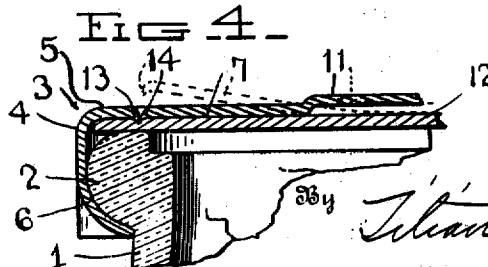
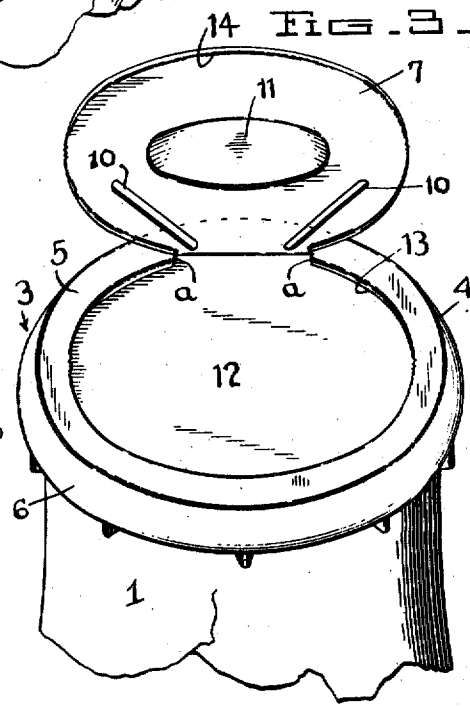
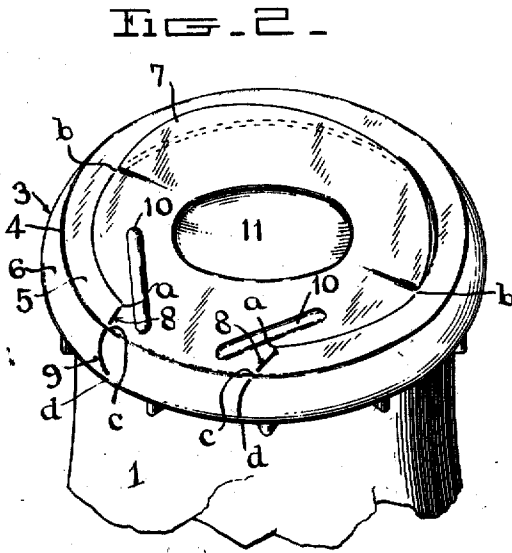
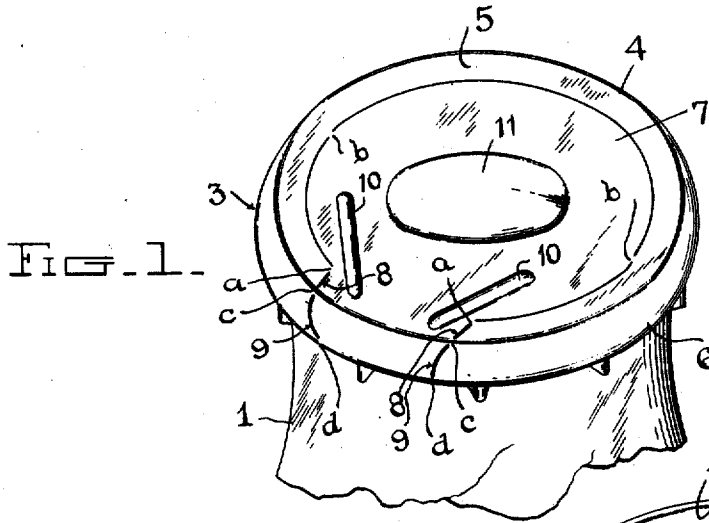


E. D. SCHMITT.
JAR CAP.
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1,242,604.

Patented Oct. 9, 1917.



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JAR-CAP.

1,242,604.

Specification of Letters Patent.

Patented Oct. 9, 1917.

Application filed February 4, 1915. Serial No. 8,008.

To all whom it may concern:

Be it known that I, EDWARD D. SCHMITT, a citizen of the United States, residing at Baltimore and State of Maryland, have invented certain new and useful Improvements in Jar-Caps, of which the following is a specification.

This invention relates to improvements in jar caps, and more particularly to a cap especially adapted for milk jars or bottles, or bottles having comparatively large mouths.

It is desirable to use a comparatively heavy tin cap for the reason that with such tin, the cap can be very firmly secured to the bottle, but, at the same time, it is desirable that the cap may be readily removed by hand, or without the aid of tools of any kind.

It is difficult to tear comparatively heavy tin in the ordinary way, and I have therefore, devised a construction in which a peculiar leverage is given to the part of the cap which serves as the opening means, so that the metal of the rim will be twisted apart, rather than torn. This is accomplished with a very slight force, making the cap readily removable by hand.

A further object of the invention is to provide means whereby a portion of the cap which covers the closing member or disk, may be quickly brought into position to be grasped by the hand in removing the seal.

In my application filed January 14, 1915, Serial Number 2,147, series of 1915, I show a cap quite similar in construction and mode of operation, to the present cap, but differing in certain essential and highly advantageous features, as will be described.

In the cap just referred to, the opening lever extends partially across the closing disk; but is secured thereto only at its base, and furthermore, is of such construction as will not prevent dust or foreign matter from accumulating upon the top of said disk, whereas, in the present construction, this added feature appears. The cap is so constructed that any attempt to remove it for the purpose of refilling or adulteration, may be readily detected.

In the drawings—

Figure 1 is a perspective view of the top of a milk bottle, with the cap applied.

Fig. 2 is a similar view, showing the edge of the opening lever slightly raised to bring it above the inner edge of the securing rim, to a position where it may be readily grasped by hand, at the beginning of the opening operation.

Fig. 3 is a similar view showing the central portion of the cap raised and occupying the position where it has twisted the metal of the rim apart, between the base of the opening lever and the first two notches or cuts, and

Fig. 4 is a broken sectional view of a portion of the top of a bottle and cap, showing the manner in which the outer edge of the opening lever and inner edge of the securing rim impinges slightly into the disk, when the cap is applied.

Referring to the drawings, the numeral 1 designates the usual milk bottle, provided with the usual annular bead 2, the under side of which, in the present instance, serves as a locking shoulder or surface for the cap, which is applied to the jar by a suitable machine, and crimped or indented into locking engagement with the shoulder. The numeral 3 designates the cap, which comprises a securing rim 4, formed with a flat upper portion 5 and a depending flange or skirt 6, the lower edge of which is locked to the bottle. The cap is cut through to form a central opening lever 7, which is integral with the rim at the points *a*, and at the points *b*.

The securing rim is provided adjacent to the points *a*, and outside thereof, with two cuts 8, which extend almost entirely across the upper flat portion of the securing member. These cuts terminate just short of the ends of two similar cuts 9 made in the flange 6 of the cap, the lower ends of the cuts 9 terminating just short of the lower edge of said flange, thus leaving, between the cuts 8 and 9, a small amount of unbroken metal *c*, and, between the lower ends of said cuts and the lower edge of the cap, similar unbroken parts *d*, the metal between the parts being adapted to be twisted apart with ease, by the peculiar leverage which is given in the manner about to be described.

The numeral 10 designates two ribs stamped upwardly in the opening lever 7, and extending some distance back into the opening lever, and a short distance on to

the flat portion of the securing rim. These ribs are for the purpose of stiffening the metal of the opening lever adjacent to the cuts 8, so that when the said opening lever is raised, it will not bend across the ribbed portion, but instead, will cause the opening force to be applied at the points *a*, so that the metal at this point is readily twisted apart. A further upward movement of the lever twists the metal apart at the points *c* while still further movement twists the parts *d* apart, thus permitting the securing rim to be removed. Prior to this operation, the very slight connections *b* between the opening lever and the upper surface 5 of the rim, have been broken.

Normally, the central portion of the cap is flush with the inner edge of the rim, and in order to be able to raise this slightly above the rim, to be readily gripped by the hand, I provide the opening lever with a central raised portion 11 and, the opening lever is attached to the rim on two opposite sides as shown at *b*. By pressing down upon this central portion, the edge of the opening lever, beyond the points *b*, will be forced slightly upward, as shown in Fig. 4, which obviously, facilitates the gripping of the lever to start the opening operation. This central portion which is cambered upwardly, serves as a stiffening means for that portion of the lever adjacent to the inner ends of the ribs 10, so that the whole lever is stiffened at the points necessary to bring about the twisting action in rupturing the parts of the metal necessary to be broken, to remove the cap.

The numeral 12 designates a disk, preferably of cardboard or other compressible material, which forms the closing member, and is adapted to make sealing contact between the securing rim and the lip of the bottle, as shown in Fig. 4.

In manufacture, the tool for cutting the opening lever from the arm is so shaped that two short indenting points 13 and 14, are provided, on the inner edge of the rim, and the outer edge of the locking lever, respectively. These, in the application of the sealing pressure, are slightly indented into the disk 12, so as to prevent lateral movement of the central portion of the disk, thus holding it perfectly flat, as shown in Fig. 4.

It will be understood that the securing rim, and closing member are assembled, so that the whole cap, comprising the securing rim, opening lever, and disk, may be handled as a concrete article.

From the foregoing, it will be noted that the formation is such that the entire central portion of the cap is virtually closed, thus protecting the disk from dust or for-

eign matter, a thing very desirable and essential in handling milk.

The cap has been described as being particularly adapted for use in connection with milk bottles, but it will be understood that it may be employed in other connections, where it would be useful.

Having thus described my invention, what I claim is:

1. A closure for jars comprising a securing rim, formed with an upper flat portion and a depending flange by which it may be secured to the locking shoulder of a jar, and a central portion filling the space within the rim and serving as an opening lever, and having narrow portions *b* integral with the rim at opposite sides, and also narrow portions *c* integral with the rim, at the base of said lever, the narrow side portions serving as points upon which a part of the central portion may be rocked, in the opening operation, the rim of the closure being provided with spaced cuts on its upper flattened surface and extending partially thereacross, and also cuts on the flange whose upper ends terminate adjacent to the outer ends of the first mentioned cuts and means for stiffening the lever so that when said lever is lifted, it will be twisted apart at the sides and adjacent to the base of the lever, to remove the seal.

2. A bottle cap comprising a securing rim having a flat upper surface and a depending flange by which latter it may be secured to a locking surface on the exterior of a jar, and an opening lever filling the space within the rim and having narrow portions integral with the rim at opposite sides, and also having narrow portions integral with the rim, adjacent to the base of said lever, a raised central portion for stiffening the lever and also adapted to be manually depressed to throw one edge of the lever above the inner edge of the rim, for the purpose set forth, the rim being provided at its top adjacent to the base of the lever, with cuts extending partially across the flat portion thereof, there being also cuts in the flange whose upper ends terminate short of the first mentioned cuts, stiffening ribs adjacent to the base of the lever, whereby the rim and the adjacent portions of the lever are stiffened, so that when the lever is lifted, the points at the side of said lever and also the points between the cuts, will be twisted apart to unlock the seal.

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

EDWARD D. SCHMITT.

Witnesses:

FRANCIS S. MAGUIRE,
FRANK G. BRERETON.