

UNITED STATES PATENT OFFICE.

CHARLES T. HOLLOWAY, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN FIRE-EXTINGUISHERS.

Specification forming part of Letters Patent No. **155,238**, dated September 22, 1874; application filed July 13, 1874.

To all whom it may concern:

Be it known that I, CHARLES T. HOLLOWAY, of the city of Baltimore, in the State of Maryland, have invented certain Improvements in Fire-Extinguishers, of which the following is a specification; and I do hereby declare that in the same is contained a full, clear, and exact description of my said invention, reference being had to the accompanying drawing and to the letters of reference marked thereon.

My invention relates to improvements in that class of fire-extinguishers in which gas generated by a mixture of chemicals is used as the agent for expelling the extinguishing-liquid from the apparatus.

In the accompanying drawing, forming a part of this specification, a vertical section of an extinguisher having my improvements thereon is shown.

A is the generator or body of the extinguisher, having at its upper end the neck or nozzle *a*, provided with a male thread. The upper part of the nozzle is recessed at *a'*, admitting the flange *b* of a glass acid-bottle, B, which is thus suspended within the extinguisher. The bottle, rising from this flange, terminates in a small neck, *b'*. A cap, C, screws on the nozzle *a*, and is provided with handles *c*, by means of which the union is accomplished. The cap C extends upward to some height, ending in a male-threaded sleeve, *c'*, of reduced size, capped by the nut *d*. The bottle B, when the cap C is screwed upon the nozzle *a*, is firmly held in position, a gasket, *e*, being interposed between the flange *b* and a part of the said cap. A gasket, *f*, may also be inserted between the lower part of the flange *b* and the recessed portion of the nozzle *a*. The sleeve *c'* of the cap C serves as a guide to a stem, E, having a handle of convenient shape at its outer projecting end, the neck and nut *d* being suitably bored for the reception of the said stem. The lower end *g* of the stem E is enlarged in diameter, a socket being formed therein. Another stem, *h*, preferably of glass, fits within the glass bottle B, resting upon its bottom. The upper end of

the stem *h* is reduced to the size of the socket in *g*, which is fitted over it, there being left, when the stems E and *h* are thus joined, a length of the stem E above the nut *d* of about one inch. The neck of the bottle B is provided with a gland, *i*, which prevents leakage between the neck and the stem *h*.

The parts of my invention not mentioned as being made of glass are preferably made of composition:

The mode of operation is as follows: The different parts of the invention being relatively arranged, as seen in the drawing, and it is desired to mix the chemicals, which consist of an acid in the bottle and a solution of soda in water in the generator B, the operator simply strikes or presses the upper stem E downward, thus causing the lower stem *h* to be forced through or break the bottom of the bottle, and the acid therein to fall into the liquid in the generator. The chemicals being mixed, the gas required to expel the extinguishing-liquid from the apparatus is generated, and the liquid, when it is to be employed, leaves the generator through the discharge-pipe provided for the purpose. The pipe is provided with an ordinary cock and hose-pipe nozzle.

To prevent particles of the broken bottle falling into the mixture I use a detachable perforated false bottom, I, which is slipped over the base of the bottle.

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

1. The combination of the cap C *c'*, nut *d*, neck *a*, bottle B, and stems E *h*, relatively arranged, as and for the purposes specified.

2. The combination of the bottle B and perforated false bottom I, substantially as and for the purpose set forth.

In testimony whereof I have hereto subscribed my name in the city of Baltimore.

CHARLES T. HOLLOWAY.

Witnesses:

DANL. SUPER,
R. ROSS HOLLOWAY.