No. 670,266. Patented Mar. 19, 1901.

H. W. AVERY.

NON-REFILLABLE RECEPTACLE.

(Application filed Oct. 22, 1900.)

(No Model.)

Fig. 1.

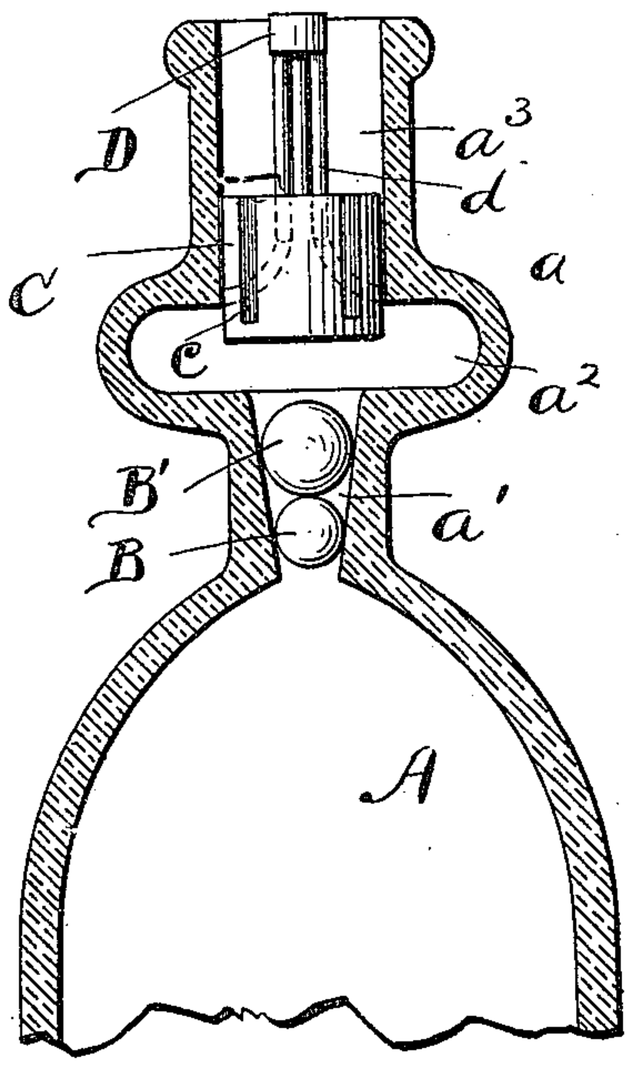


Fig. 2.

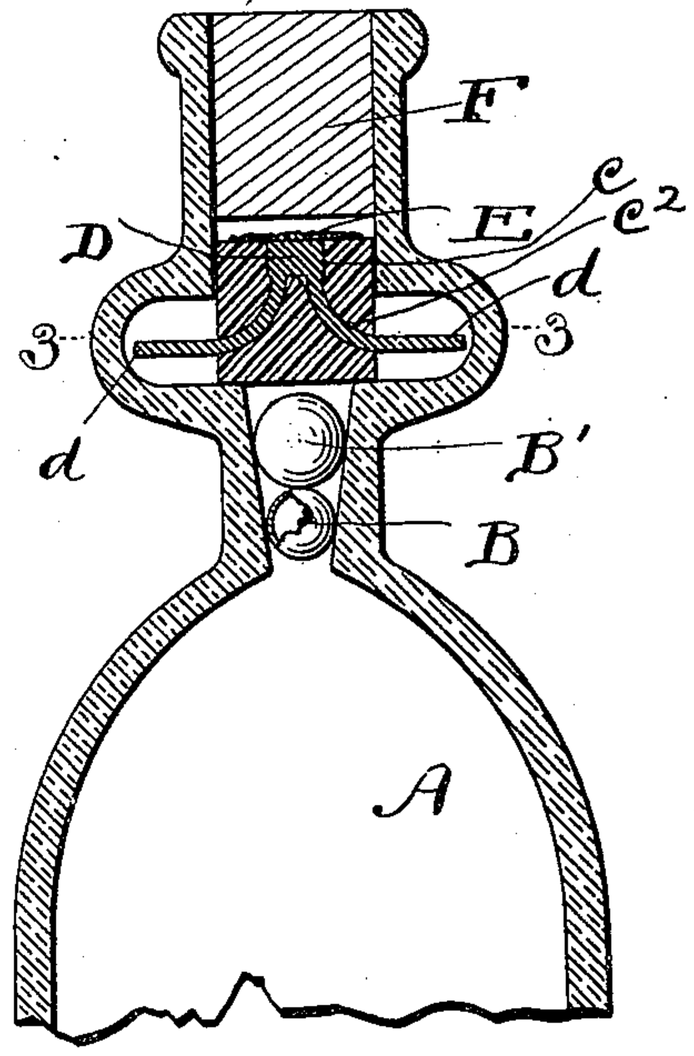


Fig. 3.

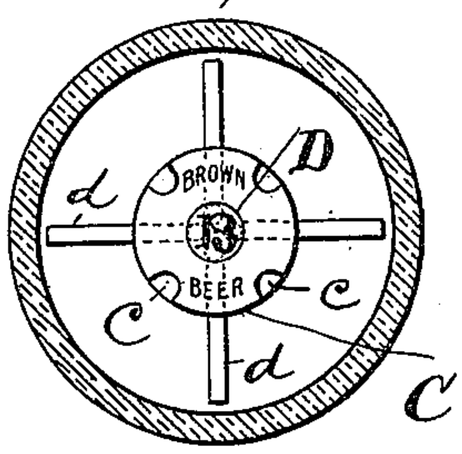


Fig. 4.

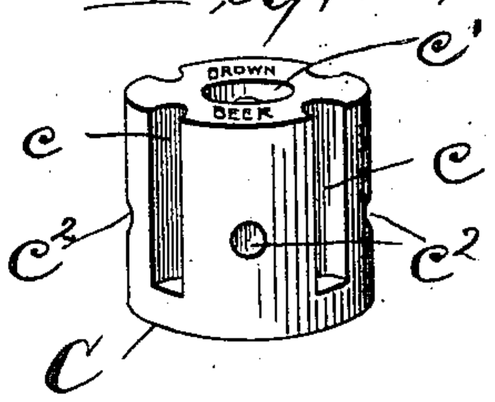


Fig. 5.

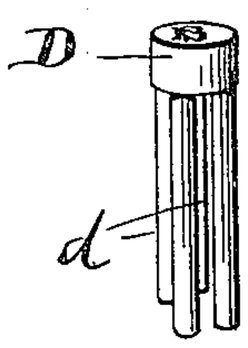
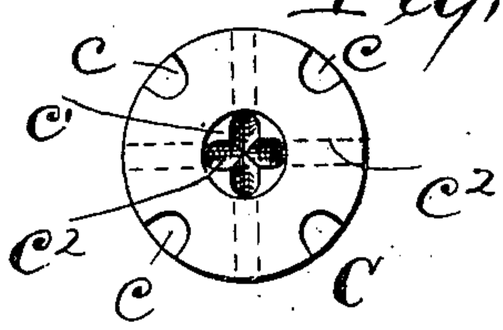


Fig. 6.



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UNITED STATES PATENT OFFICE.

HENRY W. AVERY, OF CLEVELAND, OHIO.

NON-REFILLABLE RECEPTACLE.

SPECIFICATION forming part of Letters Patent No. 670,266, dated March 19, 1901.

Application filed October 22, 1900. Serial No. 33,848. (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.

The ultimate object of this invention is to provide simple and efficient means for preventing the refilling of a receptacle—a bottle, for example—after it has once been emptied. It has been common to employ suitable valves or movable plugs in the neck of the receptacle after it is filled, which do not prevent its emptying, but do prevent its being refilled. The trouble with such devices has lain in the want of a simple and efficient baffle to prevent their removal after having been once placed in the bottle.

The immediate object of this invention is to provide such a baffle in a form which shall be very cheap in construction, which shall not contaminate the contents of the receptacle, and which it shall be impracticable to remove without destroying the receptacle.

The invention consists, primarily, of the baffle I employ, which consists, essentially, of a plug adapted to be placed within the neck of the vessel and having passages in it leading from its upper surface to its sides, combined with fingers which are adapted to be inserted in such openings and may be shoved downward into the plug and thereby outward beyond its sides after the plug is in place. The more specific arrangement and construction of this, hereinafter described and claimed, is also of my invention.

The drawings clearly illustrate my invention as applied to a bottle which has the well-known valve consisting of a light ball surmounted by a heavy ball, such valve being shown simply as illustrative. It is, however, an effective valve, for when it is attempted to fill the bottle right side up the heavy ball chokes the opening, and when the bottle is inverted the light ball will float on the entering liquid and also choke the opening.

Figures 1 and 2 are vertical central sections of the upper portion of such a bottle, Fig. 1 showing my baffle as it is being inserted and Fig. 2 showing the same in place. Fig. 3 is a horizontal section through the neck of the bottle, being taken on the line 3 3 of Fig. 2. Fig. 4 is a perspective view of the plug I employ, Fig. 5 a perspective view of the fingers, and Fig. 6 a plan of the plug.

Referring to the parts by letters, A represents any receptacle, here shown as the upper portion of a bottle. This bottle has above its body a neck a, in which there is first a seat a' for the valve, then an enlarged annular recess a^2, into which my baffle-fingers take, and above this a cork-receiving portion a^3. The valve-seat is shown as tapering downward and as containing a light ball B, which may, if desired, be a hollow ball, and a heavy ball B'. The upper end of the valve-recess a' is of smaller area than the cork-opening a^3. Thus my plug may be easily inserted through this cork-opening and seat at the bottom of the annular recess a^2 over the edge of the valve-recess a'.

The plug is designated C. It may be made of porcelain, glass, or any desired material. Its exterior is slightly smaller than the interior of the cork-opening a^3, (though not necessarily conforming to the shape thereof,) whereby it may be inserted therein and is easily movable therein. On the exterior of the plug are recesses or grooves c, whereby the fluid may have a passage-way between the plug and the cork portion of the mouth. These passage-ways, preferably, do not extend entirely to the bottom of the plug, whereby the chance of anybody inserting a small hooked wire through them to engage the bottom of the plug is reduced. In the upper surface of the plug is a recess c', and extending downward from this recess and outward and preferably curved on about a quarter of a circle are passage-ways c^2, terminating at points on the surface of the plug, which are adapted to be within the enlargement a^2 when the plug is in place. The recess is thus a collective continuation of the passages to the upper end of the plug.

The baffle-fingers are preferably of metal. They may be made as shown in the drawings, where they appear as integral points d, projecting from a head D. These fingers are

inserted into the recess c' in the plug, and when the plug is in place forced downward through the plug, passing out through the side wall of the plug and occupying the recess a^2, as clearly appears in Fig. 2. This movement of the fingers brings their upper ends substantially flush with or below the top of the plug C, wherefore there is nothing for any one to take hold of in attempting to remove the fingers. The fingers are of such strength that if any one could work a hooked instrument down through one of the recesses c and get under the plug and pull it upward he could not sheer off the fingers, as any force sufficient to do this would break the bottle. If he could possibly bend the fingers down along the outer side of the plug, that would not help him, for the exterior diameter of the plug plus the thickness of the fingers would then be too large for the removal of the plug.

My baffle may be very conveniently inserted and only a continued downward push is required to complete the operation. Thus my baffle may be used in conjunction with the ordinary corking-machine.

The name of the proprietor of the contents may be easily marked on the upper surface of the plug, as illustrated in Figs. 3 and 4. If desired, a suitable mark, as an initial, for example, might be made in the surface of the head D, as shown. The upper surface of the head could be of material soft enough to easily take the imprint of the lower end of the inserting plunger. Such mark would readily show whether there had been any attempt to remove the fingers by endeavoring to get hold of the head with some sharp instrument. My baffle is likewise adapted to receive a seal on its upper surface, as indicated at E in Fig. 2, which might have the proprietor's name and would be an additional precaution. Such seal would not interfere with the cork F or the grooves c. These additional precautions, which my baffle is well adapted to have, I believe to be really unnecessary, as with the parts properly proportioned it would so be difficult to remove the baffle without breaking the bottle and would require such special tools for its accomplishment that it would not ordinarily be done. If the receptacle is so difficult of refilling that it will not be done by irresponsible individuals, that is all that is practically required. This and more my bottle will do without the additional precautions. With them it will reveal tampering of any sort.

Having described my invention, I claim—

1. A baffle for a non-refillable receptacle, consisting of a plug having openings therein, leading from the upper surface to the side surface, and fingers adapted to be forced through such openings, substantially as described.

2. The combination with a receptacle having an enlargement in its neck, of a baffle consisting of a plug adapted to occupy such enlargement and having an opening leading from its upper surface to its side surface, and a finger adapted to be inserted into such opening through the upper surface and projected through the side surface into such enlargement, substantially as described.

3. The combination with a non-refillable receptacle having an enlargement in its neck, and a cork-receiving portion above said enlargement, of a baffle adapted to be inserted through such cork-receiving portion, said baffle consisting of a plug having its exterior slightly smaller than the interior of said cork portion and having openings extending when the plug is in place through it from the cork-opening to the enlargement, and fingers adapted to be inserted through the upper end of the plug and forced downward therein and outward through the sides thereof into such enlargement, substantially as described.

4. A bottle having in its neck a valve-recess, above this an enlargement, and above this a cork-receiving portion, combined with a valve in said recess, and a baffle adapted to be loosely inserted through said cork-receiving portion, said baffle consisting of a plug having openings extending from its upper surface to its outer surface, and fingers adapted to be inserted through such opening from above and forced downward through the plug thereafter extending outward from the sides thereof until the upper ends of said fingers are substantially no higher than the upper surface of the plug, substantially as described.

5. A baffle for a non-refillable receptacle consisting of a plug having a recess in its upper surface, and passages extending from this recess lower down to its side surface, and metallic fingers connected with a head, said fingers being adapted to be placed in the upper ends of the openings and forced downward therein whereafter they extend laterally from the sides of the plug and the head lies substantially within said recess substantially as described.

6. A baffle for a non-refillable receptacle consisting of a plug having grooves in its exterior surface and openings from its upper surface to its side surface, combined with fingers adapted to be inserted from above it and pressed downward and outward until they project through its side surface and have their upper ends substantially no higher than the upper surface of the plug, substantially as described.

7. The combination with a receptacle having an enlargement in its neck, and a baffle adapted to be inserted therein, said baffle consisting of a plug having grooves in its exterior surface which grooves do not extend to the bottom of the plug and locking-fingers adapted to be inserted from the upper end of the plug and pressed downward and outward through openings therein into such enlargement, substantially as described.

8. A baffle for a non-refillable receptacle consisting of a plug having openings leading from its upper surface downward and outward to its side surface, fingers adapted to occupy

such openings and connected to a head, said head being of material adapted to receive on its upper surface some distinctive mark, substantially as described.

9. A bottle having an enlargement on its neck, and a cork-receiving portion thereabove, a plug occupying the lower end of said cork-receiving portion and extending into said enlargement, there being openings extending from the upper surfaces of said plug to its sides, fingers occupying such openings and extending into such enlargement, and a seal on the upper surface of said plug, substantially as described.

10. A baffle consisting of a plug of a general cylindrical shape but having a grooved exterior and having a recess in its upper surface and curved passage-ways leading from said recess downward and outward to the cylindrical surface between the grooves, combined with metallic fingers connected together into a head, said fingers being adapted to be forced downward through said openings and project laterally from the plug, the head thereafter occupying such recess with its upper surface substantially no higher than the upper surface of the plug, substantially as described.

11. A baffle consisting of a plug of a general cylindrical shape but having a grooved exterior and having a recess in its upper surface and curved passage-ways leading from said recess downward and outward to the cylindrical surface between the grooves, and metallic fingers connected together into a head, said fingers being adapted to be forced downward through said openings and project laterally from the plug, the head thereafter occupying such recess with its upper surface substantially no higher than the upper surface of the plug combined with a receptacle having a neck adapted to loosely receive said plug and having an enlargement adapted to receive said projecting fingers, and a suitable valve below said enlargement, substantially as described.

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

HENRY W. AVERY.

Witnesses:

ALBERT H. BATES,

H. M. WISE.