

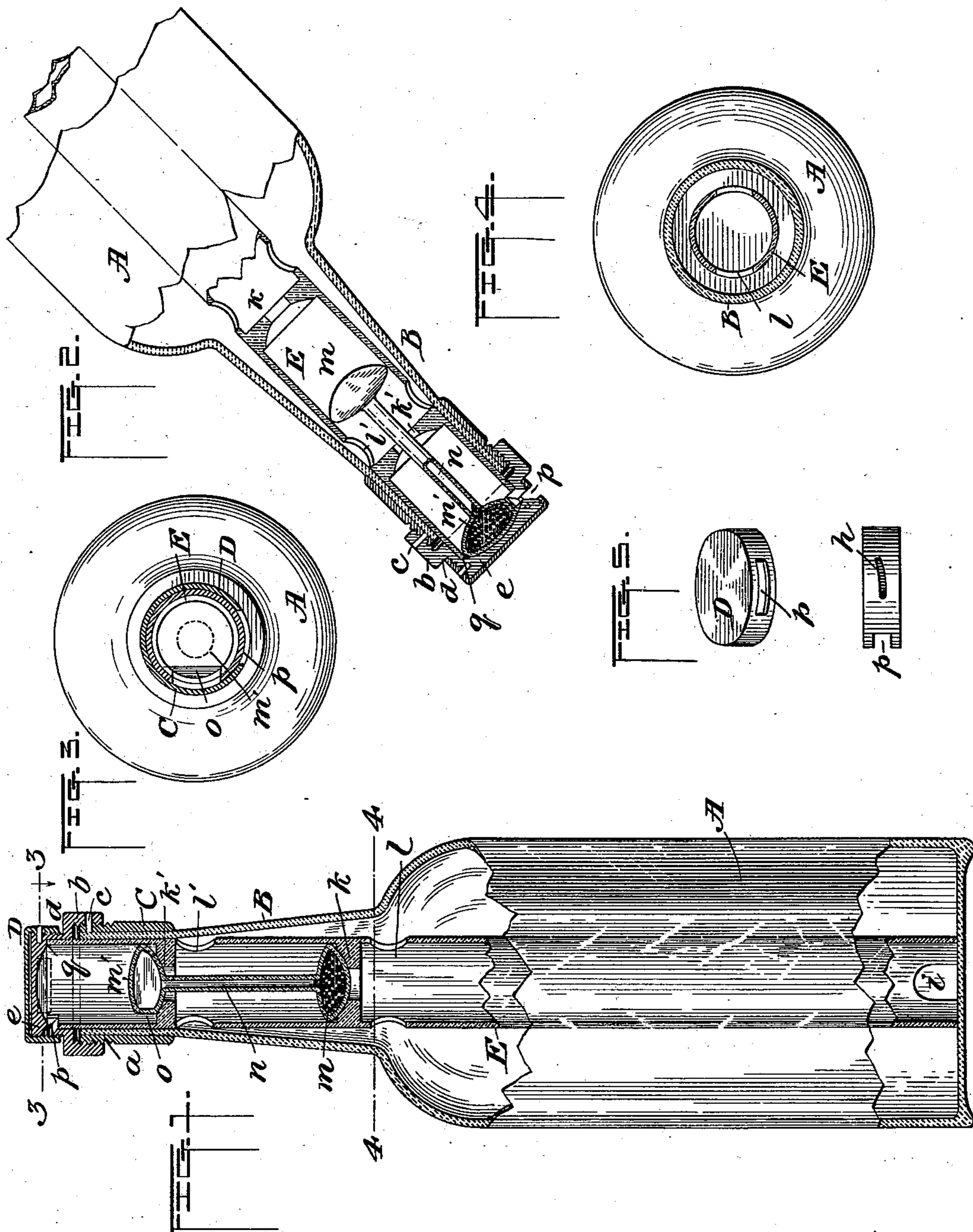
(No Model.)

2 Sheets—Sheet 1.

P. G. SMITH.
BOTTLE.

No. 550,142.

Patented Nov. 19, 1895.



Witnesses
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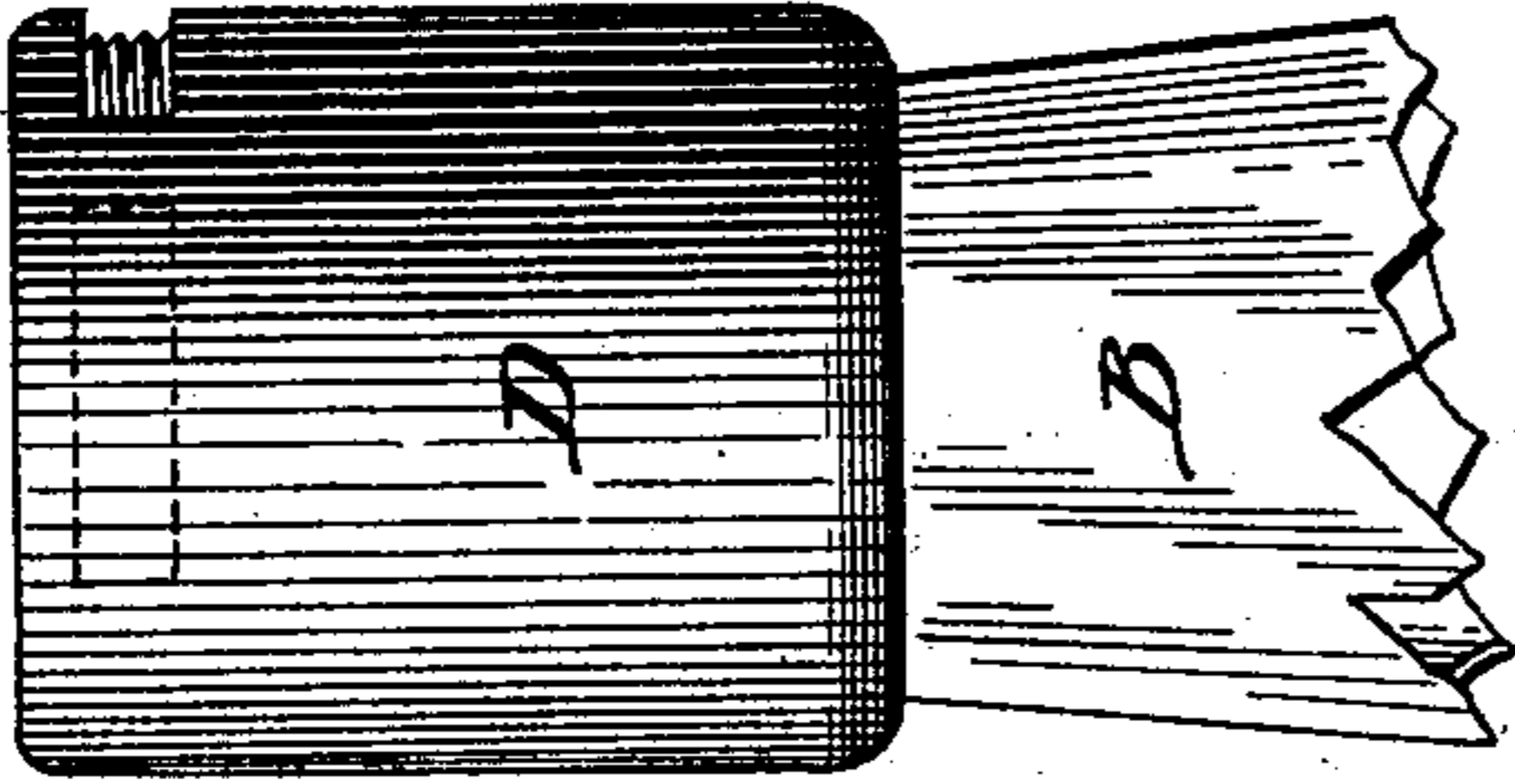
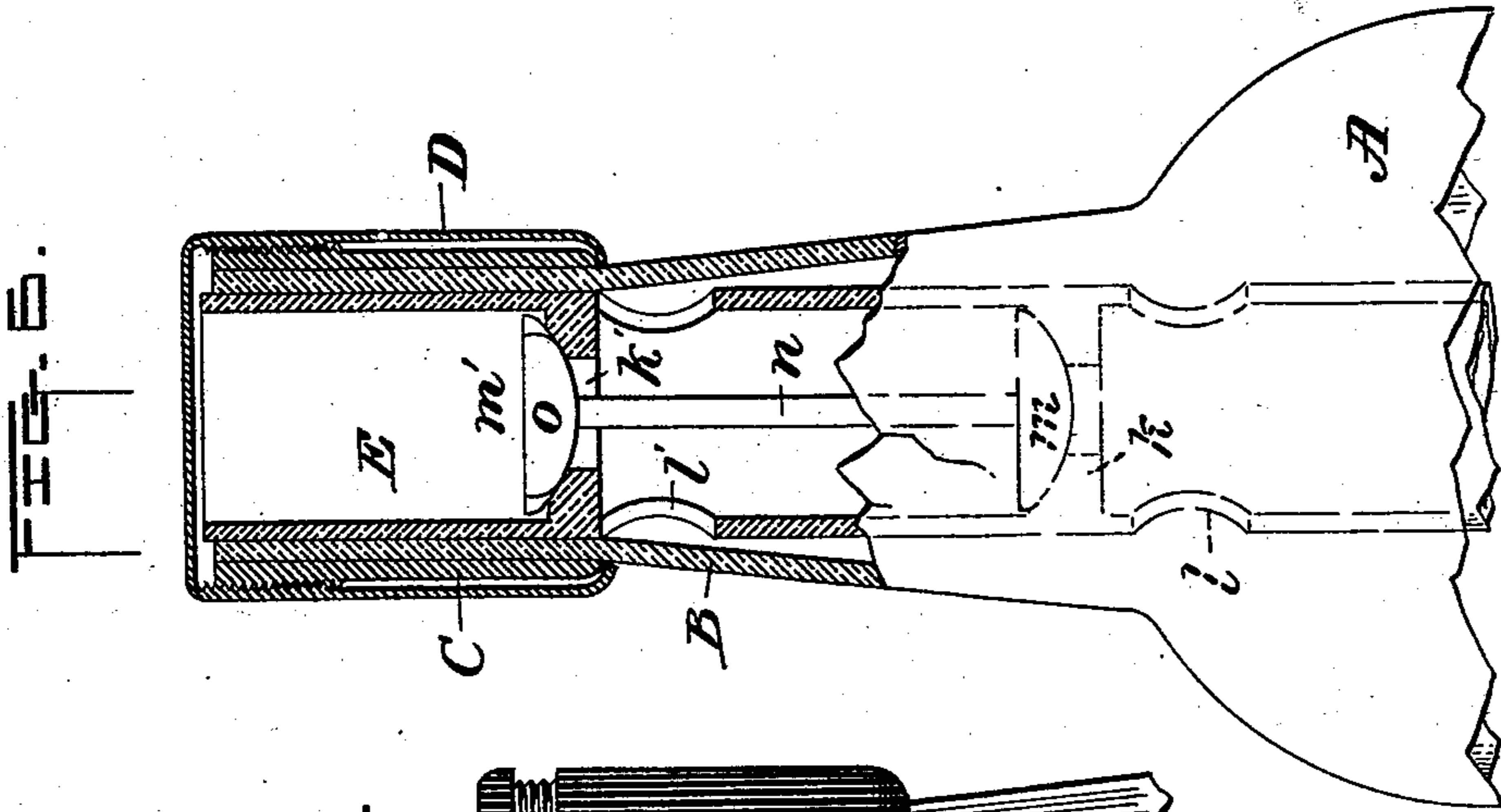
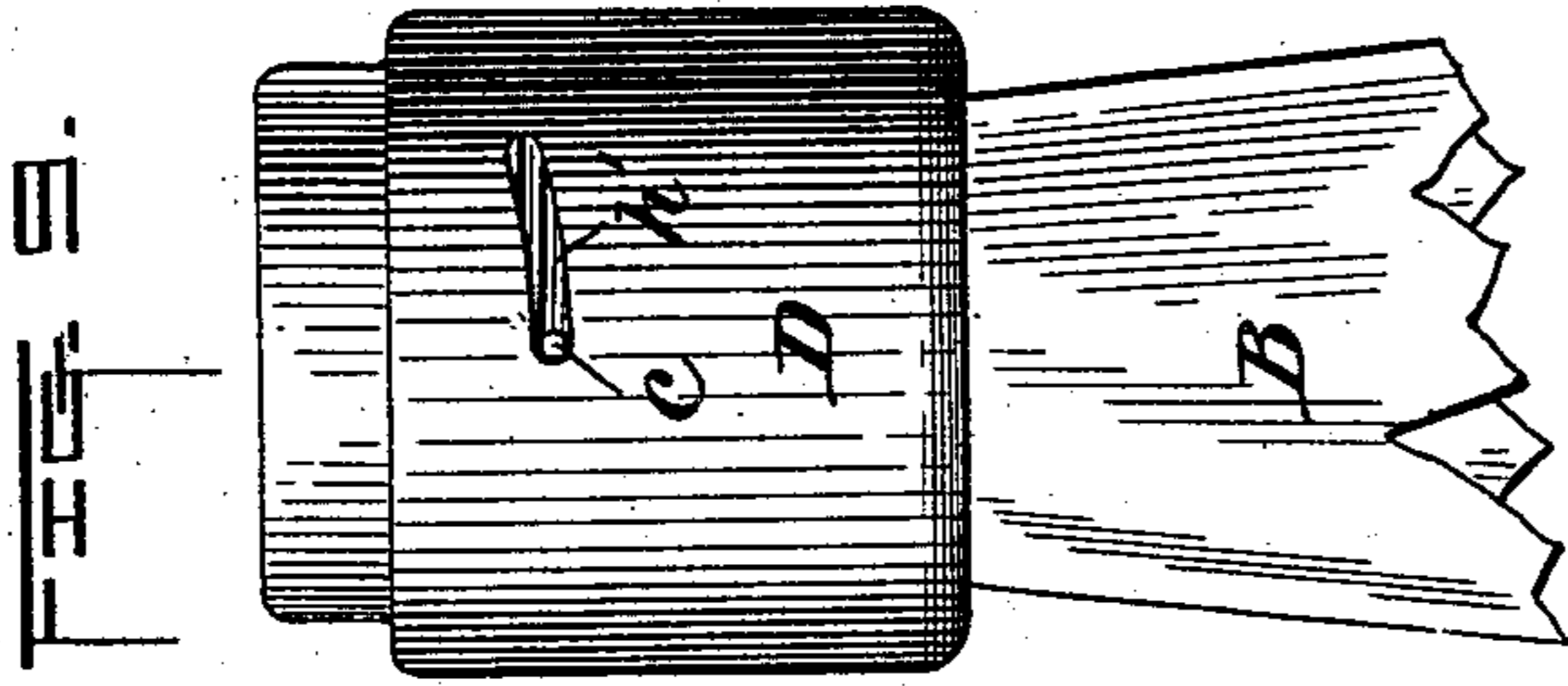
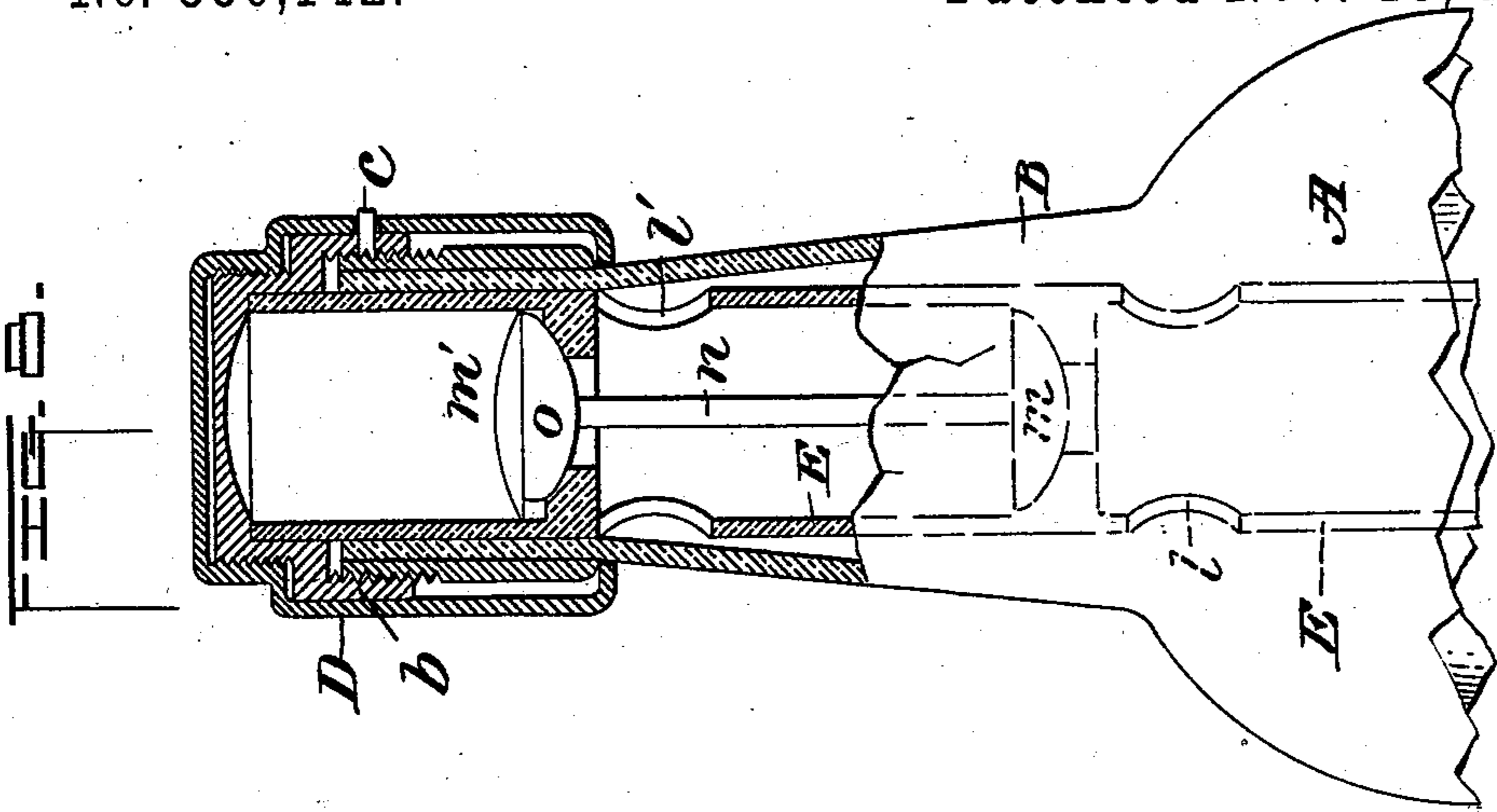
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2 Sheets—Sheet 2.

P. G. SMITH.
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Witnesses

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UNITED STATES PATENT OFFICE.

PETER G. SMITH, OF ROSLYN, NEW YORK.

BOTTLE.

SPECIFICATION forming part of Letters Patent No. 550,142, dated November 19, 1895.

Application filed May 6, 1895. Serial No. 548,353. (No model.)

To all whom it may concern:

Be it known that I, PETER G. SMITH, a citizen of the United States, residing at Roslyn, in the county of Queens, State of New York, have invented certain new and useful Improvements in Bottles, of which the following is a description, reference being had to the accompanying drawings and to the letters of reference marked thereon.

My invention relates to an improvement in bottles, and particularly to that class known as "non-refilling" bottles and adapted especially for holding whisky, beer, and the like.

The object is to provide a bottle which, after being emptied, cannot be refilled, and this I accomplish by forming a device in such a way that any attempt to take off the cap of the bottle for the purpose of refilling it would result in the breakage of the article.

I am aware that many so-called "non-refilling" bottles have been heretofore patented, but, so far as I am aware, they all present practical difficulties and can be, by the exercise of ingenuity, used a second time.

The invention consists, broadly, in a bottle for the reception of beer, whisky, or any other suitable article, having a cap or head and provided with an interior plunger or other device, which is adapted, on the movement of the head or cap beyond a predetermined limit, to break the bottle.

It consists, secondly, in a bottle having an interior plunger, a collar surrounding the top of the bottle neck and rigidly secured thereto, having an external screw-thread and a cap movable on said screw-thread capable of limited movement in an upward direction, but adapted, on an undue downward movement, to bear against the interior tube and force the same through the bottom of the bottle.

The invention consists, thirdly, in a bottle having a movable interior tube with two contracted portions, a double valve adapted to close the openings of said contracted portions, means for holding said valve normally in a vertical position, and means for forcing said tube through the bottom of the bottle upon undue tampering with the screw-cap of the bottle.

The invention consists, finally, in various details of construction and arrangement of

parts, as hereinafter described, and referred to in the appended claims.

In the drawings which illustrate the invention, Figure 1 is an elevation, partly in section, of a bottle constructed in accordance with my invention. Fig. 2 is a fragmentary view of the same, the bottle being shown in a broadly-inverted position. Figs. 3 and 4 are sectional views, respectively, on the lines 3 3 and 4 4 of Fig. 1. Fig. 5 is a detached view of the exit-cap for the fluid. Fig. 6 is a view of a portion of a bottle, partly in section, constructed according to a different form of my invention. Fig. 7 is an elevation in full line of the upper portion of the bottle shown in Fig. 6, and Figs. 8 and 9 are views similar to Figs. 6 and 7 of a modification of my invention.

In the drawings, A represents the body of the bottle, having the upwardly-projecting neck B.

C is a screw-threaded collar, preferably of metal, fitting around the upper portion of the neck B and secured thereto by means of a plaster-of-paris cement, so that it cannot be removed from the neck of the bottle. It is provided with a number of external screw-threads at its upper portion, as shown at *a*, and fitting around this upper portion and screw-threaded to engage therewith is the cap *b*, and is also secured to said collar C by the rivet *c*. This cap *b* is provided with a shoulder *d* and a contracted upper portion *e*, which is above the top of the bottle-neck and is provided with an opening P, through which the liquid from the bottle may be removed. This contracted portion *e* is also screw-threaded for the reception of the screw-cap D, which has an opening adapted, when desired, to register with the opening P in the cap *b*. A pin *g* is secured to the portion *e* of the cap *b* and projects through the inclined opening *h* in the cap D, whereby a limited movement is given the cap D on the portion *e* of the cap *d*. This opening and pin are preferably so arranged that a quarter-turn of the cap D will bring the opening *g* opposite the opening *f* and allow the removal of the liquid if the bottle be turned to an inverted or partially-inverted position, as shown in Fig. 2.

Arranged within the bottle is a tube E, preferably of glass, having openings in the

bottom, as in I, and having contracted portions forming valve-seats k' . Below these contracted portions are openings $l l'$, and a double-ended valve is adapted, when the bottle is held in an upright vertical position, to close the openings through both the valve-seats. The valves $m m'$ of this double-ended valve are hollow and connected by a hollow stem n , and one of the valves is filled with quicksilver, which, in the movement of the bottle from an upright vertical to an inverted position, shifts and tends to keep the valve in proper place. The lower valve m is in transverse diameter, just large enough to snugly fit the sides of the space between the valve-seats, while the upper valve m' is flattened on one side, as shown at o , so that when the bottle is in an inverted position, as shown in Fig. 2, and the cap D given its quarter-turn the fluid can readily flow out through the opening p .

The interior tube E is extended upward and rests against the shoulder q on the portion e of the cap b so that any downward movement of the cap b will tend to force down the tube E and thereby break out the bottom of the bottle. Limited upward movement of the cap D is permitted by the pin passing into the opening h ; but movement beyond this cannot take place. The pin c prevents any upward movement of the cap b ; but this pin is so arranged that it will allow slight downward movement of the cap b . A party desiring to refill the bottle, in case he should use a wrench and place it around the cap b , would find it impossible to turn it to unscrew it by means of the rivet c without breaking the glass, and, being resisted, he would naturally turn the wrench in the opposite direction, which would force the tube through the bottom of the bottle.

In Figs. 6 and 7 I show a form of my invention which for certain reasons is preferable. In this I dispense with the use of the cap b , but use a metal collar C, secured to the neck of the bottle by plaster-of-paris, as above described, and extend the top of the interior tube E above the upper edge of the neck of the bottle. The metal collar is screw-threaded at its upper portion, and upon it is fitted the threaded cap D, which is of spun metal and provided with a lower inwardly-turned flange, which embraces the under edge of the metal collar C, so that it is prevented from being removed by the upward unscrewing of the cap. I preferably so arrange this cap that it is allowed a quarter-turn to allow the openings above referred to to register; but in securing the cap beyond this predetermined limit will result in forcing it upon the projecting upper end of the top E and force the same through the bottom of the bottle.

In Figs. 8 and 9 I show an arrangement, a modification of Fig. 8, similar thereto, except that the cap D extends downwardly around the cap b and is flanged inwardly to embrace the metal collar C. By this arrangement I

am enabled to dispense with the pin in Fig. 1, projecting into the opening h , and use only the pin c , which fits an inclined opening h' in the cap D, thus allowing for a limited upward movement of said cap. Any rotation of the cap in the opposite direction, however, will cause the breaking of the bottle, as in Fig. 1.

It will be understood that various modifications and changes may be made by those skilled in the art to which this invention relates without departing from the spirit of the invention.

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

1. The herein described bottle or other receptacle having a cap or head, and provided with an interior plunger adapted on the movement of the head or cap beyond a predetermined limit to break the bottle; substantially as described.

2. The herein described bottle or other receptacle having an interior plunger, a collar surrounding the top of the bottle neck and rigidly secured thereto provided with an external screw thread and a cap movable thereon, said cap being capable of limited vertical movement, but adapted on an undue movement to bear against the interior plunger and force the same through the bottom of the bottle; substantially as described.

3. A bottle having a movable interior tube with two contracted portions forming valve seats, a double valve adapted to close the openings of said contracted portions, means for holding said valve normally in a vertical position, means for forcing said tube through the bottom of the bottle upon undue tampering with the screw cap of the bottle; substantially as described.

4. A bottle provided with an interior tube or plunger, a collar surrounding the neck of said bottle, a screw-threaded cap upon the collar capable of limited horizontal movement to open and close an exit port for the fluid, with connections between said cap and the top of the tube or plunger, whereby in the movement of the cap beyond a predetermined limit, the tube will be forced downward to break the bottle, substantially as described.

5. A bottle provided with an interior tube or plunger, a collar surrounding the neck of the bottle and externally screw threaded on its upper portion, a cap b secured to the collar but having a slight movement in one direction only and having a shoulder e and contracted upper portion and an opening through which the liquid may pass, the upper portion of said tube or plunger resting against the shoulder e and a cap D on the cap b and having an opening adapted to register with the opening in the cap b and having limited movement to allow of such registry, substantially as described.

6. A bottle comprising a collar rigidly fixed to the neck thereof, a cap screw threaded thereon and having a slight downward move-

ment but secured against upward movement, a movable interior tube or plunger resting against an interior shoulder on said cap, a second cap secured to the first cap and having a limited downward movement thereon and openings in said caps adapted to register with each other; substantially as described.

7. A bottle having a movable interior tube provided with two valve seats, a double valve adapted to close the openings in said tube a screw cap having an opening for the exit of liquid, one of said valves being flattened on one side to avoid covering said opening and means for forcing said tube through the bottom of the bottle upon undue tampering with the screw cap of the bottle; substantially as described.

8. The bottle having the movable interior tube or plunger, the collar surrounding the neck of the bottle, and rigidly secured to it, the cap screw-threaded on said collar and having a shoulder adapted to engage the top of the interior tube, and a second cap rotatable to a limited degree on said first cap, but adapted when the limit of movement is reached to rotate the first cap and thereby force down the tube and break the bottle, substantially as described.

9. In combination, the neck of the bottle, the collar secured thereon, the cap screw-threaded thereon having a limited movement, and provided with an inwardly turned flange

beneath the lower end of the collar, and a movable interior tube or plunger with connections between the cap and tube, whereby in the forcible movement of the former beyond a predetermined limit the tube is operated to break the bottle, substantially as described.

10. The bottle having the movable interior tube or plunger, the collar surrounding the neck of the bottle and rigidly secured to it, the cap screw-threaded on said collar and having a shoulder engaging the tube or plunger, whereby when the second cap is rotated the tube is forced downward, and a second cap rotatable on the first to open or close the exit port, substantially as described.

11. In combination with the tube and cap and the exit opening for the fluid, the double-ended valve having its upper globe cut-away on one side, substantially as described.

12. The hollow valves *m, m'*, with the hollow-stem between, and a shifting weight within the valves and stem, combined with the movable tube containing the valve-seats, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

PETER G. SMITH.

Witnesses:

ROSWELL H. CARPENTER,
WM. P. WILLIAMS.