H. B. SEELY.

INSULATED RECEPTACLE.

APPLICATION FILED JUNE 15, 1908.

995,188.

Patented June 13, 1911.

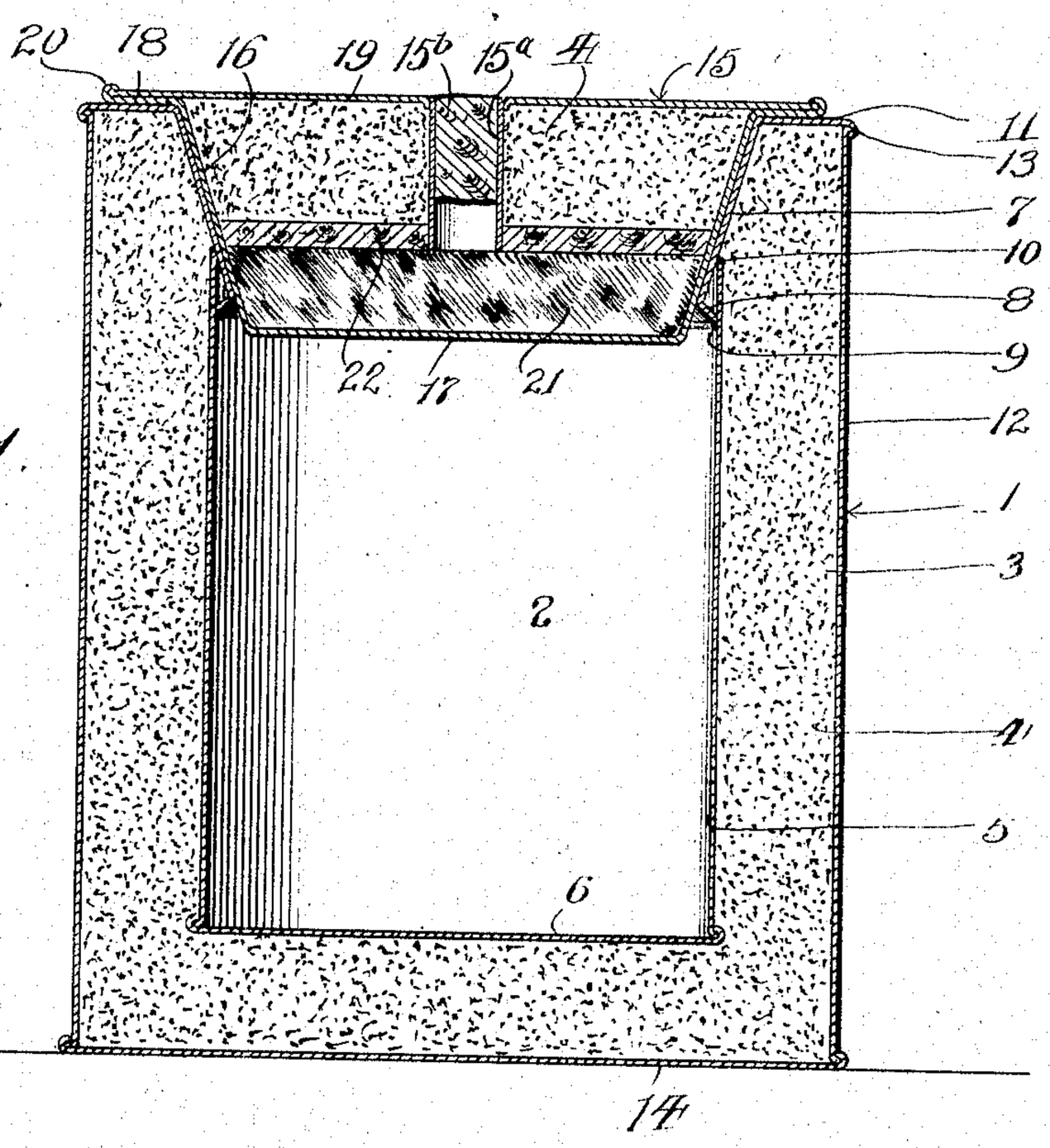
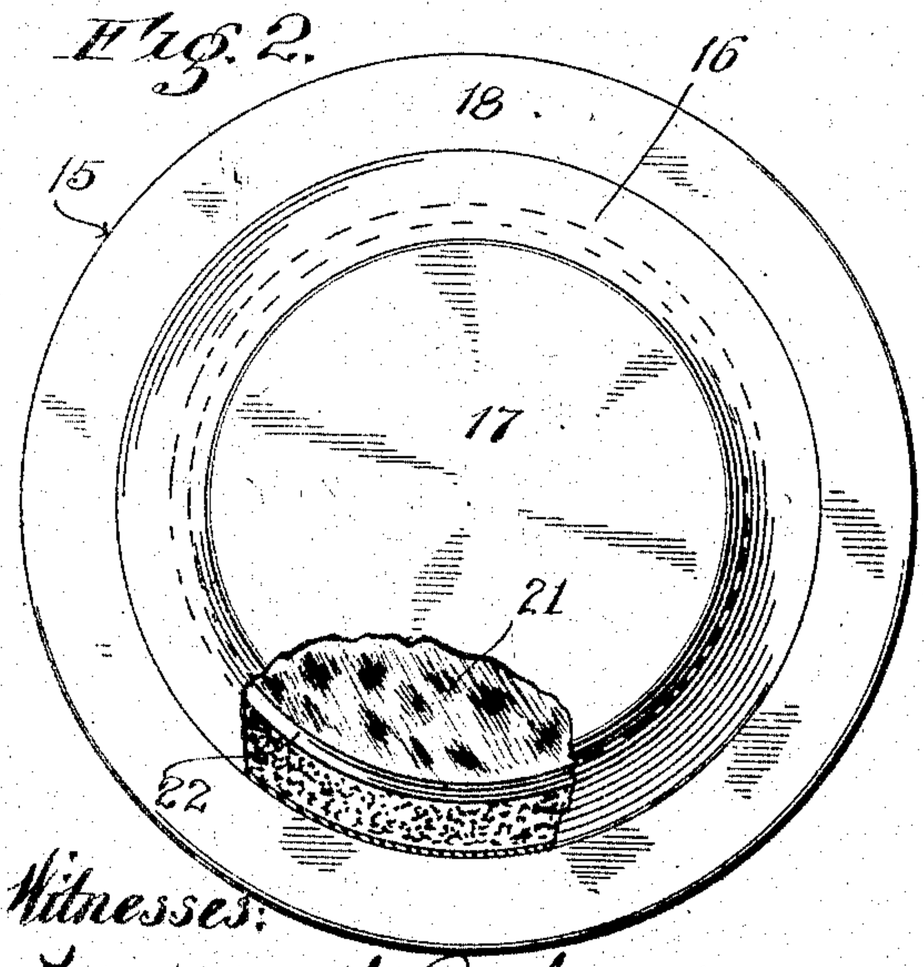


Fig. 1.

Fig. 2.



Witnesses:

Fannie F. Richards

Wm. P. Bond

Inventor:

Herman B. Seely,

by Charles G. Sherrill

his Atty

UNITED STATES PATENT OFFICE.

HERMAN B. SEELY, OF CHICAGO, ILLINOIS.

INSULATED RECEPTACLE.

995,188. Specification of Letters Patent. Patented June 13, 1911.

Application filed June 15, 1908. Serial No. 438,471.

To all whom it may concern:

Be it known that I, HERMAN B. SEELY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Insulated Receptacles, of which the following is a full, clear, and exact description.

This invention relates to improvements in insulated receptacles, the object being to provide a simple and practical device for maintaining a high or low temperature within the receptacle, for a limited period of time.

Another object is to provide a removable cover having a closed tank or compartment for containing a body of water or other substance which may be either frozen by suitable freezing apparatus, or heated to a very high degree of temperature, for maintaining a low or high degree of temperature in the receptacle, depending upon the use to which the receptacle is to be put.

To such end this invention consists in certain novel features of construction and arrangement, a description of which will be found in the following specification and the essential features of which will be more definitely pointed out in the appended claims.

The invention is clearly illustrated in the drawings furnished herewith, in which—

Figure 1 is a central, vertical section of an apparatus containing my improvements. Fig. 2 is an under-plan view of the improved cover.

In these views 1, is a receptacle having an inner chamber 2 for receiving the commodities and 3 is an insulating chamber surrounding the inner chamber and in which is placed a heat non-conducting substance 4, such as cork, magnesia, asbestos, or the like. Any well known heat non-conducting substance may be placed within this chamber. The inner chamber 2, is formed by a wall 5, closed at the lower end by a bottom 6, and this chamber is open at the top, the opening being surrounded by an outwardly flaring neck piece 7. The lower edge of the neck piece 7, is flanged outwardly as seen at 8, and the side wall 5, is soldered to the edge of said flanged portion 8, as at 9 and to the neck piece at 10. The upper edge of the neck piece 7, is extended out in the form of a horizontal flange 11, which is connected to the outer or surrounding wall 12, of the receptacle by means of a joint 13. The outer wall is closed along its lower edge by a bottom 14.

My improved cover is seen at 15, and as shown, has a flaring side wall 16, adapted to fit snugly within the tapering neck piece 7, of the receptacle and to extend down somewhat below the flange 8. A bottom 17, is formed upon the lower edge of the side wall 16, and the upper edge of said wall is flanged outwardly at 18, to receive a top piece 19, which is secured to the flange 18, as by a seam joint 20. The cover contains a body of water or other freezable substance 21, over which is placed a cork partition 22. The inner face of the wall 16, and bottom 17, of the cover are preferably covered with some water proofing substance, and the cork partition is forced down over the water to make a perfectly tight joint with the cover. After the cork 22, has been put in place, the space above the cork is filled with a heat non-conducting substance 4, such as cork, magnesia, asbestos or the like, after which the top 19, is secured in place upon the flange 18.

When the device is to be used for maintaining a low degree of temperature in the receptacle, the cover 15, is placed in some suitable refrigerating apparatus and the water therein frozen into a cake of ice. The receptacle itself may also be cooled off and then filled with the food or liquid which it is desired to preserve in a cool condition. The cover 15, is then forced down into the neck of the receptacle, thus closing the inner chamber and completely surrounding it with a jacket of heat non-conducting substance. This heat non-conducting jacket itself will effectually prevent the outer atmosphere for a limited period of time, from substantially increasing the temperature within the receptacle, but with the assistance of the ice pack in the cover, the low temperature within the receptacle will be maintained for a much longer period.

The advantage of having an insulated ice tank in the cover is readily apparent. To prepare the cover for use, it is simply placed in the refrigerating plant and the water within the tank frozen solid.

If it is desired to maintain a high degree of heat in the receptacle, the cover can be placed upon a stove and the water in the tank heated up to a very high degree of temperature, after which the cover can be

placed in the neck of the receptacle, thereby maintaining the heat within the receptacle for a much longer period of time.

It should be noted that a slight space is left between the lower edge of the cover 15, and the wall 5, of the inner chamber, thus forming an annular groove at this point. This construction provides a sort of deflecting chamber so that the rising air in the receptacle will be turned down into the receptacle.

It should be noted that the inner chamber is surrounded on all sides by the heat non-conducting substance, and that the only place where the inner chamber has any metallic connection with the outer air is through the neck of the receptacle and side wall of the cover, but these parts are so thin that very little, if any, heat or cold is lost by reason of them.

I have shown a filling tube 15[a] in the cover 15, that communicates with the water compartment of the cover. This filling tube may be used in filling and emptying the water compartment, and a cork or plug 15[b] is provided for sealing up the tube. It is obvious that either hot or cold water, cracked ice or some other temperature maintaining substance may be poured into the compartment through the filling tube, and that the same result is obtained as when the water compartment is used with the substance confined within it and heated or cooled therein. It is also evident that some other cold storage substance may be substituted for water, as for instance salt brines may be used, which may be given a very low degree of temperature without freezing them solid.

In the claims I have employed the term "temperature maintaining substance", by which I mean any substance which may be cooled to a low degree of temperature or heated up to a high degree of temperature, for maintaining in the receptacle for a limited period of time, either a low or a high degree of temperature.

I am aware that various other alterations and modifications of this device are possible without departing from the spirit of my invention, and I do not desire therefore to limit myself except as may be necessary by the prior state of the art.

I claim as new and desire to secure by Letters Patent:

1. A receptacle comprising inner and outer walls and an outwardly flaring neck secured to the upper end of the inner wall, a flange on said neck adapted to engage the upper edge of the outer wall, and a tapering cover removably seated in said neck and having an outwardly projecting flange adapted to rest upon the flange of the neck, a horizontal partition in the cover, a body of temperature maintaining substance in the lower part of the cover, and a heat non-conducting substance in the upper part of the cover.

2. In a device of the class described, a wall inclosing a chamber and having an outwardly flaring neck formed with an outwardly turned flange upon its lower edge soldered to the wall.

3. In a device of the class described, the combination of a wall inclosing a chamber, an outwardly flaring neck having an outwardly turned flange upon its lower edge, and a downwardly converging cover adapted to be seated in said neck with its lower edge projecting down below the flange on the neck.

4. A receptacle comprising inner and outer walls and an outwardly flaring neck, and a downwardly converging cover adapted to be seated in said neck with its lower edge projecting down below the flaring neck so as to form an annular space between the side wall of the neck and the surrounding wall.

In witness whereof I have executed the above application this 12th day of June 1908, at Chicago, county of Cook and State of Illinois.

HERMAN B. SEELY.

Witnesses:

CHARLES O. SIEBVEY,

FRANK BEMM.