

No. 720,746.

PATENTED FEB. 17, 1903.

L. E. SHOGREN.
NON-REFILLABLE BOTTLE.
APPLICATION FILED OCT. 27, 1902.

NO MODEL.

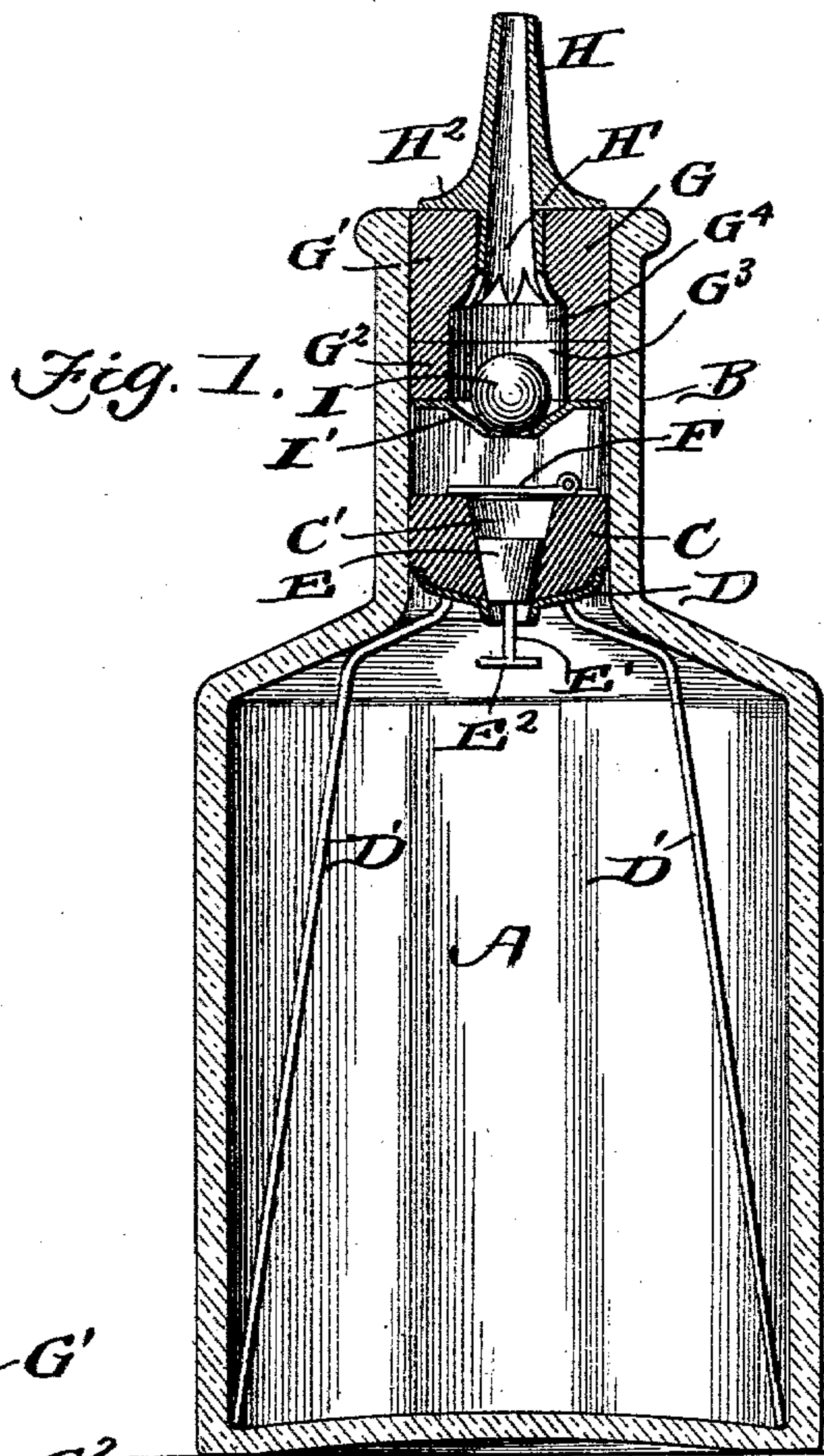


Fig. 2.

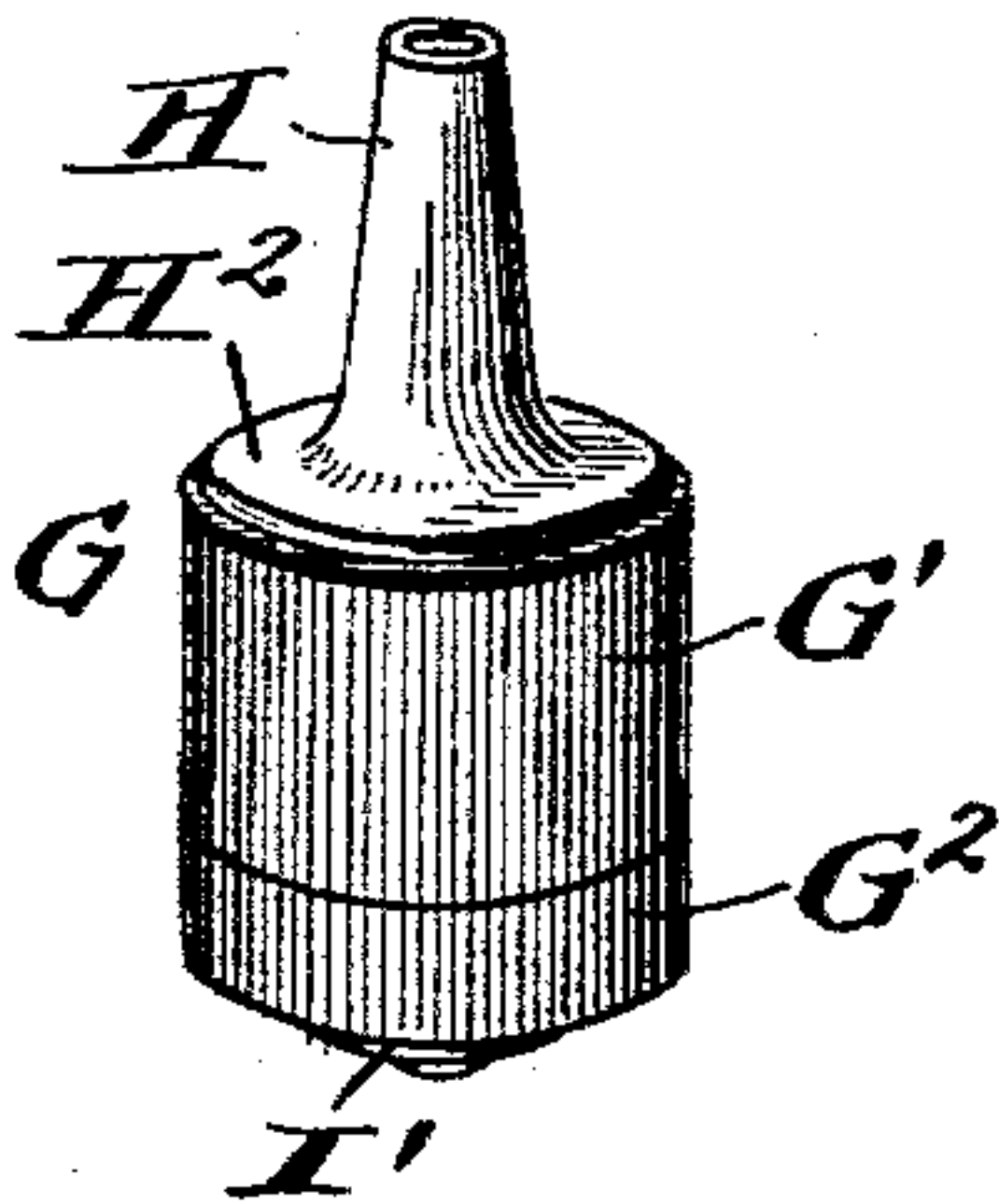


Fig. 3.

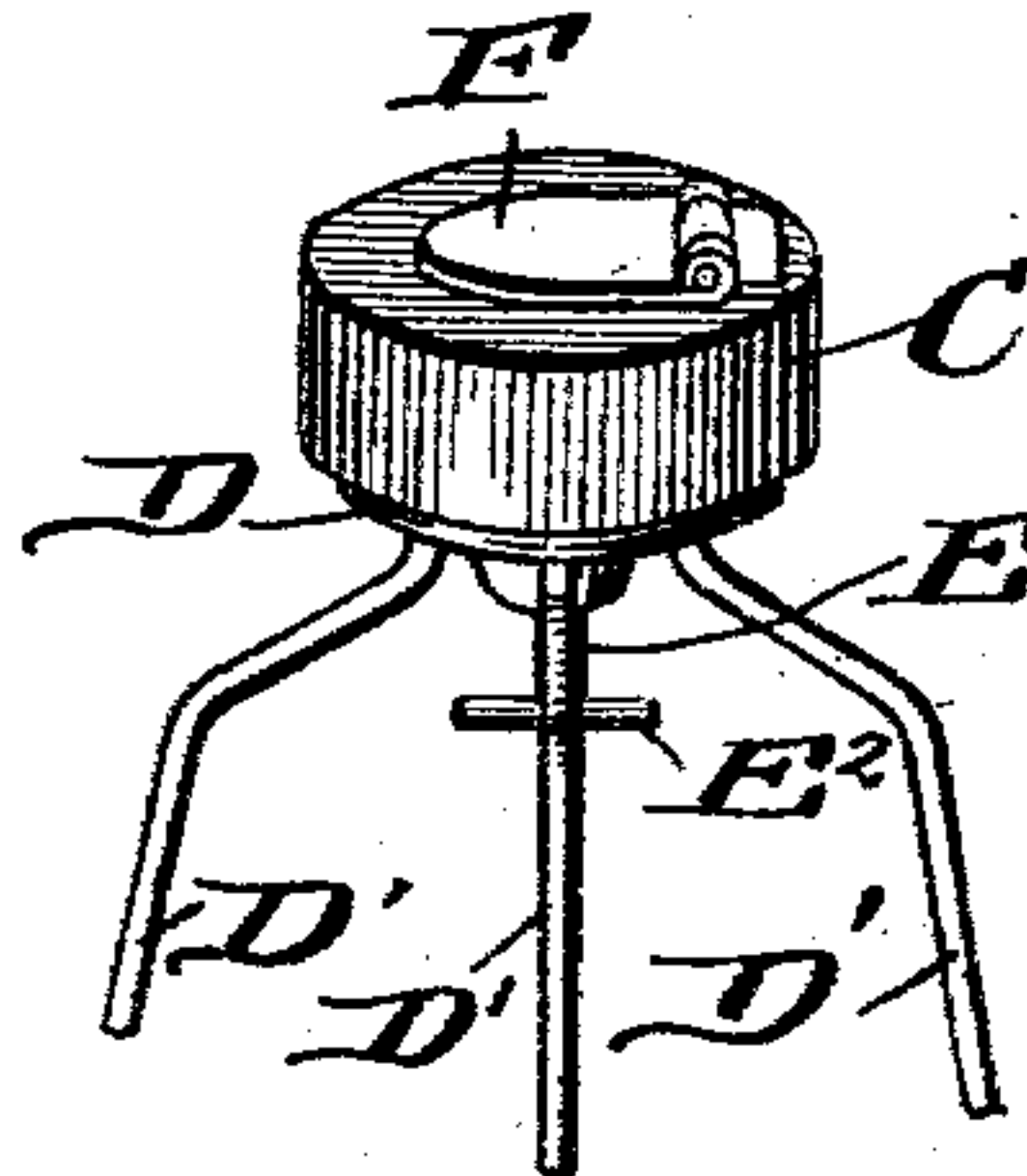


Fig. 4.

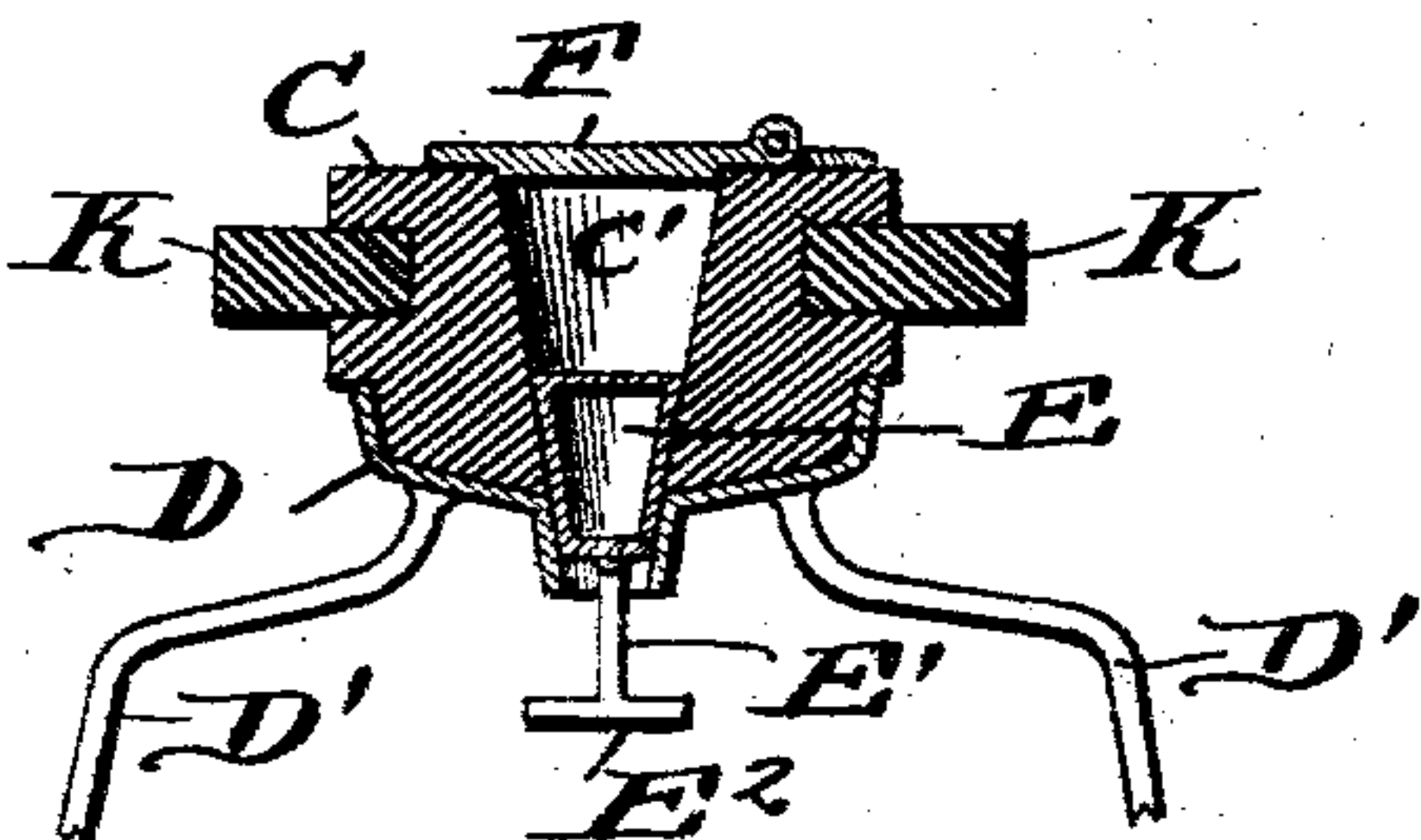
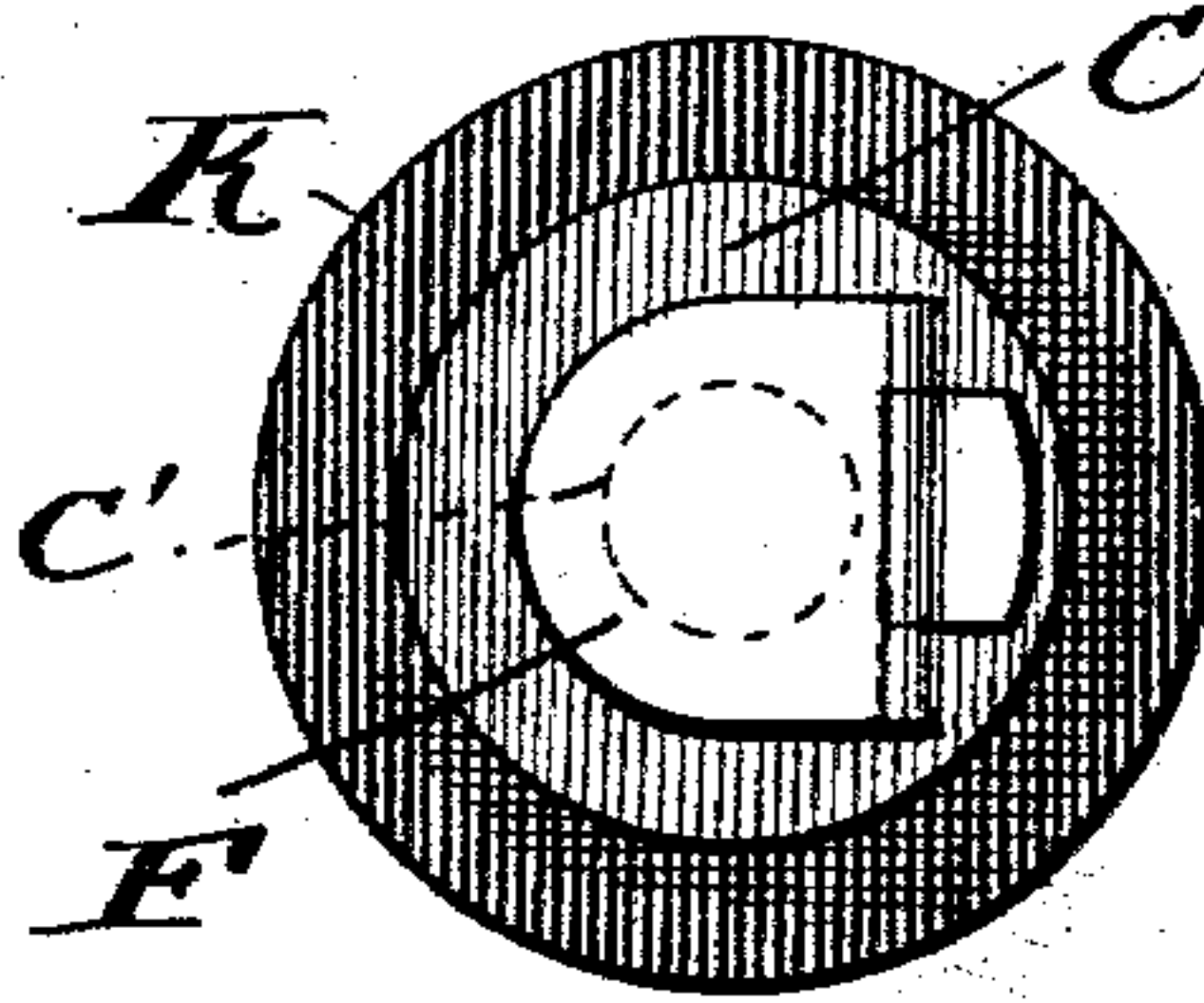


Fig. 5.



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UNITED STATES PATENT OFFICE.

LOUIS E. SHOGREN, OF VERMILION, SOUTH DAKOTA.

NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 720,746, dated February 17, 1903.

Application filed October 27, 1902. Serial No. 128,991. (No model.)

To all whom it may concern:

Be it known that I, LOUIS E. SHOGREN, a citizen of the United States, residing at Vermilion, in the county of Clay and State of South Dakota, have invented a new and useful Non-Refillable Bottle, of which the following is a specification.

This invention relates generally to bottles, and more particularly to an improved construction of stopper for a bottle, the object being to provide a stopper which under ordinary conditions will retain the contents of the bottle, but will permit the contents to be removed therefrom when desired and which will prevent the bottle being refilled after it has once been emptied.

The invention consists in the novel features of construction, combination, and arrangement, all of which will be fully described hereinafter and pointed out in the claims, reference being had to the drawings, in which—

Figure 1 is a vertical sectional view of a bottle provided with my improved construction of stopper. Fig. 2 is a detail perspective view of the upper stopper. Fig. 3 is a detail perspective view of the lower stopper. Fig. 4 is a sectional view of a slightly-modified form of lower stopper, and Fig. 5 is a view of said modification.

Referring to the drawings, A indicates the bottle, and B the neck thereof. Fitting in the neck of the bottle adjacent to the lower end thereof is the lower stopper C, having a central opening C', which tapers toward its lower end. This stopper rests upon a perforated metal plate D, to which the three supporting-legs D' are connected, but two of which are seen in the sectional view, said legs extending entirely to the bottom of the bottle and resting thereagainst. A tapering hollow valve E is fitted in the tapering opening C', said valve having a depending stem E', which carries a cross-pin E², which limits the upward movement of the valve E. A flat valve F is pivoted upon the top of the stopper C and normally rests upon the said stopper, so as to close the central opening C'. The upper stopper G is composed of two sections G' and G², secured together in any suitable manner, and this upper stopper may be composed of any suitable or desirable mate-

rial. The lower section is recessed or has a central opening G³, and the upper section has a corresponding opening or recess G⁴, which terminates in a contracted opening, into which the inner end H' of the nozzle H is inserted, said inner end being notched and spread out as shown for two purposes—first, to permit the passage of the liquid, and, secondly, to retain the nozzle in the stopper—said nozzle also having an annular collar H², which rests upon the top of the stopper. A ball-valve I is located in the central recess or opening of the upper stopper and is retained therein by means of a perforated metallic plate I', which is secured to the bottom of the lower section of the upper stopper. This ball-valve when seated upon the perforated plate will prevent any liquid being introduced into the bottle; but when the said bottle is inverted for the purpose of discharging the contents thereof the hollow valve E will permit the liquid to pass through the lower stopper and the ball-valve I will permit the liquid to pass through the upper stopper. The hollow and conical valves, however, will serve to prevent any liquid being introduced into the bottle, and if an attempt be made to refill the bottle when same is in an inverted position the hollow conical valve E will immediately float into the contracted portion of the central opening and close the same, thereby preventing the ingress of any liquid.

In Fig. 4 I have shown the lower stopper C constructed with an annular groove in which is seated an elastic ring K, which is adapted to fit into a groove or seat formed in the neck of the bottle, thereby securely fastening the inner stopper within the neck of the bottle. By means of the elastic ring the stopper can be used in connection with various sizes of bottles.

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

1. The combination with the neck of a bottle, of the upper and lower stoppers the lower stopper having a tapering central opening, and a tapering hollow valve arranged in said opening, the upper stopper having a central chamber, a ball-valve arranged in said chamber, and a discharge-spout communicating with the said chamber, as specified.

2. The combination with the bottle-neck, of a lower stopper having a tapering central opening, a perforated plate provided with supporting-legs adapted to support the said lower stopper, a flat valve arranged upon the top of said lower stopper, an upper stopper having a central chamber, a ball-valve arranged in said chamber, a perforated plate secured to the bottom of the upper stopper, and the discharge-nozzle fitting into the upper end of the upper stopper, the inner end of said nozzle being notched and spread, as specified.

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Witnesses:

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