

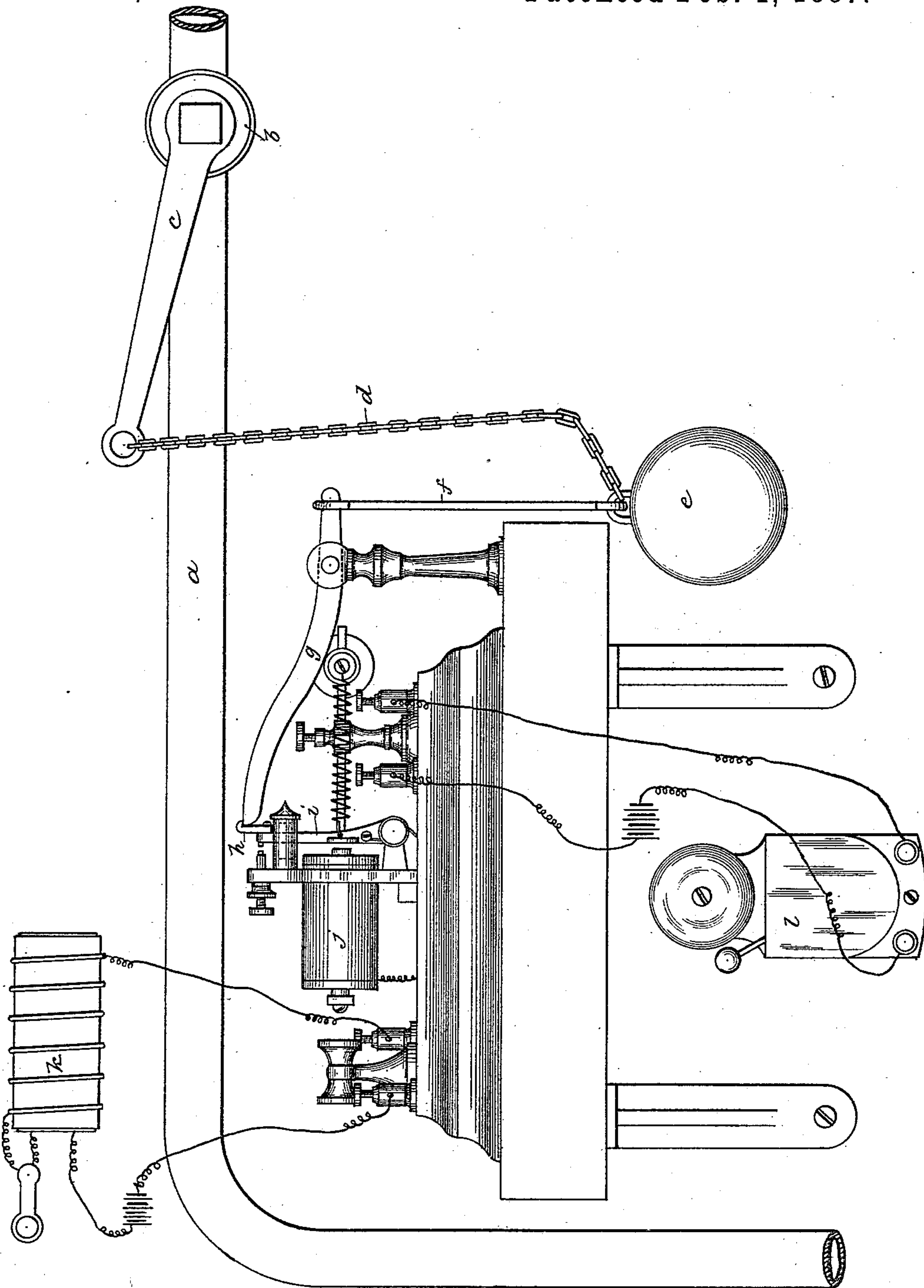
(No Model.)

L. WEIL.

AUTOMATIC ELECTRIC CUT-OFF FOR WATER PIPES.

No. 357,055.

Patented Feb. 1, 1887.



Attest:  
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7779

# UNITED STATES PATENT OFFICE.

LEOPOLD WEIL, OF NEW YORK, N. Y.

## AUTOMATIC ELECTRIC CUT-OFF FOR WATER-PIPES.

SPECIFICATION forming part of Letters Patent No. 357,055, dated February 1, 1887.

Application filed June 19, 1886. Serial No. 205,651. (No model.)

*To all whom it may concern:*

Be it known that I, LEOPOLD WEIL, a citizen of the United States, residing at New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Automatic Water-Supply Cut-Offs, of which the following is a full, clear, and exact description.

This invention is in the nature of a specific application of the generic features of my invention set forth in Letters Patent No. 336,773, granted February 23, 1886.

The invention herein consists in shutting off the water-supply of buildings automatically through the medium of apparatus rendered operative by the presence of water at unusual or undesired points. For example, in the illustration in the accompanying drawing of my invention, a water-absorbing device is constructed to render operative an electrical apparatus when said device comes in contact with water, and the electrical apparatus is connected with a cock in the water-supply pipe of a building and closes said cock. The drawing shows my apparatus in elevation.

The water-supply pipe *a* is provided with a cut-off cock, *b*, which has its lever-handle *c* connected by a chain or other flexible medium, *d*, with a weight, *e*. This weight is connected with a rod or link, *f*, which is suspended from a lever, *g*, and this lever is engaged by a hook or detent, *h*, on an armature-lever, *i*, of an electro-magnet, *j*. As shown in the drawing, the parts are in position with the valve open. When the armature is actuated by the electro-magnet, its hook *h* is disengaged from or releases the lever *g*, and the weight is then free to act by gravity, and so acting pulls its link from the lever, and then acting upon the chain and through it on the valve-lever turns said valve or cock and shuts off the water-supply.

To effect the automatic shutting off of the water through such mechanism, I connect the electro-magnet in open circuit with a water-detecting device, *k*, of substantially the construction and operation of the device of my aforementioned patent. This device, when in the presence of water, closes the electric cir-

cuit. A series of such devices may be arranged in different places in a building supplied with water, such as the wash-stands, closets, exposed pipes, &c., and connected with the electro-magnets in circuit, and whenever a leak or an overflow occurs it will be immediately detected and the apparatus set in operation.

As an auxiliary, an alarm, *l*, may be placed in the same circuit with the detector or magnet.

I do not limit my invention to the details of construction here shown, but may vary them within the state of the art.

What I claim is—

1. A water-supply pipe provided with a cut-off valve or cock, an electro-magnet and connections interposed between the two to retain said valve open and to close it, and a water-detecting device in electric circuit with the electro-magnet, rendered operative by the undesirable presence of water to operate said electro-magnet and its connections with the valve and close said valve, substantially as described.

2. A water-supply pipe provided with a cut-off valve or cock, an electro-magnet and connections interposed between the two to retain said valve open and to close it, and a water-detecting device in electric circuit with the electro-magnet, rendered operative by the undesirable presence of water to operate said electro-magnet and its connections with the valve and close said valve, and an alarm in the same circuit, substantially as described.

3. The electro-magnet in circuit and combination with the electric water-detecting device, which is rendered operative by the undesirable presence of water, a lever held inoperative by said magnet when not excited, a weight connected to said lever, and a valve in a water-supply pipe connected to said weight, substantially as herein shown and described, for the purposes set forth.

In testimony whereof I have hereunto set my hand this 15th day of June, A. D. 1886.

LEOPOLD WEIL.

Witnesses:

ARTHUR C. WEBB,

THORNE S. WALLING.