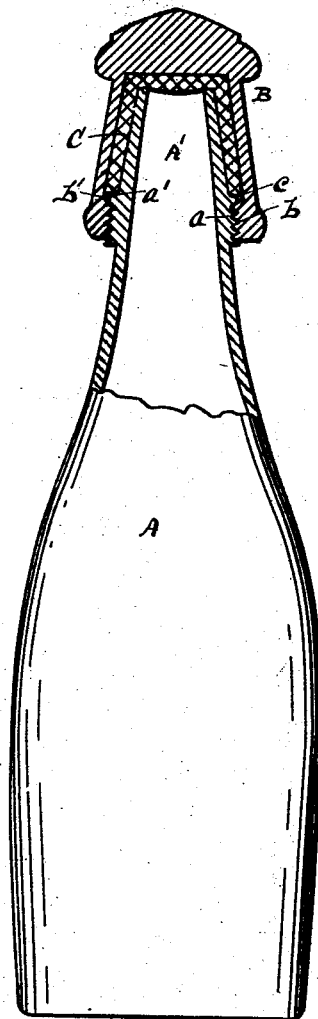


(No Model.)

J. LAUHOFF.  
BOTTLE STOPPER.

No. 491,119.

Patented Feb. 7, 1893.



Witnesses  
John Schuman.  
John F. Miller.

Inventor  
Joseph Lauhoff  
By his Attorney  
Newell S. Wright.

# UNITED STATES PATENT OFFICE.

JOSEPH LAUHOFF, OF DETROIT, MICHIGAN.

## BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 491,119, dated February 7, 1893.

Application filed May 25, 1892. Serial No. 434,324. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH LAUHOFF, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Bottle-Stoppers; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to a certain new and useful Improvement in a bottle stopper, and it consists of the devices and appliances hereinafter specified and claimed, and illustrated in the accompanying drawing, which is a vertical section showing my invention.

The desirability of having a bottle of simple, economical and efficient construction, whereby the contents of the bottle will be sealed air tight is well understood.

I carry out my invention as follows:

A represents a bottle. The upper end of the neck of the bottle is preferably made of conical form, or rather in the form of a frustum of a cone, as shown at A'. Just below the base of the frustum portion of the neck, the neck is exteriorly threaded, as shown at "a," a shoulder being formed above the threaded portion as shown at "a'."

B denotes a cap having an interiorly threaded portion at its base, as shown at "b" to engage the threaded portion of the neck of the bottle. The interior of the cap is shaped to conform to the shape of the upper end of the neck of the bottle. Within the cap I locate an elastic lining C of rubber, or other suitable material, shaped to conform to the upper end of the neck of the bottle. The lining is so inserted within the cap as to form a shoulder at its base as shown at "c" to fit down upon the shoulder at "a'" of the neck, when the stopper is tightly applied to the bottle. The length of the lining together with that of the cap, and its screw threaded engagement with the neck, is such that in screwing down the cap upon the neck the shoulder, or lower end of the lining will seat upon the shoulder "a'" before the cap is entirely forced home, in consequence of which a compression

will be exerted upon the nipple to pack it in more closely between the cap and the neck of the bottle, the conical shape aiding and facilitating the wedging of the lining in between the cap and the neck as the cap is forced tightly to the limit of its movement. It will be seen that in so applying the cap and its lining the head or upper portion of the latter is thus forced tightly upon the upper edge of the neck to tightly close the opening in the neck, while also the lining is firmly pressed upon the neck the whole length thereof from the upper edge of the neck to the threaded portion, the base of the lining also seating tightly upon the shoulder "a'" of the neck. In this manner the nipple is closely seated at all points upon the adjacent neck of the bottle, and sealed especially in a most complete manner, so as to be perfectly air tight at the upper edge of the neck, and at the shoulder "a'," so as to effectually withstand any internal pressure which may be present in the bottle when used, for example in bottling beer, and analogous liquids. The neck above the threaded portion being made tapering, preferably, wedges into the cap and lining as they are forced thereupon. By this construction, moreover, it will be seen, that in removing the stopper, as soon as the stopper is unsealed so as to permit the pressure of the gas within the bottle to begin to escape, the gas striking against the interior of the lining within the cap is deflected thereby and so compelled to pass downward between the cap and the neck of the bottle, and thus is prevented from flying up into the face, as is the case in unstopping other bottles in common use.

The cap is preferably constructed with a shoulder as at "b'" above the threaded portion thereof upon which the adjacent edge at the base of the lining seats, and whereby the lining is held in place. The lining is however removable in case it should be desirable to renew it.

What I claim as my invention is:

1. A bottle stopper consisting of an outer cap interiorly threaded at its lower end, and a lining located within the cap, extending down the interior sides of the cap to embrace the side of the neck of the bottle, and extend-

ing over the upper end of the chamber of said cap to cover the mouth of the bottle, substantially as described.

2. A bottle stopper consisting of an outer  
5 cap interiorly threaded at its lower end, and  
an elastic lining located within the cap covering the upper end of the chamber within the cap, to cover the mouth of the bottle, and  
10 extending down the interior sides of the cap to the threaded portion thereof, forming a shoulder at the base of the lining, substantially as described.

3. The combination with a bottle having its neck exteriorly threaded below the upper edge  
15 thereof and provided with a shoulder above the threaded portion, of a stopper consisting of an outer cap threaded to engage the threaded portion of the neck, and a lining located within the cap to seat upon the upper  
20 edge of the neck and upon said shoulder, said lining covering the upper end of the chamber within said cap to cover the mouth of the bottle, substantially as described.

4. The combination with a bottle having a  
25 neck tapered at its upper end and threaded

below the tapering portion and provided with a shoulder above the threaded portion, of an outer cap threaded at its lower end to engage the threaded portion of the neck, and provided with an interior lining located above  
30 the threaded portion of the cap, to seat upon the upper edge of the neck, upon the tapered portion thereof, over the mouth of the bottle, and upon said shoulder, substantially as described.

5. A bottle stopper consisting of an outer  
35 cap interiorly threaded at its lower end and formed with a shoulder "b'" above the threaded portion, and an elastic lining located within the cap extending across the top of the  
40 chamber within the cap, and having its adjacent lower edge seated upon said shoulder, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

JOSEPH LAUHOFF.

Witnesses:

N. S. WRIGHT,  
JOHN F. MILLER.