

R. H. COBB.
FIRE EXTINGUISHER.
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1,227,751.

Patented May 29, 1917.

Fig. 1

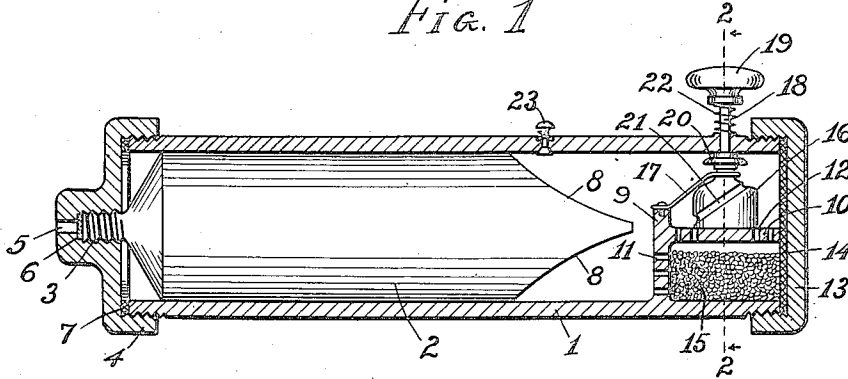


Fig. 2

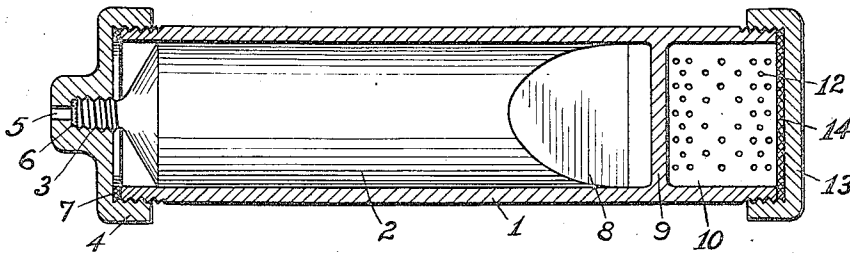
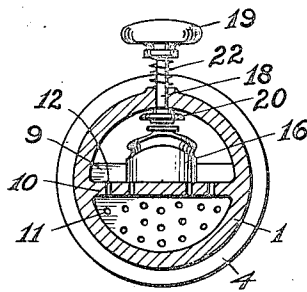


Fig. 3



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RICHARD H. COBB, OF CLEVELAND, OHIO.

FIRE-EXTINGUISHER.

1,227,751.

Specification of Letters Patent.

Patented May 29, 1917.

Application filed April 28, 1916. Serial No. 94,086.

To all whom it may concern:

Be it known that I, RICHARD H. COBB, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Fire-Extinguishers, of which the following is a specification.

This invention relates to fire extinguishers of the portable or hand type. The principal object of the invention is to provide an efficient but inexpensive fire extinguisher which is adapted to be operated by gas pressure generated at the moment it is desired to use the same. This is accomplished by precipitating an acid upon a chemical substance, and the gas thus generated exerting a continuous even pressure upon a flexible tube containing the liquid to be thrown upon a fire.

In order that the invention may be clearly understood, the same will be hereinafter fully described with reference to the accompanying drawings, which are intended to simply illustrate the invention in its broad application, and the novel features thereof will be distinctly pointed out in the appended claim.

In the drawings like characters of reference indicate corresponding parts.

Figure 1 is a longitudinal sectional view of a fire extinguisher constructed in accordance with my invention,

Fig. 2 is a similar view looking down upon the same, and

Fig. 3 is a cross sectional view taken on line 2—2 of Fig. 1.

Referring to the drawings, 1 represents a casing, which is preferably tubular in form. This casing is adapted to receive a lead or similar flexible tube 2, which contains a suitable liquid for extinguishing fire. The forward end of said flexible tube terminates in an externally threaded nozzle 3, which is adapted to screw into a cap 4 having an aperture 5 in alinement with the opening of the nozzle. The nozzle 3 is sealed by means of a suitable gasket 6, which is interposed between the end of the nozzle and inside of the cap. Said cap is screwed onto the casing, and a washer 7 serves to make it airtight. Said flexible tube is preferably of such diameter as to fill the casing 1, and its rear end is flattened from two opposite sides as at 8, against which the gas pressure acts thereby squeezing the tube gradually and

continuously from its rear end toward the nozzle end and thus expelling its contents.

Any suitable means may be employed for generating gas instantaneously to produce pressure for acting upon said flexible tube. As illustrated, at the rear of the casing is arranged a chamber formed by a cross-partition 9 and a longitudinal plate 10, each of which is provided with perforations 11 and 12 respectively. The rear end of the casing is closed by a cover 13, a washer 14 being used to make it air-tight. This chamber is adapted to hold a supply of a chemical substance such as sodium or calcium carbonate indicated by 15. A glass bottle 16 containing sulfuric, muriatic, or any other suitable acid, which when discharged upon said chemical substance will produce gas, is supported upon said perforated plate 10, and is held in place by a spring 17 or other suitable means. In order to break the bottle 16 for quickly discharging its contents upon the chemical substance 15, a plunger 18 is slidably mounted in the wall of the casing above the bottle. Said plunger is provided with a head 19, which is adapted to be struck a sharp blow by the hand of the operator, and the same carries a disk 20 for crushing the bottle and breaking it at 21. A coiled spring 22 tends to hold said plunger in normal position. The moment the bottle 16 is broken, the acid falls through the perforations 12 upon the chemical substance 15 and gas is generated instantly. The gas passes through the perforations 11 and also 12, and the pressure acts upon the flexible tube 2 as already described. A thumb operated valve 23 is provided in the casing for permitting the escape of the gas pressure after a fire has been extinguished so as to save the remaining liquid in the flexible tube.

When it is desired to use the fire extinguisher, the operator strikes the head 19 of the plunger 18 a sharp blow with his hand thus breaking the bottle 16. This discharges the liquid upon the chemical substance, and the gas generated passes through the perforations 11 and 12 into the casing inclosing the flexible tube. The pressure of the gas acts upon the flattened sides 8 of said tube, thereby compressing the same from the rear end to the nozzle end, which pressure acting upon the contents of the tube breaks the seal 6, and the contents of the tube is forcibly expelled.

It will be understood that the invention

herein disclosed is capable of many modifications and broad application, nor is it limited solely to fire extinguishers although described in connection with same. For instance the casing may contain the acid and the chemical substance arranged to be dropped into the same for producing gas pressure.

Having fully described my invention,
10 what I claim is:
The combination of a casing, a collapsible

tube within the casing and of a corresponding size in cross section, the tube having a nozzle at its forward end, the rear end of the tube being flattened at opposite sides, the tube containing a liquid, and means for generating gas within the casing to act upon said flattened sides of the tube for compressing the tube to expel the liquid, substantially as described.

In testimony whereof I affix my signature.
20 RICHARD H. COBB.