W. K. PLATT.

Fire-Extinguishers.

No. 156,816. Patented Nov. 10, 1874.

FIG. 1.

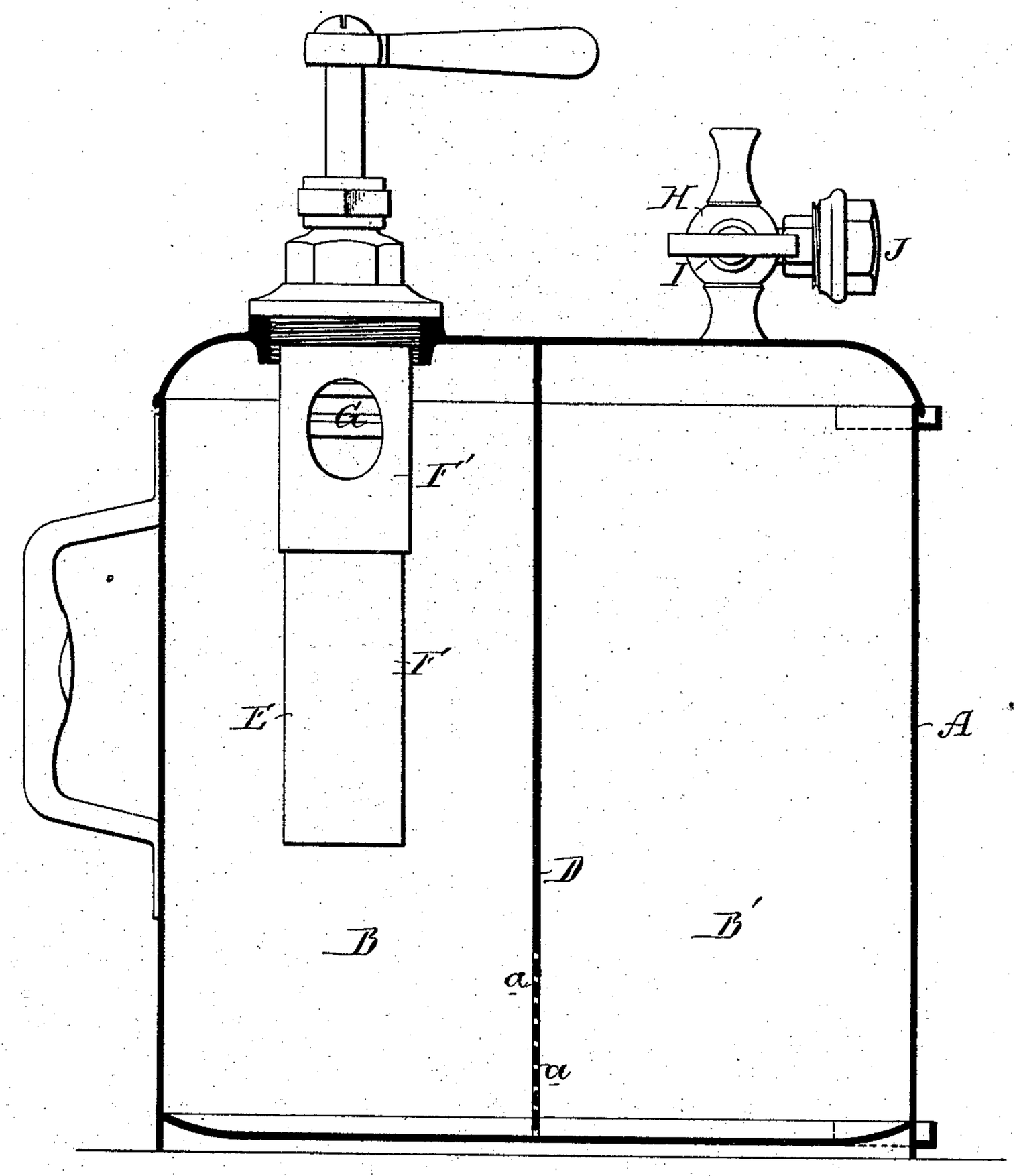


FIG. 2.

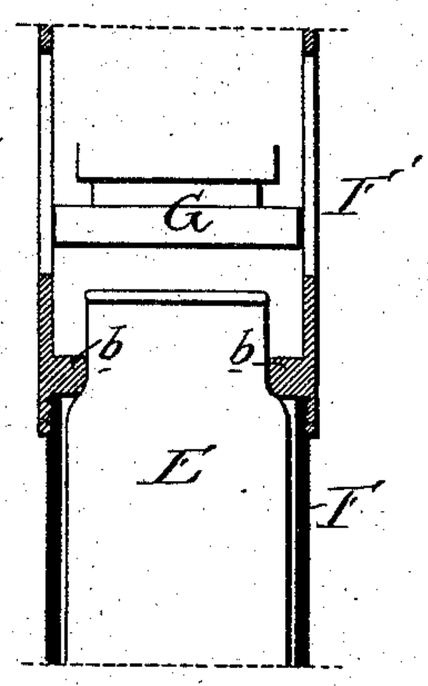


Fig 4

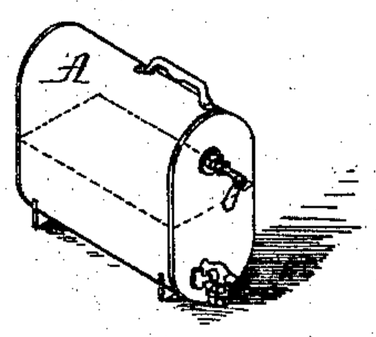
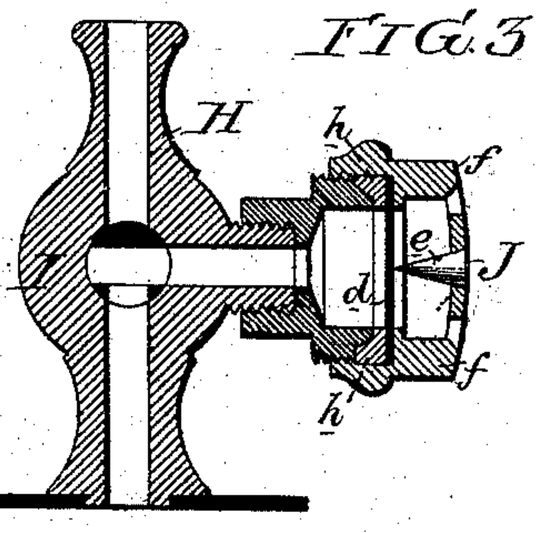


FIG. 3.



Witnesses.

Harry Smith

Hubert Howson

William K. Platt
by his Attys.
Howson and Sons

UNITED STATES PATENT OFFICE.

WILLIAM K. PLATT, OF CAMDEN, NEW JERSEY.

IMPROVEMENT IN FIRE-EXTINGUISHERS.

Specification forming part of Letters Patent No. **156,816**, dated November 10, 1874; application filed August 26, 1874.

To all whom it may concern:

Be it known that I, WILLIAM K. PLATT, of Camden, Camden county, New Jersey, have invented an Improved Fire-Extinguisher, of which the following is a specification:

My invention relates to certain improvements, fully described hereafter, in fire-extinguishers, the main objects of the said improvements being to simplify and reduce the cost of the apparatus, to prevent the accidental fracture of the acid-bottle, and to provide a vent for the gas when its pressure exceeds the limit of safety.

In the accompanying drawing, Figure 1 is a sectional elevation of my improved fire-extinguishing apparatus; Figs. 2 and 3, detached sectional views of parts of the same, drawn to an enlarged scale; and Fig. 4, a reduced perspective view of the apparatus in working position.

The casing of the apparatus consists of a single vessel, A, of sheet metal, of the oblong or elliptical form best observed in Fig. 4, the interior of the said vessel being separated into two chambers, B and B′, of about equal capacity by a partition, D, perforated with holes *a* at or near the bottom, through which communication is established between the two chambers. The acid-bottle E is contained within a tube, F, screwed into, or otherwise secured to, a tube, F′, suspended from the top of the vessel A within the chamber B, and containing the usual screw-plunger G, for breaking or opening the bottle when its acid contents are to be discharged into the said chamber.

The accidental movement of the bottle, and consequent risk of breakage, are, however, prevented by confining the said bottle between an internal shoulder, *b*, of the tube F′ and the bottom of the tube F, in a manner which will be readily understood on referring to Fig. 2.

In using the apparatus it is turned to the half-inverted position shown in Fig. 4, in order to bring the chamber B uppermost, and the bottle is then opened or broken by means of the screw-plunger G, when, owing to the mixture of the acid with the liquid contents of the vessel, carbonic-acid gas will be generated under considerable pressure, as usual, and can be discharged through a nozzle, H, furnished with a stop-cock, I, and with a hose also, if desired.

As the perforations *a* are at one end of the partition D only, the acid must pass entirely through both chambers before it can reach the outlet H, so that its thorough union with the liquid in the chambers is insured.

The apparatus, constructed as above described, with one casing separated into two chambers by a perforated partition, is quite as effective as, and cheaper and more compact than, ordinary apparatus consisting of two or more connected vessels.

It often happens in the hurry and excitement of a fire that the acid is discharged and gas generated before the operator is ready to use the apparatus, the pressure in such cases sometimes increasing to such a degree as to rupture the casing. To prevent this I arrange a vent, J, at one side of the cock I, as shown in Fig. 3, and across this vent I extend a diaphragm, *d*, of thin metal, which will yield to excessive pressure sufficiently to be brought in contact with a fixed point, *e*, by which it will be perforated, and the gas thus permitted to escape.

The point *e* is secured to a screw-cap, *f*, between which and a collar, *h*, the diaphragm *d* is confined, so that the latter, after having been perforated, can be readily removed and replaced by a new one.

The vent may be closed by the cock when the latter is turned to such a position as to permit the outward passage of gas through the nozzle.

I do not claim, broadly, a fire-extinguisher in which a single casing is divided by a perforated partition; but

I claim—

1. The combination, in a fire-extinguisher, of a casing, A, a partition, D, dividing the casing, and forming two chambers, B B′, communicating through openings *a* in the partition, an acid-bottle, E, arranged in the chamber B, and the nozzle H, communicating with the chamber B′, all as described.

2. The acid-bottle E, contained within a tube, F, and retained in position by an internal shoulder of a tube, F′, to which the said tube F is connected, all substantially as specified.

3. The combination of the vent J, its diaphragm *d*, and perforator *e* with the nozzle H and cock I of the apparatus, for the purpose specified.

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

WILLIAM K. PLATT.

Witnesses:
WM. A. STEEL,
HUBERT HOWSON.