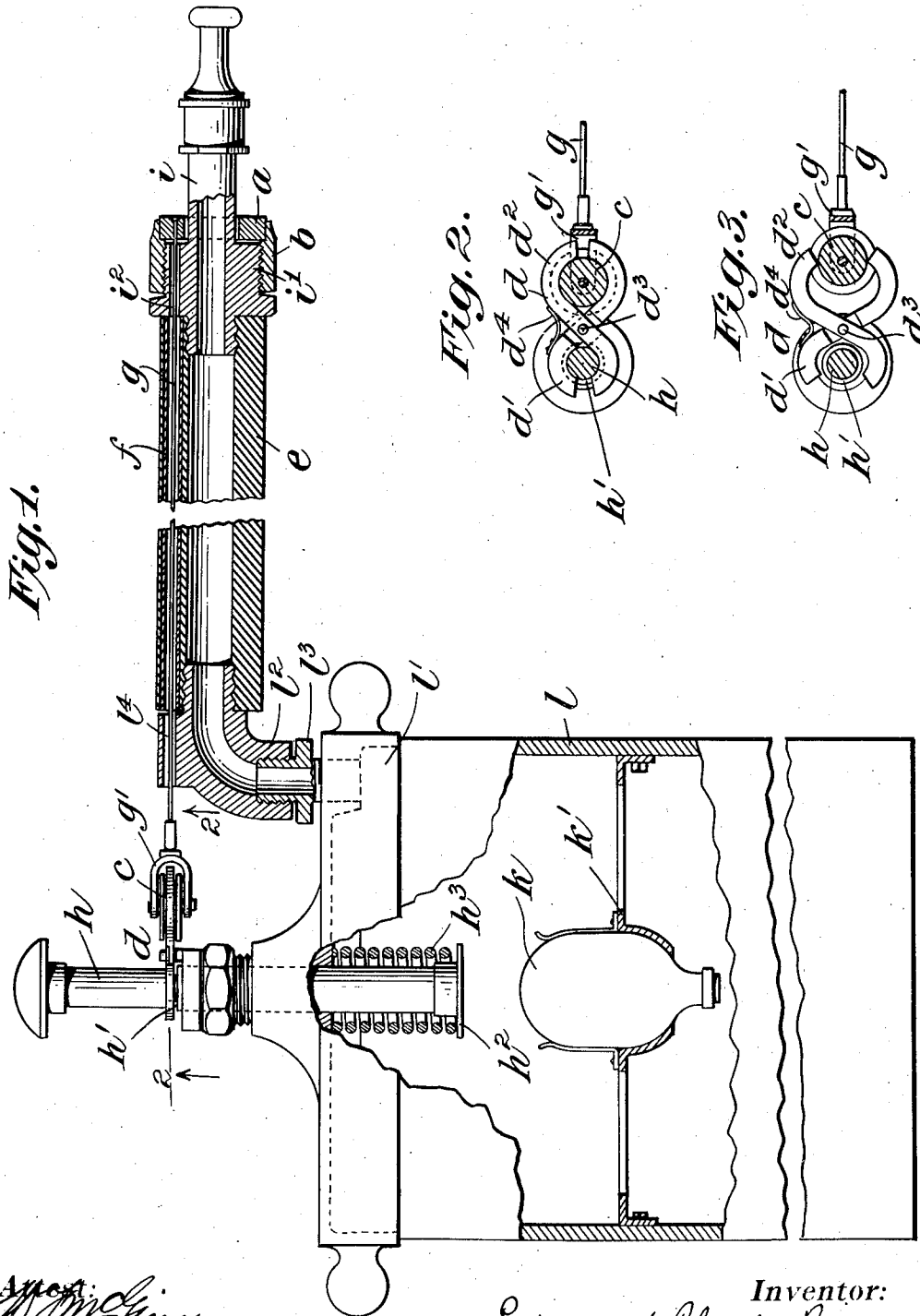


E. C. BARRON.
 CHEMICAL FIRE EXTINGUISHER.
 APPLICATION FILED MAY 10, 1912.

1,058,937.

Patented Apr. 15, 1913.



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UNITED STATES PATENT OFFICE.

EDMUND CHARLES BARRON, OF WEST KENSINGTON, LONDON, ENGLAND.

CHEMICAL FIRE-EXTINGUISHER.

1,058,937.

Specification of Letters Patent.

Patented Apr. 15, 1913.

Application filed May 10, 1912. Serial No. 696,293.

To all whom it may concern:

Be it known that I, EDMUND CHARLES BARRON, a subject of His Majesty the King of Great Britain and Ireland, residing at West Kensington, London, England, have invented new and useful Improvements in Chemical Fire-Extinguishers, of which the following is a specification.

The invention relates to fire extinguishers of the type in which acids are freed at the time of use of the device and form with alkali a fire extinguishing fluid.

It has for its object particularly to provide at the discharge nozzle means whereby the operator may free the acid in the container at any desired time. In accordance with this object the hose is provided with a flexible tube in which is disposed a connection between a movable member on the nozzle and means for releasing the acid in the container. In the embodiment herein illustrated the last named means comprises a spring-pressed plunger controlled by a suitable cam device, which upon release breaks the acid vessel.

The invention will be more fully explained hereinafter with reference to the accompanying drawings in which:

Figure 1 is a fragmentary view in elevation of the container, part being broken away to show the relation of the plunger and acid bottle, showing the hose in section. Fig. 2 is a view taken on the plane of the line 2—2 Fig. 1 and showing the releasing mechanism of the plunger. Fig. 3 is a similar view showing the releasing mechanism when disengaged from the plunger.

The container *l* of the extinguisher has a removable cap *l'* secured thereto in which may be mounted a vertically reciprocable plunger *h* having an annular recess *h'* in the stem thereof and having a head *h²* at the inner end of the stem for a purpose to be later described. This plunger is normally forced inward with respect to the container *l* by a suitable spring *h³* interposed between the head *h²* and the cap *l'*. Interiorly of the container *l* and in juxtaposition to the head *h²* is mounted an acid receptacle *k* by means of a suitable spider *k'*. It will now appear that when the plunger *h* is forced inward swiftly by the spring *h³* that the head *h²* will contact violently with the vessel *k*, which is of some fragile material, with the result that the same is broken and the acid is released.

On a convenient portion of the container

l, as on the cap *l'*, may be secured a suitable elbow *l²*, by means of the union *l³*, which is provided with a channel *l⁴* in a plane generally perpendicular to the plunger *h*. To the elbow is attached a hose *e* having a discharge nozzle *i* threaded exteriorly as at *i'* for the reception of a collar *b* which has interior engaging threads. The collar *b* abuts a second collar *a* so that longitudinal movement of the former in one direction imparts a corresponding longitudinal movement to the latter. The collar *a* has attached thereto a flexible connection *g* which extends through a channel *i²* formed in the nozzle *i'*; a flexible channel *f* formed in the hose *e*; and through the channel *l⁴* to the plunger-releasing mechanism which will now be described. This plunger-releasing mechanism, in the present embodiment, comprises a pair of calipers *d* having reversely extended arms *d'* and *d²* which embrace normally the plunger *h* about its recessed portion *h'* and a cam *c* attached to the flexible connection *g*, respectively. When in this normal position the plunger is retracted against the pressure of the spring *h³*, so that when the cam *c* is moved through the movement of the collars *a* and *b* and connection *c*, the arms *d²* will open, thus causing the arms *d'* to move out of the recess *h'* and release the plunger *h*. This opening of the caliper arms may be opposed by a suitable spring *d⁴* so that when the plunger is withdrawn manually, engagement of the arms *d'* with the recess *h'* will be insured automatically.

Modifications in structure will suggest themselves, but all such are to be considered within the scope of this invention, provided they lie within the terms of the claims here-to appended.

What I claim is:

1. In a chemical fire extinguisher and in combination, a hose, a hose nozzle, a plunger, a spring tending to force said plunger into contact with a container of chemical material to break the same, a double caliper for retaining the plunger and operative connection between said caliper and the hose nozzle, whereby the former may be actuated to release the plunger.

2. In a chemical fire extinguisher, the combination of a hose, a hose nozzle, a plunger, a spring tending to force said plunger into contact with a container of chemical material to break the same, a double caliper

for retaining the plunger, a cam device to hold the caliper in engagement with the plunger, a union screw on the hose nozzle, a tube of flexible material on the hose, a wire
5 in said tube and attached to the union screw and to the cam device whereby the latter may be actuated to release the plunger.

3. In a chemical fire extinguisher, the combination of a hose, a hose nozzle, a plunger, a spring tending to force said plunger
10 into contact with a container of chemical material to break the same, a double caliper with curved jaws for retaining the plunger,

a union screw on the hose nozzle, a tube of spring material on the hose, a wire in said
15 tube, one end of said wire being attached to the union screw and a disk on the other end of the wire normally resting between one pair of jaws of the caliper.

In witness whereof I have hereunto set
20 my hand in the presence of two subscribing witnesses.

EDMUND CHARLES BARRON.

Witnesses:

EDWARD TRUMP FOSTER,

WILFRED WILLIAM GROVES.