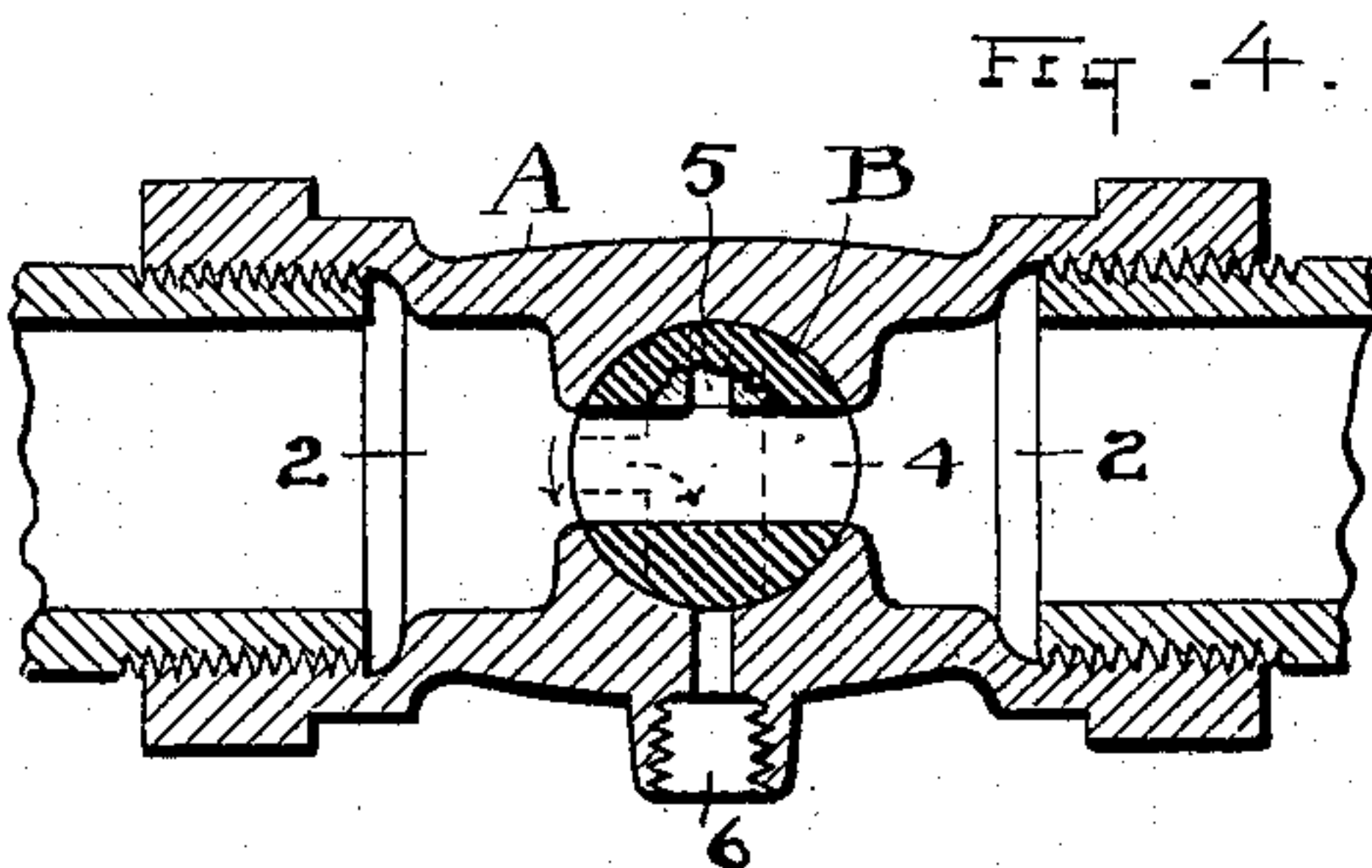
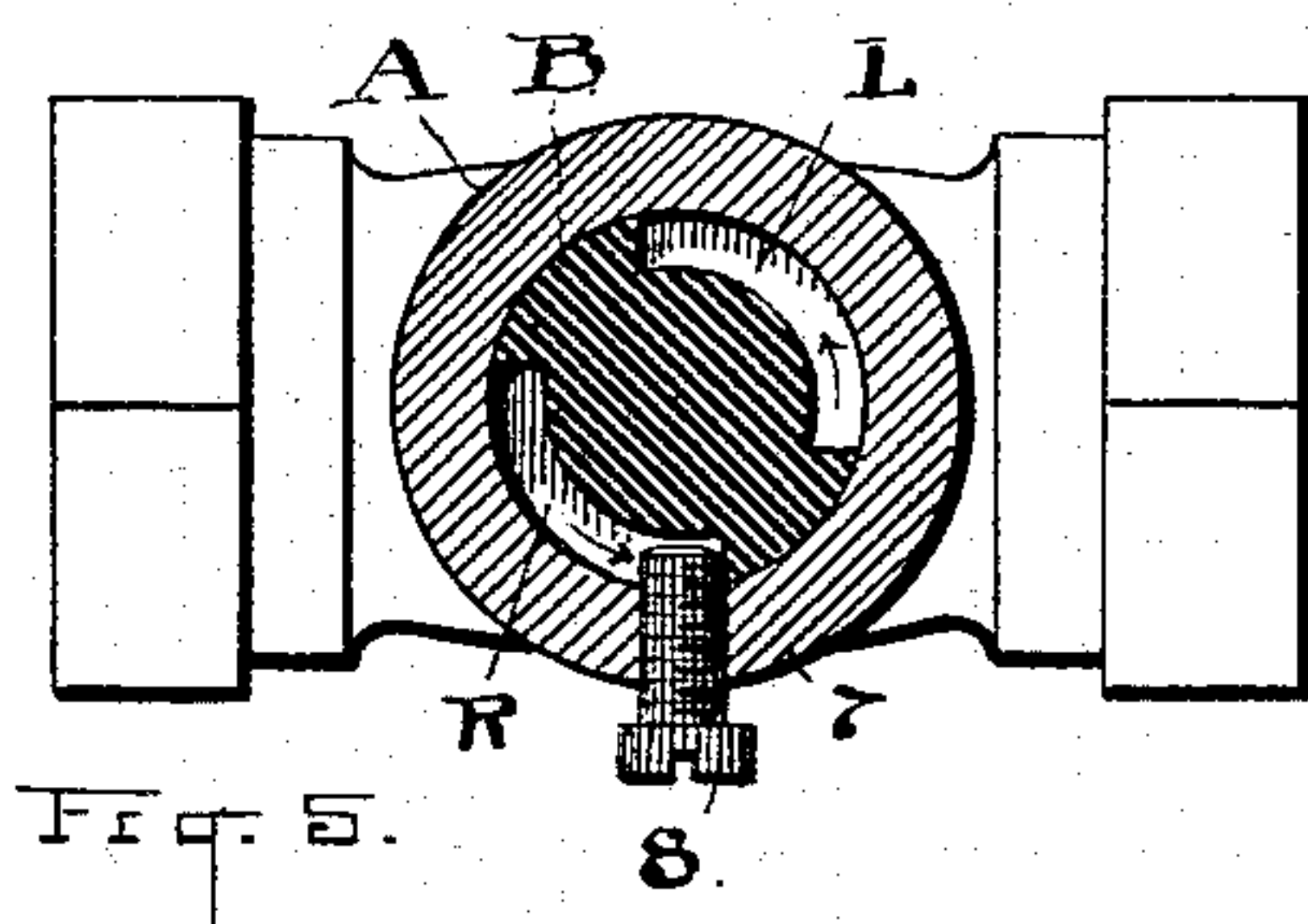
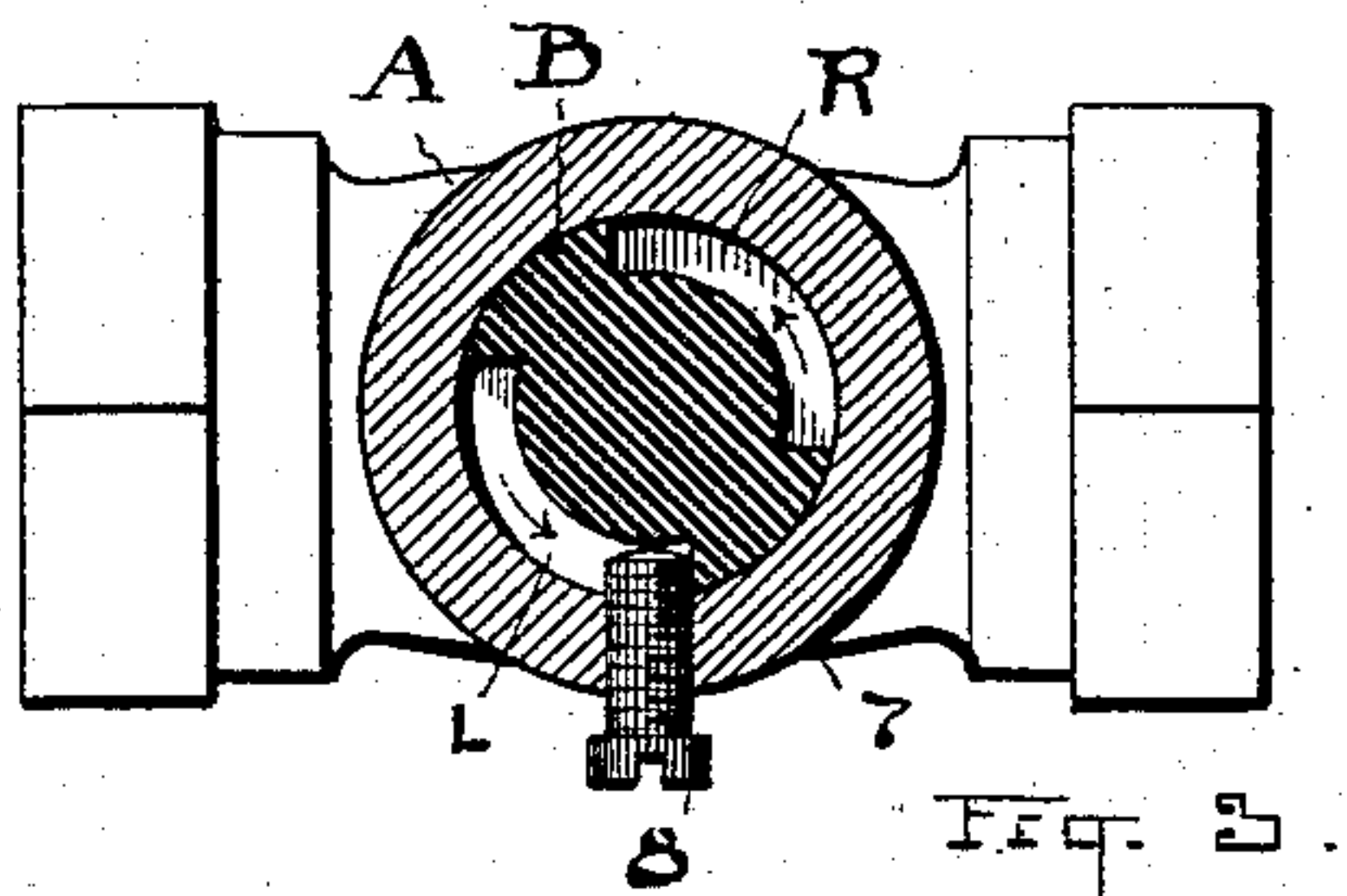
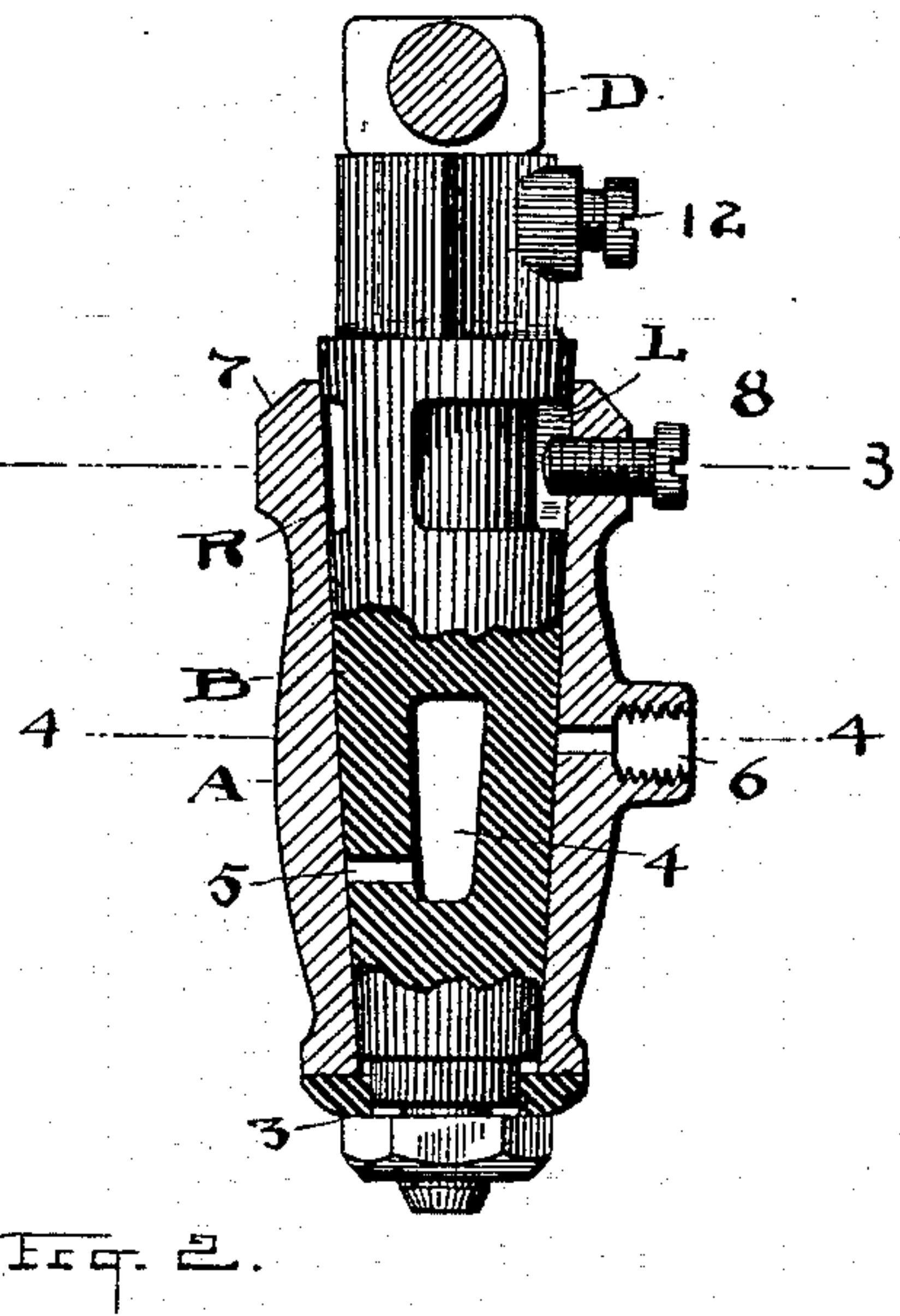
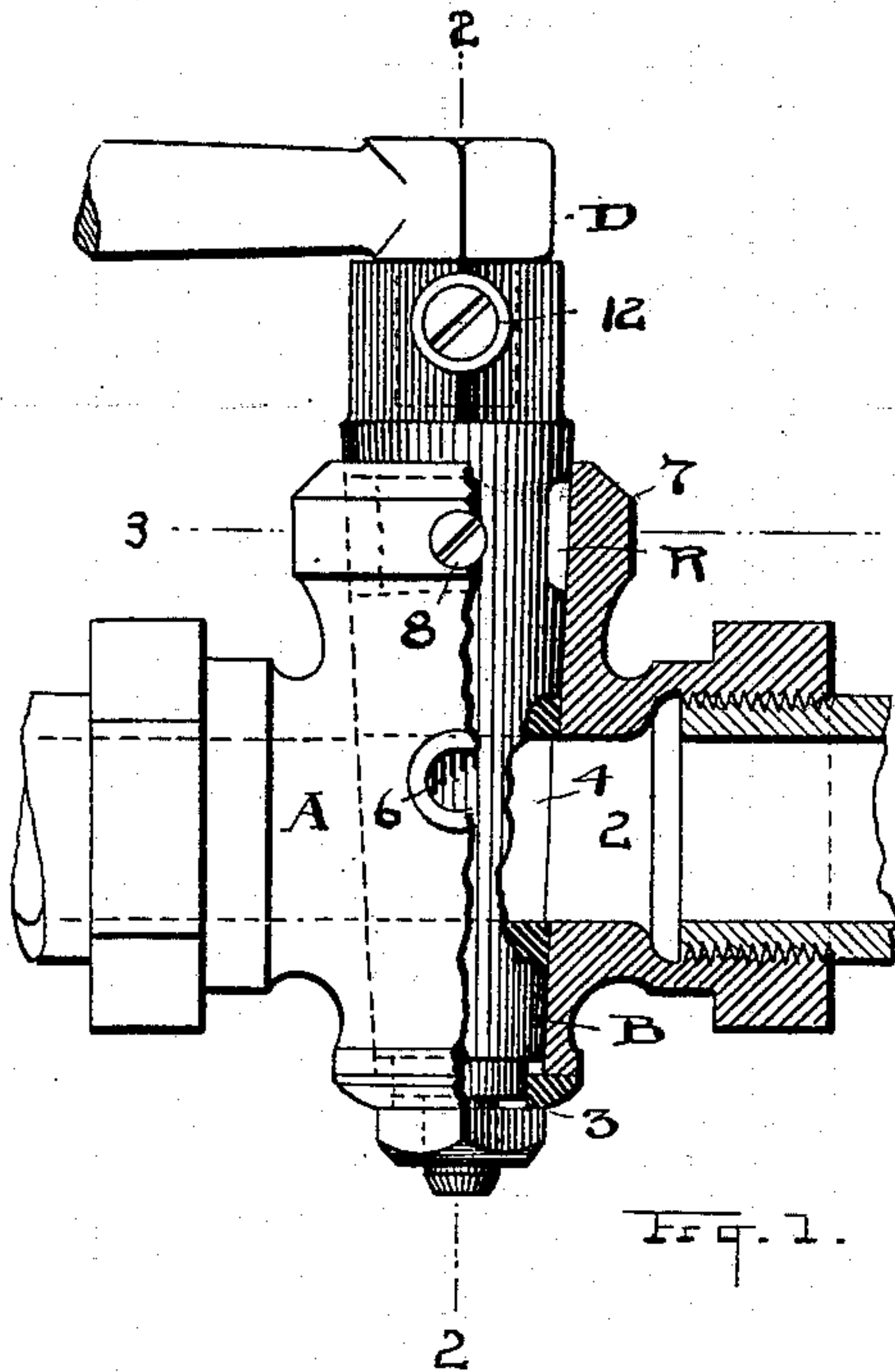
No. 615,546.

Patented Dec. 6, 1898.

I. N. GLAUBER.  
REVERSIBLE WASTE COCK.

(Application filed Apr. 20, 1897.)

(No Model.)



ATTEST  
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# UNITED STATES PATENT OFFICE.

ISAAC N. GLAUBER, OF CLEVELAND, OHIO.

## REVERSIBLE WASTE-COCK.

SPECIFICATION forming part of Letters Patent No. 615,546, dated December 6, 1898.

Application filed April 20, 1897. Serial No. 632,954. (No model.)

*To all whom it may concern:*

Be it known that I, ISAAC N. GLAUBER, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Reversible Waste-Cocks; and I do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in reversible waste-cocks; and the object of my invention is to provide simple means for reversing the waste-passage from left to right or right to left, substantially as shown and described, and more particularly pointed out in the claim.

In the accompanying drawings, Figure 1 is a side elevation, partly in section, of my improved cock and showing the water-passage open and the waste closed; and Fig. 2 is a central vertical section on line 2 2, Fig. 1. Fig. 3 is a cross-section on line 3 3 of Fig. 1, showing the relative position of the plug when the waste is to be from the left, as seen in dotted lines of Fig. 4, which is a horizontal sectional view taken on line 4 4 of Fig. 2. Figs. 5 and 6 are corresponding views to Figs. 3 and 4, respectively, only showing the position of the plug when the waste is to be from the right and reversed from the position as shown in Figs. 3 and 4.

A represents the body of a cock, having the usual water-passage 2 centrally therein and a plug B seated and held in place in the body by nut and washer 3. The plug B has a central passage 4, which provides an open way for the water through the cock when in the position as shown in the several views, but which, if the plug is turned a quarter-turn, will close the water-passage 2 from one side only, and that side to be the pressure side and the opposite side the waste-water side. To provide for the waste, I employ a passage 5 in the plug, which, if it be in line with water-passage 2, will open the wasteway either from the right or the left through central passage 4 and a waste-opening 6 in the side of the body of the cock. The waste-passage 5 in the plug is on a lower plane than waste-opening 6 in the body, and when the water-passages 2 and 4 are open the waste-passage 5 is closed by

the sides of the seat, whether it be to the rear, as shown in Fig. 4, or to the front, as seen in Fig. 6.

To reverse the waste from the right or from the left, I provide the body with a longer neck 7 than usual, and in this neck I tap a screw-hole for screw 8, the inner end of which forms a stop to limit the rotation of the plug to a quarter-turn. Near the top of the plug and within the same are provided two slots L and R, into which the end of screw 8 projects, and the shoulders at each end of the slots form stops to limit the movement of rotation of the plug to a quarter-turn.

When the screw projects into slot L, the direction of rotation of the plug serves to bring waste-passage 5 from the rear to the left, as shown in dotted lines in Fig. 4, and in this case the waste is from the left and the pressure from the right. When the screw projects into slot R, the direction of rotation of the plug brings waste-passage 5 to the right, and the waste is now from the right and the pressure from the left.

Plumbers often find that it is impossible to determine from which side the pressure is to come, and the object of this invention is to provide a simple means to change the position of the waste-hole if it is found that the waste-passage does not correspond to the waste side. As seen in Figs. 1, 2, 3, and 4, the waste is from the left; but suppose that a mistake had been made and it was found that the pressure was from the left. It would be necessary to reverse the plug by giving it a half-turn, so that the waste-passage 5 would be in proper position to be brought into alignment with passage 2 at the right. Fig. 6 shows this changed position, the screw 8 having been removed from slot L to slot R; but the direction of rotation is still the same and the waste-passage 5 is brought into alignment to waste from the right when the plug is rotated a quarter-turn as limited by slot R and as seen in dotted lines, Fig. 6.

The slots L and R are made of sufficient width and depth to allow a proper adjustment for the seating of the plug B, and at the extreme top of the plug is shown a handle D, which is removably fastened thereon by a screw 12.

The advantages of this construction of a re-



versible cock lie in the simple means by which it can be changed from a left to a right or a right to a left. To make this change, it is only necessary to withdraw the end of screw 8 from one of the said slots, give the plug half a turn, and turn said screw into the other slot, and the desired reversal has been effected. This can be done without even removing the screw 8 entirely from the neck 7 by merely unscrewing enough, so that the end will not project beyond the seat and come into contact with the shoulders of the slots. By placing the slots in the body of the plug and within the neck 7 all the working parts are removed from sight and from liability of injury while shipping, handling, or the like, and the check or stop of the plug is covered to prevent obstructions gathering therein.

As a modification of this construction I could place the recesses in the neck 7 of the body and form an overhanging flange or projection on the plug to support the engaging screw 8; but this is a manifest equivalent of my invention.

It will be noticed that the stop projection or screw 8 is never wholly removed to change the cock from a right to a left or reversely, and in this particular is believed to be first and original. All other devices having reversal or changing of the plug in view, so far as I know, are transferred from one position or hole to another. My stop remains in the

same place in all cases, and there are no unoccupied holes or other vacant places by reason of removal of the stop, as in other devices having a like object in view. Again, it is wholly immaterial in this cock where the waste-hole in the plug may be when adjustment of the plug is made from a right to a left or a left to a right hand plug—that is, whether it is opposite the waste in the body or on the same side therewith—because by having it out of line or alinement with the waste-hole 6 in the body there can be no leakage between said holes. This is a matter of great advantage in “setting” the plug and, combined with the very simple stop mechanism shown, makes an exceptionally simple and efficient waste-cock.

What I claim as new, and desire to secure by Letters Patent, is—

In waste-cocks, the body having a waste-opening and the plug having a waste-opening out of line therewith, so that said openings cannot communicate directly with each other, said plug having recesses in its neck and a screw in the body engaging one of said recesses, substantially as described.

Witness my hand to the foregoing specification this 13th day of April, 1897.

ISAAC N. GLAUBER.

Witnesses:

H. T. FISHER,  
R. B. MOSER.