

[54] CAPSULE FOR CHAMPAGNE AND
SPARKLING WINE BOTTLES

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[58] Field of Search 215/277, 324, 328

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[57] ABSTRACT

A metal capsule stopper placed over the cork, more especially on bottles for champagne and sparkling wines and in general, all bottles containing aerated or carbonated liquids or beverages, to eliminate conventional cork wiring without a change in the appearance of the bottles. This capsule is crimped on the bottle, which has a screw-ring. It has, on its outer surface, ribbings which are substantially parallel to the vertical axis of symmetry of the bottle and capsule and into which the cork may expand.

4 Claims, 4 Drawing Figures

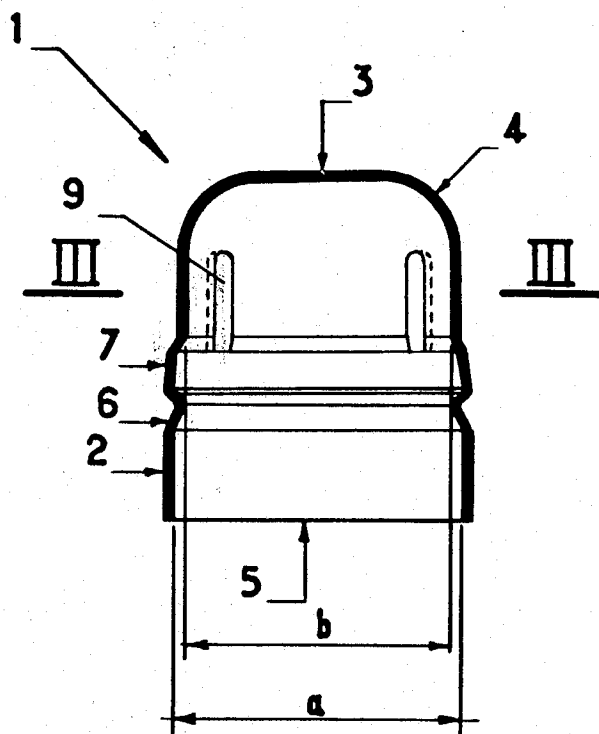


Fig. 2.

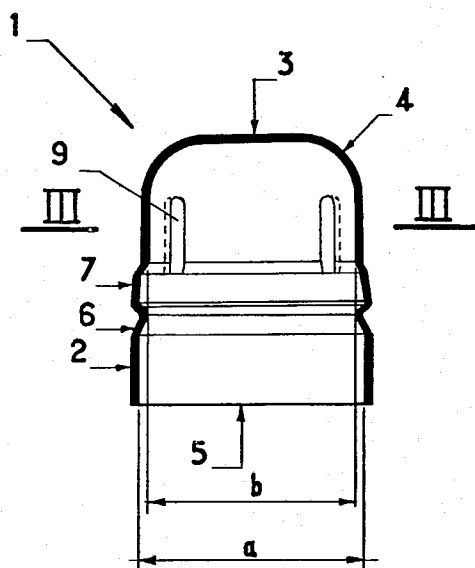


Fig. 1.

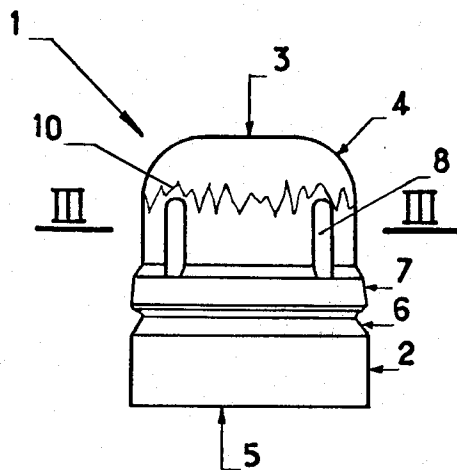


Fig. 3.

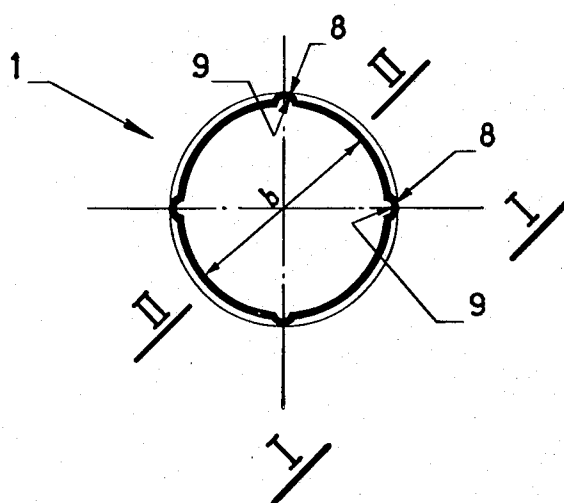
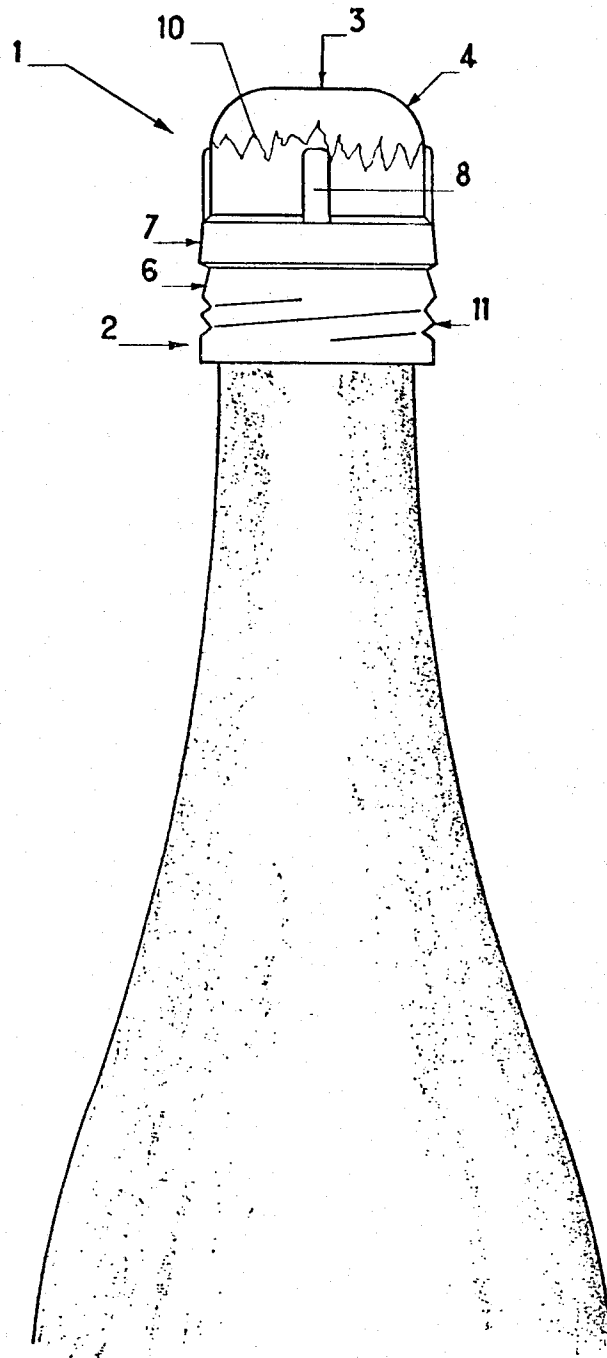


Fig. 4.



CAPSULE FOR CHAMPAGNE AND SPARKLING WINE BOTTLES

The present invention concerns a metal capsule to be used, for example, on bottles for champagne and sparkling wines and, in general, on any bottle containing aerated or carbonated liquids or beverages.

In accordance with an old tradition in the wine trade, bottles of this type are closed by a cylindrical or tapered stopper with a pre-insertion diameter considerably greater than the inner diameter of the bottle-neck. Thus, a 31.5 mm cork may be used corresponding to a bottle opening of 17.5 mm. Since this cork is driven in only to a certain depth, generally about $\frac{3}{4}$, the last third extends over the rim of the bottle ring and, as soon as the cork is capable of resuming its natural shape, this part returns, for the most part, to its original diameter.

Since, moreover, the pressure existing inside the bottle could push the cork out, the latter is usually retained by wiring generally formed by twisted wires passing over the upper surface of the cork, which is in turn protected by a small thin metal plate.

Indeed, if the cork is pushed outwardly by the pressure inside the bottle, the wires could enter the cork and cut the stopper in pieces. Since the upper surface of the cork is protected by a plate, the most these wires can do is to become incrustated in the side part of the cork emerging from the neck which tends to swell even more under the tension created by the inner thrust, on the one hand, and the blocking by the wiring, on the other.

This wiring, the presence of which remains visible under the thin metal capsule which covers the neck of the bottle and the visible part of its closure, gives a very precise and distinctive image of the products for which it forms a part of the packaging. However, from a purely practical viewpoint, it is far from able to meet the requirements of the modern consumer and, especially, presents certain little known technical disadvantages: namely difficult installation, risk of oxidation, and often difficult and even dangerous removal.

The invention which will be described below will eliminate these drawbacks while keeping the distinctive image of the wines or other beverages which it packages and will even facilitate the opening of the bottle by the consumer.

With this purpose in mind, on bottles to be used most especially for champagne and sparkling wines and in general all bottles containing aerated or carbonated beverages, a metal capsule is provided which covers the part of the stopper emerging from the bottle neck and which is crimped on the ring of the bottle which is equipped with a screw-thread; this cap, in the part which covers the extending cork, has on its outer surface, ribbings which are generally parallel to the axis of symmetry of the bottle and to which correspond grooves in the inner surface of the capsule. These parallel ribbings extend upwardly from a circular rib, the lower edge of which merges into a circumferential tightening groove.

In the attached drawings, which represent as nonlimiting examples a capsule according to the invention:

FIG. 1 illustrates a side elevation of a capsule after capping, before the formation of the screw-thread in the skirt;

FIG. 2 shows a vertical section according to the axis of symmetry of the same capsule;

FIG. 3 shows a horizontal section taken along line III-III of FIGS. 1 or 2, and

FIG. 4 illustrates the cap affixed by crimping onto the neck of a bottle.

Capsule 1 represented in the figures is formed by pressing from a metal sheet, e.g., of an aluminum alloy 21/100 mm thick; it has a practically cylindrical skirt 2, the irregularities of which will be pointed out further herein, and its top 3 is connected to this skirt 2 by a rounded rather high radius, e.g., 9 mm.

The skirt presents two parts with different diameters: the diameter of its opening 5 is 34 mm as shown at *a*, while the inner diameter *b* at the base of the rounded area 4 is 32 mm. These two diameters are at least equal, but normally slightly greater than that of the cork before it is placed into the neck. For different cork diameters, the inner dimensions of the capsule are normally adapted.

At a certain distance from the base 5, the part of the skirt with the large diameter *a* offers a narrowed rib 6, of mostly triangular section, the inner diameter of which is equal to that of the part of the skirt with the small diameter *b*; above this groove, the skirt resumes its larger diameter *a*, forming a ring 7 approximately 5 mm in width. These two elements, the groove 6 and the ring 7, form a circular strainer which prevents any deformation of the cap during handling, on the one hand, and installation, on the other.

Above the ring 7, the part of the skirt with reduced diameter *b* begins; the shape of this cylindrical part is, however, irregular, since, starting from the ring 7 and perpendicular to it, four vertical ribs 8 are formed in the wall so as to create on the inside four grooves 9. Their depth is approximately 1 mm in the example described. For purely esthetic reasons, the rounded area 4 may be provided with an irregular fold 10.

The capsule as has just been described is now ready to be crimped onto the bottle by a stopper; in this position it is equipped with a screw-thread 11 through a deformation in the metal of the lower part 2 of the skirt 1 in the screw-thread of the neck. Lastly, the entirety is covered by an overcap or capsule made of a thin sheet of metal in the same manner as traditionally-closing champagne and sparkling wine bottles.

The presence of the vertical ribs 8 and of the fold 10 imparts to the entirety an appearance which corresponds to the traditional aspect which the consumer is accustomed to finding with this category of beverages. The advantages of the new cap do not, though, end there, and a certain number of other advantages are present which are of undisputed technical and/or economic benefit.

The lack of the cork wiring presents a definite advantage for the bottler, as, for example, the presence of the twisted ring of the wiring pointing upwards is a considerable inconvenience for the placement of packing or stopping caps. At the same time, it brings about the possible omission of the plate covering the cork; finally, it makes it easier for the consumer to open the bottle.

Another factor which plays a vital role for the consumer is the presence of the grooves 9 inside the capsule. As is well known, the pressure which exists inside the bottle exerts high pressure on the cork, which has a tendency to push out. However, since it is retained by the capsule, its head is slowly transformed and fills the entire inner volume of the capsule above the neck; in particular, it penetrates the grooves 9 and the contour

of the head assumes an irregular shape. When, at the time of opening, the consumer begins by unscrewing the capsule 1, the cork is entrained in this rotational movement and the adhesive forces between the glass and the cork are, if not broken, then greatly reduced.

If the inner pressure is very high, the cork may possibly be expelled with the removal of the capsule; in this case the flow of the liquid may, however, be controlled more easily than if this incident occurs when the wiring is removed. Normally, though, the final part of the opening will be achieved through a direct action on the head of the cork, the gripping of which is facilitated by the swellings corresponding to the four grooves 9 which, for this operation, are much more useful than the grooves so often left by the penetration of the vertical wires of the cork-wiring in the cork.

Lastly, the capsule which has just been described may be used equally for champagne-ring bottles or for champagne crown-ring bottles; in both cases the cylindrical part of the ring has only to be provided with a screw-thread, which requires only a minor change in the bottle's manufacturing mold.

I claim:

1. A capsule for covering and retaining a cork stopper which has been driven partially into a wine bottle having screw threads about its neck comprising a cylindrical member having a closed and an open end formed of thin formable sheet metal and of such internal diameter as to fit over said cork stopper and bottle neck, a plurality of grooves on the inner surface of said member substantially parallel to the vertical axis of said member and adapted to receive areas of said cork stopper which expand under internal pressure.

2. A capsule as defined in claim 1, wherein said member includes a skirt portion deformed over the threads of said bottle neck.

3. A capsule as defined in claim 1, wherein a plurality of extending ribs are formed on the outer surface of said member opposite said grooves.

4. A capsule as defined in claim 2, and further including an annular rib on the outer surface of said member immediately above said skirt portion.

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