

No. 726,451.

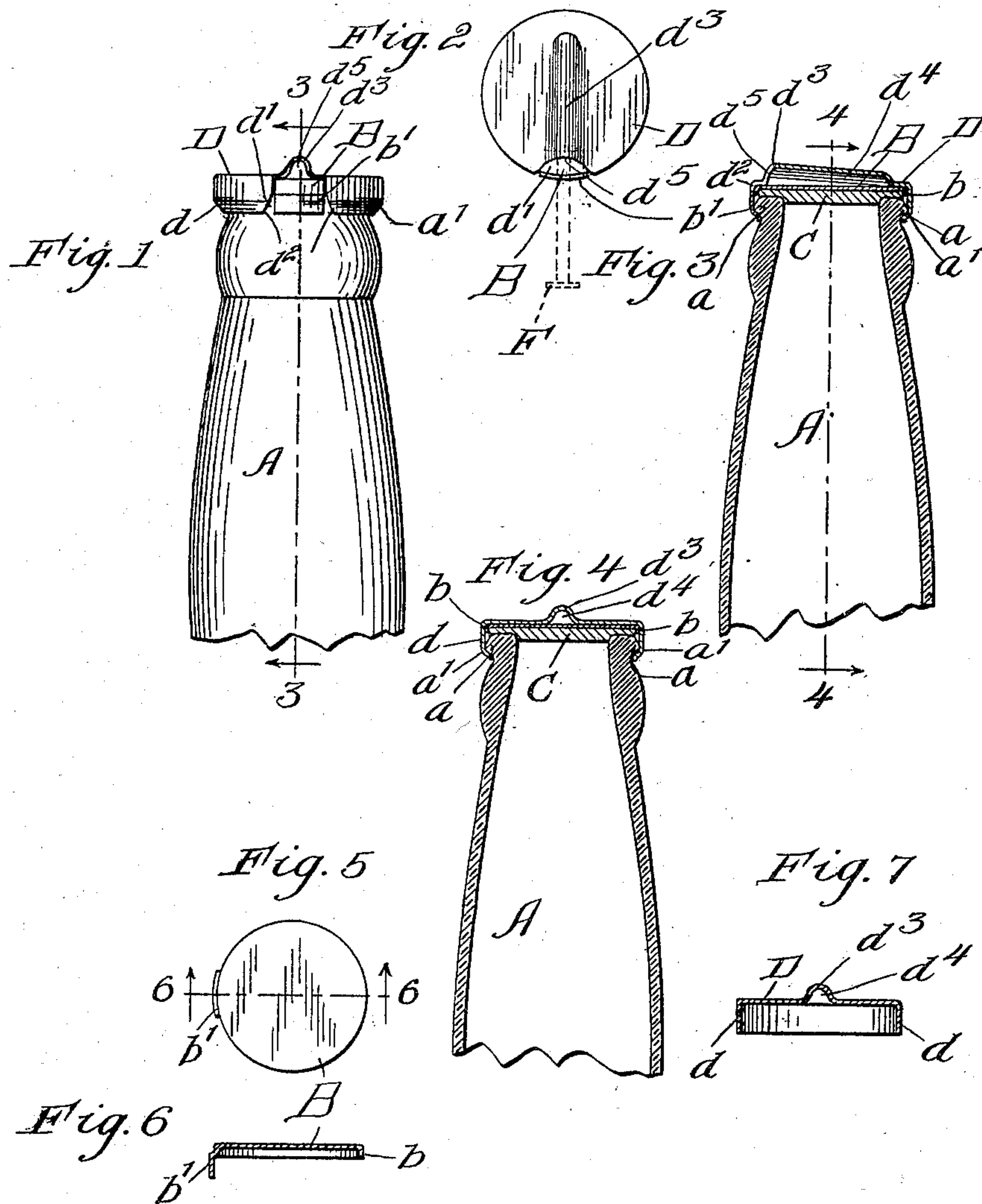
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E. NORTON.

BOTTLE CAP OR CLOSURE FOR BOTTLES, JARS, &c.

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NO MODEL.



Witnesses:

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UNITED STATES PATENT OFFICE.

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BOTTLE CAP OR CLOSURE FOR BOTTLES, JARS, &c.

SPECIFICATION forming part of Letters Patent No. 726,451, dated April 28, 1903.

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To all whom it may concern:

Be it known that I, EDWIN NORTON, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented a new and useful Improvement in Bottle Caps or Closures for Bottles, Jars, or other Vessels, of which the following is a specification.

My invention relates to improvements in bottle caps or closures for bottles, jars, or other vessels of glass or other material.

The object of my invention is to provide a sheet-metal bottle cap or closure of a simple and efficient construction, which may be cheaply manufactured, readily and conveniently applied to the bottle, jar, or other vessel, which will securely seal the bottle, jar, or other vessel, and which at the same time may be easily opened by a simple instrument—such, for example, as an ordinary nail.

My invention consists in the means I employ to practically accomplish this object or result—that is to say, it consists, in connection with a bottle, jar, or other vessel having a cap holder, shoulder, or groove at its mouth or open end and a cork or sealing-disk of some impervious and compressible material—such, for example, as cork—of a sheet-metal cork-holder disk which fits on top of the cork or sealing-disk, and a sheet-metal clamp-disk having a depending segmental or divided crimping-flange adapted to be smoothly and closely crimped or bent into the groove or under the shoulder of the mouth of the bottle, jar, or vessel and provided with an integral raised portion extending diametrically across the same and forming a socket or groove into which a nail or other simple instrument may be inserted for wedging or prying off the clamp-disk, and thus opening the bottle, jar, or vessel. The entrance or opening into this groove or socket coincides with the segment or circumferential part of the clamp-disk, where its crimping-flange is omitted, notched, or divided, so that the whole extent of the wedging or prying force of the nail or instrument tending to open or raise the clamp-disk comes first upon the free or end edges of the crimping-flange, and thus tends to spread the same and enables the clamp-disk to be readily started in its opening movement. This is further facilitated by the inclined or rounded

shape of the end edges of the crimping-flange on the clamp-disk in connection with the rounded shoulder of the bottle, jar, or vessel, which gives a cam-like, inclined, or wedging action in outwardly bending or spreading the crimping-flange in its initial or starting movement. The cork-holder disk is provided, or preferably provided, with a short segmental crimping-flange at the notch, division, or opening in the crimping-flange of the clamp-disk; the two segmental crimping-flanges on the cork-holder disk and clamp-disk thus supplementing each other and substantially completing the circle, so that the cork or sealing-disk may be compressed and held compressed by the crimping-flanges at the whole circumference, if desired.

In the accompanying drawings, forming a part of this specification, Figure 1 is a front elevation of a cap or closure embodying my invention and showing the same as applied to a bottle. Fig. 2 is a plan view. Fig. 3 is a central vertical section on line 3 3 of Fig. 1. Fig. 4 is a central vertical section on line 4 4 of Fig. 3. Fig. 5 is a detail plan of the cork-holder disk. Fig. 6 is a section of same on line 6 6 of Fig. 5, and Fig. 7 is a detail section of the clamp-disk.

In the drawings, A represents a bottle, jar, or other vessel, having at the mouth of its neck a cap-holder groove or shoulder *a*.

C is the cork or sealing-disk, the same being made of any suitable impervious and compressible sealing material—as, for example, a thin disk or cork or other suitable natural or artificial material commonly used for this purpose.

B is the sheet-metal cork-holder disk, the same having a narrow depending retaining-flange *b* for keeping or holding the cork or sealing-disk in place therein. It is also provided with a short segmental depending crimping-flange *b'*, preferably about three-eighths of an inch in length and of slightly-larger diameter than the cork-retaining flange *b*, so that it may properly fit over the beveled or rounded cap-holder shoulder *a* of the bottle, jar, or vessel.

D is the clamp-disk, the same having a depending segmental crimping-flange *d* extending, preferably, all around the clamp-disk excepting about three-eighths of an inch,

where a notch, division, or opening d' is left. The segmental crimping-flange d preferably has rounded or inclined ends d^2 to facilitate the wedging or prying off of the clamp-disk.

- 5 This action is also aided by the rounded shape a' of the cap-holding external shoulder a on the bottle, jar, or vessel. The clamp-disk D has extending diametrically across the same an integral raised portion d^3 , forming a groove or socket d^4 to receive a nail or other simple instrument for prying off or wedging off the clamp-disk. The entrance d^5 in the clamp-disk to this groove or socket d^4 is preferably adjacent to the notch or division d' in the crimping-flange d , so that the initial prying or wedging force of the instrument in opening the vessel may be exerted upon the notched, divided, or weakened portion of the crimping-flange d .
- 20 In operation the cork or sealing-disk C is permanently applied to the sheet-metal cork-holder disk B at the time the device is manufactured. To seal the bottle, jar, or vessel, the cork-holder disk, with the cork therein, is placed on the mouth or open end of the vessel with the clamp-disk inclosing or embracing the same, and then the cork or sealing-disk is compressed by downward pressure thereon, so as to tightly seal the bottle, jar, or vessel, and then while held so compressed the segmental crimping-flanges on the clamp-disk and cork-holder disk are crimped or bent under the cap-holder shoulder a on the bottle, jar, or vessel. To open the bottle, jar, or vessel, a nail or other simple instrument, as F, is inserted in the groove or socket d^4 , between the clamp-disk and cork-holder disk, and the clamp-disk wedged or pried off, enabling the cork-holder disk and cork or sealing-disk to be removed. The cork-holder disk B is preferably provided with the narrow retaining-flange b , as illustrated in the drawings, as this is a convenience in keeping the cork or sealing-disk in position prior to the assembling of the two disks B and D together, especially in cases where the cork or sealing-disk is composed of a plurality of elements. The narrow flange b may, however, be omitted, if desired, as the cork-holder disk without this flange will give proper support to the cork or sealing-disk and to the nail or implement used in wedging or prying off the clamp-disk.

I claim—

- 55 1. The combination with a bottle, jar or vessel, having a cap-holder shoulder at its mouth or open end, of a cork or sealing-disk, a cork-holder disk B having a flange b and a short segmental depending crimping-flange b' , and a clamp-disk D having a depending segmental crimping-flange d supplementing the crimping-flange on the cork-holder disk, and provided with an integral raised portion forming a socket or groove for insertion of a nail or other simple instrument between the cork-holder disk and clamp-disk for wedging or prying off the clamp-disk and opening the

bottle, jar or vessel, the entrance to said groove or socket coinciding with the notch or divided portion of said crimping-flange on the clamp-disk, and the segmental crimping-flange on the clamp-disk having rounded or inclined ends, substantially as specified. 70

2. The combination with a vessel having a cap-holder shoulder at its mouth or open end, of a cork or sealing-disk, a cork-holder disk and a clamp-disk having a segmental or divided crimping-flange and an integral raised portion extending across the same to receive a nail or other instrument between the cork-holder disk and clamp-disk, substantially as specified. 75 80

3. The combination with a vessel having an external shoulder at its mouth, of a cork or sealing-disk and a clamp-disk, having a segmental or divided crimping-flange and a raised portion forming a groove or socket for insertion of a nail or instrument, substantially as specified. 85

4. The combination with a vessel having an external shoulder at its mouth, of a cork or sealing-disk and a clamp-disk, having a segmental or divided crimping-flange and a raised portion forming a groove or socket for insertion of a nail or instrument, the entrance to said groove or socket being adjacent to the notch or division in the crimping-flange of the clamp-disk, substantially as specified. 90 95

5. The combination with a vessel having an external shoulder at its mouth, of a cork or sealing-disk and a clamp-disk, having a segmental or divided crimping-flange and a raised portion forming a groove or socket for insertion of a nail or instrument, the entrance to said groove or socket being adjacent to the notch or division in the crimping-flange of the clamp-disk, and the crimping-flange on the clamp-disk at the notch or division therein having inclined or rounded ends, substantially as specified. 100 105 110

6. In a closure for bottles, jars or vessels, a clamp-disk having a segmental crimping-flange and an integral raised portion extending across the same forming a groove or socket for reception of an opening instrument under said clamp-disk, substantially as specified. 115

7. In a closure for bottles, jars or vessels, a clamp-disk having a segmental crimping-flange and an integral raised portion extending across the same forming a groove or socket for reception of an opening instrument under said clamp-disk, the entrance to said groove or socket being adjacent to the notch or division in said crimping-flange, substantially as specified. 120 125

8. In a closure for bottles, jars or vessels, a cork-holder disk and a clamp-disk having a segmental crimping-flange and an opening for insertion of an instrument between the clamp-disk and cork-holder disk, substantially as specified. 130

9. In a closure for bottles, jars or vessels, the combination of a cork-holder disk, of a clamp-disk having a crimping-flange, and an

opening for insertion of an instrument between said disks, substantially as specified.

10. In a closure for bottles, jars or vessels, a cork-holder disk having a short segmental
5 crimping-flange, and a clamp-disk having a segmental crimping-flange and provided with an opening for insertion of an instrument between said disks, substantially as specified.

11. In a closure for bottles, jars or vessels,
10 a cork-holder disk having a segmental crimping-flange at less than half of its circumference, and a clamp-disk fitting on top of said cork-holder disk and having a crimping-flange at more than half its circumference
15 supplementing said segmental crimping-flange on the cork-holder disk, substantially as specified.

12. In a closure for bottles, jars or vessels, a pair of sheet-metal disks provided with segmental crimping-flanges, the crimping-flange
20 on the inner disk extending for less and on

the outer disk for more than half the circumference, the outer disk having an opening for insertion of an instrument between the disks, substantially as specified.

13. In a closure for bottles, jars or vessels, a pair of sheet-metal disks, the upper or outer one being provided with a crimping-flange extending for more than half its circumference and with a central, raised portion across
30 it for engaging an instrument for prying the clamp-disk off, substantially as specified.

14. In a closure for bottles, jars or vessels, a clamp-disk having a crimping-flange extending for more than half its circumference, and a socket across its top to receive an instrument for prying it off, substantially as
35 specified.

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Witnesses:

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