No. 625,197. Patented May 16, 1899.

E. M. PHILLIPS.

STOPPER FOR MILK BOTTLES.

(Application filed Mar. 4, 1899.)

(No Model.)

Fig. 1.

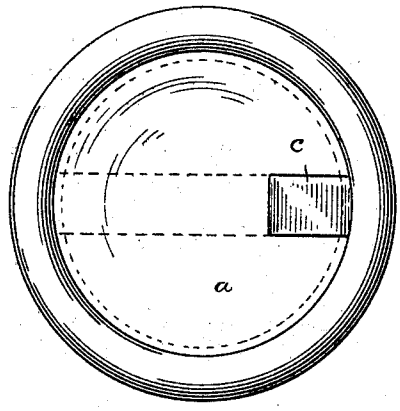


Fig. 2.

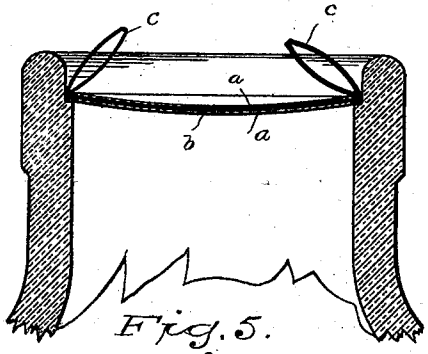


Fig. 5.

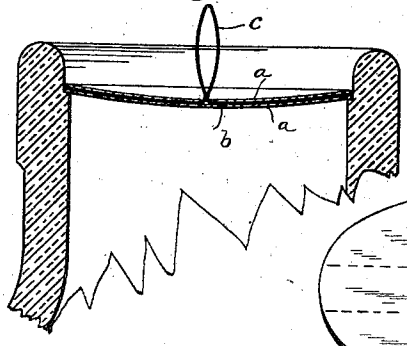


Fig. 4.

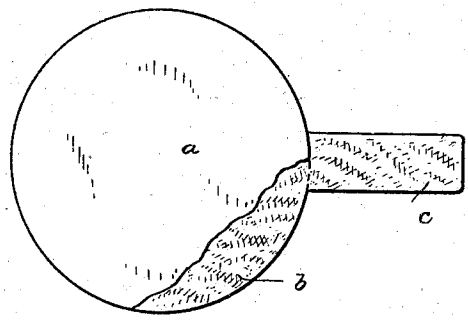
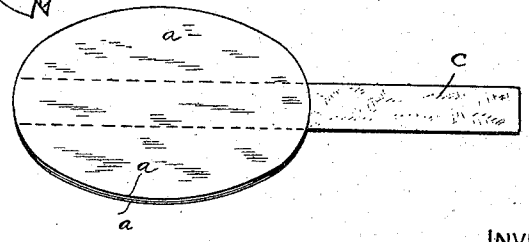


Fig. 3.



WITNESSES

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STOPPER FOR MILK-BOTTLES.

SPECIFICATION forming part of Letters Patent No. 625,197, dated May 16, 1899.

Application filed March 4, 1899. Serial No. 707,744. (No model.)

To all whom it may concern:

Be it known that I, ELIZABETH M. PHILLIPS, a citizen of the United States, residing at Glenbrook, county of Fairfield, State of Connecticut, have invented a new and useful Stopper for Milk-Bottles, of which the following is a specification.

My invention has for its object to provide an inexpensive stopper for jars, cans, and bottles, more especially cream and milk bottles, which shall avoid the serious objections inherent in all stoppers of this class of which I am aware.

It is of course well understood by all who are in any way familiar with the art that a common way of closing milk and cream bottles is by means of a disk of paper hard-finished on its under side, which is forced into the neck of the bottle and rests upon a shoulder therein, thereby providing an air-tight closure for the bottle. It is a serious objection to these disks as ordinarily made that they can only be removed by a metallic instrument, the use of which must be by making a fulcrum of the edge of the bottle. The result is that the edges of the bottles become chipped, large numbers of bottles are ruined, and bottles not ruined are inconvenient, if not dangerous, to handle owing to the sharp edges at the top where the glass has been chipped, and a still greater danger results from chips and fine particles of glass getting into the milk or cream in the bottle. It has been attempted heretofore to avoid the use of metallic instruments and the consequent loss to the bottler and danger to the consumer through chipping of the bottles by providing stoppers of this class with tabs extending from the side thereof for the purpose of enabling a consumer to remove the stoppers by pulling upon the tabs. These tabs, however, have been of uniform thickness with the stoppers themselves and have been objectionable owing to the fact that the tabs broke on the under side of the stoppers within the edges and permitted the milk or cream to soak into the stoppers, that the tabs tore off when it was attempted to remove the stoppers, and that stoppers provided with tabs were much less conveniently packed, the tabs extending out from the edges of the disks and being likely to become broken and if folded inward upon the stoppers they broke inside of the edges and practically ruined the stoppers.

My novel invention overcomes all of the objections enumerated and provides a strong and impervious stopper that will close the bottle tightly and may be removed without the use of an instrument, thereby avoiding the possibility of injury to the bottle and without injury to the stopper, so that the stopper may be replaced in the bottle if the contents are not all used, the stoppers, moreover, being adapted to be packed closely together for shipment and not being liable to injury, as there are no projections from the edges thereof.

In the accompanying drawings, forming part of this specification, Figure 1 is a plan view of a milk or cream bottle closed with one of my novel stoppers; Fig. 2, a sectional view corresponding therewith, illustrating a looped form of tab and also showing the stopper as provided with a tab on each side; Fig. 3, a perspective illustrating a form of my invention in which the tab is made longer and is not looped; Fig. 4, a plan view illustrating a form of my invention in which the intermediate ply of textile material instead of being a strip extending across the stopper corresponds in outline with the stopper itself, an integral portion of said intermediate ply extending outward at one side to form the tab; and Fig. 5 is a sectional view corresponding with Fig. 2, illustrating a form of my novel stopper in which a tab extends through and projects above one of the outer plies of the stopper.

My novel stopper consists, essentially, of two outer plies, which I have indicated by *a*, and an intermediate ply *b*, which has formed integral therewith a tab *c*, which extends outward therefrom. The outer plies are of paper or pasteboard and may each consist of any number of independent plies, the outer surface being of course hard-finished, so as not to absorb milk or cream under ordinary circumstances. The intermediate ply may be of any suitable textile material strong enough for the purpose required. For example, it may be either a strip of tape or a strip of ordinary textile material, as indicated in Figs. 1, 2, 3, and 5, or a full ply of textile material corresponding in outline with the stopper itself, as indicated in Fig. 4. The tab *c* is an

extension of the intermediate ply which extends outward in any direction from the stopper. Where the intermediate ply is a strip of tape or of ordinary textile material, the ends of the strip may be securely fastened between the outer plies and the tab may be in the form of a loop to receive the finger of the operator, as indicated in Figs. 1 and 5, or, if preferred, a loop of the tape or textile material may be provided on opposite edges of the stopper, as shown in Fig. 2, or one end of the strip may stop at one edge of the stopper and the other end extend any required distance beyond the edge of the stopper, as indicated in Fig. 3. Where the intermediate ply is a sheet of textile material the same size as the stopper itself, the tab consists simply of an extension of the intermediate ply beyond the edge of the stopper, as clearly shown in Fig. 4.

The advantages of my novel construction will be apparent. By making the tabs of textile material and textile material only I insure that the tabs will not break off in use, that being perfectly flexible they will not be in the way in packing the stoppers for shipment, that there shall be no breaking or scoring of the under side of the stoppers to permit milk or cream to soak in, and that the edges of the bottles will be closely engaged by the edges of the stoppers entirely around, so that air cannot enter or the contents ooze out, and by using the textile material in the form of an intermediate ply only—that is, placing it between plies of hard-finished paper—I render it impossible for the textile material to become soaked with the cream or milk and render it impossible for the contents of the bottle to be tainted with glue or paste. It should be noted, furthermore, that the fact of the tabs being made of textile material only and being part of an intermediate ply becomes of great importance when the bottles are closed mechanically or in large quantities by hand, as even where the tabs extend from the edge of the stoppers the tabs will lie close to the necks of the bottles and the lower half of the edge of each stopper will engage the neck of the bottle and the shoulder therein without the slightest danger of any break, check, or score in the under side of the stopper, thus leaving it impervious under all ordinary circumstances.

Having thus described my invention, I claim—

1. A stopper of the character described consisting of outer disks of paper and between said disks an intermediate ply consisting of a strip of textile material said strip extending outward from the disks to form a tab, substantially as shown for the purpose specified.

2. A stopper of the character described consisting of outer plies of hard-finished paper and between said plies an intermediate ply consisting of a strip of textile material having its ends secured between the outer plies and extending outward from the stopper to form a loop-shaped flexible tab.

In testimony whereof I affix my signature in presence of two witnesses.

ELIZABETH M. PHILLIPS.

Witnesses:

JAMES H. LOUNSBURY,

GEO. W. MESSINGER.