

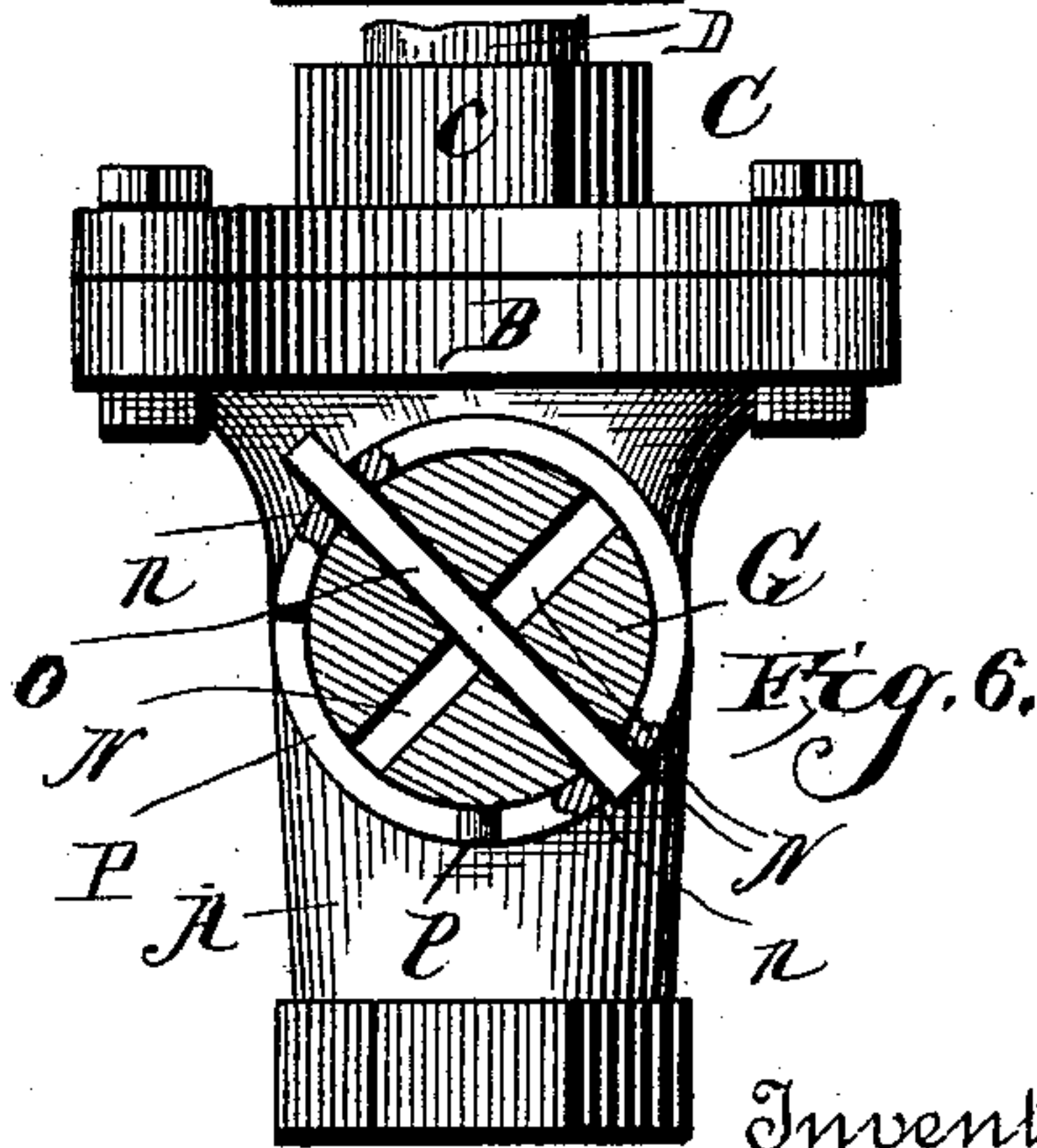
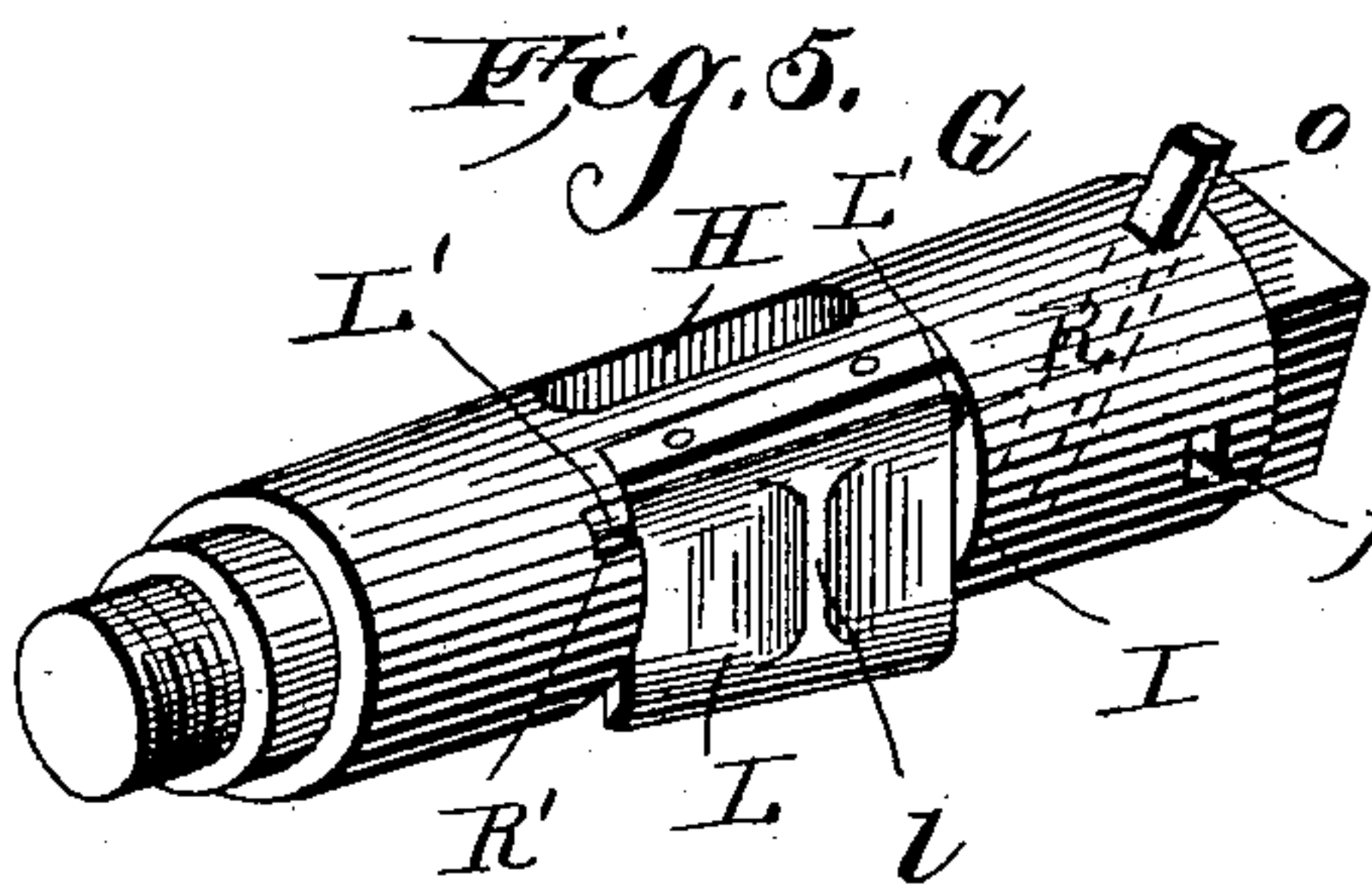
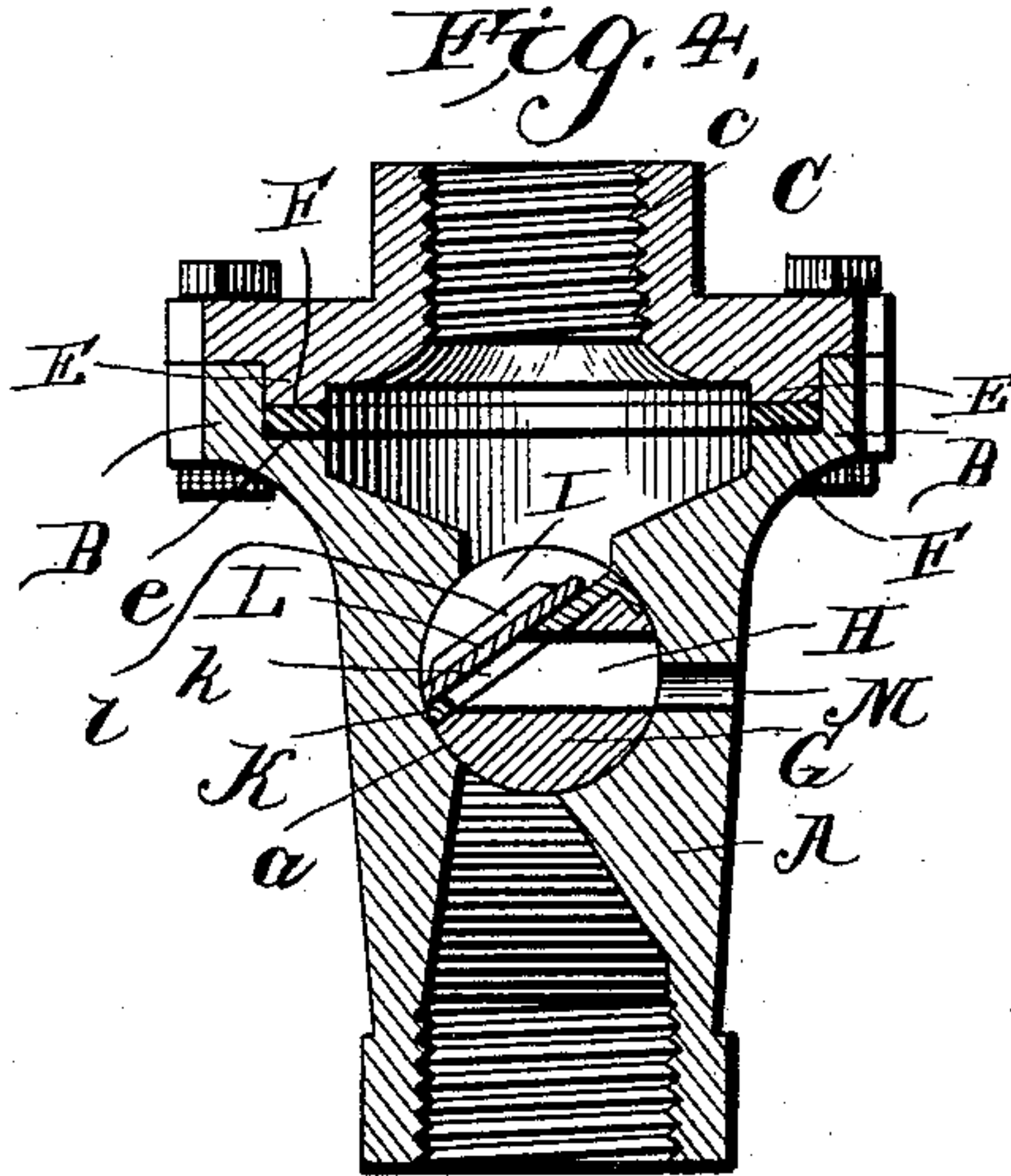
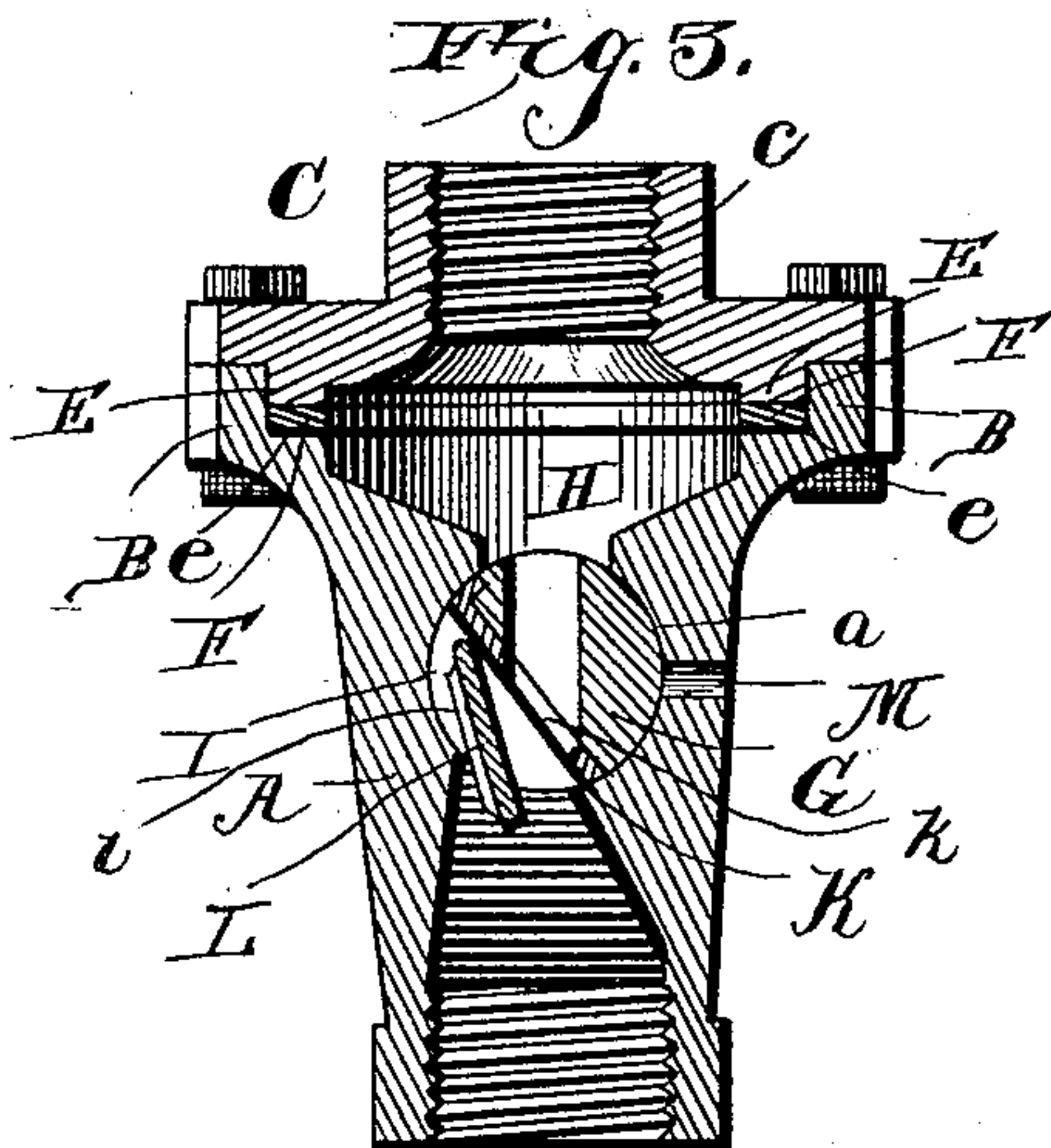
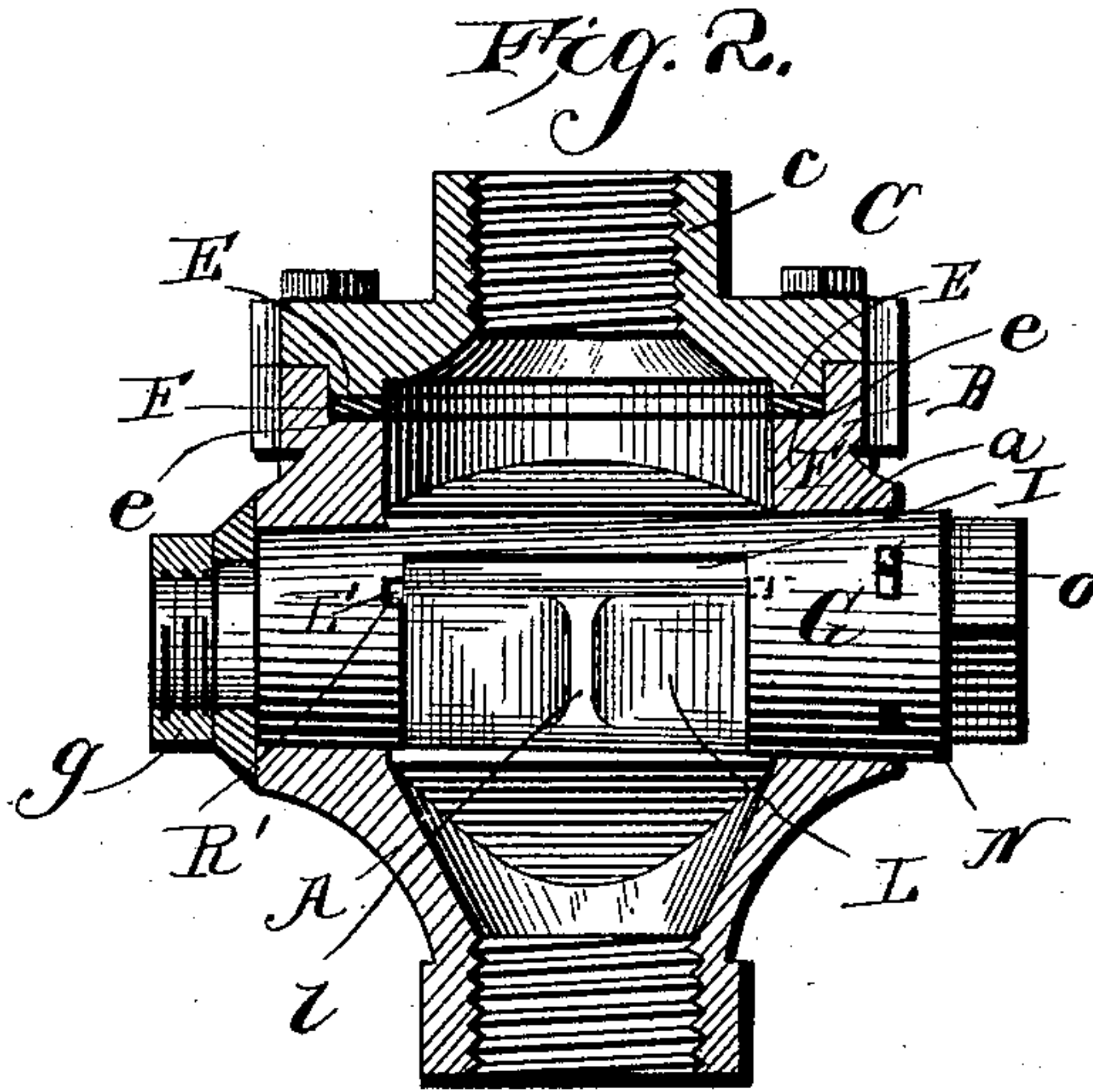
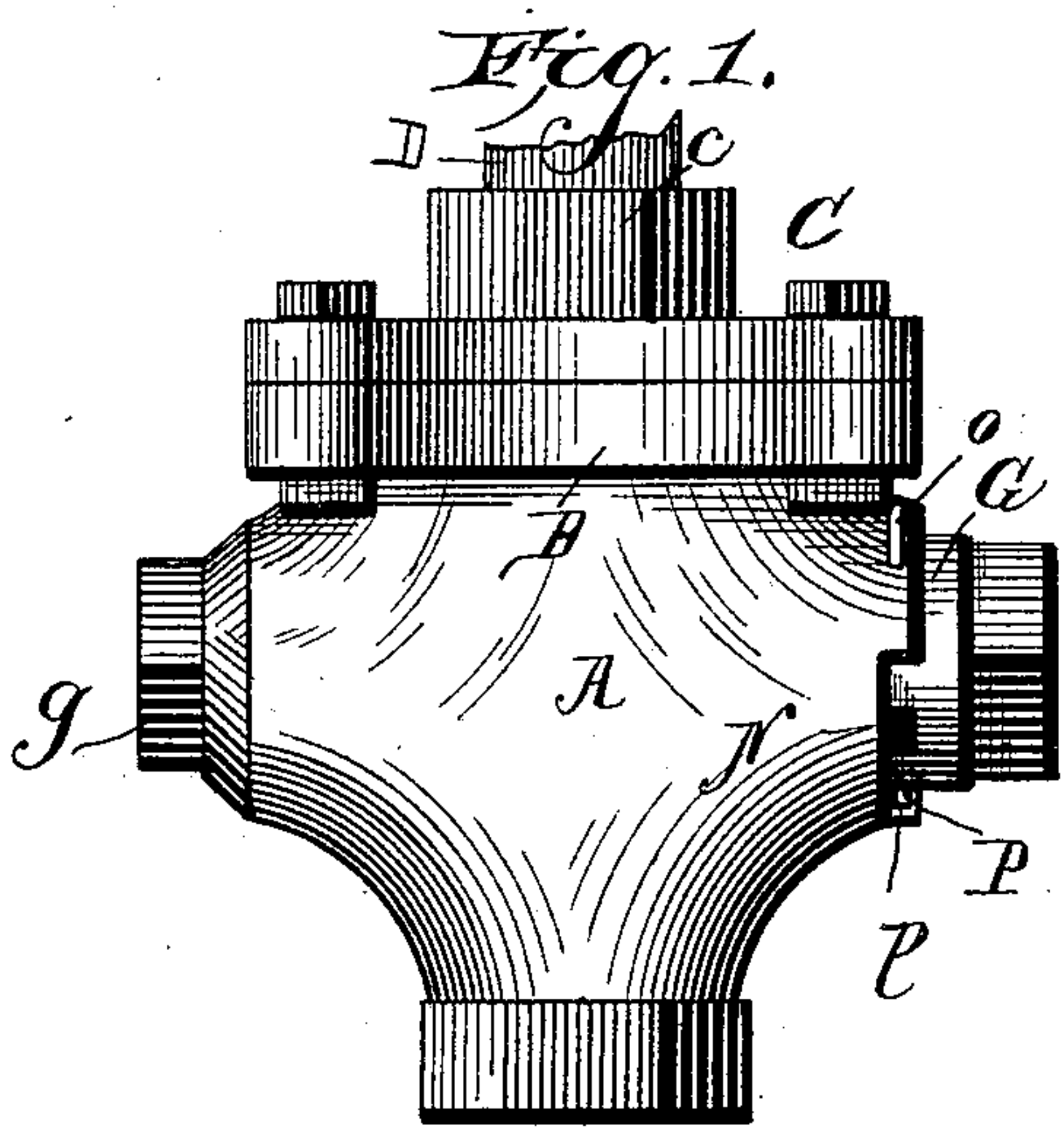
(No Model.)

G. A. MATTESON.

VALVE.

No. 397,134.

Patented Feb. 5, 1889.



Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE ADELBERT MATTESON, OF CRIDERSVILLE, OHIO.

VALVE.

SPECIFICATION forming part of Letters Patent No. 397,134, dated February 5, 1889.

Application filed August 31, 1888. Serial No. 284,272. (No model.)

To all whom it may concern:

Be it known that I, GEORGE ADELBERT MATTESON, a citizen of the United States, residing at Cridersville, in the county of Auglaize and State of Ohio, have invented new and useful Improvements in Valves, of which the following is a specification.

The object of my invention is to provide a combined stop-cock, check-valve, and connection or union for steam, fluid, or gas lines, whereby the inconvenience of separately connecting the stop-cock and the check-valve to the line may be avoided.

A further object of the invention is to provide means whereby the check-valve may be removed at any time to repair or clean.

With these objects in view the invention consists in a certain novel construction and combination of devices, fully described hereinafter, in connection with the accompanying drawings, and specifically pointed out in the appended claims.

In the drawings, Figure 1 is a side view of a stop embodying my improvements. Fig. 2 is a central longitudinal sectional view of the same. Fig. 3 is a central transverse sectional view with the valve open. Fig. 4 is a similar view with the valve closed. Fig. 5 is a detail perspective view of the check-valve with its removable seat. Fig. 6 is an end view, partly in section, of the casing.

Referring by letter to the drawings, A designates the casing of the stop-cock having the transverse bore *a*, and the upper end of the casing is provided with the horizontal flange B, to which is adapted to be bolted a plate, C, having a rigid nut, *c*. This nut is screwed on the lower end of a section of the line-pipe D. It will be seen that this plate and nut form the connection or union between the line-pipe and the stop-cock. The under side of the plate C is provided with a depending rib, E, which fits in an annular groove, *e*, in the upper side of the flange B, and bears on a packing-ring, F, which is located in the groove.

The core G of the stop-cock is conical in form, fits in the bore *a* in the usual way, and is held in place by a suitable nut, *g*, which is screwed on the smaller end of the core. The core is provided with a transverse elongated

opening, H, which is adapted to align with the vertical opening in the casing to allow the passage of the steam, fluid, or gas.

I represents a recess, which is formed in the side of the core G, in which is arranged the valve-seat K, having an opening, *k*, therein, which registers with the opening H in the core, and on the outer side of this seat is hinged the check-valve L, which is thus received completely within the recess in the core. When the stop-cock is open, this check-valve hangs loosely, thereby leaving its seat and allowing the passage of the steam, fluid, or gas; but the lower edge of the said valve projects slightly into the vertical opening of the casing, whereby, if the pressure is too violent, the valve will be partially or entirely closed. When the stop-cock is closed, the check-valve is turned around on the upper side of the core, and its lower edge, or a rib, *l*, on its outer side, bears against the side of the bore *a* and holds the check-valve tightly in place. The object of this rib is to prevent the entire side or lower edge of the check-valve from bearing against the side of the bore, since in case the latter should become corroded or rusted, the rib would not be as liable to cling to the side of the bore and prevent the operation of the stop-cock as if a larger surface were in contact therewith.

The manner of hinging the check-valve is as follows: It is provided at its ends with the trunnions L' L', which are mounted in bearings R R' in the sides of the recess I. One of these bearings is open at one side, to enable the valve to be removed from the casing. When the stop-cock is closed, the transverse opening H therein assumes an approximately horizontal position, (out of alignment with the opening in the casing,) with its open end adjacent to the side of the casing; and therefore to allow a perfect draining of the stop-cock and check-valve, when in this position, I provide a vent, M, in the side of the casing in such position as to allow the escape of any accumulation.

It will be readily seen that having combined the check-valve with the stop-cock it is only necessary to make one connection, instead of more, and therefore time is saved in

putting the device in place, in addition to the time, material, and expense which are saved in the construction thereof.

A further advantage of the invention is the facility with which the various parts of the device are reached to repair or clean. It is simply necessary to close the stop-cock and remove the connection, after which the check-valve and its seat may be detached, and the entire interior of the stop-cock is exposed to view.

The advantages derived from arranging the check-valve seat so that it is detachable from the core of the stop-cock will be readily seen, in that it enables the operator to obtain quick and ready access to the interior of the core, and also enables an easy replacement of parts which become broken by strains or otherwise.

The larger end of the core is provided with a stud, *p*, which travels in a segmental groove, *P*, in the end of the casing, whereby the rotation of the core is limited, and this end of the core is also provided with two or more transverse openings, *N N*, either of which is adapted to register with openings *n n* in the casing, and through these registering - openings is passed a key, *O*, to lock the core in either its open or closed position.

Having thus described the invention, I claim—

1. In a valve, the combination, with the casing *A*, provided with a longitudinal opening,

of the core mounted transversely in the casing and provided with an opening, *H*, adapted to register with the longitudinal opening, the valve-seat on the side of the core, the removable connection *C*, bolted to the upper end of the casing over the longitudinal opening thereof, and the check-valve provided with trunnions mounted in bearings at the sides of the said seat, the check-valve being less in width than the longitudinal opening, whereby it may be introduced and removed therethrough when the connection is removed, substantially as specified.

2. In a valve, the combination, with the casing, of the core mounted in a transverse bore in the casing and provided with an opening, *H*, adapted to register with a longitudinal opening therein, the valve-seat fitted in a recess, *I*, in the core and having the closed bearing *R* and the open bearing *R'* at opposites thereof, the check-valve provided with trunnions *L' L'*, mounted in the said bearings, and a transverse rib, *l*, adapted to bear against the side of the bore when the valve is closed, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

GEORGE ADELBERT MATTESON.

Witnesses:

WILLIAM BROUGH JACK,
HARRY WOLFE.