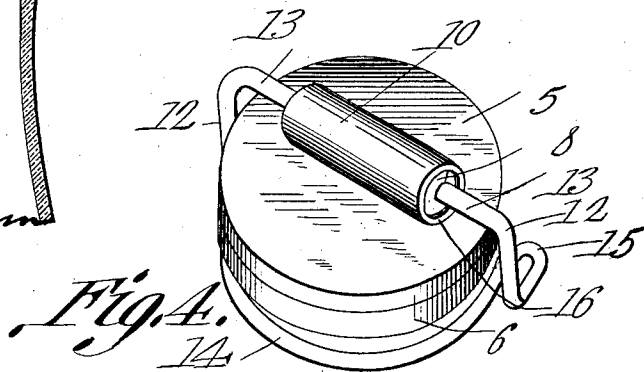
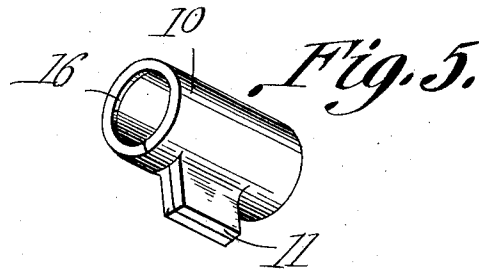
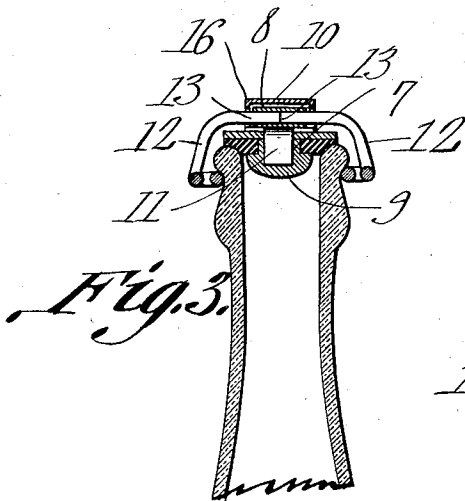
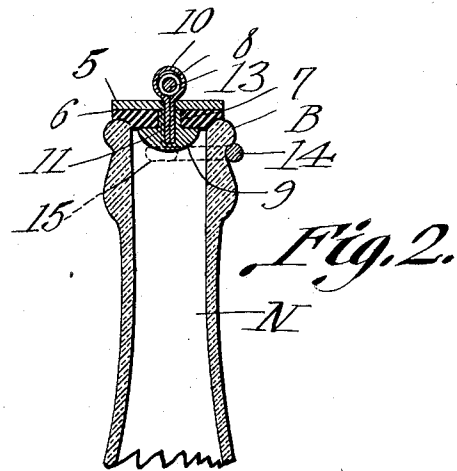
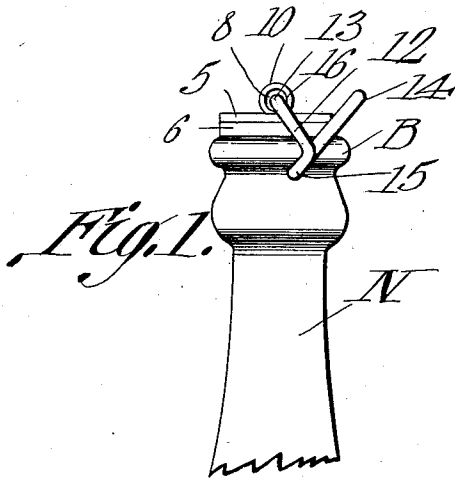


W. B. LANGAN.
BOTTLE STOPPER.
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1,057,066.

Patented Mar. 25, 1913.



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WILLIAM B. LANGAN, OF HAWLEY, PENNSYLVANIA.

BOTTLE-STOPPER.

1,057,066.

Specification of Letters Patent.

Patented Mar. 25, 1913.

Application filed May 28, 1912. Serial No. 700,271.

To all whom it may concern:

Be it known that I, WILLIAM B. LANGAN, a citizen of the United States, residing at Hawley, in the county of Wayne and State of Pennsylvania, have invented a new and useful Bottle-Stopper, of which the following is a specification.

This invention relates to bottle stoppers, and has for its primary object to provide a stopper attachable to "crown" bottles, or bottles having round beads around their mouths, in order to close the bottles after the contents have been partially emptied so as to preserve the balance of the contents.

Another object of the present invention is to provide such a stopper which shall be readily applicable to "crown" bottles after the "crown" seal has been removed, which shall be simple and comparatively inexpensive in construction, and which shall serve to effectively form a gas tight closure for the bottle when applied thereto.

A further object of the present invention is to provide a device of this character embodying a cushion adapted to seat on the mouth of the bottle and embodying means adapted to be swung over the bead of the bottle in order to spring into engagement therewith so as to maintain the cushion under compression.

With the foregoing and other objects in view, which will be apparent as the invention is better understood, this invention resides essentially in a stopper comprising a metallic disk and a cushion on the bottom thereof seatable on the mouth of the bottle, a diametrical bearing secured on the disk and having internal flanges at its ends, and a wire bail having its end portions connected by a sleeve journaled in the bearing and having an intermediate resilient curved portion adapted to surround over one-half of the circumference of the bottle neck under the bead, so that the ends of the curved portions may be sprung over the bead of the bottle and by their contact with the bead, will maintain the cushion under a compression.

The invention is illustrated in the accompanying drawings, wherein similar reference characters have been employed to designate corresponding parts, and wherein:—

Figure 1 is an elevation of the neck of a "crown" bottle showing the stopper applied thereto prior to the engagement of the bail with the bead of the bottle. Fig. 2 is a

longitudinal central section through the neck of the bottle and through the stopper when engaged to the bead of the bottle. Fig. 3 is a view similar to Fig. 2 taken at right angles to the plane of section of the said figure. Fig. 4 is a perspective view of the present stopper on an enlarged scale. Fig. 5 is a perspective view of the bearing.

Referring specifically to the drawings, the neck of the "crown" bottle has been designated by the letter N, and the round bead around the mouth thereof by the letter B. These bottles, which have in their usage become known as "crown" bottles, employ what is known as the "crown" seal for the closure thereof, this seal consisting in a cap crimped over the bead. These seals after they have once been removed cannot again be attached to the bottle, and it is therefore impracticable to close the bottle with the "crown" seal after the seal has once been removed. This is inconvenient in many instances, for the reason that when the bottle has only been partially emptied, it is impossible to close the bottle unless other closures or stoppers are employed in order to preserve the remainder of the contents so as to prevent the deterioration or fermentation of the contents.

The present invention resides in a stopper capable of attachment to bottles of the character specified after the "crown" seal has been removed, and consists in the novel construction and combination of parts to be directly described.

The numeral 5 designates a metallic disk, which may be of brass or other suitable metal, or which may be of any other material than metal, and 6 designates the cushion on the bottom of the disk, this cushion being preferably of soft rubber, but the same may be constructed of any other suitable compressible material. The disk 5 and cushion 6 are of equal diameter and are adapted to seat on the mouth of the bottle. A split bearing 10 is seated diametrically on the disk 5, and has flanges or ears 11 projecting from its edges and passing through the disk 5, and internal flanges 16 at its ends. The bearing 10 is constructed of suitable material, preferably sheet metal.

The bail is constructed from a short length of stout wire, the end portions 13 of which are bent together and are connected by a sleeve or ferrule 8 shrunk or soldered thereon. This sleeve or ferrule 8 is jour-

naled in the bearing 10 and is shorter than the same. This bail has an intermediate curved portion 14 adapted to surround over one-half of the circumference of the bottle neck under the bead and connected at its ends to the end portions 13 by angular or L-shaped portions 12, one of the arms of the portions 12 being arranged outside of and parallel with the ends of the curved portion 14, and attached thereto by bends, as designated by the numeral 15. The curved portion 14 is resilient in order to permit the ends thereof to spring over the bead of the bottle and to spring into engagement with the bottle neck.

In assembling the parts, the bearing 10 is bent over the sleeve 8, and the ears 11 are passed through the disk 5. The various parts are then placed in a mold and a metallic button or head 9 is cast on the lower ends of the ears 11, the said head or button having a neck 7 encompassing the ears 11 and abutting against the bottom of the disk 5. The cushion 6 is held between the head 9 and the disk 5 around the neck 7, and in this manner the stopper is firmly held together and may not be tampered with so as to separate the parts or otherwise injure the stopper. It will be noted that by molding the head 9 on the ears 11, the bearing 10 will be constrained against detachment, so that the bail may not be detached, the ends of the bail being secured together by the sleeve 8 which is arranged within the bearing 10.

In use, when it is desired to apply the present stopper to the "crown" bottle, the disk 5 and cushion 6 are seated on the mouth of the bottle, this being expedited by means of the head 9 which enters the mouth of the bottle. Then by holding the disk 5 against the mouth of the bottle by means of the thumb of one hand, the curved portion 14 of the bail may be swung into engagement with the bead B of the bottle, and in so doing, the ends of the curved portion 14 are sprung over the bead and the curved portion surrounds over one-half the circumference of the bottle neck under the bead. The sleeve 8 being slidably arranged in the bearing on the disk 5 permits the bail and disk to shift laterally relative to each other so as to assume the proper position, and the distance between the center line of the end portions 13 and the plane of the curved portion 14 is such that when the ends of the curved portion 14 are engaged with the bead B, the cushion 6 will be brought under compression, the contact of the ends of the curved portion 14 with the under side of the bead maintaining the cushion 6 under compression so as to form a gas tight joint. It will therefore be seen, that when the curved portion 14 is engaged under the bead of the bottle, the bail will be locked in position, and the stopper will therefore be firmly retained in position.

The lower ends of the portions 12 extending outwardly are permitted to escape the bead B so that the ends of the curved portion 14 may properly engage the bead. When the ends of the curved portion 14 are sprung over the bead B, the said curved portion will be brought under tension and the ends thereof will engage the under side of the bead so as to provide a cam action to draw the disk 5 inwardly or downwardly for compressing the cushion 6 over the mouth of the bottle. The stopper may be detached or removed from the bottle by swinging the bail out of engagement with the bead of the bottle, which will leave the stopper free to be removed. This stopper therefore provides convenient and efficient means for closing a "crown" bottle after the "crown" seal thereof has been removed, and may be used repeatedly. This stopper is comparatively simple in construction and is capable of manufacture at a small cost, and it is understood that this stopper is susceptible of slight alterations or deviations in its details, such as change in materials, sizes, proportions, and the like, within the scope of the appended claims without departing from the spirit of the invention.

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

1. A stopper for bottles having round beads about their mouths, comprising a disk and a cushion on the bottom thereof seatable on the mouth of a bottle, a diametrical bearing secured on the disk and having internal flanges at its ends, a wire bail having its ends bent together and having an intermediate resilient curved portion adapted to surround over one-half of the circumference of the bottle neck under the bead and connected at its ends to the end portions by L-shaped portions, and a sleeve connecting the end portions of the bail and journaled in the bearing, so that the ends of the curved portion may be sprung over the bead of the bottle and by their contact with the bead will maintain the cushion under compression.

2. A stopper for bottles comprising a disk seatable on the mouth of a bottle, a bearing secured on the disk, a bottle engaging bail having its ends bent together, and a sleeve connecting the ends of the bail and journaled in the said bearing, the bearing having integral flanges at its ends.

3. A bottle stopper comprising a disk, a split bearing seated on the disk and having ears projecting from its edges and passing through the disk, and internal flanges at the ends of the bearing, a head molded on the ears at the bottom of the disk, a cushion held between the head and disk, a bottle engaging bail having its ends bent together, and a sleeve connecting the ends of the bail and journaled in the bearing.

4. A bottle stopper comprising a disk, a

split bearing seated on the disk and having
ears projecting from its edges and passing
through the disk, a head secured on the lower
ends of the ears, a cushion held between the
5 head and disk and a bottle engaging bail
pivoted in the bearing.

In testimony that I claim the foregoing as

my own, I have hereto affixed my signature
in the presence of two witnesses.

WILLIAM B. LANGAN.

Witnesses:

P. H. KEARNEY,
HERMAN HARMES.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
