

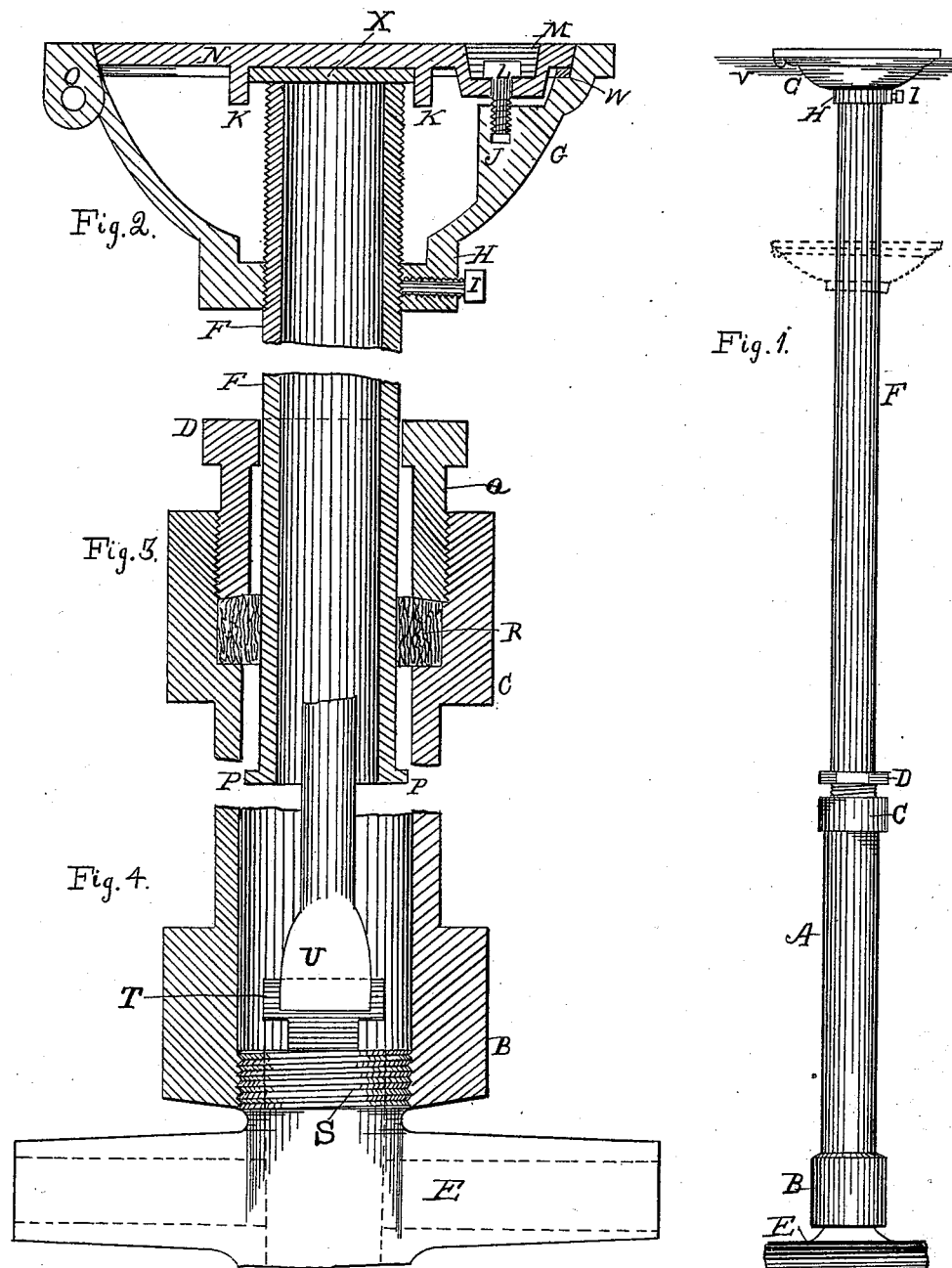
(No Model.)

B. B. BIGNALL.

STOP COCK BOX FOR WATER OR GAS SERVICE PIPES.

No. 421,897.

Patented Feb. 25, 1890.



Witnesses.

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UNITED STATES PATENT OFFICE.

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STOP-COCK BOX FOR WATER OR GAS SERVICE PIPES.

SPECIFICATION forming part of Letters Patent No. 421,897, dated February 25, 1890.

Application filed January 29, 1889. Serial No. 297,986. (No model.)

To all whom it may concern:

Be it known that I, BURNETT B. BIGNALL, a citizen of the United States, and a resident of St. Charles, in the county of Kane and State of Illinois, have invented certain new and useful Improvements in Stop-Cock Boxes for Water or Gas Service Pipes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form part of this specification.

The object of my invention is to provide a box for gas or water service cocks which shall be water-tight and at the same time be capable of extension to different depths in the ground to a service-cock and be longitudinally expansive, so that frost in heaving the upper section will not disturb the bottom portion connected with the service-cock. It is essential that these boxes be kept absolutely free from leakage and be capable of such longitudinal extension that any lifting of the top section or extension-pipe will not disturb the lower section, which is in most instances below the line of frost.

In my device I secure the advantages required by a telescope or extension pipe having the service-cock screwed fast to the bottom section, with a device for packing near its upper end made tight, so that the smaller or extension pipe may have the required reciprocating movement therein without admitting water. The small pipe having outwardly-extending lugs on its lower end, it cannot be wholly withdrawn from the lower section and carried off. The top end of said extension-pipe is covered by a packing in a cup of the lid, which keeps it free from water, and consequently ice and water are kept out of the box, so that a key U can at all times be placed therein and the service-cock be readily reached and operated.

Referring to the drawings, Figure 1 represents the elevation of my improved stand-pipe complete and ready for use. Fig. 2 is an enlarged central vertical section of the upper portion of the same. Fig. 3 is a like view of the middle portion, and Fig. 4 is a like view of the lower portion, showing the large pipe or box secured to the stop-cock.

Like letters refer to corresponding parts in each figure of the drawings.

A represents the lower and larger pipe of

the box, with an enlargement B on its lower end, provided with an internal screw-thread to enable it to be secured to the vertical portion S of the service-cock E, beneath the surface of the ground. The upper end of this pipe is also provided with an enlarged section C, having its inside recessed outward and screw-threaded, forming an internal diameter equal to the outer diameter of the main body of the pipe below. This enlarged inner section is provided with an externally-screw-threaded sleeve Q, the upper end of which is formed into a nut-head D, which is flanged inward to fit closely around an extension-pipe F working therein. The recess is provided with a rubber or other soft elastic annular packing R, which rests on its lower shoulder, having an inner diameter slightly less than the outer diameter of the extension-pipe and of the bore of the lower and larger pipe of the box. The extension-pipe F is of smaller diameter than the opening or bore of the lower pipe A, and is adapted to work up and down therein through the sleeve Q and packing R, forming a water-tight joint therewith. The lower end of the extension-pipe is flanged outward or provided with lugs P, which loosely fill the diameter of the bore of the lower pipe A. When the extension-pipe is drawn upward a sufficient distance, the flange or lugs P strike the packing R and prevent the pipe from being drawn out and carried away. This pipe may be lowered to the cock-stem T, or be adjusted at any suitable convenient point between the cock-stem and packing, as the depth of the water-pipe in the ground may require. The extension-pipe F is held in its adjustable position by the support V on the top of the cup-shaped cap G, which rests within the upper surface of the ground or pavement. This cap is formed with a central screw-threaded opening in its thickened annular bottom H, to receive the upper screw-threaded end of the extension-pipe F, which is extended into the cap until its upper end is near the upper plane of the cap. The cap G is held on the extension-pipe F, and is prevented from being screwed off and carried away by means of a set-screw I, which extends through the edge of the annular bottom H, at right angles with the pipe, and is screwed up against the pipe. The cap G is provided with a cover N,

hinged at O, to one side of the cap, with its edge or flange resting on an annular packing W, of any suitable elastic material, in a recess on the inner side of the upper edge of the cap. From the central portion of the under side of the cover N there is an annular flange forming an inverted cup K, which fits down on and around the upper end of the extension-pipe F, and by means of suitable packing X in the bottom of said cup a water-tight joint is formed therewith to prevent any water from entering the upper end of the extension-pipe. Near the opposite edge of the cover from the hinge there is a recess M, having a screw-hole through its bottom and into a re-enforced portion J of the inside of the cup below, in which a screw L is placed and countersunk to hold the cover firmly down upon the packing W in the recess of the flange of the cap, and the packing X in the bottom of the inverted cup of the cover, thereby forming a water-tight joint with the upper end of the extension-pipe and holding the cover in place.

I am aware that it is not new to form a stop-cock box with an extension, and also that stop-cock boxes have been provided with hinged covers, and such I do not claim, broadly; but,

Having fully described my invention, what I do claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination, with an extensible stop-cock box, of the lower pipe having its upper end enlarged and recessed outward from its inner opening and screw-threaded, an elastic annular packing in said recess having an opening of less diameter than that of the pipe below and resting on the lower shoulder of the recess, and an externally-screw-threaded sleeve in said recess, with its lower end resting on the packing and its upper end forming a nut-head flanged inwardly and closely fitting around an extension-pipe, said extension-pipe working up and down within the lower pipe, packing, and sleeve and having on its lower end outwardly-extending flanges or lugs, as set forth.

2. The combination, with a stop-cock box having the upper end of the lower pipe enlarged and recessed, with a packing and sleeve therein carrying an extension-pipe within the lower pipe and forming a water-tight joint therewith, of the upper end of the extension-pipe extending through a cup-shaped cap, said cap having a hinged cover thereon with an inverted cup on its underside having packing therein, said cup fitting down over and around the tops of the extension-pipe, forming a water-tight joint therewith, as set forth.

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Witnesses:

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