(No Model.)

E. P. H. CAPRON.

STOP COCK BOX.

No. 450,140. Patented Apr. 14, 1891.

Fig. 1.

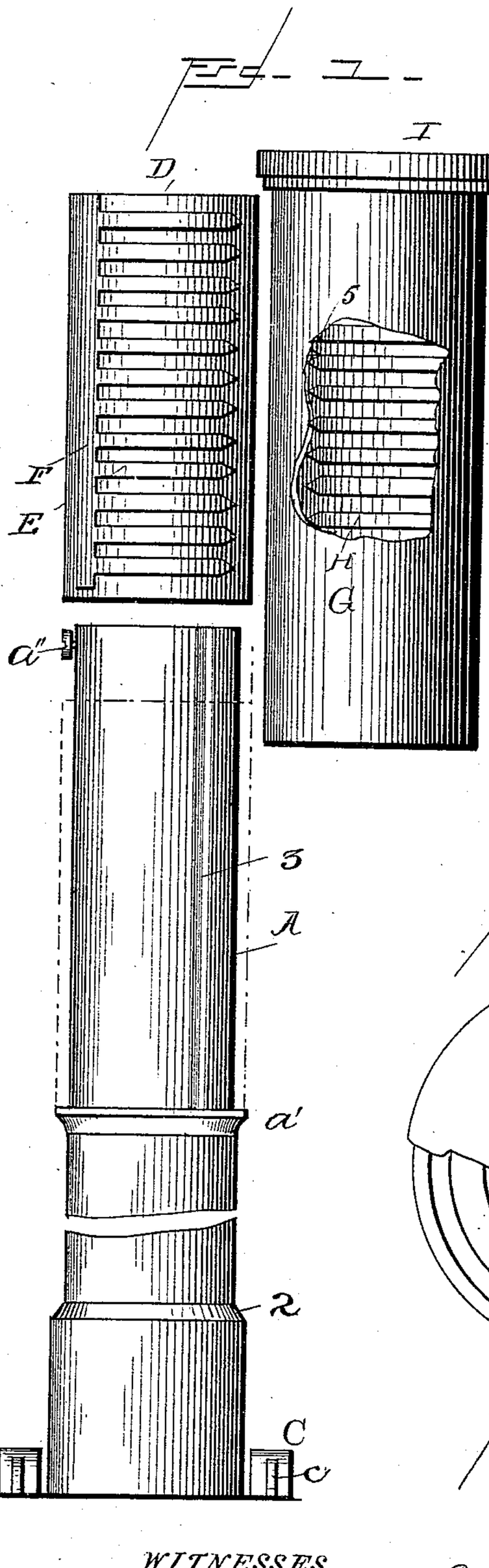


Fig. 2.

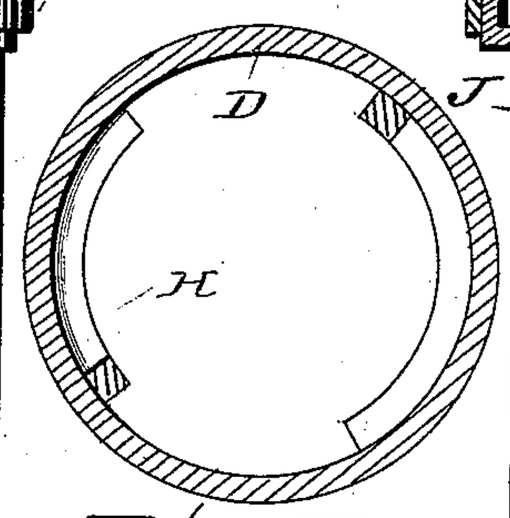


Fig. 3.

Fig. 4.

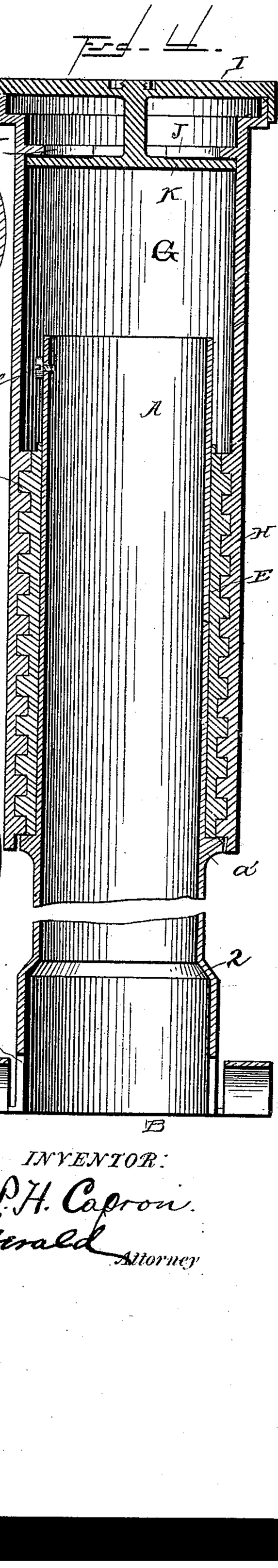


Fig. 5.

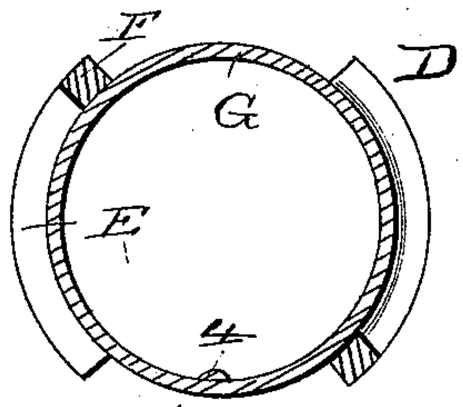
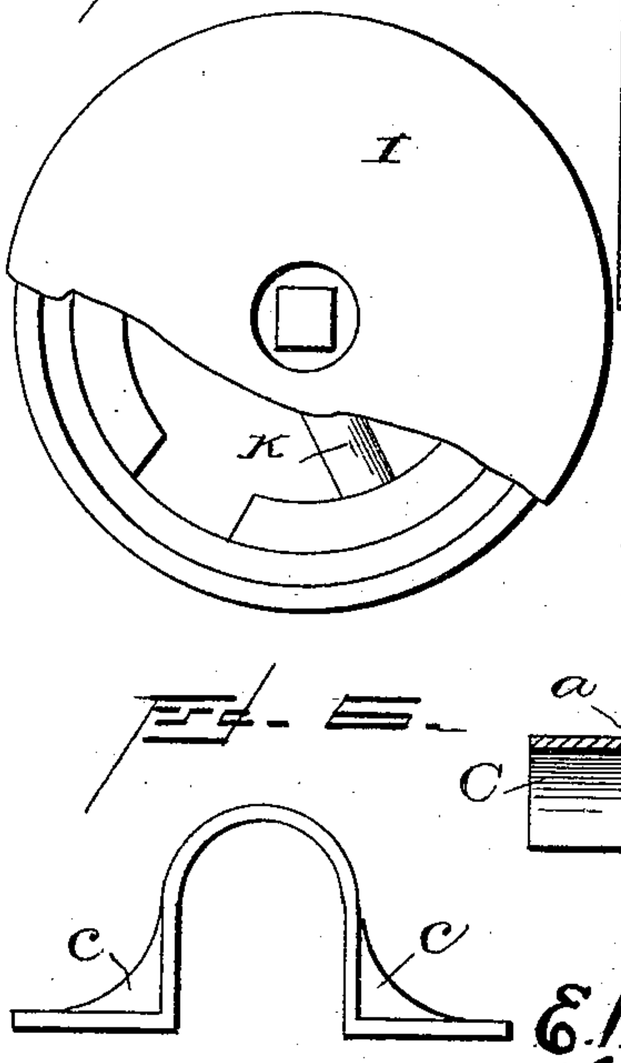


Fig. 6.



WITNESSES

A. J. Schwartz

C. S. Frye

INVENTOR:

E. P. H. Capron.

By W. S. FitzGerald Attorney

UNITED STATES PATENT OFFICE.

ELISHA P. H. CAPRON, OF NORWALK, CONNECTICUT.

STOP-COCK BOX.

SPECIFICATION forming part of Letters Patent No. 450,140, dated April 14, 1891.

Application filed June 12, 1890. Serial No. 355,116. (No model.)

To all whom it may concern:

Be it known that I, ELISHA P. H. CAPRON, a citizen of the United States, residing at Norwalk, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Stop-Cock Boxes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain novel features involved in the construction of stop-cock boxes for water, gas, and other pipes, as will be hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of the tubes or pipes separated from each other. Fig. 2 is a transverse section of the outer pipe on a line with the internal teeth. Fig. 3 is a transverse section of the adjustable pipe on a line with the external transverse teeth. Fig. 4 is a longitudinal section of the stop-cock box complete. Fig. 5 is a detail of the cap and the top of the top pipe. Fig. 6 is a detail view of the supporting-arch hereinafter described.

It will be understood that the object of a stop-cock box is to afford easy access to the stop-cock of service-pipes, that the supply of water or gas may be readily controlled. One of the great disadvantages met with in the use of these boxes as now constructed is that no adequate means are provided to easily adjust the top of the box to the varying height of the grade.

I am aware that a telescopic pipe having screw-threaded surfaces or engaging-lugs has been the subject of Letters Patent; but practice has demonstrated that these forms of construction are not unobjectionable.

The object of my invention is to provide a stop-cock box that can be readily adjusted to conform with the line of grade, and also to compensate the expansion and contraction of freezing and thawing.

Referring in detail by letter to the various parts of my invention, A is the lowermost and internal pipe, which is constructed with the desired diameter, having the base-plate B rigidly secured to its lower end. As the lower end of the pipe is cut away on each side to form the openings *a*, that it may straddle the service-pipe, it will be seen that the base-plate B is practically in two pieces, as shown. The upper part of the opening *a* in the lower end of the pipe A is rounded to conform to the periphery of the upper side of the service-pipe; but it will be seen that this part of the pipe A does not come in contact with the service-pipe, as the U-shaped shoulders C reach upward from the inner edges of the plate or plates B, and, being a little lower than the top of the openings *a*, will prevent the same from coming in contact with the service-pipe. It will be understood that though the service be made of lead it will not be injured by the cutting-edges of the pipe A coming in contact therewith. The shoulders C are not connected to the pipe A, but are properly re-enforced and braced upon each side by the braces *c*, as shown in Fig. 1. A short distance above the shoulders just described the pipe A decreases slightly in diameter, forming the offset 2, while near the middle of the length of said pipe it is further provided with the collar *a'*, cast thereon, upon which will normally rest the adjustable section D, which is of proper diameter to snugly encircle the pipe A. A longitudinal groove 3 is cast in the outer side of pipe A, while a rib 4 is provided on the inner surface of the section D, which is adapted to engage with said groove. thus preventing all lateral movement of said section when it is in the operative position. When the adjustable section is resting on the collar *a'*, the top of the pipe A will extend slightly above said section, that the latter may have sufficient room for movement between said collar and the set-screw *a''* secured in the top of pipe A, as shown. Said set-screw also prevents the adjustable section being accidentally raised off of pipe A. This adjustability of these parts constitutes a valuable feature of my invention, as it enables the upper part of the box to rise and lower with the action of the frost.

Upon opposite sides of the adjustable section D, reaching from the top to the bottom thereof, I cast a series of transverse teeth E, the right or left hand ends of which are somewhat pointed or beveled, while the other ends thereof terminate in a longitudinal rib F. Each series of teeth E occupy about one-

fourth of the surface of the circumference of the section D, leaving the remaining surface thereof clear. The stop-cock box is completed by the addition of the top piece G, which is of proper diameter to inclose the adjustable section D, with its teeth E. This top pipe G is provided on its inner surface, in like manner, with a series of teeth H, which are like the teeth E, except that they terminate in longitudinal ribs 5, so placed that the free ends of the teeth will enter freely between the ends of the teeth E. It will be seen that the teeth H will move freely up or down on the blank sides of the adjustable section when the pipe G is lowered or raised into position over the same. When the top pipe G is thus placed over the section D, it will be seen that it may be secured at any desired point by a lateral turn thereof, thus causing the teeth H to enter between the teeth E, and when the teeth strike against the respective ribs of the other teeth the operator will know that the full bearing-surface thereof is utilized. A reverse movement of the pipe G will disengage the teeth, when such pipe may be raised or lowered or entirely removed. Said longitudinal ribs serve the additional purpose of strengthening the teeth. The top of the pipe G is provided with the locking-cap I, constructed as shown in Fig. 5. This cap consists of a disk-like lid adapted to snugly fit in the top opening of the pipe G, which is provided with the lips J, placed somewhat obliquely to the pipe to act as threads of a screw, that the depending transverse arm K on said lid will engage therewith, and when the lid is rotated be readily secured. The top of the lid is provided with a nut, which is countersunk and cast therewith, so that a wrench may be used to effectively secure the lid in position, and thus necessitate the use of a wrench when it is desired to remove the lid.

All the parts of the lid are preferably cast integrally, and as the nut on the top thereof is sunken below the surface it is not liable to be broken off.

I have described a preferred form of construction for all the various parts; but I desire to state that, if so preferred, the longitudinal groove and rib in the side of the adjustable section and pipe A might be dispensed with, and in lieu thereof a slot may be provided in the said section, through which shall reach a set-screw connected to the pipe A. The adjustable section may be dispensed with in climates where the action of the frost is not felt, in which case the teeth E are cast on the surface of pipe A and adapted to engage the teeth H, as described.

In operation an opening is made in the usual manner down to the stop-cock on the service-pipe, and the pipe A, with its connected base, which is cast integrally therewith, is placed over the stop-cock, so that the shoulders C will rest upon the service-pipe. The adjustable section D is then placed upon this pipe so that the internal longitudinal rib thereon will engage with the groove in the pipe A, when the set-screw may be secured in the upper part of said pipe, and thus prevent the liability of the adjustable section being accidentally removed therefrom. The adjustable section resting upon the collar a' is now ready to receive the top pipe G, which is lowered around the same, and when the top thereof is on a line with the grade a lateral turn will cause the teeth H to enter between the teeth E until the ribs are reached, when the work is done, except to fill in the earth around the pipe.

Having thus described my invention, further reference to the various parts is deemed unnecessary.

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

1. In an adjustable stop-cock box for water and gas, the pipe A, resting on and cast integrally with the base B, the shoulder C, arranged diametrically opposite on the outer side of the pipe A and adapted to rest upon the service-pipe, the adjustable section D, having the transverse teeth and the longitudinal rib on the outer sides thereof and further provided with the internal rib adapted to engage the groove in the pipe A, the collar a', secured around the pipe A and arranged to receive the weight of the adjustable section, and the top pipe G, having on its internal surface teeth H, terminating in a longitudinal rib, said teeth being adapted to engage with corresponding teeth on the adjustable section and arranged to encompass the adjustable section and be secured by the teeth by a lateral turn, substantially as set forth.

2. The combination of the pipe A, having at its lower end the base adapted to fit over a service-pipe and having the set-screw a'' at its upper end, the adjustable section provided with lateral teeth, and the upper pipe G, provided with internal teeth adapted to engage the external teeth of the said adjustable section and having a removable cap at its upper end, substantially as set forth.

3. The combination of the pipe A, having in its outer surface a longitudinal groove and secured integrally to the rectangular base B, having the independent shoulders C, the adjustable section provided with lateral teeth terminating in the longitudinal rib and having the vertical interior rib, the upper pipe G, provided with internal teeth adapted to engage the teeth on the outer side of the adjustable section, and the cap I, having the depending transverse arm K to the outer integrally-secured nut, all substantially as described.

4. In a stop-cock box for water and gas, the combination of the top pipe G, having the series of interior transverse teeth H, each series occupying about one-fourth of the circumference of the pipe and engaging with the teeth of the section D, the adjustable section D, provided on each side with the series of ex-

ternal transverse teeth, each series occupying about one-fourth of the circumference of the pipe and having the vertical interior rib, and the pipe A, the bifurcated end of which is secured to the base-plate B, carrying the independent shoulder C, both of which are cast integrally with said pipe and further provided with the longitudinal groove adapted to allow the adjustable section to move freely up and down thereon with the action of the frost, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ELISHA P. H. CAPRON.

Witnesses:
W. H. MALONE,
H. C. MITCHELL.