

(No Model.)

J. E. BOTT.
FIRE EXTINGUISHER.

No. 474,208.

Patented May 3, 1892.

FIG. 1.

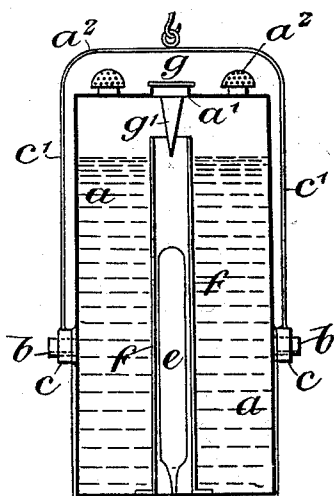
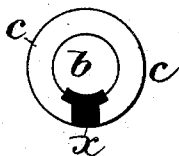


FIG. 2.



Witnessed:
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UNITED STATES PATENT OFFICE.

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FIRE-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 474,208, dated May 3, 1892.

Application filed November 10, 1891. Serial No. 411,487. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH ELTON BOTT, a subject of the Queen of Great Britain, residing at Brinnington Hall, Stockport, in the county of Chester, England, have invented certain new and useful Improvements in Automatic Fire-Extinguishers, of which the following is a specification, reference being had to the accompanying drawings, and to the letters marked thereon.

My invention consists of an improved apparatus for sprinkling the interior of buildings or other places with a liquid compound inimical to fire.

In the accompanying drawings, Figure 1 is a diagram representing a section of a fire-extinguisher constructed according to my invention; and Fig. 2 is a section, on a larger scale, through one of the trunnions.

In carrying my invention into effect I construct a receptacle *a* (preferably cylindrical) for the purpose of containing an alkaline or chemical mixture inimical to fire. The said receptacle *a* is constructed with two trunnions or pivots *b*, placed on the sides of the vessel at sufficient distance from its center of gravity to cause one end of the receptacle *a*, when free, to swing into a lower position than the other end. In order to support the cylinder or receptacle *a* in a vertical position, the trunnions *b* are fixed in bearings or journals *c*, which latter are suspended from the ceiling of the room or place to be protected by a forked bar or frame *c'*, to which the journals *c* are fixed, or the trunnions *b* may be fixed to other suitable support. In order to keep the cylinder or receptacle *a* from turning over, the said trunnions *b* are soldered to the journals *c* with a fusible solder in the manner represented at Fig. 2, in which I have represented a space or recess formed in both the trunnions *b* and the journals *c*, which space is filled with fusible solder *x* to retain the receptacle *a* in a vertical position. The journals *c* are also formed with a hole in their lower sides to afford access of heat to the solder *x* and to allow the latter to run out when melted.

When secured with its longer axis in an upright position, as shown in the drawings, or previously, the receptacle *a* is filled with the alkaline or chemical mixture through an

opening *a'* in the upper end or cover, which latter is also constructed with one or more suitable sprinkling-nozzles *a''*.

The interior of the receptacle *a* is provided with suitable means of centrally guiding a glass bulb or tube *e*, which contains acid, (sulphuric or muriatic.) Preferably I employ a metal tube *f*, fixed to the bottom of the receptacle *a*. The glass tube or bulb *e* is sealed by the blowpipe before being placed in its guide *f* in the cylinder *a*. The plug or stopper *g*, closing the opening *a'*, through which the alkaline or chemical liquid is charged into the receptacle *a* and through which the said bulb or tube *e* is admitted, is then screwed into the said opening *a'*, the lower portion of said plug or stopper *g* being formed into a sharp point *g'*.

The action of my improved fire-extinguishing apparatus is as follows: On the temperature of the room or other place reaching 154° Fahrenheit or any other predetermined temperature the fusible solder *x*, forming the retaining-joint at the bearings in the trunnions, is melted, and the receptacle *a*, being thereby released, suddenly swings downward. The glass bulb or tube *e*, containing acid, is then broken on contact with the point *g'* of the plug or stopper *g*. The acid then mixes with the alkaline or chemical liquid in the receptacle *a*, and thereby liberates gases the pressure from which forces the alkaline or chemical compound through the sprinkling-nozzles and extinguishes the flames or the incipient fire before there is any chance of its spreading.

The principal advantage I claim for my invention is that the acid, being contained in a sealed tube, so that no evaporation can take place, is automatically liberated at the exact moment when required. Thus the apparatus is always ready and free from the internal derangements and liability to getting out of order inseparable from sprinkling apparatus actuated by electrical or other mechanical means.

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

1. In an automatic fire-extinguisher, the combination, with a receptacle *a*, of trunnions *b*, journals *c*, carrying such trunnions, coacting spaces formed in such trunnions and jour-

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nals, a hole at the lower part of each journal communicating with the spaces, and fusible solder filling the said spaces, substantially as herein shown and described, and for the purpose stated.

2. In an automatic fire-extinguisher, a receptacle *a*, containing sprinkling-nozzles, a guide *f*, a sealed glass tube or bulb containing acid and arranged in said guide, and a point *g'* in line with said guide to break the glass tube or bulb when the receptacle is reversed, combined with receptacle-reversing means consisting of trunnions *b*, journals *c*,

carrying such trunnions, coacting spaces formed in such trunnions and journals, a hole at the lower part of each journal communicating with said spaces, and fusible solder filling said spaces, substantially as described.

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