

(No Model.)

J. E. BOTT.

AUTOMATIC FIRE EXTINGUISHING APPARATUS.

No. 474,209.

Patented May 3, 1892.

FIG. 1.

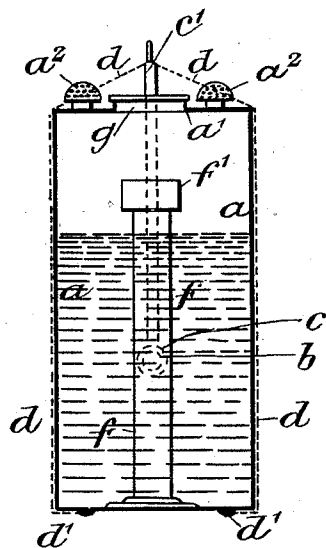
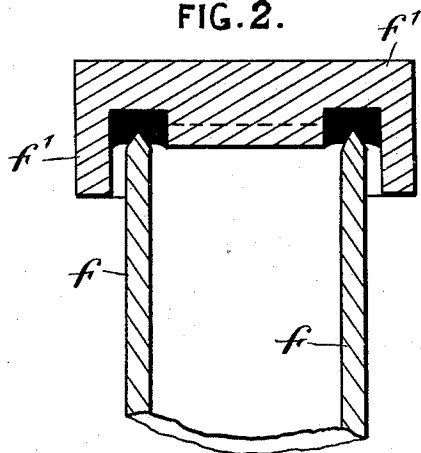


FIG. 2.



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UNITED STATES PATENT OFFICE.

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AUTOMATIC FIRE-EXTINGUISHING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 474,209, dated May 8, 1892.

Application filed November 10, 1891. Serial No. 411,488. (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-Extinguishing Apparatus, of which the following is a specification, reference being had to the accompanying drawings, and to the figures marked thereon.

My invention consists of improvements in 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 my improved fire-extinguisher, and Fig. 2 is an enlarged view of the upper part of the acid chamber or tube and its cap or stopper.

In carrying my invention into effect I employ 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 to swing into a lower position than the other end when permitted. In order to support the cylinder or receptacle *a* in a vertical position, the trunnions *b* are mounted in journals *c*, which are suspended from the ceiling of the room or other place to be protected by a forked bar or frame *c'*, to which the journals *c* are fixed; or the said journals may be fixed to other supports, and in order to keep the cylinder from turning over the receptacle *a* is secured to the ceiling or other fixed support by means of a band in the form of a chain or wire *d* at each side thereof, as shown by the dotted lines in Fig. 1, a joint or link in such wire or chain being made of fusible metal. Preferably the ends *d'* of the bands are soldered to the lower end of the cylinder *a* by means of fusible solder. When secured with its longer axis in an upright position, as aforesaid, 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 sprinkling-nozzles *a''*. The acid is placed in a tube *f*, of glass, gutta-percha, or other non-corrosive material, fixed vertically within the receptacle *a*, such tube *f* being shorter than

the receptacle *a*, a space of several inches 55 being left between the upper end thereof and the cover of the receptacle *a*. The said upper end of the tube *f* is formed, preferably, with a sharp edge and it is provided with a heavy valve or cover of lead *f'*, so as to seal 60 the tube *f* and prevent evaporation of the acid. If desired, the lead cover *f'* may be filled with paraffine or other wax, as indicated by the solid black parts in Fig. 2, for the purpose of further security to the contents 65 of the tube *f*.

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 links, parts, or joints *d'* of the sustaining-bands *d* are melted and the receptacle suddenly swings downward, the heavy lead valve or cover *f'* falls away 75 from the tube *f*, and allows the acid to mix with the alkaline or chemical compound in the receptacle *a*, the resultant gases forcing the liquid compound through the sprinkling-nozzles *a''*.

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 reversible receptacle *a*, provided with a supply-aperture *a'*, sprinkling-nozzles *a''*, and trunnions *b*, supported in journals *c*, of suspending means, such as the forked bar or frame *c'* and the band *d*, containing readily-fusible parts *d'*, interposed between the suspending means and the receptacle, substantially as described. 85 90

2. In automatic fire-extinguishers, the combination, with a reversible receptacle *a*, having a supply-orifice *a'* and sprinkling-nozzles *a''*, of an acid-containing tube *f*, fixed within 95 such receptacle, a sharp edge to such tube *f*, and a heavy lead valve or cover *f'*, fitted by its own weight to such sharp edge and freely separable therefrom, substantially as herein shown and described, and for the purpose 100 stated.

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