M. P. FREEBEY.

SEAL FOR BOTTLES AND THE LIKE CONTAINERS.

APPLICATION FILED OCT. 9, 1912.

1,154,853. Patented Sept. 28, 1915.

Fig. 1.

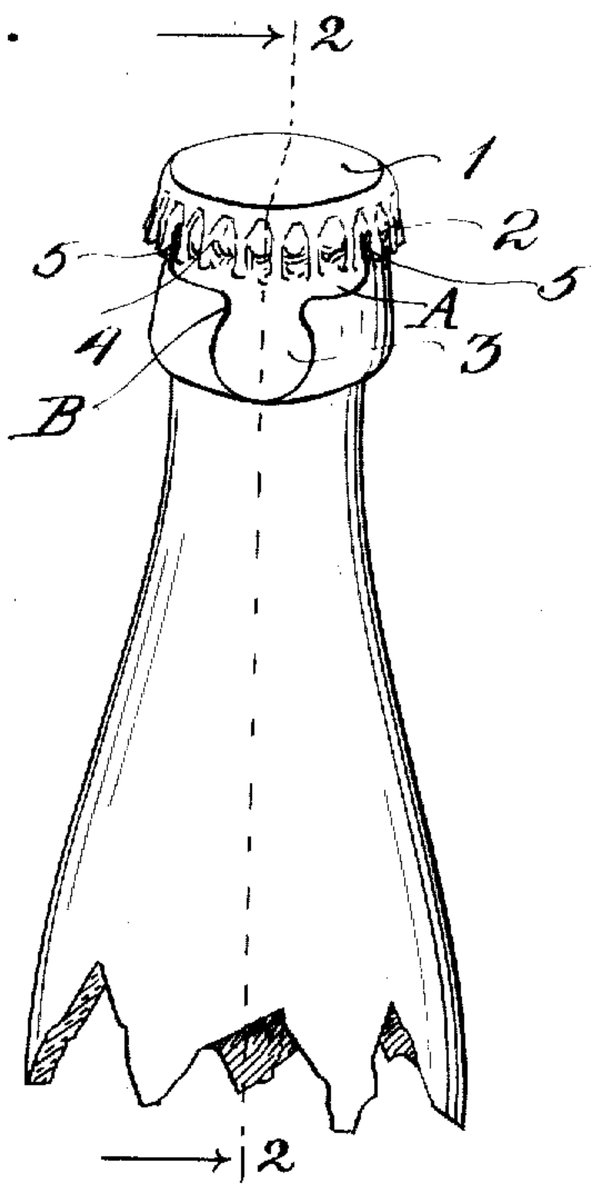


Fig. 2.

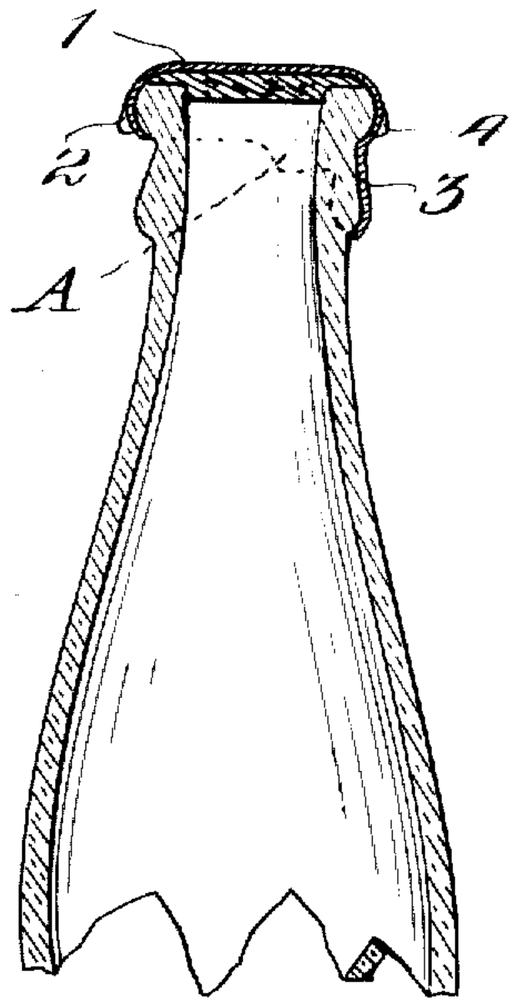


Fig. 3.

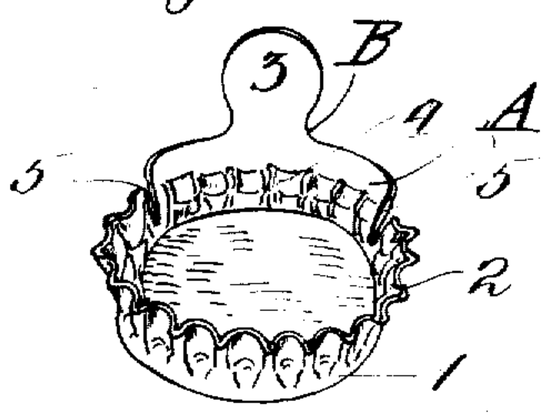
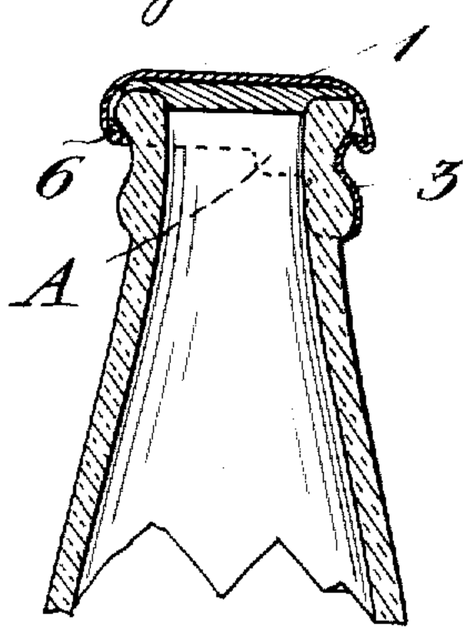


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

MORDECAI P. FREEBEY, OF LOS ANGELES, CALIFORNIA.

SEAL FOR BOTTLES AND THE LIKE CONTAINERS.

1,154,853. Specification of Letters Patent. Patented Sept. 28, 1915.

Application filed October 9, 1912. Serial No. 724,859.

To all whom it may concern:

Be it known that I, MORDECAI P. FREEBY, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a certain new and useful Improvement in Seals for Bottles and the like Containers, of which the following is a specification.

My invention relates to a seal or closure for bottles, jars and like containers, and has particular reference to that class of closures which are arranged to be forced on the containers.

An object of this invention is to provide a seal or closure for containers which can be readily removed without the employment of tools or separate devices, and which may be replaced without destroying the sealing action of the closure.

Other objects will appear from the following specification in connection with the accompanying drawing, in which,

Figure 1, is a perspective view of the closure as applied to a bottle. Fig. 2, is a sectional elevation on lines 2—2, Fig. 1. Fig. 3, is a perspective view of the closure, showing the tang, and Fig. 4, is a sectional elevation showing a modified form of crimp used to fasten the closure on a bottle.

The closure shown in Figs. 1 to 3, inclusive, comprises a sheet metal cap having a crown or disk 1, a rim 2 extending at approximately right angles to said disk and vertically crimped or corrugated throughout its entire circumference, as shown at 4, to hold the crown or disk in close contact with the mouth of the bottle; said rim having two vertical incisions 5 extending from its edge toward the crown or disk, through approximately two-thirds of the corrugated portion of said rim, and dividing said rim into two sections, the smaller section embracing approximately one-third of the entire circumference of said rim. A flange A extends parallel along the entire edge of said smaller section beyond the crimped or corrugated portion thereof; and a tang or finger-piece 3, having a neck-like connecting portion B, and being integral with and forming an extension of said flange, extends vertically from and midway of its edge, providing a hold by which to lift the said smaller section of the rim away from close contact with the bottle mouth. When applied to a bottle, the flange A, the neck B, and the tang or finger-piece 3, lie against and conform to the shape of the adjacent portions of the bottle. To remove the cap, the tang or finger-piece is pulled outwardly from the bottle, bending the neck-like connecting portion, which moves all of the corrugations on that portion of the rim having the flange A out of holding engagement with the usual lip on the bottle mouth, thus automatically releasing the large section of the said corrugated rim, which has remaining only a slight resisting power after the said smaller section has been disengaged. The cap is not torn or seriously distorted by removal and when replaced subsequently forms a satisfactory closure.

It is desirable that the portion of the rim extended to form the flange shall embrace a considerable part of the circumferential length of the entire rim, preferably about one-third. If the flange is too short at its point of connection with the rim, only a small part of the crimped portion of the rim will be disengaged by pulling the tang or finger-piece outward from the bottle neck, and a strong upward pull would be required to detach the remainder of the rim from the bottle, resulting in the tearing and distortion of the cap. On the other hand, if the flange be made too long at its point of connection with the rim, a very considerable force would be required to disengage that portion of the rim directly connected with the flange. Hence, in order to provide a cap which will hold securely when crimped on to the bottle and which may be readily removed without special tools or appliances, and without injury to the cap so that the latter may be replaced and again form a satisfactory closure, the flange is added to the rim for about one-third of the circumferential length of the latter, and the vertical incisions are provided in the rim at the ends of the flange to permit the flange to be sprung outwardly a sufficient distance to break the hold without tearing or distorting the rim. The length of the flange may be varied somewhat, but in any event it should be of such length that when the portion of the rim to which it is attached is released from the lip on the mouth of the bottle, the remaining portion of the rim, which should extend more than half way around the bottle mouth, will hold the cap on the bottle, but only with such resisting force that the cap may be removed by an upward pull of the tang or finger-piece without

causing the tearing, bending or distortion of the cap.

The invention may be embodied in caps having plain rims with beads, such as shown at 6, in Fig. 4, as well as in the crimped form of rim.

What I claim is:—

1. In a bottle closure, a metal disk with a vertically corrugated rim extending, when in position over the mouth of the bottle, downward and approximately at right angles to said disk; said rim being divided into two sections by vertical incisions extending from the edge of said rim upward through approximately two-thirds of the corrugated portion thereof; the smaller section of said rim embracing approximately one-third of the circumference of the entire rim; said smaller section having a flange extending along its entire length immediately below its corrugated portion; said flange having integral therewith a neck extending downward from and midway of its edge and terminating in a finger-piece; said neck and finger-piece being normally, when in use, against the neck of the bottle, and providing means, on being pulled outwardly, for lifting said smaller section of said corrugated rim away from close contact with the bottle mouth whereby to break the hold of and cause the release automatically of the larger section of said rim without tearing said rim or otherwise impairing the closure for further use.

2. In a bottle closure, a metal body having a crimped edge extending at approximately right angles to the axis of the body, and two vertical incisions extending approximately through two-thirds of the crimped portion and providing a portion equal to approximately one-third of the circumference of the edge and separate from such remaining crimps, but coöperating therewith to hold said body on bottle, said separate portion having integral with and below the line of its crimps a flange forming an extension of said edge and lying normally when in use against a bottle neck, said flange having centrally thereof and integral therewith a tang, extending vertically from the said flange and arranged to be pulled outwardly to release the crimps of said separate portion whereby to cause the remaining crimps automatically to disengage from the bottle.

3. In a bottle closure, a metal body having for the greater part of its circumference a crimped edge extending approximately at right angles to the axis of said body, and a flange integral with and forming an extension of said body, said flange having crimps coöperating with the crimps on said edge to hold said body on a bottle, said crimps being in line with the crimps of said edge, but separated therefrom by vertical incisions extending approximately two-thirds of the distance through said crimped edge; said flange having a finger-piece integral therewith and lying normally when in use against a bottle neck, and arranged to be pulled outwardly to release only the crimps on said flange whereby to destroy the hold of and cause the release automatically of the crimps on said edge without tearing the body.

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

MORDECAI P. FREEBEY.

Witnesses:

CATHERINE M. BURKE,

J. L. COPELAND.

Correction in Letters Patent No. 1,154,853.

It is hereby certified that in Letters Patent No. 1,154,853, granted September 28, 1915, upon the application of Mordecai P. Freebey, of Los Angeles, California, for an improvement in "Seals for Bottles and the Like Containers," an error appears in the printed specification requiring correction as follows: Page 1, line 2, for "Mordecai P. Freeby" read *Mordecai P. Freebey;* and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 1st day of February, A. D., 1916.

[SEAL.]

J. T. NEWTON,

Acting Commissioner of Patents.

Cl. 215–10