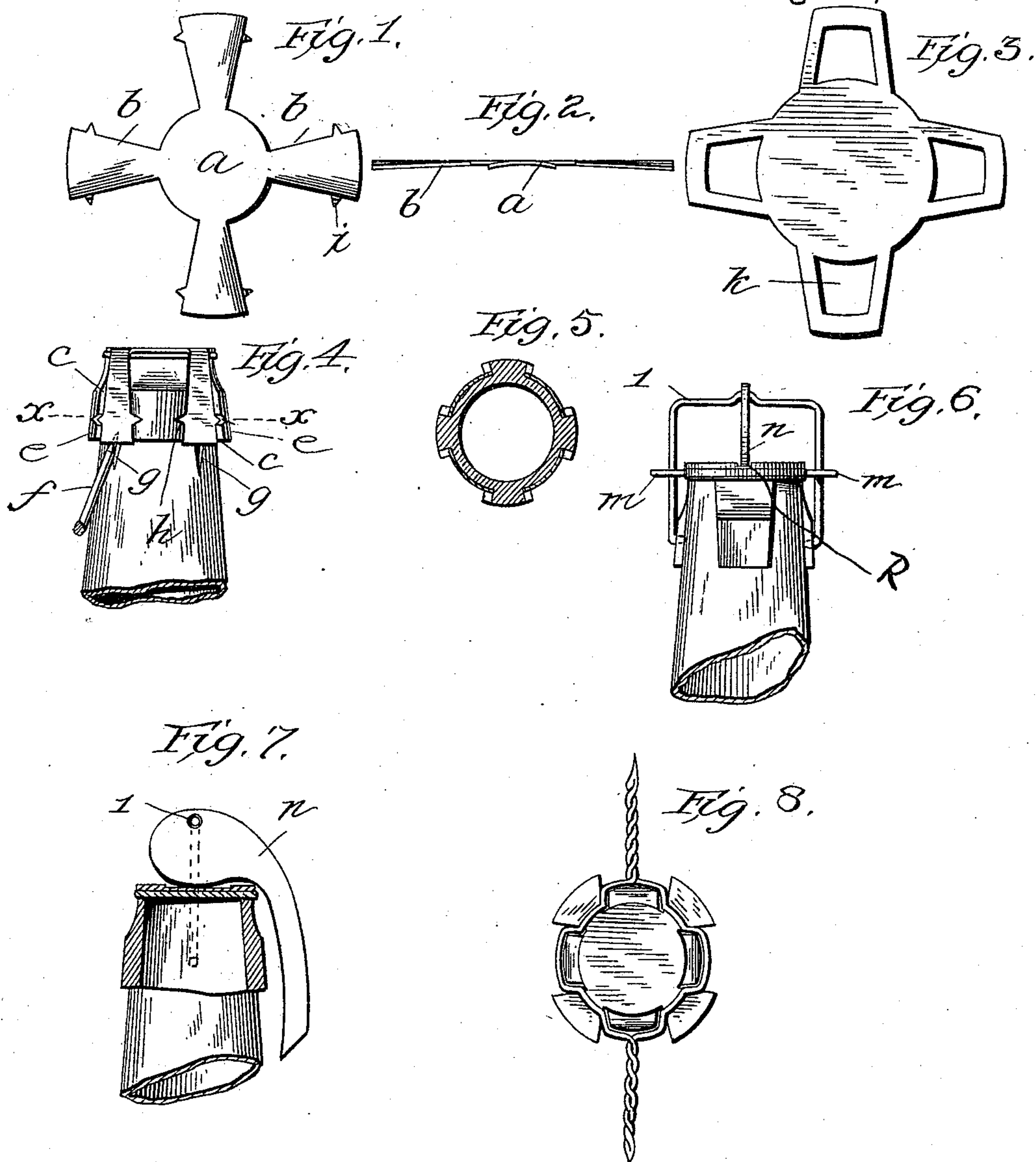


(No Model.)

J. ROSENFELD & S. W. MACKEY.  
BOTTLE STOPPER.

No. 525,286.

Patented Aug. 28, 1894.



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# UNITED STATES PATENT OFFICE.

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## BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 525,286, dated August 28, 1894.

Application filed December 5, 1893. Serial No. 492,843. (No model.)

*To all whom it may concern:*

Be it known that we, JESSE ROSENFELD and SAMUEL W. MACKEY, citizens of the United States of America, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Bottle-Stoppers, of which the following is a specification.

Our invention relates to bottle-stoppers. It is particularly designed for bottles of that class, in which it is desirable to secure the contents under hermetical seal.

The object of the invention is to produce a stopper, inexpensive of structure, so that it may be thrown away when the bottle is opened, and at the same time to provide a secure fastening and one which may be easily applied or removed. We have also provided in connection with the permanent stopper, a temporary stopper, which may be opened and closed at will.

Our invention is illustrated in the accompanying drawings, in which—

Figure 1—represents a plan view of the permanent stopper before it is applied to the bottle. Fig. 2—shows an edge view of the same. Fig. 3—represents a modified form of the same. Fig. 4—shows a bottle to which our improved stopper is applied. Fig. 5—is a horizontal section on line  $x-x$  of Fig. 4. Figs. 6—and 7—show the top of a bottle with our temporary stopper applied thereto, and Fig. 8—represents a temporary fastener for the winged stopper.

In the drawings, Fig. 1—represents a permanent stopper, which is cut or stamped from a sheet of any suitable material, such as tin, papier-maché or from a sheet of compound material, it being necessary that the material should be capable of bending and retaining the form in which it is bent. This stopper is cut as shown in the figure, into the form of a disk  $a$ , with wings  $b$ . These wings may be two or more in number. In the form shown in Fig. 1—, these are formed in dove-tailed shape, wider at the outer ends. The top of the bottle is formed with corresponding dove-tailed recesses  $c$ , between lugs  $e$ . The wings are cut so as to fit snugly into the recesses and are slightly bent, as shown in Fig. 2 along radial lines. In applying this fastening or stopper, we first place upon the bottle, a suitable disk, which forms a pack-

ing directly over the mouth of the bottle. This may be of cork or other substance known for the purpose. Over this disk the fastening is placed centrally located, with the wings registering with the cavities. The wings are then bent down so as to enter the cavities and are pressed thereinto. When the pressure is applied to the wings, they are flattened so as to take out the radial bend which forces the edges laterally into firm contact with the edges or walls of the cavity. The bend in the wing, of course, narrows it so that it may easily enter the cavity, but when it is spread, it forms a secure lock. The stopper may be removed by means of a sharp pointed tool, like an awl inserted under the lower end of the wing, as indicated at  $f$ . To facilitate the entrance of the point of this tool, we form vertical grooves in the bottle midway in the cavities, as shown at  $g$ . To give greater security, we also in some cases, form notches  $h, h$ , in the walls of the cavity and cut on the wings, corresponding spurs  $i$ , adapted to fit into the notches and interlock, when the wings are bent down. Instead of the dove-tailed form of the wings, we may cut openings  $k$ , in the wings as shown in Fig. 3, these openings being adapted to fit snugly over the lugs and the cavities. It will be understood that when the fasteners are applied, the central part is pressed down firmly upon the packing disk, and the wings are bent in to form a secure hold upon the bottle. When the wings are bent out, the stopper may be easily removed and is then thrown away, but sometimes it is desirable to provide in connection with stoppers of this class, a temporary stopper, which may be used to secure the bottle and preserve a part of its remaining contents. For this purpose we have provided a bail  $l$ , the inwardly bent ends of which are sprung into holes in the lugs of the bottle, so that the bail may swing over the top. The legs of the bail pass through ears  $m$ , of a covering disk formed on its under side with any suitable packing. The bail extends above this disk and in the center has an upward bend, in which is pivoted a cam lever  $n$  arranged to bear in a small depression  $n'$  in the disk to hold more securely. When this cam lever is raised, the lower part of the cam is turned to the covering disk, and when the le-



ver is pressed down against the neck of the bottle, the high part of the cam is brought to bear upon the covering disk so as to force it into contact with the mouth of the bottle.

5 We have provided another temporary fastener, which may be used in connection with the winged disk above described. This is shown in Fig. 8. It is formed of wire, bent to fit over the wings when they are partly  
10 bent down or when they are in the condition in which they are left after being raised out of the cavities. The ring is formed with salient and re-entrant loops or bends, adapted to fit the wings and the intermediate lugs.  
15 The rings are provided with twisted ends opposite each other, which form handles, whereby the ring may be pressed down. After the permanent fastening has been removed, by  
20 bending out the wings from the cavities, it may be replaced upon the bottle and held sufficiently secure to retain the remainder of the contents by pushing the ring down over the wings and thus forcing them inward into sufficient engagement with the cavities. The  
25 ring may be modified to suit the wings shown in Fig. 3.

It will be noticed that in both the form of Fig. 1 and that of Fig. 3, the lateral or side edges of the wings bear on the adjacent side  
30 edges of the lugs or recesses.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In combination, the bottle having lateral lugs and recesses between, and the stopper 35 having wings with intervening free spaces, said wings being independently movable extending down from the plane of the disk portion of the stopper and engaging the said lugs, substantially as described. 40

2. A bottle stopper consisting of a disk having dovetailed wings in combination with a bottle having dovetailed lugs engaging therewith, substantially as described.

3. In combination, the bottle having projecting lugs adapted to receive the wings of a stopper and having also the groove *g* between the lugs to permit the insertion of a tool beneath the wings and the stopper having wings, substantially as described. 50

4. In combination, the bottle having the lateral lugs with recesses between them and with notches in the edges of said lugs, and the stopper comprising the wings adapted to fit down between the lugs in the recesses, said 55 wings having spurs to fit into the notches in the edges of the lugs, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

JESSE ROSENFELD.  
SAMUEL W. MACKEY.

Witnesses:

ALEX. M. MORRISON,  
WILLIAM H. BERRY.