

(No Model.)

J. E. BOTT.

AUTOMATIC FIRE EXTINGUISHING APPARATUS.

No. 474,209.

Patented May 3, 1892.

FIG. 1.

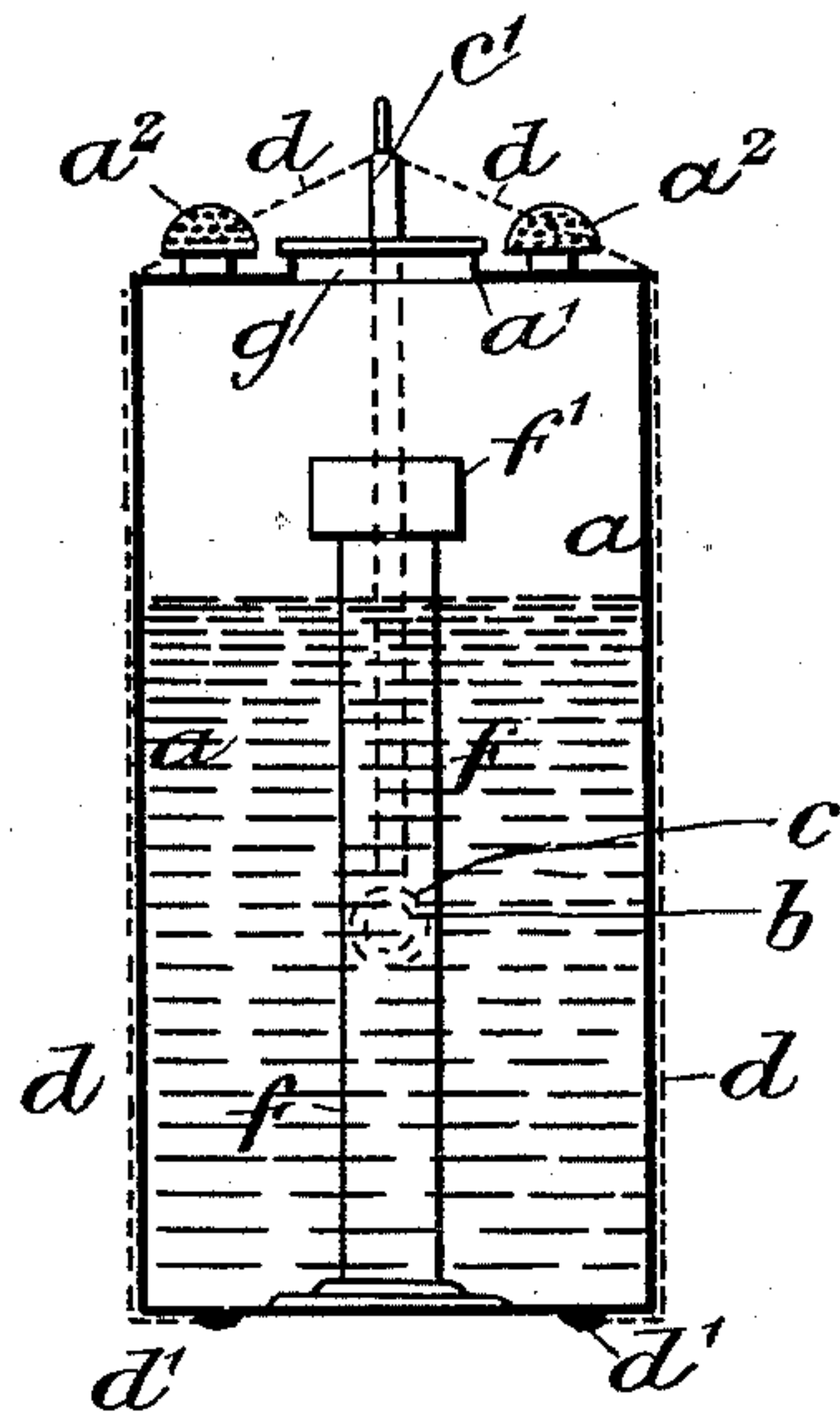
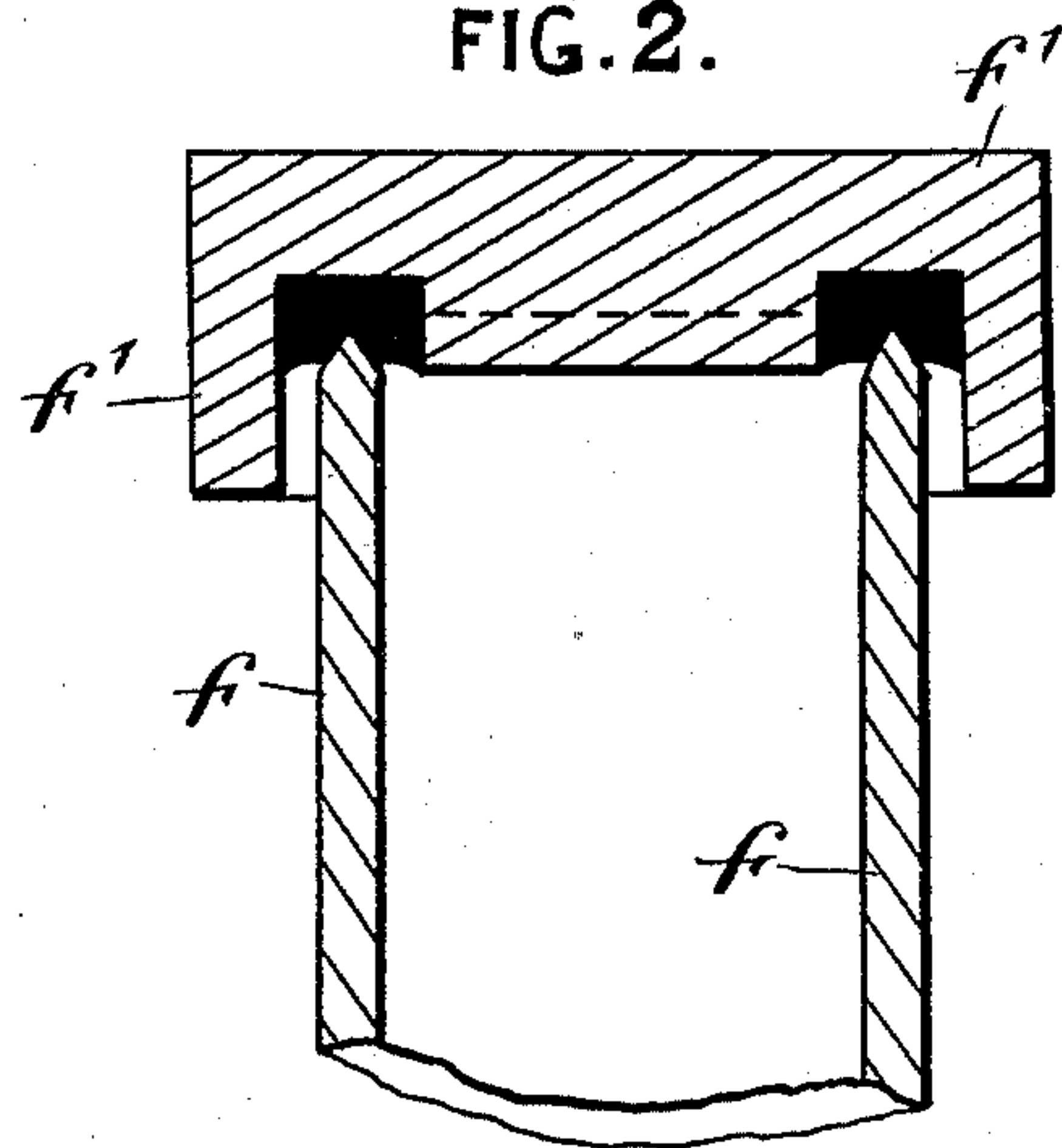


FIG. 2.



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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 3, 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 *a²*. 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 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 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 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 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 *a²*.

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 *a²*, 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.

2. In automatic fire-extinguishers, the combination, with a reversible receptacle *a*, having a supply-orifice *a'* and sprinkling-nozzles *a²*, of an acid-containing tube *f*, fixed within 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 stated.

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