

No. 641,796.

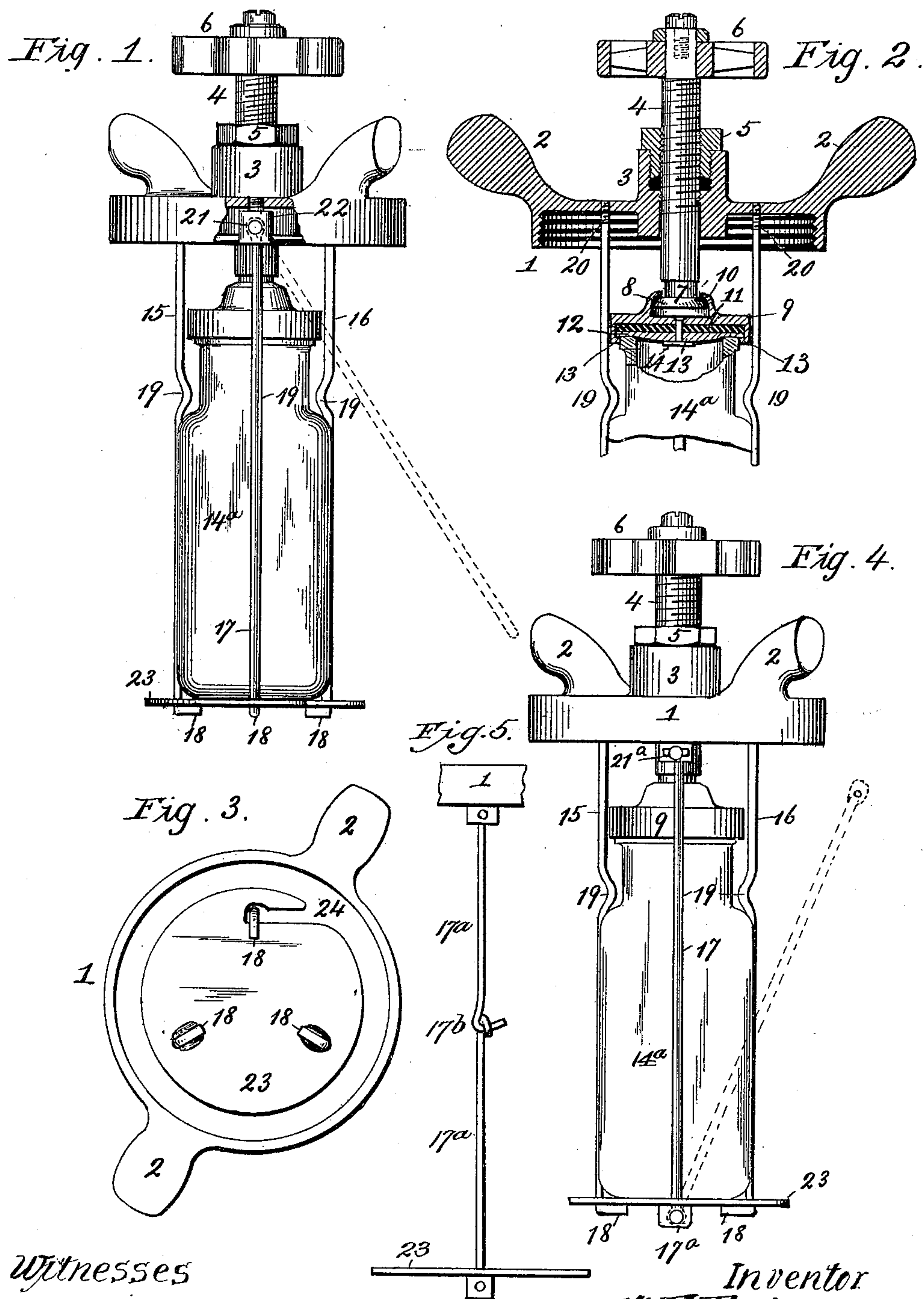
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W. F. PRIER.

CHEMICAL FIRE EXTINGUISHER ATTACHMENT.

(Application filed Jan. 17, 1899.)

(No Model.)



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UNITED STATES PATENT OFFICE.

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CHEMICAL FIRE-EXTINGUISHER ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 641,796, dated January 23, 1900.

Application filed January 17, 1899. Serial No. 702,442. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. PRIER, of Kansas City, Wyandotte county, Kansas, have invented certain new and useful Improvements in Chemical Fire-Extinguisher Attachments, of which the following is a specification.

My invention relates to attachments for chemical fire-extinguishers, and more particularly to improvements in the bottle-carrying cage forming a part of the generality of such devices, the objects in this connection being to produce a skeleton cage or basket embodying structural features which permit the bottle to be placed in or removed from position easily and quickly without any necessity of the operator's hands coming in contact with the acid and to produce a stopper which, while unaffected by the acid, adapts itself to any irregularities in the mouth of the bottle, and thereby absolutely prevents leakage.

With these objects in view the invention consists in certain novel and peculiar features of construction and combinations of parts, as will be hereinafter described and claimed, and in order that the invention may be fully understood reference is to be had to the accompanying drawings, in which—

Figure 1 represents in side elevation, partly broken away, a chemical fire-extinguisher cap provided with attachments embodying my invention. Fig. 2 represents a vertical section of the same. Fig. 3 represents an inverted plan view of the same. Fig. 4 represents a side elevation of a modified form of construction. Fig. 5 represents a still further modification of the bottle-supporting-cage attachment.

In the said drawings, 1 designates the customary threaded cap of a chemical fire-extinguisher, and 2 projections or handles whereby the cap is screwed firmly down upon the cylinder (not shown) or unscrewed therefrom. This cap is provided with the internal-threaded central boss 3, in which is mounted the threaded stem 4, said stem extending also through the customary packing-gland 5, mounted in said boss.

6 designates the usual hand-wheel clamped upon the upper end of stem 4, and 7 the reduced cylindrical neck portion formed at the

lower end of the stem and uniting the latter with the enlarged segmental head 8, said head being also preferably turned integral with the stem.

The bottle-stopper consists of the flanged cap 9, formed with a segmental socket 10, in which fits snugly the segmental head 8, this relation constituting a swivel connection, which permits the stem to be rotated freely in said cap when the latter is pressed down upon the bottle, as hereinafter explained, and also permits said cap to assume a position at an angle to the stem in order to adapt itself perfectly to the mouth of the bottle, which is frequently higher at one side than the other, and therefore could not be reliably closed unless by a stopper which adapts itself to any irregularity in the mouth of the bottle.

11 designates a rubber or equivalent disk fitting in the flanged portion of the cap, and 12 a lead or equivalent disk, which also fits within said flange at the under side of the rubber or cushion disk and upon a shoulder 13, formed in said flange by counterboring and adapted to eliminate all chance of the accidental disconnection of said disk with the cap. Furthermore, this disk is additionally secured by means of a lead or equivalent rivet 14, which extends centrally through it and through the superposed rubber disk and that portion of the cap forming the base of socket 10. This compressible lead disk when pressed firmly down upon the mouth of the bottle 14^a by the proper manipulation of the handle 6 will yield and adapt itself to any irregularities which may exist, and thereby effectually close the mouth of the bottle.

The cage or bottle support consists of the rods 15, 16, and 17, having their lower ends bent radially inward to form the arms or hooks 18. Said rods are also bent or kinked inward at 19 just above the shoulder of the bottle, so as to prevent the latter sliding toward the cap when the stopper is withdrawn and the extinguisher inverted, thereby making positive the discharge of the acid and the generation of gas. The upper ends of the rods 15 and 16 are screwed, as at 20, or otherwise connected to the cap 1, while the upper end of the rod 17 is pivoted, as at 21, in the bifurcated bolt 22, screwed into said cap, the ar-

rangement being such that the rod 17 in pivotal operation swings tangentially to the surface of the bottle.

23 designates an apertured base-plate for the skeleton cage or basket, said base-plate being pierced to receive the rods 15 and 16 and soldered, preferably, to their hook ends 18, the latter forming the permanent support of said plate. Said plate is provided also with a slot 24, said slot forming the entrance or guide passage for the rod 17 in moving the latter to operative position to secure the bottle in place or in swinging it laterally outward when it is necessary or desirable to remove the bottle—for instance, when necessary to recharge the bottle with acid. These three rods are arranged equidistant from each other, so that when the stopper is elevated and the movable rod swung out of the way by disengaging its lower end from the plate the bottle is free to be lifted out of the cage. After it is charged with the requisite quantity of acid and replaced upon the base-plate 23 it is only necessary to swing rod 17 back into the slot 24 and then screw the stopper down tight upon the bottle. The cap 1 is then screwed down upon the cylinder (not shown) in the customary manner.

In Fig. 4 a modification is shown. This modification consists simply in pivoting the rod 17 at its lower end, as at 17^a, to the plate 23 or a projection thereof and having its upper end fitting in the bolt 22, the latter in this case being made somewhat longer in order that the removable pin 21^a, carried thereby and extending through the upper end of said rod, may be conveniently manipulated by hand. This change, however, is not a change in principle, and as such properly falls within the scope and spirit of my invention.

In Fig. 5 I show in lieu of the rod 17, pivoted at one end and adjustably connected at the other, the sectional rod 17^a, pivotally connected at its upper end to the cap 1 and at its lower end to the plate 23, the meeting ends of said sectional rod being detachably hooked together or otherwise connected, as at 17^b.

From the above description it will be apparent that I have produced an attachment for chemical fire-extinguishers which embodies the features of advantage enumerated as desirable in the statement of invention and which, while of simple, strong, and durable construction, may be manufactured at small cost.

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

1. In a chemical fire-extinguisher, a cylinder-cap, and a bottle-carrying cage pendent therefrom, the same comprising a base-plate and a plurality of rods connecting the base-plate and the cap, one of said rods being composed of two parts, one pivoted at its upper end to the cap and terminating in a hook at its lower end, and the other pivoted at its lower end to the plate and terminating at its upper end in a hook hooked to the first-named hook, and a stopper adjustably carried by the cap, substantially as and for the purpose set forth.

2. A chemical fire-extinguisher, embodying a cap, a stem carried by said cap, and a bottle-cap swiveled on the lower end of said stem, and provided with a central perforation, a depending annular marginal flange, and an inwardly-projecting flange at the lower end of said depending flange, a perforated rubber disk 11, fitting in said bottle-cap, and a lead disk also fitting in said bottle-cap between said rubber disk and said inwardly-turned flange, said lead disk being thickest at its center and tapering to a thin outer edge, and provided also centrally with a perforation, and a lead rivet extending through the perforations of the bottle-cap, the lead disk and the interposed rubber disk and having each end riveted, substantially as described.

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

WILLIAM F. PRIER.

Witnesses:

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F. S. THRASHER.