# W. H. BARNS.

## SERVICE-BOXES FOR THE SHUT-OFF COCKS OF GAS AND WATER-PIPES.

No. 194,402. Patented Aug. 21, 1877.

*Fig. 1.*

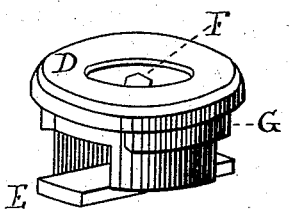
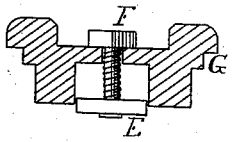
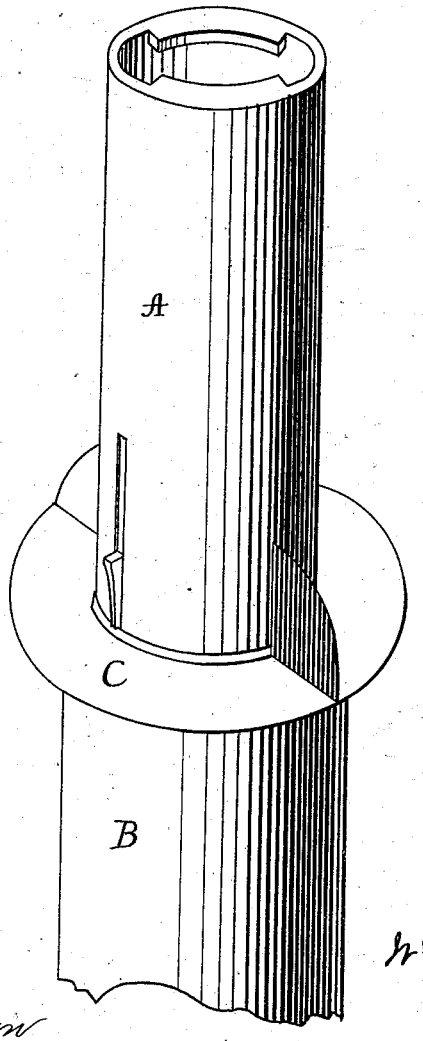



*Fig. 2.*




WITNESSES

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# UNITED STATES PATENT OFFICE.

WILLIAM H. BARNS, OF NEW LONDON, CONNECTICUT.

## IMPROVEMENT IN SERVICE-BOXES FOR THE SHUT-OFF COCKS OF GAS AND WATER PIPES.

Specification forming part of Letters Patent No. **194,402**, dated August 21, 1877; application filed July 23, 1877.

*To all whom it may concern:*

Be it known that I, WILLIAM H. BARNS, of New London, in the county of New London and State of Connecticut, have invented certain new and useful Improvements in Service-Boxes or Shut-Off-Cock Boxes for Gas and Water Pipes; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to furnish a cheap, efficient, and durable case or tube, through which access may be had, when desired, to the underground stop or shut-off cock in the small pipe which carries gas and water from the street-mains to the house, which cock is usually placed near the outer edge of the sidewalk, in front of the house supplied.

In the drawing, Figure 1 is a perspective view of my device with the cap. Fig. 2 is a sectional view of the cap.

A is a metal tube—"surface-tube" it may be called, since it is the one whose upper end is at the level of the ground.

B is a pipe, of drain-tile or cement, which is of greater diameter than A to permit it to fit over the cock.

C is a disk of metal, fitted closely around the upper tube, with one or two flanges on its upper side, and which is keyed to the tube by a metal key, fitted into a slot in both tube and disk.

The cap D has a saucer-shaped depression in its upper surface. Through a hole in its center passes a screw, F, the head of which is formed to take a key or wrench, and the lower end of which works in a thread in the toggle E, the ends of which are intended to catch under the lugs cast on the inside of the upper end of the tube A. The lower end of the screw, after passing through the toggle, is upset or riveted over, so that it may not be disconnected from the toggle and either part lost. The lugs on the inside of the tube A go but one-fourth of the way around the inner circumference of the tube, and two rims cast on the under side of the cover correspond with and fit into them.

The cover is put on as follows: The ends of the toggle are placed in the spaces between the lugs, and the cap turned, either to the right or left, one-fourth of a revolution, when the rims on the cap drop into the spaces between the lugs, and the cover rests on the end of the tube and closes it. In this position the ends of the toggle are under the lugs, and, even without setting up the screw, the cap is as firmly fixed as most of the devices in common use. A key or wrench is now applied to the screw-head, and the toggle brought tightly against the lugs, and the cap is secure. It will not turn in either direction, and it cannot be lifted off by any force less than breakage, and the head of the screw, being protected by the rim of the saucer in which it is placed, cannot be disturbed by anything passing over it.

The operation of my device is as follows: The tile or cement-pipe is placed vertically, with its lower end over the cock. The disk is placed around the metal upper tube, the lower end of which is put inside the cement pipe, and the upper end on a level with the soil. In this position the key, which may be a common nail, is driven into the slot, and the upper tube cannot slip down, nor be disarranged in any way, and the disk keeps dirt from getting into the joint between the pipes, while the flange on it prevents the pipes from being turned in the ground.

The upper metal pipe may be but a short length. The object of using a lower piece of tile being its indestructibility and its cheapness, as long a piece may be used as the depth at which the gas or water pipes are placed may warrant.

I am aware that service-boxes of two parts or pieces have been used; but when made of wood, they perish so quickly as to require constant care and frequent resetting, and, when constructed wholly of metal, are so expensive that they have not been generally adopted.

In my arrangement the cost of the metal part is compensated for by the cheapness of the tile, and, taken in connection with the durability of both materials, this device competes fairly in cost with the perishable wood box

and its iron cover, with the additional advantage that when once set it is permanent, and not likely to need repairs.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The cap D, having the rims G on its under side to fit corresponding spaces between the lugs of the tube, the cap being thereby prevented from turning, and having the toggle E, with its set-screw F, substantially as described.

2. In a service-box or tube for underground stop-cocks formed of two parts, the combination of the upper tube A and the disk C, fitted around and keyed to it, substantially as described.

3. A service-box or tube for underground stop-cocks formed of two parts, having its upper part A of metal, in combination with the disk C, and its lower part of clay or cement drain-pipe, substantially as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

WILLIAM H. BARNS.

Witnesses:
C. BUTLER,
GEO. B. PREST.