H. F. King.

Faucet.

No. 94,419. Patented Aug. 31, 1869.

Fig. 1

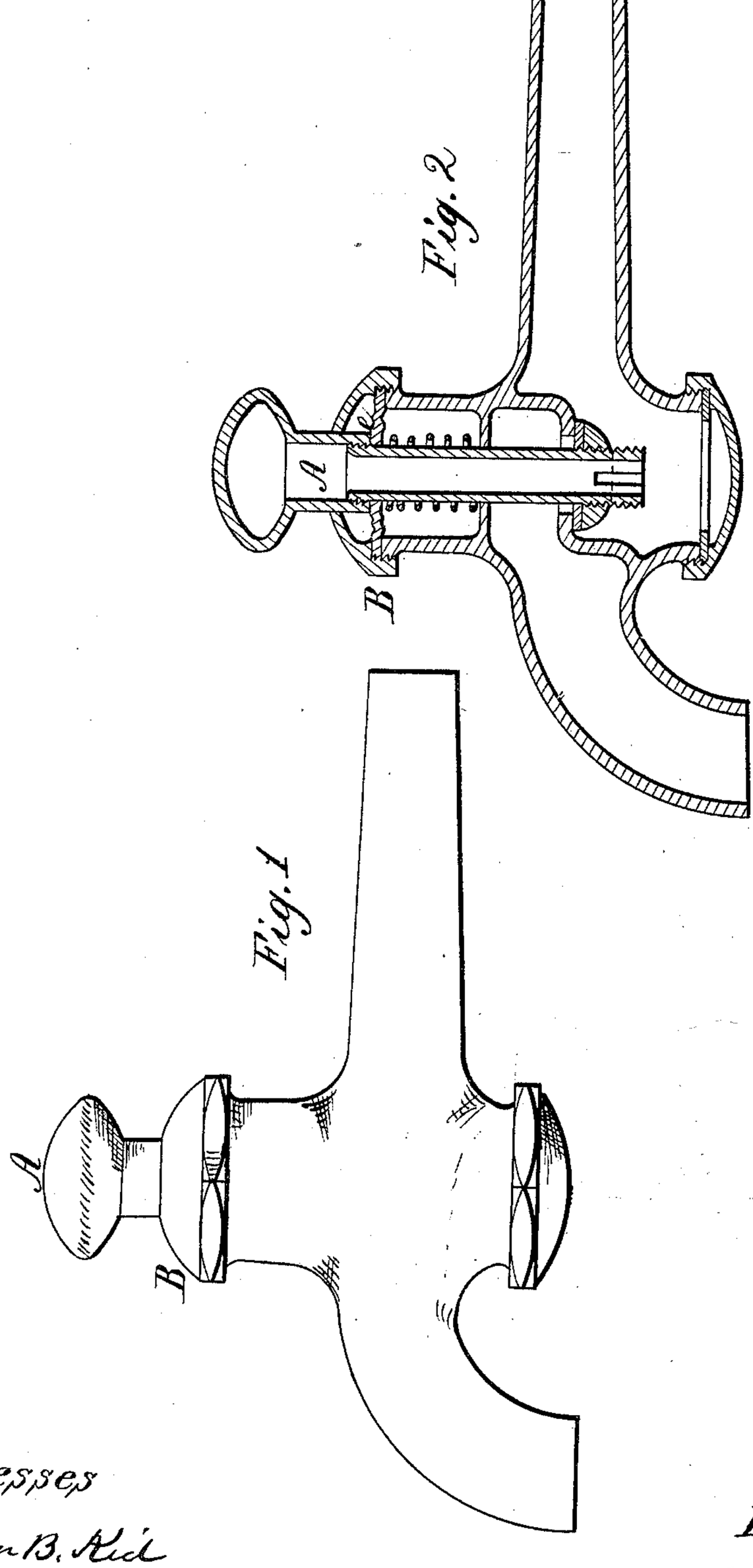


Fig. 2




Witnesses
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Robt Wkid

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HENRY F. KING, OF NEW YORK, N. Y.

*Letters Patent No.* 94,419, *dated August* 31, 1869.

## IMPROVEMENT IN SELF-CLOSING FAUCETS.

The Schedule referred to in these Letters Patent and making part of the same.

*To all whom it may concern:*

Be it known that I, HENRY F. KING, of New York, in the county of New York, and State of New York, have invented certain new and useful Improvements in Self-Acting Faucets; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view showing the faucet constructed in accordance with my said invention.

Figure 2 is a sectional view of the same passing through the centre of parts.

This invention relates, first, to that class of faucets closing with the pressure of the fluid and resting on an elastic seat, the object being to obtain a sufficiently fluid-tight valve without the use of a stuffing-box or packing, whereby a simple, cheap, and effective substitute is employed; and second, to an improved arrangement for an air-chamber, forming a part, and operating in connection with the faucet, and entirely dispensing with the cumbersome elongation of the pipe usually employed for that purpose.

The liability to derangement of the compression-faucet, as ordinarily constructed, is well known, and when there is a pressure of water to overcome, the force to open the faucet is often greater than can be exerted by the finger.

When the faucet is opened and closed suddenly, the inertia of the moving water frequently bursts the pipe, or if this action is repeated often, the joints of the pipe leak, or the valve is injured.

The introduction of an air-chamber prevents those concussions, for the elastic fluid within the chamber forms a medium for gradually overcoming the inertia of the ascending liquid columns, and thereby prevents those jars and shocks which are incident to all non-elastic substances in rapid motion, when brought suddenly to a state of rest.

Less force is required also to open the faucets that have air-vessels, because the water crowds the air into the dome, or upper part of the vessel, and by its reaction on the surface of the water, with a force exactly proportioned to the degree of its compression.

In the annexed drawing, the actuating-rod A moves freely through the cap B, and thrusts against the elastic washer *e*, the edges of which are held firmly by the cap.

The actuating-rod A is made hollow, and acts as an air-chamber.

The pressure is applied to the top of the rod, and lowers the valve from its seat, and allows the liquid to discharge, but in its closing-motion, simply withdraw the compressing-force, and it is free to close by the pressure of the liquid behind it. The liquid ascends the hollow rod, and is gradually brought to rest by the enclosed air.

I am aware that valves have been made to rise and fall vertically without being turned upon their axis, and therefore do not claim this; but

I claim a faucet, having a hollow rod, A, carrying a valve, bearing upward against its seat, in connection with the elastic packing *e*, which closes the valve with the assistance of the water, said rod acting as a handle, and forming a chamber for entrance of water when the supply is cut off, as herein described for the purpose set forth.

HENRY F. KING.

Witnesses:

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W. VAN HOUTEN.