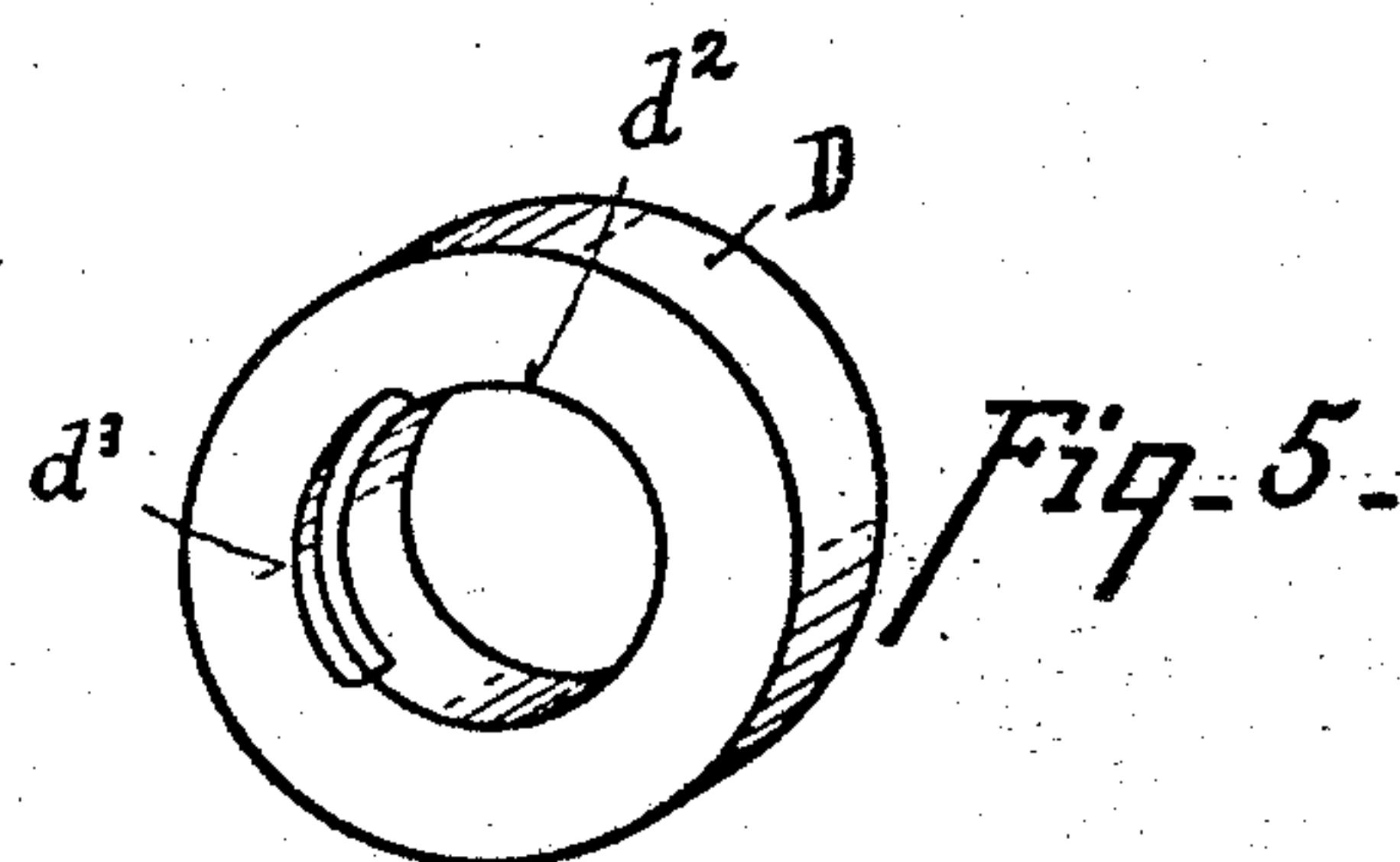
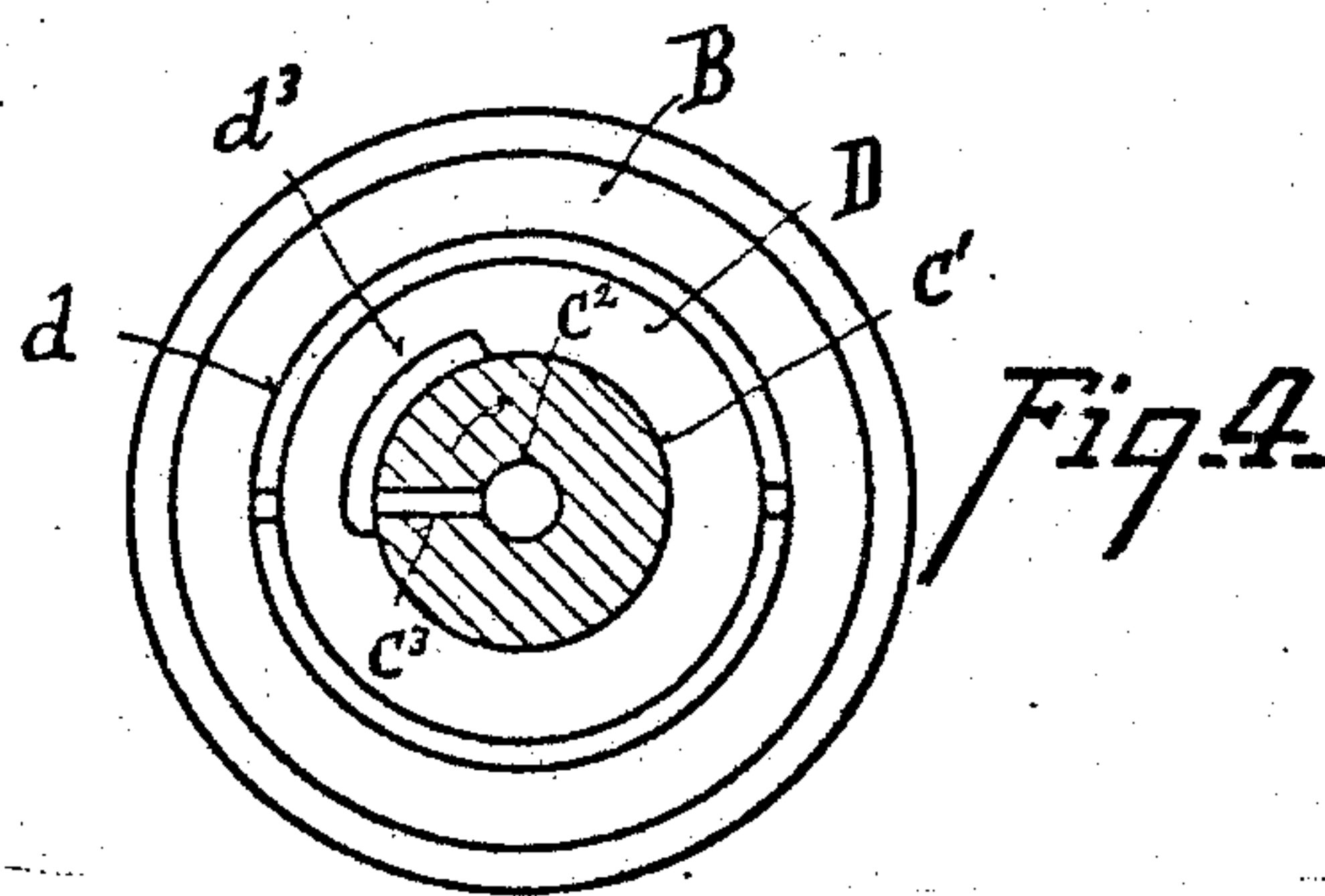
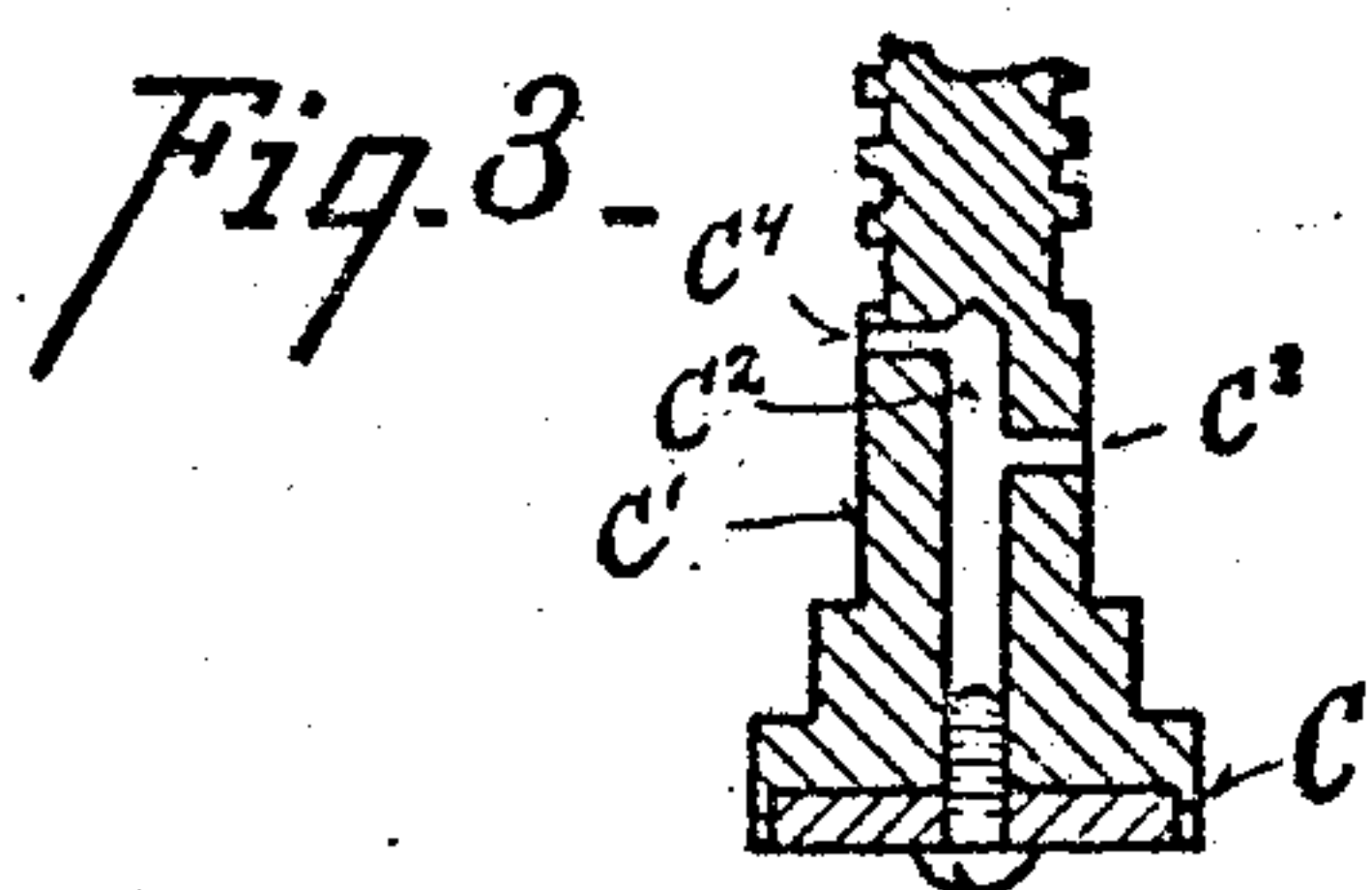
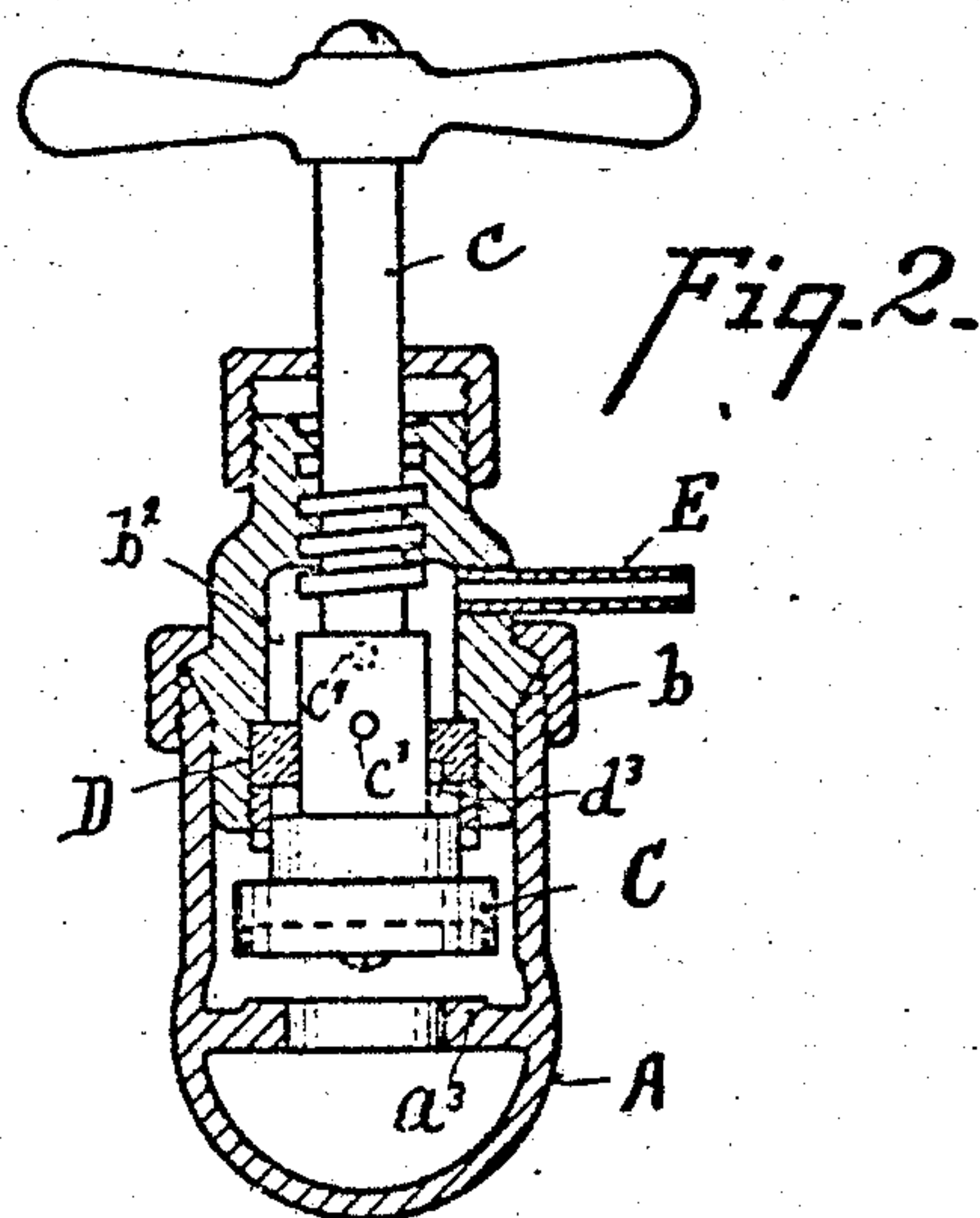
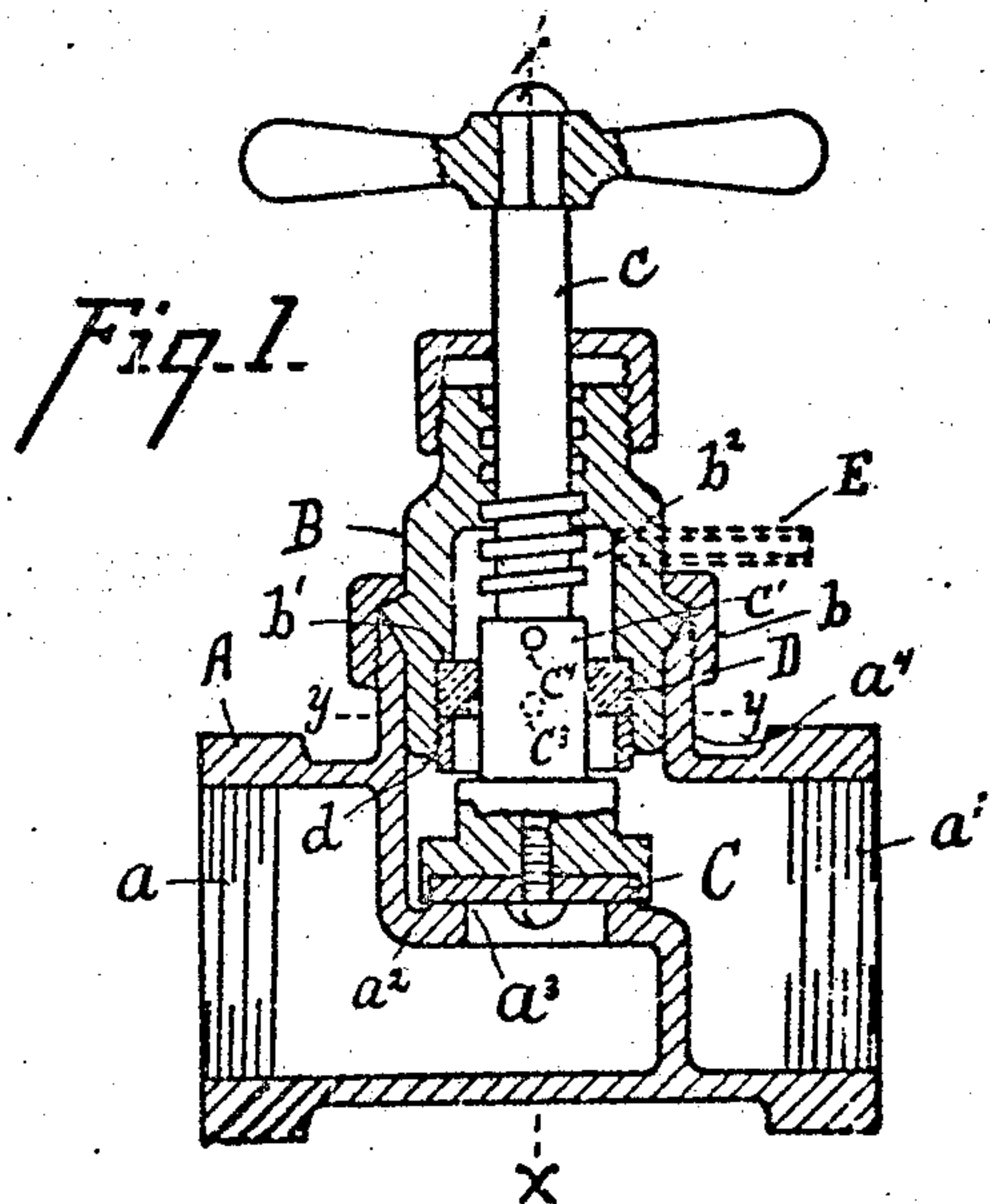


No. 789,971.

PATENTED MAY 16, 1905.

G. H. HARRINGTON.
STOP COCK.

APPLICATION FILED SEPT. 8, 1904.



Witnesses

C. W. Miles.
A. Michmann.

Inventor

Geo. H. Harrington

Walter J. Murray

Attorney

UNITED STATES PATENT OFFICE.

GEORGE H. HARRINGTON, OF CINCINNATI, OHIO.

STOP-COCK.

SPECIFICATION forming part of Letters Patent No. 789,971, dated May 16, 1905.

Application filed September 8, 1904. Serial No. 223,682.

To all whom it may concern:

Be it known that I, GEORGE H. HARRINGTON, a citizen of the United States of America, and a resident of Cincinnati, county of Hamilton, State of Ohio, have invented certain new and useful Improvements in Stop-Cocks, of which the following is a specification.

The object of my invention is a stop-cock in which the waste-port is cut off from communication with the water-channel as the valve is raised from its seat by a simple and efficient means.

In the accompanying drawings, Figure 1 is a central vertical sectional view of a stop-cock embodying my invention, the valve and the valve-stem being shown in elevation. Fig. 2 is a central vertical sectional view taken upon line $x-x$ of Fig. 1, the valve and valve-stem being shown in elevation. Fig. 3 is a detail sectional view of the lower end of the valve-stem and the valve. Fig. 4 is a horizontal sectional view upon line $y-y$ of Fig. 1, upon an enlarged scale. Fig. 5 is a detail vertical view, upon an enlarged scale, of the packing-ring.

Referring to the parts, valve-casing A has an inlet a and an outlet a' , between which is a perforated diaphragm a^2 , upon which is formed the valve-seat a^3 . Valve-casing A has an upward annular extension a^4 , which is interiorly beveled at its upper end to seat the beveled flange of bonnet B, which is held upon the extension a^4 by screw-cap b , the upper end of the bonnet being interiorly screw-threaded to fit the screw-threads of the valve-stem c . Near its lower end bonnet B has an interior shoulder b' , against which the packing-ring D is held by a screw-threaded ring d .

Ring D is made preferably of papier-mâché and has a central perforation d^2 of a size such as to fit snugly against the enlarged lower end c' of the valve-stem. Upon its lower inner circumference ring D has a notch d^3 of

a smaller depth than the pitch of the screw of the valve-stem, which has in its lower end a diametrical recess c^2 , into which run two channels c^3 c^4 , the channels being placed so that when the valve C is seated the lower channel c^3 registers with notch d^3 and channel c^4 stands above packing-ring D in communication with chamber b^2 , which surrounds the valve-stem above the packing-ring and has leading from it a waste-port E.

It is seen that when the valve is seated there is an open communication between the discharge-port a' and the waste-port E through channel c^3 , recess c^2 , channel c^4 , and chamber b^2 , but that as soon as the stem is given a slight rotation, so as to raise the valve C even slightly from its seat, that the channel c^3 is carried past the notch d^3 and is closed by the unnotched portion of the packing-ring and remains so closed while the valve is raised from its seat. This quick closing of the channel c^3 effectually cuts off the waste-port from the water-passage as soon as the valve is raised, so as to prevent any spurting of the water through the waste-port; but as soon as the valve is seated there is a ready communication between the discharge-port of the valve and the waste-port to release the water remaining in the pipes after the valve has been seated.

What I claim is—

In a stop-cock the combination of a valve, a valve-seat, a rotating valve-stem having a channel extending through it with an upper and a lower opening, a packing-ring fitting against the stem and having a notch to register with the lower opening in the stem when the valve is seated, and a waste-port above the packing-ring and in communication with the upper opening in the stem.

GEORGE H. HARRINGTON.

Witnesses:

WILBER C. GOODALE,
C. J. ENRIGHT.