(No Model.)

J. C. LOBDELL & A. TALCOTT.

STOP COCK BOX.

No. 604,622. Patented May 24, 1898.

Fig. 1.

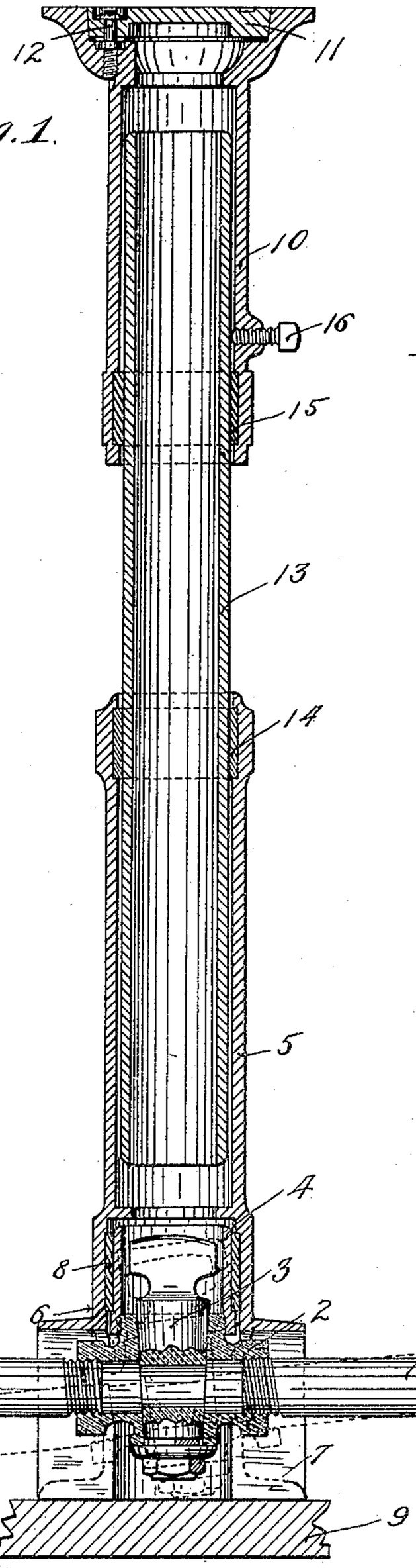


Fig. 2.

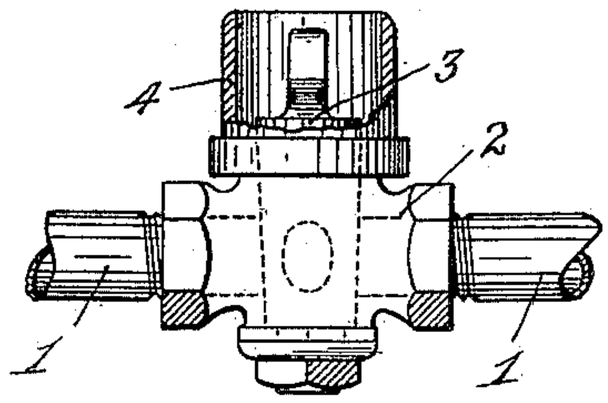
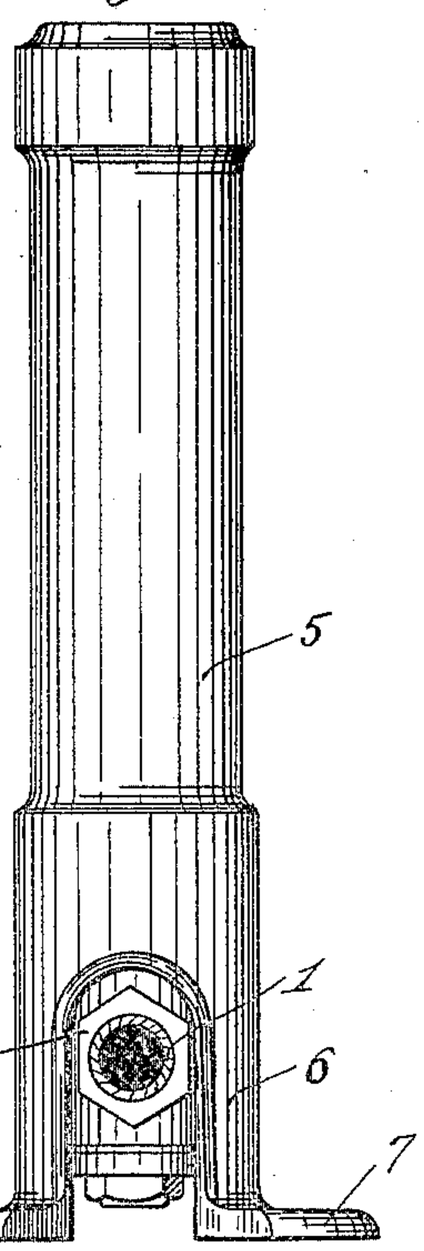


Fig. 3.



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UNITED STATES PATENT OFFICE.

JARED C. LOBDELL AND ASA TALCOTT, OF MINNEAPOLIS, MINNESOTA, ASSIGNORS OF ONE-THIRD TO HENRY F. HODGE, OF SAME PLACE.

STOP-COCK BOX.

SPECIFICATION forming part of Letters Patent No. 604,622, dated May 24, 1898.

Application filed July 2, 1897. Serial No. 643,218. (No model.)

To all whom it may concern:

Be it known that we, JARED C. LOBDELL and ASA TALCOTT, citizens of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Stop-Cock Boxes for Water or Gas Service Pipes; and we 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.

Our invention has for its object to provide an improved stop-cock box for water and gas service pipes. As is well known, these pipes are located a considerable distance below the surface of the ground, and the function of the so-called "stop-cock box" is to form an opening and a guide for the long key-rod, which is applied to the valve of the stop-cock to open and close the same. Our invention is especially designed for use in connection with stop-cocks which are applied in the branch pipes between the street or main supply pipe and the house connections therefrom.

To the ends above noted our invention consists of the novel devices and combinations of devices hereinafter described, and defined in the claims.

The preferred form of our invention is illustrated in the accompanying drawings, wherein like numbers indicate like parts throughout the several views.

Figure 1 is a view principally in central vertical section, but partly in side elevation, with some parts broken away, showing our improved stop-cock box applied in working position to the stop-cock of a water or gas pipe. Fig. 2 is a view in side elevation, with some parts broken away, of the stop-cock and sections of the pipe shown in Fig. 1; and Fig. 3 is an elevation of the lower section of the stop-cock box and the stop-cock, looking at the same at an angle of ninety degrees from the direction in which Figs. 1 and 2 are viewed.

1 indicates sections of a pipe which for the purposes of illustration may be assumed to be a branch water-pipe which extends from the main or street water-pipe to the house connections, which pipe is provided with an ordinary stop-cock 2 3. These parts being of the ordinary construction, the sections of the pipe 1 are screwed or tapped into the casting 2 of the stop-cock, and the valve 3 is provided with a flattened head for the application of the ordinary key-rod. (Not shown.)

To adapt the stop-cock for the application of our improved box, we provide the casting 2 with a vertically-extended annular flange or nipple section 4, which surrounds the flattened head of the valve 3 and, as shown, is screw-threaded onto a screw-threaded portion of said casting 2.

As preferably constructed our improved stop-cock box involves three telescopically-engageable sections which are tubular in form. Of these sections the lower section 5 is provided at its lower end with a slightly expanded and pronged or bifurcated base 6, the prongs of which terminate in flanges or feet 7. When placed in working position, the expanded and bifurcated portion 6 of this lower section 5 is adapted to telescope with the nipple or flange section 4 of the stop-cock casting 2, with its prongs straddling or embracing the pipe-joining sections of said casting 2. The internal tubular portion of that part of the expanded base 6 which telescopes with the nipple or flange 4 is slightly chambered or channeled to receive an annular gasket or piping 8, preferably of rubber and necessarily of some yielding material. This gasket 8 engages the exterior of the annular flange or nipple 4 and forms a tight joint therewith, but will nevertheless yield, so as to permit the stop-cock and pipe 1 to be given an angular movement with respect to the stop-cock box, as indicated by dotted lines in Fig. 1, without producing excessive strains on any of the parts. The importance of this construction will be more clearly brought out later on. Usually the flanges or feet 7 would be secured, by means of screws (not shown) or otherwise, to a plank or board, (indicated at 9,) which plank or board is embedded in the ground immediately under the stop-cock 2 3. It will thus be seen that the stop-cock box is self-supported, or, in other words, its weight is not thrown upon the stop-cock or its pipe connections.

The top or uppermost tubular section 10 of the stop-cock box is, as shown, expanded to form a seat for a countersunk removable cap or cover 11, which is of ordinary construction and is held in place by means of a screw 12.

The intermediate tubular section 13 of the box telescopes into the upper end of the lower box-section 5 and into the lower end of the upper box-section 10. Substantially watertight joints are formed between the intermediate section 13 and the sections 5 and 10 by means of flexible annular gaskets or packing-rings 14 and 15, which are secured in annular channels or chambers formed, respectively, in the upper and lower ends of the said box-sections 5 and 10. These annular channels or chambers securely hold the gaskets 14 and 15 against axial movement or displacement without the use of cement or other device. The gaskets or rings 14 and 15 also frictionally hold the box-sections 5, 10, and 13 against telescopic movement by their own weight. However, we preferably secure the upper box-section 10 to the intermediate section 13, when the proper adjustments of the parts of the box have been made, by means of a set-screw 16, working through said box-section 10 and impinging on said box-section 13.

In the ordinary construction the lower end of the lowermost box-section of the stop-cock box is screw-threaded directly onto the stop-cock casting. As the earth settles or changes its position under the action of frost, rain, &c., the sections of the pipe to which the stop-cock is applied will expand, contract, and assume different angular positions with respect to the stop-cock box. With the ordinary construction just referred to these changes in position of the pipe and stop-cock will throw such strains on the connection between the stop-cock and the stop-cock box that either this connection or the connections between said pipe and the stop-cock casting will be broken. With our invention above described this liability of breakage is obviated and rendered impossible, as the flexible joint between the stop-cock box or the flange 4 thereof and the box-section 5 will readily yield to permit the irresistible movements of the pipe and stop-cock. By practical experience, both with the so-called "standard" or "ordinary" constructions and with our improved stop-cock box, we have found the above statements to be true.

By the use of the intermediate box-section, which is made to telescope with the upper and lower box-sections, we obtain twice the amount of possible adjustment that can be attained with a construction wherein one of two box-sections is simply given telescopic engagement with the other. It is of course obvious that under the action of expansion and contraction, either of the earth or of the parts of the stop-cock box, or of both, the sections of the said box will, by their telescopic movement, automatically adjust themselves to the varying conditions. It is also thought to be evident from the disclosures above made that various alterations in the specific details of construction above described may be made without departing from the spirit of our invention.

What we claim, and desire to secure by Letters Patent of the United States, is as follows:

1. A stop-cock box, securable at its lower end to the stop-cock, by means of a joint which permits angular movement of said parts with respect to each other, substantially as described.

2. A stop-cock box, securable to the stop-cock, by means of a telescopic flexibly-packed joint which permits angular movement of said parts with respect to each other, substantially as described.

3. A stop-cock box formed in sections, the lower of which is applicable to the stop-cock, the upper of which is securable at or near the surface of the ground, and the intermediate section of which telescopes with said upper and lower box-sections, with freedom for endwise sliding movements substantially as described.

4. A stop-cock box formed in sections, the upper of which is securable at or near the surface of the ground, the lower of which is securable to the stop-cock by means of a telescopic flexibly-packed joint, and the intermediate section of which telescopes with said upper and lower box-sections, substantially as described.

5. A stop-cock box, formed in sections, the lower of which is applicable to the stop-cock, the upper of which is securable at or near the surface of the ground, and the intermediate section of which telescopes with said upper and lower box-sections, and is connected therewith by means of flexible gaskets, secured in channeled seats formed, respectively, in said upper and lower box-sections, substantially as described.

6. The combination with a stop-cock located beneath the surface of the ground, of a stop-cock box, formed with telescopic sections, the lower member of which is connected to said stop-cock, by a telescopic joint and is pronged or bifurcated to form a supporting-base, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

JARED C. LOBDELL.
ASA TALCOTT.

Witnesses:
JAS. F. WILLIAMSON,
BESSIE B. NELSON.