H. S. SHEPPARD.

METHOD OF MAKING BOTTLE CLOSURES.

APPLICATION FILED MAY 28, 1908.

902,843. Patented Nov. 3, 1908.

Fig. 1

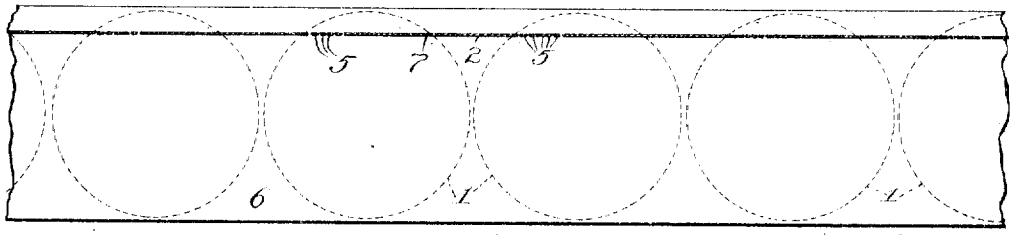


Fig. 2.

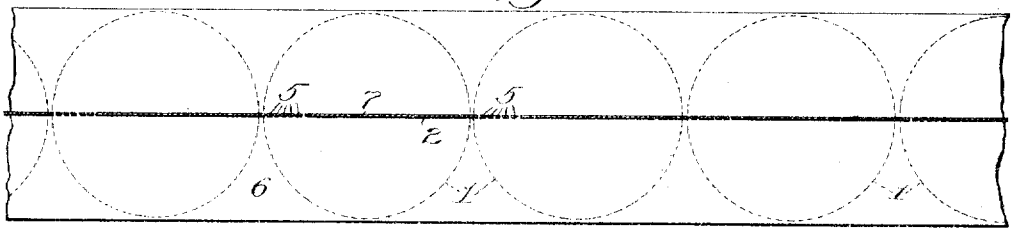


Fig. 3

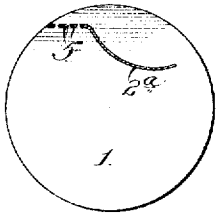


Fig. 5

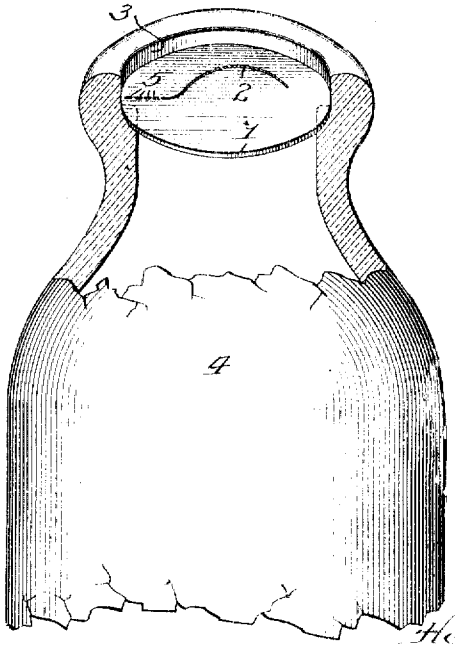
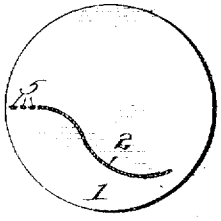


Fig. 4



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METHOD OF MAKING BOTTLE-CLOSURES.

No. 902,843. Specification of Letters Patent. Patented Nov. 3, 1908.

Application filed May 28, 1908. Serial No. 435,383.

To all whom it may concern:

Be it known that I, HENRY S. SHEPPARD, a subject of the King of Great Britain, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in a Method of Making Bottle-Closures, of which the following is a full, clear, concise, and exact description.

My invention relates to a method of making bottle closures. Its object is to provide a bottle-closure of the nature of the ordinary paste-board disk, adapted to be inserted in the countersunk opening in a milk bottle or the like, said disk being provided with means by which it may be lifted from the mouth of the bottle.

A further object is to produce a simple device of this character by a simple and inexpensive method of manufacturing the same.

The bottle-closure made in accordance with the method of my invention consists of a disk of pasteboard, or the like, in which one end of a thread is sewed, the other end of said thread being adapted to be grasped for the purpose of withdrawing the disk from the mouth of the bottle.

The structure of the bottle closure and my preferred method of making the same may be more readily understood by reference to the accompanying drawing, in which

Figure 1 is a plan view of a blank of pasteboard or the like having a thread stitched across it, the dotted circles indicating the disks which are to be punched or otherwise formed from the blank; Fig. 2 is a similar view showing a modification; Figs. 3 and 4 are plan views of the disks resulting from the employment of the methods illustrated in Fig. 1 and Fig. 2, respectively; Fig. 5 is a perspective view partly in section and partly broken away, showing the application of the bottle-closure.

Like parts are designated by similar reference characters throughout the several views.

A commonly-used closure for milk bottles consists of a pasteboard disk which fits in the countersunk opening of the bottle. Such disk has, heretofore, been commonly removed, in opening the bottle, by inserting the tine of a fork or other sharp pointed implement downward through the disk and then lifting the disk out of its seat by means of said fork or other implement. Such method of removing the disk is objectionable, for the reason that in pushing the implement down so as to pierce the disk, there is a liability of the disk bending or being pushed into the milk. In such event, the downward pressure of the disk upon the surface of the milk may cause some of the liquid to be forcibly ejected from the bottle. Moreover, the removal of the stopper in such manner generally renders it unfit for re-insertion in the bottle opening.

In the bottle closure of my invention, the disk 1 of pasteboard or similar material has affixed thereto a thread 2 as shown in Fig. 4 or a thread 2^a, as shown in Fig. 3. Such thread provides a readily accessible handle by which the disk may be withdrawn from the opening 3 of a bottle 4, as shown in Fig. 5. The threads 2 and 2^a are affixed to the disk by being sewed or stitched into the same, as at 5, the free end of the thread being of sufficient length to be grasped by the fingers.

Prior to my invention, various means have been suggested for rendering the pasteboard disk readily removable, but, so far as I am aware, no practical means which at the same time is comparatively inexpensive has been devised. It is apparent that to first form the disks and then to separately sew or otherwise fasten a thread thereto would involve such expense as to render the device impracticable.

A further feature of my invention consists, therefore, in the method of forming the disk with the string attached thereto.

Referring to Fig. 1 and Fig. 2, the card or blank 6 of pasteboard or other like material from which the disks 1 are to be punched, is first provided with a row of thread 7 stitched thereto, the stitches being indicated at 5. Instead of having the stitches continuous in the row, I preferably provide such stitches at definite points or intervals only, such intervals corresponding approximately to the diameter of the disks to be formed. The thread however is, as shown, continuous, there lying between each interval of stitching a straight unstitched portion 2 of the thread.

After the thread has been thus secured, preferably at intervals, to the blank 6, the disks are punched from said blank, so that each disk may include one of the points of attaching of the thread, which may be done

by punching the disks along the line of the row 7, as indicated in Fig. 1 and Fig. 2. In punching the disks the thread is of course severed, each disk being thus provided with a thread 2 or 2^a forming a handle secured at one end to the disk by stitches 5.

When, as shown in Fig. 2, the row of thread 7 extends diametrically across the disks, a longer free end 2 of the thread for each separate disk is provided than when the row extends across a short arc of each disk. In either case the disks are preferably so punched that the stitches 5 are near the circumference thereof.

With the thread 2 thus secured near the circumference of the disk, a slight upward pull will readily remove the disk 1 from the mouth 2 of the bottle without injuring the disk and without danger of spilling the milk.

While for purposes of illustration I have shown only one row of stitching and one row of disks, it is obvious that my invention is not so limited, and that the card may be provided with as many rows of thread attached thereto as there are rows of disks capable of being punched from the card.

Having thus described my invention, I claim:—

1. The method of forming disk bottle-closures which consists in affixing at intervals a line of thread to a blank and punching out disks from said blank along said line of thread, thereby forming said disks and at the same time severing said thread in separate portions each of which is attached to a disk.

2. The method of manufacturing disk bottle-closures which consists in sewing a line of thread into a card of pasteboard with groups of stitches made with said thread at spaced apart portions of the card, and punching out a plurality of disks therefrom, each disk including a portion of said thread.

3. The method of manufacturing bottle-closures which consists in attaching a line of thread to a card of pasteboard by stitches at intervals in said line corresponding approximately to the diameter of the disks to be formed from said card, and punching out the disks along the line of said line of thread.

4. The method of forming disk bottle-closures which consists in extending a line of thread across the surface of a card, and attaching the same to the card at points corresponding approximately to the diameter of the disks to be formed from said card, and punching each disk from said card so as to include one of the points of attaching, and at the same time severing the thread into separate portions attached to the disks formed.

In witness whereof, I, hereunto subscribe my name this 25th, day of May A. D., 1908.

HENRY S. SHEPPARD.

Witnesses:
GEORGE E. FOLK,
GEO. C. DAVISON.