H. Y. NORWOOD.

RECEPTACLE.

APPLICATION FILED JUNE 28, 1912.

1,236,471.

Patented Aug. 14, 1917.

Fig. 2

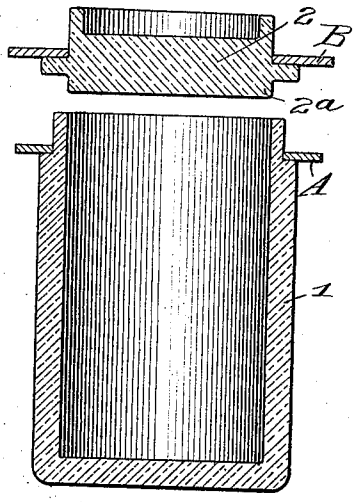


Fig. 1

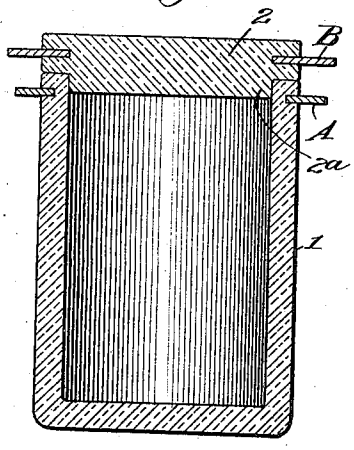


Fig. 3

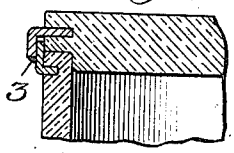


Fig. 4

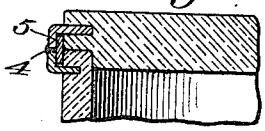


Fig. 5

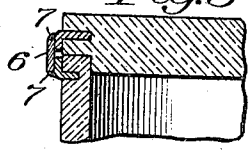


Fig. 6

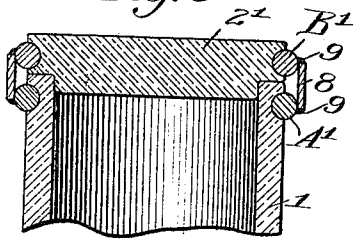


Fig. 7

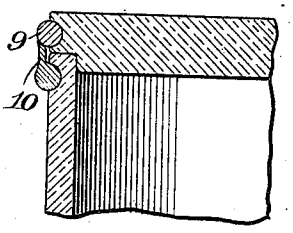


Fig. 8

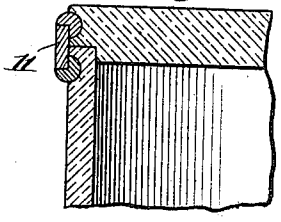


Fig. 9

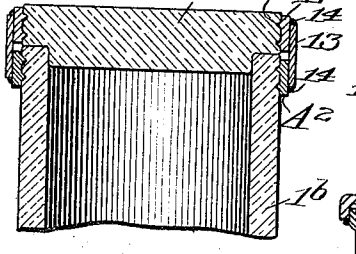


Fig. 10.

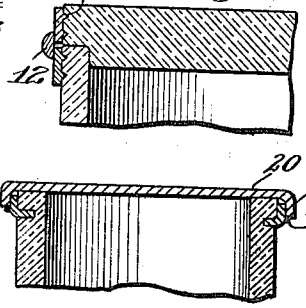


Fig. 11

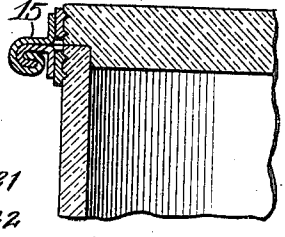


Fig. 12.

Witnesses

Walter D. Payne

Nelson H. Copp

Inventor

Harry Y. Norwood

By Church & Rich

His Attorneys

UNITED STATES PATENT OFFICE.

HARRY Y. NORWOOD, OF ROCHESTER, NEW YORK.

RECEPTACLE.

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To all whom it may concern:

Be it known that I, HARRY Y. NORWOOD, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Receptacles; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of the specification, and to the reference numerals marked thereon.

My present invention relates to the manufacture of receptacles for liquids or solids to which covers are attached to protect the contents, and while receptacles embodying my invention are intended for any and all uses, they are provided particularly for the preservation of food products, made either by the house-wife or manufactured in a wholesale way for public distribution.

My invention has for its general object to provide a simple and effective means for uniting the cover to the body of the receptacle, so that the contents will be hermetically sealed, and it consists in applying to a glass jar, or one made of vitrified or frangible material, a metal band or strip which will coöperate with a similar strip or band on the cover of the receptacle, when the latter is composed of material the same as that of which the jar is made, whereby these parts may be securely united. The invention further comprehends applying such a band to a receptacle and arranging it for coöperation with a cover made of sheet metal in such a manner that the parts may be quickly and securely attached when desired.

To these and other ends the invention consists in certain improvements and combinations of parts, all as will be hereinafter more fully explained, the novel features being pointed out in the claims at the end of the specification.

In the drawings:

Figure 1 is a vertical sectional view of a receptacle and cover therefor showing the connecting bands or members applied in accordance with one embodiment of my invention;

Fig. 2 is a similar view illustrating one of the formative steps during the process of manufacture of the parts;

Figs. 3, 4, and 5 are fragmentary views illustrating various forms of joints, which may be made to attach the bands together;

Figs. 6, 7, and 8 are detailed sectional views of a modified construction showing bands circular in cross section, and different means of securing these together;

Figs. 9, 10 and 11 are sectional views showing flat bands secured to the exterior of the receptacle and cover, and various means for attaching these to form a sealed joint;

Fig. 12 is a fragmentary view in section, illustrating the manner of attaching a modified form of ring and metal cover.

Similar reference numerals in the several figures indicate similar parts.

The broad principle of my invention may be carried out in a variety of ways, and comprehends principally, the securing to the frangible material of which the jar and cover is composed, continuous metal bands, in such a way that an air tight union or joint is effected between said bands and the respective parts, to the end that when these bands are subsequently soldered, seamed or otherwise united, the receptacle will be effectively sealed against the entrance of air or liquids which would have a deleterious effect upon the contents of the receptacle. One method of performing my invention is that shown in Fig. 1, in which the metal bands A and B are constructed in the form of flat rings of thin metal of appropriate composition embedded or fused into the glass or other substance, of which the receptacle 1 and the cover 2 are composed. One method of attaching these parts is that shown in Fig. 2. Here the receptacle and cover are shown in a state of partial completion, with shoulders to support the rings and above which extends a sufficient amount of the material which when heated, may be pressed down over the upper edges of the rings securing them as illustrated in Fig. 1. In order to secure the cover against lateral movement on the receptacle without depending upon the securing devices for this purpose, the cover and receptacle are provided with coöperating shoulders which may be conveniently formed by providing the cover with an extension, the periphery of which fits within the neck of the receptacle as indicated at 2^a.

Various methods may be employed for securing the bands A and B, as shown in Figs. 3, 4, and 5, the first of which shows the edges of the bands bent in opposite directions forming circumferential or over-lapping flanges, which may be united by a bead of

solder, as indicated at 3. In Figs. 4 and 5 these flanges instead of over-lapping, are shown as being bent in opposite directions and arranged with their edges in juxtaposition and united by solder, as indicated at 4. When so arranged, I deem it desirable to space the flanges from the sides of the receptacle and cover sufficiently to permit the insertion of a flat metal ring 5, but this may, however, be arranged exteriorly, as indicated by 6 in Fig. 5, in which event the flanges of the rings will be bent downwardly in close engagement with the walls of the receptacle and cover and secured to the ring by solder ribbons 7.

The rings A and B are preferably made of a thin sheet metal which may be composed of an alloy of copper, nickel, or other suitable ingredients, the character of which may depend largely upon the nature of the glass or other material of which the receptacle is formed, the intent and purpose being to make said rings of a metallic composition, which will have a tendency to fuse into and form an intimate connection with the glass when this is molded into its final shape. It is not essential to the invention that the rings be made in the flat form previously described and for this reason I have shown in Fig. 6 to 8 and 9 to 11, other constructions. The invention is carried out according to the first group, by embedding in the receptacle and cover 1′ and 2′ the rings A′ and B′, which are circular in cross section and are secured in position in a manner similar to that described in connection with Fig. 2. Rings of this form lend themselves freely to a variety of means for effecting a union between them. For instance in Fig. 6 an external band 8 is shown extending between them and united to each of said rings by a small quantity of solder as indicated by 9. Again, one of the rings may be provided with an integral tongue or flange 10, as shown in Fig. 7, having a length sufficient to reach the adjacent surface of the ring on the other part of the receptacle. A third means of connection is that shown in Fig. 8 in which the rings on the two parts of the receptacle have a quadrant shaped portion removed circumferentially, adapting each of them to receive one edge of the ring or union member 11.

In the group of Figs. 9, 10 and 11, the bands A^2 and B^2 are shown secured on the periphery of the receptacle 1^b and its cover 2^b which will preferably be in close proximity, permitting them to be secured or sealed together by a bead of solder 12, as shown in Fig. 10, or by a band 13 and beads of solder, 14, as shown in Fig. 9. If desired these bands may be provided with laterally extending parallel flanges which lie face to face, as shown in Fig. 11, when the cover is placed upon the receptacle, permitting a tight joint to be formed between these parts by seaming the edges of the flanges as indicated by 15. Bands of the forms shown in Figs. 9, 10, and 11 may be shrunk in place, or they may be formed of a given diameter and the receptacle and cover cast therein in the usual molding process, and it will be desirable to provide the bands with projections.

Fig. 12 shows the adaptability of the invention to a receptacle which may be closed by covers formed of sheet metal. This figure illustrates a band applied to a receptacle in the manner indicated in Fig. 5 to coöperate with a metal cover 20 having a depending flange or rim 21 which closely engages the band on the receptacle and to which latter may be attached a ribbon of solder 22, and the desired seal thus obtained.

The receptacles embodying my invention are adapted to various uses and particularly for preservation of food products in a cooked or partly cooked condition, from which the air must be excluded. While I have shown a wide mouthed receptacle, it will be understood that the invention is equally applicable to small necked bottles and when so used would practically prevent successful re-filling thereof, as the fracture of the neck of the bottle or the severance of the metal strip embedded in the glass would be a sure indication of the previous use of the receptacle. The invention provides a simple and efficient means of securely sealing the body of the receptacle and cover together without affecting its appearance, and at the same time permitting the parts to be easily separated by cutting the exposed portion of one of the bands, or the connecting element extending between them, by means of a suitable instrument.

The metal bands, or circumferential strips which I employ are preferably formed from sheet metal whose composition comprises such elements that the metal will possess practically the same coefficient of expansion as that of the glass, so that the two shall contract and expand together. The composition of the metal is of such a nature that when the hot glass is molded around it an intimate physical union, incorporation, or fusing between the contacting surfaces of the glass and the metal is effected.

I claim as my invention:

1. The combination with a preserving receptacle comprising a body having an open end and a closure therefor, both composed of frangible material, of metal bands embedded in said body and cover and each incorporated into the material of which the respective parts is composed to permit a sealed connection, said bands projecting outwardly beyond the sides of the respective parts to which they are attached, and means

for uniting said bands to form an hermetic seal between the two parts of the receptacle.

2. A closed sealed receptacle comprising a body portion having an open end and a closure therefor, both of said parts being made of frangible material, separate metal bands surrounding said parts, each band having an inner edge incorporated into the substance of its respective part and forming an air tight union therewith and means for connecting the outer edges of said bands together circumferentially to form an hermetic seal between the body and cover.

3. A preserving jar of glass and a glass cover therefor, flat metallic rings arranged with their inner edges embedded in said jar and cover when said parts are in heated condition and becoming incorporated in the glass to form hermetic union therewith, said bands having outer continuous exposed edges adapted to coöperate and to be sealed together hermetically after the jar has received its contents.

4. The combination with a preserving jar of glass and a glass cover therefor, of flat metal rings formed from sheet material embedded peripherally in each of said parts and being incorporated with the glass to form a physical union therewith, said rings having free circumferentially projecting edges adapted to be united to temporarily seal the cover on the jar.

HARRY Y. NORWOOD.

Witnesses:
RUSSELL B. GRIFFITH,
FLORENCE E. FRANCK.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."