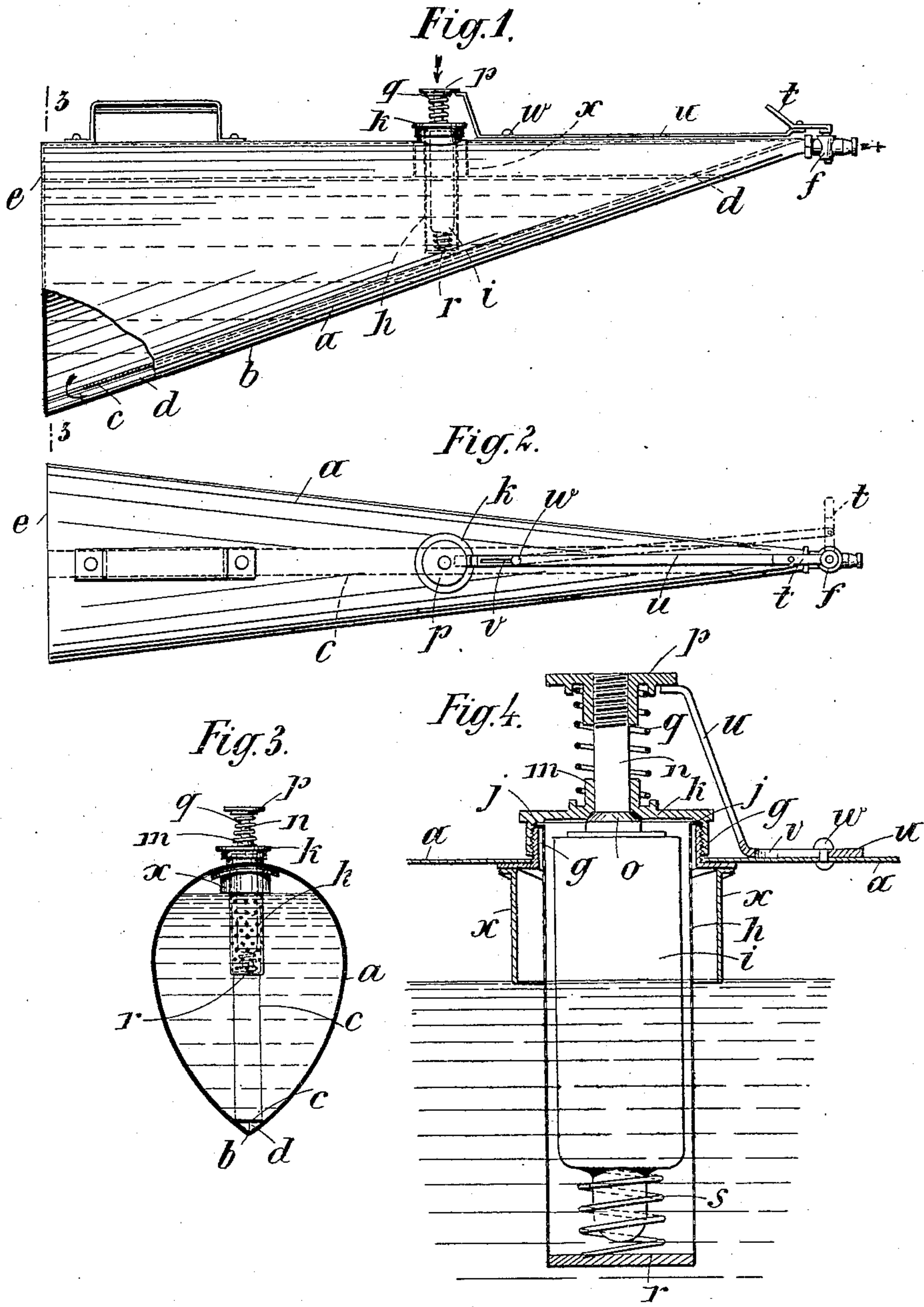


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FIRE EXTINGUISHING SYRINGE.
APPLICATION FILED AUG. 29, 1908.

936,320.

Patented Oct. 12, 1909.



Witnesses:
H. E. Barkley.
Edwin Burch.

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att'y.

UNITED STATES PATENT OFFICE.

ALEXANDER HRUBY, OF POZEGA SLAVONIA, AUSTRIA-HUNGARY, ASSIGNOR TO
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FIRE-EXTINGUISHING SYRINGE.

936,320.

Specification of Letters Patent.

Patented Oct. 12, 1909.

Application filed August 29, 1908. Serial No. 450,820.

To all whom it may concern:

Be it known that I, ALEXANDER HRUBY, a subject of the Emperor of Austria-Hungary, residing at Pozega Slavonia, in Austria, have invented certain new and useful Improvements in Fire-Extinguishing Syringes, of which the following is a specification.

This invention relates to fire extinguishing syringes of the type wherein the ejection of the liquid is effected by the pressure of gas generated by the contact of the said liquid with a reagent liberated by the breaking of a frangible receptacle.

The improvements which constitute the present invention will be described with reference to the accompanying drawing and specifically set forth in the subjoined claims.

In the drawing Figure 1 is a side-view of the syringe, with a portion of the casing broken away. Fig. 2 is a plan-view, Fig. 3 a cross-section on the line 3—3 of Fig. 1, and Fig. 4 a longitudinal section of part of the apparatus, on a larger scale.

The body or casing *a* is of approximately oval cross-section, but its walls form an edge or angle *b* at the underpart. The body *a* tapers from the rear wall *e* toward a cock *f* controlling the nozzle at the front end, and a strip of metal *c* is fixed within the casing, above the edge *b*, to form a discharge-channel *d* leading to the cock and extending through nearly the entire length of the syringe, but open near the wall *e*, or inclosed at this part by a sieve. The described shape of the body or casing renders the same very strong and easy to manipulate; no separate discharge tube is required, and the whole of the liquid can be discharged. The casing *a* has at the top a hole into which is fixed an externally screw threaded ring *g* (Fig. 4). The latter supports a perforated receptacle *h* containing a closed glass vessel *i* filled with a solution of sulfuric acid. The casing *a* contains a solution of soda, so that if the two liquids are brought into contact with each other, by breaking the vessel *i*, carbon dioxide is generated. The receptacle *h* has a flange *j* resting on the upper edge of the ring *g*, and is held fast by a cap *k* screwed onto the said ring. The cap *k* has a central, perforated boss *m* traversed by a stem *n* fastened on or bearing on the vessel *i*. The lower part of this stem is enlarged and coned to form a valve *o* adapted to fit against

a seat at the circumference of the aperture traversed by the stem. A button or head *p* is fixed to the upper end of the stem, and a helical spring *q* inserted between this head and the cap normally thrusts the stem upward and holds the valve *o* against its seat. The lower part of the vessel *i* is constricted, and a spring *s* is interposed between this part and the bottom *r* of the receptacle *h*. The result of this construction is that the spring *s* acts to throw the vessel *i* upward and maintain the upper end thereof in permanent contact with the valve *o*, whether the latter is fixed to the vessel *i* or not. Fracture is more likely to occur at the reduced lower end of the vessel *i*, and the acid comes in contact with the surrounding liquid more remotely from the valve *o* and the mechanical parts near the latter.

For breaking the vessel *i*, to liberate the liquid therein, the button *p* is depressed, so that the bottom of the glass vessel is crushed against the bottom *r* of the receptacle *h*, but means which will now be described are provided for the purpose of preventing the depression of the button while the cock *f* is closed.

To the handle *t* of the cock is pivoted a rod *u*, having a slot *v* traversed by a pin *w* fixed to the casing *a*. Part of the rod *u* is bent upward so that normally, *i. e.* when the cock is closed, its end is under the head *p*, and prevents depression of the latter. When the cock is opened the rod *u* is moved into the position indicated by dotted lines in Fig. 2 and is thus withdrawn from the head *p*, so that the latter can be depressed for the purpose already explained. Gas cannot, therefore, be generated until the cock is open. For replacing the broken vessel *i* the cap *k* is unscrewed and the receptacle *h* lifted out of the casing, with the fragments of broken glass. When the latter have been removed a fresh vessel *i* containing sulfuric acid is inserted, and the casing is recharged with liquid, whereupon the receptacle and cap are replaced. To prevent the overfilling of the casing *a* a short tube *x* is fixed inside the casing, around the inner orifice of the charging aperture, so that the casing cannot be filled above a certain level, over which there is a space in which the gas generated can expand.

What I claim as my invention and desire

to secure by Letters Patent of the United States is:—

1. A fire-extinguishing syringe comprising a casing, a frangible vessel therein, a depressible stem for breaking said vessel, a manually controlled discharge-cock to said casing, and means connected to the said cock, and extending into proximity with the stem to lock the stem against depression while the
10 cock is in closed position and to free the stem when the cock is in open position.

2. A fire-extinguishing syringe comprising a casing having a manually controlled out-

let cock, a frangible vessel and a stem movable to break said vessel, together with a rod 15 connected to the handle of the cock, one end of which rod prevents depression of the stem while the cock is closed, but is withdrawn from said stem when the cock is opened.

In witness whereof I have signed this 20 specification in the presence of two witnesses.

ALEXANDER HRUBY.

Witnesses:

HANS PAPPENHEIM,
AUGUST FUGGER.