H. V. R. READ.

APPARATUS FOR USE IN EXTINGUISHING FIRES.

APPLICATION FILED DEC. 13, 1911.

1,099,767. Patented June 9, 1914.

Fig. 1.

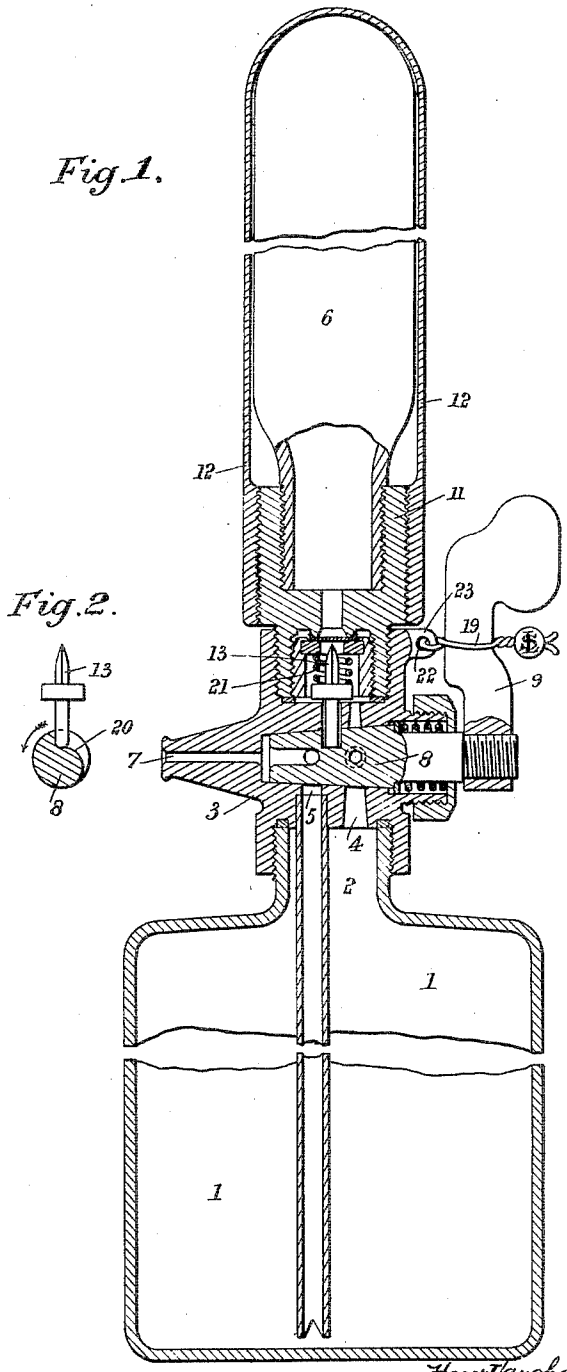


Fig. 2.

WITNESSES

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APPARATUS FOR USE IN EXTINGUISHING FIRES.

1,099,767. Specification of Letters Patent. Patented June 9, 1914.

Application filed December 13, 1911. Serial No. 665,460.

To all whom it may concern:

Be it known that I, HARRY VAUGHAN RUDSTON READ, a subject of the King of Great Britain and Ireland, of Craig's Court House, Charing Cross, in the county of London, England, have invented new and useful Improvements in Apparatus for Use in Extinguishing Fires, of which the following is a specification.

My invention relates to apparatus for use in extinguishing fires, by which a chemical compound, or liquid, is expelled onto the fire by the pressure of gas liberated from a container of compressed, or liquefied, gas, and the object of my invention is to simplify the construction and operation of such apparatus and render them more certain and efficient in action, while necessitating but one main opening into the container of the chemical compound, or liquid, and the risk of leakage and evaporation of the chemical compound, or liquid, is obviated, or reduced to a minimum, while the apparatus is out of use.

According to this invention a device is employed for on the one hand, closing the opening in the container of the chemical compound, or liquid, and for receiving a holder for the capsule containing the compressed, or liquefied, gas. The aforesaid device is provided with two passages controlled by a two-way valve, or tap, the said passages being respectively for the passage of gas liberated from the container thereof and for the passage of the chemical compound, or liquid, from the vessel containing it to the outlet, the said compound, or liquid, preferably passing through a tube dipping into the compound, or liquid. These passages controlled by the tap are, of course, so arranged that they are simultaneously opened and simultaneously closed. The tap may be operated by a handle, or lever, which cannot be turned without breaking a seal. This seal may be of any suitable description, but it preferably consists of a sealed wire, or cord, so connected with the parts to be operated that the opening of the container of compressed, or liquefied, gas cannot be effected until the tap for liberating the chemical compound, or liquid, is opened to the requisite extent.

The vessel 1 containing the chemical compound, or liquid, to be expelled has only the one opening through its neck 2, and screwed to this neck 2 is a closing piece 3, having passages 4 and 5 therethrough, the passage 4 being for gas liberated from a capsule 6, and the passage 5 being for the outlet of the chemical compound, or liquid, from the vessel 1, through the outlet 7, the said passages 4 and 5 being controlled by a two-way valve, or tap, 8 operated by a handle or lever 9. A holder for the capsule 6 is provided on the upper part of the closing piece 3, which holder consists of two parts 11 and 12, the part 11 being screwed into a recess in the closing piece 3, and the part 12 constituting a cap for supporting the capsule and being screwed onto the part 11. The capsule 6 is held by the cap 12 with its end to be opened presented toward the vessel 1 and in proximity to a piercer 13 for perforating the said end to liberate the gas. The capsule 6 is opened by the operation of the valve, or tap 8. This is effected by a cam 20 (see the cross-section of the valve, or tap-plug, Fig. 2) formed in the plug of the valve, or tap 8, upon which cam the end of the piercer 13 bears, so that when the handle or lever 9 is turned to open the said valve or tap, the piercer 13 is raised in opposition to the action of a spring 21 and the capsule thereby is opened.

In order to prevent the apparatus being improperly operated and also that it may be seen when the apparatus has been used, the handle, or lever 9 is secured either to the cap 12, or to the closing piece 3, as illustrated, by means of a cord, or wire 19, which is shown as being passed through a hole 22 in a lug 23, on the closing piece 3, and around the handle or lever 9, the ends of the said wire being then sealed. When it is required to use the apparatus, a sharp pull on the operating handle, or lever 9 in the direction to open the valve or tap 8 is sufficient to break the sealed wire, or cord, the fracture of this sealed wire, or cord, indicating that the apparatus has been used.

By the apparatus described, when the apparatus is unused, the chemical compound, or liquid, in the vessel 1 is completely isolated from the capsule of compressed, or liquefied, gas and therefore there can be no injurious action of the chemical compound, or liquid, upon the capsule, and moreover creeping of the said chemical compound, or liquid, from the vessel 1 is prevented.

What I claim is:—

1. In a liquid container, having a fill aperture, a closure fitting therefor having a

lateral discharge spout, a nipple on the upper portion of said fitting, a capsule carrier adapted to hold a capsule in inverted position on said nipple, said closure fitting being vertically perforated to afford a gas passage from a capsule in said carrier to the interior of the container and an independent discharge passage opening from said interior of the container to the discharge spout, in combination with a plug tap controlling both of said passages and perforated to simultaneously open or close the same, said plug tap having formed therein a peripheral cam slot together with a capsule piercer resting in said cam slot whereby said piercer is operatively displaced on the rotation of the plug, substantially as described.

2. In a liquid container having a fill aperture, a closure fitting therefor having a lateral discharge spout, and a perforated nipple on the upper portion of the fitting, a capsule carrier mounted on said nipple and adapted to hold a capsule in inverted position on said nipple, said closure fitting being vertically perforated to afford a gas passage from said capsule to the interior of the container and an independent discharge passage opening from said interior of the container to the discharge spout, in combination with a plug tap controlling both of said passages and perforated to simultaneously open or close the same, said plug tap having formed therein a peripheral cam slot, together with a flanged capsule piercer and a spring surrounding the pointed end of said piercer and bearing against the flange on said piercer to press the same against the bottom of said cam slot, whereby said piercer is operatively displaced on the rotation of the plug, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HARRY VAUGHAN RUDSTON READ.

Witnesses:
HERBERT D. JAMESON,
CHARLES W. CROCKER.