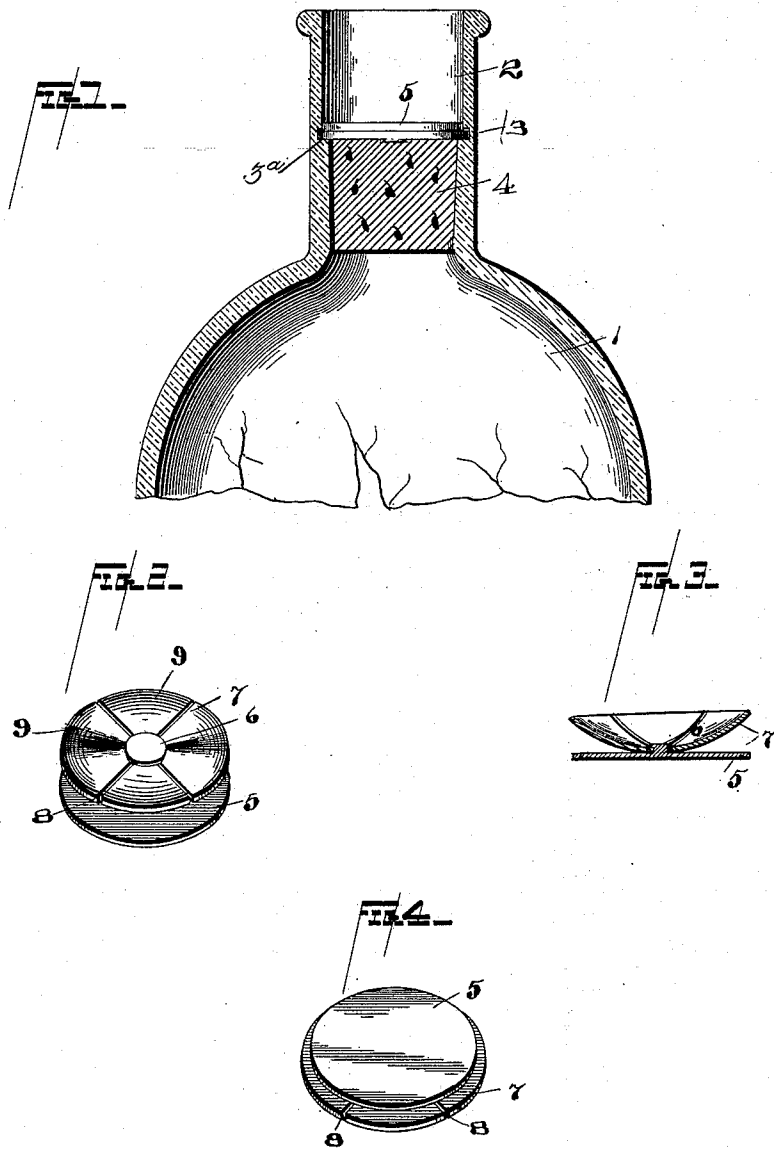


(No Model.)

A. J. JOSE.
NON-REFILLABLE BOTTLE AND SEAL.

No. 604,328.

Patented May 17, 1898.



Witnesses
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UNITED STATES PATENT OFFICE.

ALFRED J. JOSE, OF PHILIPSBURG, MONTANA.

NON-REFILLABLE BOTTLE AND SEAL.

SPECIFICATION forming part of Letters Patent No. 604,328, dated May 17, 1898.

Application filed November 6, 1897. Serial No. 657,633. (No model.)

To all whom it may concern:

Be it known that I, ALFRED J. JOSE, a citizen of the United States of America, residing at Philipsburg, in the county of Granite and State of Montana, have invented certain new and useful Improvements in Non-Refillable Bottles and Seals; 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.

In those forms of non-refillable bottles which have come to my notice wherein is employed a locking plate or seal for preventing the removal of the cork objection has been met with in that the diameter of the disk constituting the seal or stopper must be greater than the bottle-neck, and in order that the same may be inserted into the neck it must be made of thin flexible material. When thus constructed, it is an easy matter to force a corkscrew, knife, or other pointed instrument through the disk, thereby decreasing the effectiveness of the device.

In order to overcome the objection above noted—that is, to provide an effective seal or stopper which will prevent the removal of the cork and will be so constructed that it may be readily inserted into the bottle and will be at the same time thick enough to prevent forcing a pointed instrument there-through—my invention has been designed. The same consists of a flat disk of sheet metal of a size corresponding to that of the bottle-neck and a washer of soft metal and of larger dimensions secured to the under side thereof, the said washer being provided with radially-extending slits forming wings, which are bent downwardly when the stopper is originally manufactured and are capable of being forced upwardly and outwardly, so as to fit within a groove or engage a shoulder on the inner surface of the bottle-neck.

The invention is clearly illustrated in the accompanying drawings, in which—

Figure 1 represents a vertical sectional view of a bottle with my improved stopper or seal in place therein. Fig. 2 is a detail perspective view of the stopper or seal in its original form. Fig. 3 is a vertical cross-sectional view of the same; and Fig. 4 is a perspective view of the stopper or seal, showing the parts

thereof in the position they assume when the device is in locking position.

Like reference-numerals indicate like parts in the different views.

The bottle 1 has a neck 2 upon its upper end, which is provided with an internal annular groove 3, as clearly shown. Between the groove 3 and the outer surface of the neck of the bottle the glass or other material of which the bottle is made is very thin, so that the upper end of the neck may be separated from the lower end along the line of the groove 3. Beneath said groove the neck of the bottle is thickened, and the inner surface thereof converges slightly, forming a seat for a cork 4, the upper end of which lies in a line with the lower edge of the groove 3 and forms a shoulder 3^a, which projects inwardly beyond the inner surface of the upper end of the neck 2. The cork 4 is held in place in the bottle-neck by my improved stopper or seal, which will now be described. The said stopper is clearly illustrated in detail in Figs. 2, 3, and 4 of the drawings, and, as shown, it consists of a flat disk 5, of sheet metal, of a size and shape similar to that of the inner surface of the neck 2. Pivotaly attached to the under side of the disk 5 is a washer 7, made of comparatively soft metal of slightly-larger dimensions than the disk 5. The said washer is pivotaly attached to the disk 5 through the medium of a lug 6 on said disk, which is passed through a central opening in the washer 7, and afterward upset, forming a head which projects beyond the side edges of the opening in said washer. Said washer is formed with radially-extending slits 8 8, which provide wings 9 9, which are capable of being bent downwardly, as shown in Figs. 2 and 3 of the drawings, decreasing the diameter of said washer. In this form the stopper is inserted into the neck 2 of the bottle upon the cork 4 and forced downward by a plunger. The wings 9 of the washer engage the projecting shoulder in the neck, are flattened out, and enter the groove 3, heretofore referred to. When so flattened, the diameter of the washer 7 is increased, and the upward movement of the cork 4, due to the expansion of charged material on the inside of the bottle, will tend to tighten the grip between the stopper and the neck. It is impossible to get at the cork from the outside of the

bottle without breaking the latter, as the combined thickness of the disk 5 and the washer 7 is sufficient to resist the introduction of a corkscrew or other sharp instrument there-
5 through. When in place, as shown in Fig. 1 of the drawings, the seal forms an effective lock, and by its use a non-refillable bottle is produced. When it is desired to get at the contents of the bottle legitimately, a sharp
10 blow is given to the top of the neck 2, which cracks the same along the line of the groove 3 and separates the upper end of the neck from the lower end and permits of the removal of the stopper. The cork can then be drawn
15 in the usual way; but evidence of the fact that the bottle has been opened will be given.

As has been stated heretofore, the lower washer 7 of my improved seal is constructed of soft metal, and the lower end of the bottle-
20 neck 2 is contracted, so that a shoulder 3^a is formed adjacent to the annular groove 3, which projects inwardly beyond the inner surface of the upper end of said neck. In the original manufacture of my improved seal the
25 wings of the washer 7 are bent inwardly, as shown in Fig. 3 of the drawings, so that their outer edges are in line with the outer edges of the disk 5. When, therefore, the cap is inserted in the bottle-neck, as heretofore de-
30 scribed, the outer edges of the washer 7 abut against the shoulder 3^a and are forced outwardly into the annular groove 3. Were it not for the provision of the shoulder 3^a, which projects inwardly beyond the inner surface of
35 the upper end of the neck 2, the seal would slip through the neck and enter the body of the bottle. The provision of the shoulder 3^a

is therefore an essential feature of construction in my invention.

By reason of the fact that the washer 7 is 40 pivotally connected to the disk 5 the same is capable of moving freely thereon, so as to be easily inserted within the groove 3 in the bottle-neck. It will also be observed that should a pointed implement be applied through the 45 upper end of the neck 2, upon the top surface of the disk 5, it would be impossible to turn the washer 7 in its seat in the stopper 3, and thereby tend to detach the same.

Having thus described my invention, what 50 I claim as new, and desire to secure by Letters Patent, is—

As a new article of manufacture, a seal or stopper for bottles, consisting of a metallic disk and a washer of larger diameter than 55 said disk, provided with radially-extending slits forming wings which are bent inwardly, reducing the diameter of said washer, and are adapted to be forced outwardly so as to en- 60 gage a shoulder on the inner surface of the bottle in which the same is inserted, the said disk being formed with an integral lug at its center which extends through an opening at the center of said washer, and is afterward 65 upset, forming a pivotal connection between said disk and washer, as and for the purpose set forth.

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

ALFRED J. JOSE.

Witnesses:

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