No. 673,236. Patented Apr. 30, 1901.

H. S. BREWINGTON.

BOTTLE STOPPER.

(Application filed Nov. 3, 1900.)

(No Model.)

Fig. 1.

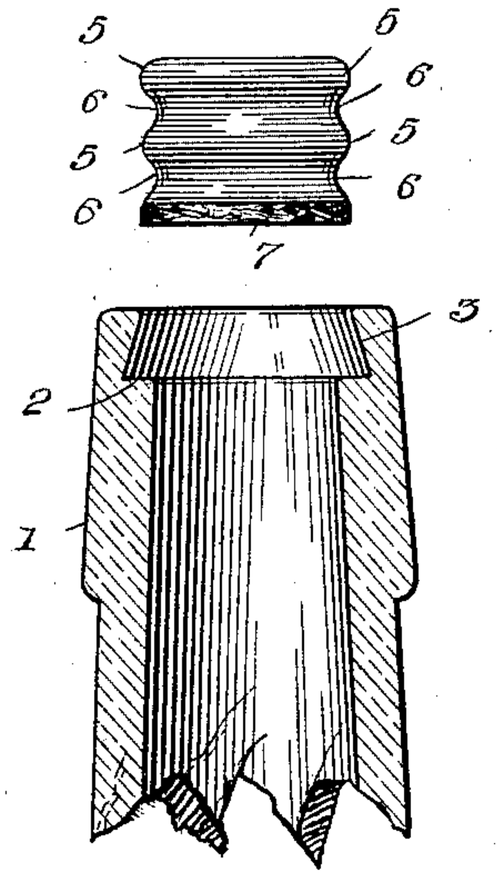


Fig. 2.

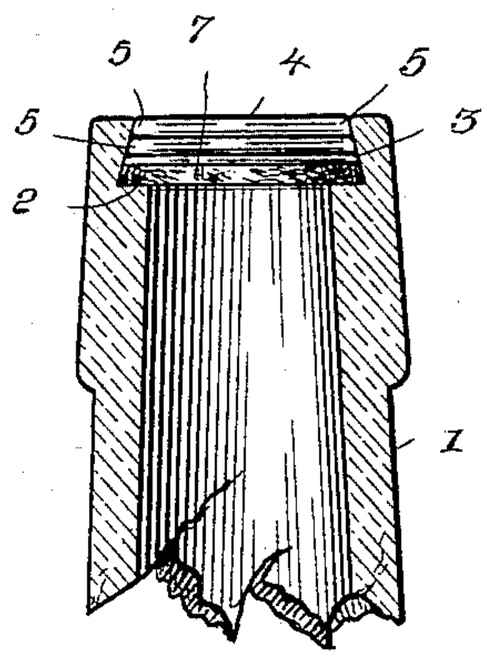


Fig. 3.

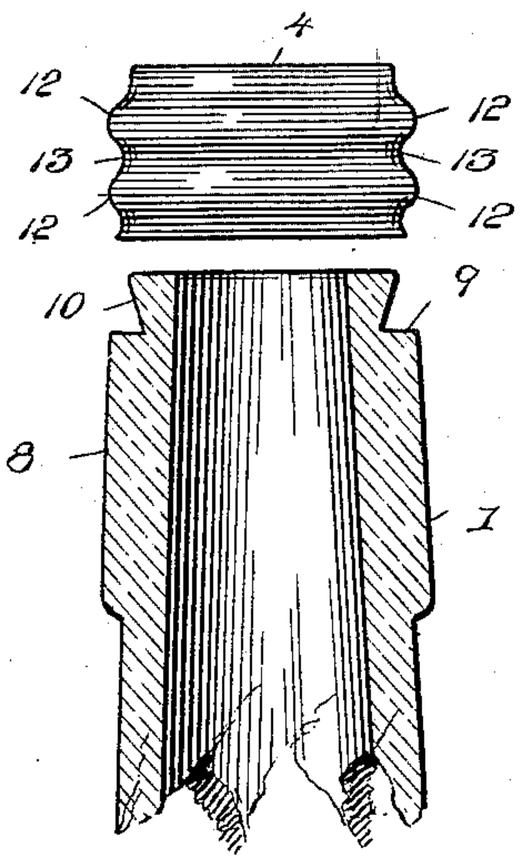
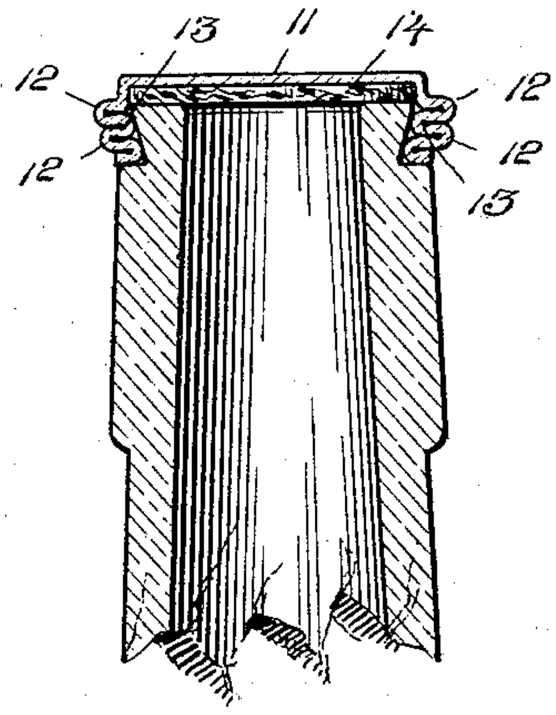


Fig. 4.



Witnesses.
F. W. Bailey.,
A. D. Lawson.

Inventor
H. S. Brewington.,
By Victor J. Evans. Attorney

UNITED STATES PATENT OFFICE.

HENRY S. BREWINGTON, OF BALTIMORE, MARYLAND.

BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 673,236, dated April 30, 1901.

Application filed November 3, 1900. Serial No. 35,401. (No model.)

To all whom it may concern:

Be it known that I, HENRY S. BREWINGTON, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented new and useful Improvements in Bottle-Stoppers, of which the following is a specification.

My invention relates to bottle-stoppers, one object being to provide a stopper which may be quickly applied to the mouth of a bottle and which may be manufactured at small cost.

A further object of the invention is to provide a stopper which may be attached to either the inside or outside of a bottle-neck and will hermetically seal the bottle.

The invention consists of a stopper comprising a cap and a corrugated cylindrical portion depending from the cap and adapted to be compressed to engage the bottle-neck.

The invention further consists of a bottle-stopper comprising a cap, a depending corrugated cylindrical portion which is adapted to be compressed into engagement with either the inside or outside of the mouth of a bottle, and a packing of cork or other suitable yielding material.

The construction of the improved stopper will be fully described hereinafter in connection with the accompanying drawings, which form a part of this specification, and its novel features will be defined in the appended claims.

In the drawings, Figure 1 is a central vertical section of a bottle-mouth with my improved stopper shown in side elevation and as it appears before application to the bottle. Fig. 2 is a central vertical section of a bottle-neck with my improved stopper in position therein, the stopper being shown in elevation. Fig. 3 is a vertical section of a modified form of bottle and an elevation of a modification of the stopper. Fig. 4 is a vertical section showing the modified form of the stopper after its application to the bottle-neck.

Referring now to Figs. 1 and 2, the reference-numeral 1 designates the neck of a bottle, the inner surface of which just below its upper end is beveled to form an annular shoulder 2, the inclined wall 3 above the annular shoulder 2 serving as a socket to receive the stopper. The stopper consists of a cap or disk 4, from which depends a cylindrical portion 5, formed with a plurality of horizontal corrugations 6. 7 designates a disk of cork, which is inserted into the lower end of the cylindrical portion 5 of the stopper and forms a closure therefor. The stopper is preferably made of aluminium, which I have found especially adapted for the purpose owing to its lightness and ductility. It will, however, be understood that the invention is not restricted to the use of any particular material in its manufacture, it being only essential that the stopper be made of material sufficiently thin to adapt it to be readily compressed into a firm engagement with the bottle-mouth. To apply the stopper, it is inserted into the bottle so that the packing-disk 7 will rest upon the shoulder 2, after which by pressure applied in any preferred manner the cylindrical portion of the cap or stopper is compressed, causing it to fill the space within the bottle-mouth above the shoulder 2, as clearly illustrated in Fig. 2, the cap 4 after such compression resting flush with the edge of the bottle-mouth.

Referring now to Figs. 3 and 4, 8 designates the neck of a bottle, the outer surface of which is recessed to form an annular exterior shoulder 9 and an annular beveled surface 10. The stopper consists of a cap or disk 11 and a depending cylindrical portion 12, formed with a plurality of horizontal corrugations 13. In this modification, however, the packing-disk 14 instead of being secured within the lower end of the cylindrical portion of the cap is secured to the inner side of the cap 11.

To apply the modified form of stopper, it is fitted over the upper end of the bottle-neck, so that the lower end of the corrugated portion of the stopper will rest upon the annular shoulder 9. When the stopper is compressed by any suitable means, the packing-disk 14 is forced down upon the mouth of the bottle and the crimped or compressed portion of the stopper firmly engages the beveled surface 10, thus insuring a secure engagement of the stopper with the bottle-neck.

It will be obvious that my improved stopper may be quickly applied to hermetically seal a bottle-mouth by the application thereto of a pressure sufficient to compress the cylindrical portion of the stopper, the corrugations

therein rendering the stopper easily compressible.

As illustrated in Fig. 4, the compression of the stopper forms its corrugations into a plurality of annular bends or convolutions which rest substantially parallel to each other, forming a strong and reliable fastening for the stopper.

I claim—

1. A bottle-stopper comprising a cap and a cylindrical portion depending therefrom formed with one or more horizontal corrugations, said cylindrical portion being made of compressible material whereby the corrugations are adapted to be compressed together.

2. A bottle-stopper comprising a cap, a cylindrical portion depending therefrom and formed with a plurality of horizontally-disposed corrugations, said corrugated portion of the stopper being formed of a non-resilient metal adapting the corrugations to be compressed closely together.

3. A bottle-stopper comprising a cap, a cylindrical portion depending therefrom and formed with a plurality of horizontally-disposed corrugations, said depending portion being made of compressible material whereby the corrugations are adapted to be closely compressed together, and a packing within said depending portion.

4. A bottle-stopper comprising a cap; an integral depending cylindrical portion formed with a plurality of horizontally-disposed corrugations and a packing-disk secured to the under surface of the cap, said depending cylindrical portion being formed of a non-resilient pliable metal to adapt the corrugations to be closely compressed.

5. The combination with a bottle-neck formed with an annular horizontal shoulder, and an inclined stopper-retaining surface above said shoulder; of a stopper comprising a cap and a depending cylindrical portion formed with a plurality of corrugations adapted to be compressed by a downward pressure upon said shoulder.

6. The combination with a bottle-neck formed with an annular horizontal shoulder adjacent to its upper end and with an inclined stopper-retaining surface above said shoulder; of a stopper comprising a cap, a depending cylindrical portion formed with a plurality of horizontal corrugations adapted to be compressed against said shoulder, and a packing-disk within the stopper.

7. The combination with a bottle-neck formed with an annular shoulder adjacent to its upper end, and a beveled stopper-retaining surface above said shoulder, of a stopper comprising a cap and a depending cylindrical portion formed with horizontally-disposed corrugations adapted to be compressed to form substantially parallel bends, and a packing-disk fitted within the stopper.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY S. BREWINGTON.

Witnesses:

E. WALTON BREWINGTON,

ROBERT C. RHODES.