(No Model.)

C. L. PORTER.

FIRE EXTINGUISHER.

No. 547,285. Patented Oct. 1, 1895.

Fig. 1.

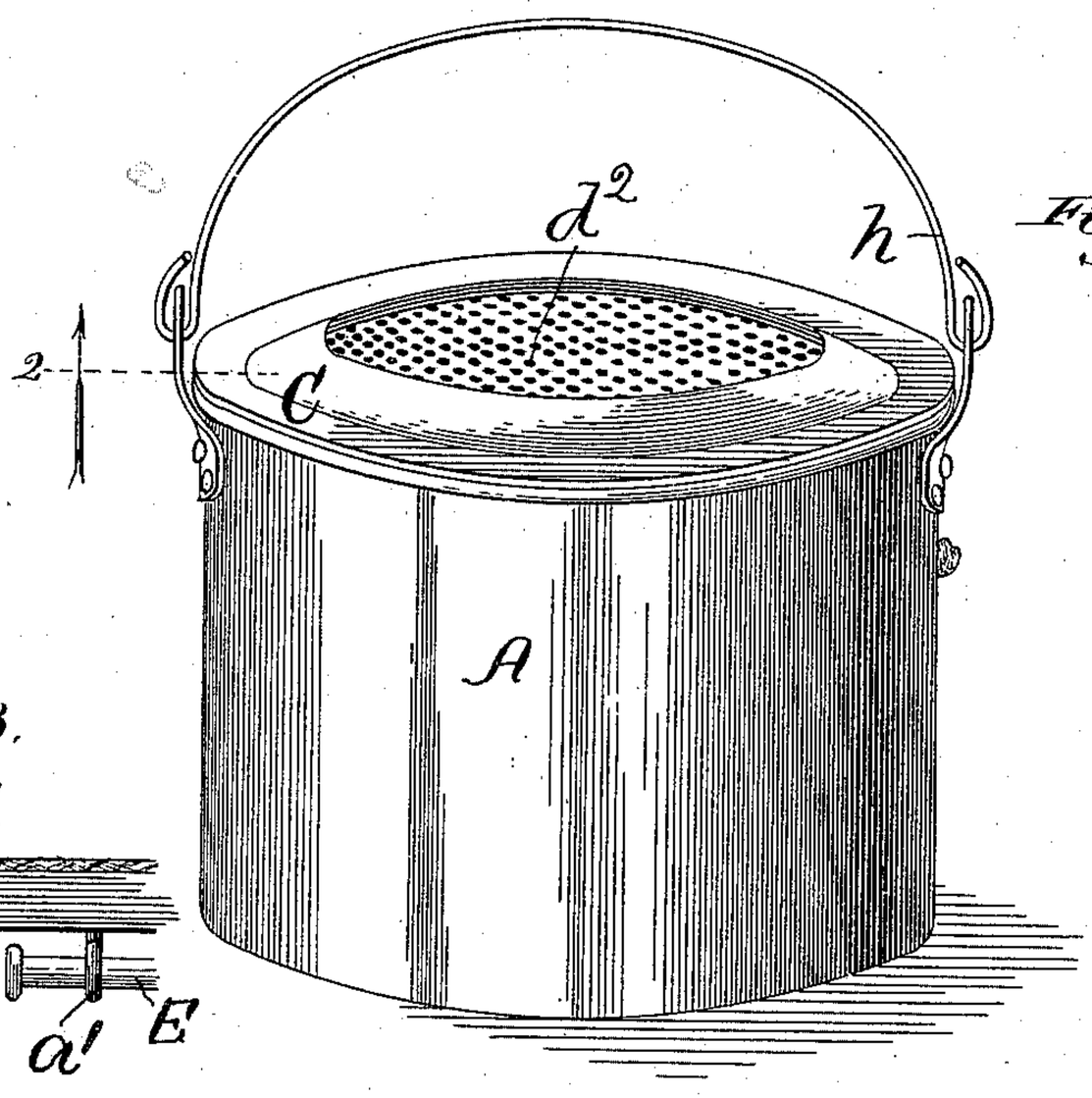


Fig. 3.

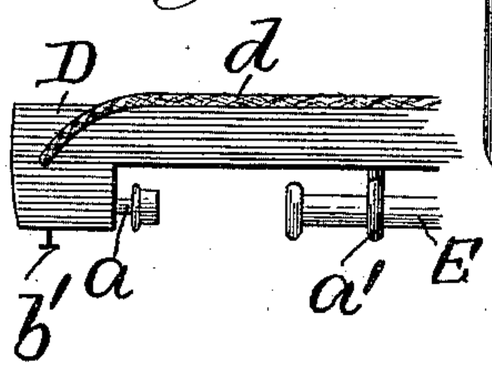
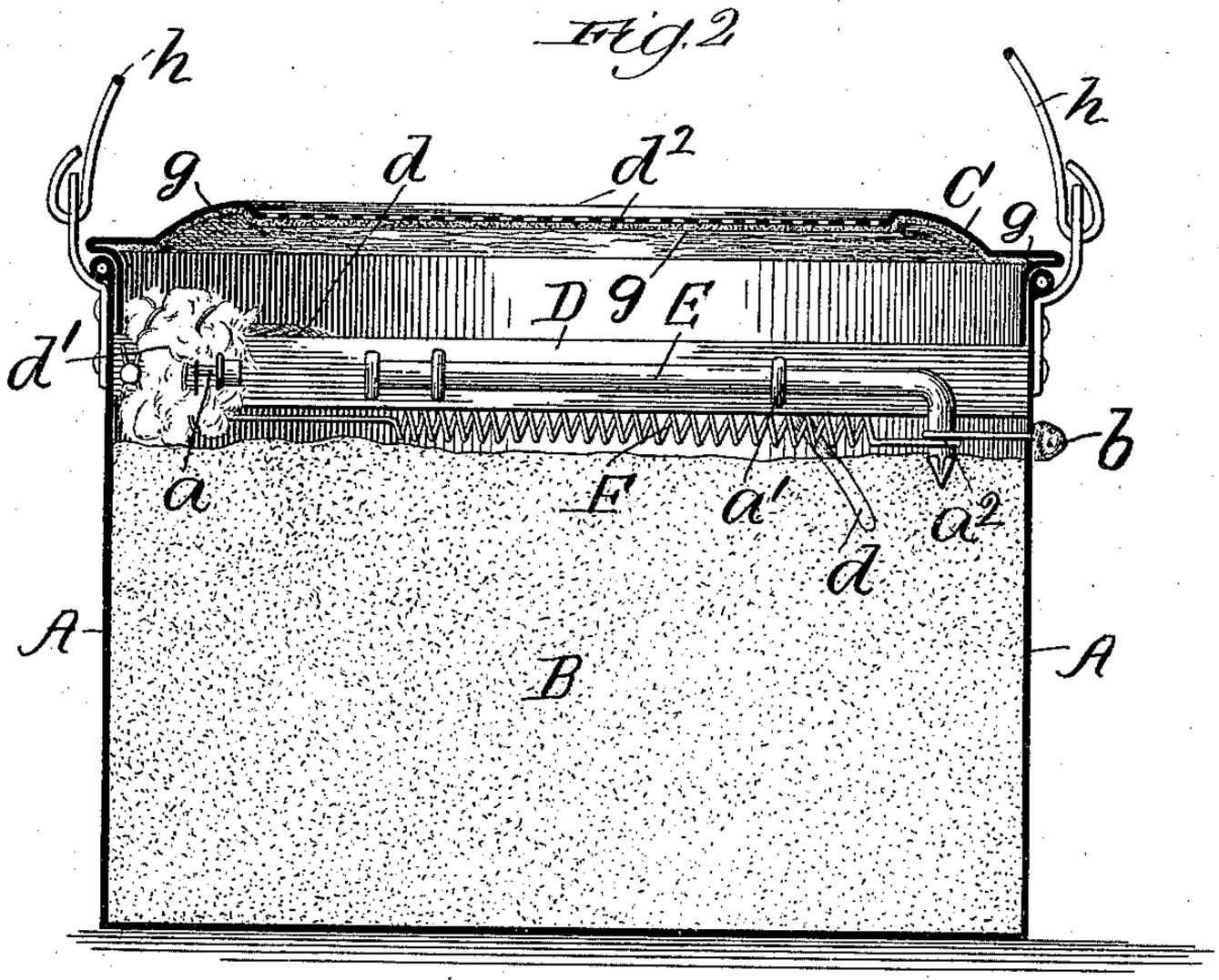


Fig. 2



Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES L. PORTER, OF CHICAGO, ILLINOIS.

FIRE-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 547,285, dated October 1, 1895.

Application filed October 17, 1894. Serial No. 526,200. (No model.)

To all whom it may concern:

Be it known that I, CHARLES L. PORTER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Fire-Extinguishers; and I do hereby 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.

This invention relates to improvements in self-acting fire-extinguishers; and it consists of a suitable vessel containing a dry combustible chemical compound or composition which is adapted to be ignited by a set mechanism actuated or released by a rise in temperature caused by a fire in the compartment or room where the device is located. The compound in the process of combustion generates and gives off a powerful gas, which quickly fills the room or compartment and extinguishes the fire.

In the drawings, Figure 1 is an elevation in perspective of an apparatus embodying my improved features; Fig. 2, a vertical section on line 2, Fig. 1, looking in the direction indicated by the arrow; and Fig. 3, a broken-away detached detail of construction.

A is a vessel, which may be of any convenient shape, the cylindrical form shown being preferred, however. This vessel is partially filled or charged with a chemical compound B, leaving sufficient space between the top thereof and the cover C for the arrangement of the igniting mechanism. A transverse bar-support D is placed in the vessel just above the surface of the compound and is rigidly secured in position. A nipple a is fastened to this bar near one end, Figs. 2 and 3, and is adapted to receive and retain an ordinary percussion-cap or fulminate-wafer in a position to be exploded when struck by an object. A striking-pin E is loosely attached to the bar D by a number of screw-eyes a' and is adapted to have an endwise movement. A part of a spring F is coiled around one end of the striking-pin, as at a^2, the terminal or rod end of the spring projecting through the side of the vessel, and is held in an expanded position by means of a button or seal b, of metal or wax, that is fusible at a low temperature. The opposite end of the spring is secured to a peg b', as shown in Fig. 3, which is a plan of a part of the igniting mechanism. One end of a combustible fuse d, Figs. 2 and 3, is inserted in the compound, the opposite end being arranged and held in close proximity to the percussion-cap. This end of the fuse may be tufted out, as shown at d', or it may be inclosed in a tuft of light cotton or other highly-inflammable substance, so as to insure instantaneous ignition when the cap is exploded and the fire transmitted to the gas-producing compound.

The cover C is secured in place so as to make the vessel practically air-tight and prevent the entrance of any moisture, and also to guard against the chemical compound being affected by atmospheric changes. This cover is provided with a number of perforations d^2. These perforations are closed from the inner side by a lining or seal g of some suitable fabric, like cotton cloth, coated with some inflammable composition, which also renders it impervious to air and moisture.

The vessel is provided with a bail h, by means of which the same may be carried or suspended.

In practical use the apparatus will ordinarily be suspended from the ceiling or supported on a shelf or bracket. When a fire occurs in a compartment or room, a slight rise in temperature will fuse the metal lock, releasing the spring and propelling the striking-pin with sufficient force against the percussion-cap to explode the same, which, in turn, ignites the fuse and fires the gas-producing compound. At the same time the material lining the inner side of the vessel-cover is ignited and burned away, so that the gas generated escapes through the series of perforations into the compartment and is instantly effective in extinguishing the fire. The explosion of the percussion-cap will also give an alarm that will attract attention.

The compound may be made the subject-matter of a separate patent.

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

1. An automatic fire extinguisher, comprising a vessel, charged with a combustible compound and provided with a perforated cover, said perforations being sealed by an inflam-

mable lining, and means for automatically igniting said compound, substantially as and for the purpose set forth.

2. In an automatic fire-extinguisher, the combination with a vessel, charged with a combustible compound and provided with a close-fitting perforated cover, of an inflammable lining, closing the perforated surface of the cover, and means for simultaneously igniting the compound and lining to the cover, substantially as and for the purpose set forth.

3. In an automatic fire-extinguisher, the combination with a vessel, charged with a combustible compound and provided with a perforated cover, of an inflammable lining, covering and closing the perforated surface, a bar-support, secured to said vessel, a percussion-cap, secured to said bar, a striking-pin, a spring, connected at one end to said pin and adapted to force the same against and explode said cap, a fusible seal or lock, for retaining said spring in its expanded or set position, and a fuse, adapted to be ignited by the fulminate explosion and fire the compound, substantially as and for the purpose set forth.

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

CHARLES L. PORTER.

Witnesses:
L. M. FREEMAN,
L. B. COUPLAND.