(No Model.)

W. F. SINGER.

AUTOMATIC FIRE EXTINGUISHER HEAD.

No. 451,280. Patented Apr. 28, 1891.

Fig. 1.

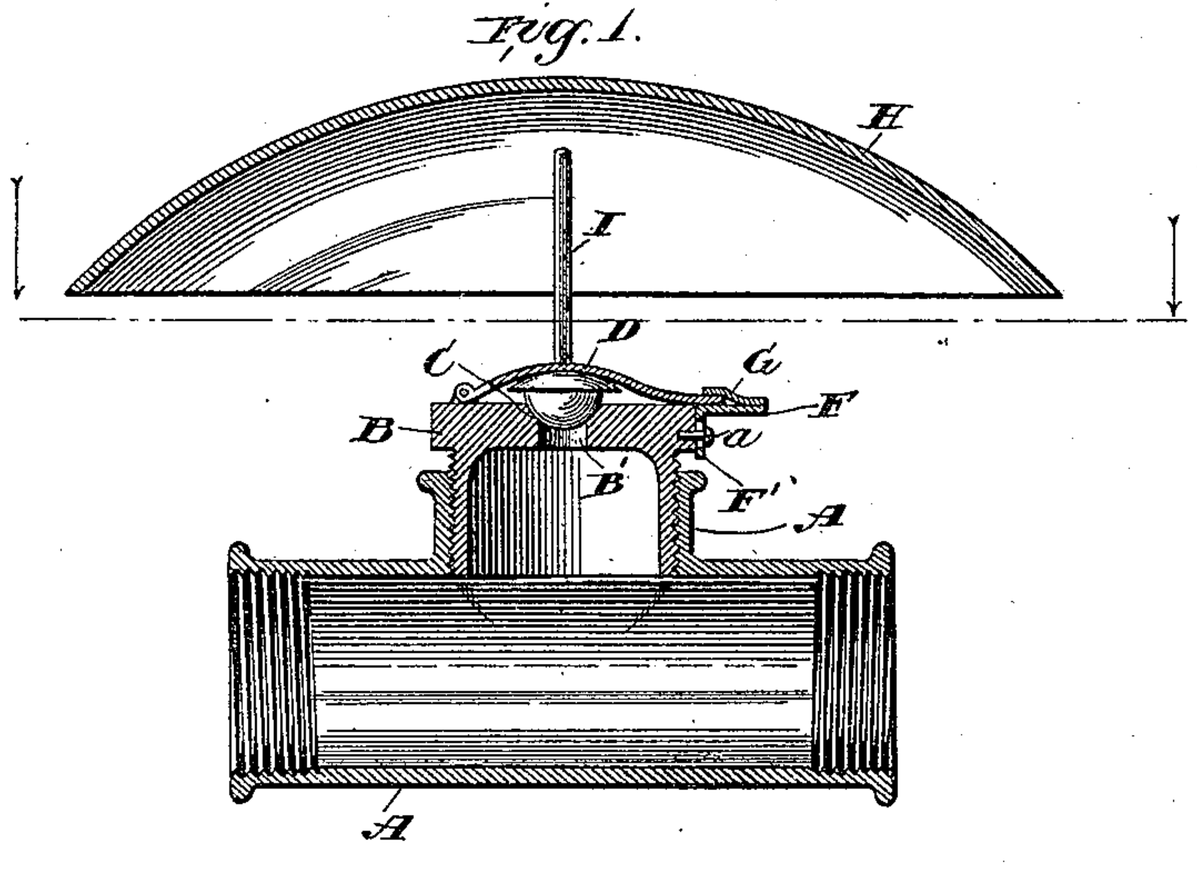


Fig. 2.

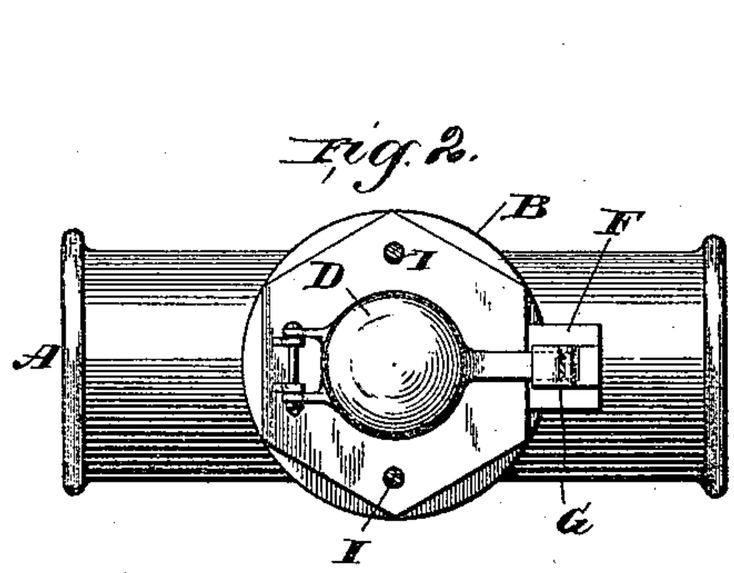
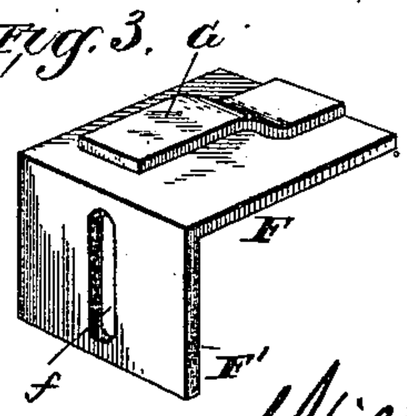


Fig. 3.



Witnesses:

W. M. Rheem.

Wm. H. Scott.

Inventor:

William F. Singer

by Franklin H. Hough

his attorney

UNITED STATES PATENT OFFICE.

WILLIAM F. SINGER, OF CARTHAGE, ASSIGNOR OF ONE-HALF TO GILBERT L. HAVILAND, OF SYRACUSE, NEW YORK.

AUTOMATIC-FIRE-EXTINGUISHER HEAD.

SPECIFICATION forming part of Letters Patent No. 451,280, dated April 28, 1891.

Application filed July 28, 1890. Serial No. 360,236. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. SINGER, a citizen of the United States, residing at Carthage, in the county of Jefferson and State of New York, have invented certain new and useful Improvements in Automatic-Fire-Extinguisher Heads for Stationary Automatic Fire-Extinguishers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in automatic-fire-extinguisher heads for stationary automatic fire-extinguishers; and it has for its object to simplify and cheapen the construction and to render more efficient in operation this class of devices.

To these ends and to such others as the invention may pertain the same consists in the peculiar construction and in the novel combination, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the accompanying drawings, and then specifically defined in the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, like letters of reference indicating like parts throughout the several views, and in which—

Figure 1 is a central vertical section through an automatic-fire-extinguisher head embodying my improvements. Fig. 2 is a top plan view of the same. Fig. 3 is an enlarged detail, in perspective, showing the valve-securing clip and its connections.

Reference now being had to the details of the drawings by letter, A designates an ordinary pipe-fixture, which is known commonly as a T.

B is a screw-threaded plug, which is preferably made of block-tin. This plug is seated within the vertical T-outlet A′ and is provided with a central opening B′, within the enlarged upper end of which is seated the semi-spherical valve C.

The valve-cover D is hinged at one of its edges to the upper face of the plug B, and when in its normal or closed position, as shown in Figs. 1 and 2 of the drawings, it fits closely over the valve and retains the same in position.

F is a strip of heavy sheet metal, which is attached to the edge of the plug B upon the side opposite to that upon which the cover D is hinged, the same being held in place by means of a screw *a*, passed horizontally through the slot *b*, which is provided for its reception in the vertical portion F′ of the strip F. This vertical slot permits of the ready adjustment of the strip, as may be desired, as will be readily understood. The clip G is secured at one of its ends to the upper face of the strip F by the use of a fusible solder, and the free end of the clip is adapted to normally fit over the edge of the cover D and retain the same in place, as shown in the drawings.

H is a convex or dish-shaped chamber of sheet metal, which is held in place directly over the valve by means of the rods or wires I.

The operation of the device will be readily understood in connection with the foregoing description. The pipe A constitutes a section of a series of pipes which extend throughout the entire system of the protected building, which pipes are normally charged with either water or gas under a high pressure. In case the temperature within the apartment is raised to a point necessary to fuse a solder used in securing the clip G in place, the clip will be detached, thus permitting the force of the water or gas within the pipes to act upon the valve, unseating the same and throwing back the cover B′. The gas or water thus liberated under pressure will contact with the concave chamber H and will be caused to spread out and be widely distributed throughout the apartment.

Attention is called in this connection to the advantage gained by the arrangement of the parts of the device which pertain to the releasing of the valve-cover. It will be observed

that instead of soldering the releasing-clip directly to the plug B, as has heretofore been done, I attach it to the part F, which part is held to the plug by the screw *a*. By this construction when it may be at any time desirable in testing the apparatus to fuse the solder, and thus release the valve, or when the valve might from any cause be accidentally unseated, it will not be necessary to remove the plug; but the part F may be detached by removing the screw *a*, and another similar part, with the clip attached, may be substituted.

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

1. The combination of the water or gas pipe, the plug seated therein, the valve-controlled opening in the plug, the valve in said opening, the hinged valve-cover, and the part F, secured to the plug, as described, and having secured to its upper face by fusible solder a clip G, adapted to engage the valve-cover, substantially as shown and described, and for the purpose specified.

2. In a device for the purpose described, the combination of the water or gas pipe, the plug seated therein, the valve-controlled opening in the plug, the valve in the opening, the hinged valve-cover, the part F, attached to the plug and having the clip G secured thereto by fusible solder and adapted to engage the valve-cover, and the concavo-convex disk H, secured above the valve by wires I, attached to the plug, all arranged and operating substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM F. SINGER.

Witnesses:

FRANKLIN H. HOUGH,

C. W. CURTIS.