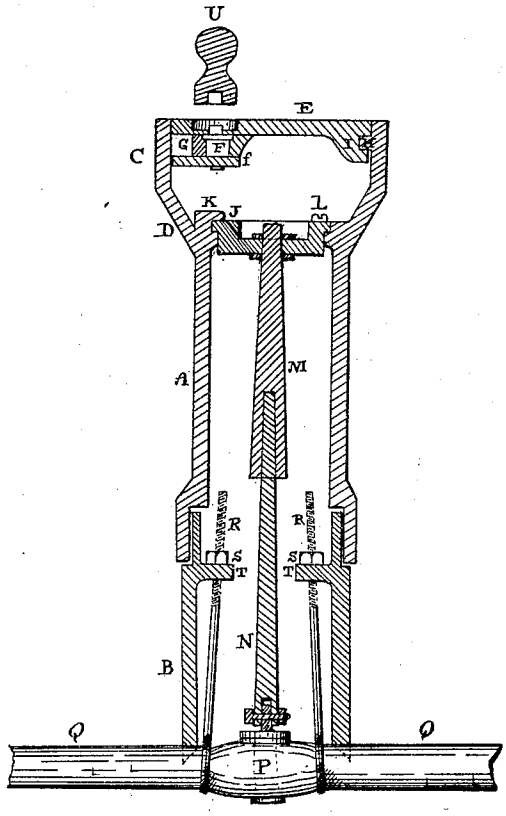
W. J. SMITH.

BOXES FOR STOP-COCKS IN WATER-PIPES.

No. 173,822. Patented Feb. 22, 1876.



WITNESSES.

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WILLIAM J. SMITH, OF LANCASTER, PENNSYLVANIA.

IMPROVEMENT IN BOXES FOR STOP-COCKS IN WATER-PIPES.

Specification forming part of Letters Patent No. **173,822**, dated February 22, 1876; application filed January 22, 1876.

To all whom it may concern:

Be it known that I, WILLIAM J. SMITH, plumber, in the city of Lancaster, in the county of Lancaster, State of Pennsylvania, have invented certain Improvements in Boxes for Stop-Cocks in Water-Pipes, of which the following is a specification:

The object of this invention is to provide an extensible box and key-rod, in combination with an ordinary branch-pipe and its stop-cock, coming from the main water-pipe to dwellings, so as to accommodate itself to the action of frost, and thereby prevent the breaking of stop-cocks, at the same time so easily managed that the occupant of the premises can at once stop off the water should a pipe be ruptured by the freezing of the water in it, as frequently happens during severe winters, often tedious for the plumber to remedy. The delay, flooding, expense and damage to property is hereby prevented.

The accompanying drawing is a vertical section of the combined cylinders and key-rods fitting loosely, yet closely, over each other, with the letters of reference marked thereon. A brief explanation thereof will enable those skilled in the art to make and use the same. The upper section A of the cylinder sets over the lower section B by having the lower part widened, or what is termed "faucet" and "spigot" ends or coupling, but kept loose to allow play in case of frost raising the ground surrounding the upper section of the box. The upper portion of the cylinder A is flared out at D, and produced into an oblong or square box, C, the upper edge of which is designed to come on a level with the pavement or sidewalk. A top or lid, E, sets in even with the edge of the box C, and rests upon flanges G and H opposite each other, cast with the box, thus closing the top flush. In order to lock the lid, projecting lugs I are cast to the under side of one edge to set under the rear flange H, while a turn-button or latch, *f*, (on a key-shaft, F,) is turned under the flange G and locked, by means of an ordinary socket or wrench key, U. There is a depressed circular bore or chamber for the admission of the key shown to operate the latch *f* on the upper surface of the lid. There is removable bottom J, also centrally dished above, set under a fixed lug, K, on one side, and secured by a single screw-bolt, L, on the other; a central portion is countersunk for a washer, secured so as to hold the upper section M of the key-rod (by a pin) with its square or arbor adapted to the same socket-key U, and which projects through the bottom J. This section M has a long square socket below to receive the upper squared portion of the lower section N of the key-rod. This latter is connected with the stop-cock O P in the ordinary manner, as is its connection with the water-pipe. The lower section of the cylinder is firmly connected with the pipe by rods R passing through lugs T, cast on the inner side, made adjustable by a brass nut and screw-end to the rod, (S R.) These rods end in a hook, to embrace the pipe on each side of the stop-cock, and draw the cylinder tightly over the pipe. A circular notch on two opposite sides is made in the lower edge of the cylinder B to receive the pipe. This being below the frost-line, is never affected, while the upper section A with the upper section M of the rod may be raised six inches, and yet no injury will happen or prevent the action of the key on the stop-cock. Thus a serious evil is overcome, often exceedingly difficult to remedy, as it involves digging up the frosted ground, removing the brick or rotten wood or rubbage lodged around and over the cock to prevent access, as heretofore constructed. This construction of the box and rods will apply equally well to hydrants or pave-wash, and the like, to prevent rupture in the parts by the action of frost, or other causes of strain, when provided with sliding or yielding sections.

I am aware that various stop-cock boxes have been used; but I am not aware of any ever before used constructed substantially as herein set forth.

What I claim as my invention in stop-cock box or cylinders is—

The combination of the two sections of the key-rod M N and box or cylinders A B, with the lid E having flanges G H, turn-latch F *f*, and bottom J, made removable in the upper or yielding section A, the lugs T for the hook-ended clamp-rods R, provided with a screw-end and nut S, firmly connecting the lower section B with the pipe Q, the whole arranged substantially as and for the purpose specified.

W. J. SMITH.

Witnesses:

W. B. WILEY,

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