(No Model.)

P. C. E. TABOUËT.

FIRE EXTINGUISHER.

No. 286,502. Patented Oct. 9, 1883.

Fig. 1.

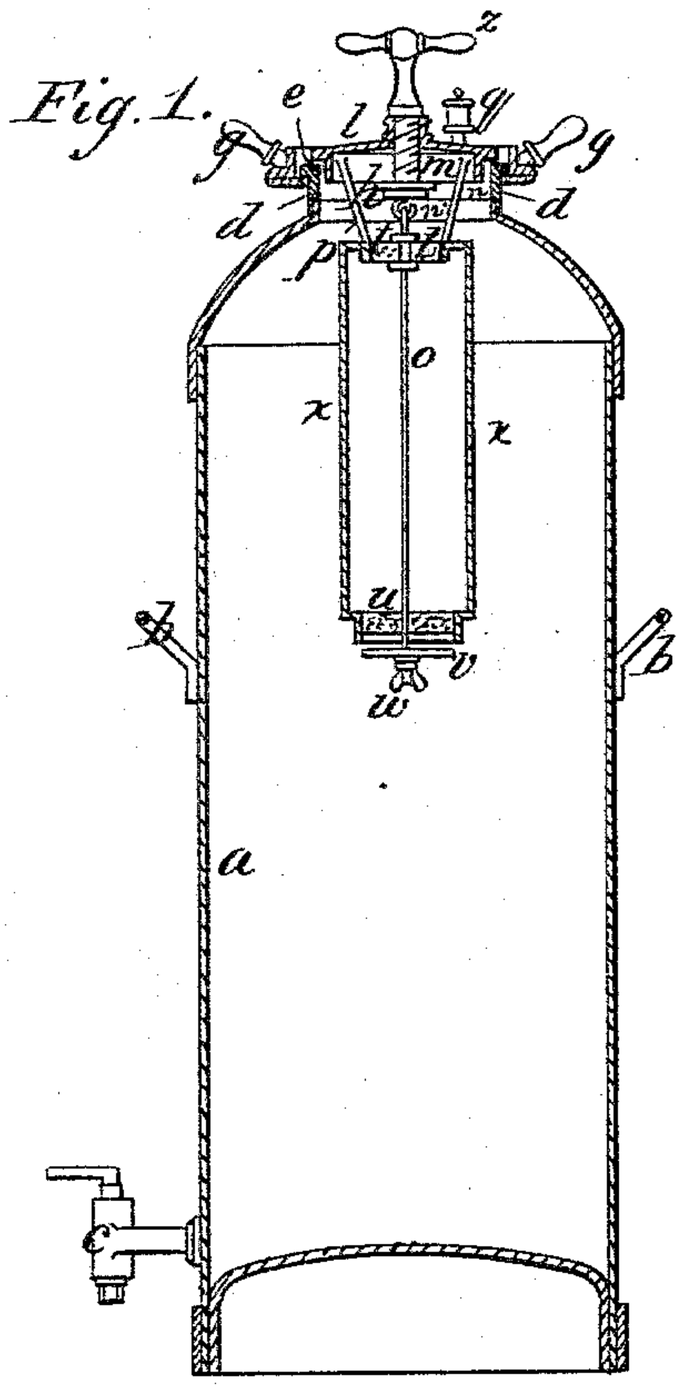


Fig. 2.

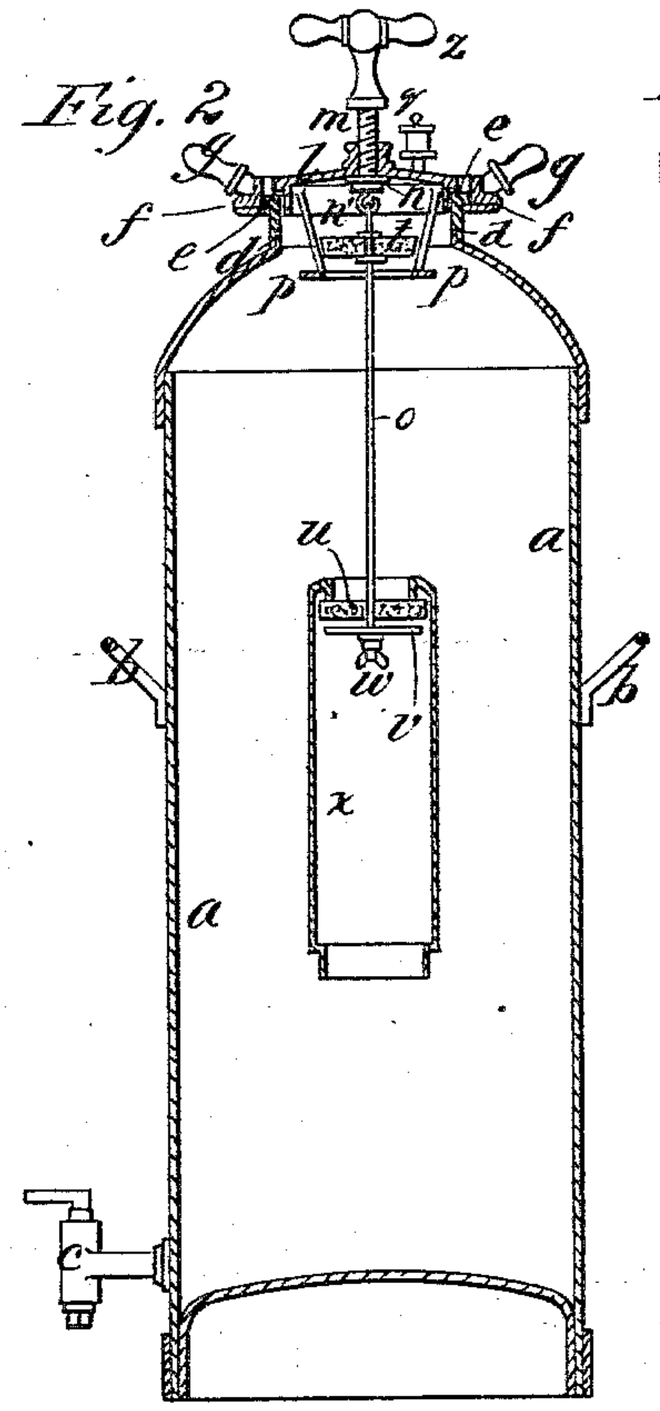


Fig. 7.

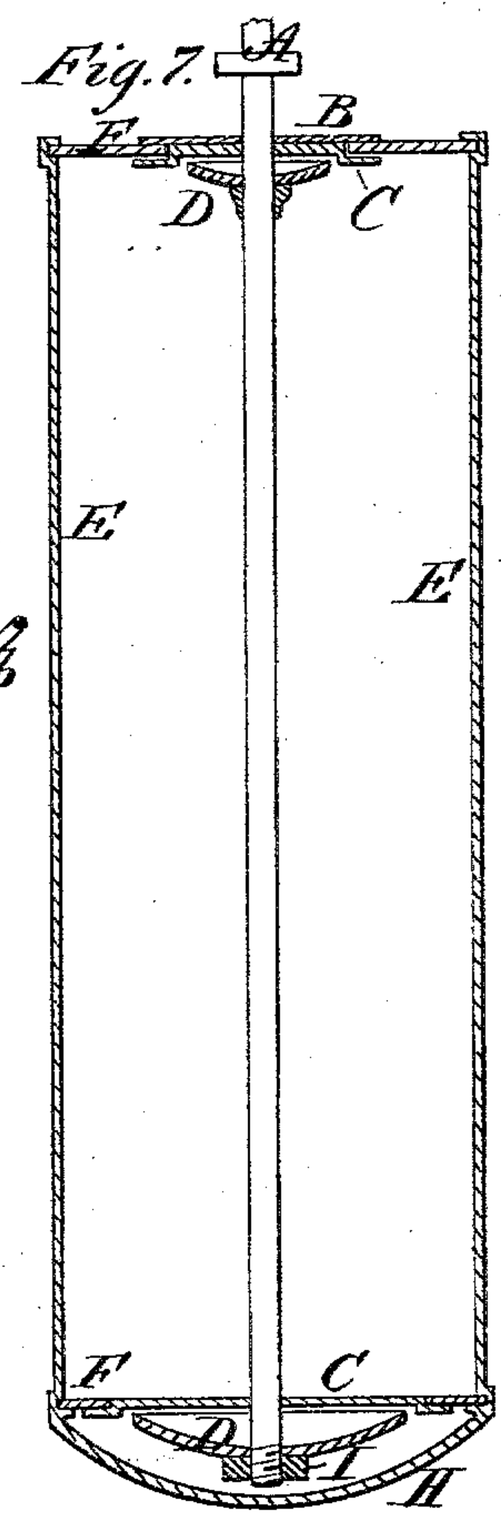


Fig. 3.

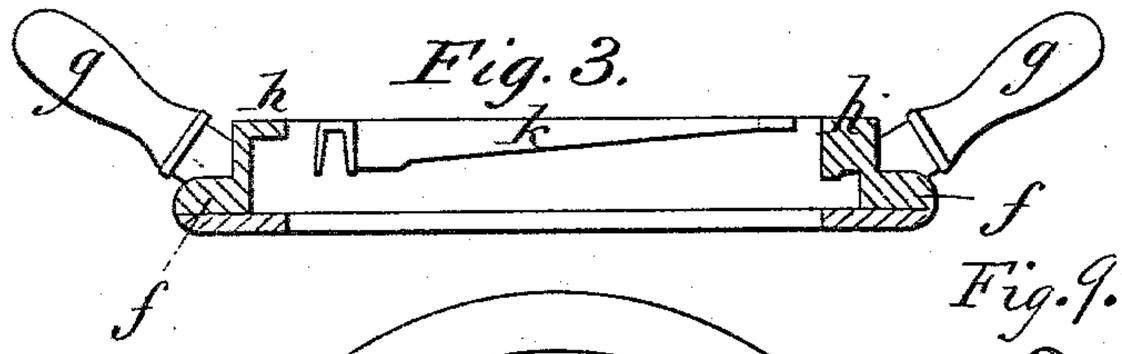


Fig. 4.

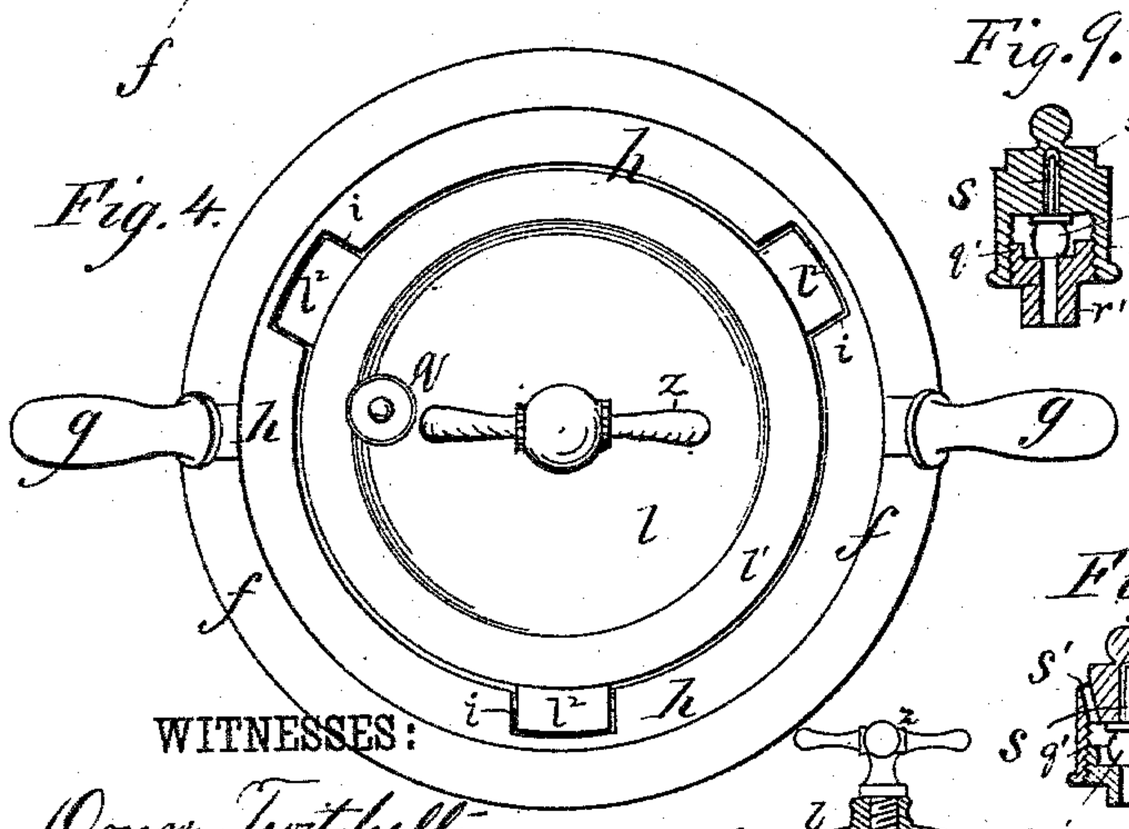


Fig. 9.

Fig. 6.

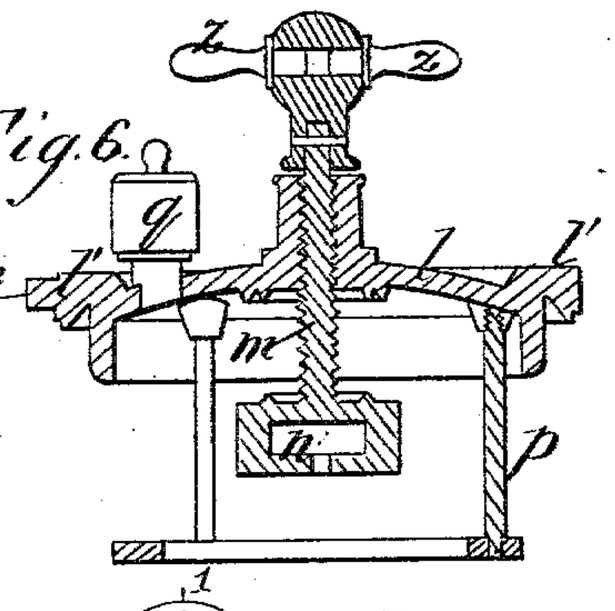


Fig. 5.

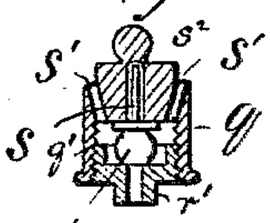
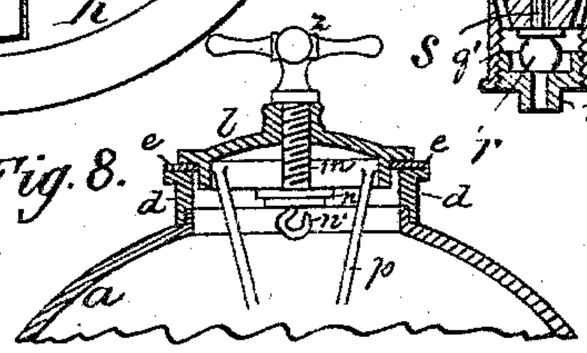


Fig. 8.



WITNESSES:

Donn Twitchell.

C. Sedgwick

INVENTOR:

P. C. E. Tabouet

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

PIERRE C. E. TABOUËT, OF PARIS, FRANCE.

FIRE-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 286,502, dated October 9, 1883.

Application filed May 2, 1883. (No model.)

To all whom it may concern:

Be it known that I, PIERRE CHARLES EUGÈNE TABOUËT, of the city of Paris, France, have invented Improvements in Fire-Extinguishers, of which the following is a full, clear, and exact description.

The object of my invention is to produce an improved fire-extinguishing apparatus presenting all the required conditions of security and convenience of working. This apparatus is arranged in such a manner as not to be charged and put under pressure except at the moment that it is required for use, and this can be effected in the space of a few seconds and without requiring any special knowledge.

In order that my invention may be better understood, I have represented different views in the annexed drawings of an extinguisher arranged according to my invention, but as a specimen only.

Figure 1 shows a vertical section of the extinguisher not as yet under pressure. Fig. 2 represents a similar section of the apparatus under pressure. Fig. 3 represents a section through the center of the closing-crown of the apparatus. Fig. 4 is a plan view of the cover and closing-crown. Fig. 5 represents in vertical section a detail, on an enlarged scale, of the safety-valve. Fig. 6 is a sectional elevation of the cap and its gallery, showing a modification of the hook on the end of the screw. Fig. 7 also represents a variation in the manner of closing the bottle. Fig. 8 is a vertical section of the upper part of the vessel with the movable crown removed. Fig. 9 is a vertical section of the safety-valve, taken on a line at right angles to that on which Fig. 5 is taken.

a is the body of the apparatus, provided with handles *b*, and having the water-supply tap *c*, upon which a hose terminating in a nozzle is to be secured. This recipient *a*, which is by preference cylindrical in shape, but of which the form may vary, has at its upper part a fixed crown, *d*, upon the upper surface of which is placed a washer, *e*, of india-rubber, leather, or other elastic matter. Upon this fixed crown turns a second crown, *f*, Figs. 3 and 4, furnished with handles or ears *g*, the rim *h* of this crown having three notches, *i*, and three inclined planes or cams, *k*.

The cap *l*, which closes the apparatus, has three lugs, l^2, projecting from its rim *l'*, which bears upon the india-rubber ring of the fixed crown *d*. This cap is placed in such a manner that its lugs enter the three notches *i* of the movable crown *f*, and in turning this crown in the required direction its three inclined planes or cams press upon the lugs of the cap and hermetically fix this latter upon the apparatus. To remove the cap it suffices to turn the movable crown in the opposite direction.

The cap *l* has in its center a screw-socket, into which enters a long-pitched screw, *m*, having a washer, *n*, furnished with india-rubber at its lower part, and a hook, *n'*, of which the end is curved horizontally, so as to permit a rod, *o*, to be easily hooked to it, and of which the use will be hereinafter explained. In place of the hook on the lower end of the screw, the same may be provided with a slot, *n'*, as shown in Fig. 6.

The cap *l* has a gallery, *p*, depending from its under surface, and it carries the safety-valve *q*, formed of a little elastic block, *r*, of india-rubber, for example, surmounted by a cupel, s^2, and provided with a metallic pin, *s*, Fig. 5, projecting into the cupel, and serving to guide it into the cap *q'*, which cap is provided with eduction-ports *s'* and screws upon the seat *r'* of the valve. The cupel s^2 is secured in the cap *q'* in any suitable manner. By turning more or less the cap *q'*, the india-rubber is proportionately compressed, and the pressure is thus regulated at which the valve opens.

The rod *o*, of which we have above spoken, carries two stoppers, *t* and *u*, of which the second is larger than the first, and is sustained by a metal washer, *v*, fixed upon the rod *o* in any convenient manner—as, for example, by means of a thumb-screw, *w*. The stopper *t* is rigidly secured to the upper end of the rod *o*, and the stopper *u* is fitted loosely thereon.

The stoppers *t* and *u*, which are properly tarred over, support a bottle, *x*, open at both ends, and of any convenient form and material, upon which they are sealed with sealing-wax.

Thus arranged the working of the apparatus is as follows: It is supplied with water in which has previously been dissolved a proper quantity of alkaline powder, by preference having

for its base a bicarbonate of soda. The level of the alkaline solution in the apparatus is regulated in such a manner that this last is full when the bottle *x* is introduced into it. When the apparatus is fitted with the alkaline solution, it is closed by means of the cap *l*, as above described, and it may remain in this condition an indefinite period of time, for there exists no interior pressure. When it is wished to charge the apparatus, the cap *l* is raised and a rod, *o*, is hung to the hook *n'* or to the slot, carrying a bottle, *x*, sealed, and containing a preparation which will disengage carbonic acid, for example, or any sort of acid. This done, the cap is replaced upon the apparatus, which has then the appearance represented in Fig. 1. Upon turning the handle *z* of the screw *m* in the proper direction this screw is raised, and with it the rod *o* and bottle *x*. The upper edge of this latter comes in contact and abuts against the gallery *p*, and by continuing to turn the screw the two stoppers *t* and *u* are dragged out and the bottle falls, as indicated in Fig. 2, discharging its contents into the alkaline solution in the apparatus. From this results the disengagement of gas, establishing the pressure in the apparatus. The bottle *x* is supported by the lower stopper, *u*, and the pressure within the apparatus acting upon the washer *n*, furnished with india-rubber, forces the same tightly against the cap and hermetically closes the apparatus automatically, and prevents any leaking of the gas or liquid.

Although the pressure in this apparatus becomes very great, (about fourteen atmospheres,) its working does not present any danger on account of the safety-valve above mentioned.

In Fig. 7, A is the central suspending-rod of the bottle E, carrying the cutting-washers D. These washers are drawn by the rod A when it is wished to charge the apparatus, and they cut the washers C, of lead or of other suitable soft metallic matter or composition. These washers C are soldered upon the plates F. The upper plate, F, is protected by a plate, B, and the lower one by a protecting-band, H. I is a tightening-nut screwing upon the lower end of the screwed rod A.

I claim—

1. In a fire-extinguishing apparatus, the combination, with the vessel *a*, provided with the fixed crown *d*, having the elastic ring *e* on its upper surface, of the movable crown *f*, provided with the handles *g*, the rims *h*, having notches *i* and the inclined planes or cams *k*, and the cap *l*, having lugs projecting from its rim, substantially as herein shown and described.

2. In a fire-extinguishing apparatus, the combination, with a vessel, of a bottle open at both ends and provided with stoppers, and suspended from the cap of the said vessel, and means, substantially as herein shown and described, for removing the stoppers of the bottle simultaneously, as set forth.

3. In a fire-extinguishing apparatus, the combination, with a vessel and its cap provided with a gallery, of a screw passing through the cap, a rod secured to the lower end of the screw and carrying a loose and a rigid stopper, and a bottle open at both ends, substantially as herein shown and described.

4. In a fire-extinguishing apparatus, the combination, with the vessel *a*, the cap *l*, provided with the gallery *p*, and means for securing the cap to the vessel, of the rod *m*, provided with the washer *n* and the hook *n'*, the rod *o*, the stoppers *t u*, the former rigidly secured to the rod and the latter fitted to slide thereon, and the bottle *x*, substantially as herein shown and described.

5. In a fire-extinguishing apparatus, the safety-valve *q*, consisting of the seat *r'*, the cap *q'*, having eduction-ports *s'*, and the elastic block *r*, provided with the pin *s* and the cupel s^2, substantially as herein shown and described.

The foregoing specification of my improvements in fire-extinguishers signed by me this 28th day of February, 1883.

PIERRE CHARLES EUGÈNE CABOUËT.

Witnesses:

EDWARD P. MACLEAN,

JEAN BAPTISTE ROLLAND.