No. 627,362. Patented June 20, 1899.

A. TAYLOR.

NON-REFILLABLE BOTTLE.

(Application filed Nov. 30, 1898.)

(No Model.)

Fig. 1.

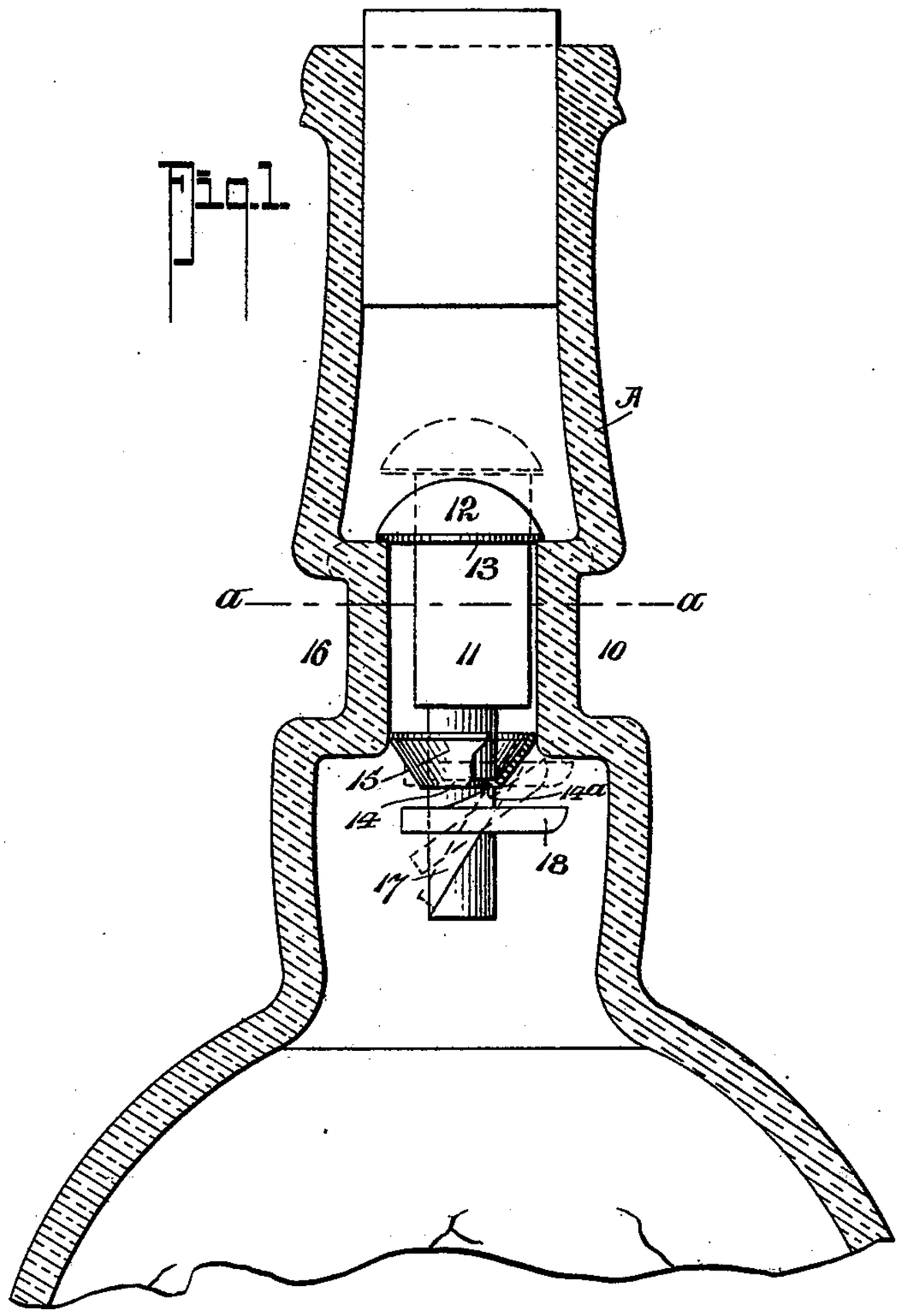
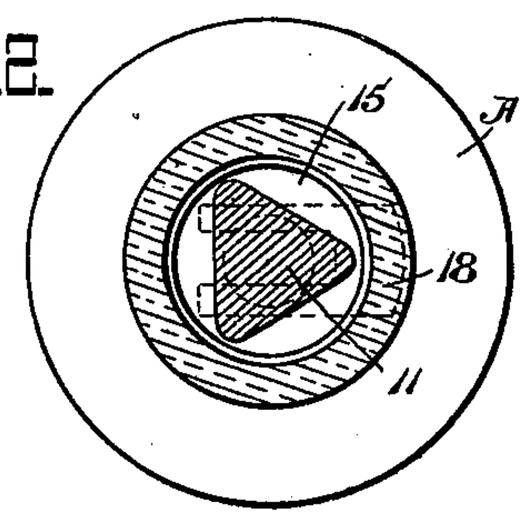


Fig. 2.



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ALFRED TAYLOR, OF GOLDSTREAM, CANADA, ASSIGNOR OF ONE-HALF TO WILLIAM HENRY QUANN AND JOHN HENRY QUANN, OF VANCOUVER, CANADA.

NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 627,362, dated June 20, 1899.

Application filed November 30, 1898. Serial No. 697,889. (No model.)

To all whom it may concern:

Be it known that I, ALFRED TAYLOR, a citizen of the Dominion of Canada, residing at Goldstream, Vancouver Island, in the Province of British Columbia, Canada, have invented a new and useful Non-Refillable Bottle, of which the following is a specification.

My invention relates to an improved device for preventing the refilling of bottles after they have once been emptied of their original contents; and the object of this invention is to provide a movable valve in the neck of a bottle having a contracted throat, which valve when the bottle is inverted will fall forward and allow the liquid to escape, but when the bottle is held upright or a liquid is forced into the neck the valve will fall or be driven back and effectively seal the opening.

I attain the above object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a sectional view of a bottle-neck constructed to receive my valve-stopping device. This shows the valve in proper position when upright. Fig. 2 is a plan section on the line *a a*.

Similar numerals refer to similar parts throughout the views.

The neck A is preferably made in the ordinary way, but having a contracted throat 10 at some distance from the mouth, so that the refilling preventative will not interfere with the stopping of the bottle.

Arranged to lie directly in the throat 10 is a valve or stopper 11. This valve is provided with a head or cap 12, which rests on the upper rim of the throat, and a rubber gasket or washer 13, resting around and beneath the cap 12, forms a tight seal when the bottle is in an upright position. For a portion of the stem of the valve 11 the construction is of irregular form to allow of the passage of the liquid from the bottle, and at the same time the irregular edges rest in proximity to the walls of the throat and prevent the said valve from having a lateral movement. (See Fig. 2.) At some distance below the cap 12 the stem is contracted to a small depending portion 14, and around this is formed a groove 14ª, over which is placed a rubber conical-shaped washer 15, the upwardly-sloping outer rims of which engage the walls of the throat. This washer 15 acts as a flexible valve or trap. It allows the liquid to escape from the bottle; but should the same be poured in the washer will seal the throat effectively, as it will be pressed against the walls thereof. As shown by dotted lines, it matters not what the position of the valve 11 is, the washer 15 will act the same. Thus it is seen that although the liquid may freely escape the same cannot be introduced into the bottle. Beneath the washer or flexible valve 15 grooves 17 are cut parallel on opposite sides diagonally across the said stem. Arranged on the recessed side of the stem and with its fork taking into the grooves 17 is a cross check-bar 18. The grooves 17 on the opposite sides of the stem of the valve are so formed that the check-bar 18 will drop to a horizontal position and fulcrum on the lower part of the stem and form a leverage on the opposite side thereof, and as shown in dotted lines this check-bar 18 is arranged to lie with its solid end in close proximity to the rubber washer 15 for the purpose of being introduced into the bottle. To prevent it from dropping to this position, however, and allowing the valve to be withdrawn from the bottle, the lower rim of the rubber washer 15, which engages in the groove on the stem, projects beyond the plane occupied by the upper surface of the check-bar when being forced into the bottle; but after the valve is in the rubber will press the bar forward and always prevent it from dropping, so that its outer end will pass within the throat.

From the foregoing it is shown that the flexible washer 15 performs two functions. It prevents liquid from being introduced into the bottle, and also it prevents the check-bar from being tumbled over so that its outer end would enter the throat and allow the valve to come away from the throat.

Should it be desirous to employ my device in the mouth of bottles for containing sauces, &c., the upper portion, containing the cork, as shown by dotted lines, may be dispensed with, and the bottle may be sealed with wax or other material until in use, when the valve will provide a convenient stopper.

The valve 11 and the check-bar 18 may be made of the same material as the bottle, the washers 13 and 15 being the only parts that require to be of foreign material, such as rubber or any other foreign material.

Having now described my invention, what I claim as new is—

1. In a bottle for the purposes described, in combination with the neck having a contracted throat, a movable valve in said throat, a cap on said valve, and a washer therebeneath attached to the valve, and made to rest between the rim of the cap and the upper side of the throat; of a flexible closure surrounding the stem of the valve and engaging the walls of the throat, a flattened contraction on the stem of the valve beneath the said throat, and in proximity to the lower rim of the flexible closure, a biforked check-bar arranged to lie in the flattened contraction, with its fork on each side of the stem, in a horizontal position, so that as the valve falls toward the mouth of the bottle it will be prevented from coming away from the throat, said flexible closure being arranged to engage the check-bar to maintain the same in position for engaging the neck as specified.

2. The combination with the neck of a bottle or analogous receptacle having a contracted portion between its ends, of a valve consisting of a stem extending through the contracted portion of the neck and provided at its upper end with a head normally resting upon the said contracted portion, a movable check-bar mounted upon the stem and projecting therefrom and arranged to engage the contraction of the neck to prevent withdrawal of the valve, and a flexible closure mounted upon the stem and engaging the walls of the contraction of the neck and arranged to prevent the check-bar from swinging inward sufficiently to clear the same, said closure being adapted to be compressed by the check-bar to permit the same to be introduced into the neck of the bottle, substantially as described.

ALFRED TAYLOR.

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