

(No Model.)

B. R. BENNER.  
BOTTLE.

No. 545,147.

Patented Aug. 27, 1895.

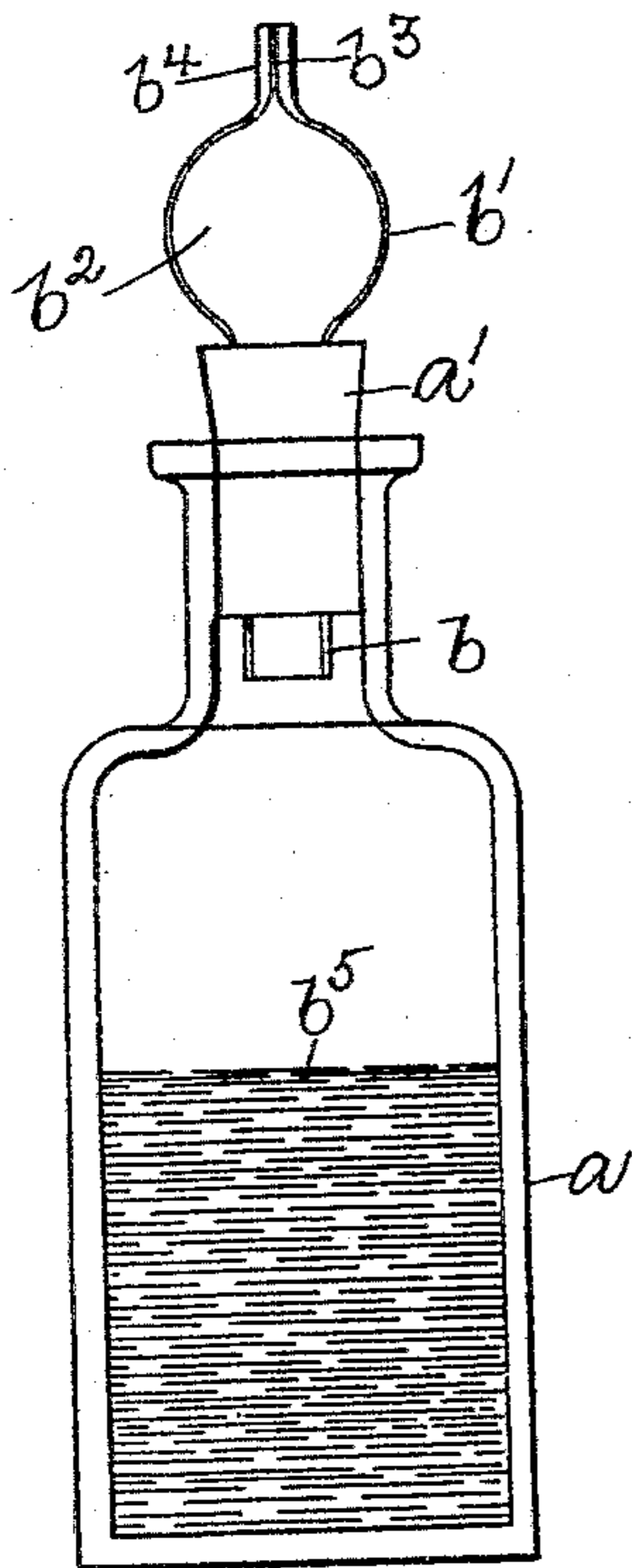


Fig. 1.

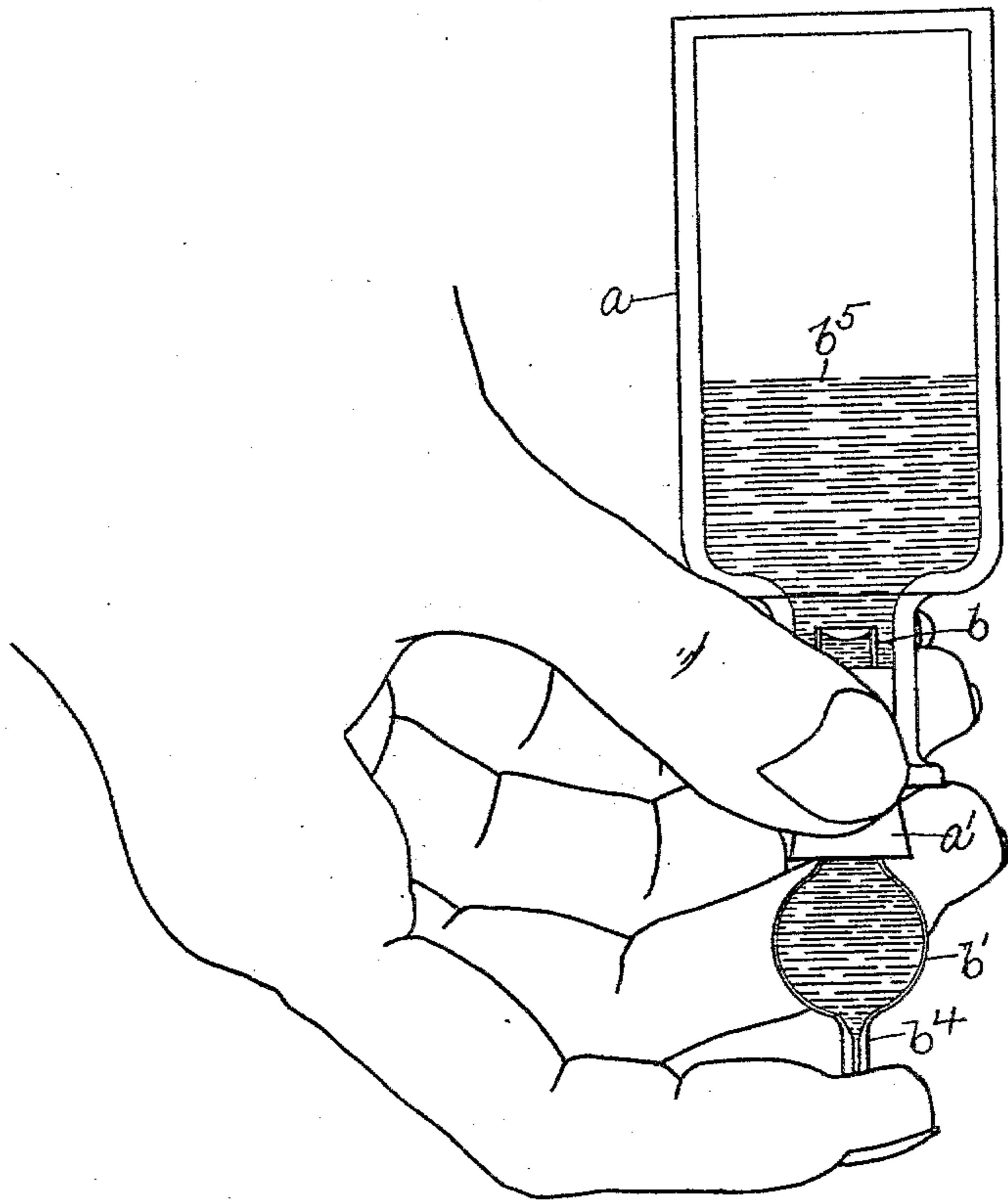
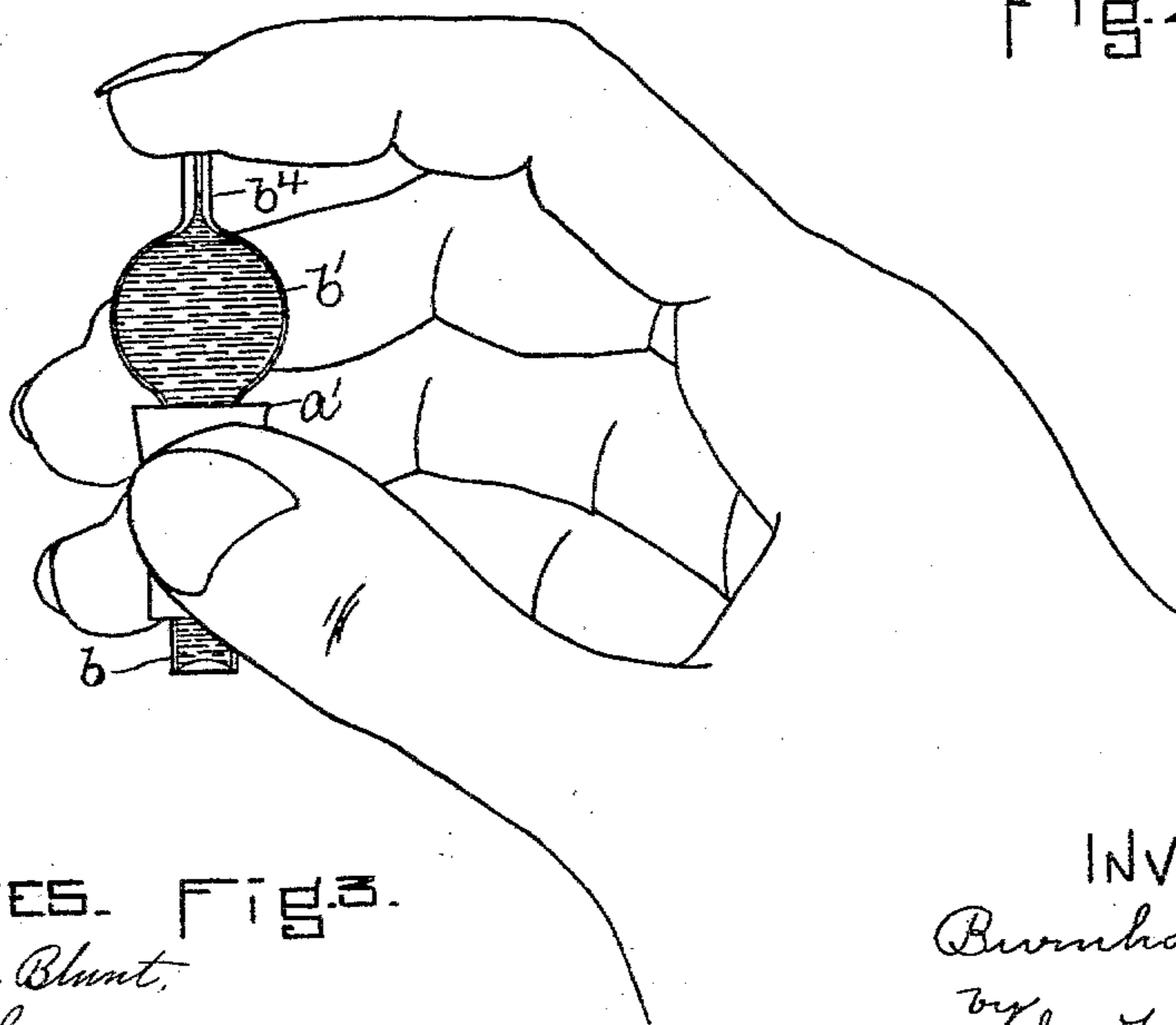


Fig. 2.



WITNESSES. FIG. 3.  
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INVENTOR.  
Burnham R. Benner  
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ATT'Y.

# UNITED STATES PATENT OFFICE.

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## BOTTLE.

SPECIFICATION forming part of Letters Patent No. 545,147, dated August 27, 1895.

Application filed May 4, 1895. Serial No. 548,117. (No model.)

*To all whom it may concern:*

Be it known that I, BURNHAM R. BENNER, a citizen of the United States, residing at Lowell, in the county of Middlesex and State of Massachusetts, have invented an Improvement in Bottles, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

10 This invention relates to bottles or like vessels of that class having a device or apparatus carried by the stopper or cork, by which a predetermined amount of the liquid contents of the bottle may be withdrawn, the said bottles  
15 being especially designed to contain medicines.

The object of this invention is to provide bottles of the class referred to with a novel construction of measuring apparatus, by which a  
20 predetermined amount of the medicine contained in the bottle may be measured off without contact of the medicine with the finger or hand of the nurse or operator, which is especially desirable in the sick-room for the sake  
25 of cleanliness and also to avoid danger of injury to the nurse or operator from poisonous medicines, and also by means of which device substantially the entire contents may be withdrawn from the bottle.

30 In accordance with this invention the stopper or cork of the bottle is provided with a suitable hole through which extends a tube, preferably of glass, having communicating with it a chamber located outside of the cork, the said chamber being provided with a nipple  
35 having a capillary opening, for a purpose as will be described. The nipple and the walls of the chamber referred to will preferably be made of glass in one piece with the  
40 tube, which, for the best results, projects a substantially short distance below the cork or stopper into the neck of the bottle and terminates above the liquid and preferably within  
45 the neck of the bottle, so that substantially all of the contents of the bottle may be withdrawn.

These and other features of this invention will be pointed out in the claims at the end of this specification.

50 Figure 1 represents a bottle embodying this invention in its normally-elevated position. Fig. 2 represents the bottle shown in Fig. 1 as

inverted and shows a sufficient portion of a hand to enable the operation of withdrawing a predetermined quantity of liquid contents  
55 to be understood, and Fig. 3 represents in elevation the stopper or cork with its attached measuring device in the normally-elevated position ready to discharge the predetermined quantity of the liquid. 60

The bottle *a*, of glass or other suitable material and of any desired size, is provided with the usual cork or stopper *a'*, which, in accordance with this invention, is provided with a suitable hole or opening extended through  
65 it, and into and through which hole or opening is inserted a tube *b*, preferably of glass, having an enlarged portion or bulb *b'* above the stopper to form a chamber *b<sup>2</sup>*, which communicates with the bottle *a* through the tube *b*. 70

The bulb *b'* is provided with an air-inlet opening, which, in accordance with this invention, is made as a fine or capillary opening or passage *b<sup>3</sup>*, extended through a nipple *b<sup>4</sup>*, attached to the bulb *b'*. The bulb *b'* and  
75 the tube *b* may be made of any desired or required size or capacity to hold a predetermined quantity or amount of the liquid *b<sup>5</sup>* contained in the bottle, which liquid may and is supposed to be medicine. Normally the  
80 bottle *a* stands upright in the position shown in Fig. 1, but when it is desired to administer a dose of medicine to a patient, the nurse or other operator places a finger over the nipple *b<sup>4</sup>* and inverts the bottle substantially  
85 into the position represented in Fig. 2.

When the bottle *a* is inverted with the finger on the capillary opening or nipple *b<sup>3</sup>*, the medicine *b<sup>5</sup>* flows through the tube *b* into the chamber *b<sup>2</sup>* and fills the same, forcing the  
90 contained air back into the bottle; but the air in the capillary opening or nipple is not forced out, but remains to form a bubble, which acts as a buffer or cushion between the liquid in the chamber and the finger of the  
95 nurse or operator, as represented in Figs. 2 and 3 by the blank space in the capillary opening. The effect of this is threefold, insuring cleanliness of the operator, preserving the medicine or other liquid from contamination, and preventing possible injury to the  
100 nurse or other operator when administering medicine of a poisonous nature, thereby insuring safety to the nurse in the performance

of her or his duty, which results are exceedingly desirable with an apparatus of this character. The measuring device has now been filled and may be emptied into a tumbler or other suitable receptacle or permitted to run directly into the mouth of the patient by removing the cork *a'* from the bottle while still holding the finger on the nipple, as represented in Fig. 3, and when the cork and the measuring device carried thereby have been removed into the proper or desired position for discharging its contents the finger is removed from the nipple and air admitted into the capillary opening, which permits the medicine to flow by gravity into the tumbler or other receptacle. The measuring device herein shown may be supposed to hold an amount of medicine equal to a teaspoonful, and the said device insures the proper or prescribed quantity of medicine being administered to the patient. The measuring device, by reason of the nipple, also possesses the additional, and to me incidental, function of being used to administer the medicine in drops, and when it is desired to use the device as a dropper the device, after being filled or partially filled, is tipped or inclined with the nipple downward and the medicine permitted to be discharged in drops from the capillary opening in the nipple.

In order that the bottle *a* may be emptied of substantially its entire contents, it is necessary that the tube *b* should not be of such length as to extend to near the bottom of the bottle, as in the case of oilers and droppers, in which the contents of the bottle are withdrawn by the insertion of a tube into the bottle and then withdrawing the tube from the bottle; but, on the other hand, it is desirable that the tube *b* should be made short,

and, for the best results, the end of the tube may be substantially flush with the bottom of the cork, and it may even be made of such length that it will not project through the cork or stopper, so that the bottle may be entirely emptied of its contents through the said tube.

I claim—

1. The combination with a bottle provided with a cork or stopper having an opening extended through it, of a measuring device carried by the stopper or cork and consisting of a tube inserted in said opening and terminating above the body portion of the bottle so as to permit substantially the entire contents of the bottle to be withdrawn through the said tube as described, a bulb attached to the said tube and in communication therewith, and a nipple attached to the bulb and provided with a capillary opening extended the length of the said nipple, for the purpose specified.

2. The combination with a bottle provided with a cork or stopper having a hole or opening extended through it, of a liquid measuring device consisting of a glass tube inserted through said opening to attach the device to the cork or stopper and terminating within the neck of the bottle to permit substantially the entire contents of the bottle to be removed through the said tube, and a bulb integral with the said tube forming a liquid receiving chamber, and provided with an air inlet, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

BURNHAM R. BENNER.

Witnesses:

JAS. H. CHURCHILL,  
J. MURPHY.