

(No Model.)

W. M. HARRISON.  
HAND FIRE EXTINGUISHER.

No. 338,520.

Patented Mar. 23, 1886.

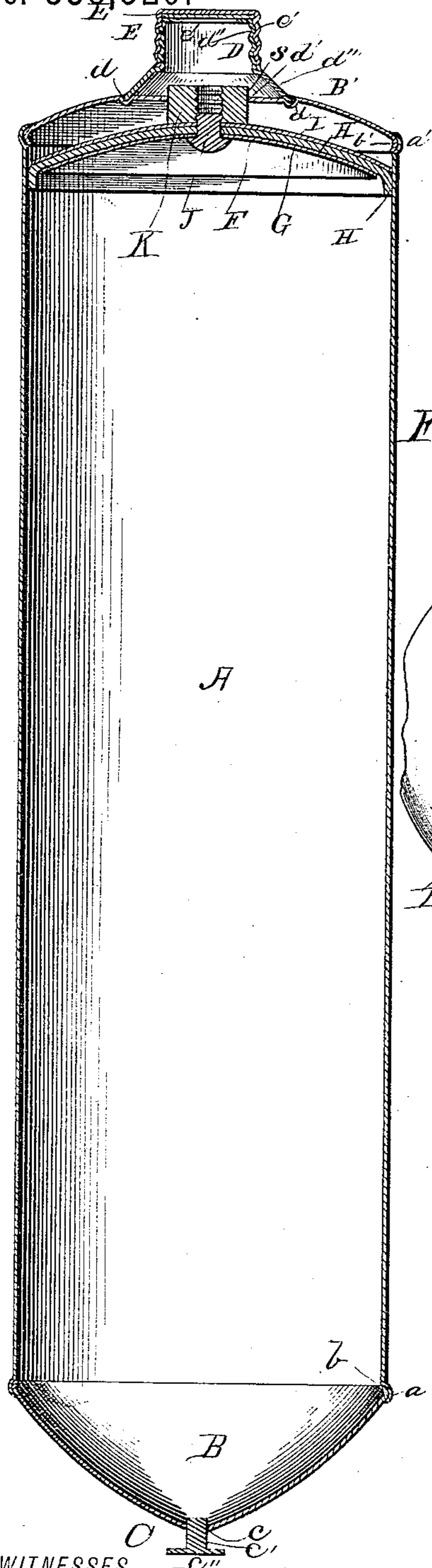


Fig. 1.

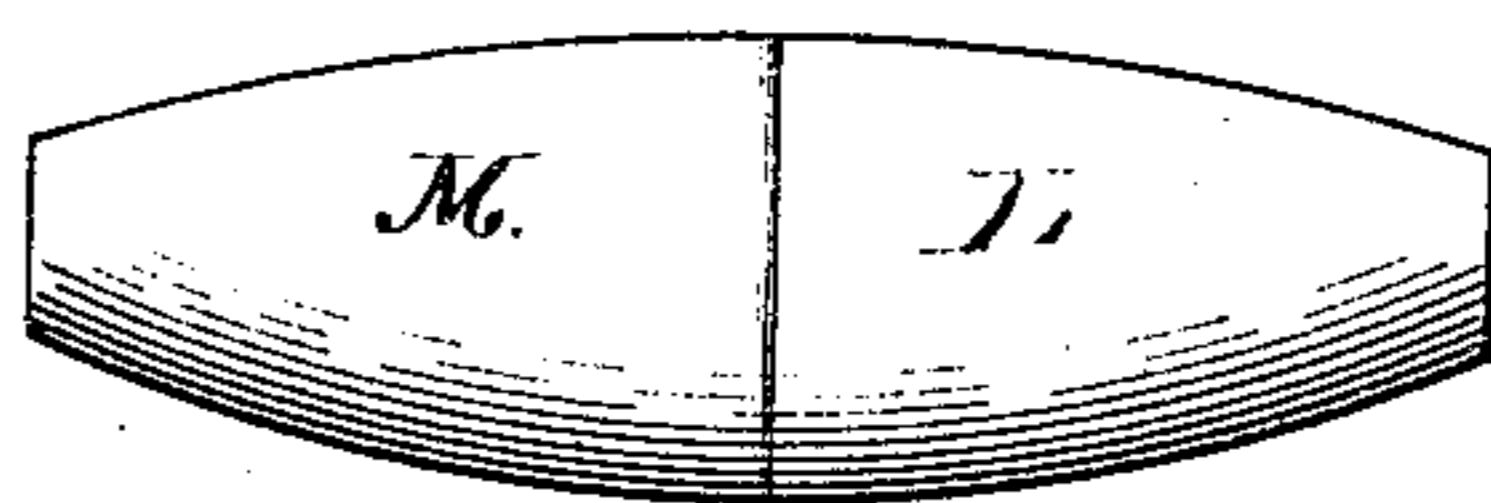
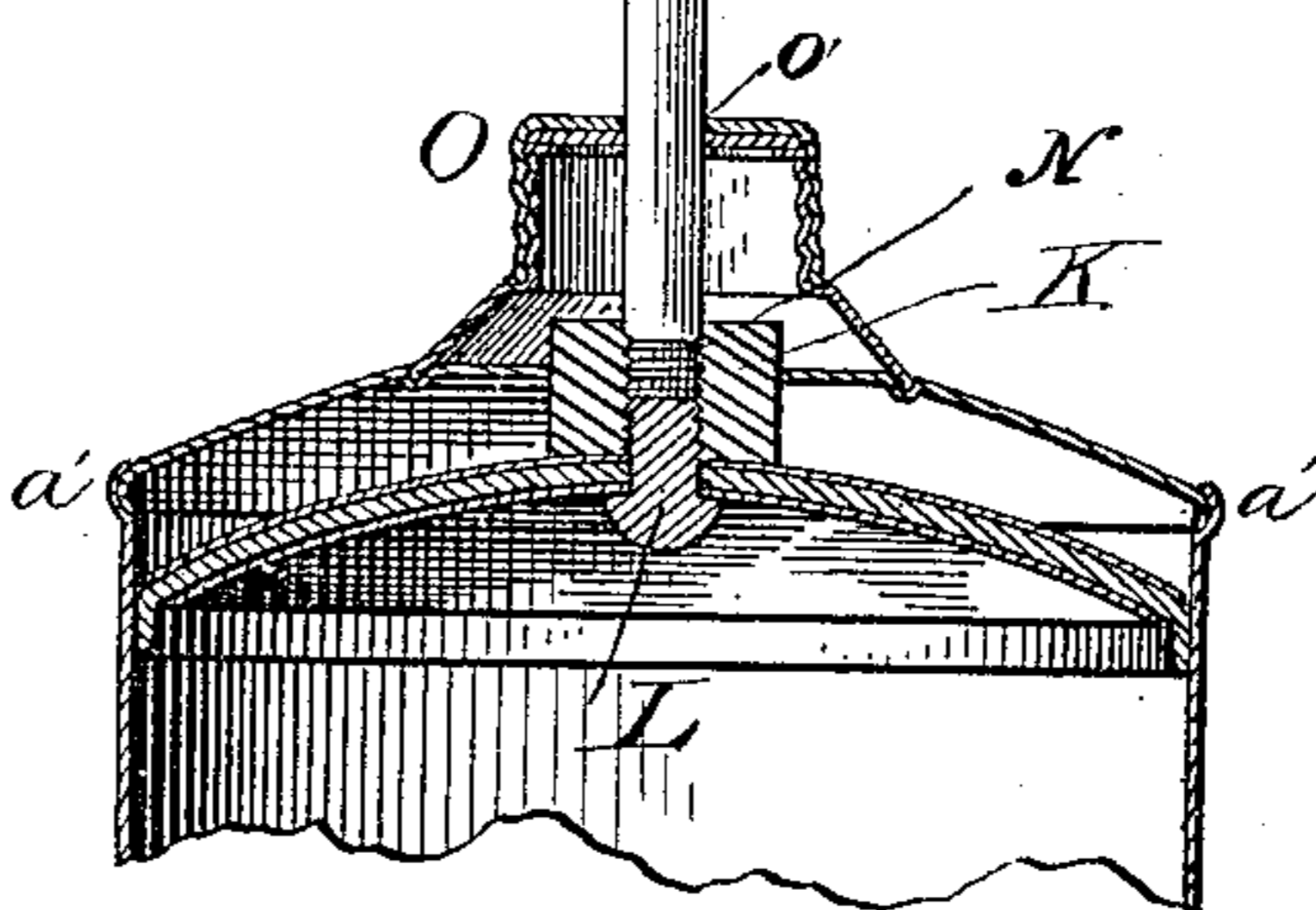
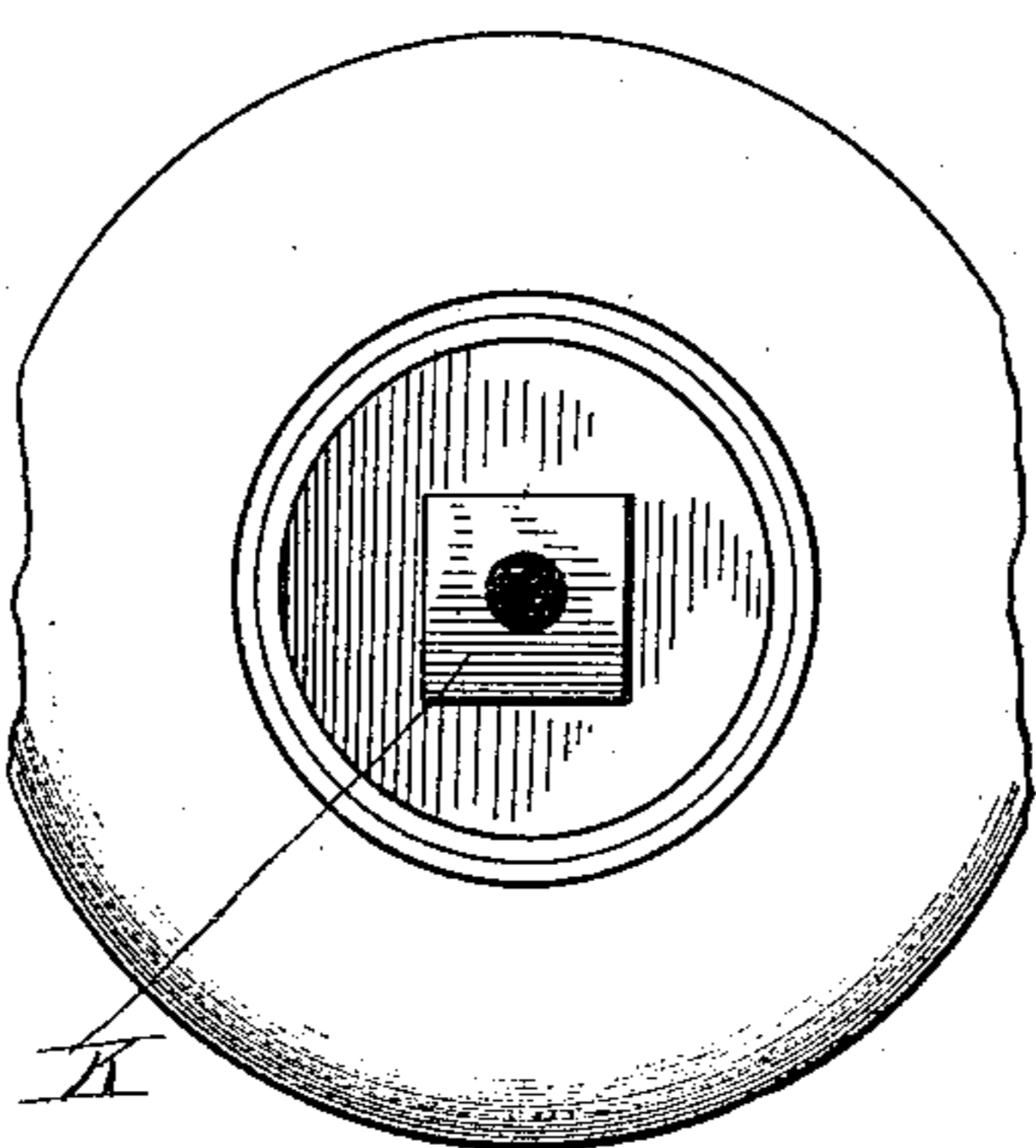


Fig. 2.

Fig. 3.



WITNESSES

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# UNITED STATES PATENT OFFICE.

WILLIAM M. HARRISON, OF BALTIMORE, MARYLAND.

## HAND FIRE-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 338,520, dated March 23, 1886.

Application filed December 31, 1885. Serial No. 187,237. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM M. HARRISON, of Baltimore city, in the State of Maryland, have invented certain new and useful Improvements in Hand Fire-Extinguishers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which 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 part of this specification.

My invention has relation to fire-extinguishers, and is in the nature of an improvement on the device of this class patented to A. B. Harrison, October 27, 1885, No. 329,309; and it consists in the improved construction, arrangement, and combination of parts hereinafter described, and afterward specifically pointed out in the claims.

In the accompanying drawings, Figure 1 is a longitudinal central section through my improved hand fire-extinguisher, the parts being adjusted in the position they assume when ready for shipment or storage, the handle being removed. Fig. 2 is a similar section through sufficient of the device to show how the handle is attached for use, the handle being shown in elevation, and broken away to shorten it, the outer solid cap in Fig. 1 being removed and a perforated cap substituted; and Fig. 3 is a plan view of the rear end piece of the syringe, showing the nut in the square perforation.

Like letters of reference mark the same parts in all the figures.

Referring to the drawings by letters of reference, A is the main body of my device in the form of a tube—such as used in an ordinary syringe—each end of which is provided with a curved outward flange, as at *a a'*, to receive the ends B B', whose edges *b b'* are curved to fit closely into the flanges *a a'*, and be there held for soldering, after the manner of securing the heads in a fruit-can. The end B forms the point or delivery end of the syringe, and is made of a single sheet of tin or other metal struck up into substantially a conical form, as shown in Fig. 1, with a central perforation, *c*, into which is soldered a plug, C, of substantially the form of an ordinary rivet, having a

stem, *c'*, and flat head *c''*. The plug is inserted as shown in Fig. 1, with the major portion of the body and the head projecting therefrom. The end B' is dish-shaped, and is also formed by striking up out of a single piece of sheet metal, in which operation a circular groove, *d*, and a square central perforation, *d'*, are formed.

D is an ordinary spun sheet-metal screw-cap, the thread of which is marked *d''*, and which has an outward-flaring conical flange, *d'''*. This flange corresponds in circumference with and sets into the groove *d* in the end B', where it is securely soldered. The outer end of this cap is perforated at *e*, leaving a narrow flange, *e'*, as shown in Fig. 1.

E is another screw-cap without the outward conical flange, but otherwise of the form of the cap D, and of a size to fit over said cap, and when screwed home to leave room between it and the flange *e'* of the cap D to receive a packing-disk, E', of any suitable material.

F is a piston-head composed of an interior concave or dished metal washer, G, a washer or disk, H, of rubber or other flexible material, and an outer dished metal washer, I. These three disks or washers are centrally perforated.

J is a bolt which is passed from the interior through these washers, the threaded point projecting beyond the outer washer or disk, I, and the head resting against the inner washer, G.

K is a nut which is threaded to engage the outer projecting end of bolt J, which bolt is only of a length to enter the nut, as shown, leaving part of the threaded bore of the nut unoccupied.

L is the handle, having the cross-bar M and threaded end N. When applied for use, this threaded end enters the unoccupied portion of the nut K, before referred to.

O is a spun sheet-metal screw-cap of the same size and shape as cap E, except that it has a central perforation, O', to receive the handle.

The operation of my improved device is as follows: The parts being in the position as shown in Fig. 1, the syringe having been filled with a fire-extinguishing compound, with the nut K projecting into the square perforation

$d'$  in the end  $B'$ , solder, as at  $S$ , having been poured around it, forming a close seal, and effectually holding the nut, as in a wrench, against turning, in this condition the device, with the handle separate, is ready for shipment and storage. To prepare it for use, the cap  $E$  is removed and the perforated cap  $O$  put in its place. The point of the handle is inserted and screwed home into the unoccupied part of the nut, as shown in Fig. 2. It is now ready to hang up or otherwise place it within easy reach for use. To use it, it is only necessary to knock out the plug by tapping against some rigid edge or corner, or with a knife or other implement, leaving the perforation in end  $B$  open as a nozzle. The butt-end of the handle or cross-bar is now given a smart blow, loosening the nut, and leaving the device in position to press in the handle, driving the piston forward and ejecting the fluid a distance of from twenty to forty feet, if necessary.

The advantages of this class of hand fire-extinguishers over breakable grenades are set forth in the patent hereinbefore referred to, and need not be repeated here.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. A syringe fire-extinguisher provided with an opening in its rear end conforming in outline to a nut attached to the piston-head, whereby the nut, when the piston-head is at the rear

end of the stroke, will be securely held for the insertion of the detachable handle.

2. In combination, the piston-head consisting of the outer and inner rigid disks and inclosed flexible disk, the screw passing through said perforations, the nut on the opposite side thereof to receive said screw, and the body of the syringe having a perforation in its rear end to receive and securely hold the nut therein, as set forth.

3. In combination, the piston-head having a nut secured at its rear side, the rear end of the syringe having a central perforation to receive the nut, and a seam of solder or other proper sealing material to secure the nut therein, as set forth.

4. In combination, the piston-head having a nut at its rear side, a threaded handle to enter said nut, the rear end of the syringe having a perforation corresponding in size and shape to said nut for receiving and holding it against turning, and a cap soldered to said end piece and having a central perforation to receive and guide the piston rod or handle, as set forth.

In testimony that I claim the foregoing as my own I hereto affix my signature in presence of two witnesses.

WILLIAM M. HARRISON.

Witnesses:

S. BRASHEARS,  
HARRY S. ROHRER.