T. N. BURKE.

FIRE EXTINGUISHER.

APPLICATION FILED NOV. 4, 1907.

908,201.

Patented Dec. 29, 1908.

Fig. 1.

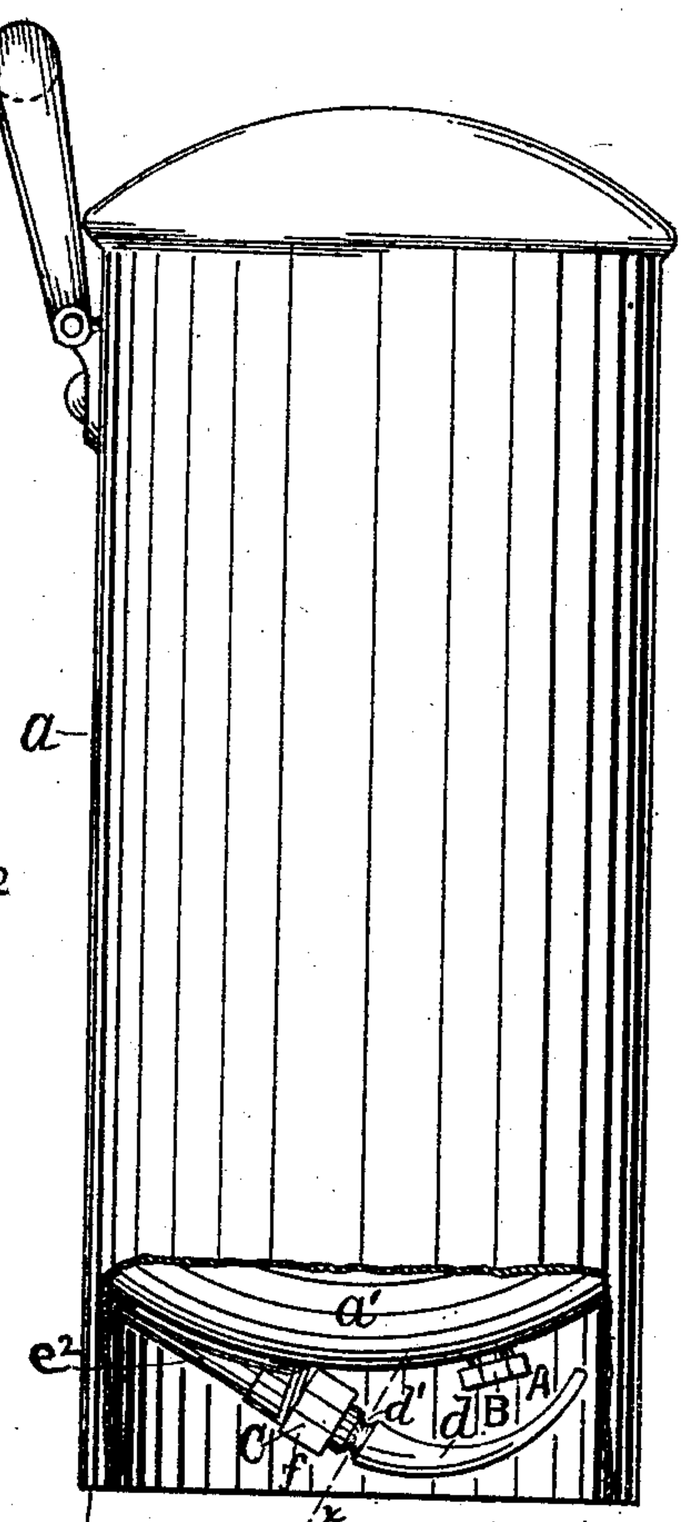


Fig. 3.

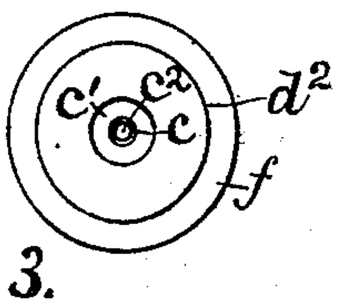


Fig. 4.

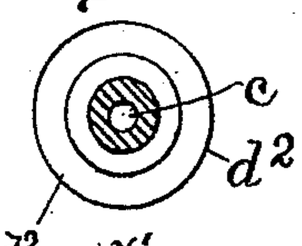


Fig. 5.

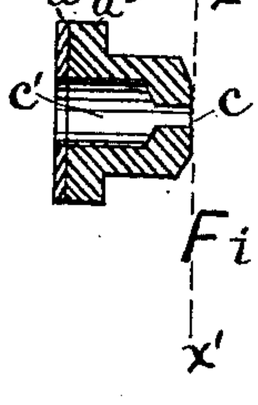
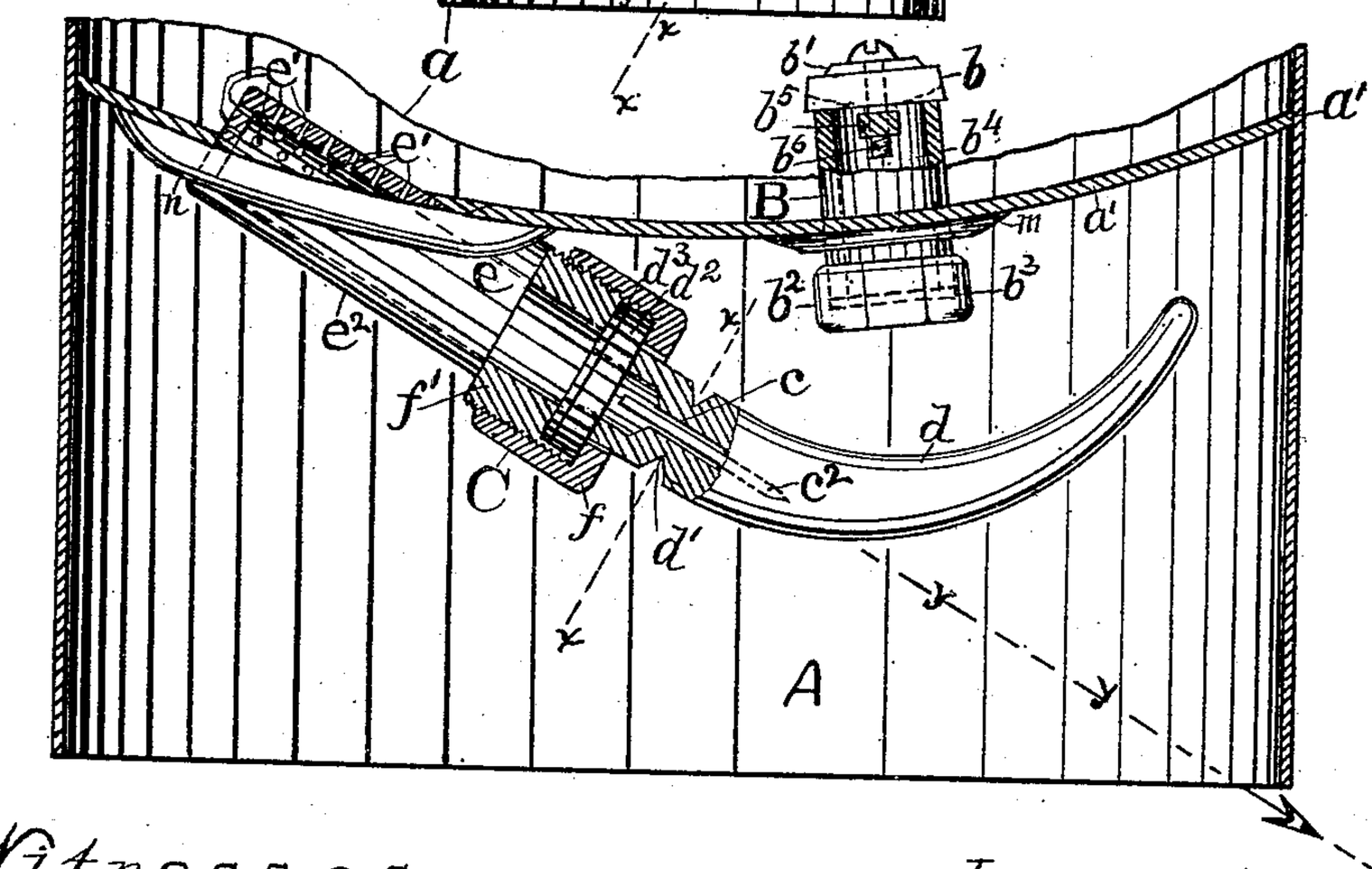


Fig 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

THOMAS N. BURKE, OF CHICAGO, ILLINOIS.

FIRE-EXTINGUISHER.

No. 908,201. Specification of Letters Patent. Patented Dec. 29, 1908.

Application filed November 4, 1907. Serial No. 400,709.

To all whom it may concern:

Be it known that I, THOMAS N. BURKE, a citizen of the United States, residing in Chicago, Cook county, Illinois, have invented certain new and useful Improvements in Fire-Extinguishers, of which the following is a clear and correct description of the same, reference being had to the hereto accompanying drawing, forming a part hereof, and in which—

Figure 1, shows my said new device, in perspective, having a part of the lower end of its cylindrical shell broken away to expose the construction under the bottom of the water-chamber. Fig. 2 shows a central longitudinal section of a fragment of the lower end of my said device; Fig. 3 shows an interior end-view of the outer part of the water-discharging mechanism, without the part, or horn *d*. Fig. 4 shows a view of the same part shown in Fig. 3 as seen from the opposite direction; Fig. 5 shows a central longitudinal section of Fig. 4.

Like reference letters denote like parts throughout.

The object of my invention is to produce a fire-extinguishing apparatus in which the parts necessary to set the device into action are an actual and non-removable part of the mechanism until the moment the device is to be put to use. Said part or parts are then removed and thereupon the action of the device at once becomes automatic. Second; by producing, and also making certain, perfect action, and a clear and smooth discharging-nozzle capable, thereby, of sending a solid stream of water from it and thus send the water farther than it could go without said perfect jet-nozzle. To attain said desirable ends I construct my said new fire-extinguisher in substantially the following manner, namely:

I make a cylindrical steel shell *a* provided with convex ends for greater lightness and strength of construction, whereof the bottom *a'* is within the lower end of the shell of the tank *a* and raised high enough to form a chamber A capable of holding the entire receiving and discharging parts B and C of said vessel or chamber.

The ingress or filling member B through which the vessel *a* is filled, consists of a cylindrical shell b^4 passed through and secured to the bottom *a'* and having its axial direction about normal to said bottom and having a flange *m* wherewith it is secured to said bottom. The outer end of said shell or tube b^4 has a screw-cap b^2 and between it and the said shell is a soft sheet-lead packing b^3. Near the inner end of said shell is a cross-bar b^5 integral therewith, and axially to said shell passes a screw b^6 having a plate *b'* under its head resting on a soft rubber valve *b* projecting, diametrically, beyond the diameter of said shell, and which, by means of said screw, is pressed down onto the top end of said shell. The curved and broken lines from the bottom of said valve indicate the position of the lower face of said valve when water is forced through said shell into the tank *a*. A hose or pipe is attached to said shell, in place of the cap b^2 and the water is made to overcome the resistance of said valve, thus we have a check valve against any return flow of water through said shell. Said tank is filled with water to a certain point, as two thirds, or three quarters full, after which air is forced through said same ingress and onto said water to a pressure as high as the limits of safety will permit.

Through said bottom *a'* is also passed a cylindrical shell *e* provided with fine strainer-holes *e'* and a flange *n* whereby it is fastened to the bottom *a'* either with solder or any other known and preferred way. The said strainer-holes guard against the admission of material which might accidentally have passed into the tank and which, on passing out through the discharging-nozzle *c* close the opening thereof and thereby destroy the working of the device at the moment its use was most needed. Said shell has an outer and threaded end *f'* provided with a cap *f* which has an axial bore through which passes a horn *d* to its flange-end d^2 which is there made air and water tight by means of a soft lead ring d^3 and its flange d^2, said parts being forced together by means of said cap *f*. That part of the shell or tube *e* which is above the flange *n* and within the chamber *a* is shown in longitudinal section. The flange-end of said part of said horn, its flange d^2 and ring d^3 are hollow, as shown in Figs. 5 and 2, in the latter a part of the horn being shown in central axial section while the ring d^3 and flange d^2 are shown in perspective, and a part of the outer part of the shell *e* and cap *f* are shown in central longitudinal section.

From the end of the chamber *c'* extends a bore *c* beyond a circumferential groove *d'* of

the horn d and into said bore is driven a steel pin c^2 slightly smaller than said bore.

When the parts of the member C are in place, as shown, the shell or strainer e is also closed air and water-tight. Therefore, when charged, as specified, my said apparatus is and remains ready for use without the slightest deterioration of efficiency for any indefinite period of time, hence, whenever the occasion for its use arrives the horn d is seized and broken away, with a jerk, at the line x x and with it is removed the pin c^2 by means of which any sediment having settled around it in the hole c would be broken up and forced out by the powerful following jet of water and, thereby, is formed a clean and smooth nozzle c, as shown in Fig. 5, where the line or plane of fracture is indicated by the broken line x' x', and the working result is a clean nozzle with a compact solid stream in the direction of the line y y to the farthest distance under any given pressure.

What I claim is:

1. The combination with an hermetically sealed tank provided with a non-reciprocatable but yielding valve, and a discharge, of a flanged, grooved and hollow horn, to close said discharge, and means to connect said discharge and horn.

2. The combination with a cylindrical and convex-ended tank, of an inwardly opening elastic inlet-valve on the inner end of an inlet-tube, and a closing-cap seal at the opposite end of said tube, a discharging-tube, a flanged, circumferentially grooved and hollow horn held on the outer end of said tube, said horn removable at said groove.

3. The combination with a cylindrical and convex-ended tank, of an elastic inlet-valve on the inner end of an inlet-tube and a closing-cap seal at the opposite end of said tube, a discharging-tube, a flanged circumferentially grooved and hollow horn held on the outer end of said tube, said horn removable at said groove, and a pin secured into and removable with the removable part of said horn.

4. The combination with an hermetically sealed tank provided with a recessed tank-end, said end provided with an entrance and a discharge, of a flanged and hollow closing device, on the end of said discharge, provided with a grooved and hollow extension, separable at said groove, and means to connect said discharge and horn.

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