

(No Model.)

A. B. SCHOFIELD.
STORAGE RECEPTACLE.

No. 571,845.

Patented Nov. 24, 1896.

Fig. 2.

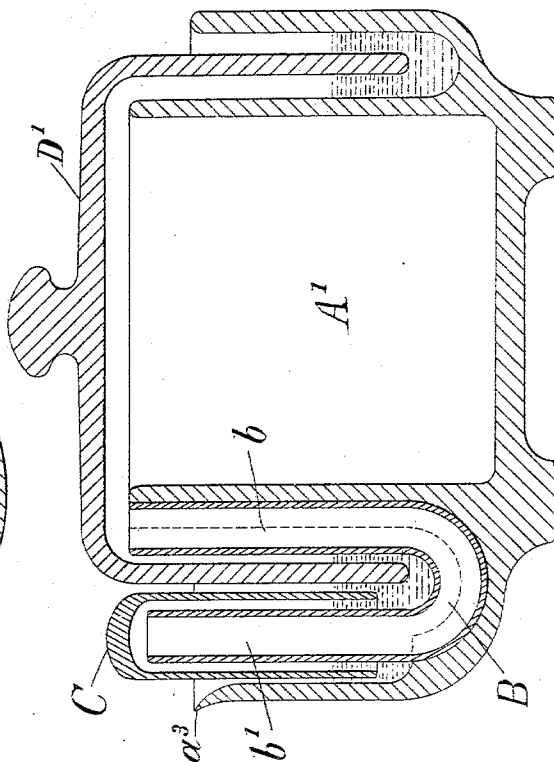
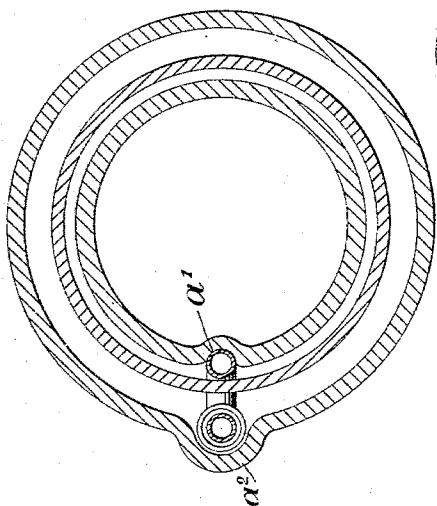


Fig. 3.

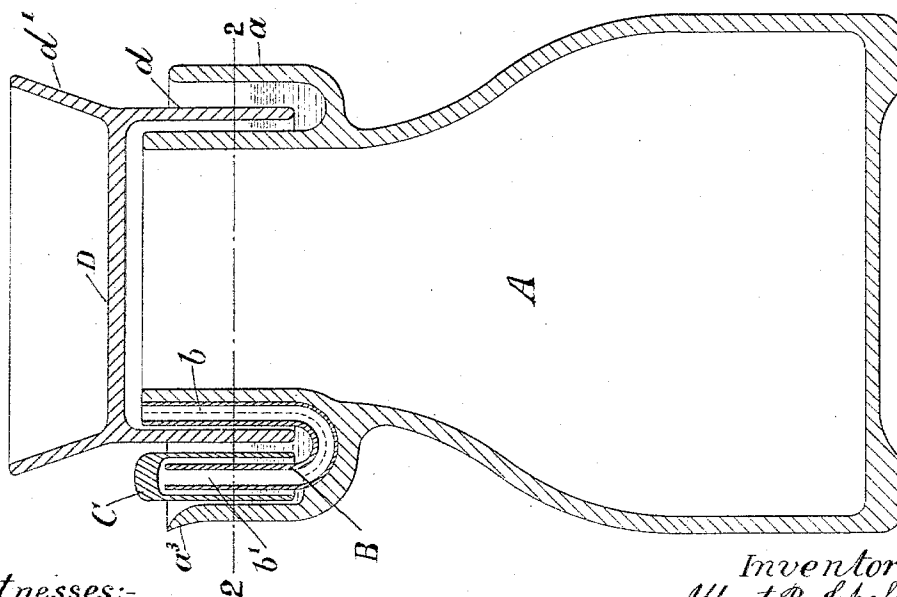


Fig. 1.

Witnesses:-
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UNITED STATES PATENT OFFICE.

ALBERT B. SCHOFIELD, OF BROOKLYN, NEW YORK.

STORAGE-RECEPTACLE.

SPECIFICATION forming part of Letters Patent No. 571,845, dated November 24, 1896.

Application filed March 18, 1896. Serial No. 583,679. (No model.)

To all whom it may concern:

Be it known that I, ALBERT B. SCHOFIELD, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Storage-Receptacles, of which the following is a specification.

My invention relates to an improvement in storage-receptacles in which there is provided a liquid seal to prevent the passage of air between a removable cover and the body of the receptacle.

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

Figure 1 represents a vertical section through a receptacle and its cover, the cover of the receptacle being in this instance adapted to hold a cake of ice. Fig. 2 is a horizontal section on the plane of the line 2 2 of Fig. 1, and Fig. 3 is a vertical central section through a receptacle of modified form.

The particular shape of the receptacle is not a matter of importance so long as its top or upper portion is provided with a valley around it for the reception of the depending flange of the cover and for the reception of the air-escape pipe or channel and its cap.

Referring to Figs. 1 and 2, the body of the receptacle is denoted by A, and it is provided at its top or upper portion with an exterior annular flange a , spaced from the body to form a valley around the receptacle for the reception of the sealing liquid, the top of the flange a stopping a considerable distance below the level of the top of the body, so as to provide against any liability of the liquid in the valley being splashed into the interior of the receptacle.

At one or more points around its top, in the present instance at one point, the wall of the receptacle and the bottom of the valley adjacent thereto are provided with a depression, in the present instance in the form of a half-circular groove a' , for the reception of a U-shaped air escape and inlet pipe B. It is intended that the bight of the pipe B shall rest in the groove a' in the bottom of the valley, and that its inner branch b shall extend upwardly along the groove in the wall of the receptacle to a point above the surface of the sealing liquid in the valley, preferably to a point on a level with the top of the receptacle,

and that its outer branch b' shall extend upwardly from the bottom of the valley to a point a considerable distance above the surface of the sealing liquid and spaced from the upper wall of the valley and from the outer wall of the cover, which is intended to seat in the valley, for the reception of a cap C.

In order to space the outer branch b' of the inlet and escape pipe from the outer wall of the valley, the outer wall of the valley is preferably provided at a point opposite the outer branch b' of the escape-pipe with an outward curve a^2 , terminating at the top in a lip a^3 , which may serve as a convenient nozzle for pouring the liquid out of the valley when for any cause it is desired to change it.

The cover is denoted by D. It is air-tight and provided with a depending flange d , adapted to project downwardly around the top of the body of the receptacle and into the valley formed by the flange a and below the surface of the sealing liquid in the valley. It is also intended that it shall enter the valley between the two branches of the escape-pipe B, so that when the outer end of the escape-pipe is open there will be free communication between the air within the receptacle and the outside air as the flange of the cover passes downwardly within the sealing liquid. The top of the cover is further provided with an upwardly-extending flange d' for the purpose of retaining a cake of ice on top of the cover to keep the air within the receptacle cold.

In use, after placing the articles to be preserved within the receptacle, the sealing liquid having been supplied in the valley around the top of the receptacle to the desired depth, the cover is placed in position with its depending flange immersed within the sealing liquid, the air within the receptacle having freely escaped through the pipe B as the cover passed downwardly into the sealing liquid. When the cover is in position, the mouth of the outer branch b' of the pipe B is closed by placing the cap C over it with its lower end extended downwardly into the liquid. This will form an air-tight seal against the passage of air to and from the interior of the receptacle, and the cap C will be found to seat itself with ease, because of the elasticity of the air within the receptacle, which will readily admit of the slight compression

of the air in the escape-pipe as the cap drops to its seat after its lower edge has reached the liquid.

When it is desired to remove the cover, the cap C may be removed with perfect ease by the return pressure of the slightly-compressed air, and when it is removed the cover itself may be lifted from its position, as the air will pass freely in through the pipe B to supply the vacuum caused by the lifting of the cover.

In the form shown in Fig. 3 the upwardly-extending flange is omitted from the cover D' and the receptacle A' made shallow; but the general structure and operation are the same as represented in Figs. 1 and 2.

While I have shown the escape-pipe made separate from the body of the receptacle, it is obvious that it might be formed integral therewith during the process of molding the receptacle, or it might be formed integral with or carried by the depending flange of the cover, its function being simply to provide a free communication between the air on the interior of the receptacle and the exterior air while the flange of the cover is being inserted in the liquid in the valley and its outer branch being so formed as to receive a cap which shall itself be sealed by a liquid.

What I claim is—

1. A storage-receptacle, comprising a body provided with a valley around it for the reception of a liquid seal, an air-tight cover provided with a flange adapted to enter the sealing liquid in the valley, an air escape and inlet conduit forming free communication be-

tween the air within the receptacle and the exterior air and having its exterior branch surrounded by liquid and a cap adapted to cover the mouth of the outside branch of the said conduit and enter the liquid surrounding said branch, substantially as set forth.

2. The storage-receptacle comprising a body provided with a valley around it for the reception of a sealing liquid, an air inlet and escape pipe seated in the valley and separable from the body for establishing communication between the air within the receptacle and the exterior air through the body of the sealing liquid, a cover provided with a flange adapted to enter the sealing liquid and embrace within it the inner opening in the escape-pipe and a cap adapted to pass over the outer end of the escape-pipe and into the sealing liquid, substantially as set forth.

3. A storage-receptacle, comprising a body provided with a valley around it for the reception of a liquid seal, an air-tight cover provided with a downwardly-extending flange adapted to enter the sealing liquid in the valley and with an upwardly-extending flange for retaining a cake of ice on the cover, an air escape and inlet conduit forming free communication between the air within the receptacle and the exterior air and means for closing the outside branch of the said conduit, substantially as set forth.

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Witnesses:

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