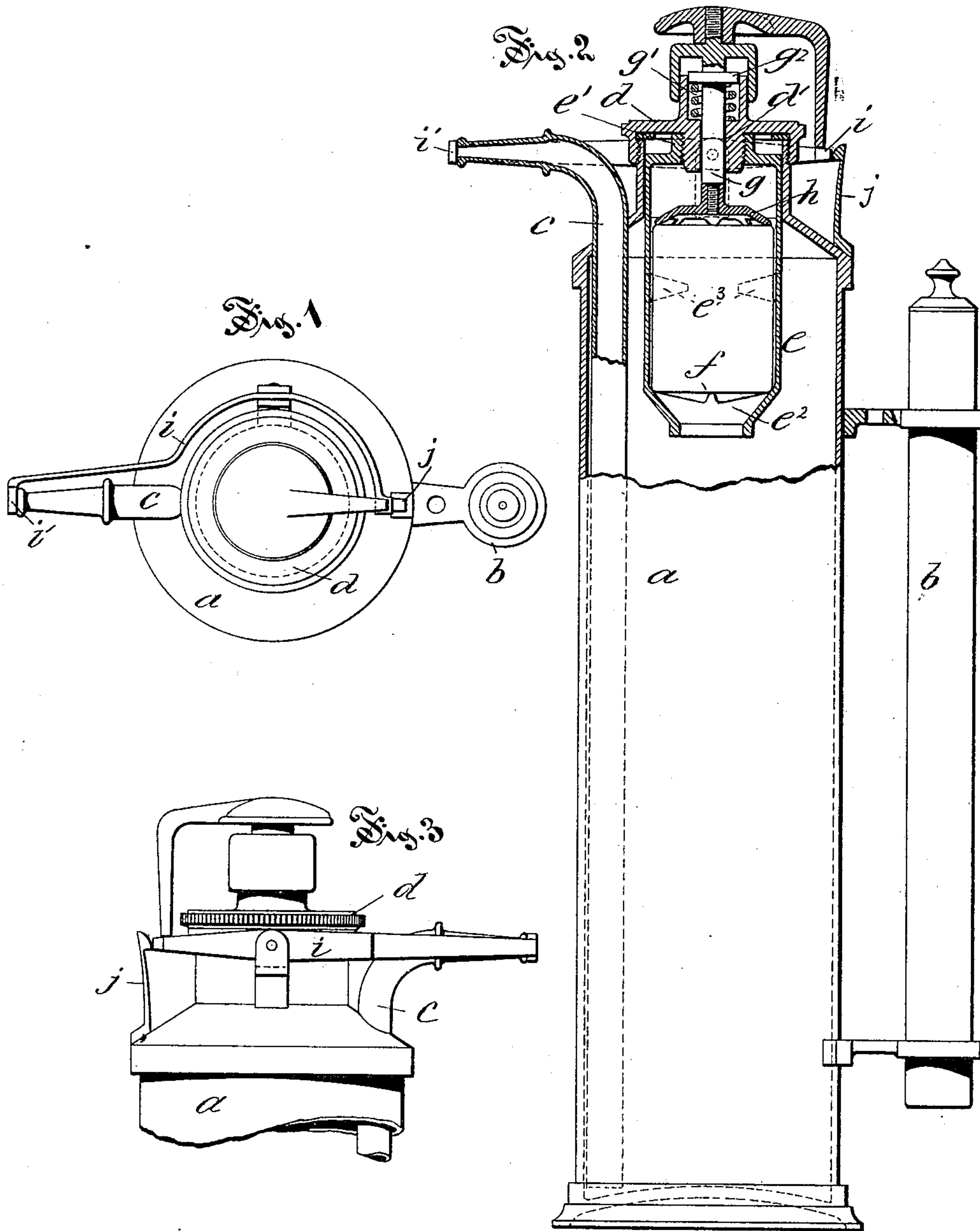


(No Model.)

J. O. BANNING.  
FIRE EXTINGUISHER.

No. 379,756.

Patented Mar. 20, 1888.



Witnesses:

Wm. Dyckman  
H. R. Williams.

Inventor:

Joseph O. Banning.  
by  
Simonds & Burdett,  
attys.



# UNITED STATES PATENT OFFICE.

JOSEPH O. BANNING, OF PLAINVILLE, CONNECTICUT, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE EDDISON FIRE EXTINGUISHER COMPANY, OF PHILADELPHIA, PENNSYLVANIA.

## FIRE-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 379,756, dated March 20, 1888.

Application filed October 22, 1886. Serial No. 216,933. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH O. BANNING, of Plainville, in the county of Hartford and State of Connecticut, have invented certain new and  
5 useful Improvements in Fire-Extinguishers, of which the following is a full, clear, and exact description, whereby any one skilled in the art can make and use the same.

My invention relates to the class of devices  
10 commonly known as "chemical fire-extinguishers;" and my improvement consists in certain details of the construction of the portable case or receptacle, the fragile vessel located therein, and the means for supporting  
15 and crushing it, and in the combination of the several parts, whereby cheapness in construction and efficiency and rapidity of operation are insured, as more particularly hereinafter described, and pointed out in the claims.

20 Figure 1 is a top view of a fire-extinguisher made in accordance with my improvements. Fig. 2 is a view in vertical section of the same. Fig. 3 is a detail side view of the top part of the extinguisher, illustrating the operation of  
25 the valve.

In the accompanying drawings, the letter *a* denotes the main receptacle, that is a cylindrical vessel of metal of convenient size for carrying readily from place to place, although  
30 my improvements also contemplate its use without removing it from a supporting shelf or bracket. On one side of the receptacle is secured a handle, *b*, and the outlet-tube *c* projects from the top of the same on the side opposite  
35 this handle, the lower end of this tube extending within the receptacle and opening near its bottom, so that practically all the liquid contents may be ejected through this tube by the pressure of the gas generated by the mixing of  
40 the chemicals in the extinguisher. The screw-cap *d* closes the top of the receptacle, and to it is secured the frame *e*, that forms the support for the glass bottle or like fragile vessel *f*, that is adapted to contain part of the chemicals used  
45 in the extinguisher. The cap has a central socket, *d'*, in which the sliding spindle *g* has a limited vertical play, the spring *g'*, located between the shoulder at the bottom of the socket and the collar *g''* on the spindle, holding the  
50 spindle normally at the upper limit of its play. To the lower end of the spindle is secured the

crusher *h*, that is a disk of metal with a rough or irregular under side. This crusher is attached to the spindle by a threaded socket fitting the screw-stem on the latter, and is adjustable to a certain extent, so that it may be located in close contact with the vessel *f*, that is held in the frame. This frame is secured to the under side of the cover by means of the screw-thread on the hub *d'* and the threaded  
55 socket in the upper cross-bar, *e'*, of the frame. By means of this construction the distance of the cup *e''* from the crusher may be adjusted. The cup-shaped bottom of the frame has a central opening to facilitate the outflow of liquid  
60 from the bottom after it has been crushed, as by a downward blow upon the top of the spindle, and the two side parts of the frame have metallic arms *e'''*, that bend readily to admit a bottle between them or to close upon and hold  
65 it in place.

On the top of the receptacle is pivoted a lever, *i*, that has on its outer end a valve that lies over and closes the mouth of the outlet-pipe, while the inner end of the lever lies in  
70 the path of a projection on the sliding spindle, so that as the latter is pushed inward the lever is tilted and the valve is lifted off the outlet-tube. The inner end of this, when thus depressed, is caught by the spring-catch *j* and  
75 held until released to close the outlet after the vessel has been again charged.

My improved extinguisher is charged with the proper chemicals whose union will produce carbonic-acid gas, the fragile vessel containing  
80 part of the elements being secured in the frame in position to be crushed by the forcible inward movement of the sliding crusher spindle, and is then ready for use. The receiver may be grasped by the handle in one hand and by  
85 a violent blow on the spindle the bottle crushed and the outlet opened for the outflow of the charged liquid in a stream that may be directed at will upon a flame to be extinguished.

I am aware that it is not new to construct a  
90 portable extinguisher of this class with sliding bottle-crushers and a valve in the outlet-pipe automatically opened by the movement of the part that crushes the bottle, and such device I do not broadly claim.

I claim as my improvement—

1. In a chemical fire-extinguisher, the com-

5 bination, with the receptacle, a cover, and a bottle-crusher sliding therein, of a bottle-supporting frame, *e*, having a rigid bottom and open at its sides to permit the inserting of a bottle, and the pliable arms *e*, extending laterally to embrace the sides of the bottle to prevent its lateral displacement in the frame, as set forth.

10 2. In a chemical fire-extinguisher, the receptacle having an outlet-tube, a bottle-supporting frame secured within the receptacle, a sliding crusher-spindle bearing a crusher, and a lever pivoted to the receptacle and bearing on one end a valve adapted to close the mouth of

the outlet-tube, and having its other end in the path of movement of a projection on the sliding spindle, all substantially as described. 15

3. In combination with the receptacle having the outlet-tube, the within-described bottle supporting and crushing device, the tilting lever bearing the outlet-closing valve, and the spring-catch for holding the lever depressed, all substantially as described. 20

JOSEPH O. BANNING.

Witnesses:

H. R. WILLIAMS,  
A. B. JENKINS.