H. E. TOWLE & R. H. PLASS.

ATTACHMENT FOR AUTOMATICALLY CLOSING COCKS AND FAUCETS.

No. 189,153. Patented April 3, 1877.

Fig. 3.

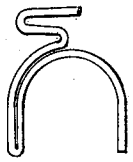


Fig. 1

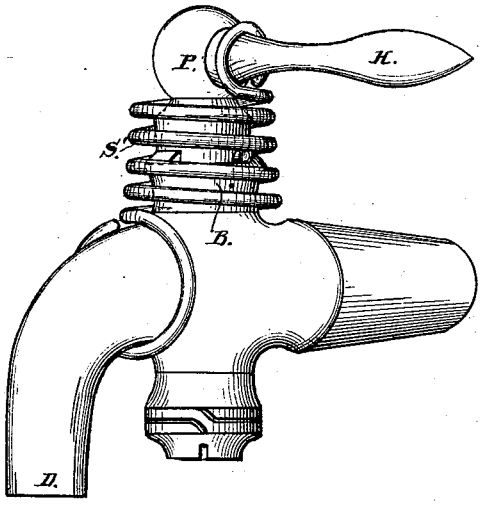
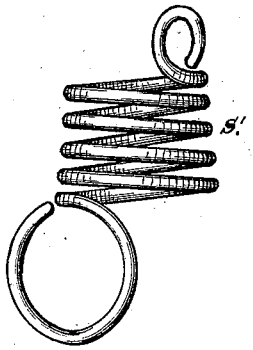


Fig. 2.



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HAMILTON E. TOWLE, OF ROSELLE, N. J., AND REUBEN H. PLASS, OF NEW YORK, N. Y.; SAID PLASS ASSIGNOR TO SAID TOWLE.

IMPROVEMENT IN ATTACHMENTS FOR AUTOMATICALLY CLOSING COCKS AND FAUCETS.

Specification forming part of Letters Patent No. **189,153**, dated April 3, 1877; application filed August 26, 1876.

To all whom it may concern:

Be it known that we, HAMILTON E. TOWLE, of Roselle, Union county, New Jersey, and REUBEN H. PLASS, of New York, N. Y., have invented an Improvement for Automatically Closing Cocks and Faucets; and we do hereby declare the following description and accompanying drawings to be sufficient to enable any person skilled in the art to make and use our said improvement without further experiment or invention.

The object of our invention is to provide an attachable spring to cocks and faucets which have already been made, and which may be in actual use; and the invention is not expected to be made and applied as a part of the cock or faucet when the latter already is constructed, but is especially devised and constructed so as to be applied, and in an easy and simple manner, to cocks, valves, or faucets in actual use, so as to avoid the necessity of removing the old cock or faucet in order to make it self-closing by the automatic reaction of the attachable spring, which is the substance of the invention.

Figure 1 is a perspective view of an ordinary faucet, with our spring in working position. Fig. 2 shows the same detached. Fig. 3 represents a manner of forming the end of the spiral spring to enable the same to stretch over, or confine itself upon, its bearing, after the manner of a fork. This method is applicable at either end of the spring.

We find two forms or ways of coiling the wire of the spring sufficient for providing for nearly every case of closing plug-cocks or faucets of the general style shown in Fig. 1 of the drawings.

In such faucet the valve is opened or closed by a rotary movement of about ninety degrees of the plug of the cock. The spring is attached in such a manner that it continually presses in the proper direction to turn the plug of the cock into the closed position; and the spring is made stiff enough to overcome the ordinary resistances of friction, &c., and to carry the plug into the closed position as soon as it is released from the overpowering force of the operator who may have opened it.

A stop to prevent the plug from moving too far in either direction is advisable; but a stop to limit the motion of the plug is necessary, to stop the rotation of it at the point where the passage-way through the cock is closed; otherwise the spring might continue to move the plug beyond the proper point to cut off the communication for fluid.

The great waste now experienced—in New York city, for example—from the water lost from carelessly leaving cocks and faucets open would, by the application of our invention, be mainly stopped, with corresponding saving of water and expense to the city.

A simple form of our invention is that shown in Fig. 1, which shows the spring S spirally coiled around the plug P, one end of the spring resting against, or coiled around, the body of the faucet B, while the other end of the spring S is made to press against the handle H or lever of the plug, or against some part of the plug, some distance from its center, for the purpose of securing sufficient leverage to cause it to rotate under the reactionary force of the spring.

Where the plug is short, the spring S is coiled in a plane, and attached between the handle or lever and the body of the horizontal part of the cock; but in either case the ends of the spring find their supports or resistance against the stationary part and against the movable part of the cock or valve, to which they may be attached in any convenient and suitable manner.

The ends of the spring may be so bent as to serve as a stop against the immovable part of the cock, while at the same time the same end is bent so as to be attached to, or press against and operate to close, the movable plug.

To apply the attachable spring, it is convenient to remove the lever H by unscrewing it from the plug; then remove the plug itself, and slip the end of the spring over the discharge end D of the faucet till the spiral part is in place; then replace the plug through the coil of the spring, and put in the lever H, so as to make it receive the reactionary pressure of the spring, which will tend to keep it closed. The cock is then ready for use.

The application of the other kind of spring may be made without removing either handle or plug, by slipping it over them, and placing the bent or forked ends so as to properly press

against the fixed and movable parts, and serve, if required, also as a stop to limit the motion of the plug.

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

As an article of manufacture, a spiral spring having the ends thereof bent for attaching it to the handle and nozzle or horizontal body of a faucet, substantially in the manner and for the purpose set forth.

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