

No. 781,332.

PATENTED JAN. 31, 1905.

G. DEMACAKOS.

BOTTLE CAP.

APPLICATION FILED OCT. 11, 1904.

Fig. 1.

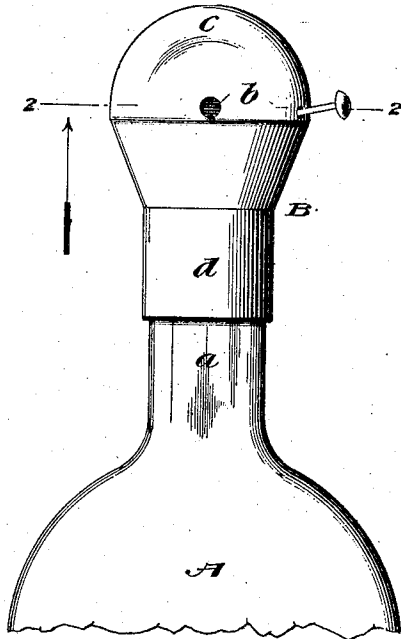


Fig. 2.

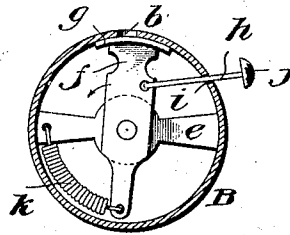


Fig. 3.

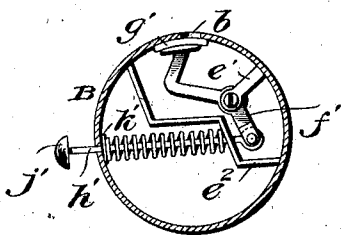
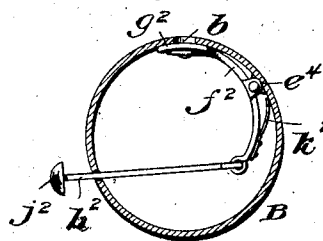


Fig. 4.



Witnesses

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BOTTLE-CAP.

SPECIFICATION forming part of Letters Patent No. 781,332, dated January 31, 1905.

Application filed October 11, 1904. Serial No. 228,066.

To all whom it may concern:

Be it known that I, GEORGE DEMACAKOS, a citizen of the United States, residing at Evansville, in the county of Vanderburg and State of Indiana, have invented new and useful Improvements in Bottle-Caps, of which the following is a specification.

My invention pertains to caps for bottles and the like; and it has for its object to provide a bottle-cap susceptible of being easily and cheaply produced and one having a pouring-aperture and means for normally closing the said aperture with a view of preventing evaporation or deterioration of the contents of the bottle to which the cap is applied.

With the foregoing in mind the invention will be fully understood from the following description and claims when taken in connection with the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of the bottle-cap constituting the preferred embodiment of my invention as the same appears when properly arranged on a bottle-neck. Fig. 2 is a horizontal section taken in the plane indicated by the line 2 2 of Fig. 1 looking upwardly, as indicated by the arrow. Fig. 3 is a view, similar to Fig. 2, of a modified construction; and Fig. 4 is a corresponding view of another modified construction.

Referring by letter to the said drawings, and more particularly to Figs. 1 and 2 thereof, A is a bottle having a neck *a* of the ordinary form of construction or any other form and construction compatible with the proper application and use of my novel cap, and B is the cap as a whole.

As shown in the drawings, the cap B is made up of a body having a pouring-aperture *b* and valve mechanism for normally closing the said aperture in order to render the bottle to which the cap is applied practically air-tight. The body of the cap may be formed of any suitable material without involving a departure from the scope of my invention. I prefer, however, to spin it of metal and to provide it with a spherical upper end *c* and a reduced lower end *d*, the latter being adapted to be placed and secured, if desired, on a bottle-neck after the manner shown in Fig. 1. I

also prefer to arrange the pouring-aperture *b* in the lower part of the spherical or dome-like upper end of the body, as shown.

The valve mechanism of the cap is clearly shown in Fig. 2, and it comprises a supporting-plate *e*, fixed to and extending across the body in about the horizontal plane illustrated, a horizontally-movable lever *f*, fulcrumed at an intermediate point of its length on said supporting-plate, a valve-plate *g*, carried by one arm of the said lever and arranged close against and curved in conformity to the circular wall of the body, Fig. 2, a handle *h*, connected to the said arm of lever *f* and extending through a small aperture *i* in the body and terminating by preference at its outer end in a knob *j*, and a spring *k*, interposed between and connecting the other arm of the lever *f* and the supporting-plate *e* and tending to normally hold the lever in and return it to the position shown relative to the pouring-aperture *b*.

In virtue of the construction described it will be observed that the valve-plate *g*, resting snug against the wall of the body and in the position shown in Fig. 2 relative to the pouring-aperture *b*, will preclude the evaporation or deterioration of the contents of the bottle to which the cap is applied, this because in the position stated the valve-plate effectually closes the said aperture. It will also be observed that when the lever *f* is swung in the direction indicated by arrow by pressure applied to the knob *j* the plate *g* will be carried in the same direction and out of alignment with the aperture *b*, so as to leave the said aperture entirely free from obstruction. It will further be noted that when the lever *f* is moved to open the aperture *b* the said lever is so positioned that it is not in the path of the liquid being poured on the passage of the said liquid toward the opening *b*.

It will be readily gathered from the foregoing that the body of my novel cap while susceptible of being easily and cheaply produced is strong and durable, and therefore calculated to outlast many bottles, also that the configuration of the body is such that the liability of the same being indented or otherwise knocked out of shape by rough handling is

reduced to a minimum. It will also be appreciated that the valve mechanism for normally closing the pouring-aperture is simple and inexpensive in construction, is reliable in operation, and embodies no delicate parts such as are liable to be affected by the contents of a bottle or to get out of order after a short period of use.

The modified valve mechanism illustrated in Fig. 3 comprises a supporting-bracket e' , fixed to the body of the cap, a lever f' , fulcrumed at an intermediate point of its length on the said bracket, a valve-plate g' , carried by one end of the said lever and curved in conformity to the cap-body, so as to effectually close the pouring-aperture b , a plate e'' , fixed to and extending across the cap-body, a handle h' , pivotally connected to the opposite arm of the lever f' with reference to the valve-plate g' and extending loosely through the plate e'' and the wall of the cap-body and having a knob j' and an enlargement k' , and a spring surrounding the said handle and interposed between the plate e'' and the enlargement k' . When the handle h' is pressed inwardly, the valve-plate g' will obviously be moved away from the wall of the cap-body, so as to leave the pouring-aperture b entirely clear, while when pressure is removed from the said handle h' the spring will operate to return the parts to and normally hold the same in the positions shown, so that the valve-plate g' effectually closes the aperture b .

In Fig. 4 I illustrate a valve mechanism which is the simplest embodiment of my invention of those illustrated. The said embodiment, Fig. 4, comprises a bracket e^1 , fixed to the wall of the cap-body, a lever f^2 , curved in conformity with the cap-body and fulcrumed at an intermediate point of its length on the said bracket, a valve-plate g^2 , carried by one arm of the lever and curved in conformity to the cap-body, so as to effectually close the pouring-aperture b , a spring k^2 , carried by the other arm of the lever and adapted to normally hold the lever in and return it to the position shown, and a handle h^2 , connected to the last-mentioned arm of the lever and extending through an aperture in the cap-body and terminating at its outer end in a knob j^2 . This modified construction operates in the same manner as the constructions before described—that is to say, when the handle is pressed inwardly the valve-plate will be moved away from the pouring-aperture, while when pressure is removed from the handle the spring will operate to move the valve-plate

to and hold the same in such position that it is enabled to effectually close the pouring-aperture.

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

1. A bottle-cap comprising a body of circular form in cross-section having a spherical or dome-like upper end and a reduced lower end, and also having a pouring-aperture in the side of the spherical or dome-like upper end, a horizontally-movable lever mounted in the body, a valve-plate carried by said lever and arranged to control the pouring-aperture, a handle connected to the lever and extending through an aperture in the body and adapted to transmit movement in one direction to the lever, and a spring arranged to move the lever in the opposite direction and normally hold the lever in such position as to enable the valve-plate to close the pouring-aperture of the body.

2. A bottle-cap comprising a body of circular form in cross-section having a spherical or dome-like upper end and a reduced lower end and also having a pouring-aperture in the side of the spherical or dome-like upper end, a spring-pressed valve-plate curved in conformity to the body and arranged to normally close the pouring-aperture thereof, and means connected with said plate and extending outside the body whereby the plate may be pressed away from the pouring-aperture.

3. A bottle-cap comprising a body of circular form in cross-section and having a spherical or dome-like upper end and a reduced lower end and also having a pouring-aperture in the side of the spherical or dome-like upper end, a supporting-plate fixed to and extending across the upper portion of the body, a horizontally-movable lever fulcrumed at an intermediate point of its length on said supporting-plate, a curved valve-plate carried at one end of the lever and conforming to and arranged snug against the wall of the body, a handle-rod connected to the said arm of the lever and extending through an aperture of the cap-body, and a spring connecting the other arm of the lever and the supporting-plate.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

GEORGE DEMACAKOS.

Witnesses:

HIRAM M. LOGSDON,
GEORGE P. CHRISTIAN.