

No. 722,596.

PATENTED MAR. 10, 1903.

G. LIMBACH.
BOTTLE STOPPER HEAD.
APPLICATION FILED MAY 6, 1902.

NO MODEL.

Fig. 1.

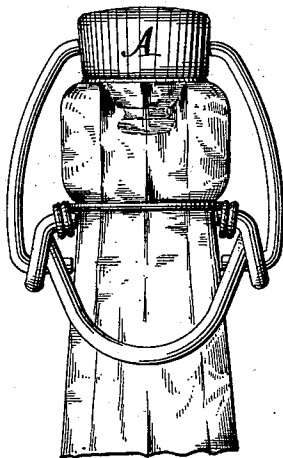


Fig. 2.

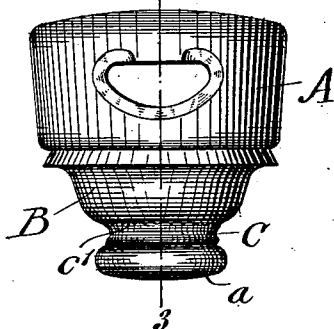


Fig. 3.

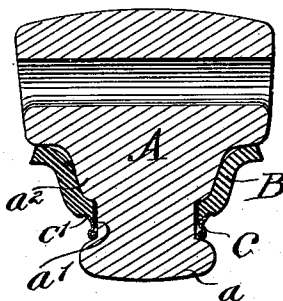


Fig. 4.

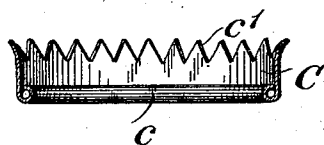
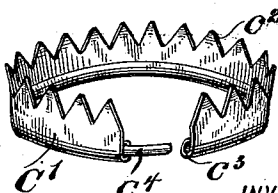


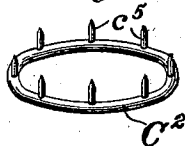
Fig. 5.



WITNESSES:

Walter Wollheim
L. Bradley.

Fig. 6.



INVENTOR

George Limbach.
BY Joseph Viles
ATTORNEYS.

UNITED STATES PATENT OFFICE.

GEORGE LIMBACH, OF NEW YORK, N. Y.

BOTTLE-STOPPER HEAD.

SPECIFICATION forming part of Letters Patent No. 722,596, dated March 10, 1903.

Application filed May 6, 1902. Serial No. 106,156. (No model.)

To all whom it may concern:

Be it known that I, GEORGE LIMBACH, a citizen of the United States, residing in New York, borough of Bronx, and State of New York, have invented certain new and useful Improvements in Bottle-Stopper Heads, of which the following is a specification.

This invention relates to a bottle-stopper head of the class commonly known as the "lightning" bottle-stopper, in which a rubber gasket is used in combination with the bottle-stopper.

The object of the invention is to provide means whereby the rubber gasket can be retained in proper position on the body of the stopper without the possibility of displacement incident to use.

To this end the invention consists of a bottle-stopper head in combination with a retaining-collar having a beaded lower edge and a serrated upper edge, the serrations or teeth of said upper edge flaring outwardly at a slight angle, and a rubber gasket fitted on the body of said stopper, said retaining-collar having its serrations or teeth compressed into said gasket for securing the same on said body, as will be more fully described hereinafter and finally pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of the neck portion of a bottle provided with a stopper. Fig. 2 is a side elevation of a bottle-stopper head embodying my improvement. Fig. 3 is a vertical central section on line 3 3, Fig. 2. Fig. 4 is a central section of the retaining-collar drawn on a larger scale. Fig. 5 is a perspective view of a modified form of retaining-collar; and Fig. 6 is a perspective view, on a small scale, of a further modification.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents the head of the bottle-stopper, which is of well-known form, having a knob *a*, a neck *a'*, and an enlarged portion *a*². The rubber gasket B is fitted around the neck *a'* and is disposed against the enlarged portion *a*². In order to retain the gasket B in proper relation to the neck and enlarged portion, a retaining-collar C is employed. This retaining-collar C is

formed of sheet metal having a turned lower edge or interior bead *c*, and the upper edge thereof being serrated to form teeth or serrations *c'*. The diameter of the retaining-collar C is slightly larger than the diameter of the knob *a*, so that the collar can pass over the latter to the neck, where by a suitable tool the collar is compressed in any suitable manner, so as to cause the serrations or teeth *c'* to grip or bite into the rubber gasket, as shown in Figs. 2 and 3, and also to reduce the diameter of the collar, so that the same is prevented from becoming detached from the head of the bottle-stopper by means of the knob *a*. The serrations or teeth *c'* securely hold the gasket in its proper place, and by compressing the collar into close contact with the neck of the head A any play of the parts is prevented, so that continued use to which the bottle-stopper is subjected does not effect the displacement of the gasket.

In Fig. 5, which represents a modification of the retaining-collar, the same is made of a strip of metal formed into annular shape and having its ends somewhat separated. This collar C' is provided with serrations or teeth *c*² and with a bead *c*³ at the lower edge, from which projects at one end of the collar C' a pin *c*⁴. In applying this collar to the stopper-head the same is placed around the neck thereof, and the pin *c*⁴ is received at the opposite end of the collar C' in the bead *c*³, and by means of a suitable tool the collar is compressed, so as to close the same and cause the serrations to engage the gasket.

Fig. 6 is a further modification of the retaining-collar, in which the body C² is of annular form and is provided with a plurality of upwardly-projecting teeth *c*⁵. This collar is fitted on the neck of the bottle-stopper and is compressed, as in the other cases, so that the teeth are forced into the gasket, so as to engage the same.

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

1. The combination, with the head of a bottle-stopper, of a gasket therefor, and a retaining-collar having teeth for engaging said gasket, substantially as set forth.

2. The combination, with the head of a bottle-stopper having a knob and a neck, of a gasket fitted on said neck, and a retaining-collar having a serrated upper edge, said collar being compressed around said neck and
5 the serrations thereof engaging said gasket, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

GEORGE LIMBACH.

Witnesses:

PAUL GOEPEL,
C. BRADWAY.