

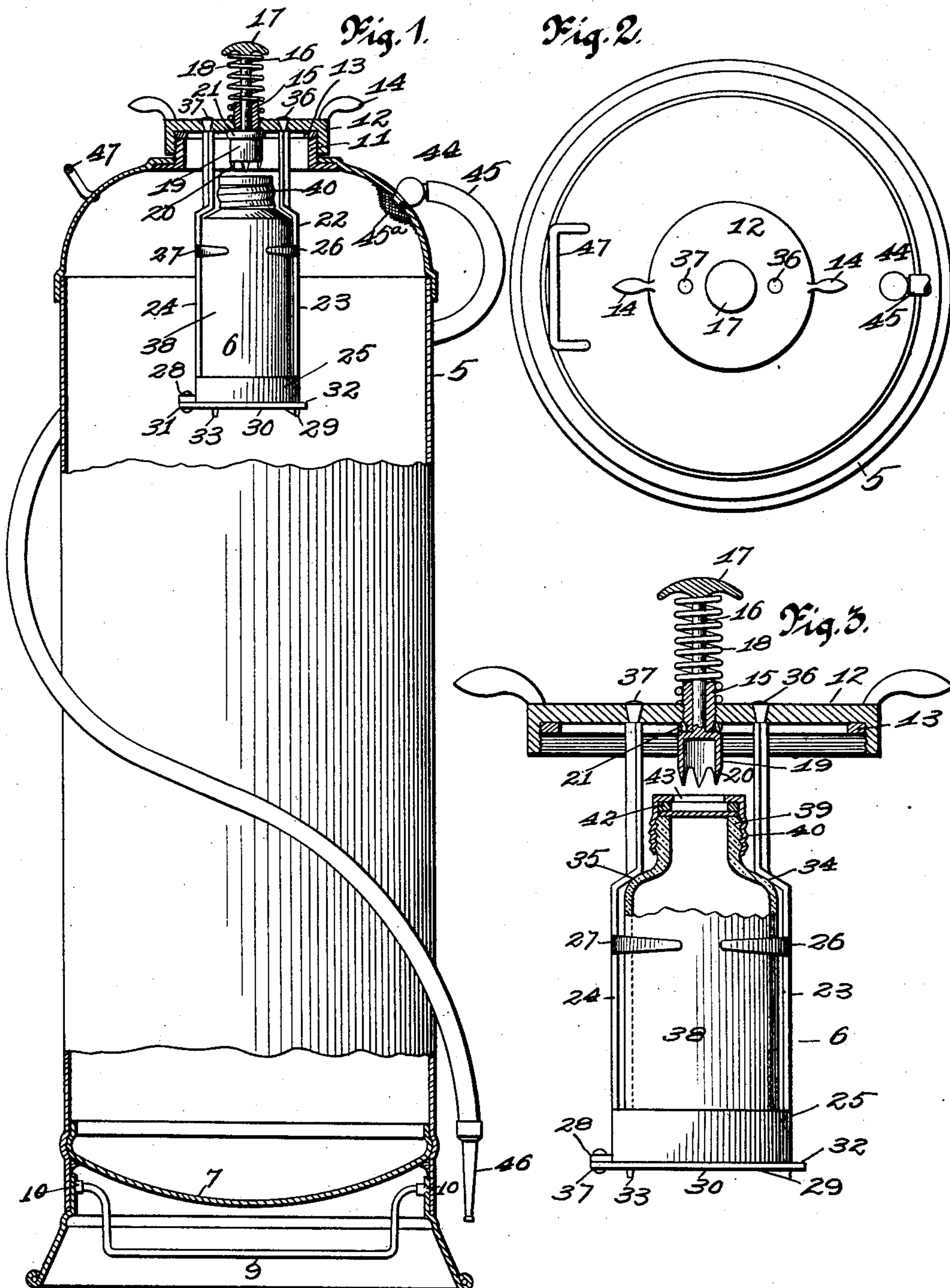
No. 678,250.

Patented July 9, 1901.

G. C. HUTCHINGS.  
FIRE EXTINGUISHER.

(Application filed Mar. 12, 1901.)

(No Model.)



Witnesses  
Alfred O. Eicher  
John H. Rippey

Inventor  
George C. Hutchings  
By Higdon & Longan Attys.



# UNITED STATES PATENT OFFICE.

GEORGE C. HUTCHINGS, OF ST. LOUIS, MISSOURI.

## FIRE-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 678,250, dated July 9, 1901.

Application filed March 12, 1901. Serial No. 50,878. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE C. HUTCHINGS, of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Fire-Extinguishers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to fire-extinguishers; and it consists of the novel construction, combination, and arrangement of parts hereinafter shown, described, and claimed.

Figure 1 is a sectional elevation of my improved fire-extinguisher. Fig. 2 is a top plan view of the fire-extinguisher. Fig. 3 is a detail sectional elevation, upon an enlarged scale, of the cap and acid-bottle.

Referring by numerals to the drawings, 5 is the main tank or receiver, and 6 the auxiliary receiver, of acid-bottle. The main tank 5 is cylindrical in plan and has a concavo-convex bottom 7, mounted a short distance above the lower edge of the cylinder forming the tank. An annular flange 8 is attached to the lower end of the cylinder and forms a base for supporting the tank. A bail 9 is journaled in the lugs 10, attached to the inner face of the lower end of the cylinder and below the bottom 7. An exteriorly-screw-threaded vertically-apertured nipple 11 projects upwardly from the upper end of the tank, and the interiorly-screw-threaded cap 12 is screw-seated upon said nipple. A packing-ring 13 is placed against the upper end of the nipple 11 inside of the cap to form a close joint.

Projecting upwardly and outwardly from opposite sides of the cap 12 are the handles 14 for operating the cap. A screw-threaded aperture is formed vertically through the center of the cap 12, and a hard-rubber tube 15 is screw-seated in said aperture. A sliding bolt 16 operates through the tube 15 and has the head 17 upon its upper end. An expansive coil-spring 18 is placed around the sliding bolt 16, between the head 17 and the cap 12, as required, to hold the bolt elevated. Upon the lower end of the bolt 16 and below the cap 12 is a cutting-head 19, said cutting-head being hollow and having teeth 20, projecting downwardly. The teeth 20 are sharpened upon their points and edges. A pack-

ing-ring 21 is placed around the bolt 16 below the tube 15 and above the head 19.

The bottle-holder 22 is rigidly attached to the cap 12 and depends into the main tank. The bottle-holder consists of the side bars 23 and 24, mounted in vertical parallel positions, the horizontal ring 25, formed integral with the lower ends of said side bars, the arms 26 and 27, projecting in opposite directions from each side of the side bars 23 and 24, respectively, and forming segments of a circle, the ear 28, projecting horizontally from the lower edge of the ring 25, the notched lug 29, projecting downwardly from the edge of the ring 25 at the opposite side from the ear 28, the plate 30, pivotally attached to the ear 28 by means of the rivet 31, the lug 32, projecting from the opposite side of the plate 30 from the ear 28 and engaging in the notch in the lug 29, and two legs 33, projecting downwardly from the plate 30 to a point on a level with the lower face of the lug 29. The downwardly-projecting lug 29 forms a leg which performs the same function as do the legs 33 in sustaining the bottle-holder in an upright position when it is removed from the tank. The legs 33 and the lug 29 form a base upon which the bottle-holder will stand when disconnected from the tank. The arms 23 and 24 are offset toward each other, thus forming the shoulders 34 and 35, which engage the shoulders of the bottle and hold the same in position. The pins 36 and 37 are formed upon the upper ends of the arms 23 and 24 and are inserted through the cap 12 and riveted as required to hold the bottle-holder securely in position relative to the cap. The plate 30 swings in a horizontal plane to open and close the lower end of the ring 25. When the plate is swung out of the way, the bottle 38 is inserted upwardly through the ring 25. Then the plate 30 is swung in position below said bottle, with the lug 32 engaging in the notch of the lug 29. The neck 39 of the bottle 38 is exteriorly screw-threaded, and a screw-threaded cap 40 is screw-seated in position upon the neck. A disk 41, of frangible material, such as sheet of mica, is placed in position to close the mouth of the bottle and inside of the cap. A packing-ring 42 is placed inside of the cap 40, above the disk 41, as required to seal the bottle when the cap is screwed firmly in position. An aperture 43



is formed through the center of the cap as required to admit of the passage of the head 19 downwardly through the cap. A nipple 44 is attached to the top of the main tank 5, at one side of the cap 12, and a strainer 45<sup>a</sup>, of wire-gauze or other suitable material, is placed inside of the tank over the opening through the nipple 44. A flexible hose 45 is removably attached to the outer end of the nipple 44 and has a nozzle 46 upon its opposite end. When not in use, the hose 45 may be coiled up and placed below the bottom 7 and above the bail 9, inside of the flange 8. A handle 47 is attached to the top of the tank 5 and upon the opposite side of the cap 12 from the nipple 44.

The fire-extinguisher is charged in the ordinary way, and when a fire occurs or it is desired to use the fire-extinguisher for any purpose the bolt 16 is operated to bring the teeth 20 into contact with the frangible seal 41 and break the seal. Then the fire-extinguisher is used in the ordinary way. The seal may be broken by striking the head 17 and depressing the bolt, or it may be broken by turning the tank bottom upward and placing the head of the sliding bolt upon the ground or floor or in any other way that the bolt 16 may be operated.

By constructing the cutting-head 19 with a plurality of teeth said cutting-head when pressed downwardly to engage the frangible seal of the acid-bottle 38 will cut a very large aperture in said frangible seal, and should said seal be mica or like material a large circular opening will be cut in said seal of mica, said cutting-head acting in this instance similar to a can-opener or biscuit-cutter. By thus making the enlarged hole in the seal the acid in the bottle 38 will flow out of said bottle very quickly.

Another advantage of my construction to which I wish to call special attention is the fact that the fire-extinguisher may be transported or turned bottom upward or manipulated in any desired manner without releasing the charge in the acid-bottle, the only limitation being that the sliding bolt must not be reciprocated.

I claim—

In a fire-extinguisher, a tank, a cap closing said tank, arms rigid with and depending from said cap to the interior of the tank, a ring formed integral with the lower ends of said arms, a hinged plate arranged to close said ring, retaining-arms formed integral with said arms, an acid-bottle held between the depending arms above the hinged plate, a cap having an aperture in its center screwed to the top of said bottle, a disk of mica closing the mouth of said bottle, a rubber packing-ring arranged between said disk of mica and the screw-cap, a hard-rubber bushing located in the center of the tank-cap, a spring-actuated rod arranged to slide vertically through said bushing, a circular head formed integral with the lower end of said rod, which head is of such a size as to pass through the aperture in the screw-cap of the bottle, a continuous row of V-shaped cutting-teeth formed integral with the lower edge of said head, and a packing-ring located upon said head around the vertically-moving rod, substantially as specified.

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

GEO. C. HUTCHINGS.

Witnesses:

JOHN D. RIPPEY,  
ALFRED A. EICKS.