

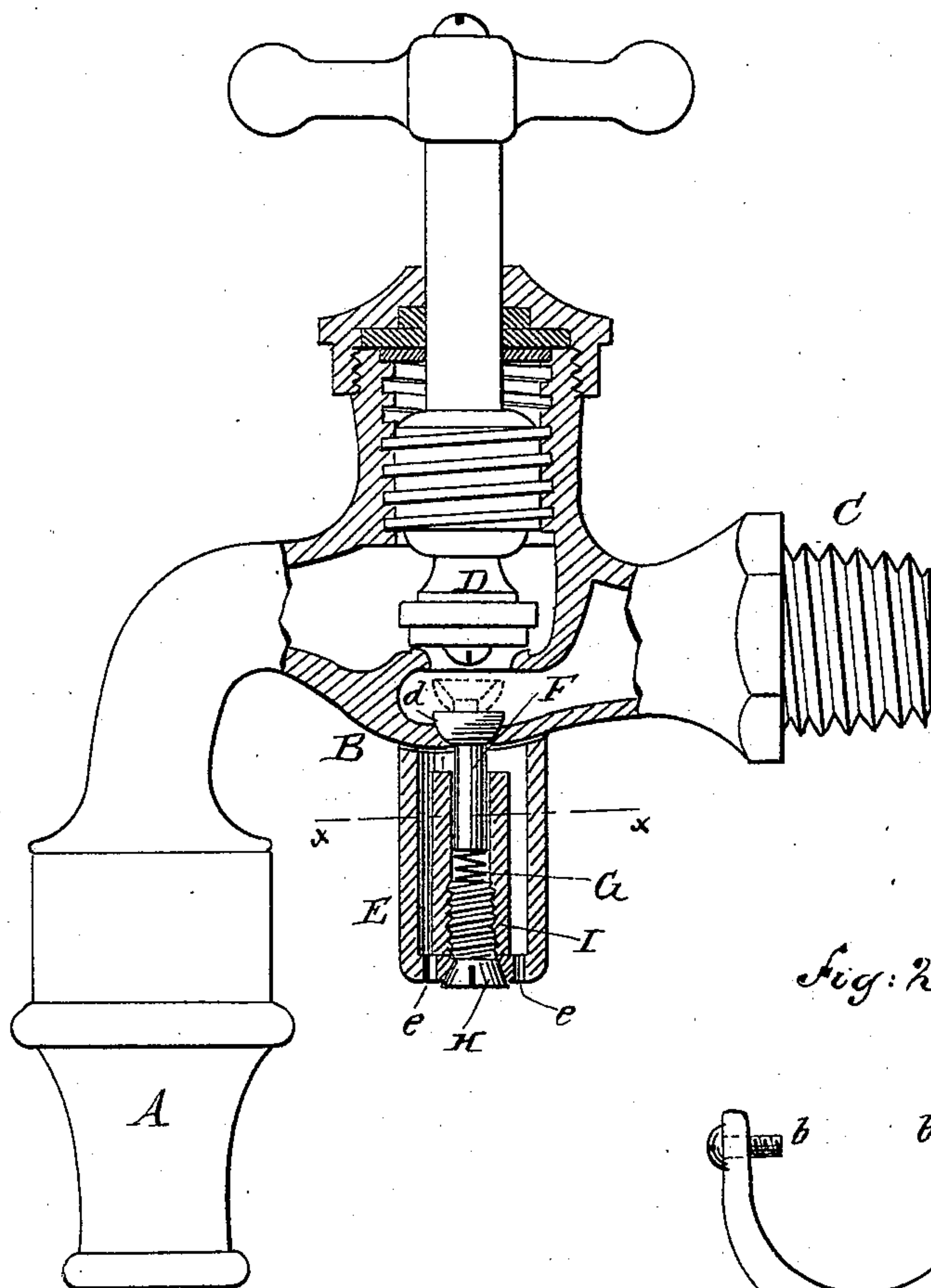
(No Model.)

A. ALLWOOD.  
FAUCET.

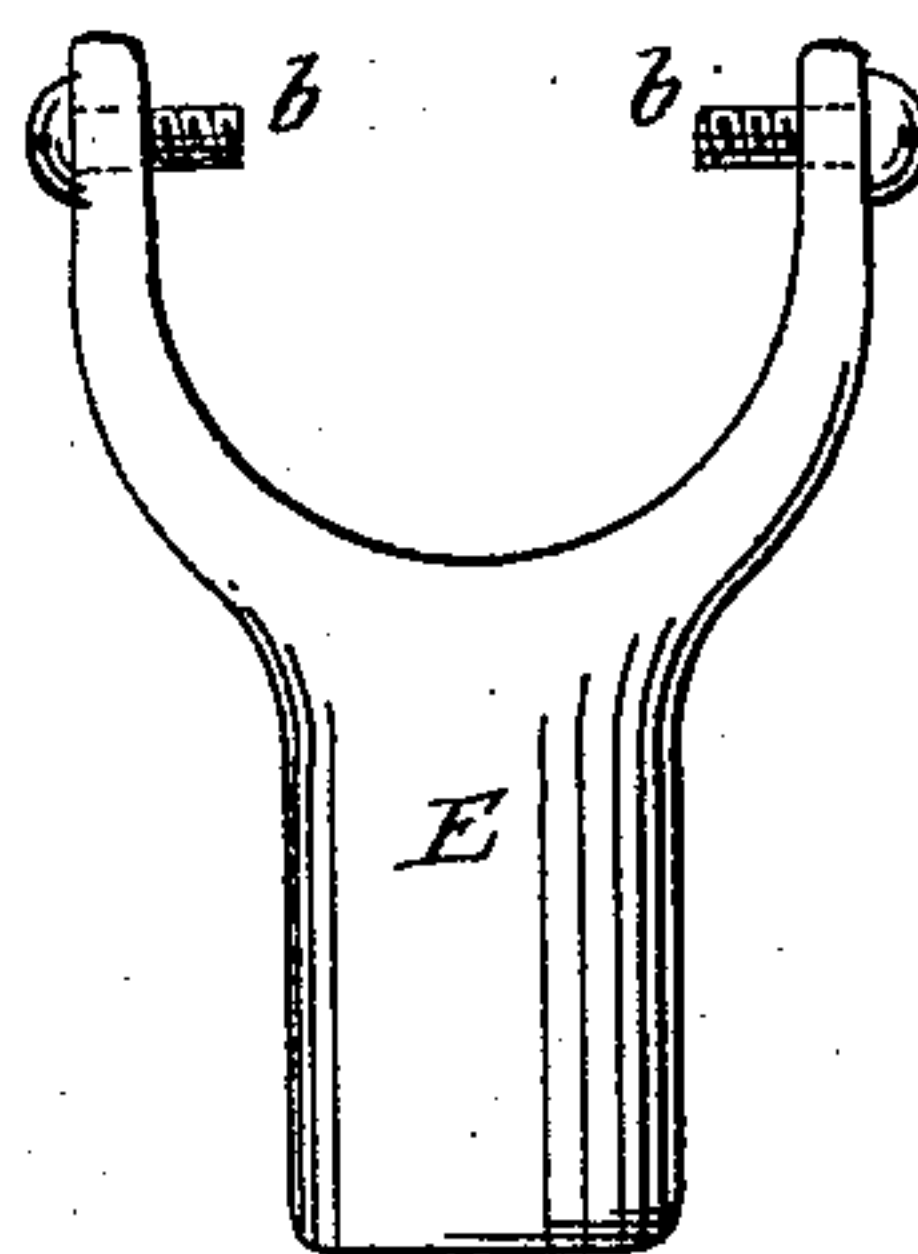
No. 304,485.

Patented Sept. 2, 1884.

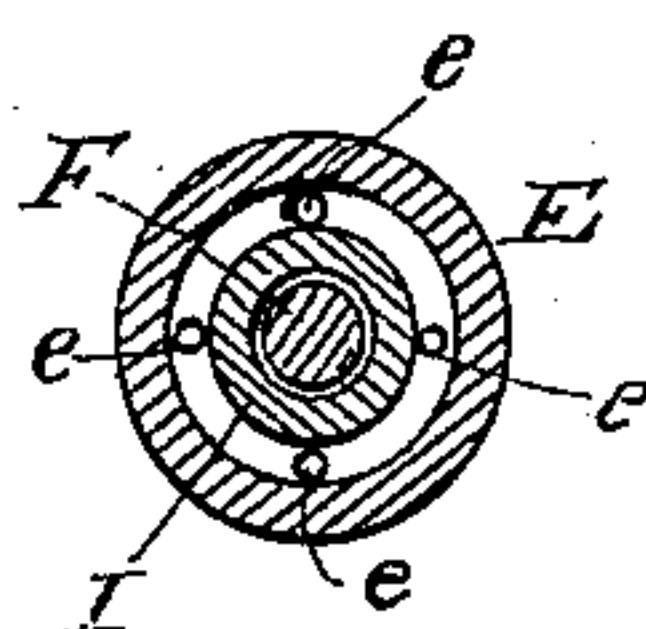
*Fig: 1.*



*Fig: 2.*



*Fig: 3.*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

ARTHUR ALLWOOD, OF FALL RIVER, MASSACHUSETTS.

## FAUCET.

SPECIFICATION forming part of Letters Patent No. 304,485, dated September 2, 1884.

Application filed March 3, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, ARTHUR ALLWOOD, of Fall River, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Faucets, of which the following is a full, clear, and exact description.

This invention is more particularly designed for faucets on water-pipes in buildings, and has for its object the prevention, in very cold weather, of the water freezing in the pipes and faucets—that is, the water standing in the pipes after the supply from the main has been shut off. The invention is applicable to the faucet of any pipe in the building that branches from or connects with the main pipe so long as the faucet forms a lower point or connection that will run off the water by gravity from the main pipe. Thus it is applicable to faucets in different stories of a building attached by branch pipes to a main supply-pipe running up through the building, so that when the supply is shut off at the base of said main pipe the water remaining in said pipe and its branches and faucets connected therewith may be discharged by gravity through the faucets. The invention consists in an automatic device of simple construction applied to the faucet to make it self-draining of water remaining in the pipe or faucet after the main supply is shut off, thus avoiding much damage to property and goods by the neglect of tenants and others to open their faucets after the supply has been shut off in or during a hard frost.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents a partly broken or sectional side view of a faucet having my invention applied; Fig. 2, a view, as seen from the front or rear, of the outer casing of the automatic draining attachment when constructed to provide for its separate application to the faucet; and Fig. 3, a transverse section on the line *xx* in Fig. 1.

The faucet generally, as represented in the accompanying drawings, is or may be of an ordinary construction, A being its nozzle; B, its body and valve-chamber; C, its screw-threaded rear end portion, which connects

with the supply-pipe or branch therefrom; and D, its valve with attached screw-threaded operating-stem.

E is the outer case of the automatic draining attachment, arranged beneath the body B of the faucet, preferably at the lowest point thereof. This case or casing E may either be cast on or with the faucet, so as to be an integral portion thereof, or which will be found very convenient in applying the invention to faucets already made or in use. It may be a separate attachment, as shown, for instance, in Fig. 2, in which said casing is represented as of jaw-like construction on its upper end to hug the sides of the body of the faucet, to which it may be secured by set-screws *bb*, passing through the sides of the jaw. This or other suitable separate connection of the case A will also be found very useful in providing for easy access to the automatic draining devices contained within it.

F is a valvular vent-stem arranged to close an orifice, *d*, in the bottom of the body of the faucet, and kept closed by the water in the faucet when exposed to the full pressure of the supply.

G is a spring for raising or opening said valvular stem when the pressure of the water in the supply-pipe is shut off, and H is an adjusting-screw, upon which said spring rests, and which serves to regulate the tension of the spring to adapt the draining device to different pressures. Said screw and spring are contained within an inner tubular upward projection, I, within the case E, and the valvular vent-stem may also pass down within the same, and be guided thereby. Outside of this tubular projection is a passage communicating below with any number of escape-orifices *e* in the bottom of the outer shell or case, E, of the attachment.

The operation is as follows: When the water is shut off in the supply-pipe the valve or valvular vent-stem F will be opened by the spring G, and so allow of the remaining water being drained out of the faucet and its connecting pipe or pipes, such water escaping by the orifices *e*. In this way the device is automatic, and frozen water-pipes within the building are prevented, supposing all the faucets to be similarly provided with the automatic means of escape for water remaining in them, or in



their pipes, after the main supply has been shut off.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

5 1. A self-draining faucet constructed or provided with a valve or valvular vent-stem controlled by a spring to open the same when the full pressure of the supply is shut off, substantially as specified.

10 2. The combination, with the body of the faucet, of the outer casing, E, having escape-orifices *e* in or near its bottom, the inner tubular projection, I, the valvular vent-stem F, the

spring G, and the adjusting-screw H, substantially as described.

15 3. The combination, with the faucet, of the outer shell or casing, E, of the automatic draining attachment, constructed and provided with means for its separate attachment to the faucet, essentially as and for the purposes 20 herein set forth.

ARTHUR ALLWOOD.

Witnesses:

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