# United States Patent

[11] 3,603,469



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[21] Appl. No. 800,888
[22] Filed Feb. 20, 1969
[45] Patented Sept. 7, 1971
[32] Priority Apr. 11, 1968
[33] Italy
[31] 8589B/68


[54] GUARANTEE CAP
4 Claims, 1 Drawing Fig.


[52] U.S. Cl. ..... 215/6, 206/47 A
[51] Int. Cl. ..... A45c 11/04
[50] Field of Search ..... 215/6, 46, 42; 206/47 A



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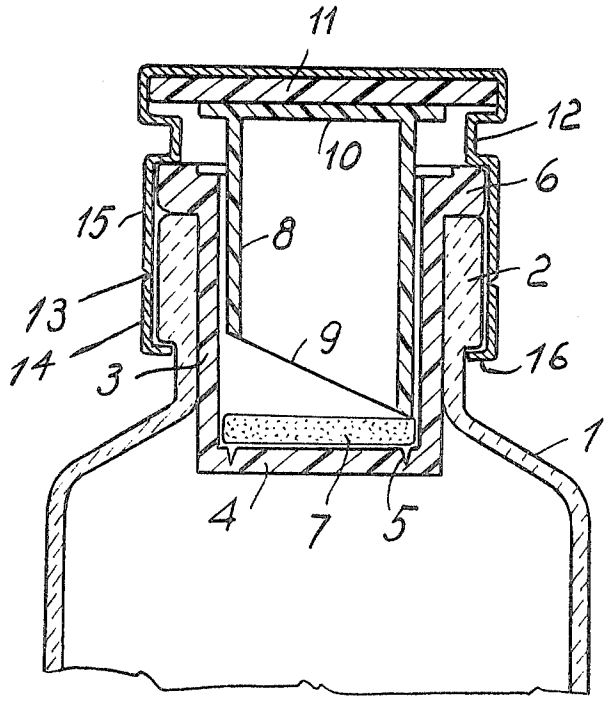
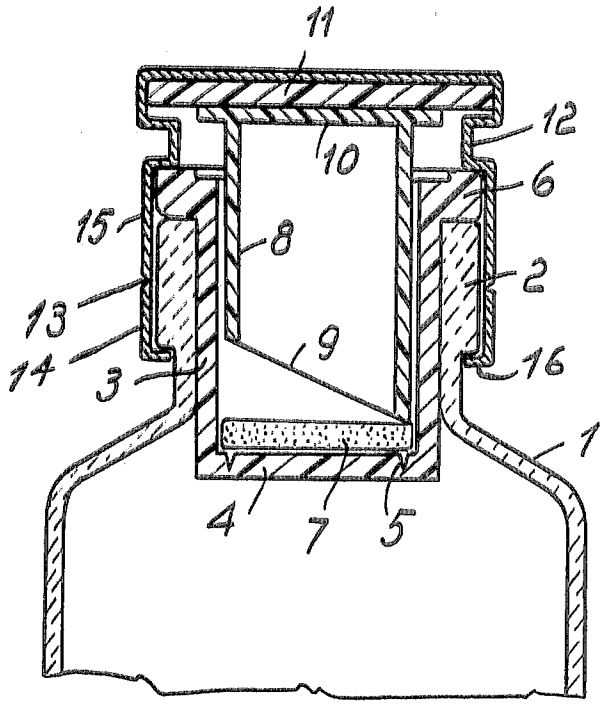
ABSTRACT: A container having a frangible bottom wall and radially outwardly extending flange at its upper open end is inserted in the neck of a bottle with the flange abutting against the upper face of the bottle neck. A member having at its lower end a cutting edge is located in the container movable from an upper rest position towards the bottom wall of the latter so that by such movement the bottom wall may be broken to thereby discharge the contents of the container into the bottle. A cap surrounding the bottle neck and flange of the container is provided in the region of its upper end with a rolled in groove which forms a shoulder pressing the flange of the container tightly against the upper face of the bottle neck while at the same time providing above the flange a space normally maintaining the cutting member in its upper rest position.

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## GUARANTEE CAP

The present invention relates to an aluminum cap which, in addition to providing a closure tor bottles or similar containers, is suitable to enclose a container driven into the bottle neck and adapted to contain tablets, or powders, which shall fall down into said bottle, when its contents shall be used, as in the case of different pharmaceuticals.

Said cap has a cylindrical shape and is fitted with an annular shoulder, obtained by an annular groove of said cap, through which it will apply pressure onto the flange of the container in such a manner to keep it against, with fluid sealing, the opening of said bottle.

In such a manner the shape of the cap will be less complicated and of easier fabrication and more economic, as compared to the enclosure of prior art.

The object of this invention, only as example but not as limitation, is shown in the single FIGURE of the accompanying drawing.

With reference to said figure, a bottle **1**, containing for example a liquid medium, is provided with a neck **2** into which a container **3** having a cylindrical shape, enclosed at the bottom portion by a wall **4** which can be broken along a groove **5** against light resistance. At the upper portion of said container is provided an overturned portion or flange **6** through which it rests against the edge of neck **2**.

Container **3** is adapted to contain one or more tablets **7**, or a powder, which fall down into bottle **1**, when wall **4** is broken along the breaking line **5** is made to open.

Breaking of wall **4** occurs through a cylindrically shaped element **8** characterized by an inclined edge **9** for cutting and one upper wall **10** onto which a pressure can be imparted by the fingers, in a manner that edge **9** can fit into groove **5** and thus causing the breaking of wall **4** along said groove.

According to the present invention, a cap made in aluminum **15**, substantially cylindrical in shape, and executed in a manner to close tightly the neck **2** and to enclose into its internal portion the element **8**, in lifted-up position, and flange **6** of container **3**. Internally said cap is provided a gland or plate **11** against which rests the upper wall **10** of element **8**. Said cap **15** is characterized by a deep annular groove **12**, with preferably straight walls, in a manner to present a resistant shoulder which is held tightly against the flange **6** by means of an inwardly extending annular flange **16** at the lower end of the cap which engages a bottom face of the rim of the bottle neck **2**, thus ensuring a sealing between the flange **6** and the bottle neck.

Cap **15** is provided with one or a plurality of breaking lines



**13**, in a manner that a strip **14** can be torn off along said line **13** when the bottle is opened.

Cap **10** obviously is appropriated to the nature of neck **2**, that is, it can be rolled both over a smooth external surface, and over a threaded external surface of neck **2**.

What I claim is:

1. In combination with a bottle having a bottle neck with an outwardly extending rim, a container adapted to contain tablets or powder fitted in said bottle neck, said container having a frangible bottom wall and a radially outwardly extending flange at the upper open end thereof abutting against the upper face of said rim; means having a cutting edge at the lower end thereof located in said container movable from an upper rest position in which said cutting edge is upwardly spaced from said bottom wall and in which an upper portion of said means projects through and upwardly beyond said open end of said container to a lower active position in which said cutting edge engages said frangible bottom wall to break the latter; and a cap surrounding said rim of said bottle neck and extending with a top wall thereof over said upper portion of said means in the rest position of the latter to prevent the same from being inadvertently moved to said active position, said cap being provided with an inwardly extending annular groove forming a shoulder having a bottom face engaging the top face of said flange of said container and at its lower end an inwardly extending annular flange engaging the bottom face of said rim so as to hold said flange of said container tightly against the top face of said rim, while spacing the top wall of said cap upwardly from said flange of said container, said cap being further provided between said shoulder and said inwardly extending flange thereof with an annular notch permitting tearing off the cap portion beneath the notch and therewith removal of the remainder of said cap from said bottle neck so that said means may be moved from said rest to said active position by flexing said top wall of said cap, while said cap may be removed to open said bottle by tearing off said cap portion from the remainder of said cap.

2. A combination as defined in claim 1, wherein said cap is made from thin sheet metal of substantially uniform thickness.

3. A combination as defined in claim 2, wherein said groove has a substantially rectangular cross section.

4. A combination as defined in claim 3, wherein said cutting means is in the form of a hollow cylindrical element having a cylindrical wall closed at the top by a transverse wall extending beyond that cylindrical wall and including a plate sandwiched between said transverse wall and said top wall of said cap, said shoulder of said cap extending inwardly beyond a peripheral portion of said plate.