

T. B. SWAHN.  
 STOPPER FOR BOTTLES OR SIMILAR VESSELS.  
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905,385.

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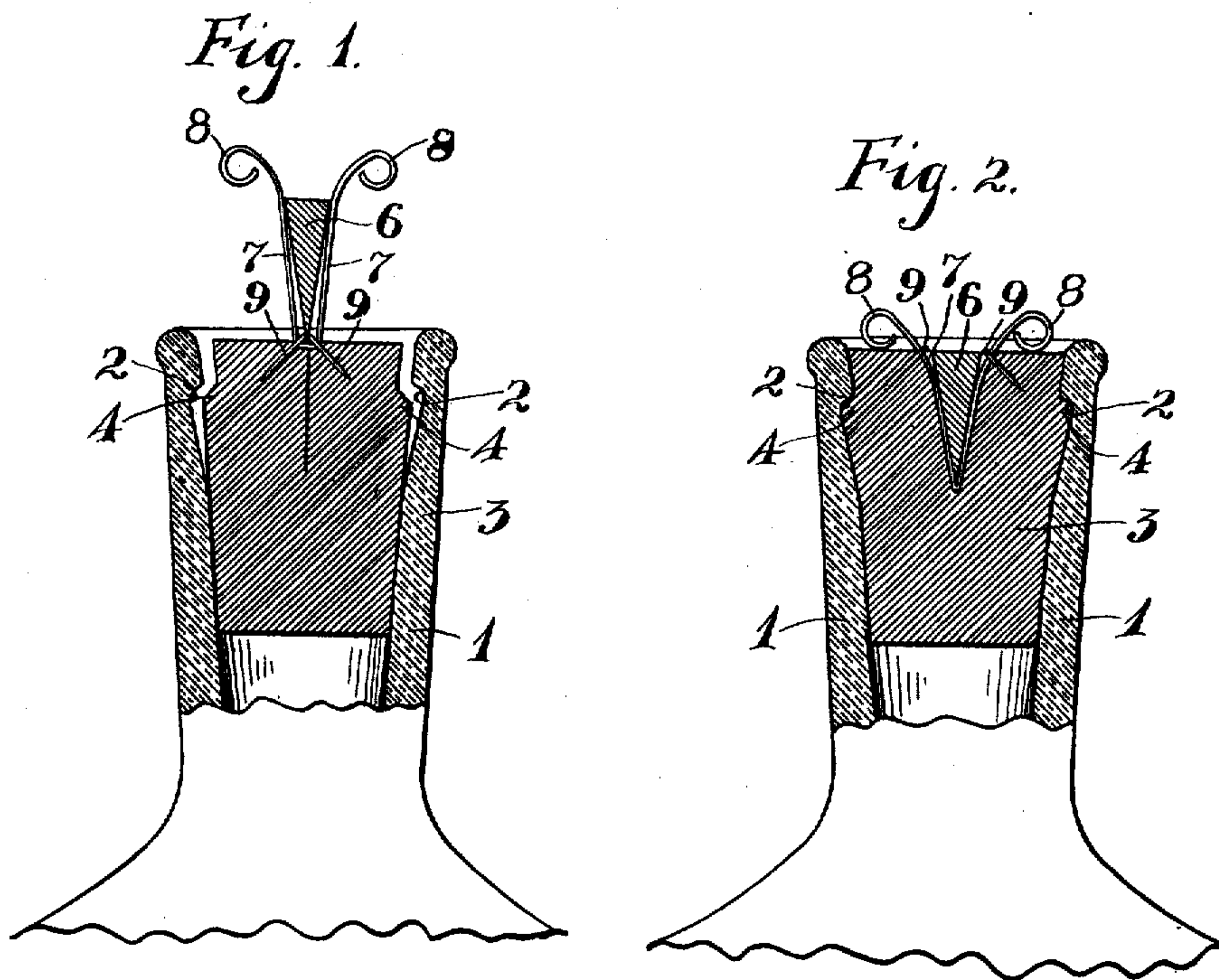


Fig. 4.

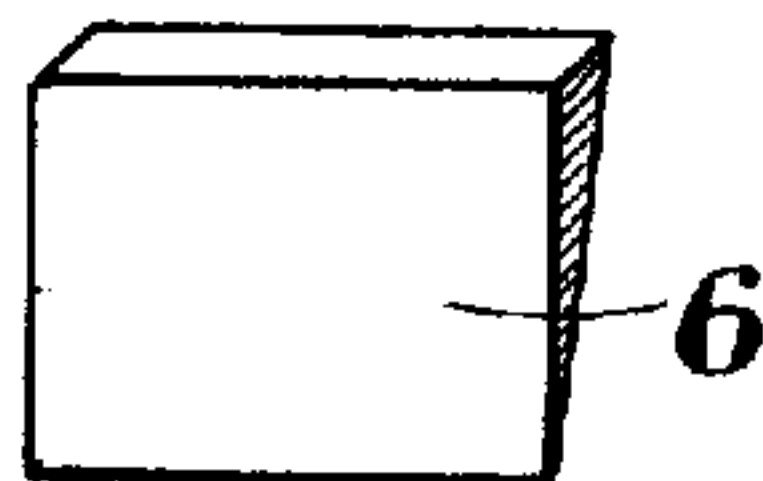
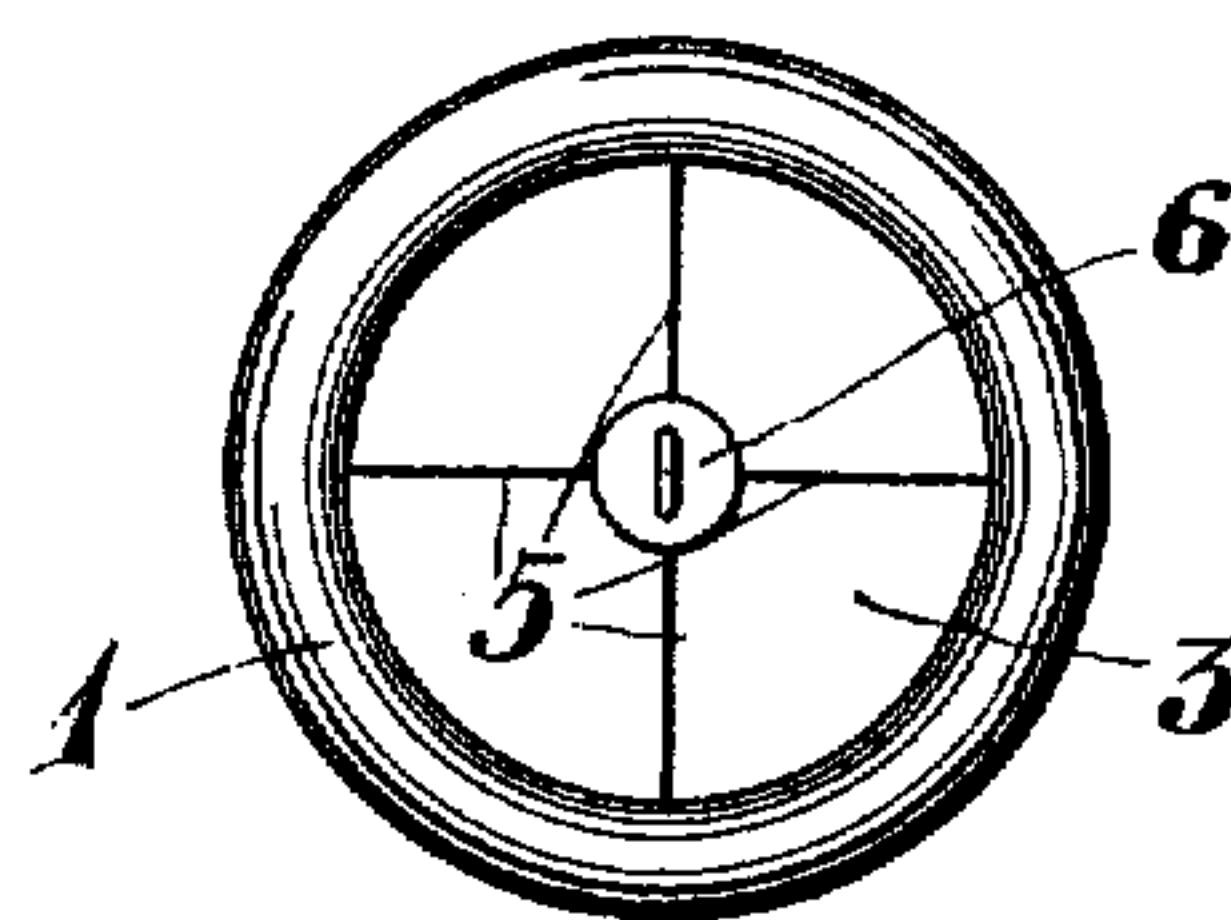
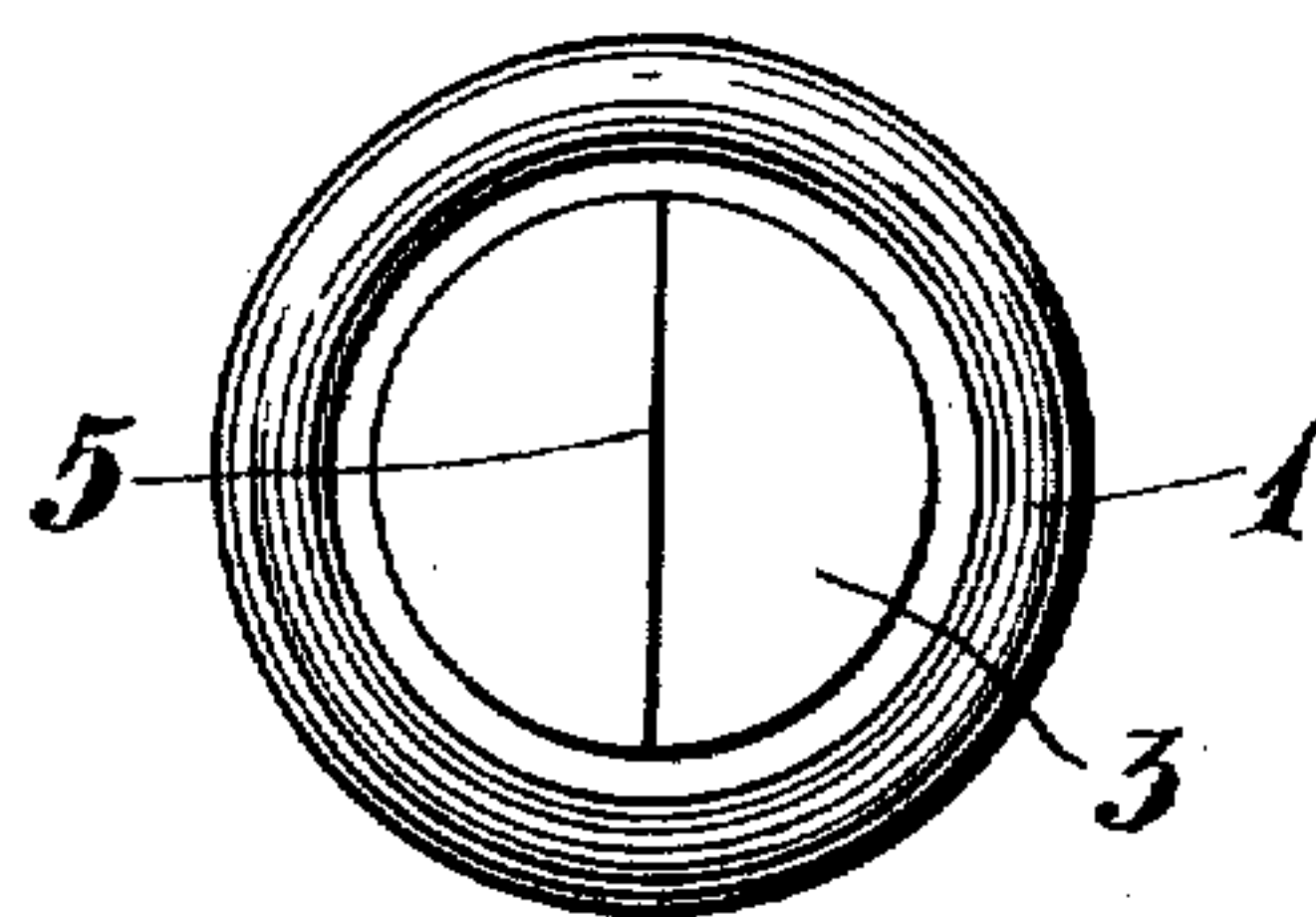


Fig. 3.

Fig. 5.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

THEODORE B. SWAHN, OF ENTERPRISE, MISSISSIPPI.

## STOPPER FOR BOTTLES OR SIMILAR VESSELS.

No. 905,385.

Specification of Letters Patent.

Patented Dec. 1, 1908.

Application filed April 23, 1908. Serial No. 428,845.

*To all whom it may concern:*

Be it known that I, THEODORE B. SWAHN, a citizen of the United States, residing at Enterprise, in the county of Clarke and State of Mississippi, have invented certain new and useful Improvements in Stoppers for Bottles or Similar Vessels; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has for its object to provide a lock stopper for bottles and similar vessels, and also to provide means for removing said stopper; and to this end, it consists of the novel devices and combinations of devices hereinafter described and defined in the claims.

In the accompanying drawings, which illustrate the invention, like characters indicate like parts throughout the several views.

Referring to the drawings; Figure 1 is a view, principally in vertical section, of my improved lock stopper. Fig. 2 is a view corresponding to Fig. 1, but with some of the parts shown in different positions. Fig. 3 is a plan view of the bottle neck and lock stopper. Fig. 4 is a perspective view of a so-called expanding wedge; and Fig. 5 is a view corresponding to Fig. 2, but showing a modified form of lock stopper and expanding wedge.

The numeral 1 indicates the neck of a bottle having an internal lock shoulder 2. A stopper 3, preferably made of soft wood, is provided with an external lock shoulder 4 adapted to fit within the lock shoulder 2 of the neck of the bottle. The upper portion of the stopper 3 is provided with a transverse vertical slit 5 that extends approximately to the middle of the stopper. An expanding wedge 6, of approximately the same width as the slit 5, is adapted to be forced into said slit to expand the stopper and thereby force the lock shoulder 4 thereof into the lock shoulder 2 of the bottle's neck, thus securely locking the stopper 3 within the neck of the bottle. In order to remove the expanding wedge 6 and contract the stopper, so that the same may be removed from the neck of the bottle, I provide a wedge puller 7 in the form of a wire with looped ends 8. This wedge puller 7 is secured to the stopper 3, on either side of the

slit 5, by small staples 9, so that the intermediate portion of the wedge puller will lie across said slit.

As is evident, when forcing the expanding wedge 6 into the slit 5, the wedge puller 7 will be carried therewith to the bottom of the slit, as best shown in Fig. 2. If desired to seal the mouth of the bottle or similar vessel, the looped ends 8 of the wedge puller may be bent over against the upper surface of the stopper 3 and said upper surface covered with sealing wax.

To remove the stopper from the neck of the bottle, first the seal, if employed, must be broken; then by pulling upward on the looped ends 8 of the wedge puller, the expanding wedge 6 will be lifted from the slit 5, and, at the same time, the wedge puller, pulling on the staples 9, will contract the upper portion of the stopper 3, thus withdrawing the lock shoulder 4 from the lock shoulder 2, as shown in Fig. 1, in which position the said stopper 3 may be removed from the neck of the bottle.

In the modification shown in Fig. 5, the stopper 3 is provided with transverse vertical slits, which divide the upper surface of said stopper into quadrants, and the expanding wedge is in the form of an inverted cone inserted into said stopper at the point of intersection of said slits. The improved stopper is not only adapted for use in bottles, but may be used in connection with jugs and jars.

The above described device, while very simple and of small cost, is efficient for the purpose had in view.

What I claim is:—

1. In combination with a bottle or similar vessel having an internal lock shoulder in its neck, a stopper adapted to fit within said neck and provided with an external lock shoulder and a transverse vertical slit, an expanding wedge, and a wedge puller adapted to be forced into said slip by said wedge, substantially as described.

2. In combination with a bottle or similar vessel having an internal lock shoulder in its neck, a stopper adapted to fit within said neck and provided with an external lock shoulder and a transverse vertical slit, an expanding wedge adapted to be forced into said slit, and means applied to said stopper for withdrawing said wedge and contracting said stopper, substantially as described.

3. In combination with a bottle or similar vessel having an internal lock shoulder in its neck, a stopper adapted to fit within said neck and provided with an external lock shoulder, a transverse vertical slit, and guide eyes, a wedge puller in the form of a wire with looped ends secured to said stopper by said eyes, and an expanding wedge adapted to be forced into said slit and to carry the intermediate portion of said wedge puller 10 with it, substantially as described.

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

THEODORE B. SWAIN.

Witnesses:

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