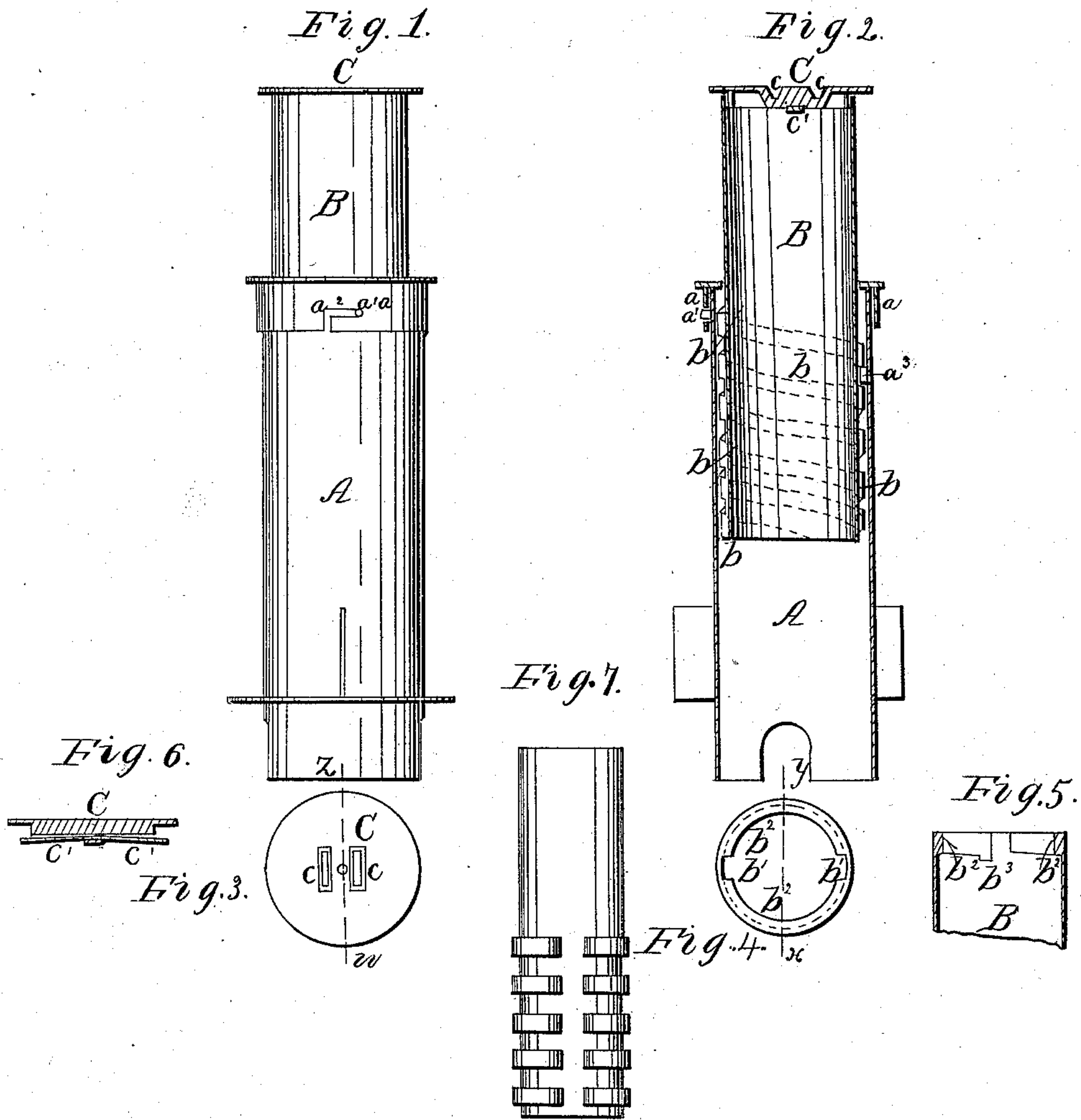


J. Smith,
Stop-Box for Cocks,
Nº 80,776, Patented Aug. 4, 1868.



Witnesses
Geo. P. Barthel
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JAMES SMITH, OF ST. LOUIS, MISSOURI.

Letters Patent No. 80,776, dated August 4, 1868.

IMPROVEMENT IN STOP-BOXES FOR COCKS OR VALVES OF WATER AND GAS-PIPES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JAMES SMITH, of the city of St. Louis, in the county of St. Louis, and State of Missouri, have made certain new and useful Improvements in Stop-Boxes for Cocks or Valves of Water or Gas-Pipes; and I do hereby declare that the following is a full and clear description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of this invention is in arranging the stop-box in two parts, so adjustable as to height that the stop-box lid or cover may be always on a level or "flush" with the surface of the ground wherein the stop-box is set.

It is well known that, in order to make the cocks or valves of the usual gas or water-pipes accessible, the said cocks or valves are surrounded by so-called stop-boxes, which give access from the upper surface of the ground to the usually deeply-seated stop-cock or valve. Now, as the level of the ground or pavement, or other contiguous surface, is changed by settling or regrading, or other accidental or purposed causes, the upper edge of the stop-box, to offer no obstruction to travel, should be suitably adjusted to all changes of level of the contiguous surface, and this to accomplish, is the purpose of my said invention.

The nature of said invention is, secondly, in so connecting the parts that they may be readily adjusted, opened, and operated by proper keys or other devices, but that said parts will be well secured against malicious or careless obstructions, destruction, or intrusion.

To enable those skilled herein to make and use my said invention, I will now fully describe the same, referring to the accompanying—

Figure 1 as an elevation,

Figure 2 as a vertical sectional elevation,

Figure 3 as a top plan of cover,

Figure 4 as a top plan of the sliding tube, and

Figure 5 as a vertical sectional elevation hereof, at the line xy of fig. 4, and

Figure 6 as a sectional elevation, on the line uz of fig. 3, of the cover or lid.

I construct my said stop-box of the usual materials, such as cast iron.

A is the exterior cylinder or housing, having a bottom flange and ribs, to better secure the same in the subsoil. The lower end of said housing A is placed over or "straddling" the gas or water-pipe, in the usual manner, leaving the stop-cock stem or valve-stem accessible to an operator using a key, passing down through the interior of said housing, generally in the usual manner.

At the upper end of said housing is the cap a , which fits about the inner sliding tube B, hereinafter mentioned. Said cap has a depending flange surrounding the upper part of the housing A, and said cap is secured by a projecting pin, a^1 , which is in the slot a^2 of said flange of the cap a .

The cap a being placed on the end of the housing, the pin a^1 enters the vertical shank of the slot a^2 , then, by turning said cap, the pin secures the cap, by entering into the horizontal portion of the slot.

Within said housing, A, I arrange the adjustable tube B, in order to adjust the height hereof with respect to the housing A, and also with regard to the surface of the contiguous ground.

I arrange the screw-threads b on the outer surface of said tube B, and, to act hereon, I place the pin a^3 on the inner surface of the housing A. When, therefore, the tube B is turned, the pin a^3 , acting upon the screw-threads b , will cause the said tube to rise from or lower in the said housing.

The cap a guides the tube B in its vertical motion, and prevents the said tube from lifting out, owing to the screw-threads b passing under the horizontal flange of said cap a .

At the upper end of said sliding tube B, I arrange the lid or cover, C.

In the upper surface of said cover are the indentations or mortises c , wherein a key (of the common form for operating the stem of a valve or stop-cock) may be placed and used to turn said lid C, or eventually the entire tube B.

On the lower surface of said lid C, I arrange the spring-plate c^1 , which extends beyond the lower surface of the lid, and enters the notches or passage b^1 , in the upper edge of the tube B, (see fig. 4;) thereupon, the lid C being turned, the spring c^1 , by its edges, enters under the projections b^2 of the tube B, indicated in fig. 5. Said projections have their lower surface inclined so that the spring c^1 will be pressed down, and thus the cap pressed down and held firmly on the upper edge of the tube B.

When the cap has been turned nearly a half revolution, the edge of the spring c^1 strikes the detent b^3 of the projection b^2 , thus preventing the cap C from turning any further in said direction without turning the tube B also.

If the tube B needs adjustment as to level, after the lid C has been secured, as aforesaid, the operator will continue to turn the lid C after it has been secured to the tube B, and thus caused the tube to turn, when, by the action of the pin a^3 on the screw-threads b , the tube will be raised or lowered.

Thus said parts are held secure against injury or theft, being operated with proper success only by the keys or other operating-devices usually possessed by operators specially charged with the supervision, construction, or repair of these and similar devices.

Instead of a screw-thread, operated as described, to adjust the box, consecutive rings, Figure 7, may be used, which must necessarily be slotted, or so arranged as to permit them to pass the projection when the pipe is elevated or depressed. When the proper point is reached, a slight turn of the pipe causes the projection to pass in between the rings, and the whole is securely held.

Of course, if desired, the relative location of the screw-threads or rings and the projection may be changed, and the latter be put upon the inner pipe, and the former upon the outer.

Other similar changes may be made without departing from the spirit of my invention.

Having thus fully described my invention, what I claim, is—

1. An extensible stop-box, constructed of the two parts A and B, and so arranged as to permit adjustment by means of screw-threads or rings, substantially as herein described.
2. In combination with the above, the caps a and C, when constructed and applied as and for the purpose described.

JAMES SMITH.

Witnesses:

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