

(No Model.)

E. H. ASHCROFT.

AUTOMATIC FIRE EXTINGUISHER.

No. 254,253.

Patented Feb. 28, 1882.

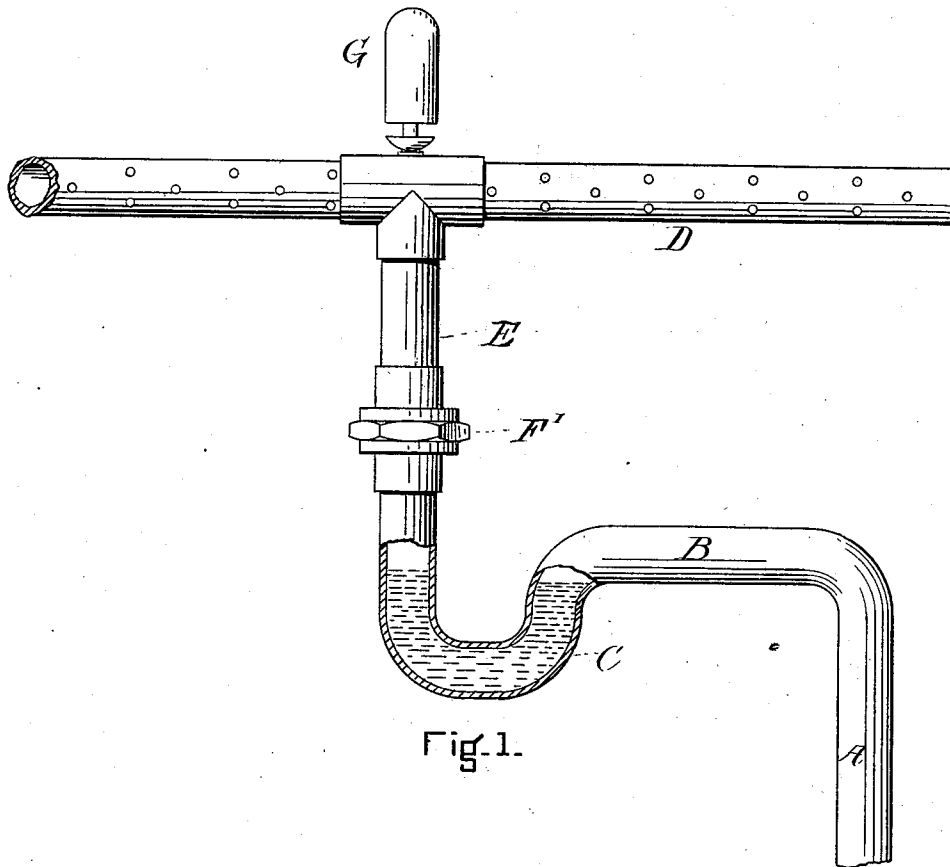


Fig-1.

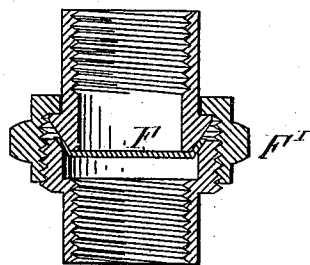


Fig-2.

WITNESSES

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UNITED STATES PATENT OFFICE.

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AUTOMATIC FIRE-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 254,253, dated February 28, 1882.

Application filed July 5, 1881. (No model.)

To all whom it may concern:

Be it known that I, EDWARD H. ASHCROFT, of Lynn, in the county of Essex and State of Massachusetts, a citizen of the United States, have invented a certain new and useful Automatic Fire-Extinguisher, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in explaining its nature, in which—

Figure 1 is a view in elevation, with a portion broken out to show the water in the trap or cut-off. Fig. 2 is a view in vertical section, enlarged, of a manner of holding the fusible plug or diaphragm.

This invention relates to means, substantially as hereinafter described, whereby steam is automatically allowed to escape into a room, apartment, building, or closed space by the increase of temperature therein above a certain limit; and it is especially adapted for use as an automatic fire-extinguisher, in connection with a steam-supply pipe.

In the drawings, A represents a pipe connected with the boiler or any steam-supply pipe, or the source of steam-supply.

B represents that portion of the pipe within the building, room, or apartment.

C is a curve in the pipe to form the cut-off or trap, hereinafter referred to.

D is the distributing-pipe, which is perforated or provided with as many holes as desired.

E is a vertical pipe connecting the cut-off with the distributing-pipe. Between the cut-off and distributing-pipe is arranged a diaphragm or plug of fusible metal, F, for stopping the opening in the pipe and preventing the escape of steam. This fusible plug or diaphragm melts at any desired temperature, and it can be made to melt at a very low temperature, comparatively—say 150° or 160°. I prefer to make them so that they will fuse at a temperature of between 175° and 200°.

The plug or diaphragm, of course, may be fastened in the vertical pipe in any desirable way to close the opening; and I mention as one

method the use of the union-coupling F', between the members of which the disk or diaphragm of fusible metal is fastened. Any other desirable means, however, for securing the plug or diaphragm in place may be used.

In order that the steam may not come in contact with the plug or diaphragm and fuse it, the cut-off is filled with water. This may be provided by the condensation of the steam in the pipe, or in any other desirable way.

The perforated pipes, of course, may extend in any direction from the upright pipe.

The employment of steam for extinguishing fire at its early stage is very desirable, because a fire is put out quickly and without doing any essential or serious damage to the room or building or anything therein contained, the steam finding the fire and extinguishing it, whereas if water be employed it might or might not reach the fire.

The essential features are appliances for supplying and distributing the steam, and the automatic device which shall be operated by increase in temperature to set free or open the passage in the supply-pipe, whereby the steam may be at liberty to escape into the room or building.

Of course the steam may be discharged into the building or room through any discharge-opening beyond or above the fusible cut-off, and it is not essential to employ a perforated or other distributing-pipe.

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States—

The combination of the steam-supply pipe, the delivery-pipe, and a fusible plug or diaphragm, and water-chamber or cut-off upon the supply side of said plug or diaphragm, all arranged and adapted to operate substantially as described.

EDWARD H. ASHCROFT.

Witnesses:

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W. C. FOGG.