

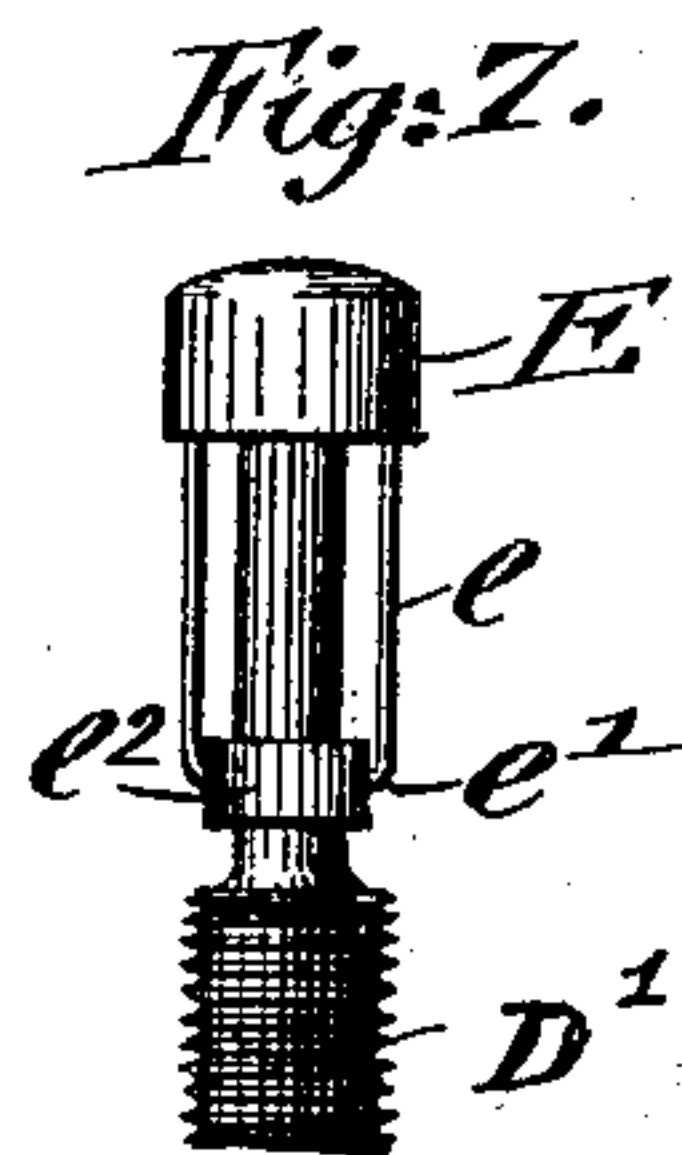
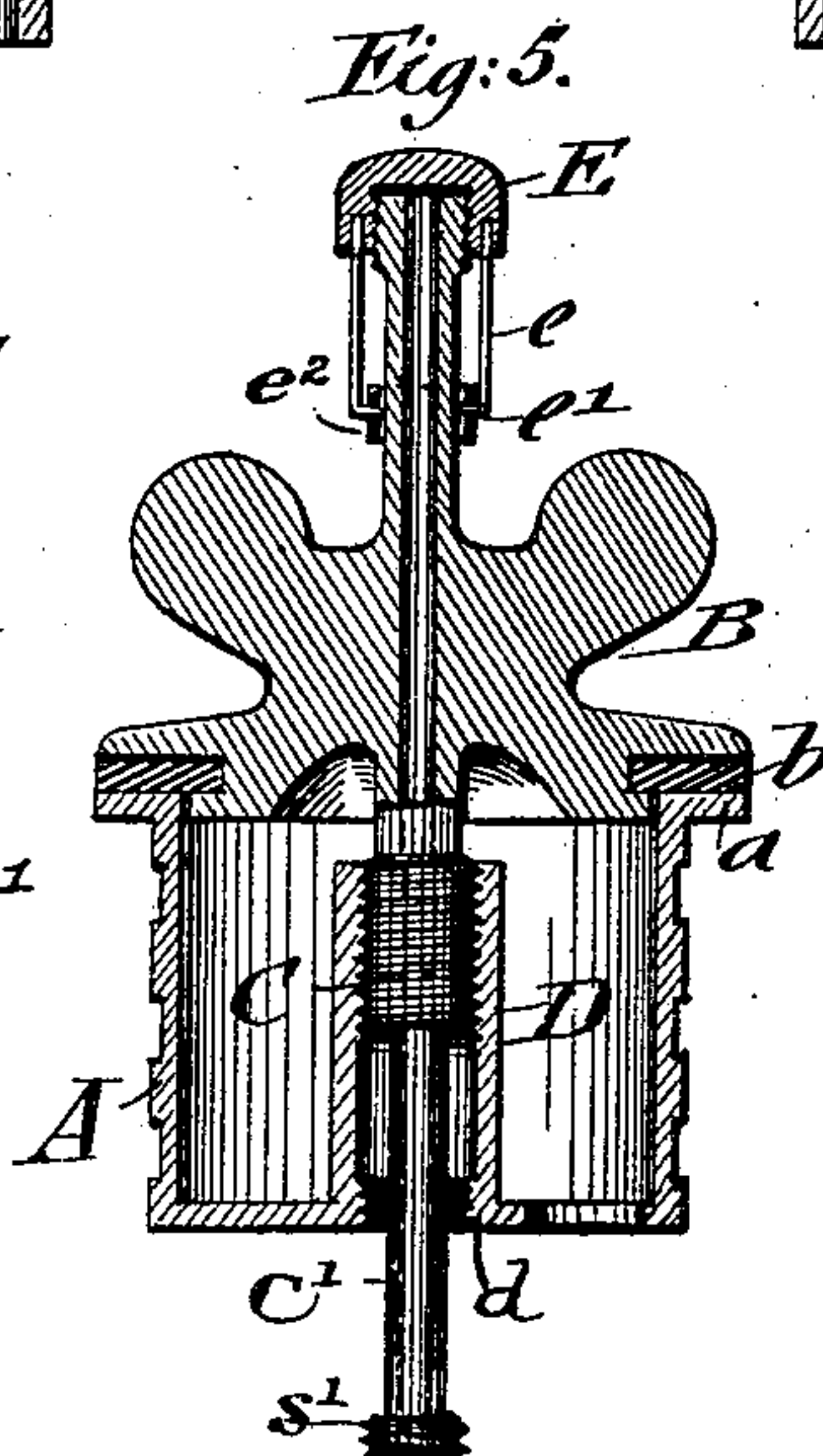
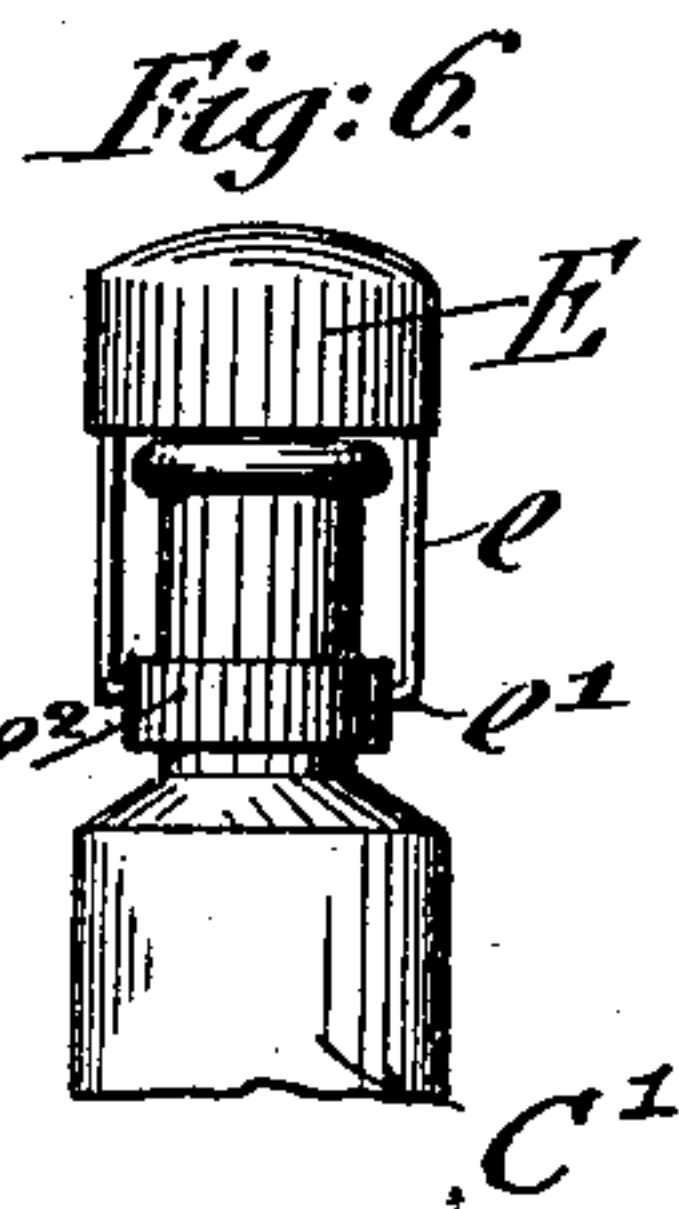
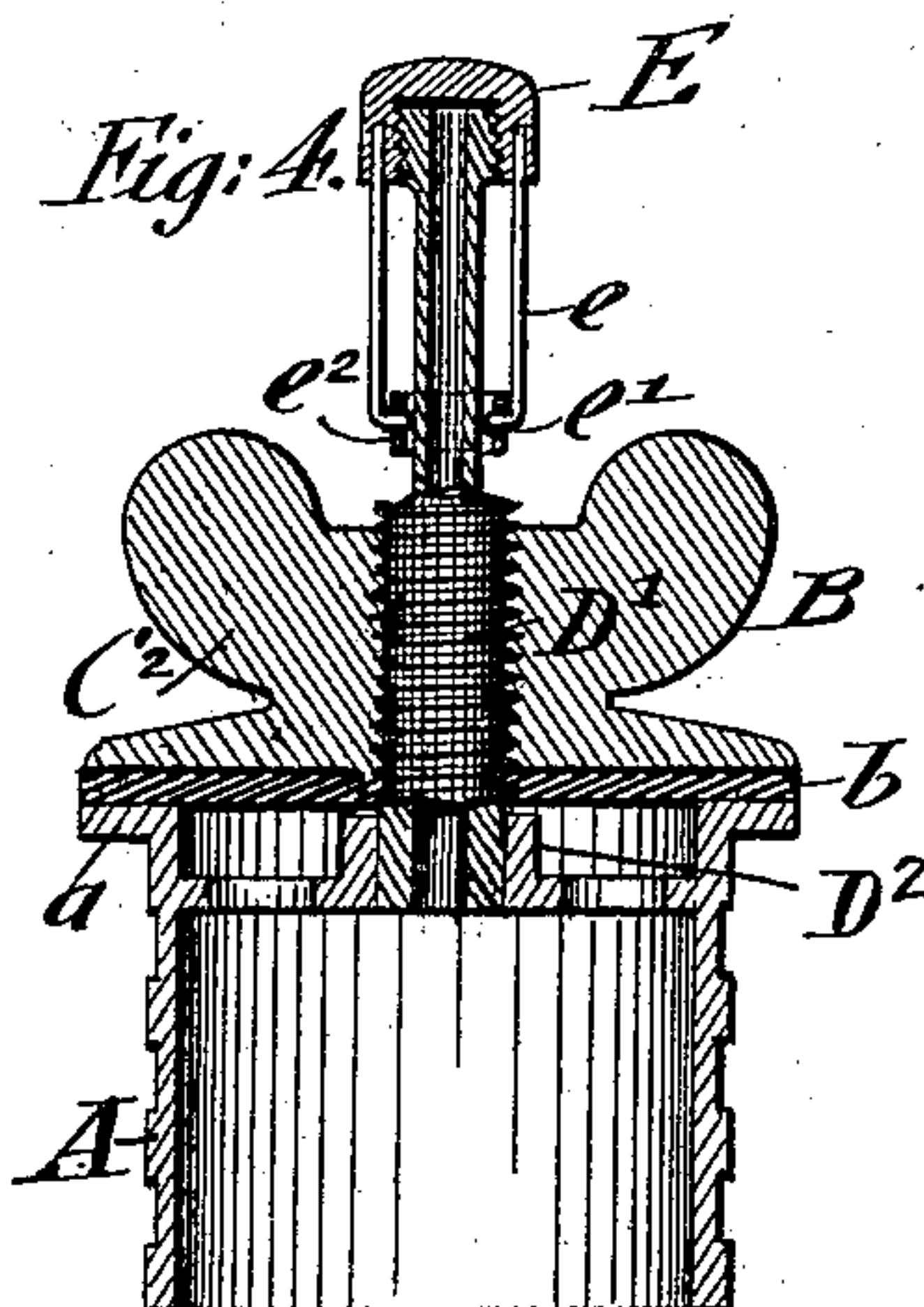
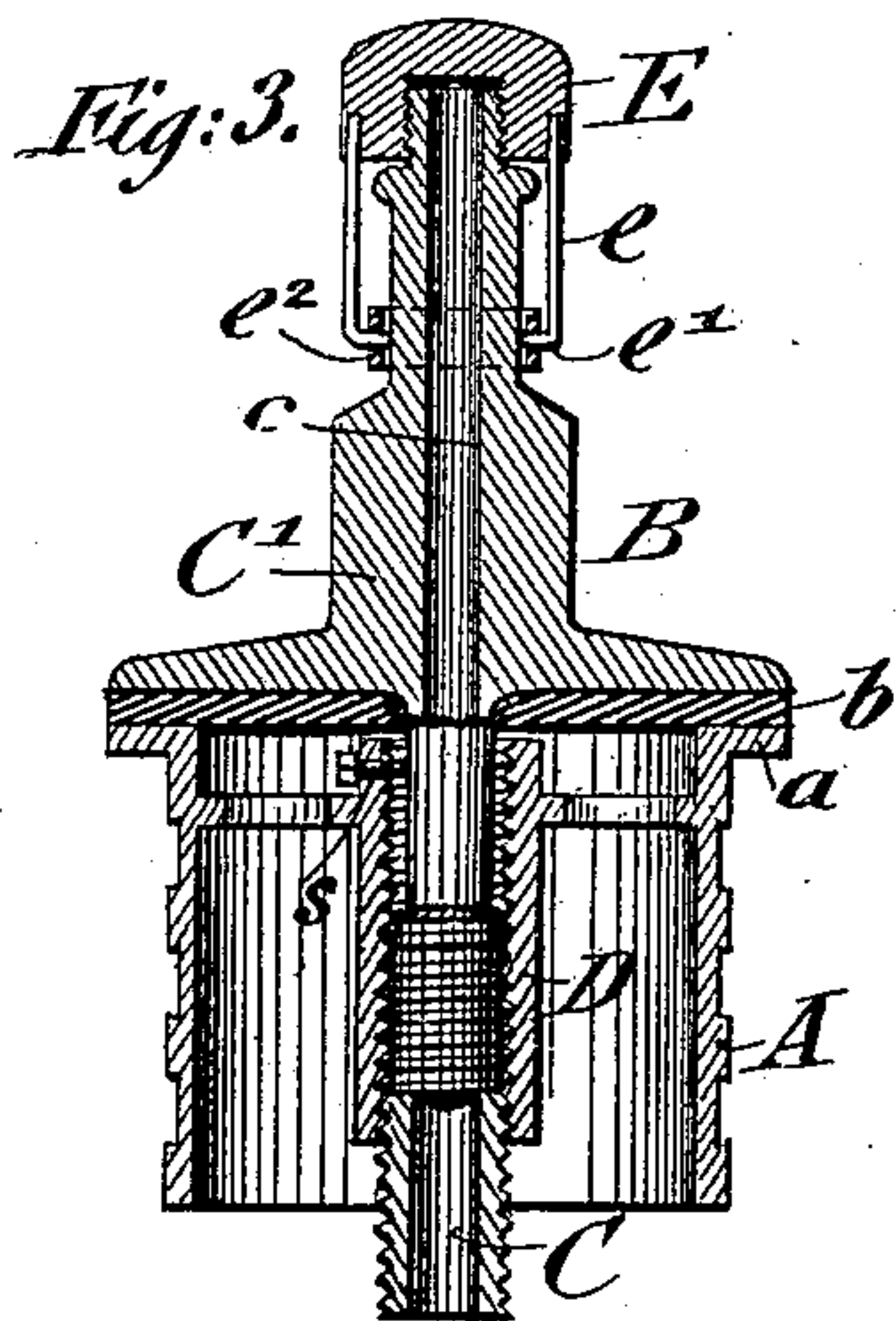
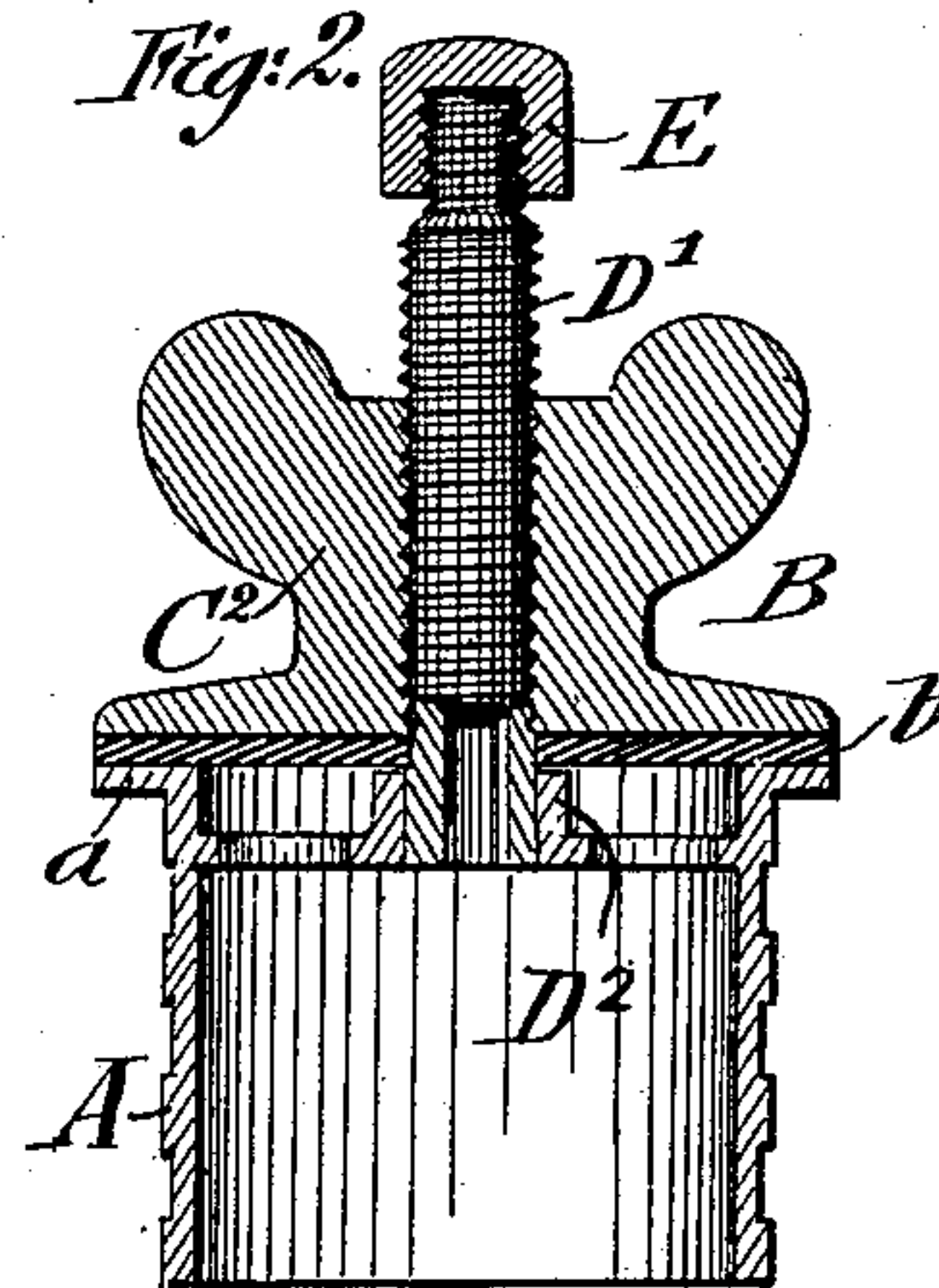
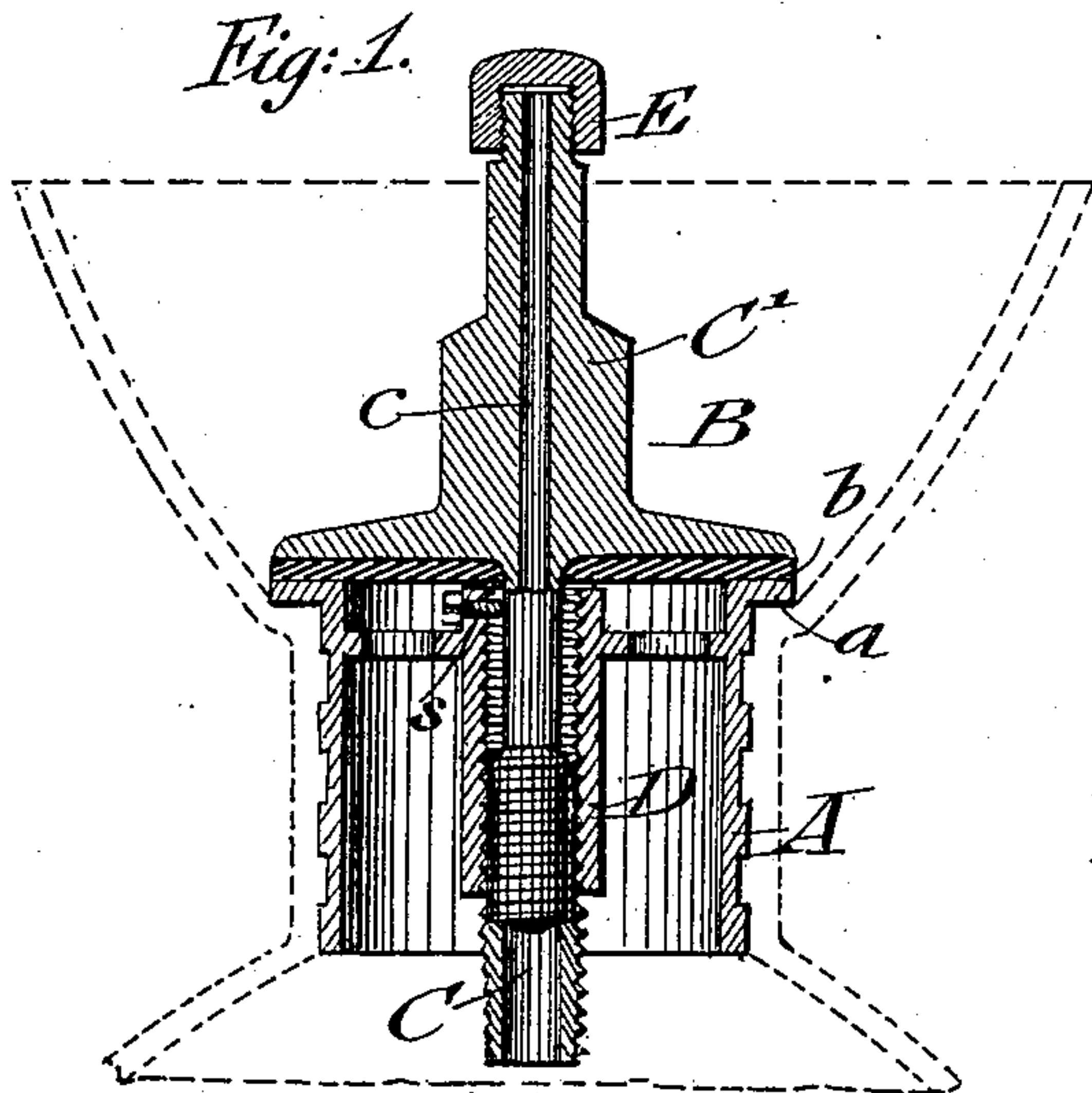
No. 710,208.

Patented Sept. 30, 1902.

E. PHILLIPSON.  
STOPPER FOR WATER BOTTLES.

(Application filed May 15, 1902.)

(No Model.)



WITNESSES:

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# UNITED STATES PATENT OFFICE.

EMIL PHILLIPSON, OF BROOKLYN, NEW YORK, ASSIGNOR TO ANTON C. EGGERS, TRUSTEE, OF BROOKLYN, NEW YORK.

## STOPPER FOR WATER-BOTTLES.

SPECIFICATION forming part of Letters Patent No. 710,208, dated September 30, 1902.

Application filed May 15, 1902. Serial No. 107,380. (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 improvements in soft-rubber water-bottles of that class in which the stopper can be raised, so as to permit the convenient filling and emptying of the bottle without detaching the same, and in which the bottle can be connected at the same time with the rubber tube of a syringe, so that the water-bottle can be used as the fountain for the syringe; and for this purpose the invention consists of a stopper for water-bottles which comprises a bushing inserted into the neck of the water-bottle, a threaded socket supported in said bushing, a stopper-head provided with a tubular exteriorly-threaded shank for engaging said socket, and a screw-cap for closing the end of the tubular shank.

The invention consists, further, of means for retaining the screw-cap at the end of the stopper-head, so as to prevent the detaching of the same, as will be more fully described hereinafter and finally pointed out in the claims.

In the accompanying drawings, Figures 1, 2, 3, 4, and 5 are vertical central sections of my improved stopper for water-bottles, showing different modified forms of the same; and Figs. 6 and 7 are detail side views of the cap device shown in Figs. 3 and 4 as applied to the stopper.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents the cylindrical bushing of my improved bottle-stopper, which bushing is cemented or otherwise secured in the neck of the water-bottle of soft rubber, which is used for applying hot or cold applications to the body. The bushing is provided with a circumferential rim *a* at its upper end, against which the rubber packing or gasket *b*, which is applied to the under side of the head of the stopper, is seated.

The stopper B is provided with a tubular shank C, which is shown partly in elevation

and partly in section and having an exterior screw-thread, and the head C' of the stopper is provided with a bore *c*, which is arranged in line with the tubular shank. The exteriorly-threaded shank screws into an interiorly-threaded socket D, which is supported in the bushing, the shank being of sufficient length to permit the raising of the stopper for filling or emptying the water-bottle without detaching the same from the bottle and also of sufficient length to retain connection with the socket D of the bushing. If desired, any suitable stop device *s* may be used, so as to prevent the stopper from becoming detached from the bottle, said stop device being shown in different forms in Figs. 1 and 5.

In place of providing the stopper B with a shank an exteriorly-threaded tubular member D' may be supported permanently in the socket D<sup>2</sup> of the bushing, as shown in Figs. 2 and 4, the tubular member being then engaged by an interiorly-threaded bore that extends through the winged head C<sup>2</sup> of the stopper, serving as a nut to be raised or lowered on the tubular member D'. As shown in Fig. 5, the means for preventing the accidental removal of the stopper from the bushing of the bottle consists of a stem *c'*, extending from the lower end of the shank C, which is provided with an enlarged threaded portion *s'*, that is adapted to abut against the threaded shoulder *d* of the socket D when the threaded shank C is screwed out of the socket, and thereby prevents the total removal of the stopper; but when it is desired to remove the stopper the threaded portion *s'* is caused to engage and screw out of the shoulder *d* by turning the stopper in a left-hand direction, or the direction opposite to that required to unscrew the threaded shank C from the socket D. A screw-cap E is screwed on the upper end of the tubular member, as shown in Fig. 2, and this serves as a stop for limiting the upward movement of the stopper to permit the opening of the bottle to such an extent that the convenient filling or emptying of the same is produced.

The screw-cap E is screwed over the exteriorly-threaded end of the head C', as shown in Figs. 1 and 3, or over the exteriorly-threaded end of the tubular member D', as



shown in Figs. 2 and 4. The screw-cap instead of being detachable may be retained on the head of the stopper B or on the tubular member D' by means of a swivel connection, 5 as shown in Figs. 3 to 7. In this case the cap is pivotally connected by downwardly-extending arms  $e$ , having inwardly-bent ends  $e'$ , with a sliding band  $e^2$  on the reduced end of the head C' or tubular member D', so as to 10 be secure against detachment and loss. In this case the band  $e^2$  forms the stop that limits the upward movement of the stopper-head C' when turned into open position.

It is obvious that the threads of the shank 15 C and of the head  $s'$  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 20 moved in either direction, is sufficient to prevent the inadvertent removal of the stopper by the user.

The tubular shank and head of the stopper or the tubular member which is an equivalent 25 of the shank permits the use of the water-bottle as a fountain for supplying liquid to a syringe, a rubber tube being connected to the end of the stopper-head or tubular member after unscrewing the screw-cap E. 30 This gives an additional advantage to the stopper, so that by it the water-bottle can be

used as a fountain for syringes without removing the stopper from the bottle.

Having thus described my invention, I claim as new and desire to secure by Letters 35 Patent—

1. The combination, with a bushing adapted to be secured in the neck of a water-bottle, of an adjustable stopper provided with an elastic gasket, a tubular member connecting 40 said stopper with the bushing, and a screw-cap for the end of said stopper-head, substantially as set forth.

2. The combination, with a bushing secured in the neck of a water-bottle, of a socket supported in said bushing, a stopper provided 45 with a tubular shank secured therein, a bore in the head of said stopper, said stopper being adapted to be adjusted relatively to the bushing, a screw-cap at the end of the stop- 50 per, and a swivel connection between the screw-cap and the stopper for retaining it in position on the same, substantially as set forth.

In testimony that I claim the foregoing as 55 my invention I have signed my name in presence of two subscribing witnesses.

EMIL PHILLIPSON.

Witnesses:

PAUL GOEPEL,  
C. BRADWAY.