Aug. 29, 1967 S. A. LANGE 3,338,445

CONTAINER AND CAP WITH RECLOSABLE TEAR STRIP

Filed Oct. 15, 1965

Fig. 1.

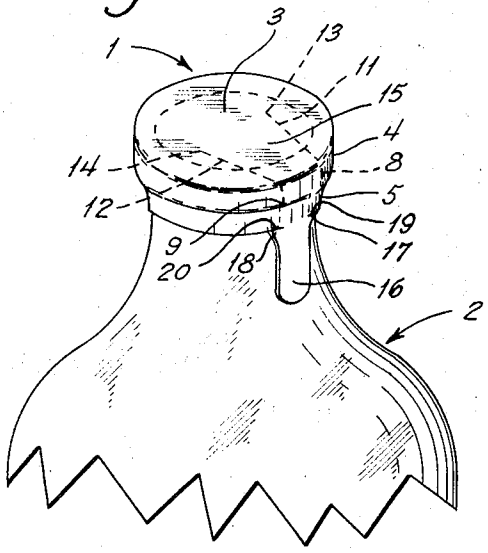


Fig. 2.

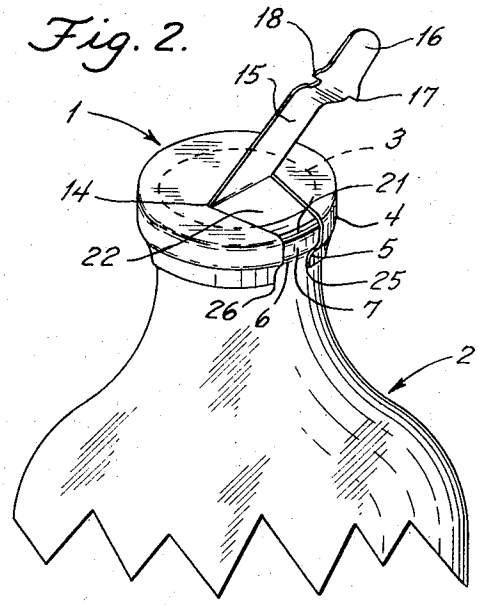


Fig. 3.

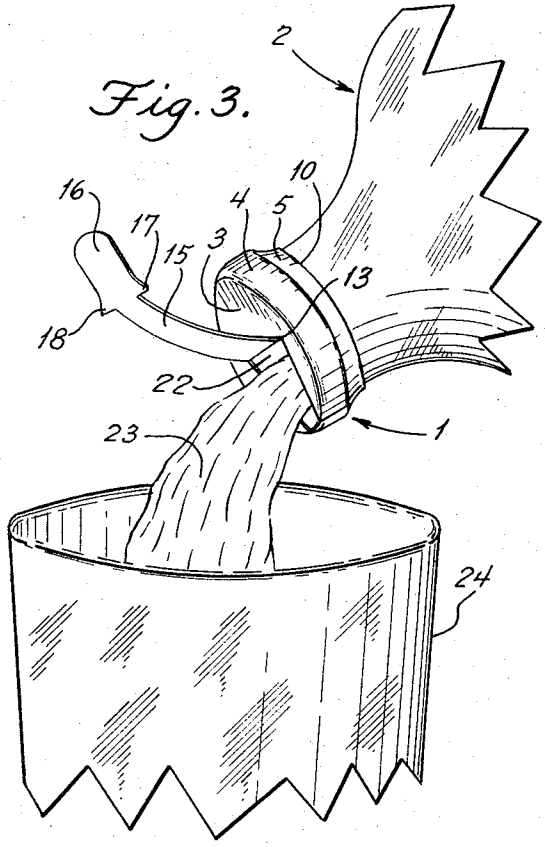
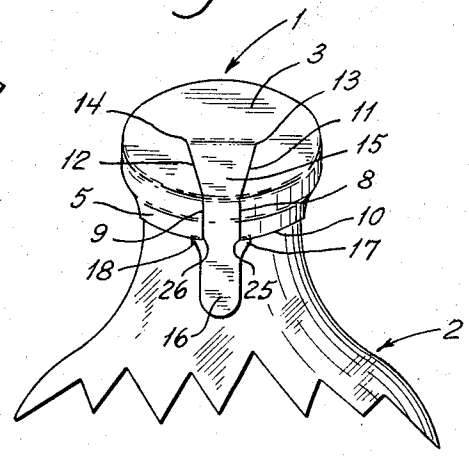


Fig. 4.



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CONTAINER AND CAP WITH RECLOSABLE TEAR STRIP

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ABSTRACT OF THE DISCLOSURE

A lightweight metal bottle cap provided with a hand removable tear strip portion forming a pour opening in the cap. The tear strip portion can be urged back to its initial untorn position and there retained to provide reclosing of the bottle.

This invention relates to closure caps for bottles and like receptacles and is particularly concerned with such caps having a hand openable pouring opening therein.

In many instances it is desirable to gain access to the contents of bottles, jars and the like through a pour opening in the closure cap without completely removing the cap. In dispensing beverages for example, particularly where all the contents are not consumed at once pouring through a suitable opening in the cap has certain advantages over complete removal of the cap. Frequently it is more difficult to completely remove the cap from the bottle finish than it is to simply tear out a pour opening. Then if the cap remains attached to the bottle it can be conveniently disposed of along with the bottle. Furthermore a more sanitary condition prevails if the cap remains on the bottle finish than if the cap is completely removed so as to expose the underlying bottle lip and the contents therewithin to the surrounding atmosphere.

Also embodied in the pour opening cap of the invention is a recloseable feature which permits that portion of the cap initially unseated to establish the pour opening, to be simply and easily reseated. The reclosure thus formed is quite adequate to close off the opening against accidental spillage and protect against the entry of dirt or other foreign matter which might contaminate the bottle contents. The cap of this invention is seen to improve over prior art bottle caps in providing a very simple inexpensive bottle closure initially comprising a tamperproof, pressure tight seal though providing a pouring opening which may be easily torn open by finger action. Once opened and a portion of the contents therewithin dispensed, the pour opening may be neatly reclosed so as to protect the contents against contamination until subsequent reuse. Alternately, however, if it is desirable to completely remove the cap from the bottle neck, such removal may be readily effected also by maintaining the finger grip and tearing further.

It is accordingly a principal object of this invention to provide new and improved closure caps for containers.

Another object is to provide such closure caps which are initially tamperproof though having provision for a pour opening formed therein.

Another object is to provide lightweight metal closure caps having a hand openable pour opening therein.

A further object is to provide lightweight metal closure caps having a tear out pour opening which can be reclosed.

A still further object is to provide closure caps having a hand accessible pour opening therein which caps may be completely hand removed from the receptacle if desired.

A more detailed object is to provide metal closure

caps formed with a tear out pour opening portion which may be reclosed by being bent back and held in its initial position.

Further and more detailed objects of the invention will in part be obvious and in part pointed out as the description of the invention taken in conjunction with the accompanying drawing proceeds.

In that drawing:

FIG. 1 is a perspective view of the combination of cap and bottle in accordance with the invention;

FIG. 2 is a view similar to FIG. 1 with the cap in open position;

FIG. 3 shows the bottle and cap in pouring position; and

FIG. 4 is a perspective view of the combination with the cap in reclosed condition.

In FIG. 1 the cap **1** of the invention is shown sealingly engaged to the neck of a bottle **2**. The cap **1** is seen to comprise a flat disc-like top **3** surrounded by a depending skirt **4** which skirt has a lower portion **5** formed inwardly into tight sealing engagement with the undersurface **6** of the bottle opening lip or bead **7**. A pair of score lines extend up across the cap skirt **4** as indicated at **8** and **9** commencing at the free edge **10** thereof and continue into the cap top **3** at **11** and **12** terminating respectively at position **13** and **14**. The score line portions **9**, **10**, **11** and **12** define a tear strip **15** therebetween which is provided with a finger grip ear **16** extending away from the skirt free edge **10**. At the juncture of the ear **16** with the skirt edge **10** a pair of protuberances **17** and **18** are provided on either side of the ear and are separated from the edge **10** by the slits **19** and **20**. In order to effect a tight seal the cap **1** is provided with an annular gasket **21** extending between a portion of the cap skirt and the lip **7** and which may be either of the preformed or flowed in type.

As shown in FIGS. 2 and 3 the cap **1** may be easily opened by grasping the ear **16** and pulling outwardly and upwardly thus peeling back the tear strip **15** so that a pour opening **22** is formed for easy pouring of the contents **23** into a glass **24**. The size of the pour opening **22** is determined by the location of the score line terminating points **13** and **14**. The longer the score portions **11** and **12** the larger the opening. However, it is desirable to have the opening **22** no larger than necessary for convenient pouring in order to normally prevent complete removal of the cap from the bottle lip **7**. To further assist in retaining the cap on the bottle during normal use, the gasket **21** should not adhere to any substantial degree to the interior surface of the cap so that the tear strip **15** will pull away from the gasket **21** leaving a portion of the gasket exposed and in contact with the bottle lip. However, there is a certain amount of adherence between the gasket and the cap so that when the tear strip **15** is raised, as seen in FIG. 2, the gasket, left intact, aids in holding the body of the cap together and in place on the bottle. Of course if it is intended to dispense the contents directly from the mouth of the bottle, complete removal of the cap may be advantageously effected by exerting a somewhat harder pull on the ear **16**.

In FIG. 4 the recloseable feature of the cap of the invention is illustrated. From that showing it is seen that the tear strip **15** has been pressed back into its original position so as to close the pour opening **22**. This can readily be done but upon such reclosing, there is the natural tendency of the tear strip to spring open which must be taken into account. Accordingly it is desirable to provide some means for securing the tear strip in the reclosed position. The protuberances **17** and **18** serve this purpose. By pressing the ear **16** inwardly against the neck of the bottle the protuberances **17** and **18** are brought below and somewhat behind the corner portions **25** and

26 of the skirt at either side of the ear. Here the tendency of the tear strip **15** to spring open is made use of since it acts to pull the protuberances **17** and **18** up a short distance in back of the skirt to hook the ear **16** securely in its downwardly extended position. This also holds the strip **15** in its downward closed position.

When desired to reopen the pouring opening through the cap, a slight downward pressure needs to be exerted on the top of the tear strip. This pushes the skirt portion of the tear strip down and frees the protuberances **17** and **18** from their position behind the skirt corners **25** and **26.** The tear strip then springs at least part way up and facilitates exposure of the pouring opening **22.**

The cap of the invention herein disclosed thus initially embodies a tamperproof and leakproof pressure seal which may be readily and easily opened by simple hand action. Once opened to a reasonable extent a suitable pour opening is formed through which the contents may be dispensed. Though one may pull further and completely remove the cap, this is not normally desirable, for full removal leaves one with a destroyed cap in hand which must be disposed of separately from the bottle. The invention eliminates this dosposal problem and allows the cap and bottle to be neatly disposed of at one time. Furthermore, if the entire contents of the bottle are not initially dispensed the recloseable feature of the cap of the invention allows the mouth of the bottle to be restored to a sanitary closed condition such as to prevent the entry of foreign matter. The closure formed by reseating the tear strip is splash proof and protects against spillage and substantial loss of liquid from the bottle even though the bottle is inadvertently upset.

Other and different variations of the invention may well

suggest themselves to those skilled in the art without departing from the scope and spirit of the invention. It is accordingly to be understood that the article described in the foregoing and shown in the accompanying drawing is to be considered as being illustrative of the invention and is not set forth in a limiting sense.

Having described my invention what I claim is new and desire to secure by Letters Patent is:

In closure construction for containers, a container having an opening therein surrounded by an upwardly extending neck terminating in a peripheral lip, a cap secured about said lip, said cap comprising a disc-like top portion and a skirt depending from and around said top, said skirt terminating in a lowermost free edge, a gasket located within said cap between said skirt and said lip, a hand tear out pour opening in said cap, means closing said opening, said means including an elongated tear strip, said tear strip having a gripping ear formed at one end and having a portion at the other end thereof integrally secured to said top portion and respective interlocking portions on said ear and skirt for releasably securing said tear strip in reclosed position.

References Cited

UNITED STATES PATENTS

2,967,000	1/1961	Burns	220—54
3,130,056	4/1964	Taylor et al.	215—46 X

FOREIGN PATENTS

57,869	7/1940	Denmark.

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