

(No Model.)

W. H. RAWE.  
BALL COCK.

No. 547,384.

Patented Oct. 1, 1895.

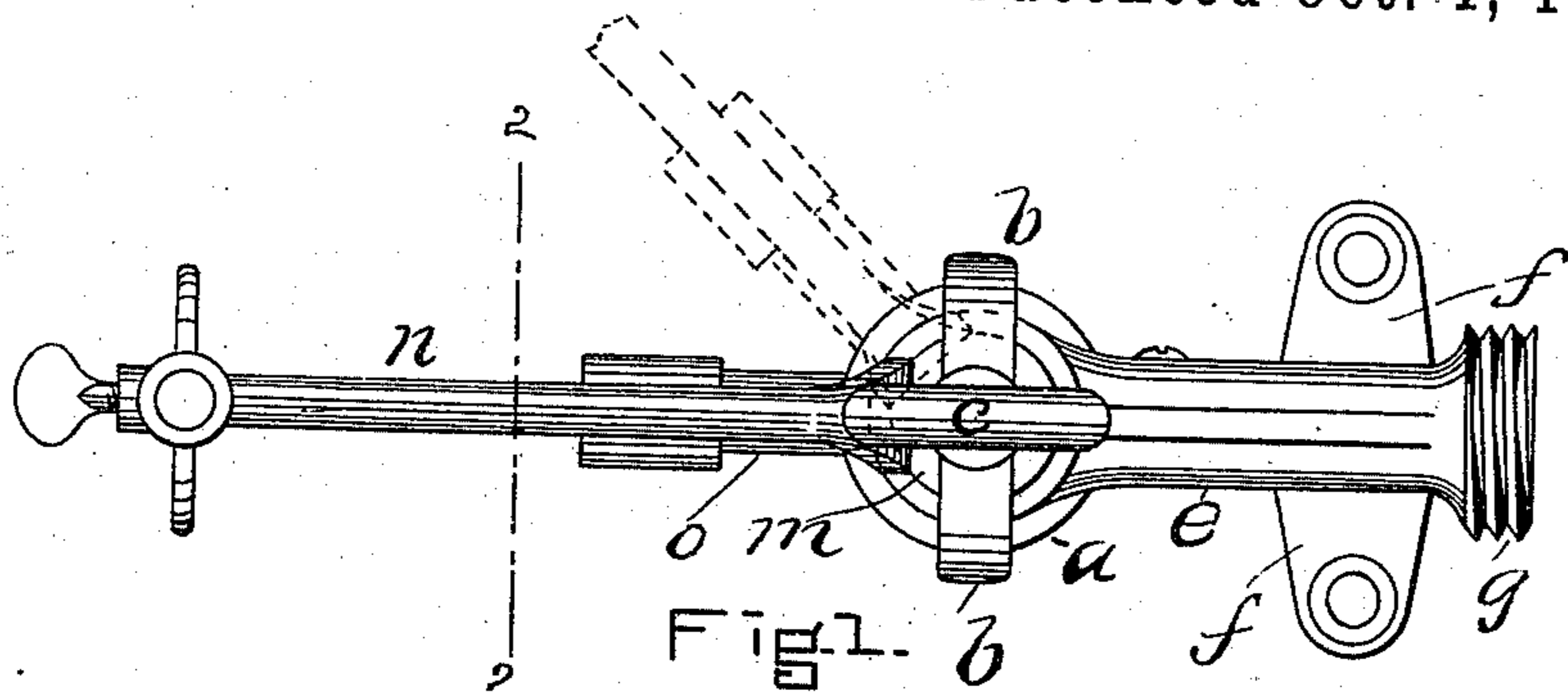


Fig. 1.

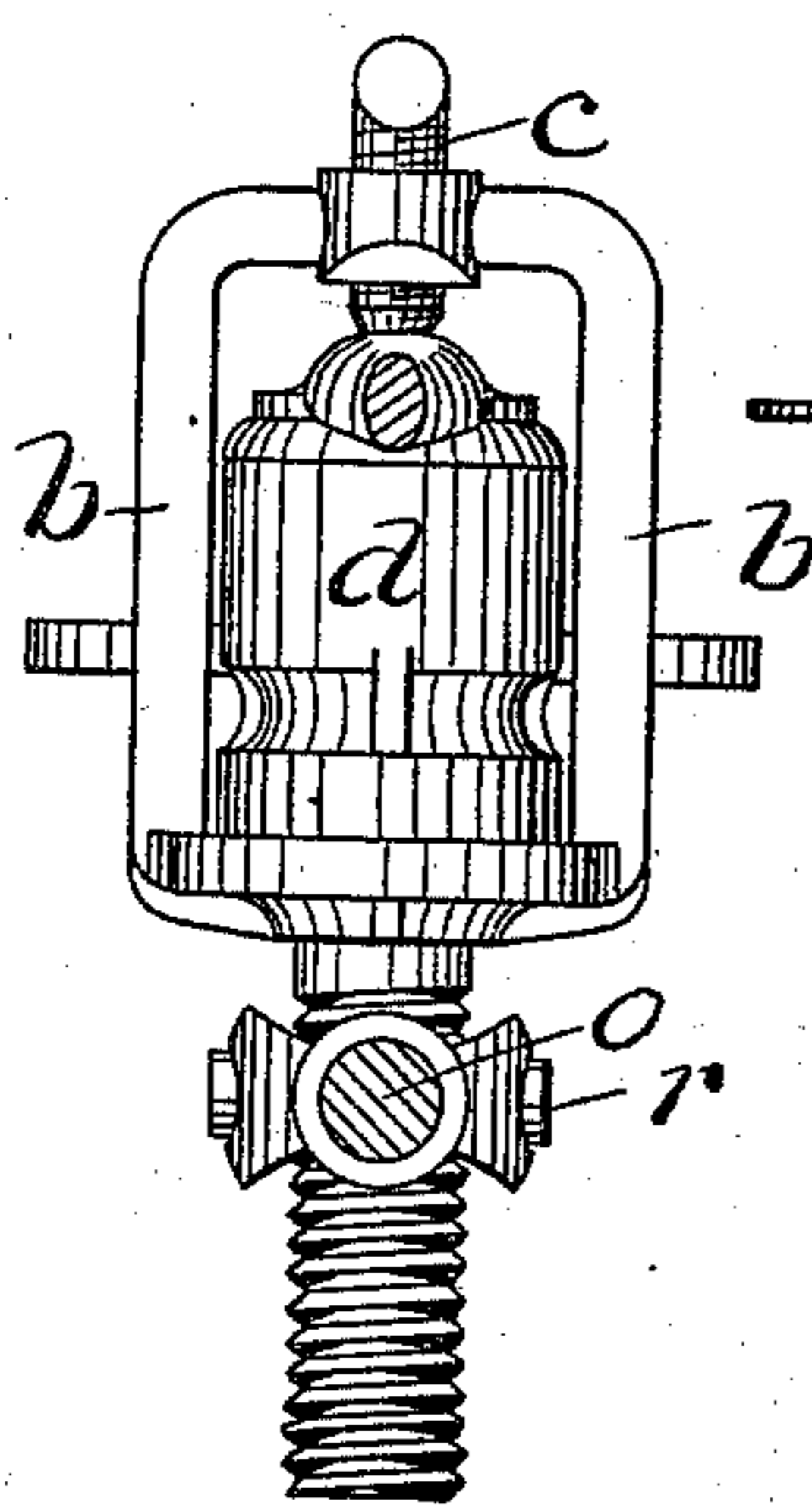


Fig. 2.

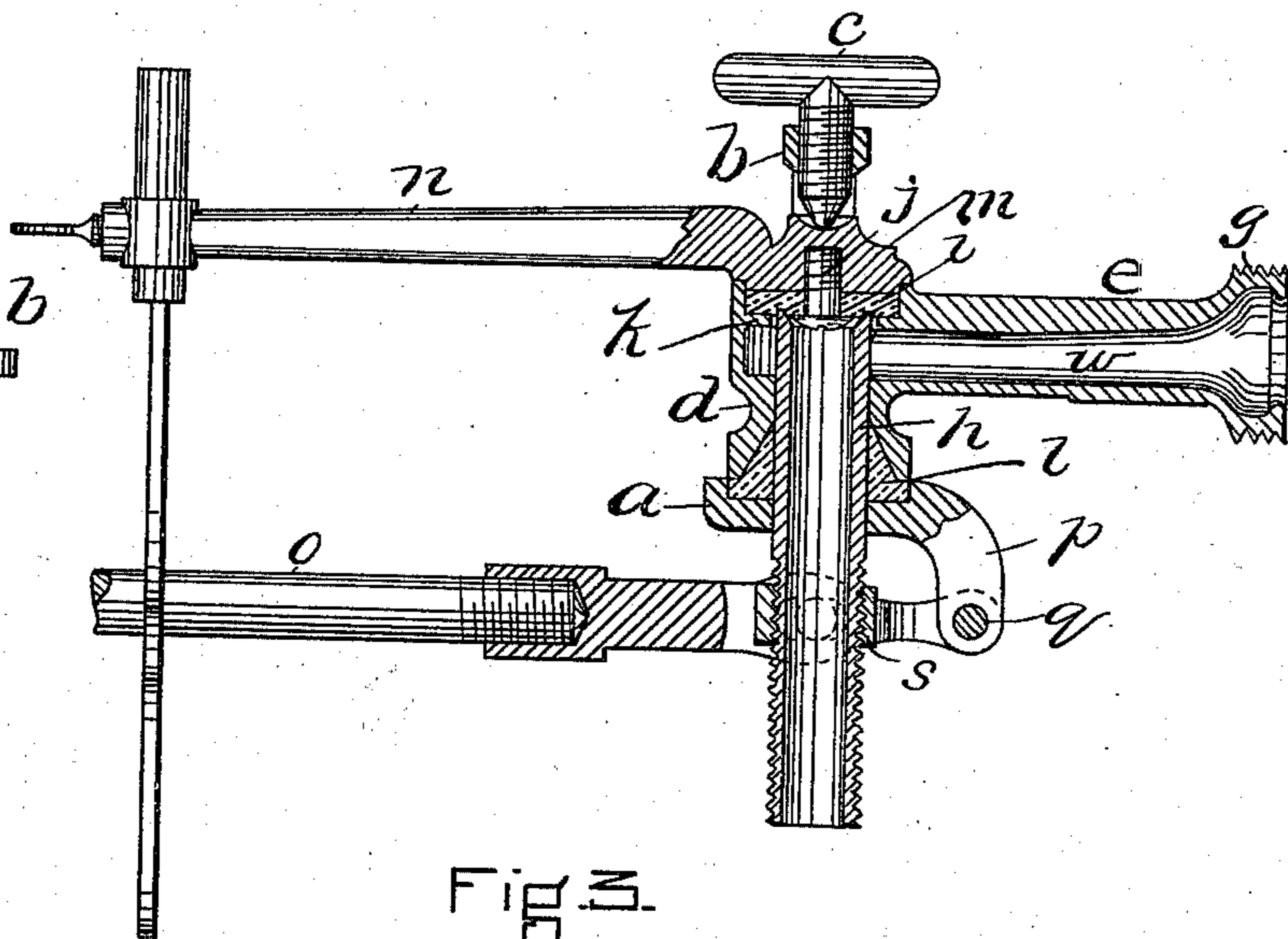


Fig. 3.

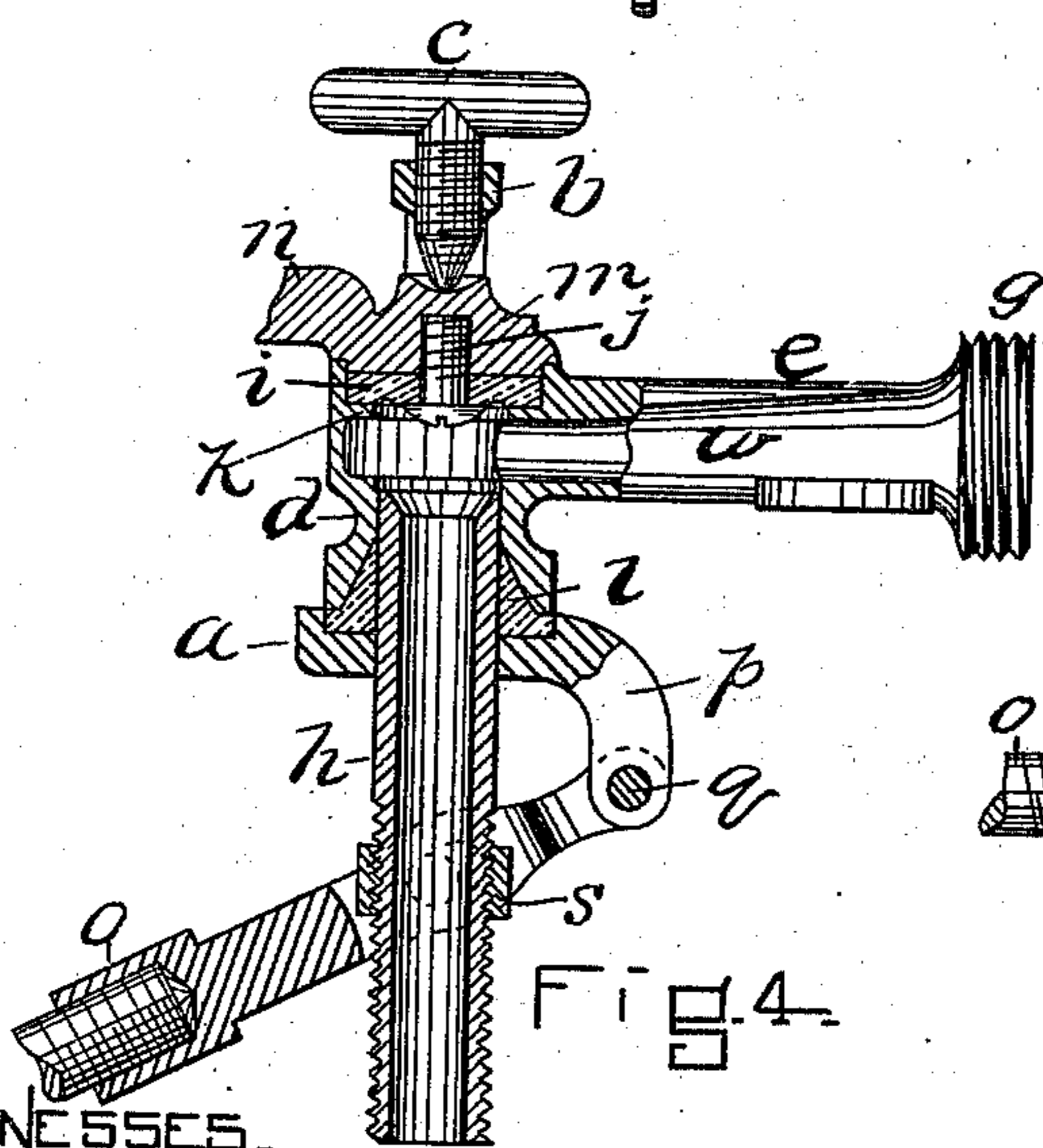


Fig. 4.

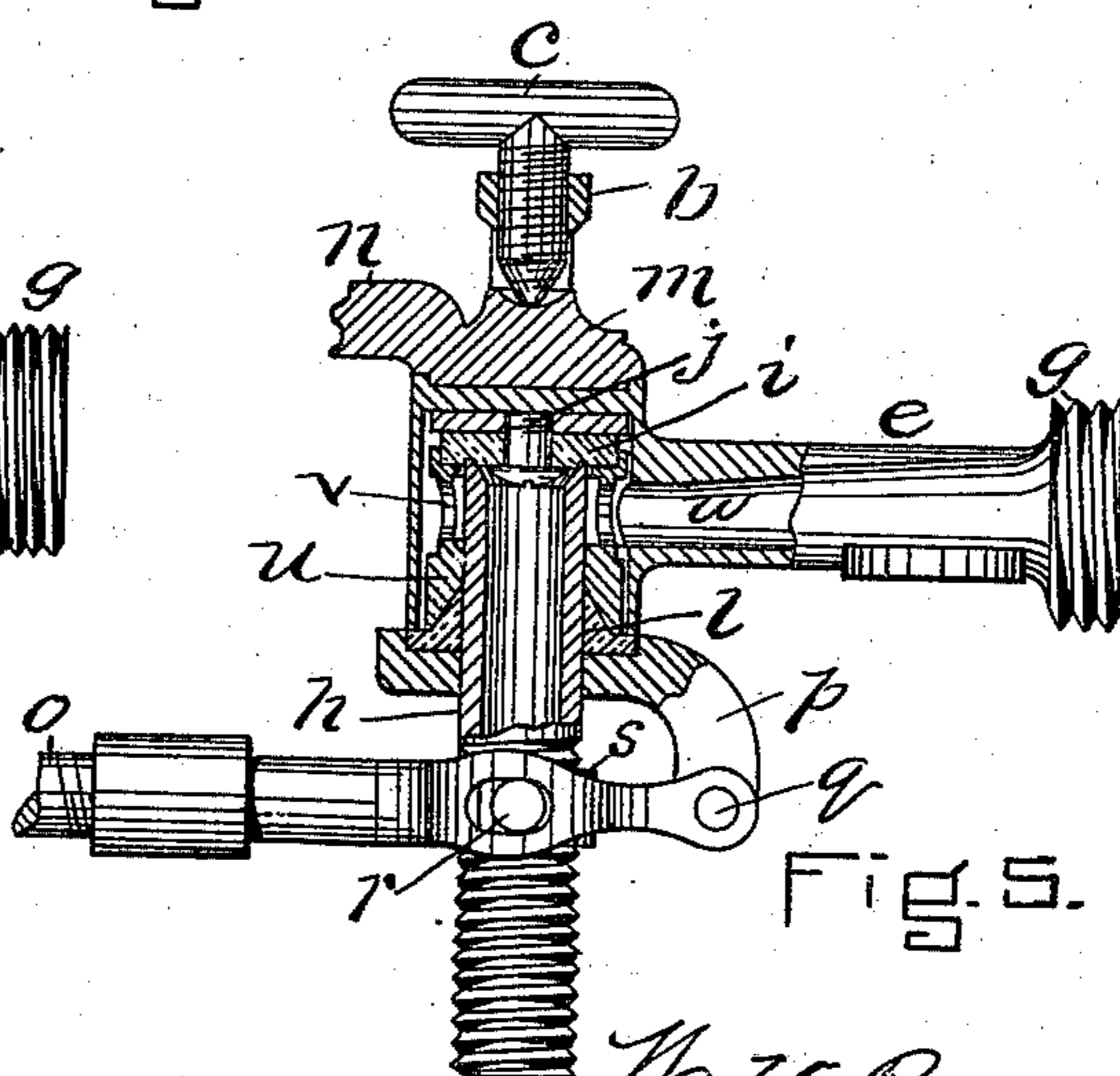


Fig. 5.

WITNESSES.  
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# UNITED STATES PATENT OFFICE.

WILLIAM H. RAWE, OF PAWTUCKET, RHODE ISLAND, ASSIGNOR OF ONE-HALF TO THE PAWTUCKET STEAM AND GAS PIPE COMPANY, OF SAME PLACE.

## BALL-COCK.

SPECIFICATION forming part of Letters Patent No. 547,384, dated October 1, 1895.

Application filed November 15, 1894. Serial No. 528,955. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM H. RAWE, of Pawtucket, in the county of Providence and State of Rhode Island, have invented certain  
5 new and useful Improvements in Ball-Cocks, of which the following a specification.

This invention has relation to ball-cocks having the general structural characteristics of that shown and described in my applica-  
10 tion for Letters Patent of the United States, Serial No. 505,702, filed March 30, 1894.

It is the object of the present invention to materially simplify the structure touching the means for holding in place and adjusting in  
15 position the parts in immediate connection with the valve or cock proper and improving the packing of the part, so as to render the same more secure and certain in the performance of its function, and also making it more  
20 ready and easy of renewal and repair in case of necessity.

To these ends the invention consists of the improvements hereinafter fully described, and particularly pointed out in the appended  
25 claims.

Reference is to be had to the annexed drawings, and to the letters marked thereon, forming a part of this specification, the same letters designating the same parts or features,  
30 as the case may be, wherever they occur.

In the said drawings, which illustrate one form of means in which my aforesaid improvements may be embodied, Figure 1 is a plan view of the invention, the dotted lines showing the varying positions to which the ball-lever and its co-operating parts may be ad-  
35 justed with respect to the other parts. Fig. 2 is a front view, parts being shown in section taken on the line 2 2 of Fig. 1. Fig. 3 is a side elevation, the principal parts being shown in longitudinal central vertical section and the cock being represented as closed. Fig. 4  
40 is a view of the principal parts as shown in Fig. 3, but the cock being represented as opened. Fig. 5 is a sectional view similar to what is shown in Fig. 3, but illustrating a modified form of the invention.

In the said drawings, *a* designates the base of the device, from which there rises a yoke *b*,

through the top of which there is tapped a  
50 screw-hole for the reception of the thumb-screw *c*.

*d* designates the cylindrical body, which is seated on the base *a* within the yoke *b*, and from which there extends the horizontal arm  
55 *e*, provided with bracket-like lugs or flanges *f*, whereby it may be secured to a side of a tank. The outer end of the arm *e* is screw-threaded, as at *g*, in order to enable a pipe to be connected therewith, and said arm is made  
60 hollow, so as to constitute to all intents and purposes a pipe which communicates with the cylindrical body *d*.

*h* designates a short section of pipe constituting the valve or cock proper, which is ver-  
65 tically arranged and extends through a hole formed in the base and through the cylindrical body and is seated at its upper end against a valve-seat *i*, consisting of a disk or piece of leather or other suitable material  
70 secured to its support by a screw *j* passing centrally therethrough. An annular flange *k*, extending inwardly, is formed in the upper part of the cylindrical body below the valve-seat *i*, which flange extends nearly, but not  
75 quite, to the periphery of the valve-pipe *h* when the latter is seated, as is shown in Figs. 3 and 5.

*l* designates an annular packing, which is adapted to rest upon the base *a*, which is prop-  
80 erly shaped to act thereon to pack the connection of the body and base with the pipe *h*, which extends through the packing when the said body is pressed down upon the packing, as will presently appear.  
85

*m* is a cap-piece adapted to rest upon the cylindrical body and to be pressed down thereon by the turning home of the thumb-screw *c*. From the cap-piece *m* there may be extended an arm *n*, which may have connect-  
90 ed therewith means for controlling the movements of the ball-lever *o*, as is shown in the before-mentioned patent; but as the said means forms no part of the present invention it need not now be further described herein.  
95

From the base *a* there extends a lug *p*, to which the ball-lever is pivoted as at *q*, the said lever being also fulcrumed on the pins *r*,

which extend laterally from the nut *s*, turned upon the lower screw-threaded end of the pipe *h*, the said pins *r* extending through slots *t*, formed through the sides of the yoke with which the end of the lever *o* is constructed, as shown.

In Fig. 5 the upper end of the cylindrical body *d* is shown as closed, while in the other figures it is represented as open, the cap *n* in the latter figures forming the top of the said cylindrical body, while in Fig. 5 the top is integral with the body, and the support for the valve *i* consists of a cylindrical plug *u*, set within the said body, ports *v* being formed through the sides of the said plug. Both of the forms shown are, as to function and result, substantially the same, the former being somewhat simpler in construction, while the latter possesses the advantage of having but one joint to pack against leakage.

In use the nut *s* will be adjusted to the desired position vertically on the pipe *h*. The latter will be arranged in proper place in the body *a* and so as to extend through the described packing, and the lever *o* will be pivoted upon the lug *p* and connected with the said nut *s*. The cap *n* will next be put in place and the thumb-screw turned home, which will press the body *d* down upon the packing and secure all of the parts in place ready for the attachment of the invention to a tank or other contrivance for use. When the ball falls and the lever *o* is depressed, the pipe-valve *h* will be drawn down, as shown in Fig. 4, opening the valve, so that the water flowing through the port *w* in the arm *e* will pass out through the valve-pipe *h* into the tank, and as the latter fills and the lever *o* is raised the valve will be closed, as represented in Figs. 3 and 5. Just before the upper end of the valve-pipe becomes seated or fully closed it will pass through the opening formed by the inner edges of the flange *k*, so as to partially shut off the water before final closing, and so preventing "water-hammering," which would otherwise occur. The screw *j* in the valve-seat *i* prevents said seat from being drawn or "bellying" downward when the valve is opened by water-suction, as will be readily understood. It is to be noted that the body *d* and all of its attached parts are circumferentially adjustable in the yoke *b* within the limits allowed by the latter, (see Fig. 1,) which are sufficient for all practical purposes.

My invention provides a highly serviceable and durable ball-cock, one which is simple in and economical of construction, and one in which the parts may be readily assembled and

connected and disconnected, as well as adjusted to any desired position.

Having thus explained the nature of the invention and described a way of constructing and using the same, though without attempting to set forth all of the forms in which it may be made or all of the modes of its use, it is declared that what is claimed is—

1. A ball cock comprising in its construction the base provided with a yoke, a thumb screw tapped through the top of said yoke, the cylindrical body provided with an inflow port arranged within the said yoke, a valve pipe arranged to operate vertically in the said body and a packing around the valve pipe at the junction of the cylindrical body with the base, the said thumb screw being adapted to be turned down to hold the said body in place.

2. A ball cock comprising in its construction the base provided with a yoke, a thumb screw tapped through the top of said yoke, the cylindrical body provided with an inflow port arranged within the said yoke, a valve pipe arranged to operate vertically in the said body, a packing around the valve pipe at the junction of the cylindrical body with the base, the said thumb screw being adapted to be turned down to hold the said body in place, a lug *p* connected with the said base, the ball lever pivoted upon the said lug, and a nut turned upon the valve pipe upon which the ball lever is fulcrumed.

3. A ball-cock comprising in its construction, the base provided with a yoke, a thumb screw tapped through the said yoke the removable cylindrical body, the valve or cock proper arranged to operate therein, and the cap *n* arranged upon the upper end of the body upon which the said thumb-screw is adapted to be turned, as set forth.

4. A ball-cock comprising in its construction, the base provided with a yoke, a thumb screw tapped through the said yoke, the removable cylindrical body, the loose plug *u* set in the said body, the valve or cock proper arranged to operate therein, and the cap *n* arranged upon the upper end of the body upon which the said thumb screw is adapted to be turned, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 6th day of September, A. D. 1894.

WILLIAM H. RAWE.

Witnesses:

MARION C. HAPPOLDT,  
BYRON M. BARBER.