Oct. 20, 1925. 1,557,653

L. R. N. CARVALHO

CAP FOR BOTTLES OR OTHER CONTAINERS

Filed Jan. 11, 1924

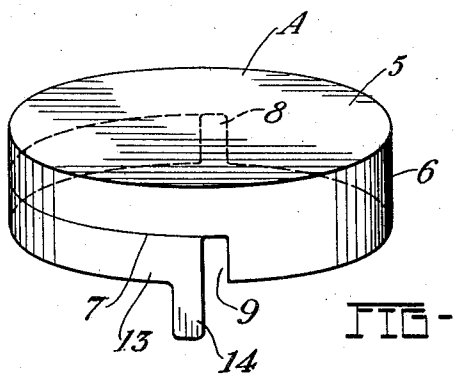


FIG-1-

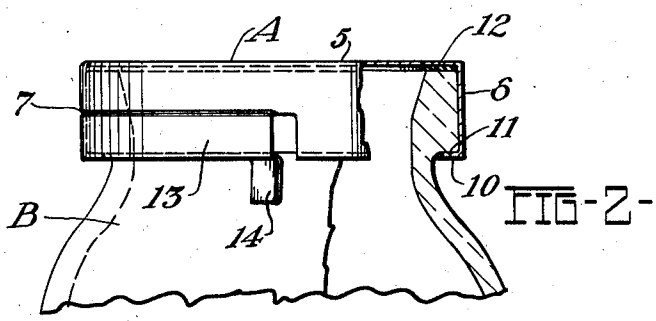


FIG-2-

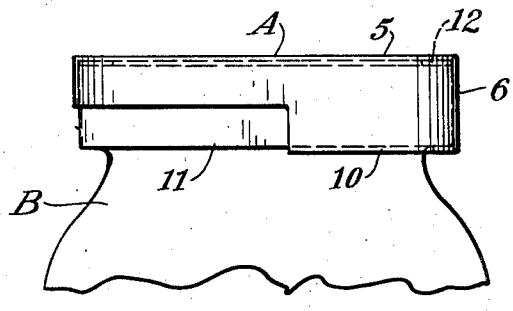


FIG-3-

INVENTOR
L. R. N. CARVALHO

By J. F. Rule

His Attorney.

Patented Oct. 20, 1925. 1,557,653

UNITED STATES PATENT OFFICE.

LESLIE R. N. CARVALHO, OF TOLEDO, OHIO, ASSIGNOR TO THE CLOSURE SERVICE COMPANY, OF TOLEDO, OHIO, A CORPORATION OF OHIO.

CAP FOR BOTTLES OR OTHER CONTAINERS.

Application filed January 11, 1924. Serial No. 685,531.

To all whom it may concern:

Be it known that I, LESLIE R. N. CARVALHO, a citizen of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have invented new and useful Improvements in Caps for Bottles or Other Containers, of which the following is a specification.

My invention relates to a cap or closure for bottles, jars or other containers. An object of the invention is to provide an improved form of cap with means for sealing it on the container, together with means permitting the cap to be readily removed from the container and repeatedly used as a closure for the container after the cap has been originally removed.

In the accompanying drawings, which illustrate a preferred form of my invention:

Figure 1 is a perspective view of the cap before it has been attached to the container.

Figure 2 is a part sectional elevation of the cap and container with the cap sealed in position on the container.

Figure 3 is an elevation showing the cap applied to the container as a temporary closure.

The cap or closure A may be made of a single piece of sheet metal and comprises a top or cover portion 5 and a flange portion 6. The flange is scored or weakened along a line 7 extending circumferentially of the flange. The score 7 preferably extends half or approximately half the circumference of the cap and terminates at notches 8 and 9 formed in the flange.

When the cap is originally applied to the jar or other container B, the lower edge 10 of the flange portion 6 is turned inward beneath an annular shoulder 11 formed on the container, thereby sealing the cap on the container. The holding flange 10 extends substantially the entire circumference of the container. A ring or gasket 12 of rubber, composition or other suitable sealing material may be interposed between the top 5 of the cap and the container to make a tight seal.

The score line 7 provides a removable rip strip 13 which is preferably formed at one end with a finger piece or tab 14. By grasping the tab 14, the strip 13 may be ripped off the cap, permitting the latter to be readily lifted from the container. After the cap has been thus removed, it may be quickly replaced on the container, thus serving as a temporary closure which may be repeatedly applied until the contents of the container have been used up. When the cap is thus replaced, that portion of the holding flange 10 which remains after the rip strip has been removed, extends approximately half way around the container and holds the cap from accidental displacement. The cap is preferably made of sufficiently resilient material to permit it to be easily removed from the container after the strip 13 has been torn off without any permanent distortion of the cap. This resiliency also causes the cap to snap into position when it is replaced on the container. The cap can thus be removed or replaced without bending or distorting it beyond its elastic limit. By changing the proportions of parts, as for example, the depth of the flange 6 or the length of the rip strip 13, the extent to which the cap must be sprung to remove or replace it, may be varied as desired. Thus, by reducing the depth of the flange 6, and particularly that portion above the line 7, the cap may be made to slip on or off the container with the application of very little force and by springing the cap very slightly.

Modifications may be resorted to within the spirit and scope of my invention.

What I claim is:

1. A closure cap comprising a top portion and a depending circumferential flange portion, the latter formed with a score or weakened line extending lengthwise thereof approximately only half the circumference of the flange and providing a removable strip, the score line being so positioned and arranged that when the strip is removed the depth of the remaining flange along said half of the circumference is substantially less than the depth of the other portion of the flange.

2. A closure cap comprising a top portion and a depending circumferential flange portion, the latter formed with a score or weakened line extending lengthwise thereof approximately only half the circumference of the flange and providing a removable strip including all that portion of the flange between the score line and the bottom edge of the flange, and means at both ends of

said strip to facilitate the tearing off thereof.

3. A closure cap comprising a top portion and a depending circumferential flange portion, the latter formed with a score or weakened line extending lengthwise thereof approximately only half of the circumference of the flange, said flange portion being cut or notched from its bottom edge upward to the ends of the score line to facilitate the removal of the strip beneath said score line.

4. A closure cap comprising a circular top portion and a depending flange portion, said flange portion formed with a score line extending lengthwise thereof through substantially half the circumference, thereby providing a removable strip, the latter formed with a finger piece or tab at one end, and means at the other end of the strip to facilitate its disconnection from the flange.

5. The combination of a container, a cap therefor comprising a depending flange surrounding the upper end of the container, the latter formed with an annular shoulder, said cap having its lower edge inturned to form an annular holding strip or flange, and means to permit the ready removal of a predetermined portion only of said holding strip, of such extent that the cap may be removed from the container, the remaining portion of said strip after said predetermined portion is removed, being of such extent that it serves as a means to hold the cap in position when replaced on the container.

6. A closure piece or cap comprising a circular cover portion and a circumferential flange extending downward from the cover portion, said flange being of greater depth at one side of the closure than the other, said deeper portion having at its lower edge an inwardly projecting portion serving as a means for holding the cap on a container the remaining portion of the flange being of a depth and extent to permit the removal and replacing of the cap without bending or distorting it beyond its elastic limit.

7. A closure cap comprising a cover portion and a circumferential flange portion extending downward therefrom, said flange portion being of greater depth throughout substantially half its circumference than the other half, said deeper portion having its lower edge turned inward to form a means for holding the cap on a container.

8. The combination of a container and a cap therefor, said cap comprising a cover portion and a depending flange portion surrounding the upper end of the container, the latter formed with a circumferential shoulder, said flange portion being turned inward along its lower edge to form a holding means surrounding the container and engaging said shoulder, said flange portion of the cap formed with a score line extending lengthwise thereof for approximately half the circumference, the cap being formed with notches extending from the ends of the score line downward to the lower edge of the cap.

9. The combination of a container having an open top and a circumferential shoulder below said top, a closure cap for the container comprising a circular top and a depending circumferential flange portion, said flange portion being of greater depth throughout one-half its circumference than the other half, said deeper portion being formed with means to engage beneath said shoulder for holding the cap on the receptacle.

10. A closure cap for a container, said cap formed of a single piece of resilient sheet metal and comprising a circular top and a circumferential flange, the depth of said flange for approximately half the circumference being materially less than the depth of the remaining portion, the lower edge of said remaining portion being inturned for engagement beneath a circumferential shoulder on the container, the narrower portion of the flange being of a width to permit the cap to be sprung onto and off the container without permanent distortion.

11. The combination of a container having an open circular top and a circumferential shoulder below said top, and a closure cap for the container comprising a circular top and a depending circumferential flange, the internal diameter of the flange being substantially the same as the external diameter of the container between its top and said shoulder, said flange comprising a comparatively narrow portion extending approximately one-half the circumference of the cap and a wider portion completing the circumference, said wider portion being inturned at its lower edge and engaging beneath said shoulder and holding the cap on the container, the width of the narrow portion of the flange being such that the cap may be sprung off or onto the container without permanent distortion.

12. The combination of a container having an open circular top and a circumferential shoulder below said top, a closure cap for the container comprising a circular top and a depending circumferential flange, the internal diameter of the flange being substantially the same as the external diameter of the container between its top and said shoulder, said flange having its lower edge inturned to engage beneath said shoulder and thereby seal the cap on the container, the flange being formed with a score line extending lengthwise thereof for substantially half the circumference of the

cap and terminating at notches formed in the flange and extending from the ends of the score downward to the lower edge of the flange whereby a removable strip is provided, the width of the flange above said score line being such that after said strip is removed the cap may be sprung onto and off the container without distorting or bending the cap beyond its elastic limit.

Signed at Toledo, in the county of Lucas and State of Ohio, this 8th day of January, 1924.

LESLIE R. N. CARVALHO.