S. J. SMITH.

FIRE EXTINGUISHER.

APPLICATION FILED JAN. 21, 1916.

1231,442.

Patented June 26, 1917.

Fig. 1.

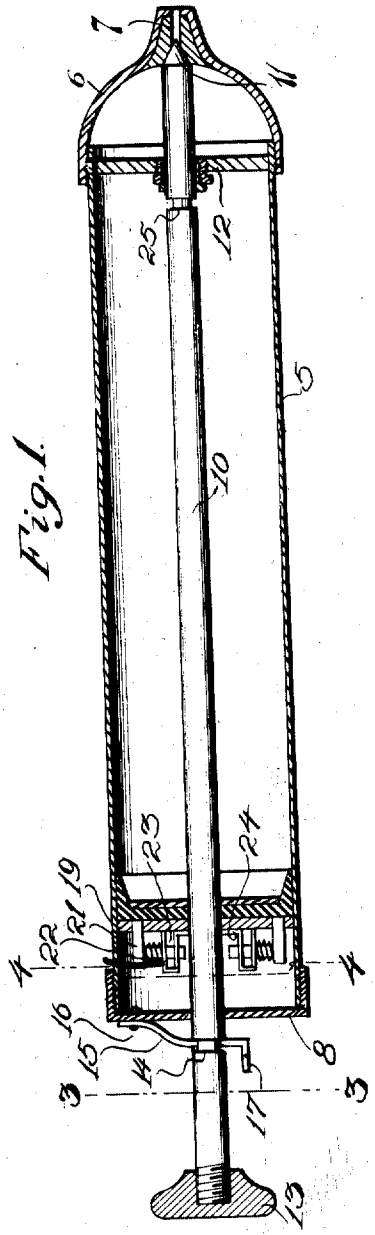


Fig. 4.

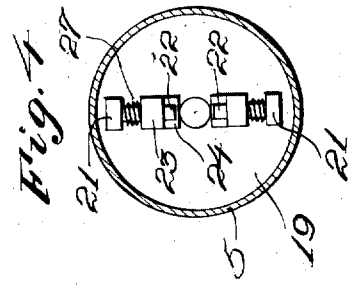


Fig. 3.

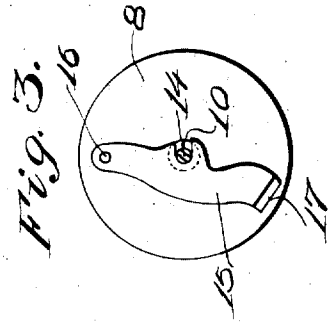
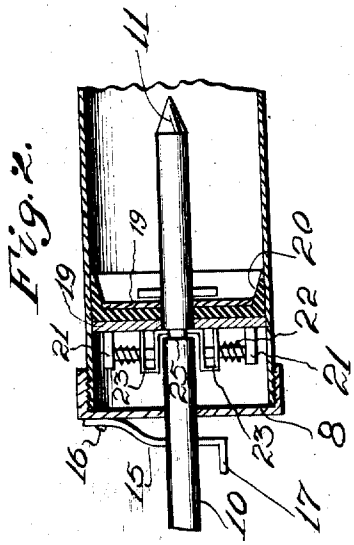


Fig. 2.



Witnesses

Inventor

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By

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UNITED STATES PATENT OFFICE.

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FIRE-EXTINGUISHER.

1,231,442. Specification of Letters Patent. Patented June 26, 1917.

Application filed January 21, 1916. Serial No. 73,387.

To all whom it may concern:

Be it known that I, SIDNEY J. SMITH, a citizen of the United States, residing at Fresno, in the county of Fresno and State of California, 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 has for its object to provide a simple and efficient portable fire extinguisher of the liquid pump type.

Another object is the provision of a portable fire extinguisher embodying an ejector or piston and an operating rod therefor slidably engaged with the piston and constituting a valve for closing the discharge port of the extinguisher when the latter is not in use.

With these and other objects in view, the invention consists in the novel construction, arrangement and formation of parts as will be hereinafter specifically described, claimed and illustrated in the accompanying drawing, in which:

Figure 1 represents a longitudinal sectional view through the improved extinguisher,

Fig. 2 represents a fragmental longitudinal sectional view in the plane of Fig. 1, illustrating the slide or piston rod partially withdrawn and locked with the piston or ejector,

Fig. 3 represents a transverse sectional view on the line 3—3 of Fig. 1,

Fig. 4 represents a transverse sectional view on the line 4—4 of Fig. 1.

Referring to the drawing in detail, wherein similar reference numerals designate corresponding parts throughout the several views, the numeral 5 indicates the hollow cylindrical body of the fire extinguisher having a tapered end 6 provided with a discharge port 7 and having the opposite end closed by a removable cap 8.

A rod 10 is slidably mounted in an aperture formed in the cap or closure 8 and the inner extremity thereof is tapered, as indicated at 11, and adapted to coöperate with the correspondingly shaped inner end of the discharge port 7 to close the latter and prevent leakage of the liquid contents of the body 5. Intermediate its ends the slide rod 10 is slidably supported in a plate 12 secured diametrically within the body 5 and adjacent the tapered end 6 thereof. A handle 13 is secured to the outer extremity of the slide rod 10 and adjacent the handle said rod is formed with an annular groove 14 adapted to receive a spring latch or locking member 15 pivotally secured at 16 to the cap or closure 8 and having an angularly directed free end 17 constituting a handle. The annular groove 14 is so arranged that in order to engage the spring locking element 15 therein said locking element must be flexed, as clearly illustrated in Figs. 1 and 2, and thus the tapered end or valve 11 is retained in firm engagement with the inner extremity of the discharge port 7.

An ejector or piston is normally disposed adjacent the open end of the cylindrical body 5 and includes a pair of clamping plates 19 between which is engaged a piston ring 20.

A pair of lugs 21 are secured to or formed integral with the outer plate 19 and are provided with inwardly directed pins 22, pivotally supporting a pair of slidable locking members 23, having inwardly directed ends 24 adapted to engage in an annular groove 25 formed adjacent the tapered end 11 of the slide rod 10 for automatically locking said rod against sliding movement with relation to the piston. Springs 27 are engaged between the laterally projecting lugs 21 and the slidable locking members 23 and normally retain the inner extremities 24 of the latter in frictional engagement with the slide rod 10.

When not in use, the slide rod 10 and spring locking member therefor are adjusted as illustrated in Fig. 1, so as to engage the tapered end 11 or valve in the discharge port 7 of the hollow cylindrical body and thus prevent the leakage of the contents of the body. When it is desired to use the fire extinguisher, the spring locking member 15 is swung upon its pivotal axis 16 so as to disengage the free end thereof from the annular groove 14 and the slide rod 10 is partially withdrawn, as illustrated in Fig. 2, so as to move the annular groove 25 into position to receive the spring actuated locking members 23. Subsequent to the outward movement of the slide rod 10 and the consequent locking of the piston 19 therewith, the rod 10 is moved inwardly, thus compressing and ejecting the liquid contents of the body through the discharge port 7.

What I claim is:

1. A portable fire extinguisher including a hollow cylindrical body having a discharge port in one end thereof, a slide rod slidably mounted in said body having a tapered end constituting a closure for said discharge port, and pivoted means for resiliently retaining said slide rod in engagement with said discharge port.

2. A portable fire extinguisher including a hollow cylindrical body having a tapered end and a discharge port in said tapered end, a slide rod slidably mounted in said body and having a tapered inner extremity constituting a closure for said discharge port, means for resiliently retaining the tapered extremity of said slide rod in engagement with said discharge opening, a piston reciprocably mounted in said cylinder, and means for locking said slide rod against sliding movement with relation to said piston.

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

SIDNEY J. SMITH.

Witnesses:
W. R. HOLMES,
B. C. FISCHER.