(No Model.)

J. F. INGLIS.

BOTTLE.

No. 584,225. Patented June 8, 1897.

Fig. 1.

Fig. 2.

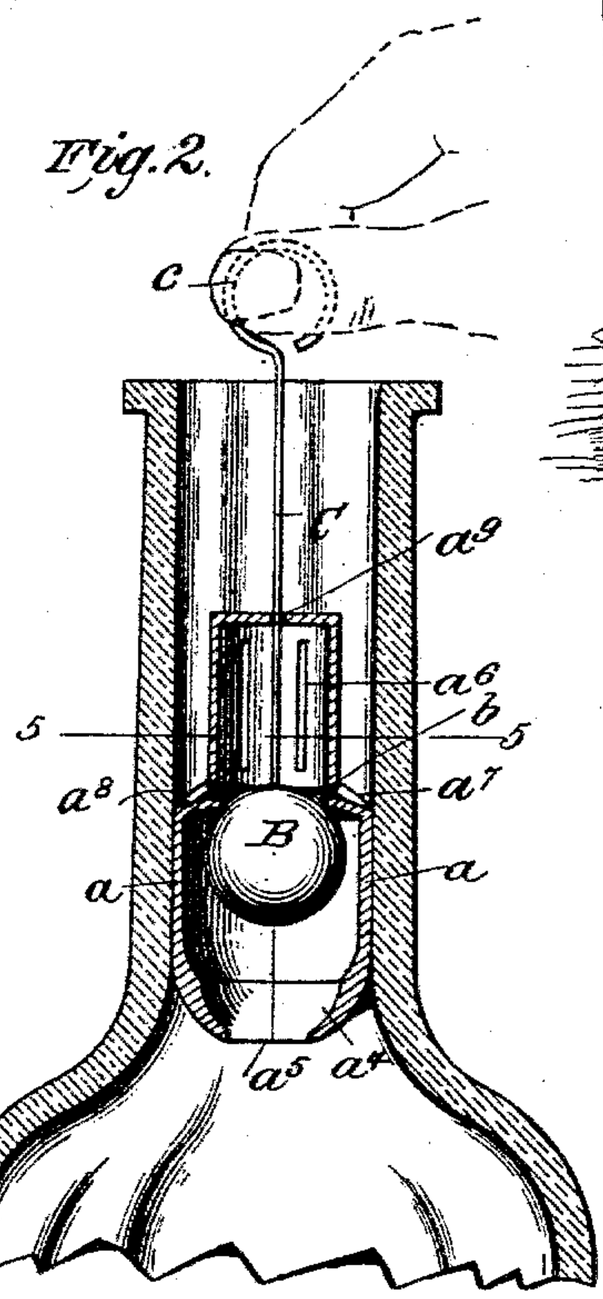


Fig. 3.

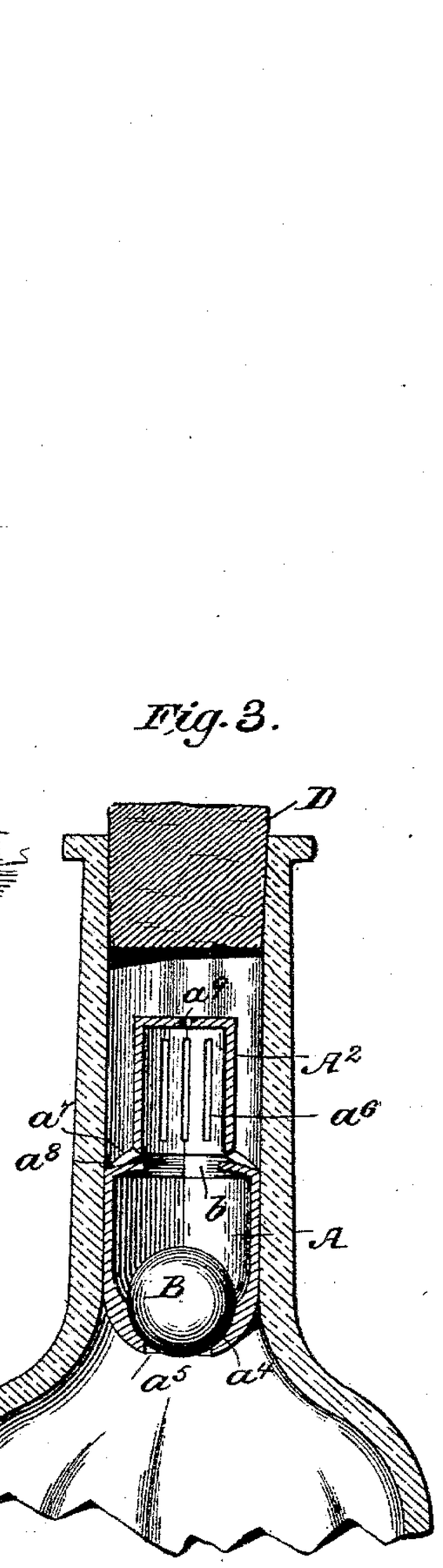


Fig. 4.

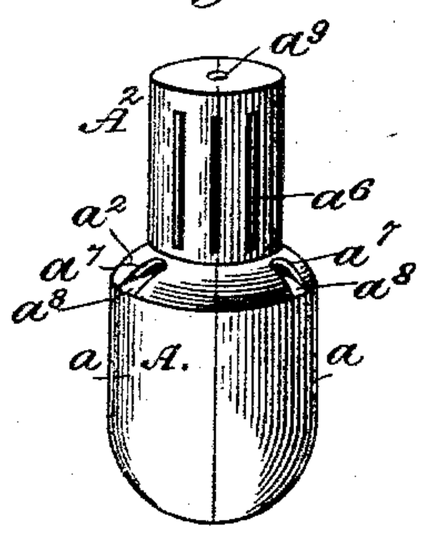


Fig. 5.

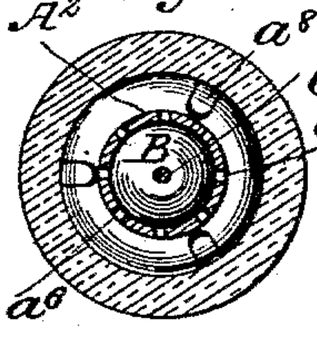
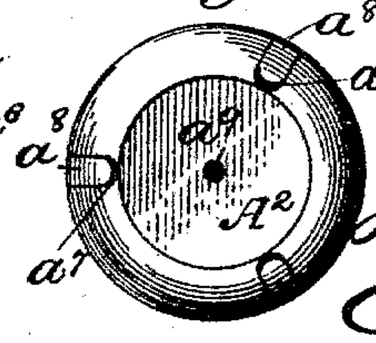


Fig. 6.



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JAMES F. INGLIS, OF SILVER CITY, IDAHO.

BOTTLE.

SPECIFICATION forming part of Letters Patent No. 584,225, dated June 8, 1897.

Application filed September 8, 1896. Serial No. 605,171. (No model.)

To all whom it may concern:

Be it known that I, JAMES F. INGLIS, residing at Silver City, in the county of Owyhee and State of Idaho, have invented a new and Improved Bottle, of which the following is a specification.

My invention relates to improvements in that class of bottles known as "non-refillable" bottles; and such invention primarily has for its object to provide a bottle of this character of a very simple and economical construction, which can be easily manufactured, and which will effectively serve for its intended purposes.

My invention also seeks to provide suitable devices for rendering the bottle non-refillable, which are adapted to be secured within the bottle-neck without requiring any special construction of the bottle-neck.

A still further object of my invention is to provide a ball-valve having a detachable member, whereby the valve can be held open when filling the bottle, which member can be pulled from engagement with the valve and leave the valve free to automatically close the bottle-neck and prevent refilling of the bottle.

With other objects in view, which will be made apparent in the accompanying description, my invention consists in a bottle having the peculiar combination and novel arrangement of parts such as will be first described in detail and then specifically pointed out in the appended claims, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of a bottle having a neck portion constructed in accordance with my invention. Fig. 2 is a vertical section of the upper part of the bottle, the valve being shown held to its elevated position to admit of filling the bottle. Fig. 3 is a similar view showing the valve at its normal position and minus the lift member. Fig. 4 is a perspective view of the cage or valve-holder. Fig. 5 is a horizontal section taken on the line 5 5 of Fig. 2, and Fig. 6 is a plan view of the cage or holder.

Referring to the accompanying drawings, A indicates a cage or valve-holding chamber, which may be made of metal, hard rubber, glass, or other material, it in the preferred form being made of spring metal, so that the side walls *a a* can be readily pressed into the neck of the bottle immediately after it is made and still in the mold, the contraction of the neck in cooling serving to tightly bind the same in place. When made of glass or other substance which will not stand heat, the holder can be slipped into the bottle-neck and held by a suitable cement.

The holder A has its upper end contracted, as indicated by A^2, the base of which terminates in an annular rim or shoulder a^2, which forms the top for the valve-compartment proper, the lower end of which is contracted and formed with a valve-seat a^4, surrounding the fluid-passage a^5. The upper portion A^2 has a series of vertical slots a^6 for the free passage of the liquid, while the top of such portion A has a single opening a^9, for a purpose presently explained. The annular portion of such holder, when made of metal, is punched at a^7 and has its punched portions bent inward to form stops a^8 to prevent the ball-valve B, when the bottle is upturned, from closing off the fluid-outlet *b*, it being obvious that when such holder is made of glass or other non-flexible material such projections are cast or otherwise formed on such holder.

C indicates a lift-rod, one end of which is secured to the valve B in such a manner as to be readily detached, while the free end passes through the central opening a^9 in the top of holder A and terminates in a finger-loop *c*, as clearly shown in Fig. 2.

D indicates the ordinary cork or glass stopper.

From the foregoing description, taken in connection with the accompanying drawings, it is thought the complete operation and advantages of my improvement will readily appear.

After the holder A has been secured in the neck of the bottle to fill the same the operator raises the lift member C and holds valve elevated in the position shown in Fig. 2.

After bottle is filled, by giving a sharp jerk on the member C the same will become detached from valve C, which then by gravity seeks the seat at the bottom of the holder and prevents the further entrance of liquid

through the neck into the bottle, it being obvious that when the bottle is tilted to a pouring position the valve will leave its seat and admit of a free discharge of the liquid.

It should be stated that the valve-holder in practice is made of two sections brazed or otherwise joined before it is fitted in the bottle-neck.

By providing a valve and holder constructed as described it will be readily seen that the same can be readily manufactured in various sizes to suit the size of the bottle-necks of the common construction, no special molds or forms being required to make the bottle-neck of a peculiar shape to receive the holder, this advantage being a very essential one, as it does not add any cost to the manufacture of the ordinary kinds of bottles.

It should be stated that the capillary attraction will aid in keeping the valve tight and keep the fluid from leaking through, it being manifest that as the air inside having no vent will aid in same direction. It does not therefore entirely depend on the valve being perfectly tight in its seat, although in practice it should be fitted as tight as possible.

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

1. A bottle having a cage in its neck formed with a lower portion to snugly fit the said neck, the bottom of which terminates in a valve-seat, a ball-valve held in such lower portion, and upper portion of reduced diameter connected with the lower portion by an annular member, said member having cut-out members a^8 bent inward to form stops for the valve, such upper portion having side slits and an aperture in the top and a stem projected through the top of the cage and detachably connected with the valve as specified.

2. As an improvement in non-refillable bottles, a valve-holding chamber formed of side members a a, each having an enlarged lower portion terminating in a valve-seat and a contracted upper portion having a series of fluid-passages in its top said members a having annular portions joining the upper and lower members provided with cut-out portions bent inward to form valve-rests, a ball-valve held for free movement in the valve-chamber, and a lift-rod connected to the said valve as specified.

JAMES F. INGLIS.

Witnesses:
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WM. PETERSON.