Feb. 27, 1923. 1,446,474

W. R. MAHNKEN

BOTTLE APPLIANCE

Filed Sept. 10, 1921

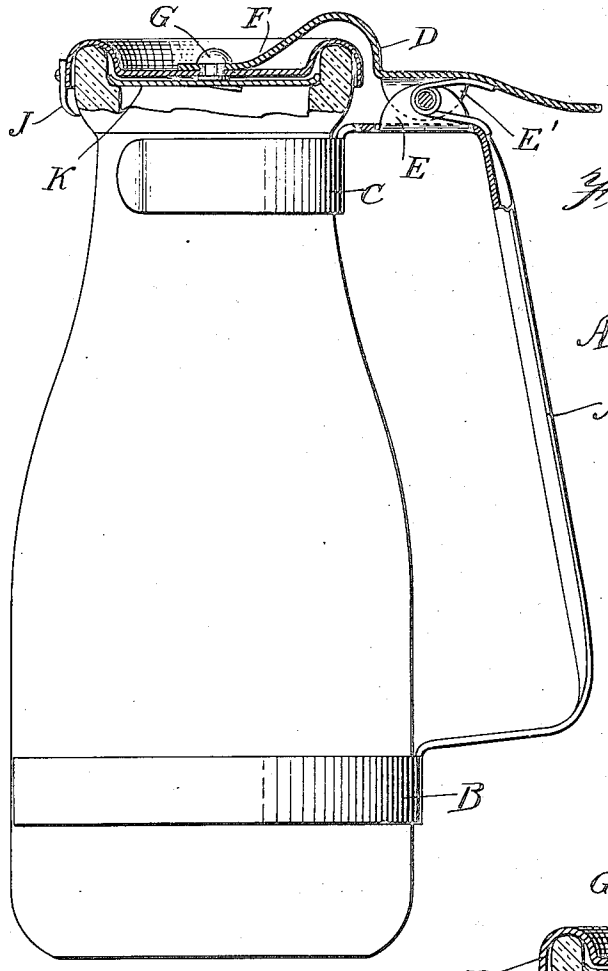


Fig. 1.

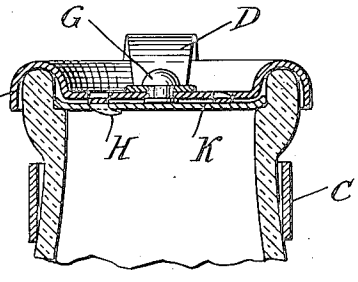


Fig. 3.

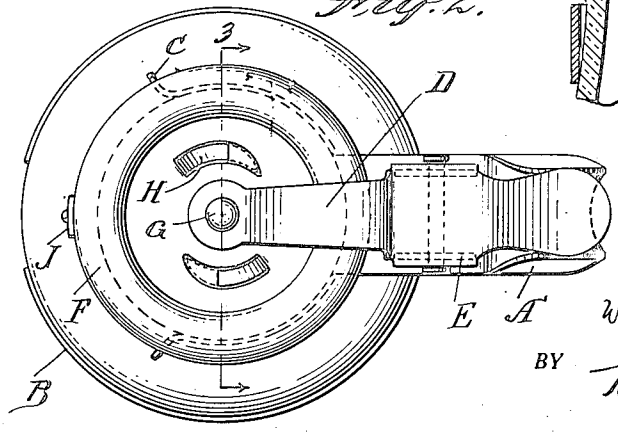


Fig. 2.

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UNITED STATES PATENT OFFICE.

WILLIAM R. MAHNKEN, OF NEW YORK, N. Y.

BOTTLE APPLIANCE.

Application filed September 10, 1921. Serial No. 499,740.

To all whom it may concern:

Be it known that I, WILLIAM R. MAHNKEN, a citizen of the United States, and a resident of the city of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Bottle Appliances, of which the following is a specification.

This invention relates to an arrangement for facilitating the dispensing of liquids from containers and has more special reference to a combined pouring frame and closure more particularly adapted to be applied to paper capped milk bottles, the frame affording a convenient means for handling the ordinarily wet milk bottle and the closure serving as a permanent cover to the container after the paper cap has been removed.

In the preferred form, the closure member is provided with a decapping arrangement which enables the paper cap to be removed without splashing the bottle contents, and in the specific embodiment of the invention illustrated in the drawings, takes the form of one or more piercing points formed in a rotatable cap member. These piercing points engage the usual flat paper bottle caps when the cover member is rotated thereby enabling the paper cap to be conveniently removed without splashing the bottle contents, and without using the usual crude implement such as forks, knives, etc.

While the present invention is primarily adapted to be used with milk bottles having a paper cap it is to be understood that the invention might be applied to other containers as for example beer or wine bottles preserving jars and the like. While in general the application of the invention to different types of containers will require some modification of the structure; the specific embodiment illustrated (applicable particularly to milk bottles) is so constructed as to be interchangeable from quart to pint bottles. This interchangeability is afforded by the provision of a resilient member which embraces either size of bottle and securely locks the pouring arrangement to the bottle.

Another phase of the invention illustrated in the specific embodiment resides in the provision of an arrangement for cutting the auxiliary cap or bonnet which is used in certain sections of the country to afford additional protection to the best grade of milk.

In the drawings which afford an illustration of the underlying principle of the invention enabling those skilled in the art to construct various equivalent modifications,

Fig. 1 is a side elevation of the invention partly in section.

Fig. 2 is a top plan view, and

Fig. 3 is a section of Fig. 2 on the line 3—3.

Referring to the drawings a frame indicated in its entirety by A comprises a pouring handle A′ to one end of which there is attached or formed therewith a resilient member B and to the other end of which there is attached a resilient member C. While two resilient members are shown and are preferred, one such member will serve the purpose provided of course that care is taken to employ material which is sufficiently heavy to effect the desired result.

In the preferred form the resilient members are shown as flat springs although helical springs wholly encircling the bottle may of course be used.

Independent of the manner of attaching the frame to the bottle it is further provided with an arrangement for supporting a tiltable arm D. Specifically this arrangement conveniently takes the form of upstanding lugs E (preferably formed with the frame A) and hinged to a lug E′ (preferably formed with the tiltable arm D) by means of a suitable pin. A spring one end of which co-operates with the handle A normally presses the arm D in a counter clockwise direction thereby normally holding the member F which is preferably stamped to conform to the shape of the bottle top in closed position. The cover member F is swivelled on a pin G which is secured to one end of the arm D. This cover member is provided with one or more arcuate piercing points H arranged substantially tangential to a circle having its center at the center of rotation of the cover F, and are preferably stamped directly from the material of the cover and inclined downwardly so as to pierce the paper cap when the cover member F is rotated.

It is to be understood that some of the bottles containing a higher grade of milk are provided with an auxiliary paper cap, or bonnet overlying the upper end of the bottle. In order that this cap may be conveniently removed, an auxiliary cutting device J may be and preferably is pivotally connected with the periphery of the cover

F. This member consists of spring metal so that it may be readily swung and lifted to an inoperative position with its point resting on the cover.

The device is used and operates as follows: The frame A is pushed down over the top of the bottle, the flat springs B and C being slightly spread during this operation thereby affording an effective grip on the bottle and locking it and the frame together. If an auxiliary paper cover or bonnet is found on the milk bottle the swivelled cutting member J is turned down so that its cutting point engages the cover or bonnet. The cover member F is then rotated thereby making a circular cut in the auxiliary paper bonnet. When the cover F has been completely rotated and the auxiliary bonnet severed, the member D is tilted to permit removal of the severed portion of the bonnet.

The cover F is then again permitted to take its normal position, and rotated, the piercing points H being thereby forced into the usual flat paper bottle cap K. On tilting the member D this paper cap will rise with the cover F and may then be removed or left on the piercing points as desired.

While a specific embodiment of the invention has been shown in the drawings, it is to be understood that various modifications thereof within the scope of the appended claims and equivalents of the elements set forth therein are included in the scope of the invention.

Having thus revealed the invention the following combinations and sub-combinations of elements and their equivalents are claimed:

1. A decapping device for removing the paper caps on milk bottles comprising a cover member having an annular bead shaped to conform to the bottle mouth and having a flexible cap piercing element integrally formed therewith adapted to lock with the cap on rotation of the cover member.

2. A decapping device for removing the paper caps on milk bottles combining a cover member having an annular bead shaped to conform to the bottle mouth and having a flexible cap piercing element integrally formed therewith adapted to lock with the cap on rotation of the cover member, and means to rotatably support the cover member from the bottle.

3. In a combined pouring and decapping device for milk bottles, the combination of a frame comprising a handle, a resilient member secured to said frame, a tiltable member secured to the frame, and a rotatable cap member having a piercing point secured to the tiltable member, the piercing point being adapted to lock with the paper bottle cap on rotation of the cap member.

4. A decapping device for removing the paper caps and auxiliary paper bonnets on milk bottles which comprises a cover member having a bonnet cutting member pivotally secured thereto and a cap piercing element formed therewith, the bonnet cutting member being adapted to cut the bonnet on rotation of the cover member and the piercing element being adapted to lock with the cap on rotation of the cover member.

5. A decapping device for removing the paper caps on milk bottles comprising a sheet metal cover member shaped so that a major portion of said member lies within the mouth of the bottle in close proximity to the paper cap, said portion having a flexible cap piercing point stamped from the material of the cover member and adapted to lock with the cap on rotation of the cover member.

6. In a combined pouring and decapping device for milk bottles, the combination of a pouring frame, a tiltable member secured to the frame, and a rotatable cap member having a piercing point carried by the tiltable member, the piercing point being adapted to lock with the paper bottle cap on rotation of the cap member.

7. A decapping device for removing the paper caps on milk bottles comprising a cover member having an annular bead shaped to conform to the bottle mouth and having a plurality of flexible cap piercing elements, the cap piercing elements being each integrally formed with a common bridging material.

Signed at the city of New York in the county of New York, and State of New York this 31st day of August A. D. 1921.

WILLIAM R. MAHNKEN. [L. S.]