(No Model.)

C. T. HOLLOWAY.

CHEMICAL FIRE EXTINGUISHER.

No. 347,606. Patented Aug. 17, 1886.

Fig. 1.

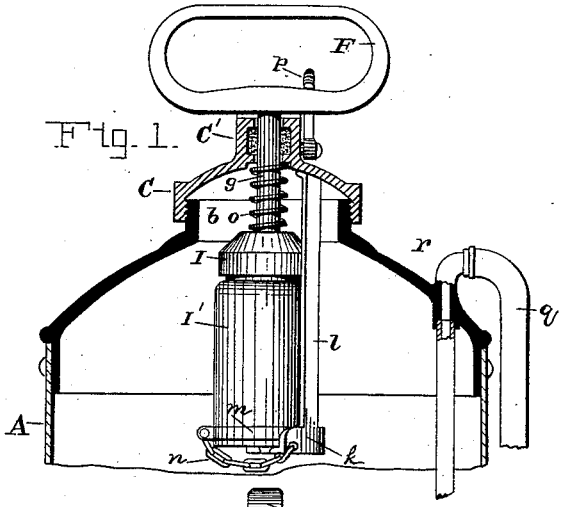


Fig. 2.

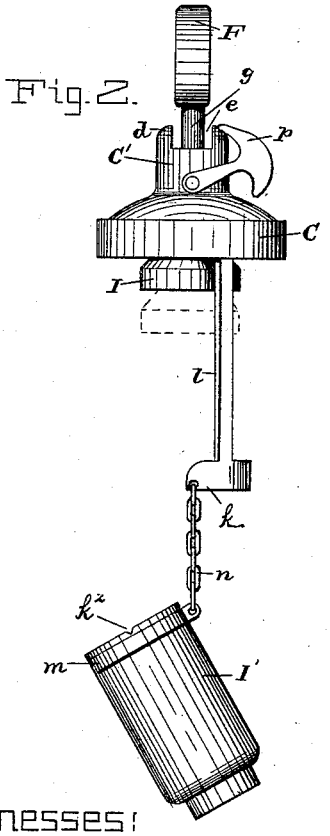


Fig. 3.

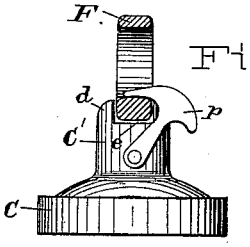


Fig. 4.

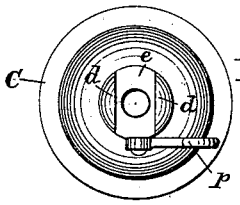


Fig. 5.

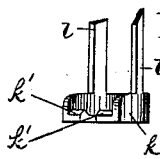
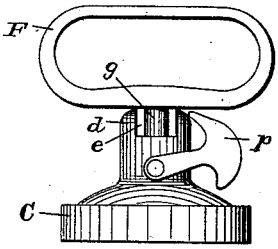


Fig. 6.



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UNITED STATES PATENT OFFICE.

CHARLES T. HOLLOWAY, OF BALTIMORE, MARYLAND.

CHEMICAL FIRE-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 347,606, dated August 17, 1886.

Application filed May 25, 1886. Serial No. 203,196. (No model.)

To all whom it may concern:

Be it known that I, CHARLES T. HOLLOWAY, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Chemical Fire-Extinguishers, of which the following is a specification.

My invention relates to certain improvements in chemical fire-extinguishers, and is illustrated in the accompanying drawings, in which—

Figure 1 is a vertical section of the upper part of the alkali-vessel, and shows the operative parts, the acid-bottle being closed. Fig. 2 is a side view of the operative parts detached from the alkali-vessel, and shows the acid-bottle in the position it occupies when emptying its contents. Fig. 3 is a side view of the top-cover, hook, and handle, the latter being in section to more clearly show the engagement of the hook. This figure also shows that when the hook is engaged with the handle the latter occupies the horizontal cross-groove in the top neck. Fig. 4 is a plan view of the top cover. Fig. 5 is a view of a portion of the hanger-seat by which the acid-bottle is supported. Fig. 6 is a side view of the top cover, hook, and handle, the latter occupying a position transverse to that which it has in Fig. 3.

The alkali-vessel A is of ordinary construction. At its top is an open neck, *b*, screw-threaded, and a top-cover, C, closes the open neck by being attached to the said screw-threaded part in a well-known manner. The top-cover C has a tubular neck, C′, provided on top with two upward-projecting ears, *d*, and a horizontal cross-groove, *e*, between said two ears. A handle, F, has the shape of a link or loop, though it may be shaped differently, and is attached to a stem, *g*, extending down between the two ears and through the tubular neck C′, which is fitted with a suitable packing, *h*, so as to be air-tight, and yet allow the stem to turn or move up and down. At the lower end of the stem *g* is a rigidly-fixed cap or stopper, I, which closes the acid-bottle I′. When the apparatus is not charged, the handle F, drawn upward, may be turned crosswise of the horizontal groove *e*, and rest upon the top of the two ears *d*, as shown in Fig. 6. This position will keep the acid-bottle cap I elevated and out of the way at the time of placing the acid-bottle in position on the seat. When the acid-bottle has been placed upon its seat, the cap I may be lowered to close said bottle by simply giving a quarter-turn to the handle F, which latter will then lower and occupy the horizontal groove *e*. In this position between the two ears *d* the handle cannot turn, and therefore it will serve for turning the top-cover C, to screw it on the neck *b*.

A hanger to support the acid-bottle I′ consists of a semicircular seat, *k*, and two rods, *l*, connecting the seat with the top-cover C. The semicircular seat *k* has two sharp-edged lugs, *k′*, and the bottom of the acid-bottle has two V-notches, *k²*. When the bottle has position on the seat, the V-notches set upon the sharp lugs. A band, *m*, is around the acid-bottle and a chain, *n*, connects the band with the seat *k*. As the seat projects under but one-half of the bottle, and the latter rests upon the sharp lugs, it may be easily upset. When the cap I is raised, the bottle may, by tilting the apparatus a little to one side, be caused to fall from its seat and empty its contents. At such time it will hang suspended by the chain *n*, as shown. A spring, *o*, is interposed between the cap I and the inner part of the top-cover C. This spring exerts a downward pressure on the cap I, and keeps it closely pressed on the acid-bottle, and at the same time of course it retains the handle F on its seat, which is in the cross-groove *e* between the two ears *d*. A hook, *p*, is pivoted to the neck C′ of the top-cover, and serves, by engaging with the handle F, to retain the cap I on the acid-bottle and the handle on its seat. The hook enables the extinguisher to be carried by the handle without causing a commingling of the two solutions. When the parts are thus combined and arranged, the handle F serves, first, for lifting and carrying the extinguisher, and, second, when lifting the extinguisher by the handle the thumb of the person's hand may readily disengage the hook *p* from the handle, whereupon the weight of the extinguisher will at once cause the commingling of the acid with the alkaline solution. This is done by the said weight overcoming the tension or pressure of the spring *o* and raising the cap I, allowing the acid-bottle I′ to fall from its seat

and empty the acid into the alkaline solution, thereby producing the desired carbonic-acid gas. The apparatus is then at once ready to discharge its contents on a fire. The discharge-pipe *q* is attached to a neck, *r*, on the top of the alkaline vessel.

From the foregoing description it will be seen the handle F is so combined with other parts that it completely controls the acid-bottle cap, and in the act of lifting the extinguisher the handle may be utilized to promptly effect a commingling of the acid and alkaline solutions, and thereby facilitate the operation of the apparatus.

Acid-bottles have heretofore been arranged to upset by falling from a seat, and I do not herein lay claim to said feature.

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

1. A fire-extinguisher having in combination an alkaline vessel, a tubular neck having two upward-projecting ears and a horizontal groove between the ears, an acid-bottle, and a handle having a stem extending down between the two ears, and at its lower end carrying a cap or stopper for the acid-bottle, as set forth.

2. A fire-extinguisher having in combination the alkaline vessel, provided with an open neck having a screw-thread, a top-cover for attachment to the screw-threaded neck, having two upward-projecting ears and a horizontal groove between the ears, an acid-bottle having a cap or stopper, and a handle having a stem extending down between the two ears for controlling the said acid-bottle cap, as set forth.

3. A fire extinguisher having in combination an alkaline vessel, an acid-bottle arranged to be upset from its seat, a handle having a stem extending down through the top of the alkaline vessel, and at its lower end carrying a rigidly-fixed cap or stopper for the acid-bottle, and a hook on top of the alkaline vessel for engagement with the handle, whereby the extinguisher may be carried without mixing the solutions, as set forth.

4. A fire-extinguisher having in combination an alkaline vessel, an acid-bottle arranged to be upset from its seat, a handle having a stem extending down through the top of the alkaline vessel, and at its lower end carrying a rigidly-fixed cap or stopper for the acid-bottle, a spring exerting a downward pressure on the cap or stopper, and a hook on top of the alkaline vessel for engagement with the handle, as set forth.

5. A fire-extinguisher having in combination an alkaline vessel, a tubular neck having two upward-projecting ears and a horizontal groove between the ears, an acid-bottle, a handle having a stem extending down between the two ears, and at its lower end carrying a cap or stopper for the acid-bottle, and a hook for engagement with the handle, as set forth.

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

CHARLES T. HOLLOWAY.

Witnesses:

JNO. T. MADDOX,

R. ROSS HOLLOWAY.