

No. 643,252.

Patented Feb. 13, 1900.

M. E. OGDEN.

## **FIRE EXTINGUISHER.**

(Application filed Apr. 19, 1899.)

(No Model.)

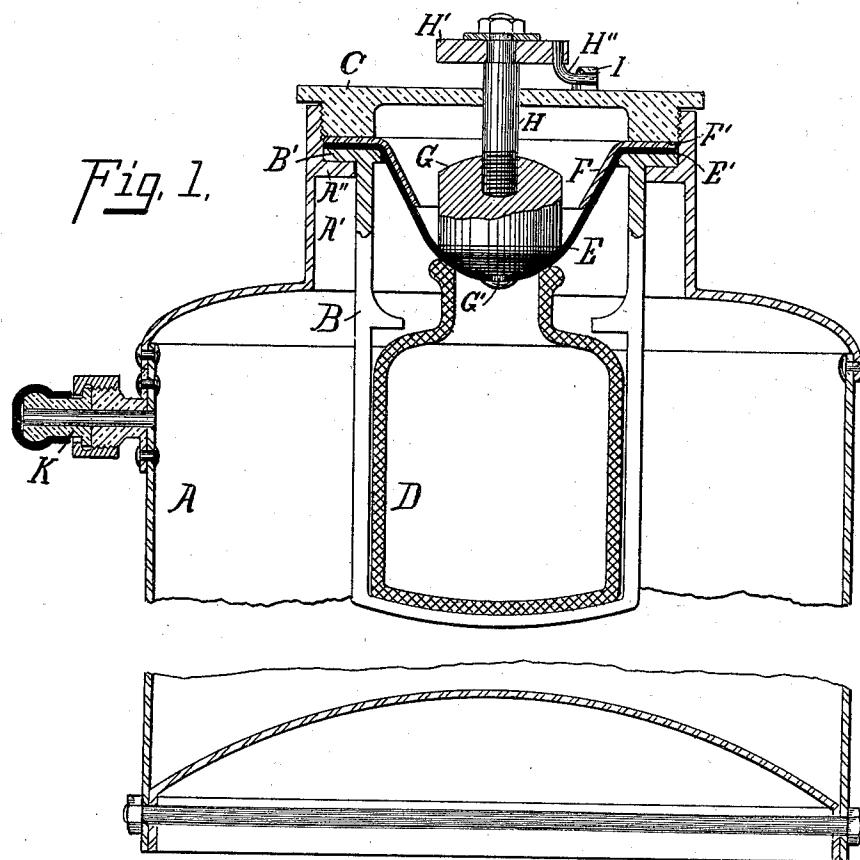


Fig. 2

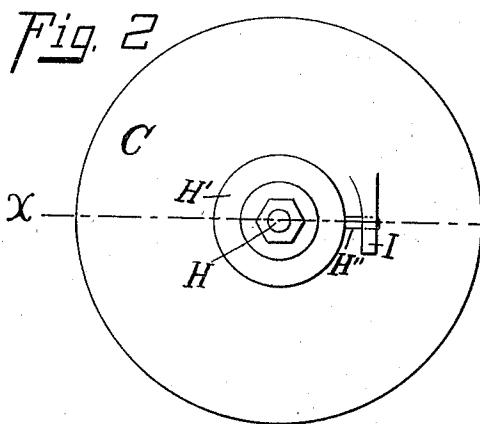
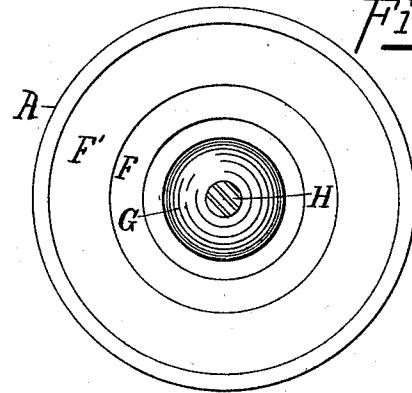


Fig. 3.



## Witnesses

*H. H. Denham*  
*Syester Wickström*

Inventor

Inventor  
By his Attorney *Mancelia E. Ogden*  
*A.C. Tanner*

# UNITED STATES PATENT OFFICE.

MANCELIA E. OGDEN, OF NEWARK, NEW JERSEY.

## FIRE-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 643,252, dated February 13, 1900.

Application filed April 19, 1899. Serial No. 713,643. (No model.)

To all whom it may concern:

Be it known that I, MANCELIA E. OGDEN, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Fire-Extinguishers, which improvements are fully set forth in the following specification and accompanying drawings, and in the latter—

10 Figure 1 is a central longitudinal section of a fire-extinguisher embodying my said improvements, the section being taken on the line  $xx$  of Fig. 2. Fig. 2 is a plan view showing the cap or cover for the extinguisher and fastening device operative in connection therewith. Fig. 3 is a plan view of the neck portion of the extinguisher, the cap or cover therefor being removed.

Similar reference-letters denote like parts 20 throughout the three views of the drawings. This invention relates to improvements in that class of devices commonly known as "invertible chemical fire-extinguishers," from the facts that within said extinguishers a 25 chemical solution is used and that to charge the extinguishers for practical operation the same are to be inverted or upset.

Under date of October 27, 1896, United States Patent No. 570,262 for improvements 30 in fire-extinguishers of the character above named was issued to myself; and the object of this invention is to provide an invertible fire-extinguisher which, as compared with that described and claimed in my said prior 35 patent, shall be simpler in construction, somewhat less expensive to manufacture, and substantially automatic in operation.

The invention consists in the novel disposition of certain of the parts, whereby adjustment 40 of said parts is attained through gravity, in certain combinations of the various parts, and in certain details of construction, all of which will be specifically referred to herein-after and clearly pointed out in the claims.

45 Having reference to the accompanying drawings, A is the usual solution vessel, having a neck A', and the latter having an interior annular ledge A''. From this ledge A'' is suspended a frame B, insulated in any 50 well-known manner against the corrosive action of the contained solution or of suitable non-corrodible material, as aluminium, the

said frame having at its upper extremity an annular flange B', adapted to seat upon the ledge A''.

55

C is the cap or cover for the extinguisher, exteriorly threaded to screw into the interiorly-threaded neck A', as shown. The cap C is provided at its center with the usual orifice.

D is the acid-receiver, supported uprightly 60 within the frame B, its mouth being in vertical alignment with the central orifice in cap C.

E is a funnel-shaped diaphragm of yielding or pliable material, preferably rubber. This diaphragm terminates at its upper extremity 65 in an annular outwardly-extending flange E', adapted to seat upon the flange B' of frame B.

F is a funnel-shaped guard having at its upper extremity an annular outwardly-extending flange F', adapted to seat upon the 70 flange E' of diaphragm E. Guard F is adapted to fit with fair accuracy within the diaphragm E and extends downward to a point about midway of said diaphragm. The guard F may be readily drawn up or stamped from 75 suitable sheet metal.

There is placed within the diaphragm E a weight G, of lead or other suitable material and having a rounded or semispherical lower extremity adapted under normal conditions 80 to nicely seat in the apex of the diaphragm E, and to which latter it may be secured in any well-known manner, as by riveting or flanging over a stud, as G', with which the weight G may be provided, and which may project 85 through a suitable orifice formed in the diaphragm E at its apex, as clearly indicated in the drawings.

The weight G is provided with a stem H, which projects upward therefrom through the 90 central orifice in cap C and carries at its upper extremity a rotatable button H'. The weight G may be fastened to the lower end of stem H in any well-known manner, or these parts may be formed as a unit during the 95 process of casting.

At times it may be desirable that the active parts of the extinguisher be held in a fixed position, as in shipment thereof from place to place, and to this end the rotatable button H' 100 is provided with a depending rod H'', having at its lower end a foot or offset adapted upon button H' being rotated, as to the position indicated in Fig. 1, to engage or take under the

cleat or catch I, the latter being formed integral with or firmly secured to cap C.

In assembling the parts the frame B, with acid-receiver D in place therein, is let into 5 the solution vessel A, its flange resting upon ledge A''. Then the diaphragm E is inserted in place, its apex being in vertical alinement with the mouth of acid-receiver D and its annular flange resting upon flange B' of frame 10 B. Then guard F is inserted in place, its body portion extending downward within the diaphragm E and its flange resting upon the flange of said diaphragm. Thereafter the cap C is screwed into the neck of vessel A, seats 15 upon the flange or guard F, and upon being screwed homeward the flanges F', E', and B' are collectively urged downward upon the ledge A'' and firmly held against displacement therefrom.

20 The guard F serves as a reinforcement for the upper portion of diaphragm E and in a measure strengthens the latter at the angle between the main portion thereof and its flange E'. In the practical operation of the 25 device the weight G falls or recedes away from the mouth of acid-receiver D. It follows that inward folding of diaphragm E might tend to interfere with this action of weight G, and guard F therefore serves the additional purpose 30 of preventing any material inward folding of diaphragm E.

The main portion of diaphragm E should be of ample length to permit the lower end thereof under normal conditions to readily 35 seat upon the mouth of acid-receiver D and close the same.

Vessel A is provided with the usual nozzle K, to which a delivery-hose may be attached, when desired.

40 The operation of the device is as follows: Vessel A is suitably filled with the usual chemical solution. Thereafter the frame B, with acid-receiver D and contents, is let into vessel A, its flange resting upon ledge A''.

45 The parts E and F are now introduced to place and, with frame B, are held securely in position by means of cap C, all as hereinbefore described. Now so long as vessel A remains in an upright position the various active 50 parts of the extinguisher will assume the position shown in Fig. 1 and mouth of acid-receiver D will be closed and sealed. Upon vessel A being inverted or upset weight G will recede or fall away from acid-receiver D, taking with it rod H and lower portion of diaphragm E, thus liberating the contents of acid-receiver D.

When desired, the various active parts of the extinguisher may be held in their normal 60 positions by proper manipulation of button H', as will be readily understood.

It will further be seen that the details of

the device may be varied somewhat without departing from the spirit or principle of my invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. An invertible fire-extinguisher comprising a solution vessel, an acid-receiver suitably supported in a vertical position within the solution vessel, a funnel-shaped yielding diaphragm arranged within the solution vessel with its apex normally in close proximity to the mouth of the acid-receiver, means for retaining said diaphragm in position within the solution vessel, and a weight situated wholly within and fixed to the diaphragm at the apex thereof, the said weight being capable under normal conditions of seating the apex of the diaphragm upon the mouth of the acid-receiver to close and seal the same, and of unseating the apex of said diaphragm from the mouth of the acid-receiver upon the extinguisher being inverted or upset, as herein specified.

2. In an invertible fire-extinguisher, the combination of a solution vessel, a funnel-shaped diaphragm of yielding material within the solution vessel, a cap for the solution vessel, the said cap being provided with a catch, as I, and a central orifice, and adapted to hold said diaphragm in place within the solution vessel, a weight situated wholly within the diaphragm and secured to the apex thereof, a rod rigidly secured to and projecting upward from said weight through the central orifice of the cap, and a button rotatably mounted on the outer end of said rod, the said button having a member adapted to engage said catch upon said button being suitably rotated, substantially as herein specified.

3. In an invertible fire-extinguisher, the combination of a solution vessel having a neck provided with an interior annular ledge, a funnel-shaped yielding diaphragm having a flange at its upper edge adapted to engage said ledge, a detached guard let into said diaphragm and having an annular flange adapted to engage the flange of the diaphragm, the said guard being suitably shaped to admit of inward and outward folding of the apex portion of the diaphragm and outward folding only of the upper portion of said diaphragm, a weight situated wholly within and fixed to the apex of the diaphragm, and means for retaining said diaphragm and said guard relatively in place within the solution vessel, substantially as herein specified.

MANCELIA E. OGDEN.

Witnesses:

WILLIAM H. RUBY,  
H. R. DUNHAM.