No. 624,363. Patented May 2, 1899.

G. R. MOORE, JR.

BOTTLE STOPPER.

(Application filed Aug. 8, 1898.)

(No Model.)

Fig. 1.

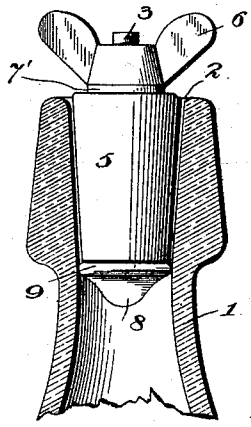


Fig. 2.

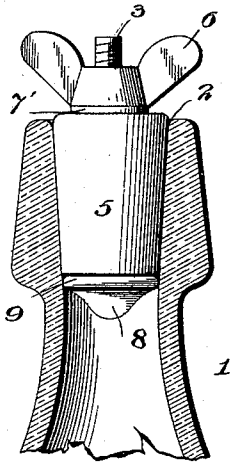
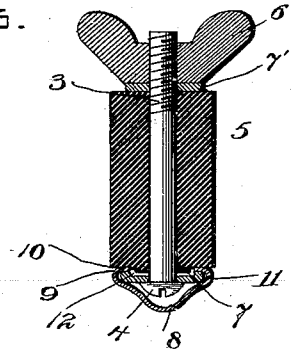


Fig. 3.



Witnesses:

Jno. Innis

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

GEORGE R. MOORE, JR., OF KENTON, OHIO.

BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 624,363, dated May 2, 1899.

Application filed August 8, 1898. Serial No. 688,051. (No model.)

To all whom it may concern:

Be it known that I, GEORGE R. MOORE, Jr., a citizen of the United States, residing at Kenton, in the county of Hardin and State of Ohio, have invented certain new and useful Improvements in Bottle-Stoppers; and I do hereby 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.

This invention relates to expansible bottle-stoppers; and it consists of the construction and arrangement of the several parts, which will be more fully hereinafter described and claimed.

The objects of the invention are to provide for the repeated use of a single stopper and through the medium of the expansible nature thereof to effectively seal a bottle-mouth in such manner that it can be readily opened at any time without the use of extraneous implements and also to materially reduce the ordinary expense of devices of this class, which have generally been heretofore only fit for use a single time.

In the accompanying drawings, Figure 1 is a sectional view of a part of a bottle-neck having the improved stopper in position therein and before expansion. Fig. 2 is a view similar to Fig. 1, having the stopper expanded and as sealing the bottle-neck. Fig. 3 is a central section through the improved stopper.

Referring to the drawings, wherein similar numerals are utilized to indicate corresponding parts in the several views, the numeral 1 designates a bottle-neck having a suitable mouth 2.

The stopper comprises a stem 3, screw-threaded a portion of its length adjacent its upper end and provided at its lower end with a head 4, having a flat upper face, as clearly shown. Surrounding the stem is an expansible seal-sleeve 5, preferably formed of rubber, and through which the stem extends longitudinally. The upper and lower ends of the sleeve are flat, and the body thereof may be tapered, as illustrated, or otherwise shaped to adapt it to the particular form of bottle-neck, or it may have the contour of a regular cylinder. The head 4 of the stem exerts its pressure against the lower end of the sleeve in a manner which will be presently set forth, and adapted to bear on the upper part of said sleeve is a winged or clamping nut 6, adjustably mounted on said stem. On the opposite faces of the ends of the sleeve and also surrounding the stem 3 are washers 7 and 7′, against which the said head 4 and nut 6 have a bearing and more effectively expand the sleeve by bringing the opposite pressures to bear on a larger surface.

In order to prevent the liquid contents of the bottle from coming in contact with the metal stem-head 4 and the adjacent washer 7, a shield or covering 8, of suitable neutral material, is adapted to be applied to the lower end of the stopper. By the use of this shield the liquid contents of the bottle are prevented from being tainted or otherwise injured by coming in contact with the material of which the sleeve 5 is composed and the metal parts exposed at the lower portion thereof. The edge 9 of the shield 8 laps over upon the upper face of the washer 7 and extends into a recess 10, formed in the lower end of the sleeve 5, said overlapped portion of the shield being confined in the said recess by a central boss or locking projection 11 on the said expanding sleeve adjacent the recess. The upper face of the washer 7 is also formed with a recess 12 to receive the boss or projection 11 and avoid the irregular expansion of the said sleeve at this point and to induce a proper position of the several parts. After the stopper has been inserted in the bottle-neck the sleeve 5 is expanded to completely fill the mouth of said neck and effect a liquid and fluid tight closure by screwing down the clamp or winged nut 6, which draws on the stem 3 and laterally extends said sleeve. In releasing the stopper the clamped or winged nut 6 is loosened and the sleeve released from frictional contact with the wall of the mouth. The clamp or winged nut, as set forth, prevents the stopper from falling below a certain level in the mouth of the neck and particularly in straight-necked bottles.

The device will be found to be exceptionally efficient in its service as a stopper and materially reduces the cost of such devices

by providing for a repeated use of the same stopper and also affords a great convenience in opening or closing a bottle-neck.

Having thus described the invention, what is claimed as new is—

A bottle-stopper comprising a stem formed with a head at its lower end and screw-threads at its upper end, an expansible sealing-sleeve surrounding said stem and having a central projecting boss at its lower end, a washer on the stem between the head and lower end of the sleeve and having a central recess in the upper surface thereof to receive the said boss on the sleeve, a shield covering said head and having its edge inturned and confined between said washer and the lower end of the sleeve, another washer on the stem against the upper end of the sleeve, and a winged clamping-nut engaging the upper end of said stem.

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

GEORGE R. MOORE, JR.

Witnesses:

WILL SLATER,

E. F. FOGLE.