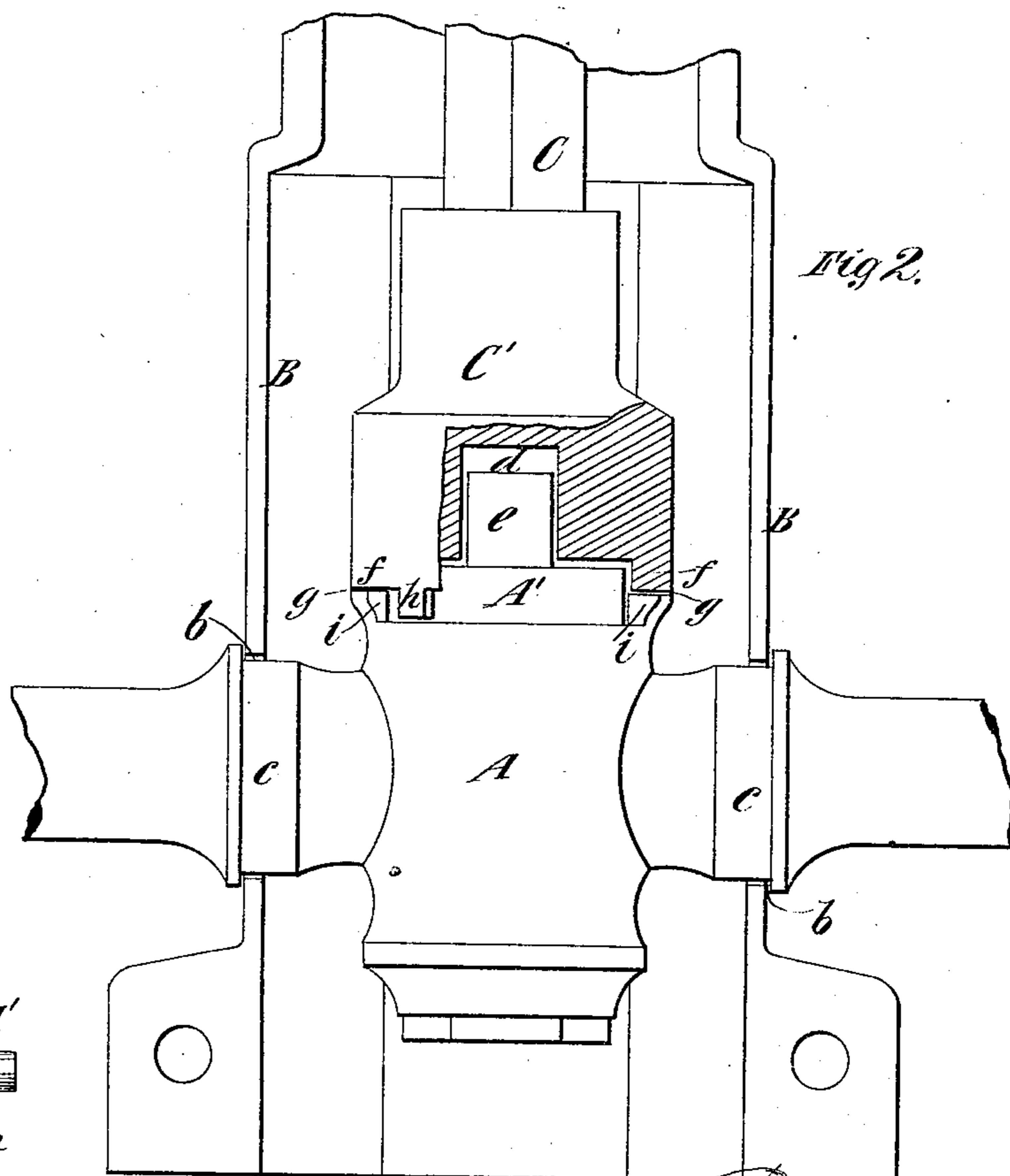
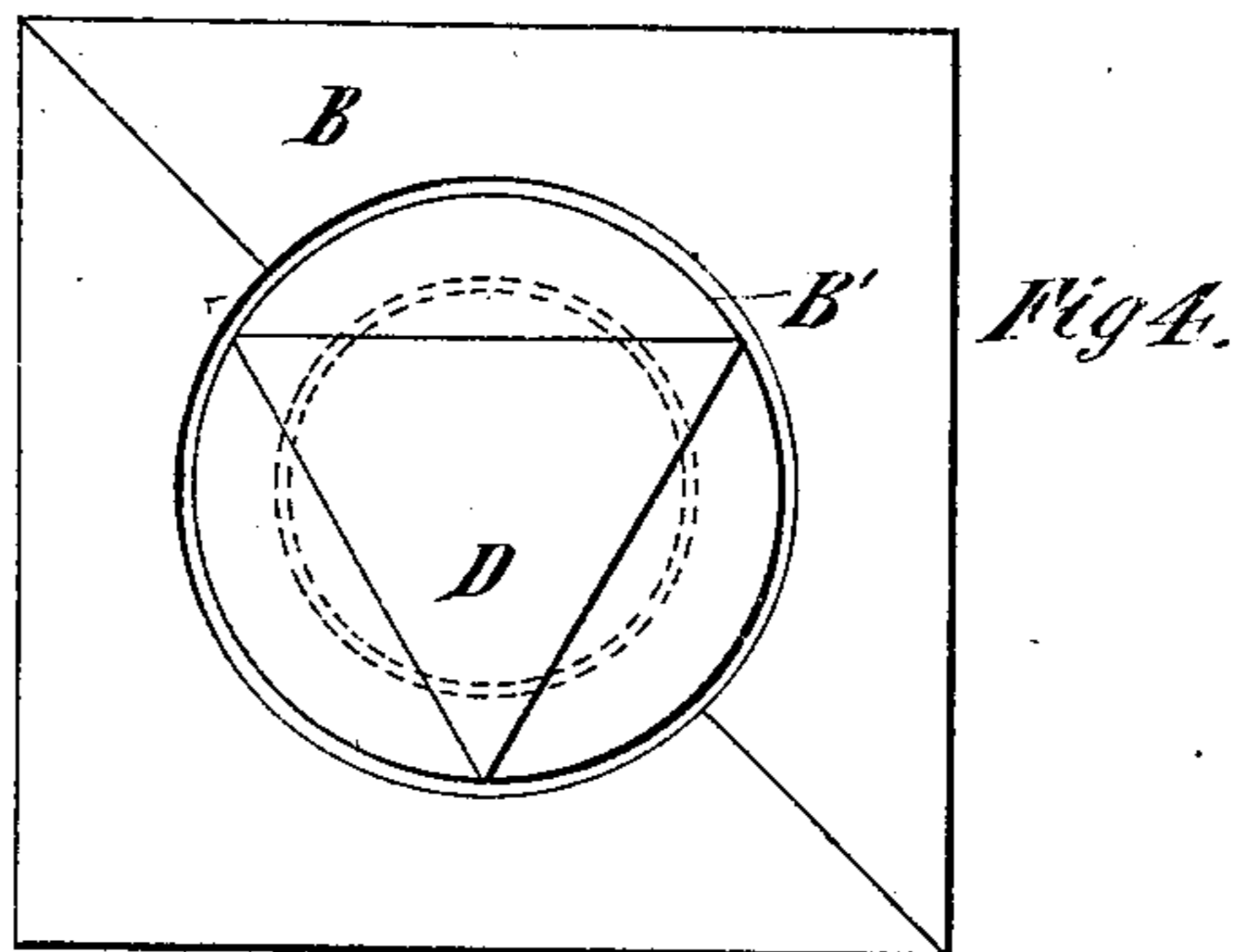
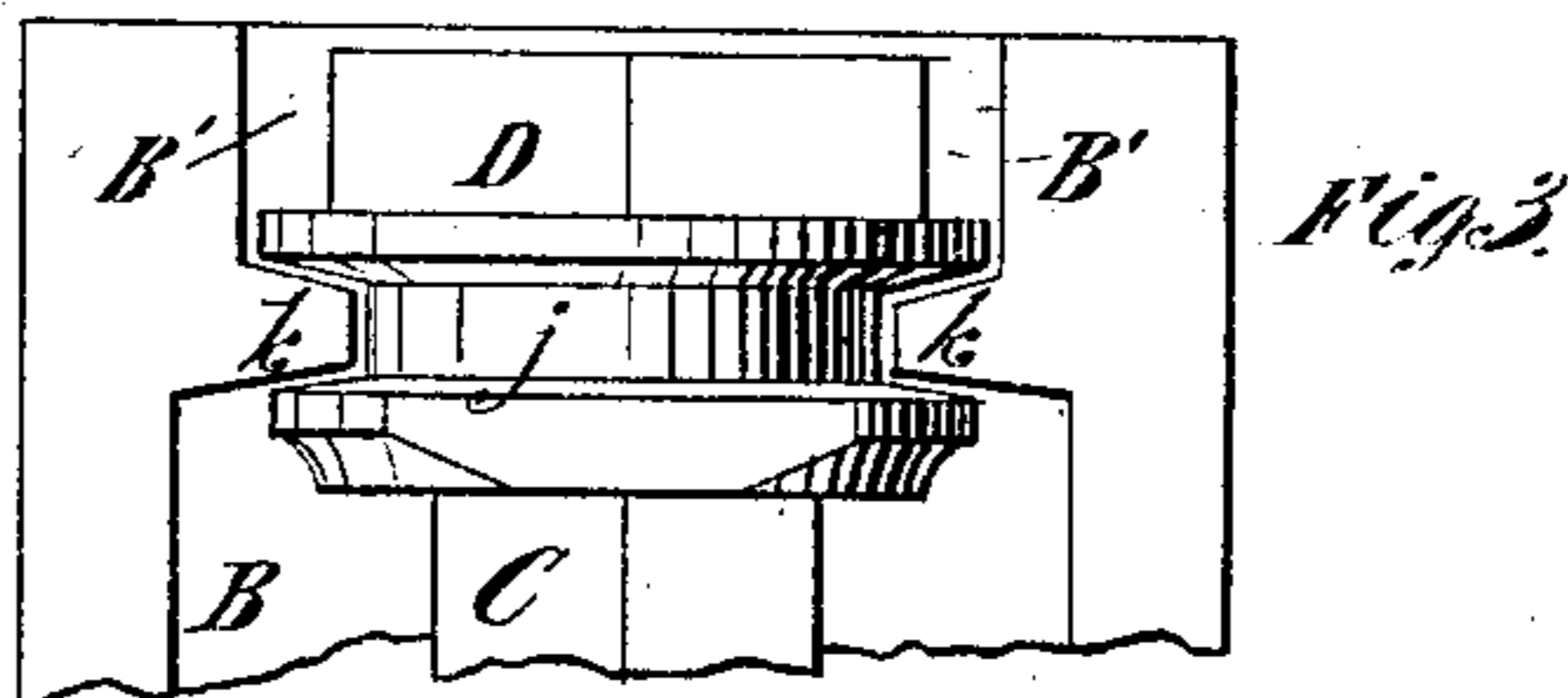
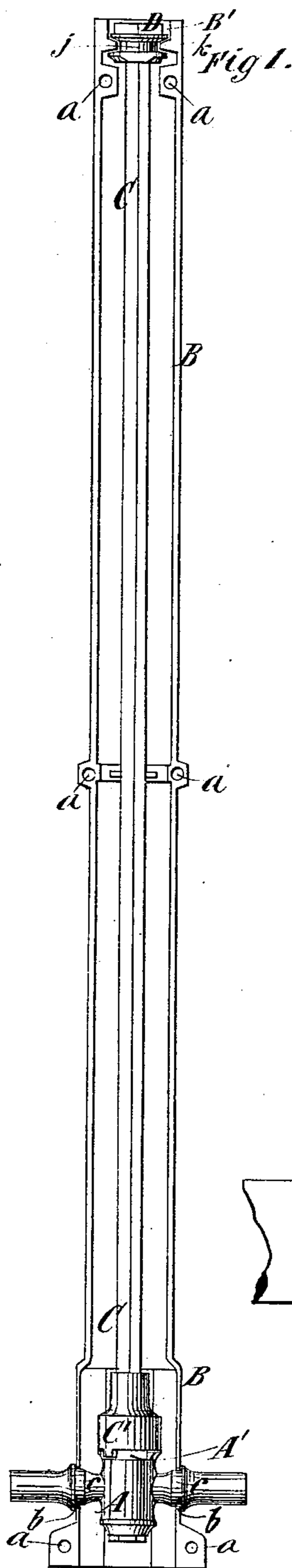


(No Model.)

J. BROUGHTON.  
SERVICE COCK AND CASING.

No. 250,780.

Patented Dec. 13, 1881.



WITNESSES

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# UNITED STATES PATENT OFFICE.

JOHN BROUGHTON, OF BROOKLYN, NEW YORK.

## SERVICE-COCK AND CASING.

SPECIFICATION forming part of Letters Patent No. 250,780, dated December 13, 1881.

Application filed August 23, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN BROUGHTON, of the city of Brooklyn, in the county of Kings and State of New York, have invented certain  
5 new and useful Improvements in Service-Cocks and Casings, of which the following is a specification.

My invention relates to house service-cocks which are buried deep in the ground and have  
10 spindles or rods extending to the surface whereby their plugs may be turned, the cocks and spindles being inclosed in casings to keep the dirt away from them.

My invention consists in the combination,  
15 with a service-cock and its turning spindle or rod, of an external casing containing the cock and spindle or rod, and a socket upon the spindle or rod fitting the head of the cock-plug, and having a bearing upon the shell, whereby  
20 the cock-plug is relieved of the weight of the spindle or rod, and any downward pressure thereon exerted in turning the same. The said socket is also preferably formed with a lug which enters a recess in the bearing on the  
25 shell, and, striking against the shoulders at the ends of said recess, forms a stop for limiting the turning of the plug. The spindle or rod is provided at its upper end with a cap or head, to which a wrench is applied for turning  
30 the spindle and plug; and the invention consists in a novel manner of supporting the cap or head in the top of the casing, so that the top of the casing is closed to prevent the entrance of dirt.

35 In the accompanying drawings, Figure 1 represents a vertical section of a casing, and a side view of a cock and spindle arranged therein according to my invention. Fig. 2 represents a similar view of the cock and a partially-sectional view of the socket upon the  
40 spindle or rod which fits the plug, and a portion of the casing, all upon a larger scale than Fig. 1. Fig. 3 represents a sectional view of the top of the casing, and a side view of the cap or head of the spindle or rod, upon the same scale as Fig. 2; and Fig. 4 represents a top view of the casing and the spindle cap or head on the same scale as Figs. 2 and 3.

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

A designates the shell of an ordinary service-cock, and A' designates the plug thereof.

B designates the casing, which is of a sufficient length to reach from the cock to the surface of the ground, and is composed of two  
55 parts secured together by means of screws inserted through holes *a*. The casing forms approximately a square column divided longitudinally at diagonally-opposite corners, and each part of which forms two sides thereof. 60 In the meeting edges of the two parts of the casing B are formed recesses *b*, which fit circular portions *c* upon the shell A of the cock, and when the two parts of the casing are secured together the cock is clamped between 65 them.

C designates the spindle or rod which extends centrally through the casing, and through which the plug A' is turned. At the lower end the spindle or rod is provided with a  
70 socket, C', which is provided with an oblong hole, *d*, into which the oblong head *e* of the plug A' fits, as seen in Fig. 2, thus locking the spindle or rod to the plug and insuring their turning together. 75

In order to take the weight of the spindle C and socket C' off the cock-plug A', I provide the socket with a downwardly-extending lip or rim, *f*, which rests upon the top of the shell A at *g*, whereby a bearing is formed 80 which sustains the weight of the spindle and appurtenances. Although the bearing *g* is upon the shell of the cock, it is within the casing B, and is entirely independent of the plug.

In order to form a stop for limiting the turning of the plug A', the bearing on the shell A is recessed or cut away for about a quarter of the circumference, and the socket C' has a lug, *h*, which enters the said recess. The ends of the recess then form shoulders *i*, against one 85 of which the lug *h* strikes when the plug is turned to full open, and against the other of which said lug strikes when the plug is turned to fully close the cock.

Upon the top of the spindle C is a cap or 95 head, D, the top of which is of triangular or other form adapted to receive a wrench, and which has an annular groove, *j*. The top of the casing B has a recess or depression, B', which receives the cap or head D, and at the 100 bottom of said recess is an inwardly-projecting lip or flange, *k*, which enters the groove *j* and holds the spindle against longitudinal movement in either direction, as well as sustains the

weight thereof, and relieves the plug of all pressure. When thus constructed the cap or head D closes the hole in the top of the casing and prevents the entrance of dirt.

5 Though the socket C' and cap or head D are separate pieces, they are rigidly secured to the rod or spindle C, so as to turn therewith and may be considered as parts thereof.

10 By my invention I prevent the plugs of service-cocks which are provided with long turning spindles or rods from becoming tightly jammed into their seats, and therefore enable them to be more easily and quickly turned from the surface of the ground.

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

1. The combination, with a service-cock and its turning spindle or rod, of an external casing containing the cock and spindle or rod,

and a socket upon the spindle or rod fitting 20 the head of the cock-plug, and having a bearing upon the shell, substantially as specified.

2. The combination of the cock-shell A, having a bearing, *g*, recessed and provided with shoulders *i*, the plug A', the spindle or rod C, 25 and the socket C', fitting upon the bearing *g*, and comprising the lug *h*, substantially as specified.

3. The combination, with a service-cock and a turning spindle or rod having a cap or head 30 provided with an annular groove, of an external casing having an inwardly-projecting flange fitting said annular groove, substantially as specified.

JOHN BROUGHTON.

Witnesses:

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