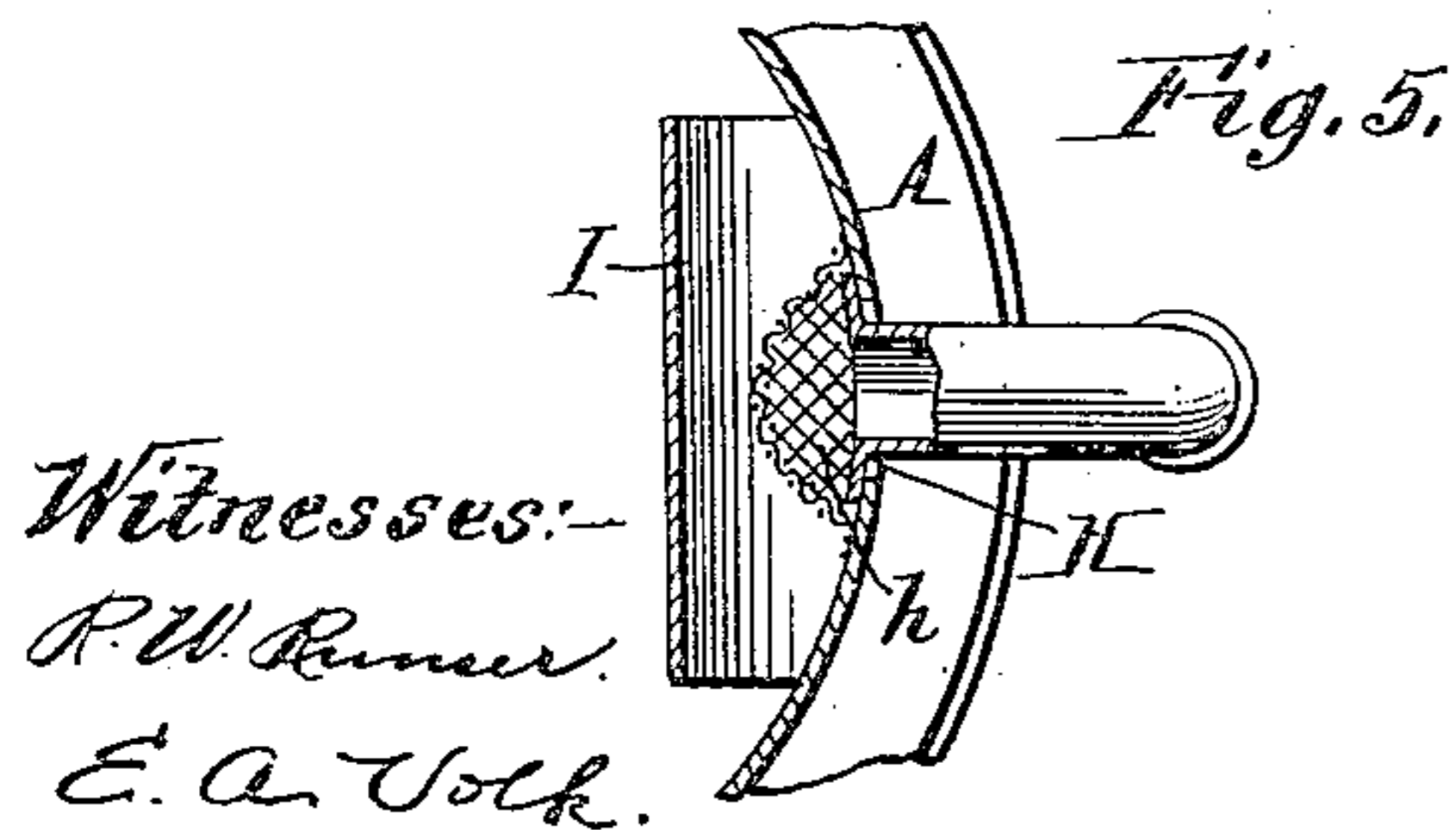
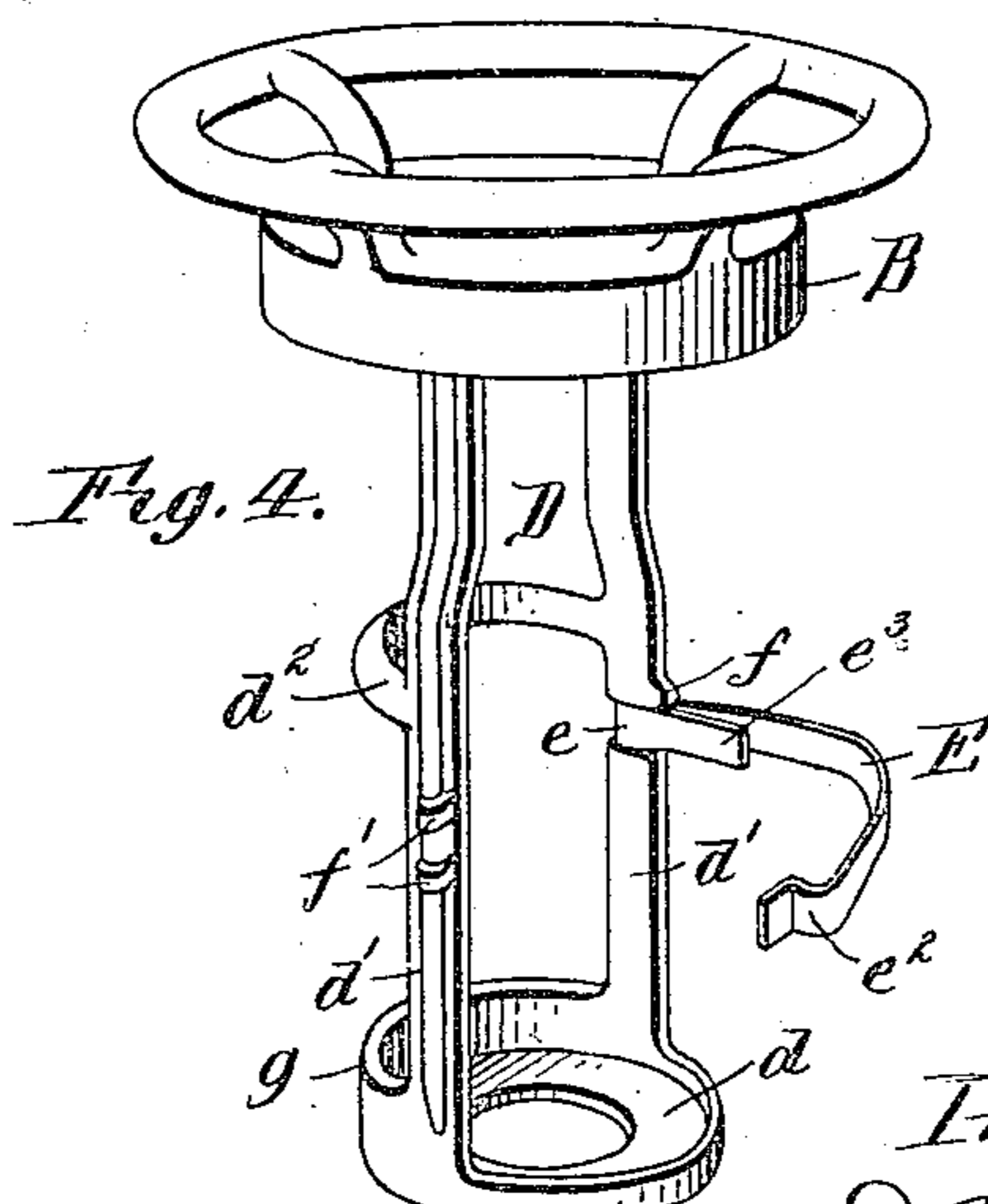
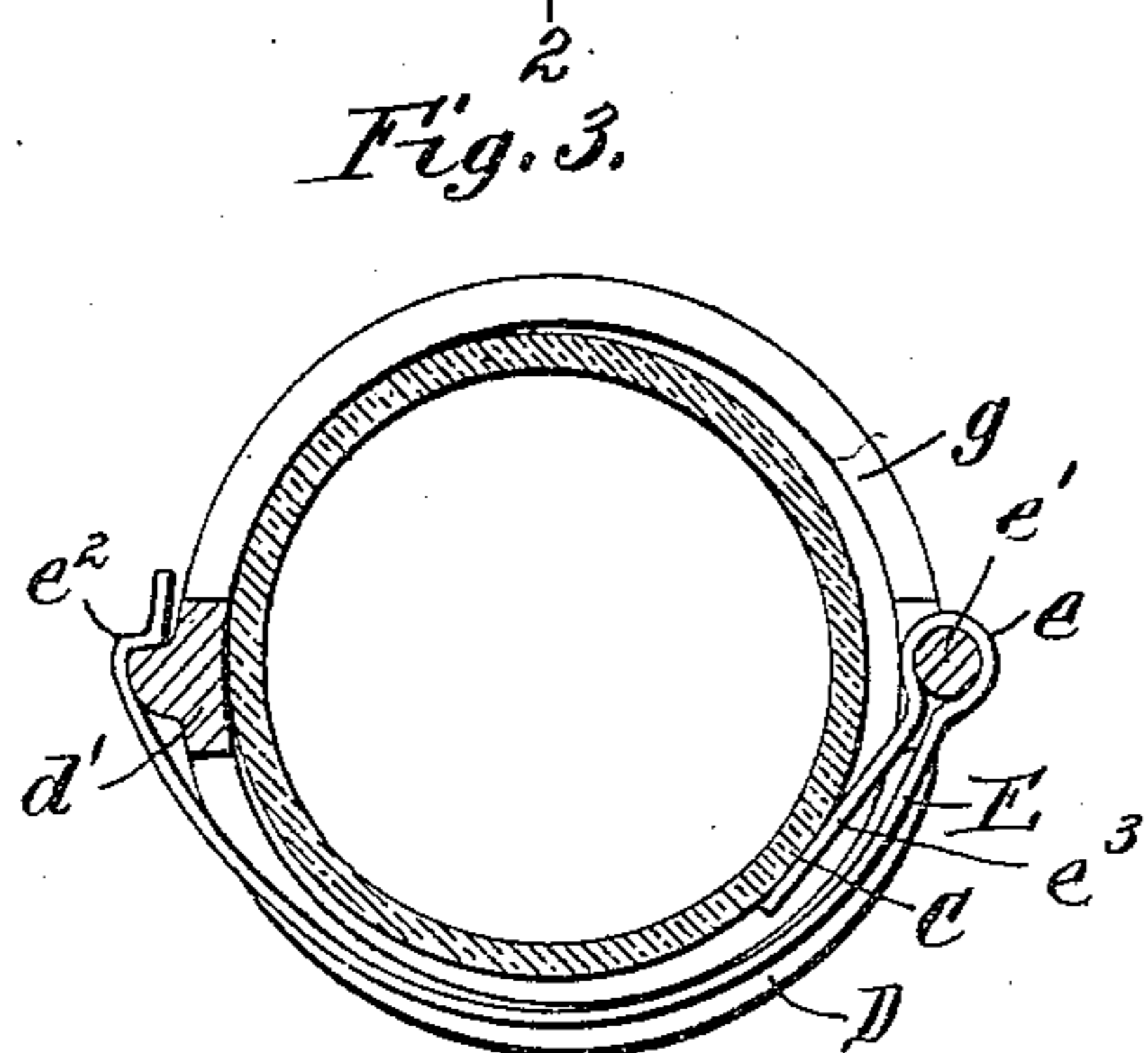
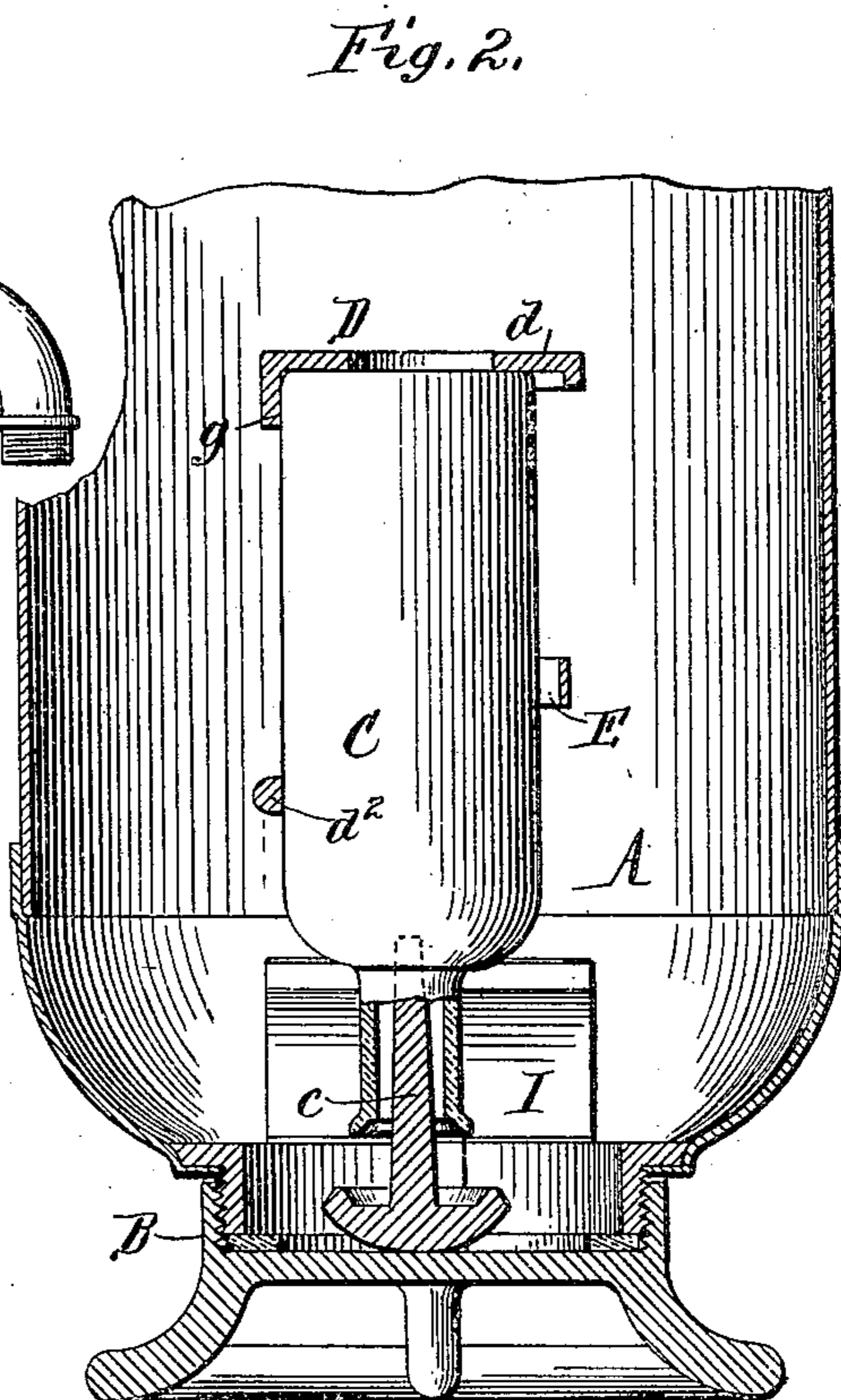
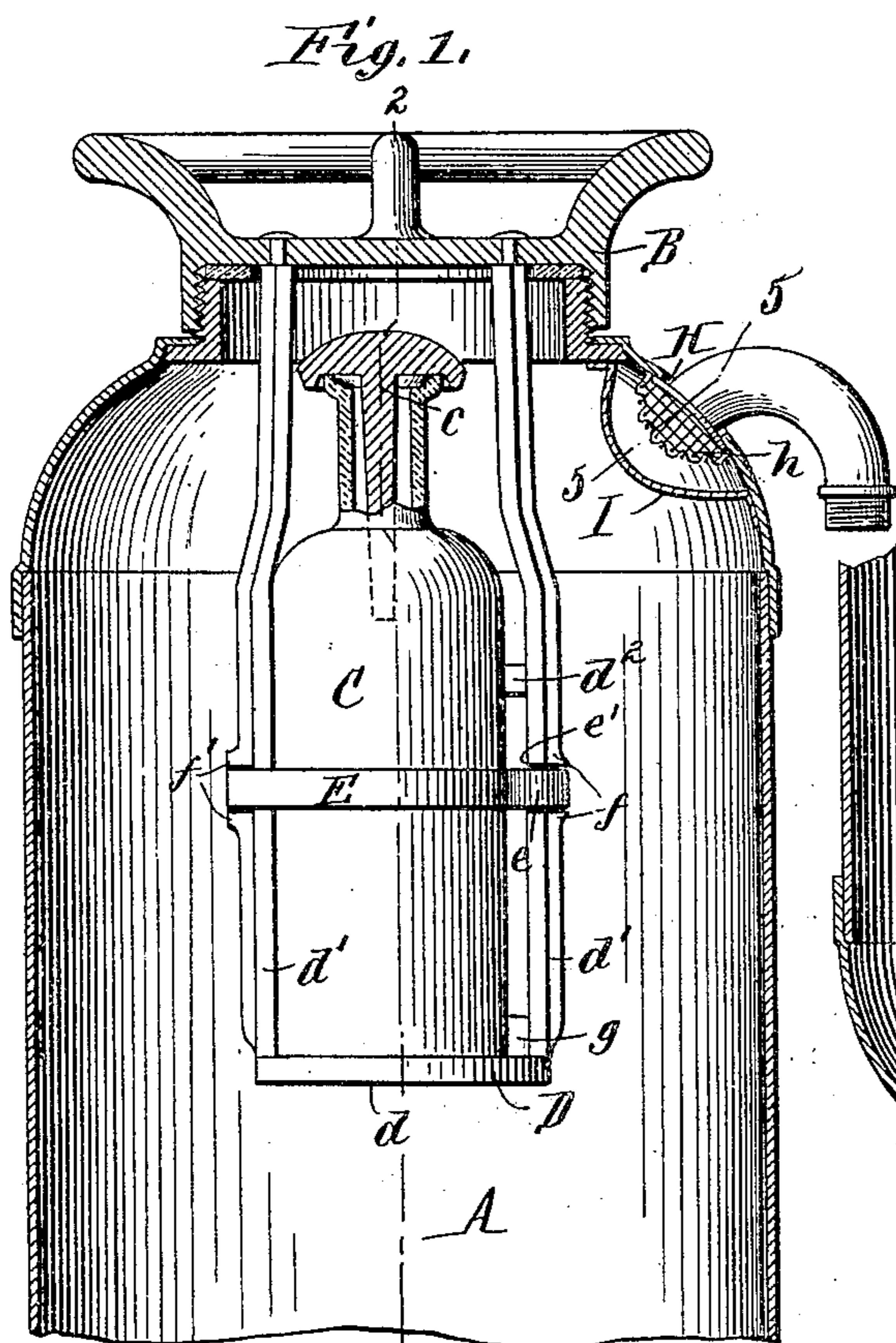


No. 838,794.

PATENTED DEC. 18, 1906.

E. D. MATTESON.  
CHEMICAL FIRE EXTINGUISHER.

APPLICATION FILED JAN. 31, 1906.



Witnesses:  
R. W. Rumer.  
E. A. Volk.

Inventor:  
Edward D. Matteson,  
by Wilhelm Packer Hard,  
Attorneys.

# UNITED STATES PATENT OFFICE.

EDWARD D. MATTESON, OF BUFFALO, NEW YORK, ASSIGNOR TO WESTERN INSPECTION COMPANY, OF BUFFALO, NEW YORK.

## CHEMICAL FIRE-EXTINGUISHER.

No. 838,794.

Specification of Letters Patent.

Patented Dec. 18, 1906.

Application filed January 31, 1906. Serial No. 298,791.

*To all whom it may concern:*

Be it known that I, EDWARD D. MATTESON, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented a new and useful Improvement in Chemical Fire-Extinguishers, of which the following is a specification.

This invention relates to portable fire-extinguishers of that kind in which the extinguishing agent is generated by the combination of chemical substances normally kept isolated in the extinguisher tank or reservoir. Ordinarily an alkaline solution is contained in the tank or reservoir and an acid which is confined in an inner receptacle in the tank is discharged into the alkaline solution when it is desired to use the extinguisher. The inner receptacle usually consists of a bottle removably secured in a cage or holder in the upper part of the tank or reservoir, and has a stopper, which when the tank is inverted drops and allows the acid to pour from the bottle into the alkaline solution.

The primary object of the invention is to provide a cage or holder for the inner bottle or receptacle which is of simple, durable, and desirable construction, adapted for the ready insertion and removal of the bottle into and from the same, and which is adapted to securely hold the bottle notwithstanding variations in its size.

In the accompanying drawings, Figure 1 is a fragmentary sectional elevation of a portable fire-extinguisher embodying the invention. Fig. 2 is a sectional elevation in line 2 2, Fig. 1, showing the extinguisher inverted. Fig. 3 is a cross-section, partly in plan, on an enlarged scale, of the bottle-cage and bottle. Fig. 4 is a perspective view, on a reduced scale, of the bottle-cage. Fig. 5 is a detailed section of the guard in line 5 5, Fig. 1.

Like letters of reference refer to like parts in the several figures.

A represents the tank or reservoir of portable chemical fire-extinguisher, only the upper portion thereof being shown in the drawings, B the usual screw-cap or cover therefor, and C the inner receptacle or bottle which holds the acid or one of the chemicals necessary to the generation of the extinguishing agent, and which is provided with a loose stopper *c*, adapted to open and discharge the contents of the bottle into the tank or reser-

voir when the latter is inverted to operate the extinguisher. These parts are all common and the construction thereof forms no portion of the invention and they may be of any usual or suitable construction and arrangement.

The inner receptacle or bottle is removably held in the usual cage or holder D, which is suspended in the tank from the cap or cover B, and is removable from the tank with the cap when the latter is unscrewed.

The cage is of novel construction. It consists of a bottom or platform *d*, which is supported by upright side rods or bars *d'*, secured at their upper ends to the cap B. Two or more of these rods could be used, but preferably there are only two arranged at diametrically opposite sides of the bottom, being spaced as far apart as possible not to interfere with the removal of the holder through the mouth of the tank, so as to allow a bottle of large diameter to be placed between them in upright position on the bottom or platform *d*. The side bars of the cage or holder are connected between their ends, preferably at about the mid-height of the bottle-body, by a cross or back bar *d*<sup>2</sup>, which is curved to embrace and form a back support for the bottle in the cage.

The bottle is releasably clamped and held stationary in the cage between the back bar and a swinging clamping-bar E, hinged to one of the side bars *d'* and having means for releasably fastening it to the other side bar. The clamping-bar is preferably made of spring metal and has a looped or bent end *e*, which encircles a reduced cylindrical portion *e'* of one side bar, (see Fig. 3,) whereby it can swing on the side bar, and the end of the loop extends inwardly or toward the bottle, forming a spring-arm *e*<sup>3</sup>, adapted to bear against the front side of the bottle and press the same yieldingly against the back bar *d*<sup>2</sup> of the cage. The free end of the clamping-bar has an in-bent hook or shoulder *e*<sup>2</sup>, adapted to snap over a lip or edge on the adjacent side bar. Shoulders *f* on the one side bar above and below the hinge-loop of the clamping-bar and shoulders *f'* on the other side bar above and below the fastening lip or edge prevent the vertical displacement of the clamping-bar. The bottle is clamped firmly between the back and clamping bars and is held from movement when the extinguisher is inverted.

The clamping-bar, together with its hinge and fastening means and the spring-arm  $e^3$ , which bears against the bottle, are made from a single strip of metal, being thus exceedingly simple and inexpensive to make. The clamping-bar being adapted to yield will firmly hold bottles differing considerably in size, so that a variation in the size of the bottle will not prevent it from being held firmly and stationarily in the cage. As the internal parts of the extinguisher are subject to corrosion on account of the presence of the chemicals therein, the cage or holder constructed as described is very desirable on account of having the fewest possible working parts to be rendered inoperative or destroyed by the action thereon of the chemicals, and the parts can be made large and strong, and therefore more durable.

The bottom or platform is located far enough below the cap B, from which it is suspended, to allow the bottle to be inserted in the cage while held upright, or nearly so, and it has an upright marginal retaining-flange  $g$  for preventing the accidental displacement of the bottle. The front portion of the retaining-flange is low or shallow, making it easy to insert and remove the bottle, while the rear portion thereof is considerably higher, so that it will engage the bottle when it is placed in the cage and prevent the bottle from being inadvertently shoved over the edge of the platform or left standing on the retaining-flange in such manner that it could be disengaged from the cage in the handling of the extinguisher.

H represents the opening in the upper portion of the tank or reservoir with which the usual discharge hose or pipe is connected and which is provided with the usual strainer  $h$ .

I represents a guard or shield for preventing the splashing or slopping of the solution into the discharge opening and pipe, due to careless handling of the extinguisher or to the vibrations thereof when not stationarily supported, as when located on a train, boat, or other moving or unstable support. The guard consists simply of an arched or bent piece, which bridges the discharge-opening and is secured to the tank. It prevents the entrance of the contents of the tank into the discharge-opening except through the open opposite ends of the space formed by the shield. The shield will thus deflect to opposite sides of the discharge-opening any of the solution which might be splashed up against it and will thereby prevent loss of the solution and injury to nearby objects on which

the solution might otherwise be discharged. The shield does not prevent a free discharge of the solution when the extinguisher is inverted and the solution is under the pressure of the gas generated in the tank or reservoir.

While the bottle-holder is especially designed and adapted for the described purpose in chemical fire-extinguishers, it will be apparent that the construction claimed is adapted for releasably holding bottles or analogous articles for other purposes.

I claim as my invention—

1. In a fire-extinguisher, a holder for a bottle or receptacle, comprising a support, a clamping-bar pivoted to said support to swing horizontally and having means for bearing yieldingly against the bottle or receptacle, and fastening means for said clamping-bar, substantially as set forth.

2. In a fire-extinguisher, a holder for a bottle or receptacle, comprising a support, a clamping-bar hinged to said support and having a projecting yielding portion to bear against the bottle or receptacle, and fastening means for said clamping-bar, substantially as set forth.

3. In a bottle or receptacle holder for fire-extinguishers, or the like, the combination of a support, and a swinging clamping-bar bent at one end to form a hinge-loop and a projecting spring-arm for bearing against the bottle or receptacle, substantially as set forth.

4. In a bottle or receptacle holder for fire-extinguishers, or the like, the combination of a support, and a swinging clamping-bar bent at one end to form a hinge-loop and a projecting spring-arm for bearing against the bottle or receptacle, and at the opposite end to form a fastening part, substantially as set forth.

5. In a bottle or receptacle holder for fire-extinguishers, or the like, the combination of a support having a bottom, side supporting-bars and a cross-bar connecting the side bars, and a clamping-bar opposite to said cross-bar hinged at one end to one of said side bars and having a yielding projecting part to bear against the bottle or receptacle, and means for fastening the other end of said clamping-bar to said other side bar, substantially as set forth.

Witness my hand this 29th day of January, 1906.

EDWARD D. MATTESON.

Witnesses:

EDWARD C. HARD,  
A. L. MCGEE.