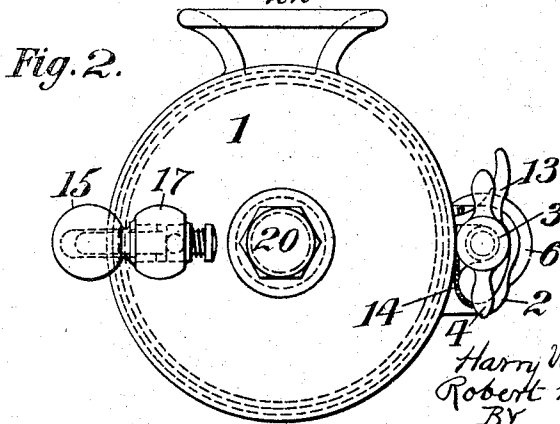
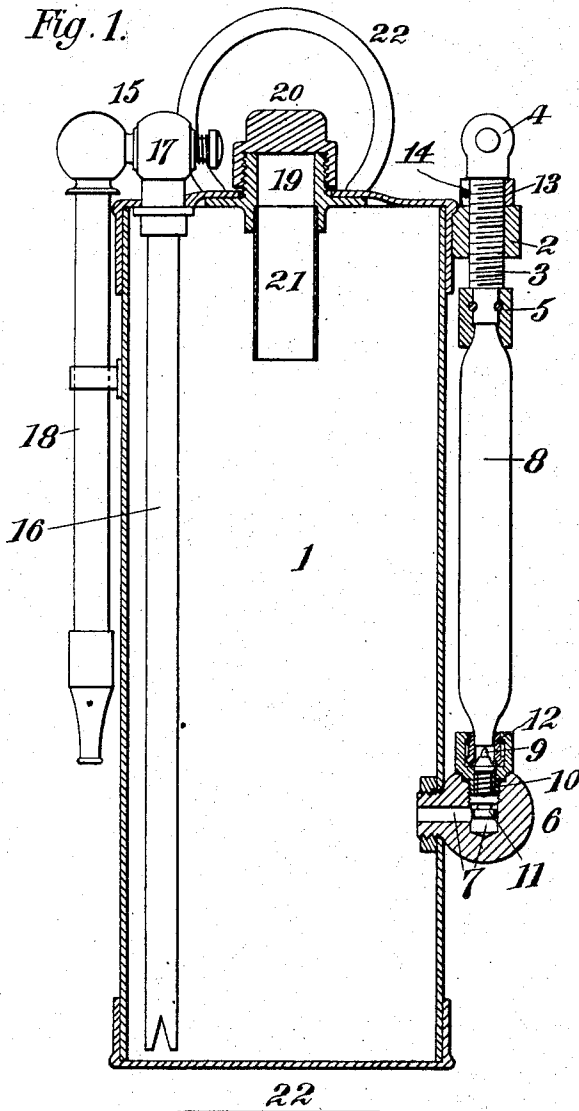


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FIRE EXTINGUISHING APPARATUS.
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937,549.

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WITNESSES

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HARRY VAUGHAN RUDSTON READ, OF LONDON, AND ROBERT HUNTER CAMPBELL, OF EDMONTON, ENGLAND, ASSIGNORS TO AERATORS LIMITED, OF LONDON, ENGLAND.

FIRE-EXTINGUISHING APPARATUS.

987,549.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, HARRY VAUGHAN RUDSTON READ, a subject of the King of Great Britain and Ireland, of Broad Street avenue, in the city of London, England, civil engineer, and ROBERT HUNTER CAMPBELL, a subject of the King of Great Britain and Ireland, of Angel Road, Edmonton, in the county of Middlesex, England, mechanical engineer, have invented new and useful Improvements in Fire-Extinguishing Apparatus, of which the following is a specification.

The object of this invention is to provide fire-extinguishing apparatus in which compressed, or liquefied, gas, contained in capsules, or like containers, can be released so that its pressure forces out the extinguishing liquid from the said apparatus.

According to this invention the vessel which contains the extinguishing apparatus is provided with supports between which the capsule, or container, is held, one of the said supports being provided with a valvular device and means for opening, or piercing, the valve, or closure, of the capsule, or container, and the other support being capable of being screwed inward, so that it presses the valve, or closure, of the capsule, or container, onto the opener, or piercer, so as to liberate the contents and allow the gas to pass into the vessel containing the extinguishing liquid, so that the said liquid is expelled when the outlet therefor to the discharge nozzle, or the like, is opened.

The accompanying drawing illustrates an apparatus constructed in accordance with this invention.

Figure 1 is a vertical section and Fig. 2 is a plan.

At the upper part of the exterior of the vessel 1, containing the extinguishing liquid, is fixed a bracket, or projection, 2, with a screwed hole in it through which passes a screw 3, provided above with means, such as the handle 4, for turning it, and below with a part 5, adapted to bear upon the shoulder of the capsule 8 of compressed, or liquefied, gas, the said part being preferably secured to the end of the screw 3, so that the said end can rotate in the said part 5. Below is attached to the said vessel 1 an attachment 6, perforated at 7, to communicate with the

interior of the said vessel 1. The said attachment 6 is provided with a valvular opening, or piercing, device; for example, such as that shown, consisting of an opener, or piercer, 9 on a stem 10, perforated for the passage of the gas and capable of sliding in guides so that the valve 11, at the bottom of the said stem, leaves its seat when opening pressure is exerted on the capsule. The attachment 6 is also provided with a pneumatic, or other suitable, piece, such as that shown at 12, adapted to receive the lower end of the capsule 8 and make a gas-tight joint therewith. When the screw 3 is screwed down, the capsule 8 is forced onto the opener, or piercer, 9, and the valve 11 is opened and the gas liberated and passes the valve 11 and enters the vessel 1 through the opening 7. In order to prevent the screw 3 from being operated accidentally, or carelessly, the part of the said screw extending beyond the bracket, or projection, 2, through which it screws, may be embraced by a recessed part of a lever 13, mounted on a center on the bracket, or projection, 2, and acting as a filling piece between the bracket, or projection, 2 and the head of the screw and secured by a sealed wire, or string, 14, so that the screw 3 cannot be operated till the lever 13 is turned so as to withdraw it from the screw, and in so doing, break the wire, or string, 14. To the said vessel 1 is also fixed an outlet piece 15, with which is connected a pipe 16, opening into the vessel 1, near the bottom thereof, the said outlet-piece 15 being provided with a tap, or valve, at 17, and to this tap, or valve, is fixed a hose of rubber, or flexible metal tubing, 18, provided with a nozzle, which, if desired, can be held in a clip at the side of the vessel 1, when the tap, or valve, at 17 is closed, and which, when raised, will open the tap, or valve, 17, so that the extinguishing liquid will be forced therefrom by the pressure of the gas admitted from the capsule 8 into the vessel 1, the said tap, or valve, 17 being again closed by lowering the said hose, or tube, 18.

The vessel 1 is provided with a filling opening 19 and means for closing it (such as the screw cap 20), and from this opening 19 descends a short tube 21, which allows of the vessel 1 only being filled to a certain level, so as to leave, above the liquid, a

space which will act as a safety reservoir to allow of expansion of the gaseous contents of the vessel.

22 is a handle affixed to the vessel 1.

5 The shape of the device may be changed as desired and the parts adapted to meet various requirements, and I do not limit myself to the precise details shown.

10 Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:

15 1. A fire-extinguisher, comprising a vessel for containing liquid, supports at the side for supporting a capsule of compressed gas, one of such supports being secured to the side of the vessel below the top thereof and provided with a valvular capsule-opening device and perforated to communicate with the interior of the said vessel through its side, and the other support above being capable of being moved inward, and an outlet for the liquid under pressure, and means for charging the vessel with liquid, substantially as described.

20 2. A fire extinguisher, comprising a vessel for containing liquid, supports at the side for supporting a capsule of compressed gas, one of such supports being secured to the side of the vessel below the top thereof

and provided with a valvular capsule-opening device and perforated to communicate with the interior of the said vessel through its side, and the other support above including a bracket, a screw therein having a part to bear on the capsule and a filler piece pivoted to the bracket and adapted to be interposed between the head of the screw and the bracket to prevent accidental pressure of the capsule against the opening device, substantially as described.

3. A fire extinguisher, comprising a vessel for containing liquid, means for supporting a capsule of compressed gas, one of such supports being provided with a valvular capsule-opening device and perforated to communicate with the interior of the vessel, and the other support being capable of being moved inward, a filling piece to prevent inward movement of the latter support and a seal for the filling piece, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

HARRY VAUGHAN RUDSTON READ.
ROBERT HUNTER CAMPBELL.

Witnesses:

GEORGE GODFREY SELICK,
WILLIAM GERALD REYNOLDS.