C. M. PREVEAR.

STOPPER REMOVING AND HOLDING DEVICE.

APPLICATION FILED FEB. 12, 1915.

1,178,100. Patented Apr. 4, 1916

Fig. 1.

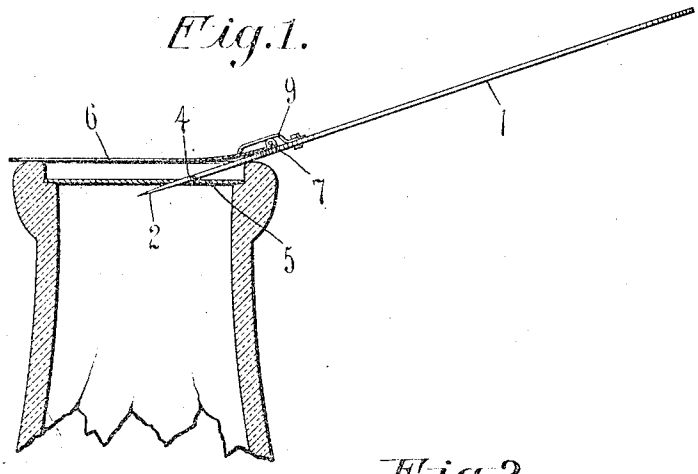


Fig. 2.

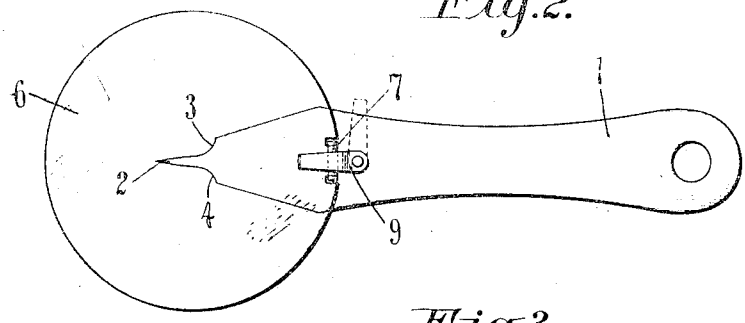


Fig. 3.

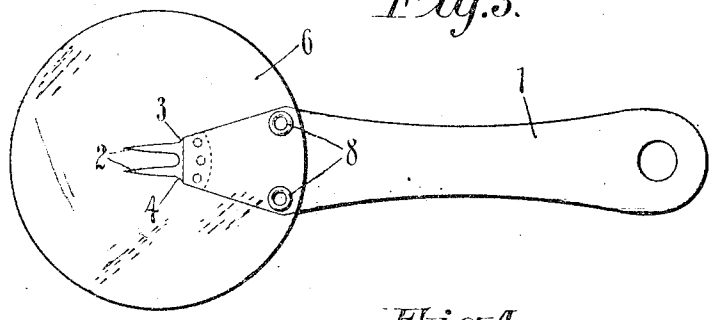
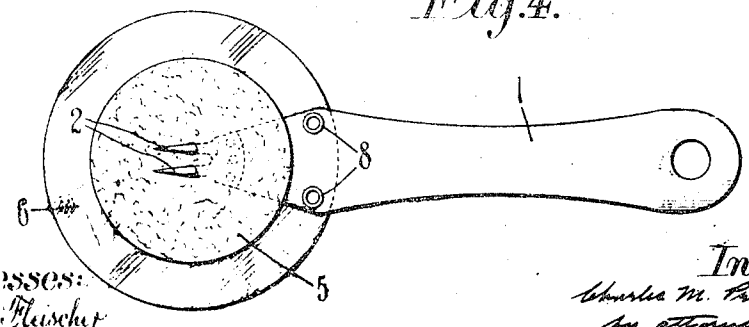


Fig. 4.



Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES MILLER PREVEAR, OF LEOMINSTER, MASSACHUSETTS.

STOPPER REMOVING AND HOLDING DEVICE.

1,178,100. Specification of Letters Patent. Patented Apr. 4, 1916.

Application filed February 12, 1915. Serial No. 7,734.

To all whom it may concern:

Be it known that I, CHARLES MILLER PREVEAR, a citizen of the United States, and resident of Leominster, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Stopper Removing and Holding Devices, of which the following is a specification.

My invention relates to a stopper removing and holding device with the object in view of providing a simple, convenient and inexpensive device for removing puncturable stoppers from milk bottles and other receptacles.

A practical embodiment of my invention is represented in the accompanying drawings in which,

Figure 1 is an edge view of the device as it appears in use when removing a paper stopper from the neck of a milk bottle. Fig. 2 is a top plan view of the device. Fig. 3 is a top plan view of a modified form of the device, and Fig. 4 is a bottom plan view of the said modified form, showing the paper stopper resting thereon in the position it would assume after having been removed from a bottle.

The shank of the device, denoted by 1, may be made of any suitable material having the necessary strength, a thin piece of iron or steel for example, and this may be developed at its outer portion into convenient shape to be grasped by the hand, and its inner end may be narrowed and finally developed into a sharp prong 2 for piercing the stopper. Fairly abrupt shoulders 3 and 4 at the base of the prong 2, serve to limit the thrust of the prong into or through the stopper 5, here shown as the paper stopper commonly used to close milk bottles in transit, although I do not wish to be understood as limiting the use of the device to either paper stoppers or milk bottles, as it may be used successfully in connection with any puncturable stopper capable of being removed by a prong or prongs. Instead of developing the shank into a prong integral therewith, it may have a prong section provided with one or more prongs secured to the shank, as shown in Figs. 3 and 4.

A guard, denoted by 6, and here shown as a thin disk of translucent or transparent material, such, for example, as celluloid, is secured to the shank either by a hinge as shown at 7, Figs. 1 and 2, or by rivets 8, as shown in Figs. 3 and 4, and extends over the prong 2. When the guard disk is hinged, a button 9 or other well known or suitable device may be employed to hold the guard in position over the prong. The hinge admits of turning the guard disk up away from the prong for conveniently cleaning the disk or sharpening the prong.

It is intended that the guard shall be large enough to cover the mouth of the bottle or other vessel from which the stopper is to be removed, so that when the prong or prongs are thrust through or into the stopper, the guard will prevent any of the contents of the bottle or vessel from unintentionally escaping from the mouth of the bottle or vessel.

It is obvious that the guard disk might be made non-transparent if so desired, but the transparent feature is quite advantageous as it admits of adjusting the point of the prong in the desired position on the stopper before giving the prong the piercing thrust.

In operation, the device is grasped by its shank and the prong or prongs thrust into the stopper, as shown in Fig. 1. The operator then presses down on the shank and lifts the stopper from its seat and removes it from the bottle or vessel and the device then becomes a holder if so desired and may be laid reverse side up on the table or other support, the guard acting as a shield to prevent any drippings from the stopper from reaching the table or support, and, if so desired, the stopper may be replaced in the mouth of the bottle or vessel by manipulating it with the device and without handling the stopper. If the guard is hinged to the shank it may be formed of either rigid or flexible material, but if riveted a flexible material is preferred, as this admits of changing the angle of the prong relative to the plane of the guard to more readily pierce the stopper while the guard is pressed closely against the mouth of the bottle. The guard not only acts as a preventer of spattering and a shield for the table or support, but also shields the prong from accidental injury or distortion and shields the operator from accidental injury from the slipping of the prong or prongs.

What I claim is:

1. A stopper remover and holder comprising a shank provided with a prong in position to be pushed into a stopper and with a guard sufficiently large to cover the mouth of the vessel from which the stopper is to

be removed, the said guard being secured at one side to the shank and extending thence along over the prong in position to be drawn toward the mouth of the vessel as the prong pierces the stopper.

2. A stopper remover and holder comprising a shank provided with a prong in position to be pushed into a stopper and with a transparent guard sufficiently large to cover the mouth of the vessel from which the stopper is to be removed, the said guard being attached at one side to the shank and extending thence along over the prong in position to press the mouth of the vessel when the prong pierces the stopper.

3. A stopper remover and holder comprising a shank provided with a prong in position to be pushed into a stopper and with a flexible transparent guard attached at one side to the shank and extending thence along over the prong, the said guard being located in position to engage the mouth of the vessel from which the stopper is to be removed as the prong pierces the stopper.

4. A stopper remover and holder comprising a shank having one end sharp to pierce a stopper and a guard hinged at one side to the shank and extending along over the sharp end of the shank in position to cover the mouth of the vessel from which the stopper is to be removed.

In testimony, that I claim the foregoing as my invention, I have signed my name in presence of two witnesses, this fourth day of November, 1914.

CHARLES MILLER PREVEAR.

Witnesses:
CHARLES A. JOSLIN,
LESTER L. FOSS.