

(No Model.)

J. O. WADDELL.
COCK AND CASING.

No. 270,520.

Patented Jan. 9, 1883.

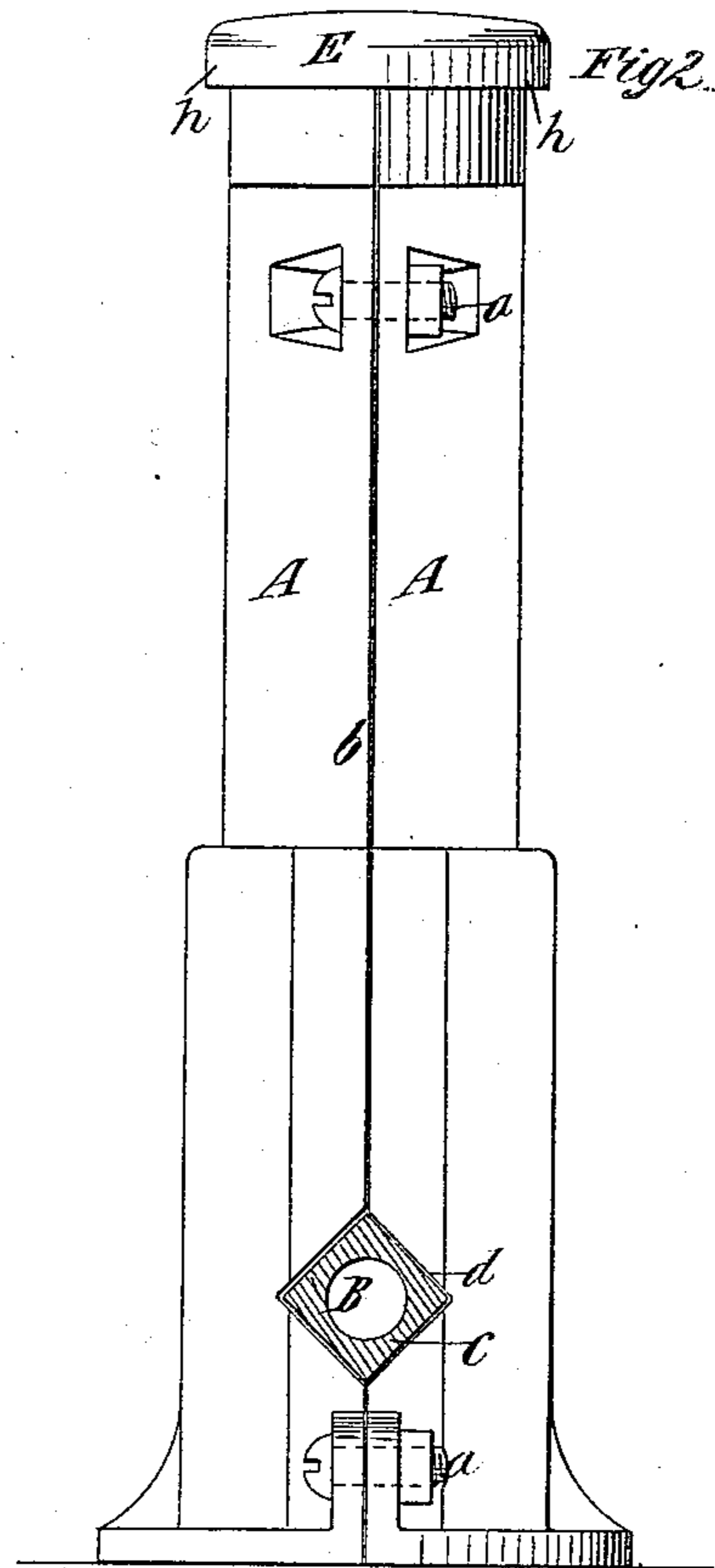
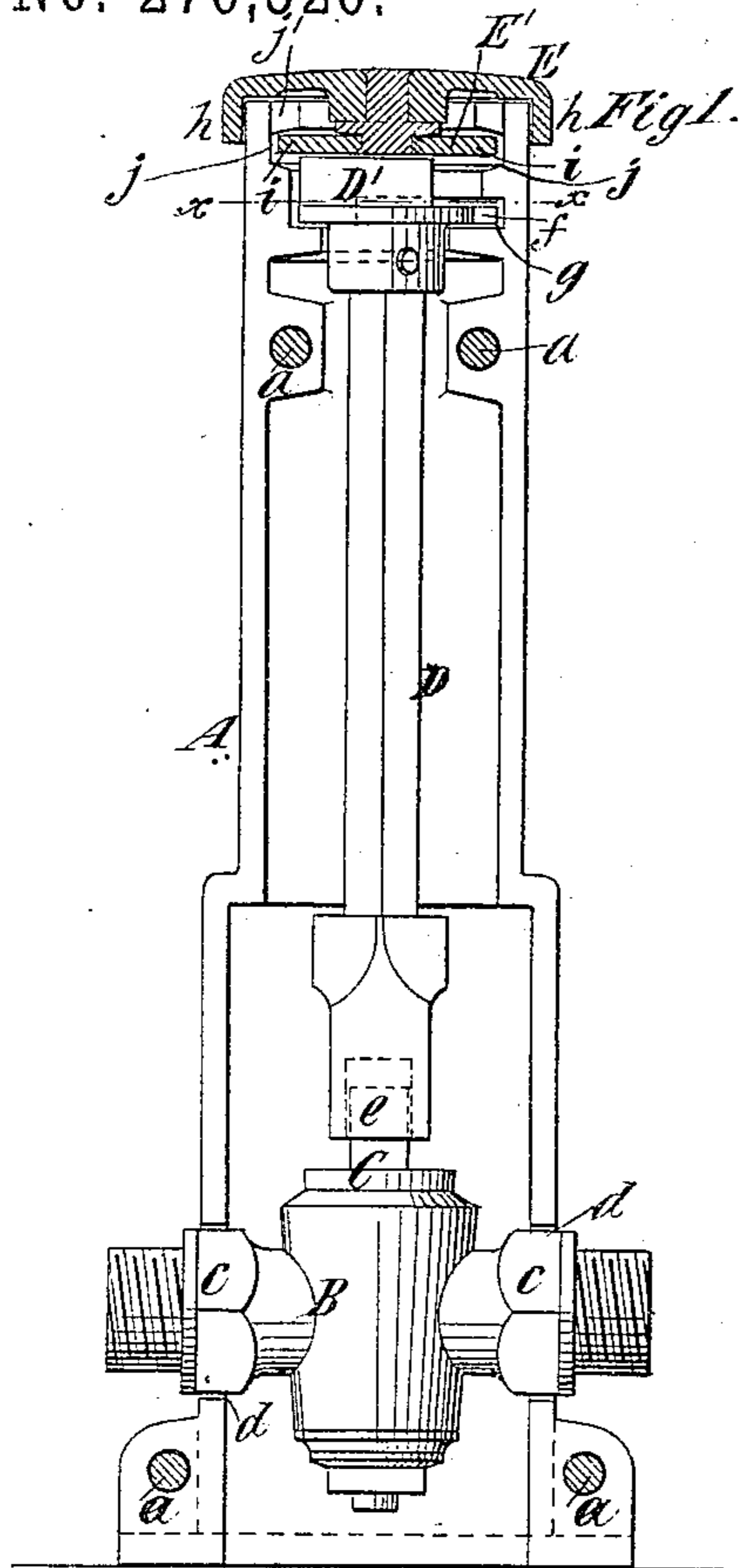


Fig. 3.

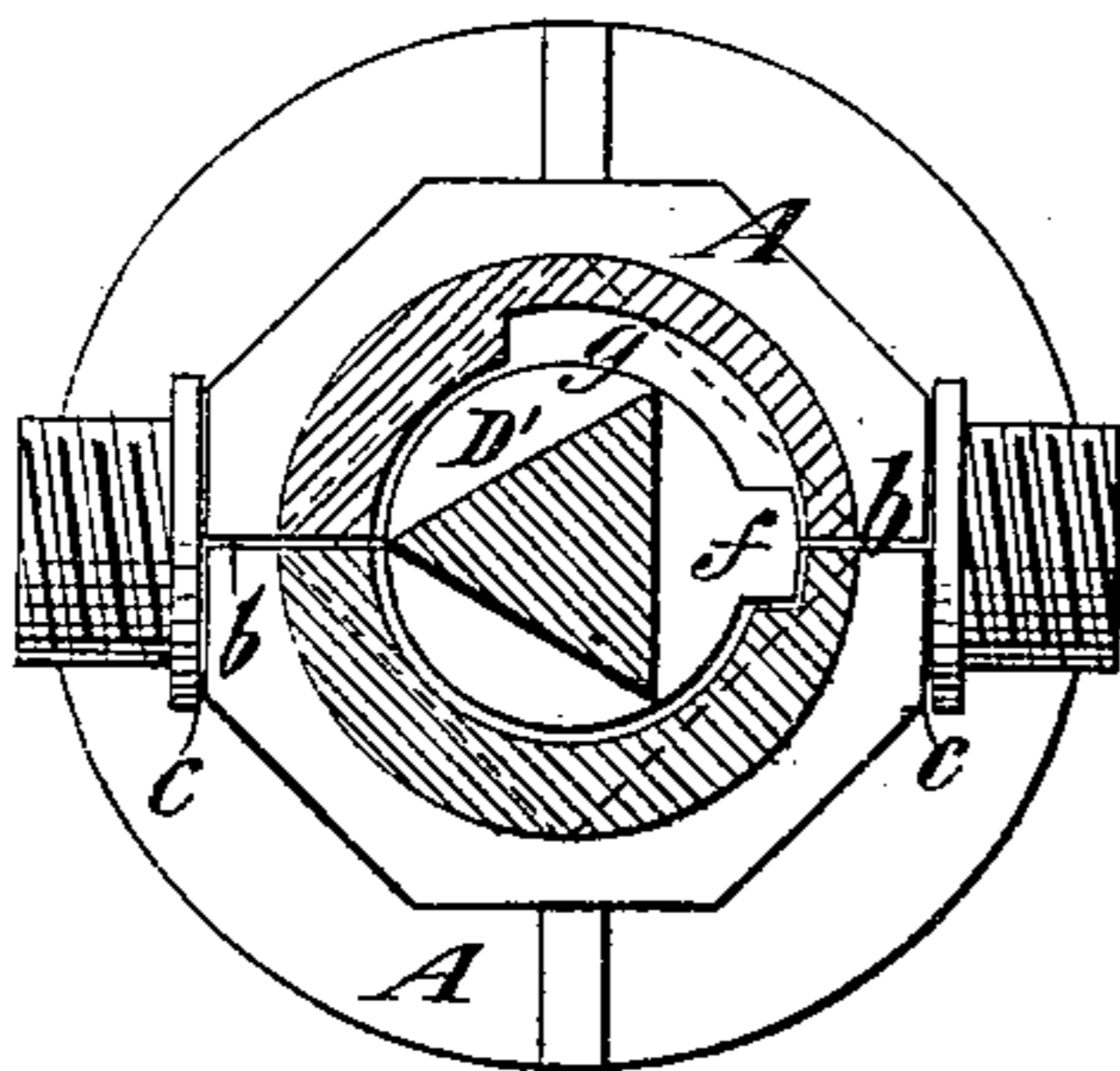


Fig. 4.

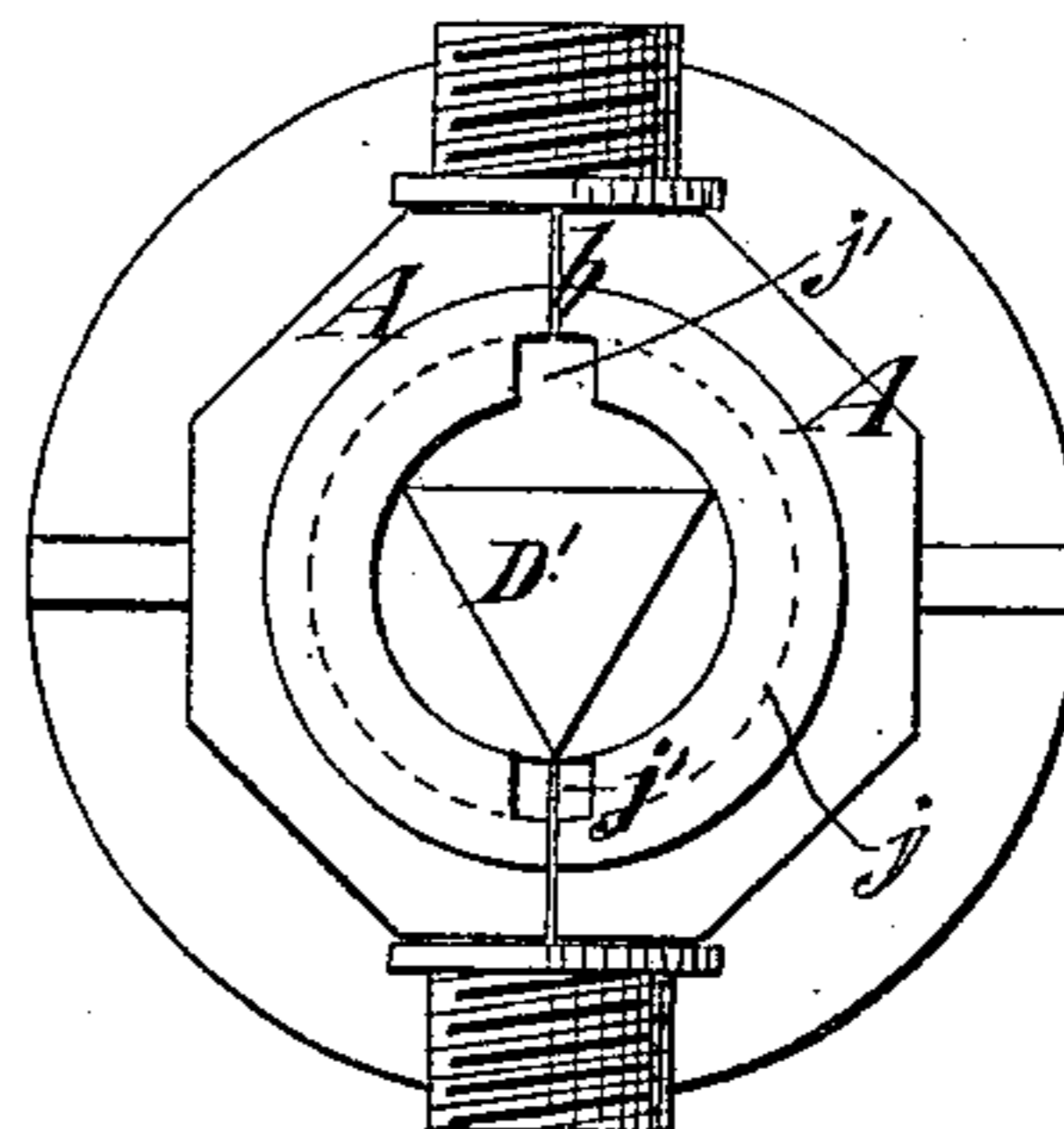
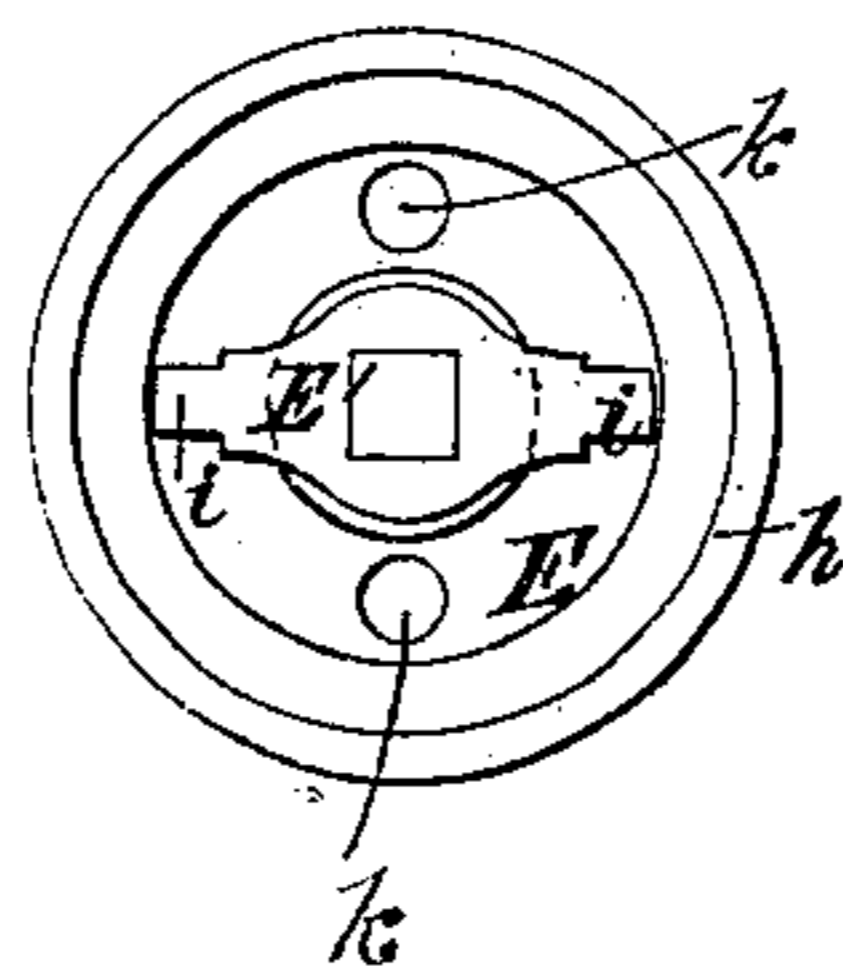


Fig. 5.



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COCK AND CASING.

SPECIFICATION forming part of Letters Patent No. 270,520, dated January 9, 1883.

Application filed September 19, 1882. (No model.)

To all whom it may concern:

Be it known that I, JAMES O. WADDELL, of Elizabeth, in the county of Union and State of New Jersey, have invented a new and useful Improvement in Service-Cocks and Casings therefor, of which the following is a specification.

My invention relates to stop or service cocks, and to casings or boxes therefor, which are divided vertically or composed of two sections, each forming one upright half of the casing. Such casings or boxes have been provided in their upright joints with holes formed by coincident notches in the two sections which fit the shanks of the service or stop cocks and retain the said cocks securely in place in the casings; but as such holes and the shanks of the cocks have been round there has been a liability of turning the cock when screwing the pipes into its shanks, and thus springing, straining, or bending the long stem or rod whereby the plug is turned.

One feature of my invention consists in the combination, with a vertically-divided casing having square or polygonal holes or openings in its upright joint, of a cock having square or polygonal shanks fitting said holes or openings, whereby the cock-shell is securely held against being turned.

The invention also consists in the combination, with the vertically-divided casing, of a cap of novel construction adapted both to close the top of the casing and hold the sections thereof together, as hereinafter described.

The invention also consists in a check of novel construction, particularly hereinafter described and claimed, which serves as a means of limiting the turning movement of the operating rod or stem to turn the plug, and also serves to hold the operating rod or stem in place vertically and prevent its moving upward, so as to disengage it from the plug.

In the accompanying drawings, Figure 1 represents an elevation of one section of a casing and a cock embodying my invention, including a sectional view of the cap of the casing. Fig. 2 represents an elevation of the entire casing and a section through the shank of the cock-shell. Fig. 3 represents a horizontal section on the dotted line $x x$, Fig. 1. Fig. 4 represents

a plan of the casing with the cap removed, and Fig. 5 represents a plan of the under side of the cap.

Similar letters of reference designate corresponding parts in all the figures.

A A designate the two half-sections of the casing, which are secured together by bolts a , and together forming a casing having an upright central joint, b .

B designates the shell of the cock, the shanks c of which are square and fit in square holes or openings d in the joint b of the casing, as best shown in Fig. 2. The holes d are formed by coincident triangular notches in the meeting edges of the sections A, and they hold the shell securely while screwing the sections of pipe into the end of the shell. These holes or openings may be of any polygonal form instead of square.

C designates the plug, and D designates the operating rod or stem, which has at its lower end a socket, e , fitting the head of the plug, and at its upper end a head, D' , to which a wrench may be applied for turning it, and with it the plug C. In order to open or close the cock, the plug must be turned a quarter of a turn, and to limit the turning movement I provide a check which consists of a check-projection, f , on the head D' , working in a groove in the casing. The groove g only extends a little more than a quarter of the circumference of the casing, as best shown in Fig. 3, and the two ends of the groove form stops, against one or the other of which the check-projection f strikes when the rod or stem is turned in either direction, and which therefore limit such turning.

Instead of the stops on the casing being formed by the ends of the groove, they might be formed by two projections projecting inward in the path of the projection f ; but where the projection f works in a groove it likewise serves to hold the rod or stem D in place vertically, and prevents the socket e from becoming disengaged from the head of the plug C.

I am aware that it is common to limit the turning of a cock-plug by means of two checks or shoulders on the cock-shell, with which a projection on the plug engages as the latter is turned; but for service-cocks the plugs of which are operated by long rods my improved check

is more desirable, as it is in the upper part of the casing, where it can be seen when turning the rod D. Where the check is formed on the plug and shell and the plug is operated by a long rod the position of the plug cannot be readily seen, and the check-projection on the plug is apt to be broken off, and in any case the rod D is apt to be twisted by force applied to it after the turning of the plug is checked.

10 E designates a cap which has a flange or ring, *h*, adapted to fit over the end of the casing, as shown in Fig. 1, and to aid in holding the two sections A together. Upon the under side of the cap E are two horns or projections, *i*, which are clearly shown in Fig. 5, and on the inner side of the casing is a circular groove, *j*, in which the horns or projections *i* may work as the cap is turned, and which prevent the cap from being taken off. The horns or projections *i* are here represented as formed by the two ends of a cross-bar, E', riveted on the inner side of the cap E. In the top of the casing are two notches, *j'*, which are represented in Fig. 4 as formed in the joint *b* of the case, and which extend downward to the groove *j*. When the cap E is to be placed on the casing the horns or projections *i* pass downward through the notches *j'*, and the cap is then turned to carry the said horns or projections into the groove *j*, which prevents the cap from being taken off until it is turned to bring the horns or projections again coincident with the notches *j'*.

35 The cap E may have holes *k*, which provide for applying a wrench to turn the cap when it is desired to take it off.

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

1. The combination, with the shell of a stop or service cock having square or polygonal shanks, of a vertically-divided casing having square or polygonal holes in its upright joint, which receive the shanks of the cock-shell and hold the latter against turning, substantially as specified. 40

2. The combination, with a stop or service cock and its divided casing, of a plug-operating rod provided at or near its upper end with the check-projection *f*, and two stops on the upper portion of the casing, between which said projection may be moved, substantially as specified. 45

3. The combination, with the casing A A, provided with the groove *g* in its upper part, of the cock B C, the operating rod or stem D, and the check-projection *f* on the upper part of said rod or stem, entering said groove, and holding said rod against vertical displacement, as well as limiting its turning, substantially as specified. 50

4. The combination, with the divided casing A A, having the groove *j* and notches *j'*, of the cap E, having the horns or projections *i* for engaging with said groove *j* to hold itself in place, and lapping or fitting over the sections of the casing to hold the upper ends thereof together, substantially as herein described. 55 60 65

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Witnesses:

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