No. 815,954. PATENTED MAR. 27, 1906.

H. K. GILBERT.

BOTTLE STOPPER.

APPLICATION FILED JUNE 21, 1905.

Fig. 1.

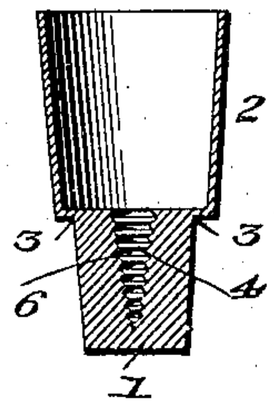


Fig. 2.

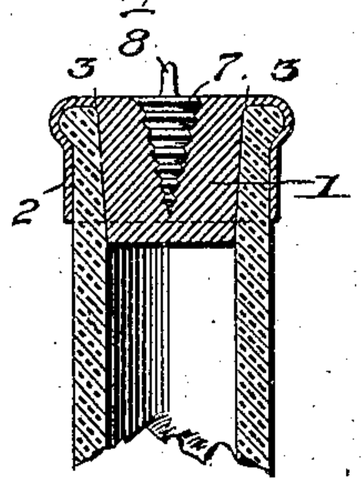
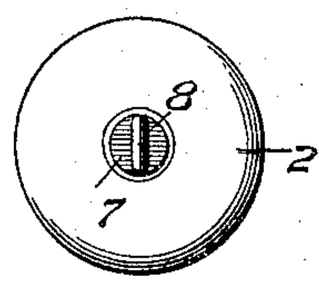


Fig. 3.



Witnesses

Edith R. Bond.

Inventor

Henry K. Gilbert

By E. N. Bond

Attorney

UNITED STATES PATENT OFFICE.

HENRY K. GILBERT, OF NIAGARA FALLS, NEW YORK, ASSIGNOR OF ONE-THIRD TO FRANKLIN J. ROBINSON, OF HYATTSVILLE, MARYLAND.

BOTTLE-STOPPER.

No. 815,954. Specification of Letters Patent. Patented March 27, 1906.

Application filed June 21, 1905. Serial No. 266,365.

To all whom it may concern:

Be it known that I, HENRY K. GILBERT, a citizen of the United States of America, and a resident of Niagara Falls, county of Niagara, and State of New York, have invented certain new and useful Improvements in Bottle-Stoppers, of which the following is a specification.

This invention relates to certain new and useful improvements in bottle-stoppers of that class which are designed to constitute a self-sealing stopper, being formed of rubber or analogous material and embodying a stopper portion designed to fit within the neck or mouth of the bottle and a skirt or flange designed to fold down over the stopper portion and embrace the neck of the bottle, where it is held by frictional and elastic engagement and serving to effectually seal the bottle and prevent escape of its contents, it being capable, as found from actual experience, of retaining liquids under pressure, such as beer and the like. In devices of this character as heretofore proposed no provision has been made for the expansion of the stopper proper to accommodate it to bottles having various-sized mouths, it being necessary to make the stopper in many sizes to adapt it for the various-sized bottles. Furthermore, the point of junction of the stopper proper with the skirt has been made on a curve, which did not insure a close sealing or closure of the bottle at the point where the skirt is bent over and a consequent liability of the escape of the liquid at that point. I aim to overcome these objectionable features, and to this end I provide the stopper with means for expanding its stopper proper portion, so that one size of stopper may be made to fit a variety of sizes of bottles, and by making the stopper with a square shoulder at the junction of the stopper proper with its skirt I insure a close and tight-fitting closure at the outer end of the mouth of the bottle. I mold or cast the stopper with a threaded tapered socket or depression to receive a screw-threaded expander of aluminium or some other light and cheap material which when forced in will expand the stopper proper portion, and thus I avoid the necessity of making a different-sized stopper for every size of bottle.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the numerals of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a substantially central longitudinal section through a stopper embodying my invention. Fig. 2 is a substantially central longitudinal section through a bottle, showing the stopper in position therein. Fig. 3 is a top plan of the bottle with the stopper in place and the skirt turned down over the mouth of the bottle.

Like numerals of reference indicate like parts in the different views.

I construct the stopper of a fine quality of rubber, whereby I am enabled to make the skirt portion quite thin and yet have it sufficiently strong to stand all the strain that will ever be put upon it in turning it down over the neck of the bottle or in taking it off of the same.

The stopper comprises a stopper proper portion, 1, and a skirt portion 2, the latter being quite thin and of greater cross-section or diameter than the portion 1, there being a square shoulder 3 at the junction thereof both upon the outside and the inside, as seen in Fig. 1. This is deemed an essential feature of the construction, as it enables me to get a firm bearing against the inner wall of the mouth of the bottle, as seen in Fig. 2, and also when the skirt portion is drawn down over the neck of the bottle it leaves a substantially flat top without any projection or protuberance, as clearly seen in Fig. 2. Furthermore, by reason of this square shoulder greater stretch of the skirt is provided and the outer wall of the stopper proper is pulled more firmly against the inner wall of the neck to insure a gas and air tight joint.

In order to provide for the expansion of the stopper portion 1, I mold the same with an interior socket or depression 4, which is formed with screw-threads 6, as seen, and adapted to engage the same is a tapered expander 7, of aluminium or any other suitable material, exteriorly threaded and normally of greater diameter than the socket or depression, so that when entered in the socket it may be screwed thereinto and cause the walls of the portion 1 to expand sufficiently

to adapt it for use in connection with bottles of different-sized mouths or necks. This expander is shown as provided with a teat or projection 8, by which it may be readily turned when desired.

From the above it will be seen that I have provided a novel form of self-sealing bottle-stopper with means for expanding the stopper portion thereof when desired, and while the structural embodiment of my invention as herein disclosed is what I at the present time consider preferable it is evident that the same is subject to changes, variations, and modifications without departing from the spirit of the invention or sacrificing any of its advantages. I therefore do not wish to restrict myself to the details of construction shown and described, but reserve the right to make such changes, variations, and modifications as come properly within the scope of the protection prayed.

What is claimed as new is—

1. A bottle-stopper comprising a stopper portion and an integral skirt portion of rubber, with a square shoulder at the junction of the stopper portion and the skirt.

2. A bottle-stopper of elastic material comprising in a single piece a stopper portion and a skirt with a square shoulder at the junction of the stopper portion and skirt exteriorly and interiorly.

3. A self-sealing bottle-stopper of elastic material comprising a stopper portion and a skirt, and means for expanding the stopper portion.

4. A self-sealing bottle-stopper of elastic material comprising a stopper portion with an interiorly-threaded socket and a skirt, and a screw-threaded expanding device adapted to engage in said socket to expand the stopper portion.

5. A self-sealing bottle-stopper of flexible material embodying in one piece a stopper portion and a skirt with a square shoulder at the junction thereof, and an expanding device adapted to engage in said stopper portion to expand the same.

Signed by me at Washington, District of Columbia, this 21st day of June, 1905.

HENRY K. GILBERT.

Witnesses:
E. W. BOND,
EDITH R. BOND.