

W. L. DRAKE.
Fire-Extinguishers.

No. 147,249.

Patented Feb. 10, 1874.

Fig. 1.

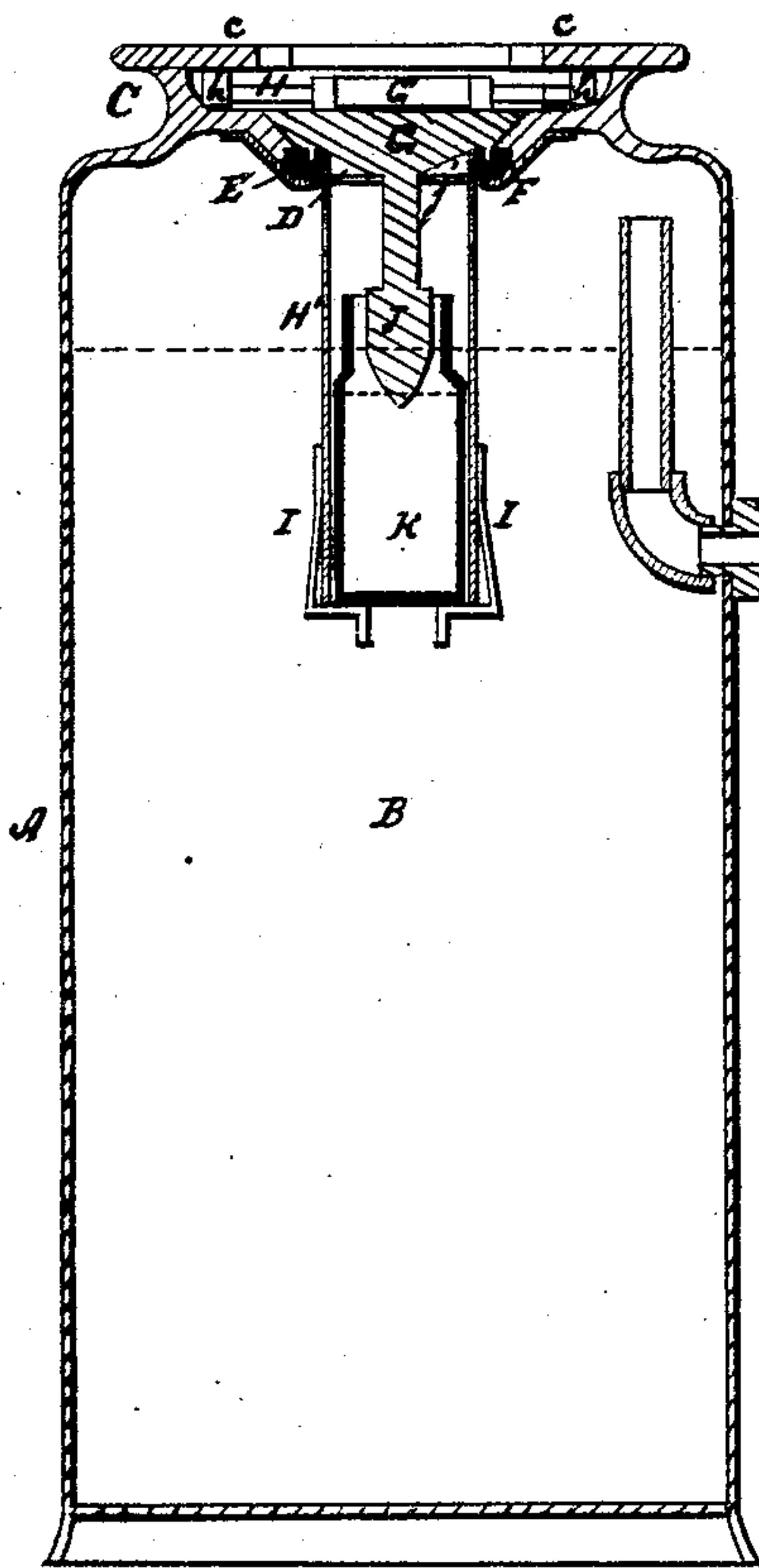


Fig. 2.

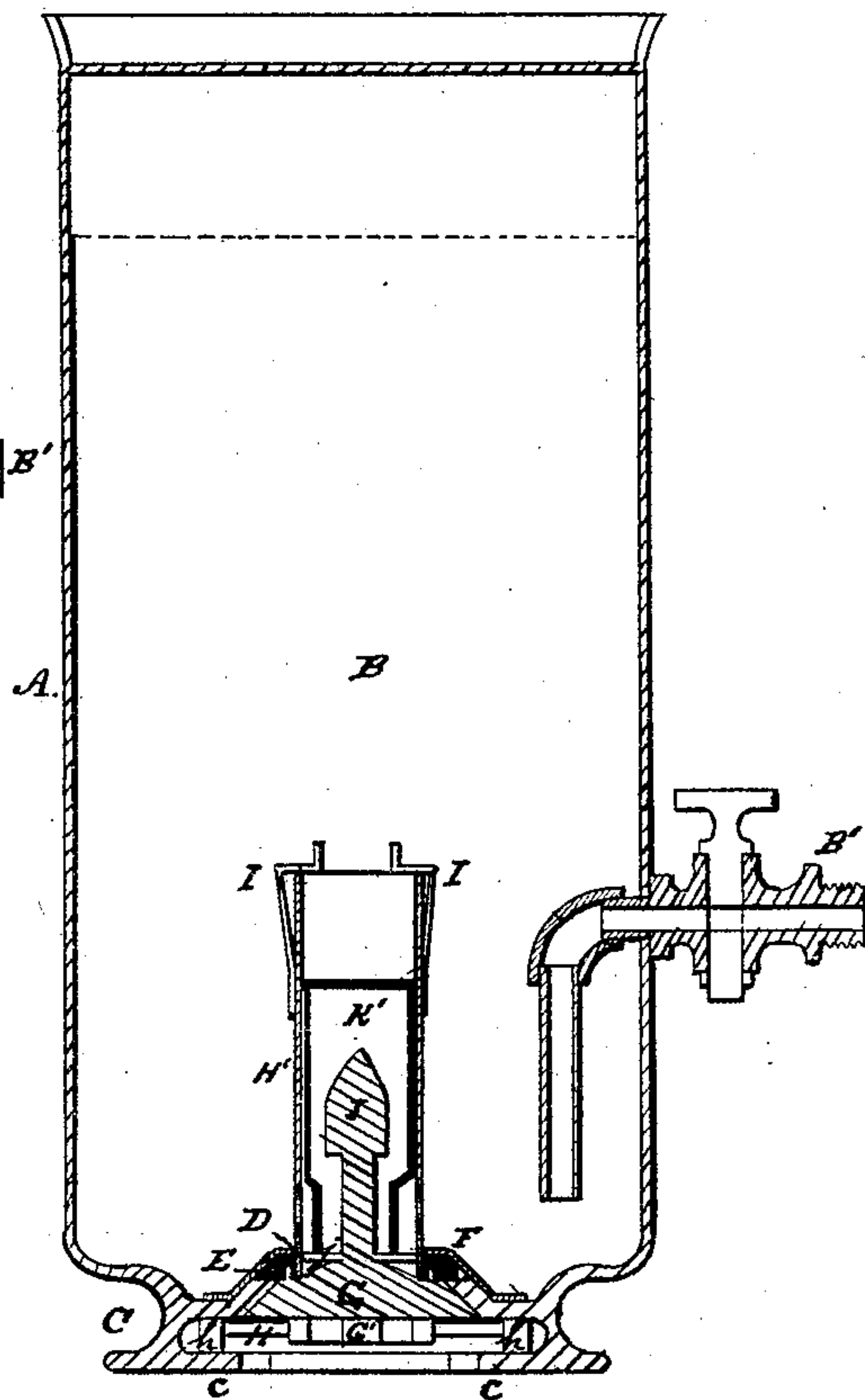


Fig. 3.



WITNESSES_

F. F. Warner
N. C. Gidley

INVENTOR _

Wear L Drake

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Fig. 4.

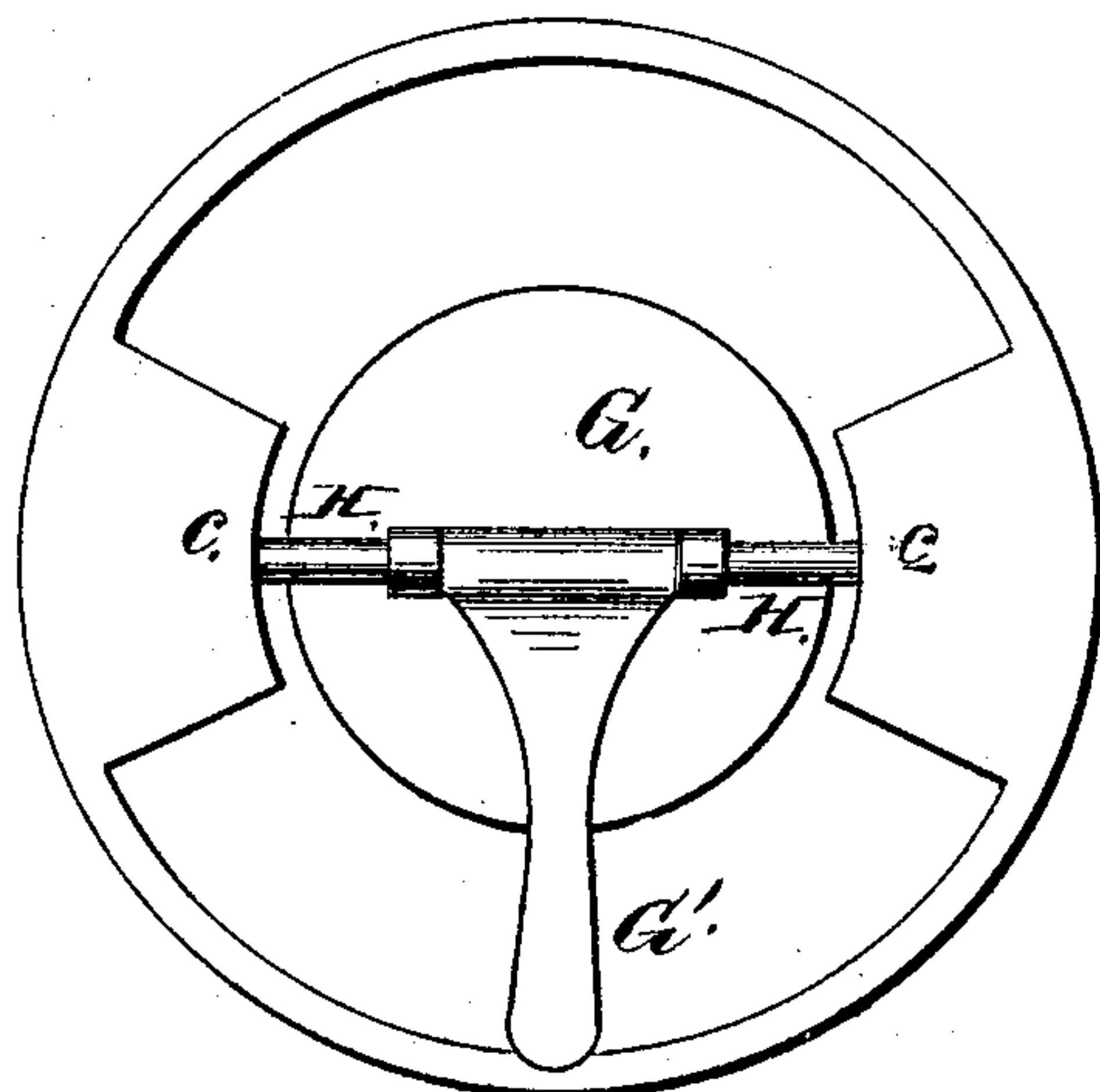
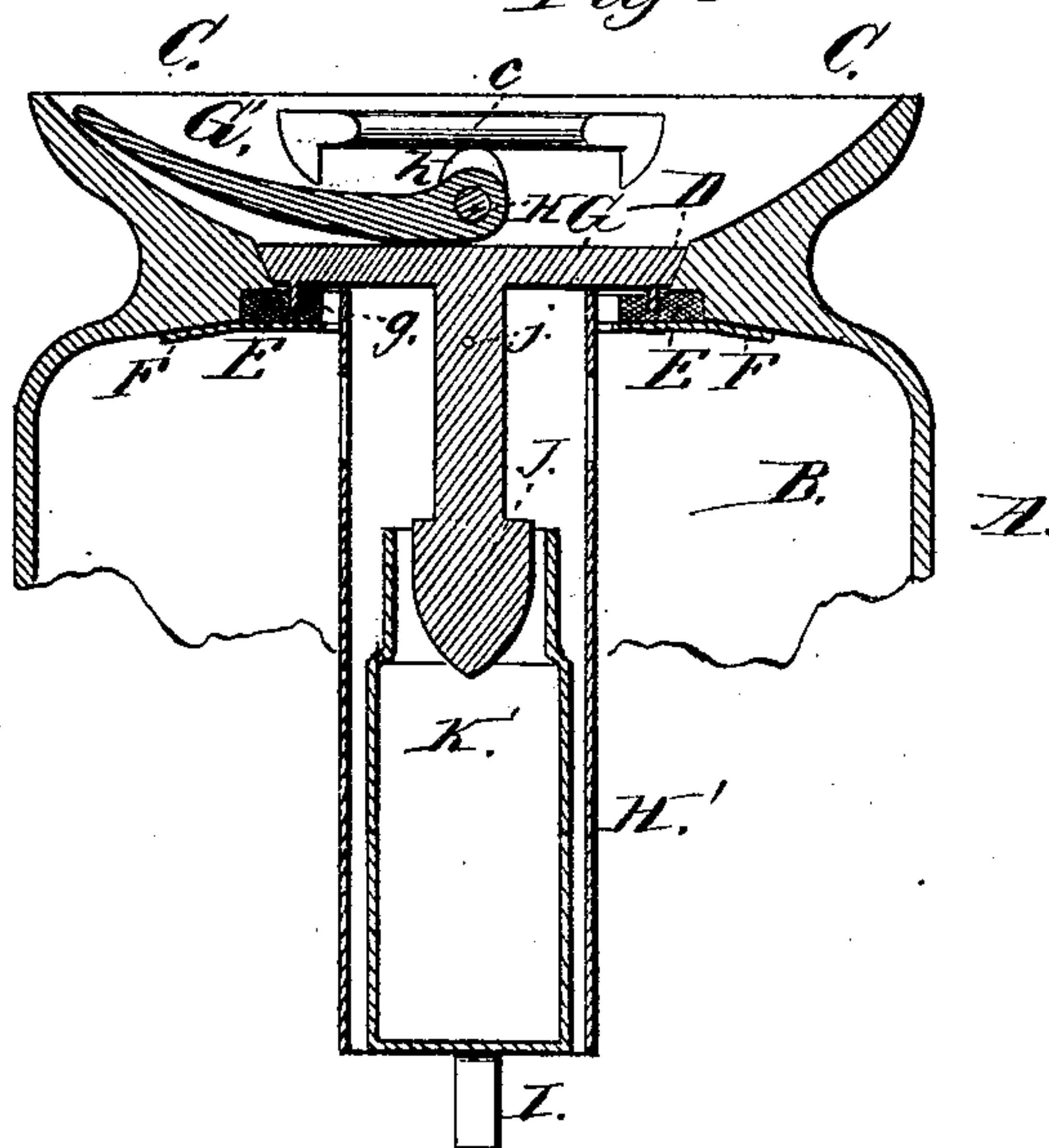


Fig. 5.



Witnesses

F. F. Warren
N. C. Gidley

Inventor

Wm L. Drake.

UNITED STATES PATENT OFFICE.

WEAR L. DRAKE, OF EVANSTON, ILLINOIS.

IMPROVEMENT IN FIRE-EXTINGUISHERS.

Specification forming part of Letters Patent No. **147,249**, dated February 10, 1874; application filed February 27, 1873.

CASE A.

To all whom it may concern:

Be it known that I, WEAR L. DRAKE, of Evanston, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Fire-Extinguishers, of which improvements the following is a full, clear, and exact description, which will enable others skilled in the art to make and use my invention, reference being had to the accompanying drawing forming a part hereof, and in which—

Figure 1 represents a vertical central longitudinal section of a fire-extinguisher provided with my improvements, and Fig. 2 a like view of the same when its position is reversed. Figs. 3, 4, and 5 are detail views.

Like letters of reference indicate like parts.

My invention relates to that class of fire-extinguishers from which water is expelled by means of gas generated within the extinguisher.

Heretofore screws have been employed for the purpose of attaching its cover or stopple firmly to the head of the vessel containing the water. An objectionable feature in the employment of screws for this purpose is, that the cover cannot be readily adjusted and removed, and the screws are liable to become rigidly set. On this account, as well as for other reasons, the bottle containing the acid, after becoming empty, cannot be readily removed and exchanged for a full bottle, and the discharged bottle refilled.

The object of my invention is to provide improved means for the purpose of attaching the cover or stopple to the head of the reservoir. I also aim to facilitate the operation of removing the empty bottle and supplying its place with a full one, and to improve the means employed for discharging the acid; and my invention consists in certain novel features, hereinafter particularly specified, relating to the means employed for the purpose of accomplishing the objects set forth.

In the drawing, A represents an extinguisher of the class referred to. B is the vessel which contains the water, and C is the head of the vessel B. *c c* are lugs on the head C. D is an opening in the head C. E is an

annular washer or packing resting on the seat F, and lapping the opening D. G is the cover or stopple, by means of which the opening D is opened or closed. H is a cross-bar turning in bearings on the cover G, and provided with cam projections *h h*, and with the lever or handle G'. The washer E forms a seat for the cover G, and when the latter is arranged on its seat the cams *h h* are arranged below the lugs *c c*, and the lever G' is laid in a horizontal position, as represented by the full lines in Fig. 3. By this means the cams *h h* are thrown against the under face of the lugs *c c*, and the cover is pressed firmly upon its seat. By raising the lever G' and turning the cams from beneath the lugs, the cover may be removed.

I deem it preferable, but not essential, to provide the lower face of the cover with a thin annular ridge, arranged for contact with the packing or washer E, as shown at *g*, so that a matched joint will be formed.

H' is a case, open at the bottom, and attached to the under face of the cover G. I I are bent spring catches or clasps attached to the walls of the case H', and extending partly across the open bottom of the latter, so as to form a seat for the bottle K, which is of a size to slide freely in the case H', and which contains the acid. The bottle K may be inserted into the case H' by pressing the springs I I apart sufficiently for that purpose, and when the springs are released, they will retain the bottle in its case. By pressing the springs I I apart again, the bottle will fall from its case.

It will now be observed that the bottle K is withdrawn from the vessel B by removing the cover G, and that the empty bottle may then be readily removed from its case, and a full bottle substituted in its stead. By this means the annoyance incident to the operation of refilling the empty bottle while in its case is obviated.

J is a lead stopper, rigidly attached to the cover G, and arranged at a considerable distance below it, and so as to enter the mouth of the bottle when the latter is inserted in its case. *j* is a cross-bar arranged between the cover G and the stopper J. The extinguisher

is discharged by turning it in the position represented in Fig. 2. The bottle K then falls upon the bar *j*, and the acid escapes and mingles with the water and salts in the vessel B, thus creating a gas, which expels the contents of the vessel through the discharge-pipe B'. The stopper J is sufficiently small to admit of this falling movement of the bottle, but large enough to prevent its contents from slopping out when the extinguisher is in the position represented in Fig. 1. The position of the bar *j* is also such that, when the extinguisher is inverted, the bottle will fall far enough to allow its contents to pass freely out around the stopper J, as represented in Fig. 2.

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

1. In a fire-extinguisher from which the contents are discharged by means of gas gen-

erated in the extinguisher, the head C, provided with the seat F, and with the lugs *c c*, in combination with the cover G, provided with a pendent bottle-holder, and with the cam-lever H *h h* G', arranged to operate, in connection with the lugs *c c*, substantially as specified, and for the purposes set forth.

2. In a fire-extinguisher of the class herein referred to, the case H', having an open bottom, and attached to the cover, and provided with one or more spring-catches, arranged to form a seat for the bottle K.

3. In combination with a fixed stopper, J, the sliding bottle K and the cross-bar *j*, substantially as specified, and for the purposes set forth.

WEAR L. DRAKE.

Witnesses:

N. C. GRIDLEY,
F. F. WARNER.