May 27, 1924. 1,495,149

R. D. BALL

CAN CLOSURE

Filed June 8, 1923

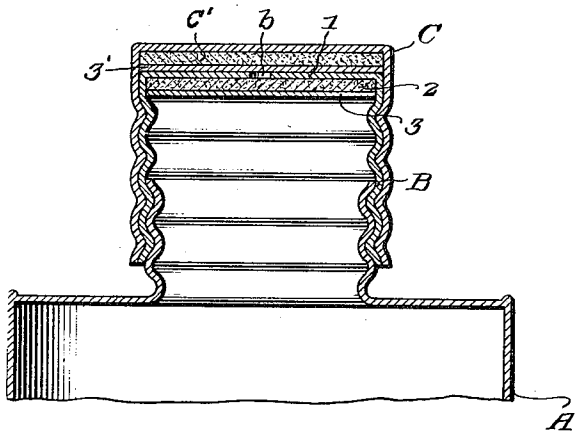


Fig. 1.

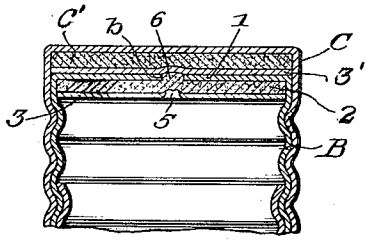


Fig. 7.

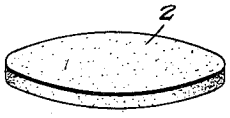


Fig. 4.

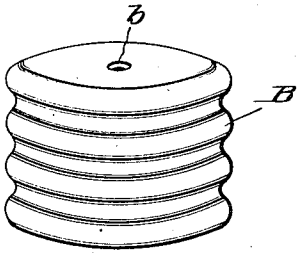


Fig. 2.



Fig. 5.

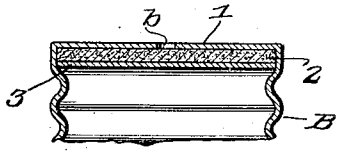


Fig. 3.

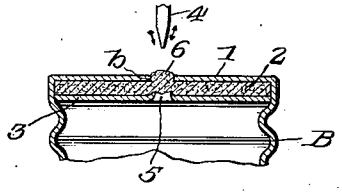


Fig. 6.

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UNITED STATES PATENT OFFICE.

RUFUS D. BALL, OF SEATTLE, WASHINGTON.

CAN CLOSURE.

Application filed June 8, 1923. Serial No. 644,128.

To all whom it may concern:

Be it known that I, RUFUS D. BALL, a citizen of the United States, residing at Seattle, King County, State of Washington, and whose post-office address is 818 Alaska Building, Seattle, Washington, have invented certain new and useful Improvements in Can Closures; 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.

This invention relates to bottle or jar closures, and more particularly to closures for bottles, jars, cans and the like in which liquids, such as ink, are vended to the trade, equipped with a closure provided with a puncturable element, to permit egress of the liquid as desired.

More specifically, the invention comprehends a closure adapted to be secured in position on a bottle, jar or can which is filled with ink or a like commodity, the closure being apertured at its top and containing a sealing disk of soft metal, such as lead, to prevent undesired egress of the ink through said aperture, but adapted to be readily punctured to permit a flow of ink to an inking pad, or for other uses.

The invention furthermore embodies a disk or pad of absorbent, fibrous material, positioned between said aperture in the closure and said sealing disk, which absorbent disk is also perforated, but not ruptured, in the act of puncturing the soft metal disk, and, in the act of applying the ink to the ink pad, the central portion of the absorbent disk is adapted for use, in lieu of a brush, in the application of the ink to the pad.

The object of the invention is the production of a simple and commercially practicable form of a closure as above briefly set forth.

Other objects of the invention will be apparent from the following specification, when read in connection with the drawings forming a part thereof.

In said drawings:

Fig. 1 is a side elevation partly in section, of a can equipped with my closure;

Fig. 2 is a side view of the interior screw-cap, fitting over the top of the can;

Fig. 3 is a vertical section through the cap shown in Fig. 2;

Fig. 4 is a perspective view of the absorbent fibrous pad or disk;

Fig. 5 is a perspective view of the soft metal sealing disk;

Fig. 6 is a sectional view of the closure cap, after perforation of the sealing disk, and

Fig. 7 is a sectional view showing the cover cap applied to the closure cap shown in Fig. 6, after perforation of the sealing disk.

Now referring specifically to the drawings, A represents a container for ink or similar liquids, provided with a neck having screw-threads adapted for cooperation with threads upon a closure cap B, the latter cap being also provided with threads for the reception of cooperating threads on a cover cap C, all as shown in Fig. 1.

The top 1, of the closure cap B, is centrally apertured at *b*, and absorbent disk or pad 2, composed of any suitable material, such as felt, cellulose or the like, is adhesively or frictionally secured to the bottom surface of the top 1, and covers the aperture *b*. To the bottom surface of the pad 2 is adhesively secured a thin lead disk 3.

The cover cap C is, in practically all respects, the counter part of the cap B, being provided with the absorbent pad C′, and the lead disk 3′, but the top of said cap C is not perforated.

It will be understood that the container or can A is filled with ink at the factory, and the closure cap B, containing the pad 2 and disk 3, permanently applied in position by solder or otherwise, and the imperforate cover cap C positioned upon the closure cap B. When the user desires to apply ink to a stamp pad he removes the cap C and passes a suitable instrument, such as indicated at 4, Fig. 6, through the perforation in the top of the cap B, thereby forcing aside the fibers or strands of the pad 2, and puncturing the disk 3. As the instrument 4 is removed it will tend to draw upwardly the ragged edges 5, surrounding the aperture made in the disk 3. In the withdrawal of the instrument 4, certain of the fibers or strands of the pad 2 will be partially drawn out of the aperture in the top 1 of the cap B, forming a protruding dauber, tuft or mat 6.

After the instrument 4 has been passed

through the pad 2, and punctured the disk 3, the can is inverted, and the ink will then pass through the disk 3 and a substantial quantity thereof will be taken up by the absorbent pad 2, which will manifestly increase in proportions and tend to project itself out of the perforation in the cap B, thereby increasing the size of the mat 6, as will be clearly understood. As soon as the pad 2 has initially absorbed the requisite supply of ink, the can A, in inverted position, is placed upon the ink pad and moved back and forth thereon until the latter has received an adequate supply of ink through the mat 6. So long as the can is held inverted and the mat 6 applied to the ink pad, a quantity of ink will be deposited upon the latter. After the necessary supply of ink has been deposited upon the ink pad, the can is restored to its normal position, and the cover cap C applied thereto, preventing deterioration of the ink in the mat 6 and the pad 2, and egress of the ink, as hereafter described, and preserving it in condition for subsequent applications to the ink pad.

It will be obvious that the passage of the instrument 4 through the pad 2 will not cut the strands or fibres of the latter, but will merely push them aside, and that the said strands or fibres are of sufficient flexibility to tend to resume their normal position, and no hole is left in said pad, permitting a free flow of ink. The pad 2 and the projecting mat 6 become fully saturated with ink and when the can is inverted and the cap B passed over the ink pad, the ink is instantly transferred to the latter, as will be understood.

It is also to be noted that the aperture in the disk 3, formed by the insertion of the implement 4, materially affects the supply of ink to the pad 2. The aperture in the cap 1 may be of such diameter as to indicate the diameter of the desired aperture in the disk 3, which latter aperture obviously governs the amount of ink supplied to the pad 2. Manifestly by the use of a tapering instrument 4, the aperture in the disk 3 may be made smaller than the aperture in the cap 1, or may be of the same diameter, as desired.

Various inks, and especially inks intended for application to inking pads, contain a substantial quantity of glycerine, or other "creeping" fluid, as an ingredient. It is well known that lead is one of, if not the only metal which successfully withstands the "creeping" action of glycerine, and that the latter not only cannot "creep" through the lead, but cannot "creep" upon or over it. Consequently, to prevent "creepage" of the ink through the aperture *b* and down between the caps B and C, the latter cap is also provided with the pad C′ and the leaden disk 3, as before stated.

After ink has been used upon the pad, the cap C is screwed down very tightly upon the cap B, causing the lead disk 3′, in the cap C, to be very firmly pressed by the resilient pad C′, upon the top 1 of the cap B. The central portion of the lead disk 3′, in the cap C, may be slightly raised from the top 1, even under this pressure, because of the protruding dauber 6, but the resiliency of the pad C′ will cause the disk 3′, around the dauber 6, to engage the top 1 at all points around the dauber, as shown in Fig. 7. Consequently, when the ink "creeps" up from the pad 2, in the cap B, and past the dauber 6, it nevertheless cannot pass the lead disk 3′ in the cap C, and cannot, therefore, pass between the threaded portions of the caps B and C and to the atmosphere. It is also to be noted that the resiliency of the pad C′ maintains a constant pressure upon the disk 3′, holding it in contact with the top 1 of the cap B.

The invention is not limited to a pad 2 of any particular material, so long as such material possesses the requisite absorption and expansion properties, and sufficient durability so that the projecting mat 6 will not be worn away until the contents of the can A have been consumed. Nor is the invention limited to a disk 3 of any particular material, so long as such material is easily puncturable, impervious to the destructive action of ink, and adapted to prevent the "creeping" action of any ingredient contained in the ink.

Modifications of the herein-described structure may be suggested to those skilled in the art, but the invention covers all embodiments falling fairly within the scope of the appended claims.

I claim—

1. A can closure comprising a cap fitted over the mouth of the can, an absorbent pad contained in said cap and integrally provided with a portion extending through an aperture in the latter, and means below said pad limiting the flow, to the latter, of liquid contained in the can, substantially as described.

2. A can closure comprising a cap fitted over the mouth of the can, an absorbent pad contained in said cap and integrally provided with a portion extending through an aperture in the latter, and means below said pad limiting the flow, to the latter, of liquid contained in the can, said means comprising a perforated sealing disk positioned in said closure, between the liquid and said pad.

3. A can closure comprising a cap fitted over the mouth of the can and an absorbent pad contained in said cap and integrally provided with a portion extending through

an aperture in said cap, and a cover member adapted to be positioned over said cap, substantially as described.

4. A can closure comprising a cap fitted over the mouth of the can and an absorbent pad contained in said cap and integrally provided with a portion extending through an aperture in said cap, means below said pad limiting the flow, to the latter, of liquid contained in said can and a cover member adapted to be positioned over said cap, substantially as described.

5. In combination with a can for containing a "creeping" fluid, a closure therefor comprising an apertured cap fitted over the mouth of the can, an absorbent pad in said cap, subject to saturation by the fluid, and a cover cap fitted over said closure cap and provided on its bottom surface with a member inherently adapted to resist the creeping action of said fluid, substantially as described.

6. In combination with a can for containing a "creeping" fluid, a closure therefor comprising an apertured cap fitted over the mouth of the can, an absorbent pad in said cap, subject to saturation by the fluid, a cover cap fitted over said closure cap and provided on its bottom surface with a member inherently adapted to resist the creeping action of said fluid, and means for resiliently pressing said member against the top of said closure cap, substantially as described.

7. In combination with a can for containing a "creeping" fluid, a closure therefor comprising an apertured cap fitted over the mouth of the can, an absorbent pad in said cap, subject to saturation by the fluid, a cover cap fitted over said closure cap and provided on its bottom surface with a member inherently adapted to resist the creeping action of said fluid, and means for resiliently pressing said member against the top of said closure cap, said means comprising a resilient element located between said member and the top of said cover cap and adapted to be compressed when the said caps are connected, substantially as described.

In testimony whereof I affix my signature.

RUFUS D. BALL.