

No. 710,207.

Patented Sept. 30, 1902.

E. PHILLIPSON.
STOPPER FOR WATER BOTTLES.

(Application filed May 15, 1902.)

(No Model.)

Fig:1.

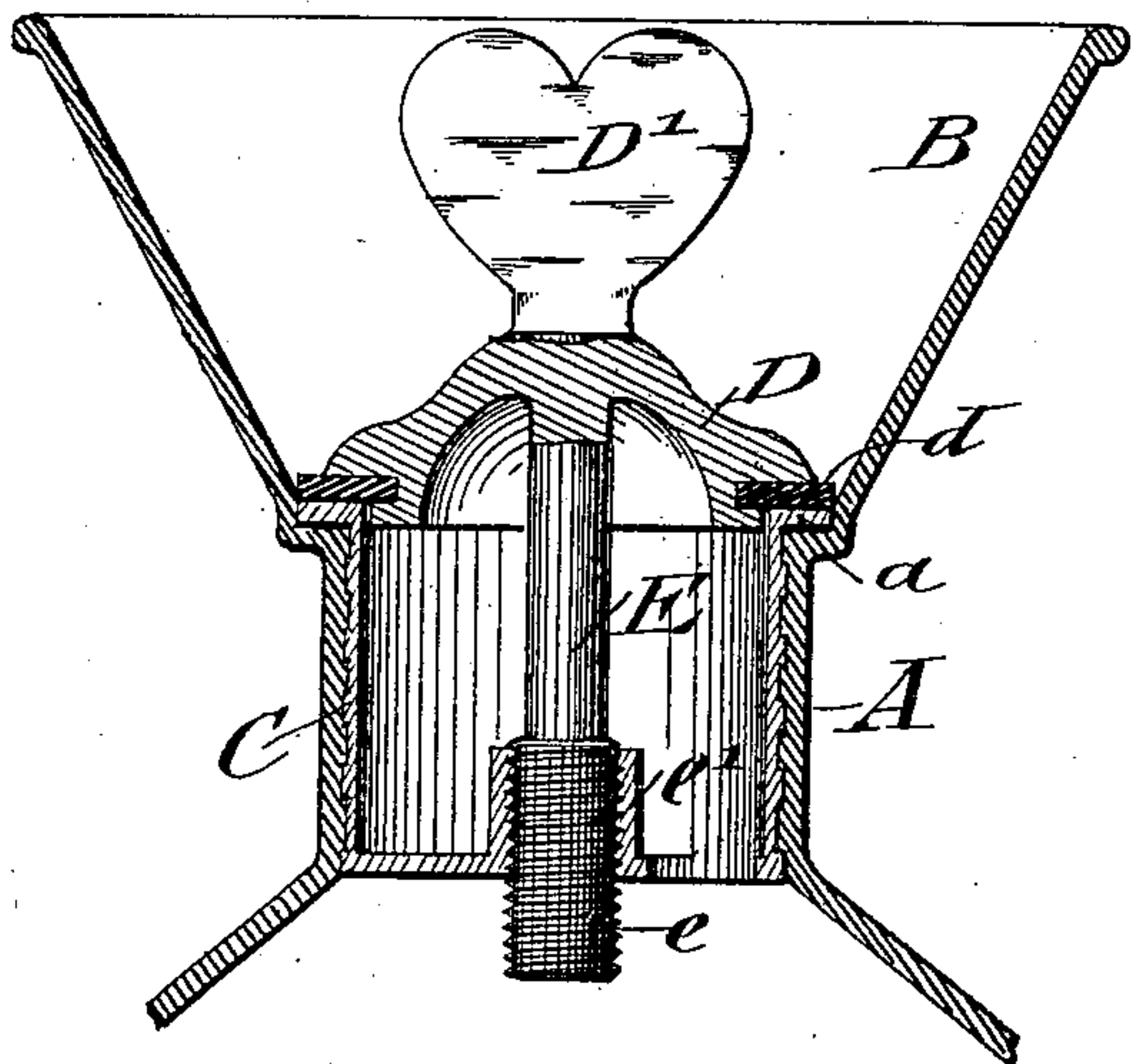


Fig:2.

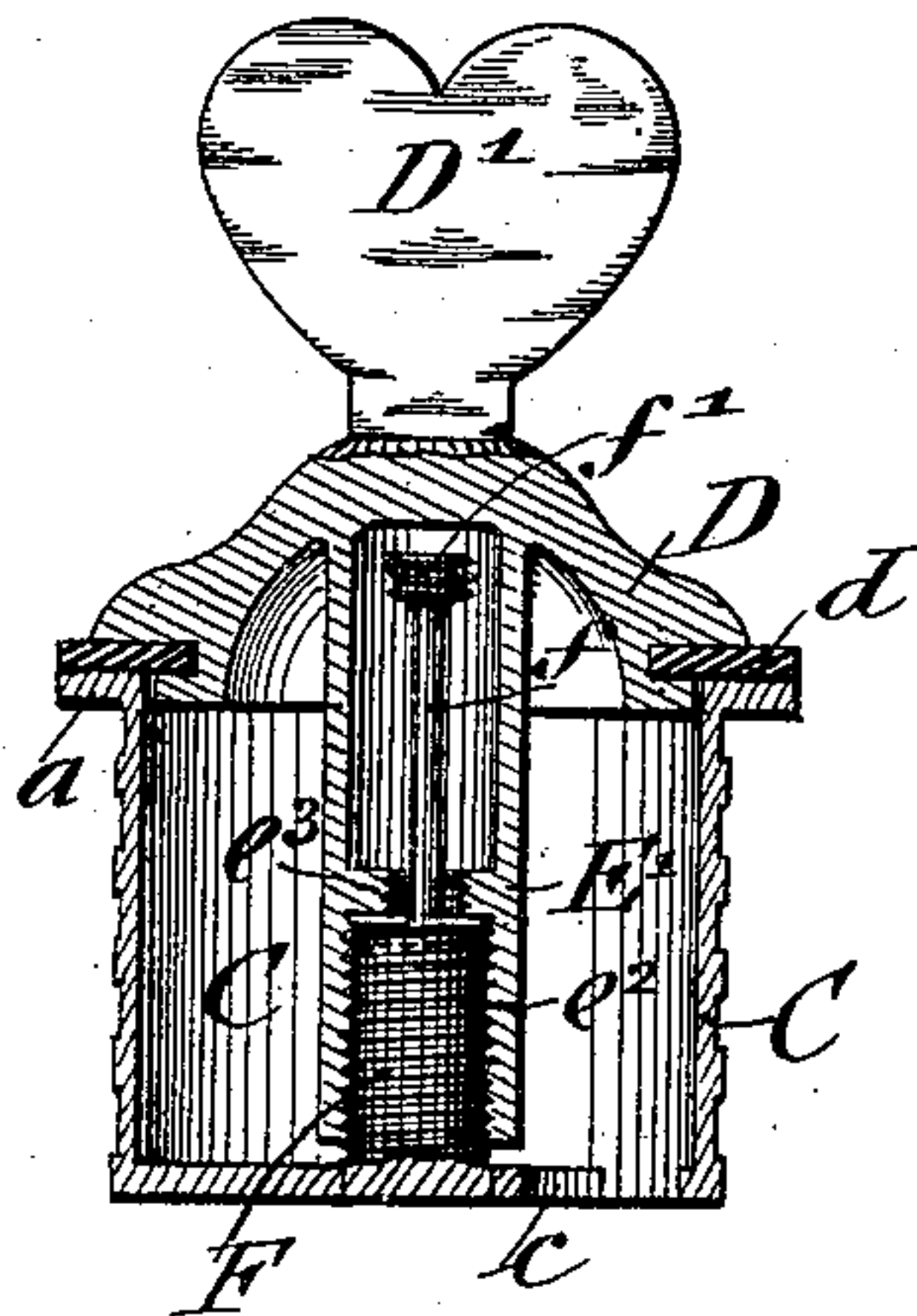


Fig:3.

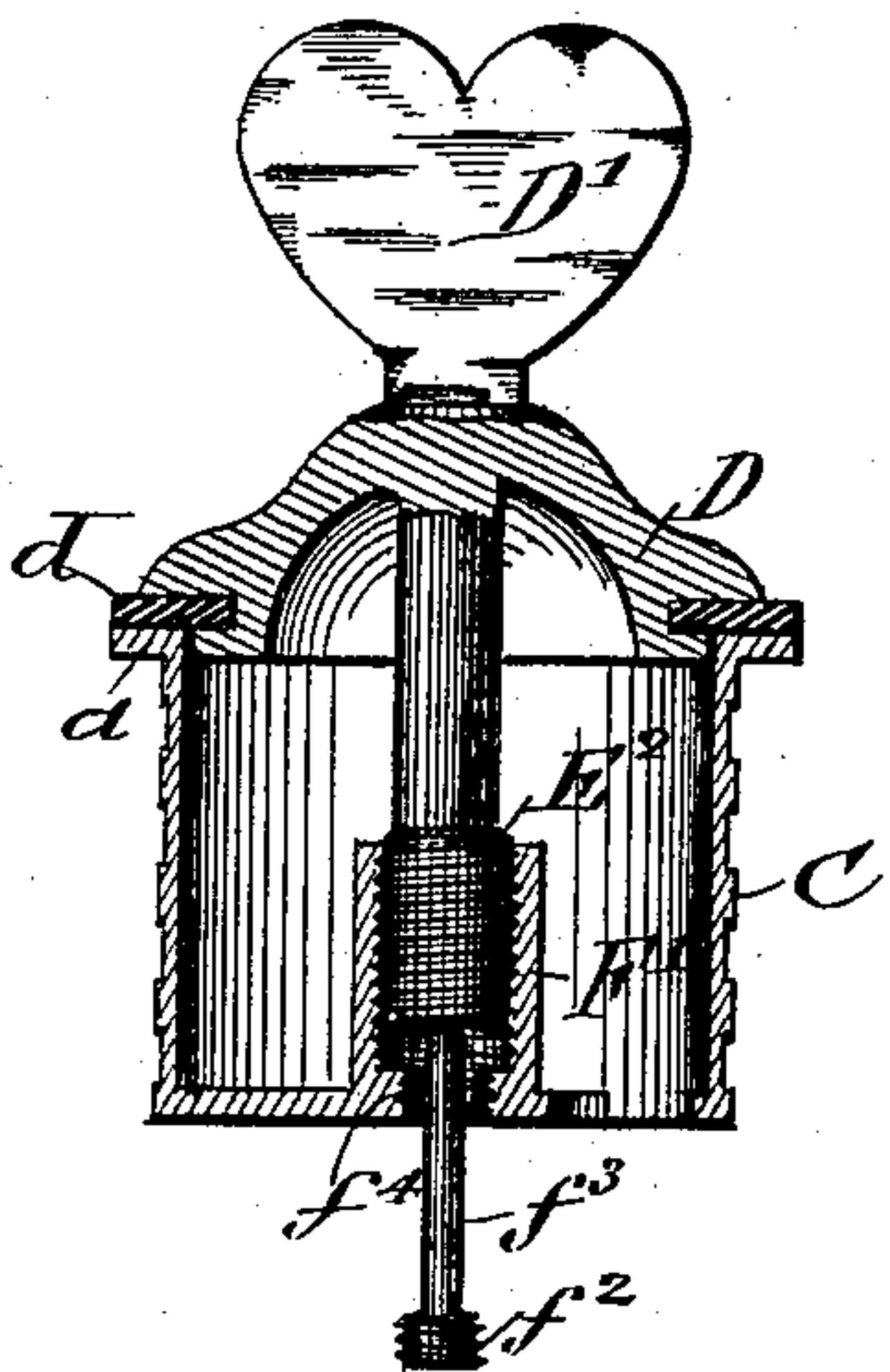
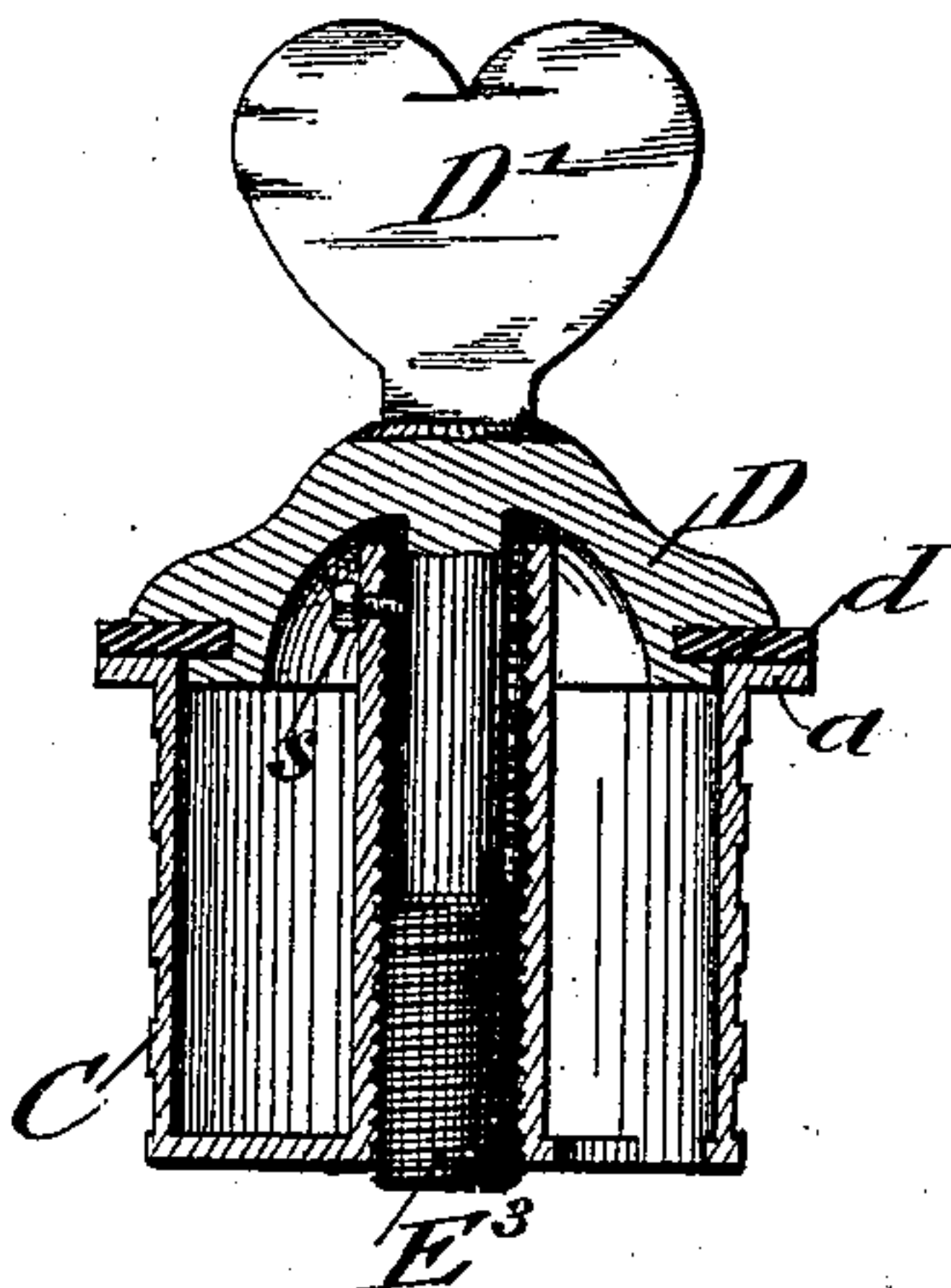


Fig:4.



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STOPPER FOR WATER-BOTTLES.

SPECIFICATION forming part of Letters Patent No. 710,207, dated September 30, 1902.

Application filed May 15, 1902. Serial No. 107,379. (No model.)

To all whom it may concern:

Be it known that I, EMIL PHILLIPSON, a citizen of the United States, residing in New York, borough of Brooklyn, and State of New York, have invented certain new and useful Improvements in Stoppers for Water-Bottles, of which the following is a specification.

This invention relates to an improved stopper for water-bottles of that class which are made of soft rubber and used either with hot or cold water for various applications to the body, the stopper being designed with the view of being opened, so as to permit the filling or discharging of the bottle, but without entirely removing the stopper, so as to prevent its getting lost or mislaid; and for this purpose the invention consists of a stopper for water-bottles which comprises a stopper having a threaded shank engaging a correspondingly-threaded socket of the reinforcing bushing of the neck of the bottle, so as to permit the opening of the stopper without detaching the same.

The invention consists, further, of a stopper for water-bottles which is provided with a threaded shank engaging a correspondingly-threaded socket of the reinforcing-bushing of the neck of the bottle and a stop device between the shank and socket, so as to prevent the detaching of the stopper after opening it to some extent out of the neck of the bottle.

In the accompanying drawings, Figures 1, 2, 3, and 4 are vertical central sections of different forms of my improved stopper for water-bottles, showing different modifications of the same, the stopper being shown in closed positions.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents the neck of a soft-rubber water-bottle of the usual construction.

B is the funnel that extends around the stopper, said rubber funnel being made in one integral structure with the neck of the bottle. The neck A is reinforced by a cylindrical bushing C, which is made of brass or other metal and provided with an exterior rim *a* at its upper end which forms a seat for the rubber packing-ring or gasket *d*, which is retained in any suitable manner at the un-

derside of the head of the stopper D. The stopper is provided with a thumb-piece D' for being readily taken hold of in opening or closing the same. The stopper D is provided with a shank E, the simplest form of which, as shown in Fig. 1, is provided with an exterior screw-thread *e* at its lower end that engages an interiorly-threaded socket *e'*, supported on the perforated bottom *c* of the bushing C, said threaded portion of the shank being of sufficient length so that the stopper can be lifted for a certain distance above the rim of the bushing without detaching the threaded shank from the socket. In this manner the bottle may be filled or emptied without detaching the stopper. In some cases, however, it is desirable for the purpose of positively preventing the detaching of the stopper when opening the bottle, so that when the threaded shank becomes released from the threaded socket a positive means will arrest the motion of the stopper. For this purpose the constructions shown in Figs. 2, 3, and 4 may be used. In Fig. 2 the shank E' is made hollow and provided with an interior screw-thread *e*². Above the threaded part is arranged an interior shoulder *e*³, which is provided with a thread opposite to the thread in the shank. The hollow shank E' engages a stationary exteriorly-threaded spindle F, attached to the perforated bottom *c* of the bushing, said spindle being provided with a stem *f*, extending into the hollow shank E' and provided at its upper end with a head *f'*, threaded oppositely to that of the larger portion of the spindle F, so that when the thread *e*² runs off the spindle F the stopper will turn loosely, swivel-like, on the stem *f*, the stopper being only detached when bringing the threaded shoulder *e*³ into engagement with the threaded head *f'* by turning the stopper in opposite direction. Without turning in opposite direction the stopper cannot be detached, as the threaded head *f'* of the stem *f* forms with the shoulder *e*³ a stop device for the stopper and prevents its detachment from the bushing of the water-bottle. Fig. 3 shows the same arrangement, only reversed. In this case the lower end of the shank E² is exteriorly threaded, the direction of the screw of the shank be-

ing opposite to that of the head f^2 of the stem f^3 of the shank. The threaded portion of the shank E^2 engages the socket F , supported by the bottom of the bushing, while the smaller end, threaded in opposite direction, engages a correspondingly-threaded portion f^4 in the end of the socket. In Fig. 4 the stop is made in connection with a stop-screw f , that abuts against the enlarged threaded end of the shank E^3 and prevents thereby the detaching of the stopper until the stop-screw has been removed. In all the constructions shown in Figs. 2, 3, and 4, however, the stopper is arrested when the same is lifted to a certain extent sufficient to permit the free unobstructed filling and discharging of the bottle. Any other stop mechanism for arresting the stopper after the same is raised to a certain extent may be used, as I do not desire to confine myself to the special constructions shown.

It is obvious that the threads of the shank F and of the head f' may be made in the same direction instead of in opposite directions, as shown, as the disengagement which occurs when the shank is screwed out of its socket, so that the same is free to turn without being moved in either direction, is sufficient to prevent the inadvertent removal of the stopper by the user.

By the construction of the stopper described the bottle can be filled and discharged without detaching the stopper, so that the same is always at hand and not liable to get lost or mislaid.

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

1. The combination, with the neck of a water-bottle, of a bushing secured therein, said bushing having a suitable screw-threaded

portion, a stopper having a thumb-piece, a gasket fitted on said stopper, and a screw-threaded shank on said stopper adapted to engage said threaded portion of the bushing, substantially as set forth.

2. The combination, with the neck of a water-bottle, of a bushing secured in the same, said bushing being provided with a perforated bottom having a central screw-threaded portion, a stopper provided with a thumb-piece, a gasket fitted on the head of the same, and a shank provided with a threaded portion adapted to engage the threaded portion of the bushing, substantially as set forth.

3. The combination, with the neck of a water-bottle, of a bushing secured therein, said bushing having a suitable screw-threaded portion, a stopper having a thumb-piece, a gasket fitted on said stopper, a screw-threaded shank on said stopper adapted to engage said threaded portion of the bushing, means for preventing the accidental detachment of the stopper from said bushing, and means for permitting the detachment of the same, substantially as set forth.

4. The combination, with the neck of a water-bottle, of a bushing secured in said neck, an interiorly-threaded socket supported by said bushing, a stopper provided with a shank having a threaded portion engaging said socket, and a stop device between the socket and shank for arresting the motion of the stopper, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

EMIL PHILLIPSON.

Witnesses:

PAUL GOEPEL,
C. BRADWAY.