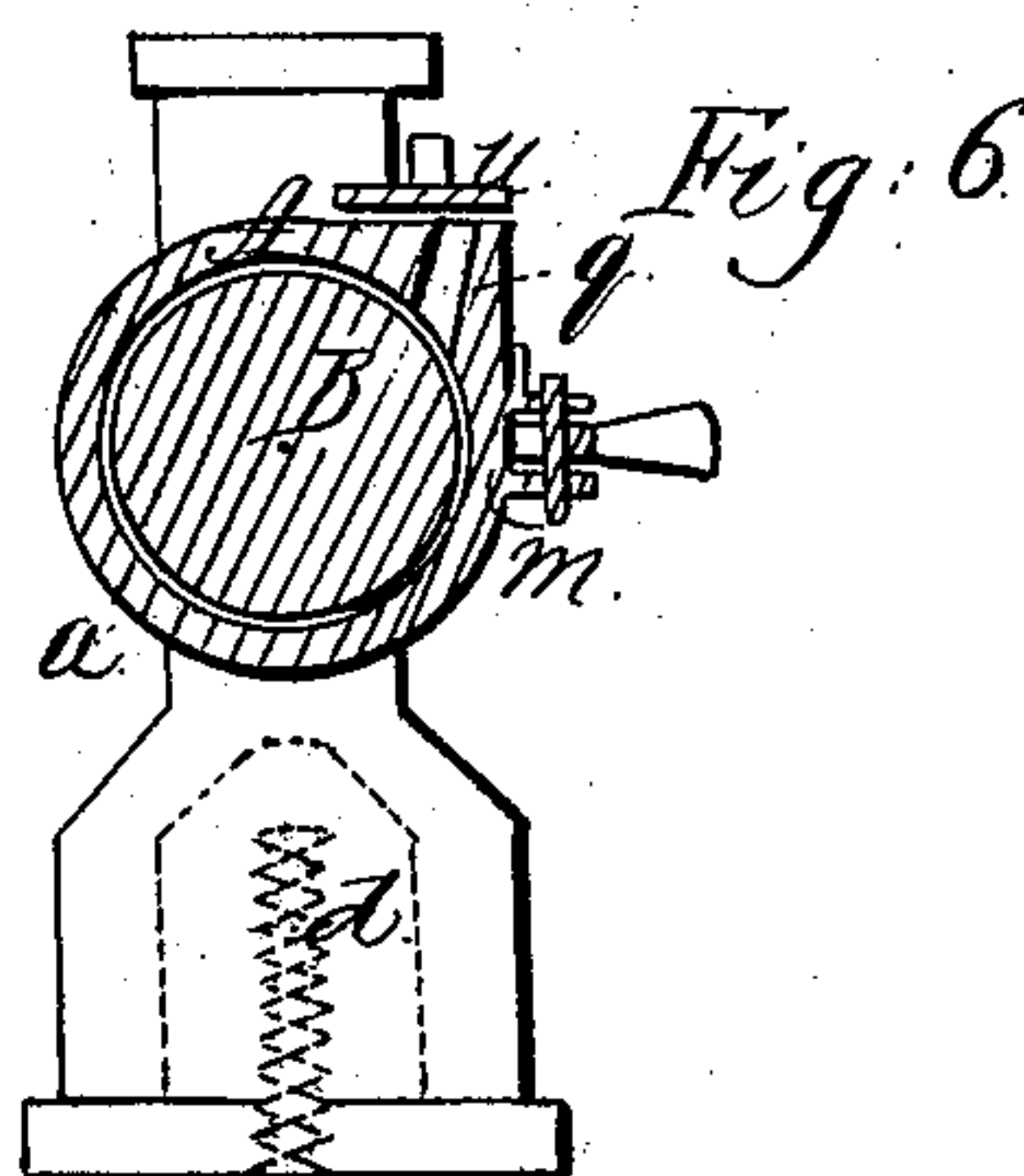
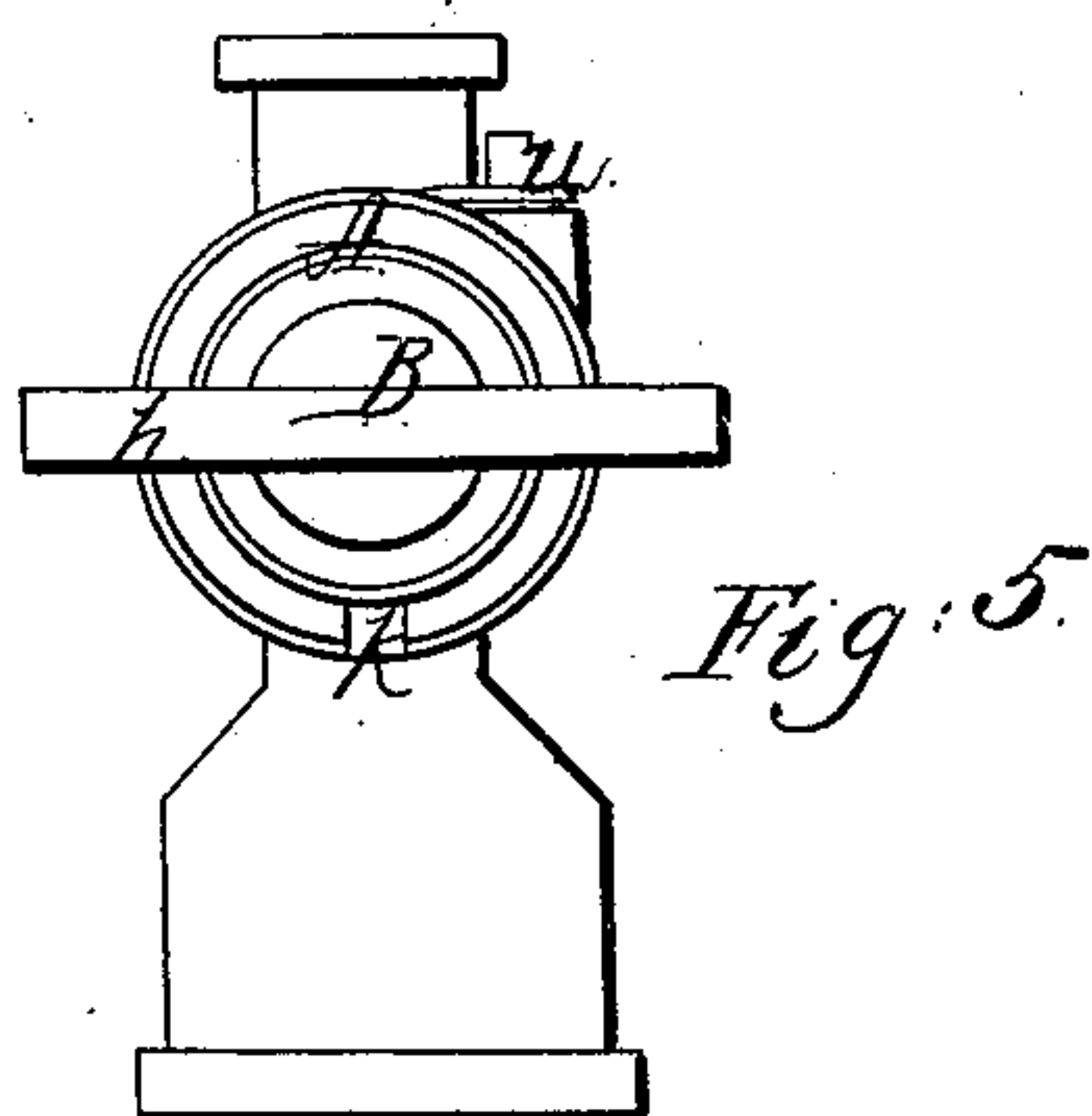
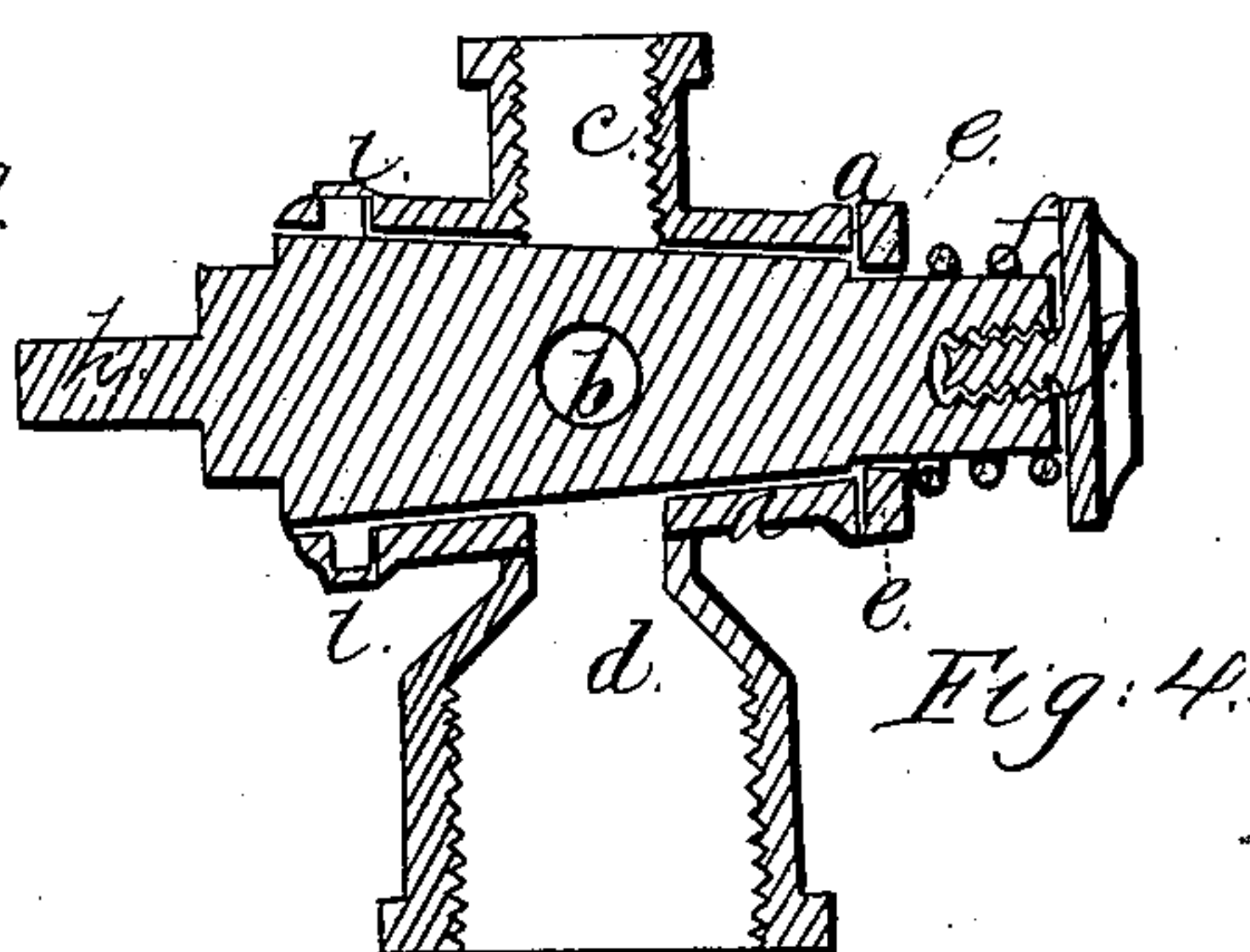
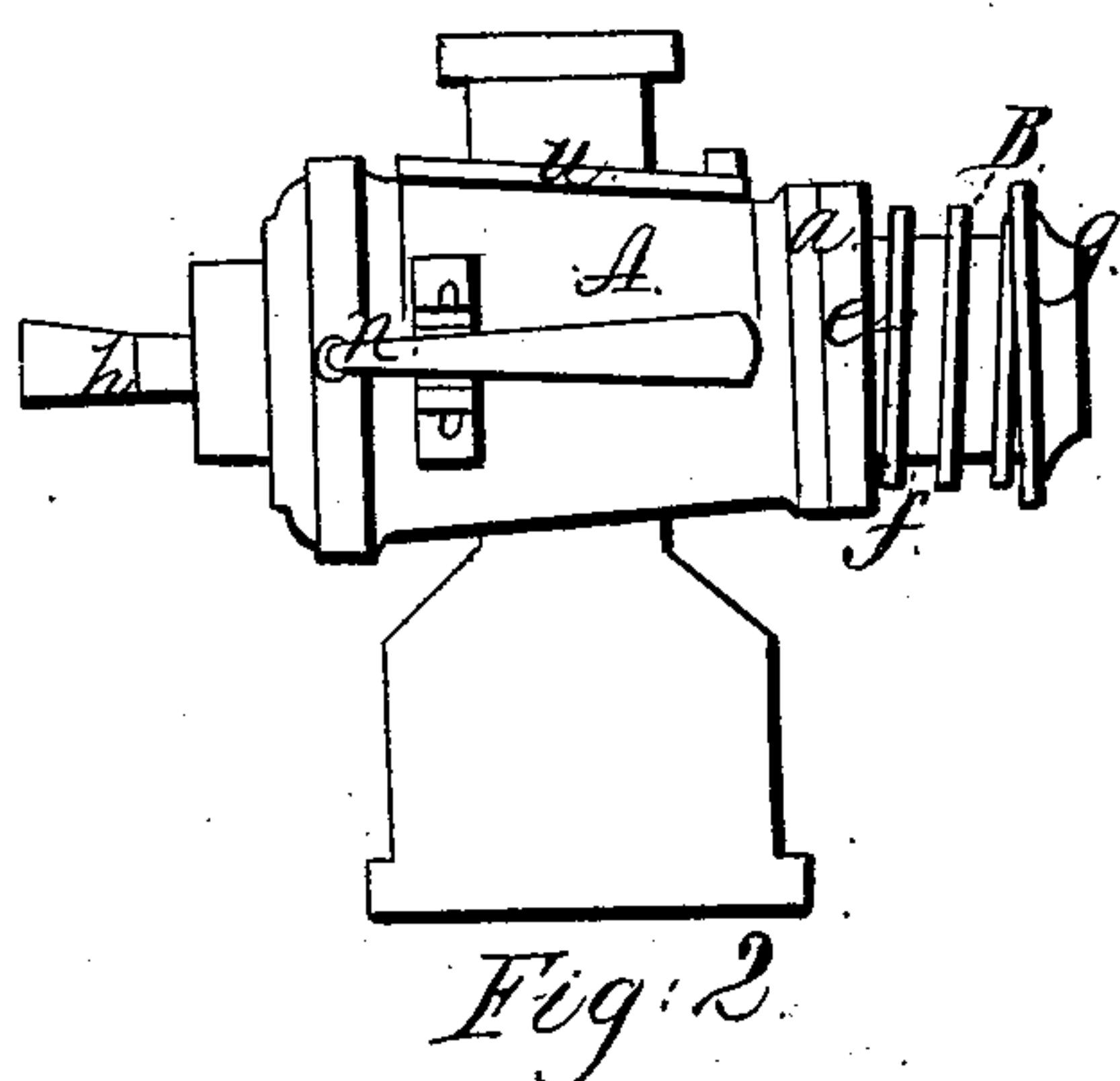
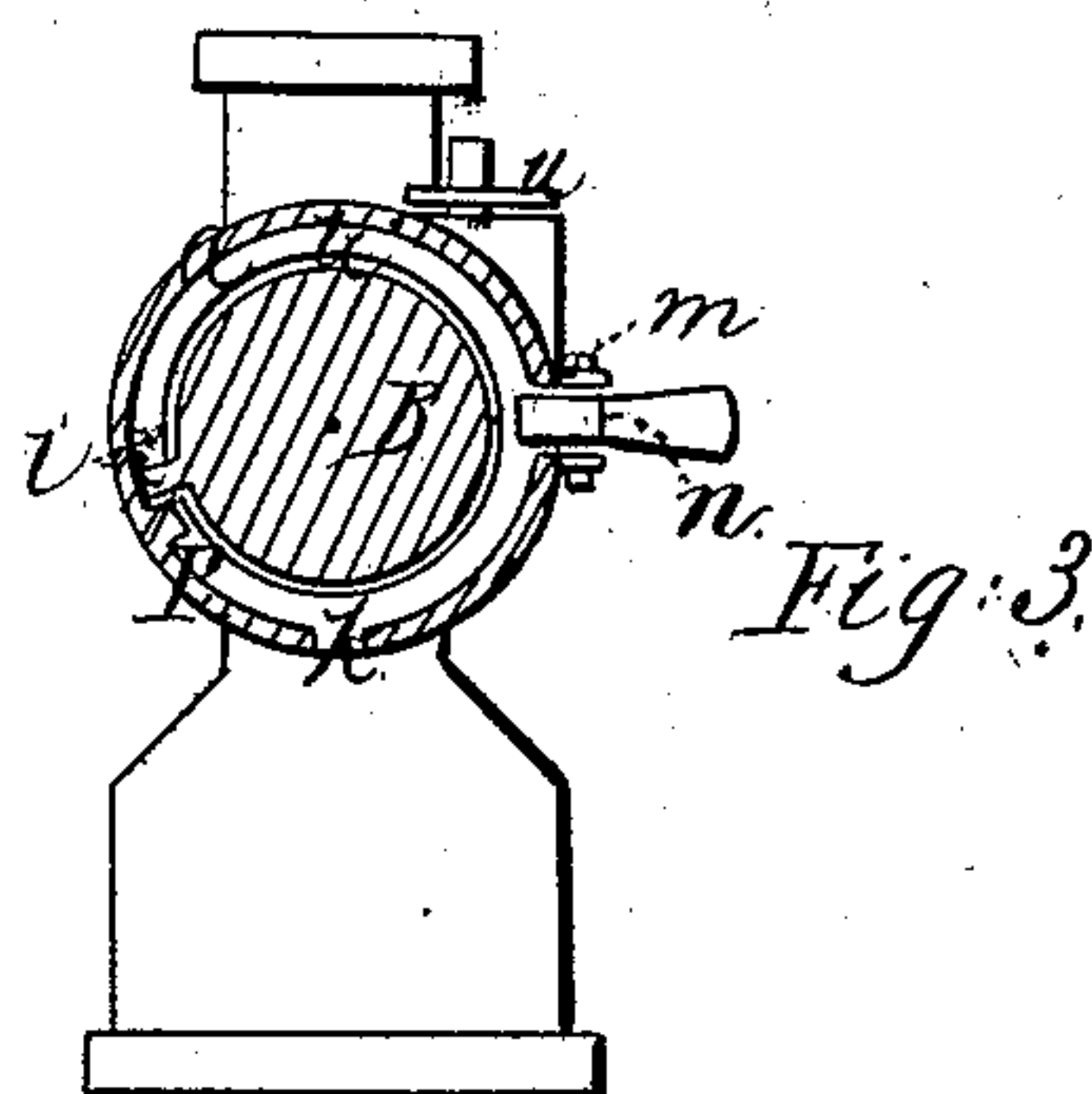
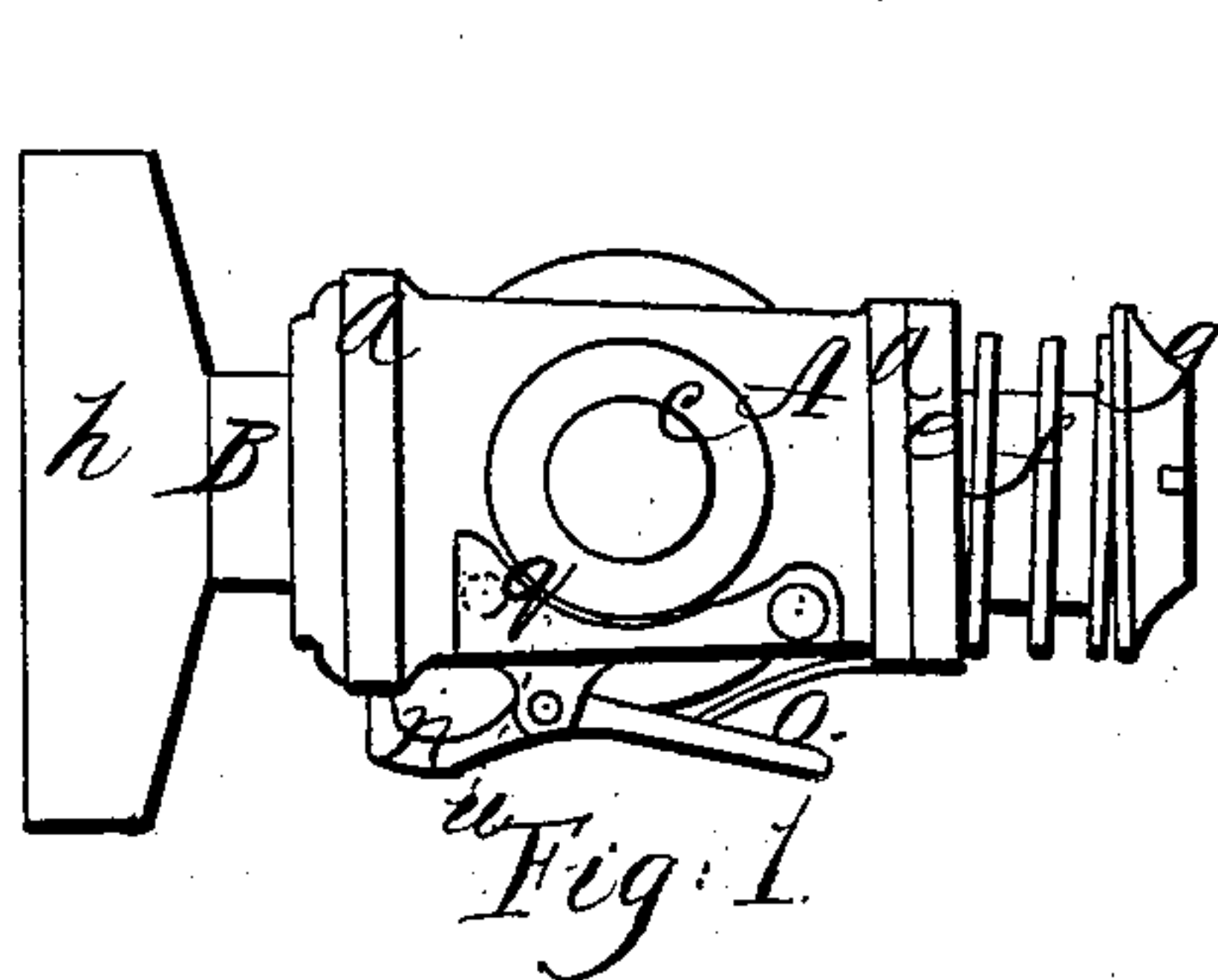


C. H. Johnson,
Stop Cock.
N^o 16,820. Patented Mar. 10, 1857.



UNITED STATES PATENT OFFICE.

CHARLES H. JOHNSON, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO CHARLES H. JOHNSON AND JAMES G. HAMBLIN.

DEVICE BY WHICH THE SPIGOTS OF GAS-COCKS MAY BE LUBRICATED IN THEIR SEATS.

Specification of Letters Patent No. 16,820, dated March 10, 1857.

To all whom it may concern:

Be it known that I, CHARLES H. JOHNSON, of Boston, in the county of Suffolk and State of Massachusetts, have invented an
5 Improvement in Stop-Cocks for Gas-Tubes; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, of which—

10 Figure 1, exhibits a top view of one of my improved stop cocks. Fig. 2, a side elevation of the same. Fig. 3, a transverse section taken through the groove, *l*, and movable stop, *n*, to be hereinafter described.
15 Fig. 4, a vertical and longitudinal section of it. Fig. 5, is an end elevation taken so as to show the exit passage or part, *k*, of the groove, *l*, to be hereinafter described.

In the drawings A, represents the main
20 body of a stop cock, B, being the tapering plug or gate which is made in such manner as to be capable of being turned around within its seat tube, *a*, and so as to bring its opening, *b*, either into line with or at right
25 angles to the eduction and induction passages *c*, *d*, of the body parts, B. On the plug B, there is arranged (as shown in the drawings) a metallic annular washer or collar, *e*, such collar being made to rest against one
30 end of the seat tube *a*. It is for the purpose of receiving the pressure of a helical spring, *f*, which is placed on the plug B and held in place by a screw, *g*, inserted into the end of the plug, the whole being as shown in
35 Figs. 1, 2 and 3. The said spring not only serves the purpose of drawing the tapering plug close into its seat tube (which is made with a tapering bore to correspond with the plug) but it is for an additional purpose,
40 viz, in order to permit the plug to be drawn backward whenever it may be desirable to apply oil to it in manner as will be hereinafter described. To the plug, B, and near to its handle, *h*, there is fixed a small stud,
45 *i*, as in most faucets of this description. For the reception of the stud, the said tube *a*, is provided with an entrance recess, *k*, arranged as seen in Figs. 3, and 5, and also with a circular groove, *l*, extending from
50 said recess and transversely around in the inner surface of the bore of said seat tube. Out of this passage or groove, *l*, and laterally through the seat tube and at about 70°

distant from the entrance recess, *k*, there is an opening *m*, made through the seat tube 55 and for the purpose of receiving one end of a movable stud or lever, *n*, which is applied to the external surface of the seat tube as shown in Fig. 1, and is forced into the same by the action of a spring, *o*, disposed as seen 60 in said figure. Within the groove, *l*, and arranged as seen in Fig. 4, is another stop, *p*, the said stop and the movable stud, *n*, serving to limit the movements of the plug during its motion either toward the right or 65 left in order to open or close the stop cock, or in other words to move the handle, *h*, around about one half a revolution.

The seat tube, *a*, of the stop cock is provided with an oil hole or passage, *g*, extend- 70 ing vertically into it and arranged as seen in Figs. 1, and 6, the latter being a cross section of the stop cock and taken through said passage *g*. To this passage, a movable cover, *u*, may be applied in such manner as to be 75 capable of being moved either on or off the passage as circumstances may require.

Such being the manner in which the stop cock is constructed, we will suppose that the movable stud, *n*, extends into the groove *l*, 80 and that the stud, *i*, is in that part of said groove which is above the stud, *n*. Under such a state of things it will be impossible to draw the plug, B, backward with reference to its seat or within the seat tube *a*, but 85 if we press upon the tail of the lever, *n*, so as to move the stud out of the groove, *l*, we shall be able to turn the plug B, around until its stud *i*, shall be carried into line with the entrance recess *k*. This having been 90 accomplished, we have only to pull the plug backward so as to cause the stud *i*, to pass entirely through and out of the recess *k*; we next shall be able to turn the plug entirely around, and if while the plug is so 95 drawn backward we pour oil into the passage, *r*, it will readily spread between the plug and its seat and by turning the plug around a few times, we shall be able to thoroughly oil the working surfaces, with- 100 out the necessity of entirely removing said plug from its seat tube, as is the usual custom when the plug is to be cleaned and oiled. After the oiling has been effected, the plug may be turned around and the parts 105 restored to their original positions.

I do not confine my invention to making the stud, *n*, in the precise form and manner above set forth, as it may be otherwise constructed so as to move into or out of the
5 opening, *o*.

What I claim as my invention, when the tapering plug of the faucet or stop cock is drawn into the tubular seat by the action of the spring, *f*, as specified, is—

10 Combining with the seat tube, *a*, an entrance passage *k* and groove *l* and a movable stop *n* arranged substantially in the manner

and for the purpose as specified, or in other words so as to enable a person to expeditiously lubricate the stop cock without the
15 necessity of entirely removing its plug from its seat tube.

In testimony whereof, I have hereunto set my signature this seventeenth day of January A. D. 1857.

CHARLES H. JOHNSON.

Witnesses:

R. H. EDDY,

F. P. HALE, Jr.