Sept. 10, 1940. R. K. MINER 2,214,255

RECEPTACLE AND CLOSURE CAP THEREFOR

Filed July 27, 1937 2 Sheets-Sheet 1

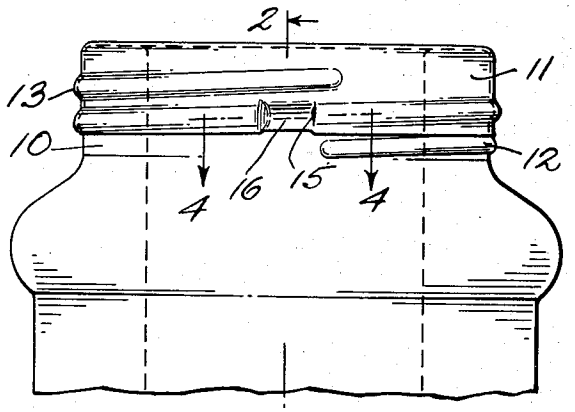


Fig. 1.

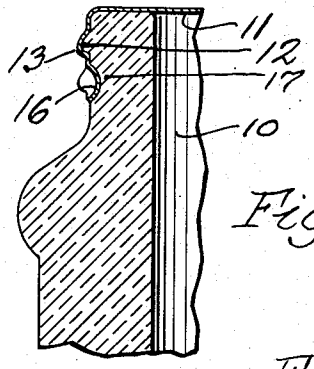


Fig. 2.

Fig. 4.

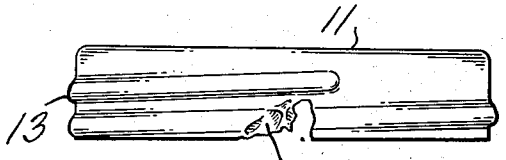
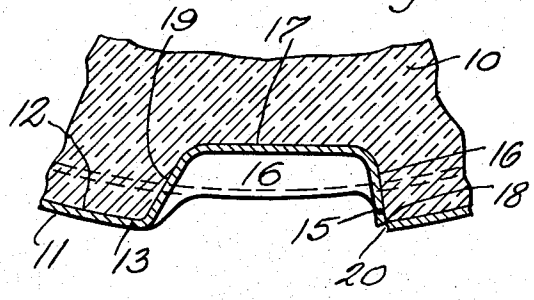


Fig. 3.



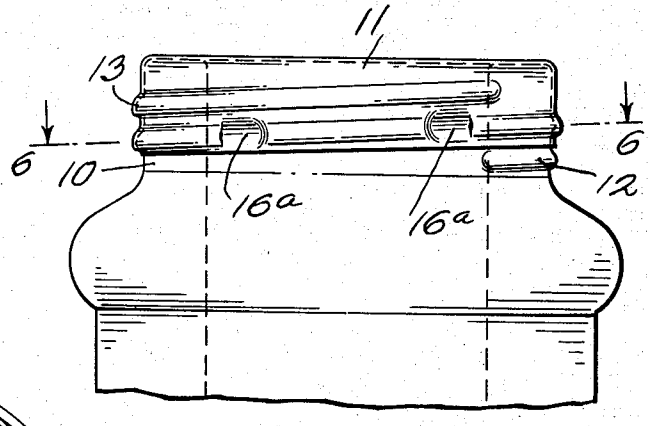
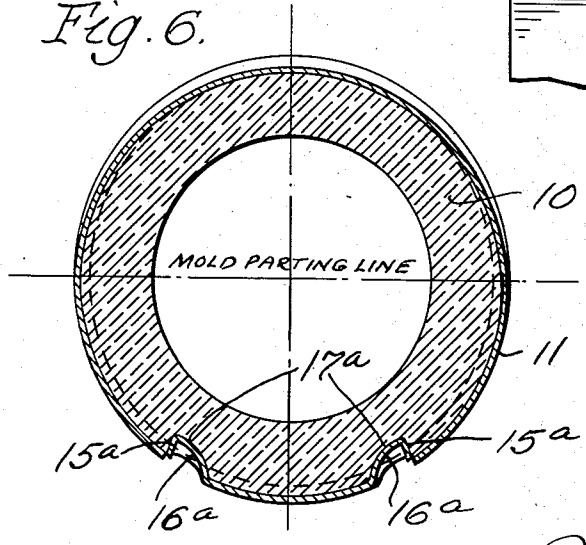


Fig. 5.

Fig. 6.



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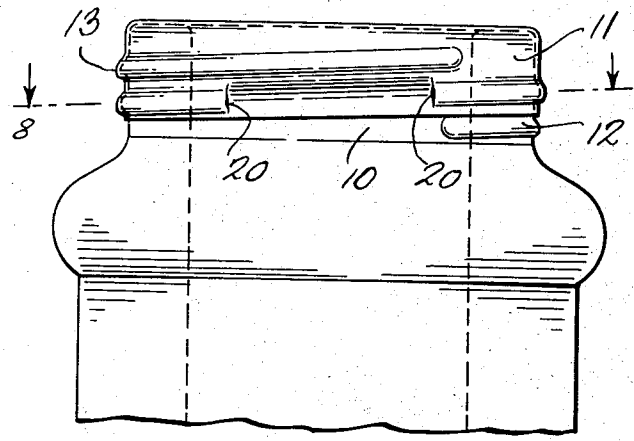


Fig. 7.

Fig. 8.

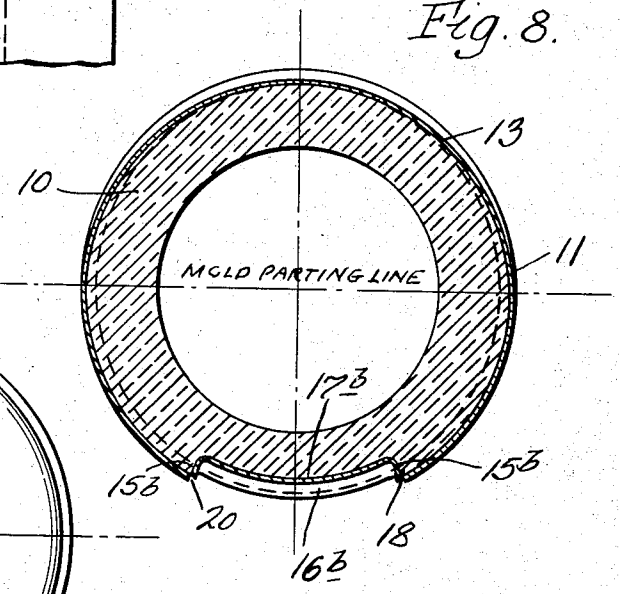
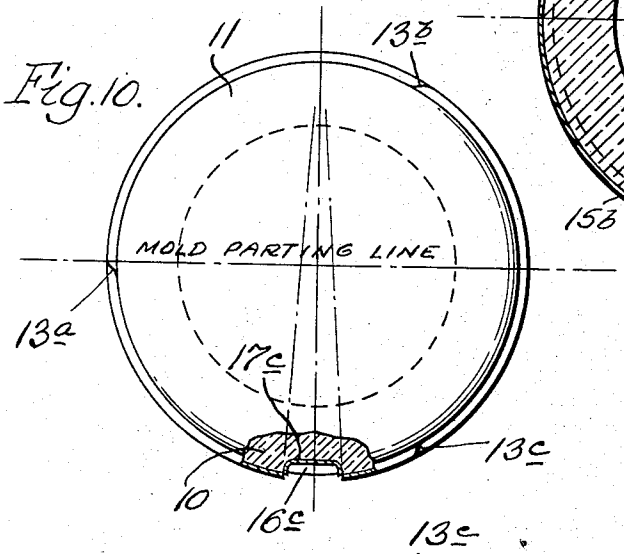


Fig. 10.



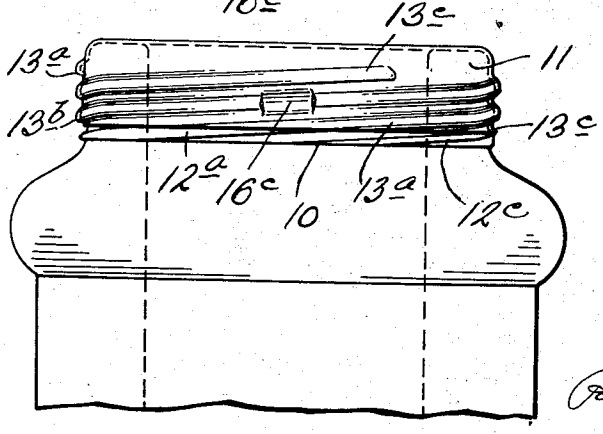


Fig. 9.

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RECEPTACLE AND CLOSURE CAP THEREFOR

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Application July 27, 1937, Serial No. 155,882

10 Claims. (Cl. 215—7)

This invention relates more particularly to improvements in bottle or receptacle closures of that type in which the receptacle is tightly closed or sealed by a cap of thin, pliable material, such as metal foil, which is adapted to be molded in place on the receptacle, as by pressure, so as to provide the cap with parts which conform to or cooperate with parts of the receptacle, whereby the cap is held tightly against the receptacle rim, or other sealing part thereof, so as to seal the receptacle, but is adapted to be removed for opening the receptacle. Joint application for United States patent Serial No. 110,498, filed Nov. 12, 1936, by Loomis Burrell and myself, discloses such a closure. While the present improvements are particularly applicable to bottles suitable for delivering or selling milk and other liquids and are herein so described, it is not thereby intended to restrict the invention to such bottles.

The objects of the invention are to produce a bottle and closure cap therefor of novel form or construction which will insure proper sealing of the bottle and prevent unintentional loosening of the cap with resulting possible leakage of the bottle contents, while nevertheless enabling ready removal of the cap; which enables reuse of the cap for again closing or sealing the bottle after it has been once opened; in which the cap can be removed and again used on the bottle for tightly closing or sealing it, but in which the initial removal of the cap ruptures it or alters its appearance, and thereby clearly shows that the bottle has been tampered with or opened, without however deforming or mutilating the cap so as to prevent its reuse for tightly closing or sealing the bottle; which has certain practical advantages over the construction illustrated in said joint application; and also to produce a receptacle closure having the features of improvement and advantage hereindescribed and set forth in the claims.

The accompanying drawings illustrate several different embodiments of my invention. In said drawings:

Fig. 1 is an elevation, enlarged, of the upper portion of a bottle with cap in sealing position thereon, showing one embodiment.

Fig. 2 is a fragmentary, vertical section thereof on line 2—2, Fig. 1.

Fig. 3 is an elevation of the cap after being removed from the bottle.

Fig. 4 is a sectional plan view on an exaggerated scale on line 4—4, Fig. 1.

Fig. 5 is a view similar to Fig. 1, showing a modification.

Fig. 6 is a sectional plan view thereof on line 6—6, Fig. 5.

Fig. 7 is a view, similar to Fig. 1, of another modification.

Fig. 8 is a sectional plan view thereof on line 8—8, Fig. 7.

Fig. 9 is a view, similar to Fig. 1, of a third modification.

Fig. 10 is a top plan view thereof, partly in section.

10 represents the upper or mouth end portion of a bottle, and 11 a cap for covering and closing or sealing the mouth of the bottle. The bottle is shouldered or threaded externally, preferably near its mouth or rim, for engagement with a shouldered or threaded formation on the cap for holding the cap tightly against the rim or other suitable portion of the bottle, so as to seal or tightly close the latter. The bottle and cap shoulders may be in the form of continuous screw threads 12 and 13 respectively, which extend circumferentially of the bottle and cap and preferably completely encircle the same, with the opposite ends of each thread overlapping, as shown in Fig. 1; or the bottle may be of other shouldered formation adapted to engage with a cooperating shouldered formation of the cap, whereby the cap is releasably held tightly in sealing relation on the bottle, but can be removed by turning or moving it in a way to disengage the cooperating threads or shoulders of the cap and bottle. Multiple or plural threads or shoulders may be used, and if so, one end of each thread or shoulder preferably overlaps the opposite end of the next thread or shoulder, so as to give holding engagement between the cap and bottle completely encircling the bottle mouth. This will ensure that the portions of the cap and bottle which are intended to contact to seal the bottle will be held firmly in contact with each other uninterruptedly completely around the bottle mouth, and thus prevent looseness between said sealing portions at any point that might permit leakage from the bottle.

In addition to such shouldered formations which hold the cap in sealing relation on the bottle and are disengaged for removing the cap, the bottle is also formed with a locking face or shoulder 15 which, by engagement with a cooperating shoulder or part 16 of the cap, opposes the turning or movement of the cap that is necessary for disengaging said cap-holding threads or shoulders in order to remove the cap, and there-

fore prevents unintentional loosening of the cap. This locking face 15 extends in a direction transverse to the circumferential direction of the threads 12 and 13, i. e., to the direction in which the cap must be moved to disengage said threads. As shown in Figs. 1 to 4, the locking face 15 crosses one turn of the bottle thread 12 and is formed by one end of a gap or depression 17 interrupting the thread, but it may be otherwise formed and located. The locking face 15 is abrupt or extends substantially radially of the bottle neck and forms a relatively sharp edge or corner 18 at the juncture of its outer end with the outer edge or face of the thread 12. The locking part functions best if it is relatively deep radially, and the desired radial depth thereof may be obtained by making the depression or gap 17 and face 15 deeper than the thread or shoulder 12 to absorb the excess metal foil of that portion of the cap skirt which normally would have been placed over the top of a thread at the position of the locking gap, thereby securing a straight lower edge on the cap in the molding operation and enabling a partial drawing or stretching of the metal foil over the sharp corner at the end of the thread forming the locking face to rupture the foil slightly at that point. The other end 19 of the depression may slope or recede in a direction outwardly away from the locking face 15. Such sloping of the end 19 facilitates the molding of the bottle, since the locking face 15 can be made radial, or even undercut somewhat, and a short depression 17 used, if the end 19 thus slopes so as to afford the clearance necessary to allow the part of the bottle mold that forms the depression to withdraw therefrom when opening the mold.

In the embodiment of the invention shown in Figs. 5 and 6, the bottle has two depressions 17*a* forming two of the locking faces 15*a*, which face oppositely or towards each other and are thus adapted, by engagement with two cooperating parts 16*a* of the cap to oppose the turning of the cap in both directions.

Instead of forming the bottle with two depressions, each having an abrupt and a sloping end, it can be made, as shown in Figs. 7 and 8, with a single depression 17*b*, having both ends abrupt to form opposing locking faces 15*b*, provided the depression is long enough and disposed so that it extends across a radial line perpendicular to the diametrical parting line of the mold in which the bottle is made. Such location of the depression will enable the part of the mold that forms the depression to be withdrawn therefrom when opening the mold. The parting line of the bottle mold is indicated in Figs. 6 and 8, to show its position in relation to the depressions and locking faces.

The cap 11 may be made from metal foil or other analogous or suitable, thin, pliable material, such that the skirt or flange of the cup-shaped cap, which surrounds the shouldered or threaded part of the bottle, can be molded or shaped, as by pressure, to conform to the surface contour of said shouldered or threaded part, thus providing the cap skirt with shoulders or parts complemental to or engaging the shouldered parts of the bottle to hold the cap on the bottle. For example, caps suitable for use with milk bottles can be made from aluminum foil of a thickness from about two to about four thousandths of an inch, and will properly seal the bottles without need for any paper or other internal sealing disk, gasket or lining. In the operation of capping a filled bottle with my improved cap, according to the preferred practice, a cap previously formed in cup shape with a plain, peripheral flange or skirt is placed over the end of the bottle, and its skirt is then compressed or squeezed around and against the threaded or shouldered portion of the bottle by suitable capping means which force the material of the skirt over the projections and into the grooves or depressions of this portion of the bottle, thereby molding or conforming the cap to this part of the bottle and providing the cap with the thread or shoulder 13 and a locking boss or part 16 for each depression 17 fitting and engaging respectively the thread 12 and gap or depression 17 of the bottle.

In thus molding the cap on the bottle, a circumferential portion of the skirt is drawn under the lower edge of the bottle thread and this draws the cap down tight against the top face and outer corner edge of the bottle rim, thereby producing a tight closure of the bottle which seals the same against leakage of its contents. Since the thread 12 extends a complete turn or more around the bottle end, the cap will be drawn tightly against the bottle rim and the under edge of the thread throughout the complete circumference of the end, thus insuring a reliable sealing of the bottle.

The inwardly projecting boss or part 16 of the cap which occupies the depression 17 of the bottle and engages the locking face 15, acts to lock the cap against accidental or unintentional turning on the bottle so as to loosen it and break the seal between the bottle and the cap. However, the cap can be turned or unscrewed to disengage the cap and bottle threads or shoulders, by hand, without the use of a tool, simply by applying sufficient turning force to the cap, and thus causing the locking face 15 to rupture or tear the boss 16, as indicated in Fig. 4. The ruptured or deformed boss 16 can pass the locking shoulder and permit the unscrewing and removal of the cap.

By making each locking face 15 abrupt or approximately radial or even undercut, in accordance with Figs. 6, 7 and 8 hereof and with a relatively sharp edge or corner 18 at the juncture thereof with the outer edge of the thread or shoulder 12 of the bottle, this sharp corner will act, when pressing the cap skirt over the same in molding or sealing the cap on the bottle, to slightly break or cut the contacting corner of the cap boss, as shown at 20, Fig. 4. The cut or break 20, it will be understood, results from pressing the thin, fragile foil of the skirt over the sharp corner 18 in molding the skirt to the bottle, and is not made by a separate or previous operation on the cap. In practice, this cut or break 20 in the cap is very minute and is barely perceptible, but it facilitates the tearing or rupturing of the locking boss 16 when force is applied to turn the cap on the bottle, and thus insures that in removing the cap, its locking boss or part will be torn or ruptured and make a conspicuous hole or opening in the cap which will clearly show that the bottle has been opened. Such breaking or cutting of the skirt of the cap is not absolutely essential to the intended rupturing of the locking boss of the cap when removing the cap, provided the locking face 15 of the bottle is sufficiently abrupt or angular, because the fragile nature of the foil or material of which the cap is made enables the abrupt locking face 15 to tear or rupture the cap boss

16 when turning force is applied to the cap. However, the described slight cutting or breaking of the skirt of the cap at this point will better insure that the cap cannot be removed without rupturing or tearing the locking boss of the cap and making a tell-tale opening in the skirt of the cap.

By providing the bottle with two oppositely facing locking shoulders 15, as shown in Figs. 5 to 8, they oppose the turning of the cap on the bottle either in the direction to remove it or in the opposite direction. This practically prevents the cap from being turned in the direction to screw it tighter on the bottle after it has been already secured in proper sealing position thereon, and thereby more or less deforming or obliterating the locking boss of the cap so that it might possibly pass the locking shoulder 15 without the intended rupturing or tearing of the same when the cap is thereafter turned in the opposite direction for removing it. This might possibly occur with a bottle having only one locking face, and in which the end of the locking depression opposite the locking face is sloping instead of abrupt, as shown in Fig. 4. When the bottle has oppositely directed locking faces, one locking part of the cap will be ruptured or torn if the cap is forcibly turned in one direction, and the other locking part will be ruptured or torn if the cap is turned in the opposite direction, thus insuring a tell-tale opening in the cap no matter whether the cap is removed as intended or is first screwed tighter on the bottle in an attempt to free its locking boss from the locking shoulder of the bottle without rupturing the boss.

As illustrated in Figs. 1 to 8 of the drawings, the improvements have been shown in constructions in which the cap is held in sealing contact with the bottle by a single screw thread on the cap engaging a single, continuous screw thread on the bottle. However, the improvements are not restricted to such constructions. For example, the bottle and cap may be made with plural threads or shoulders instead of a single thread or shoulder for effecting the releasable holding of the cap in sealing contact with the bottle. As shown in Figs. 9 and 10, the bottle is made with three threads 12*a*, 12*b* and 12*c*, one starting just before the parting line of the bottle mold, and the other two starting at points spaced 120 degrees from the starting point of the first thread, and the cap is formed with three corresponding threads 13*a*, 13*b* and 13*c* engaging the bottle threads. When more than one thread is used, the pitch angle of the thread will be greater than would be the case with a single thread, and preferably, as shown, each of the plural bottle threads makes a complete turn around the bottle end and extends below the bottom edge of the cap, while the cap has a corresponding number of open-ended threads.

In such multiple thread construction, as in the constructions previously described, the cap is formed with one or more locking bosses or parts which, by engagement with one or more locking shoulders on the bottle, oppose the loosening or removal of the cap, but are adapted to be torn or ruptured for removing the cap, by forcibly turning the cap. Figs. 9 and 10, for instance, show a depression 17*c* in the bottle interrupting one of the threads and providing opposed locking shoulders 15*c* at its opposite ends with which the opposite ends of the depressed locking boss or part 16*c* of the cap engages so as to oppose turning of the cap in either direction. The locking shoulders may have sharp corners to slightly break or cut the cap boss and insure that the boss will be ruptured or torn and a tell-tale opening made in the cap in removing it, and the cap may be molded on the bottle to form the cap threads and locking boss, all as before explained.

Each of the constructions described provides a locking part on the cap which is ruptured or so altered by removing the cap as to clearly show that the cap has been removed or tampered with while nevertheless the removal of the cap does not deform or obliterate the holding threads or parts of the cap, which remain intact, so that the cap can be reused to tightly close the bottle by screwing it thereon like an ordinary screw cap.

I claim as my invention:

1. A bottle or the like provided adjacent its mouth with an external screw thread and an abrupt locking shoulder transverse to the circumferential direction of said screw thread and having a sharp outer corner, in combination with a removable cap having a skirt of thin pliable but fragile material which is molded on the threaded and locking shoulder parts of the bottle to form the skirt with a screw thread that engages the bottle thread for securing the cap in sealing relation on the bottle and also with an integral locking boss which by engaging said locking shoulder opposes the turning of the cap on the bottle but which by reason of said thin fragile character of the skirt is ruptured by said locking shoulder and unlocks the cap solely by forcibly turning the cap by the unaided hand in the direction to unscrew it and thereby allows the cap to be unscrewed, the molding of the cap skirt over said sharp corner of said locking shoulder making an inconspicuous break in the skirt at said corner only which facilitates said rupturing of said locking boss, said rupturing of said locking boss making a tell-tale mutilation in the cap skirt but leaving said screw thread of the cap skirt intact, whereby the cap can be again screwed on the bottle to tightly close it.

2. A bottle or the like provided adjacent its mouth with an external cap-securing shoulder, and an abrupt locking shoulder transverse to the circumferential direction of said cap-securing shoulder and having a sharp outer corner, in combination with a removable cap having a skirt of thin pliable but fragile material which is molded on the cap-securing and locking shouldered parts of the bottle to form the skirt with a shoulder that engages the bottle shoulder for securing the cap in sealing relation on the bottle and also with an integral locking boss which by engaging said locking shoulder opposes the turning of the cap on the bottle, said bottle and cap-securing shoulders being constructed to be disengaged for removing the cap and to engage for again securing the cap by turning the cap on the bottle, and said boss by reason of the fragile character of the skirt ruptured by said locking shoulder and unlocking the cap solely by forcibly turning the cap by the unaided hand in the direction to release the cap and thereby allow the removal of the cap, the molding of the cap skirt over said sharp corner of said locking shoulder making an inconspicuous break in the skirt at said corner only, said skirt when molded on the bottle being of substantially uniform strength throughout except at said break, and said rupturing of said locking boss making a tell-tale opening in the skirt but leaving said securing shoulder of the skirt intact, whereby the cap can be again se-

cured on the bottle to tightly close it by turning the cap on the bottle.

3. A bottle or the like provided adjacent its mouth with an external cap-securing shoulder, and oppositely directed abrupt locking faces transverse to the circumferential direction of said shoulder, in combination with a removable cap which has a skirt of thin fragile material formed with a shoulder that engages said bottle shoulder for securing the cap in sealing relation on the bottle, said bottle and cap-securing shoulders being constructed to be disengaged for removing the cap and to engage for again securing the cap by turning the cap on the bottle, and the skirt of said removable cap being of substantially uniform strength throughout prior to securing the cap on the bottle and having integral locking parts which by engaging said locking faces oppose the turning of the cap in either direction on the bottle, but one of which locking parts by reason of said thin fragile character of the skirt is ruptured by the associated locking face and unlocks the cap solely by applying turning force by the unaided hand to the cap in a direction to disengage the shoulders of the cap and bottle and thereby allows the cap to be removed, and the other of which locking parts is similarly ruptured by the other locking face by opposite turning of the cap, said rupturing of either of said locking parts making a tell-tale mutilation in the cap skirt, but leaving said securing shoulder of the cap intact, whereby the cap can be secured on the bottle to tightly close it by turning the cap on the botttle.

4. A bottle or the like provided adjacent its mouth with an external screw thread having oppositely directed abrupt locking faces extending across said screw thread, in combination with a removable cap which has a skirt of thin fragile material formed with a screw thread that engages said bottle thread for securing the cap in sealing relation on the bottle, and the skirt of said removable cap having integral locking parts which by engaging said locking faces oppose the turning of the cap in either direction on the bottle, but one of which locking parts by reason of said thin fragile character of the skirt is ruptured by the associated locking face and unlocks the cap solely by applying turning force by the unaided hand to the cap in a direction to unscrew it and thereby allows the cap to be removed, and the other of which locking parts is similarly ruptured by the other locking face by opposite turning of the cap, said rupturing of either of said locking parts making a tell-tale mutilation in the cap skirt but leaving said screw thread of the cap skirt intact, whereby the cap can be again screwed on the bottle to tightly close it.

5. A bottle or the like provided adjacent its mouth with an external screw thread and with a depression which interrupts said thread and the ends of which form oppositely directed locking faces transverse to the circumferential direction of said screw thread, in combination with a removable cap having a skirt of thin pliable but fragile material and of substantially uniform strength throughout which is molded on the threaded part of the bottle to form the skirt with a screw thread that engages the bottle thread for securing the cap in sealing relation on the bottle and also with an integral locking boss which occupies said depression and by engaging said locking faces opposes the turning of the cap in either direction on the bottle, but which locking boss is ruptured by one of said locking faces and unlocks the cap solely by forcibly turning the cap by the unaided hand in the direction to unscrew it and thereby allows the removal of the cap, and is also similarly ruptured by the other locking face by opposite turning of the cap, said rupturing of said locking boss making a tell-tale opening in the cap skirt, but leaving said screw thread of the skirt intact, whereby the cap can be again screwed on the bottle to tightly close it.

6. In combination, a bottle or the like provided adjacent its mouth with an external screw thread, a locking depression interrupting said thread and of greater depth than said thread, an abrupt locking face having a sharp outer corner and being transverse to the circumferential direction of said thread and defining one end of said depression and formed by an end of said interrupted thread at the point of interruption, and a removable cap having a skirt of thin, pliable but fragile material which is placed in unregistered position over the mouth of the bottle and is molded in the capping operation onto the threaded portion of the bottle and over the locking depression in said thread and over the sharp cornered locking face forming an end wall of said depression, said molding operation forming said cap skirt with a screw thread that engages the threaded portion of said bottle for securing the cap in sealing relation on the bottle and also slightly rupturing said cap skirt over the said sharp corner in the forming of an integral cap locking boss engaging said locking face to oppose the turning of said cap upon the bottle, the molding of the cap skirt over said sharp corner making only an inconspicuous tear in said skirt at said corner, whereby the cap may be loosened for removal by forcibly turning the cap by the unaided hand in the direction to unscrew it, thereby rupturing said locking boss by reason of the thin, fragile character of the cap skirt in passing over said sharp corner, making a tell-tale mutilation in said cap skirt by enlarging the inconspicuous tear or slight rupture made in said cap skirt by said sharp corner during the capping operation but leaving said screw thread of the cap skirt intact to enable the subsequent temporary reuse of said cap.

7. In combination, a bottle provided with an external, circumferentially extending closure cap securing screw thread, an abrupt locking face having a sharp outer corner formed by an end of said cap securing screw thread and being transversely dispossed to the circumferential direction of said cap securing screw thread, and a removable cap having a skirt of thin, pliable but fragile material which is of substantially uniform strength throughout and is placed in unregistered position over the mouth of the bottle and is molded in the capping operation onto the threaded portion of the bottle and over the sharp cornered locking face formed by the end of said thread, said molding operation forming said cap skirt with a screw thread that engages the threaded portion of said bottle for securing the cap in sealed relation on the bottle and also slightly rupturing said cap skirt over said sharp corner in the forming of an integral cap locking boss engaging said locking face to oppose the turning of said cap upon the bottle, the molding of said cap skirt over said sharp corner making only an inconspicuous tear in the skirt at said corner, whereby the cap may be loosened for removal by forcibly turning the cap by the unaided hand in the direction to unscrew it, thereby rupturing said locking boss by reason of the

thin, fragile character of the cap skirt in passing over said sharp corner, making a tell-tale mutilation in the said cap skirt by enlarging the inconspicuous tear or slight rupture made in the cap skirt by said sharp corner during the capping operation but leaving said screw thread of the cap skirt intact to enable the subsequent temporary reuse of said cap.

8. In combination, a bottle provided adjacent its mouth with an external, circumferentially extending cap securing screw thread, a locking depression interrupting said thread and of greater depth than said thread, abrupt locking faces having sharp outer corners and being transverse to the circumferential direction of said thread and defining the ends of said depression and formed by the ends of said interrupted thread at the point of interruption, and a removable cap having a skirt of thin, pliable but fragile material which is of substantially uniform strength throughout and is placed in unregistered position over the mouth of the bottle and is molded in the capping operation onto the threaded portion of the bottle and over the locking depression in said thread and over the sharp cornered locking faces forming the end walls of said depression, said molding operation forming said cap skirt with a screw thread that engages the threaded portion of said bottle for securing the cap in sealing relation on the bottle and also slightly rupturing said cap skirt over said sharp corner in the forming of an integral cap locking boss engaging said locking face to oppose the turning of said cap upon the bottle, the molding of the cap skirt over said sharp corner making only an inconspicuous tear in the skirt at said corner, whereby the cap may be loosened for removal by forcibly turning the cap by the unaided hand in the direction to unscrew it, thereby rupturing said locking boss by reason of the thin, fragile character of the cap skirt in passing over said sharp corner, making a tell-tale mutilation in said cap skirt by enlarging the inconspicuous tear or slight rupture made in the cap skirt by said sharp corner during the capping operation but leaving said screw thread of the cap skirt intact to enable the subsequent temporary reuse of said cap.

9. In combination, a bottle or the like provided adjacent its mouth with an external, interrupted screw thread having abrupt locking faces with sharp outer corners disposed at the opposite ends of said interruption and extending across said screw thread transverse to the circumferential direction thereof, and a removable metal foil cap having a skirt of thin, pliable but fragile material which is placed in unregistered position over the mouth of the bottle and is formed during the capping operation with a complementary screw thread that engages the screw thread on said bottle for securing the cap in sealing relation on the bottle and also slightly rupturing said cap skirt over said sharp corners in the forming of an integral cap locking boss engaging said locking faces to oppose the turning of the cap in either direction on the bottle, the molding of the cap skirt of substantially uniform strength throughout over said sharp outer corners of the locking faces making only an inconspicuous tear in the skirt at said corners, whereby the cap may be loosened for removal by forcibly turning the cap in the direction of unscrewing it, thereby rupturing one end of said locking boss by reason of the thin, fragile character of the cap skirt in passing over the sharp corner in the unscrewing of the cap and the other end of said locking boss may be similarly ruptured by the sharp corner of the other locking face by turning the cap in the opposite direction, said rupturing making a tell-tale mutilation in said cap skirt by enlarging the inconspicuous tears or slight ruptures made in the cap skirt by said sharp corners during the capping operation but leaving said screw thread of the cap skirt intact to enable the subsequent temporary reuse of said cap.

10. In combination, a bottle or the like provided adjacent its mouth with an external, circumferentially extending screw thread interrupted by a locking depression of greater depth than said thread, said depression being defined at its ends by abrupt locking faces, each having a sharp outer corner and comprising the adjacent ends of the interrupted thread, said locking faces being disposed perpendicularly to the parting line of the mold used in the formation of the bottle and transversely to the circumferential direction of said screw thread, whereby to enable the ready withdrawal of the bottle from the mold in the forming operation, and a removable metal foil cap having a skirt of thin, pliable but fragile material which is of substantially uniform strength throughout and is placed in unregistered position over the mouth of the bottle and is molded in the capping operation onto the threaded portion of the bottle or the like and over the locking depression in said thread and over the sharp corners of the locking faces forming the ends of said depression, said molding operation forming said cap skirt with a screw thread that engages the threaded portion of said bottle for securing the cap in sealing relation to the bottle and also slightly rupturing said cap skirt over said sharp corners in the forming of an integral cap locking boss engaging said locking faces to oppose the turning of said cap upon the bottle, the molding of the cap skirt over said sharp corners making only inconspicuous tears in the skirt at said corners, whereby the cap may be loosened for removal by forcibly turning the cap by the unaided hand in the direction to unscrew it, thereby rupturing one end of said locking boss by reason of the thin, fragile character of the cap skirt in passing over one of said sharp corners in the unscrewing of the cap; the other end of said locking depression may be similarly ruptured by rotating the cap on the bottle in the opposite direction, said rupturing of said cap skirt making a tell-tale mutilation in said cap skirt by enlarging the inconspicuous tears made in the cap skirt during the capping operation but leaving said screw thread of the cap skirt intact to enable the subsequent temporary reuse of said cap and to enable the application of a cap to the neck of the bottle provided with outwardly extending threads and inwardly extending depressions for securing a straight lower edge of said cap skirt by providing means for the uniform distribution of equal portions of the cap skirt during the forming operation by stretching the same either over an outwardly extending thread or depressing the same into an inwardly extending depression.

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