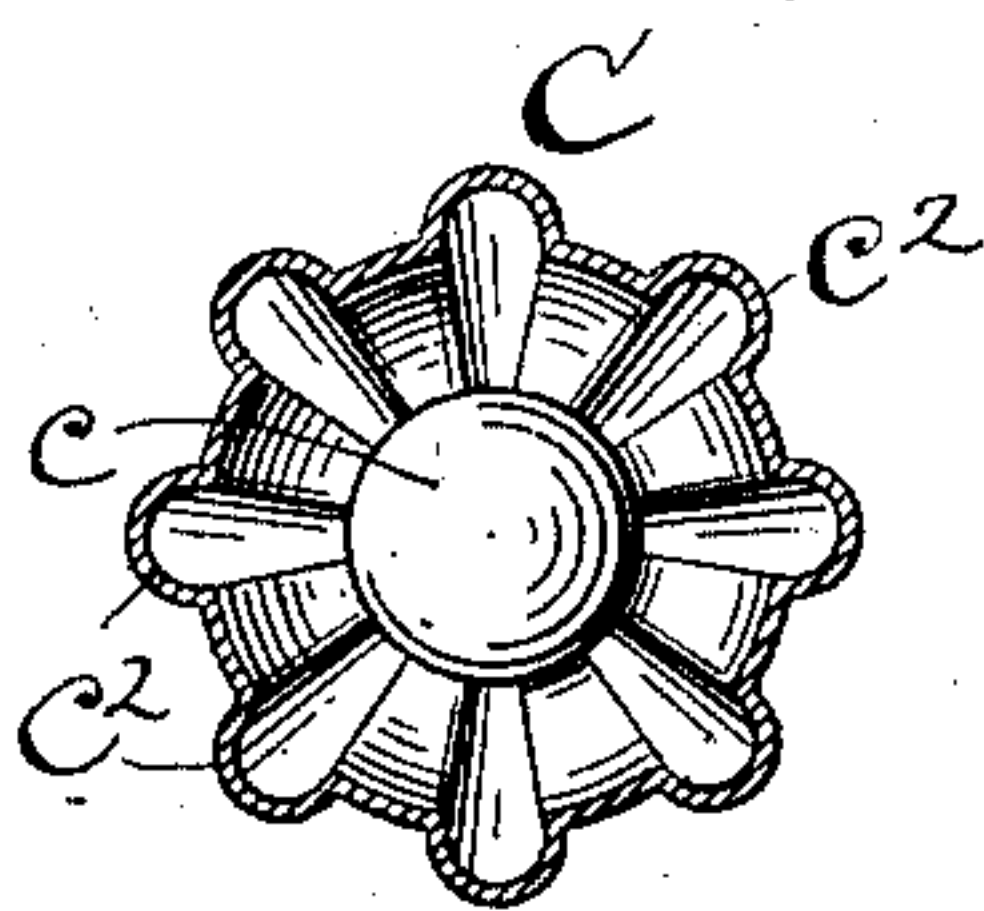
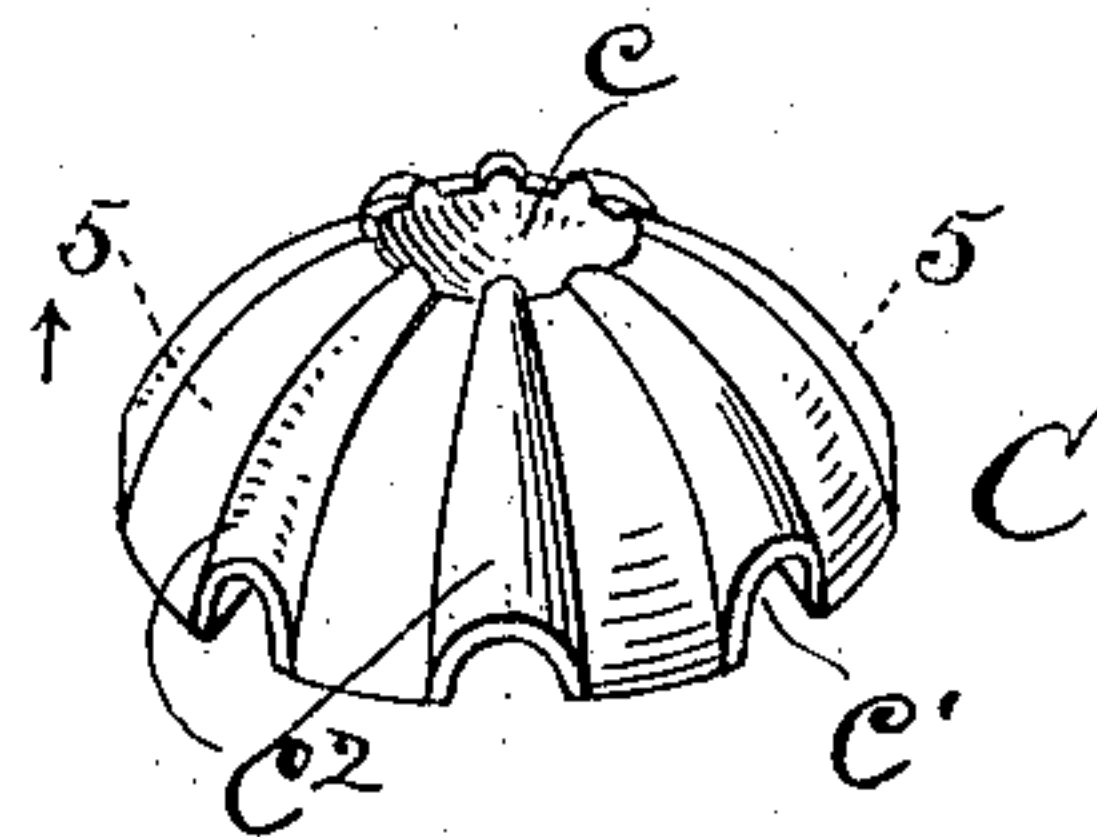
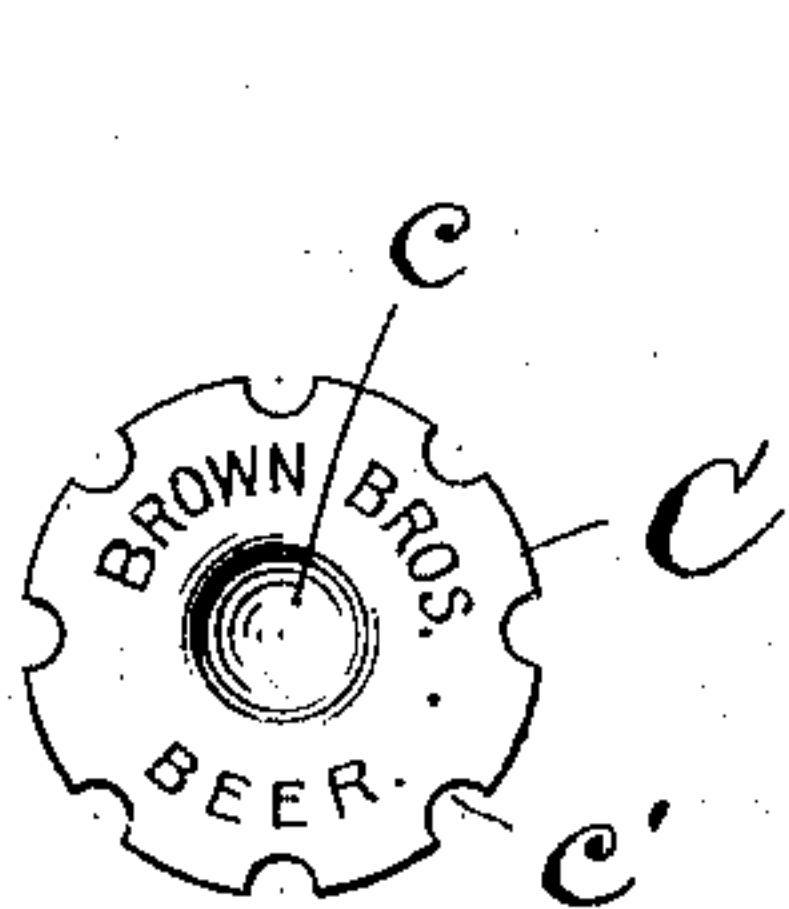
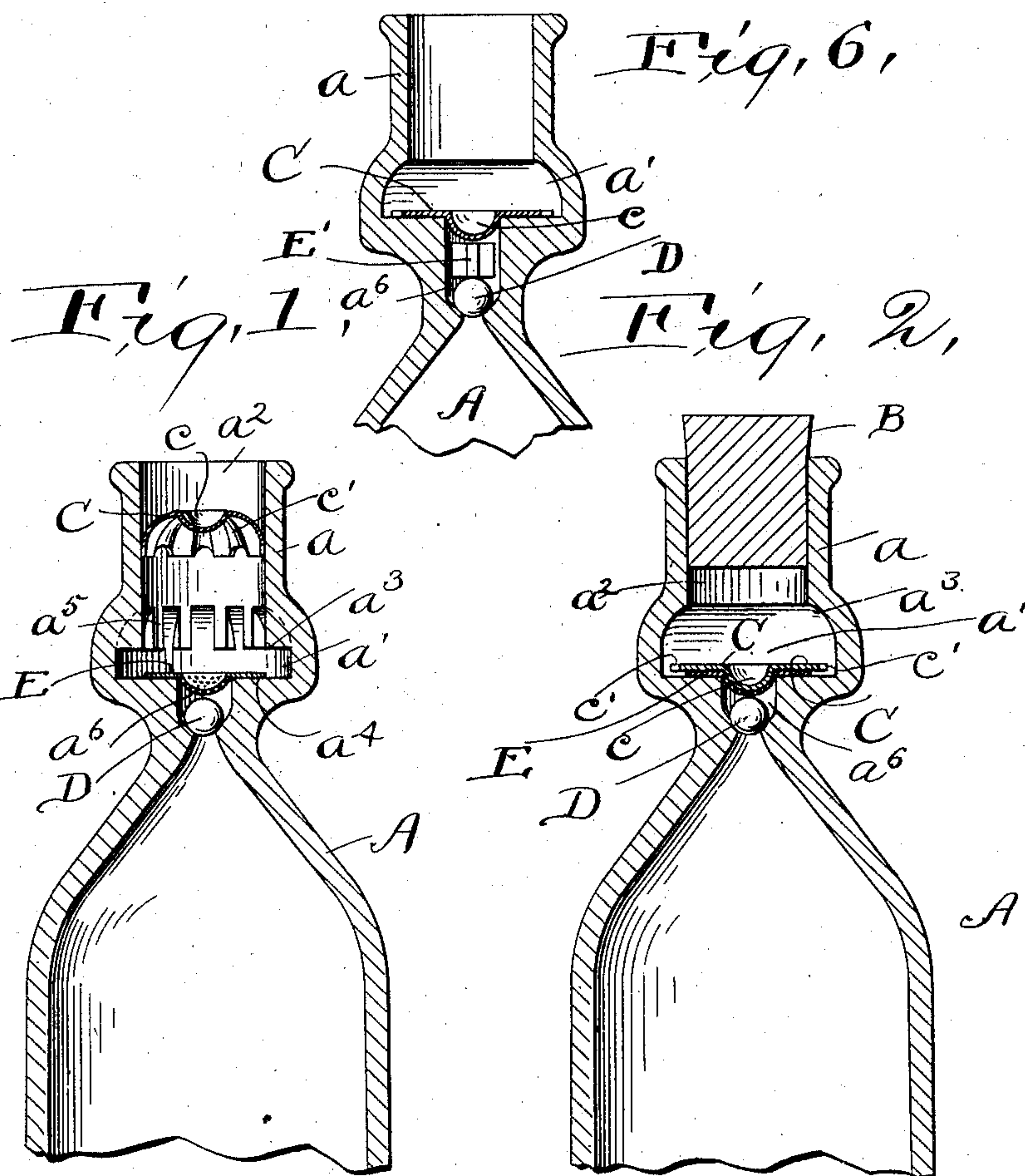


**H. W. AVERY.**

**NON-REFILLABLE RECEPTACLE.**

(Application filed Dec. 27, 1899.)

(No Model.)



Witnesses:  
E. B. Gilchrist  
P. E. Knowlton

Inventor:  
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By his Attorneys,  
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# UNITED STATES PATENT OFFICE.

HENRY W. AVERY, OF CLEVELAND, OHIO.

## NON-REFILLABLE RECEPTACLE.

SPECIFICATION forming part of Letters Patent No. 706,712, dated August 12, 1902.

Application filed December 27, 1899. Serial No. 741,729. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY W. AVERY, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Non-Refillable Receptacles, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

My invention relates to means for preventing the refilling of bottles, jugs, &c., after they have once been emptied; and its object is to provide for the accomplishment of this means which shall be very simple and cheap to construct and efficient in operation, being neat in appearance, durable, and not contaminating to the contents of the receptacle.

Another object of my invention is to provide a closing member adapted to be marked with the name or trade-mark of the maker of the contents, whereby if the closing member should be destroyed, and thus removed from the bottle, a similar new member could not be supplied without infringing the owner's trade-mark or other rights.

The invention may be best summarized as consisting of the combinations of parts hereinafter described, and definitely pointed out in the claims.

The drawings show my invention embodied in the best form at present known to me.

Figures 1 and 2 are vertical sections through the upper portions of the bottle or receptacle containing my device, Fig. 1 showing the closing member just being inserted and Fig. 2 showing it in place. Fig. 2 shows also a different form of retaining-shoulder in the neck. Fig. 3 is a plan of the closing member of the shape it has after it is in place. Fig. 4 is a perspective view, on an enlarged scale, of the closing member before it is inserted; and Fig. 5 is a horizontal section on the line 5 5 of Fig. 4 looking upward. Fig. 6 shows a modified form of bottle.

Referring to the parts by letters, A represents the upper portion of a bottle or jug or other receptacle, and  $a$  the neck thereof, in which neck there is an enlargement  $a'$ . The usual cork B is inserted in a cylindrical or approximately cylindrical portion  $a^2$  of the neck above the enlargement  $a'$ . Between this portion  $a^2$  and this enlargement  $a'$  is an

annular shoulder  $a^3$ , which prevents the removal of the closing member. The closing member consists of a guard-plate, which after it is in place is in the form of a disk C, having notches or scallops  $c'$  at its edges and having the central bulge or depression  $c$ . The natural shape of this member is as shown in Figs. 1, 4, and 5, where it appears as a fluted metal guard of cup-like form. The flutes (designated  $c^2$ ) are conical and of such extent that the exterior surface of the cup is equal to the surface of the flattened disk, wherefore the cup may be flattened without stretching the material. The cup-shaped member is put into the neck concave downward, as shown in Fig. 1, and thus rests on the annular shoulder  $a^4$ , which forms the base of the enlargement  $a'$ . When resting on this shoulder, a continued pressure of the rod or plunger which inserts the closing member flattens it out into the form shown in Figs. 2 and 3. The cup-bulge  $c$  in this closing member not only centers the member over the bottle-opening and assists in closing the same, but it forms a center around which the member is bent to have its initial shape and prevents such bending making a central crack or hole in the member by which a tool could be inserted to remove it. As an additional precaution I place beneath the closing member in a recess  $a^6$  in the neck of the bottle a buoyant closure consisting of a piece of cork or other light material D, which is adapted to float on any ordinary liquid which the bottle may contain. The piece of cork I have shown is of a spherical form and such is its preferable shape, though it could be conical, disk shaped, or of other shapes, and I use the term "plug" as including all such shapes.

Above the plug and beneath the closing member I put a weight sufficient to overcome the buoyancy of the plug. This weight may be of the disk form shown at E in Figs. 1 and 2 in the enlargement  $a'$  or of other desirable shape, as E', Fig. 6, contained in the recess  $a^6$  in the neck.

The closing member C is made, preferably, of metal, as aluminium or copper, which can be flattened out by pressure, but which it is impractical to cut through. Now the effect of this construction is that the closing member prevents access to the plug and weight,



while if it were attempted to force liquid into the receptacle by inverting it liquid, though forced through the notches slow enough not to raise the closing member, would float the plug D and choke the opening, and if the closing member were held away from its seat by suitable tools with the bottle upright the weight on the plug would hold it to its seat and prevent access.

After the bottle is filled and the closing member is inserted and flattened the usual cork B is put in place, as shown in Fig. 2. Thereafter when it is desired to empty the receptacle the removal of the cork B allows the contents to pass through the scallops or notches in the closing member. If the shoulder  $\alpha^3$  is abrupt, as shown in Fig. 1, notches  $\alpha^5$  are provided in it for the exit.

The closing member I provide is admirably adapted for use in connection with a corking-machine, since a direct reciprocating plunger inserting the closing member may also flatten it out on its seat without the necessity of additional tools.

My invention contemplates the making of the closing member with the name of the maker of the contents or some characteristic device, as shown in Fig. 3, which thus makes a guarantee of the genuineness of the contents. Any removal of the closing member which would not break the receptacle would be liable to destroy the closing member itself, so that it could not be again used, and a new closing member would either lack the proprietary wording or render the maker and user liable therefor.

Even if proper tools or machinery could be devised whereby the receptacle I have shown could be refilled that would not overcome all the advantages which I attain, for the great evil in refilling bottles comes not from the

well-equipped establishments, but from irresponsible individuals, and the ordinary bar-keeper, for example, would not have these necessary tools and machinery, and, moreover, would be liable to break the bottle if he tried such removal and also to spoil the closing member itself.

Having described my invention, I claim—

1. A receptacle having a central contracted chamber in the neck thereof, and an enlarged annular recess thereabove leaving a substantially flat annular ledge connecting the walls of said chamber and recess, combined with a valve device occupying such chamber and consisting of a buoyant closure surmounted by a weight, and a fluted metal guard in a cup-like form adapted to be inserted concave side downward and rest on said ledge and be expanded by pressure in the annular recess whereby it is held therein and forms a guard for the valve device below it while allowing the contents of the vessel to pass out, substantially as described.

2. A receptacle having a central well in the neck thereof, and an annular recess thereabove, combined with a buoyant closure interrupting communication of the bottom of said well with the interior of said receptacle, a weight entering said well above the closure, a concave stamped fluted metal guard having a scalloped edge which expands by pressure in said annular recess, whereby it is held therein and forms a guard for the members below while allowing the contents of the vessel to pass out, substantially as described.

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

HENRY W. AVERY.

Witnesses:

H. M. WISE,

ALBERT H. BATES.