

June 19, 1923.

1,459,588

E. HOFFMAN

CLOSURE FOR RECEPTACLES

Original Filed March 13, 1920

Fig. 1.

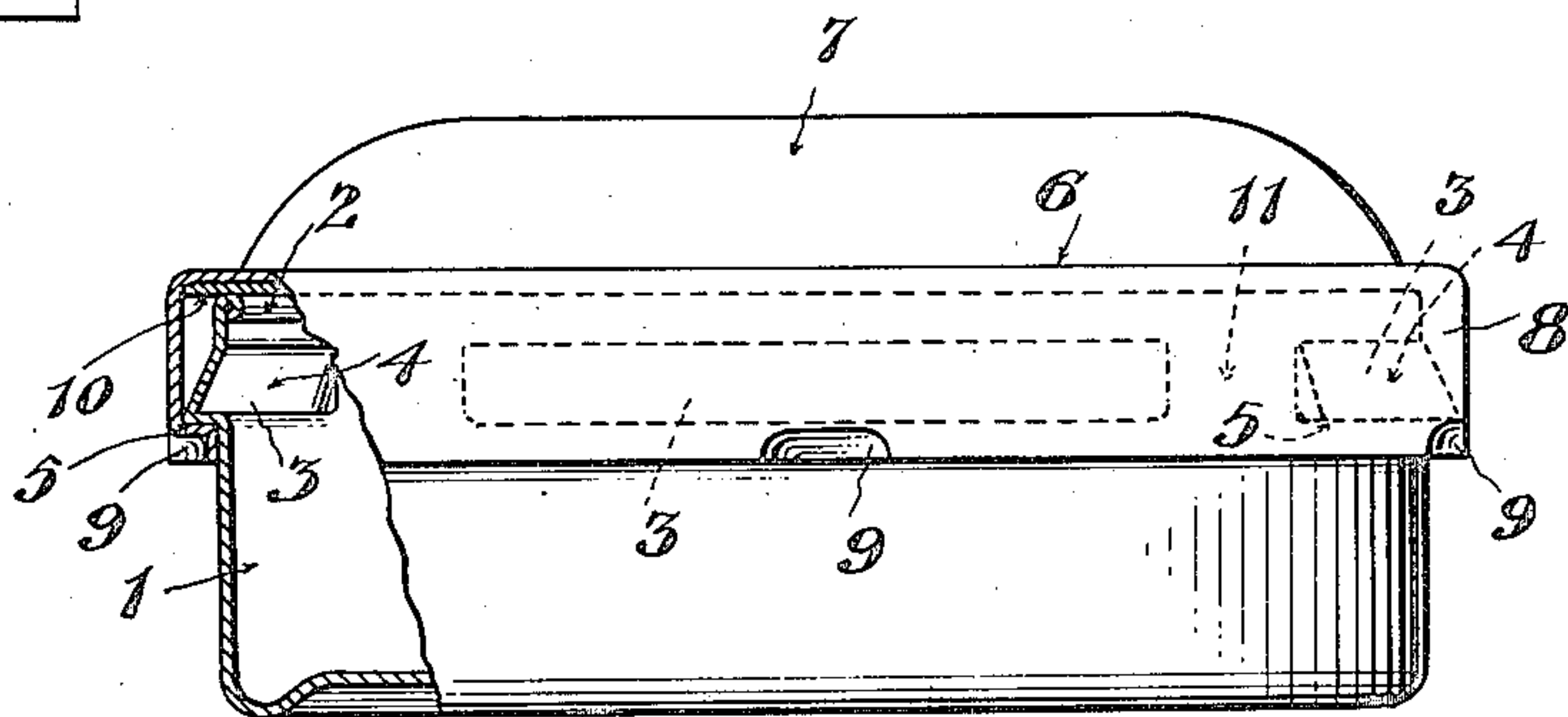


Fig. 2.

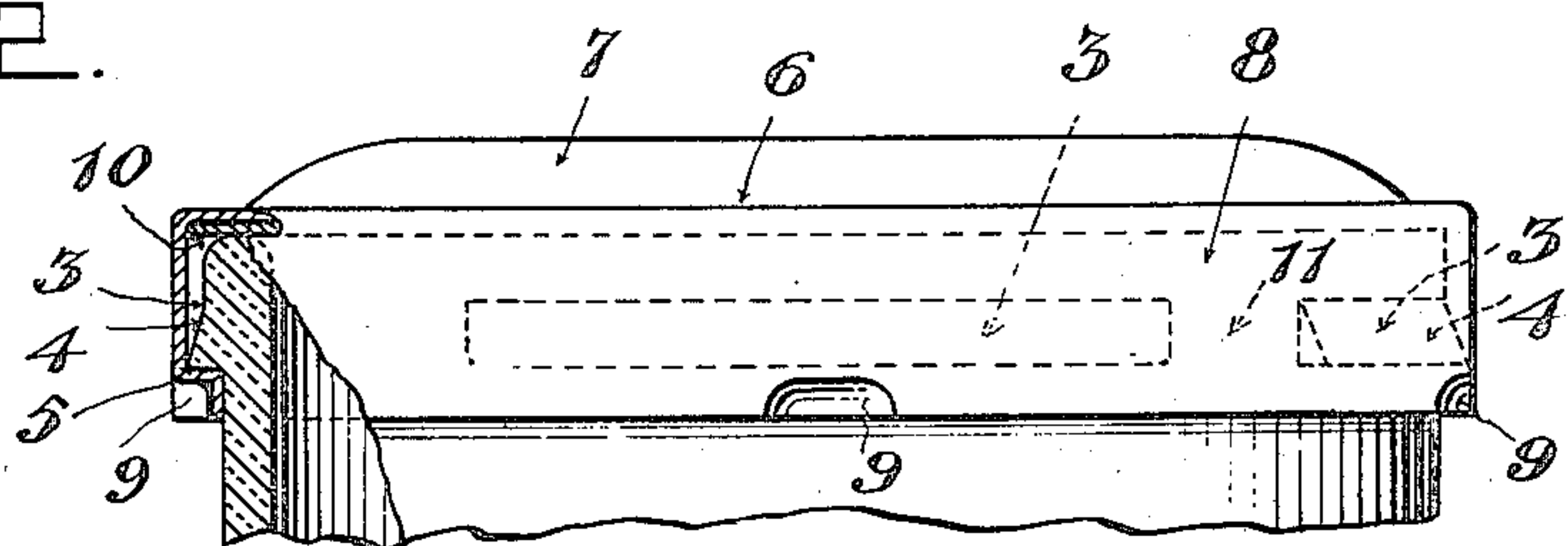
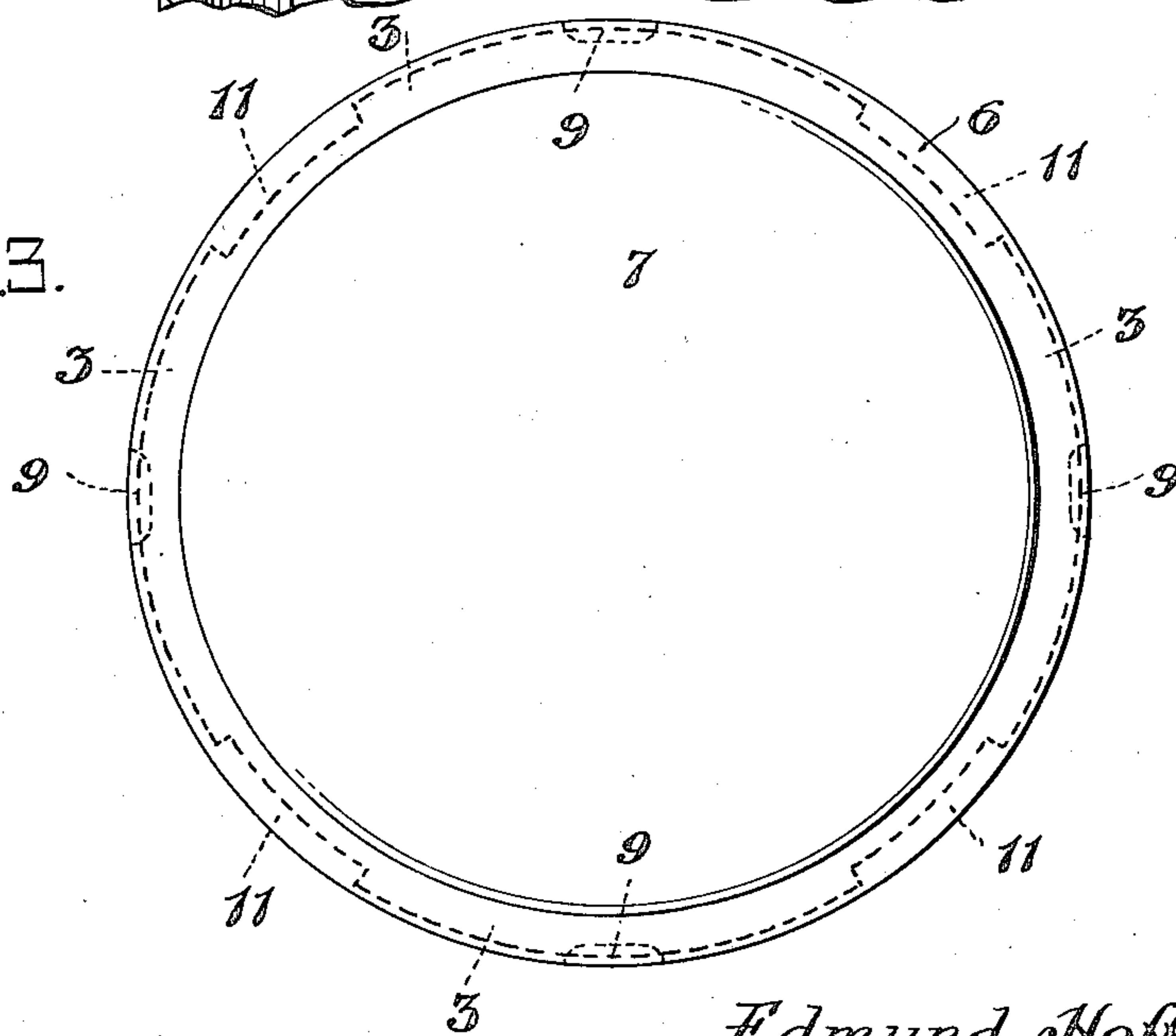


Fig. 3.



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UNITED STATES PATENT OFFICE.

EDMUND HOFFMAN, OF BROOKLYN, NEW YORK.

CLOSURE FOR RECEPTACLES.

Application filed March 13, 1920, Serial No. 365,456. Renewed May 9, 1923.

To all whom it may concern:

Be it known that I, EDMUND HOFFMAN, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, county of Kings, State of New York, have invented a certain new and useful Improvement in Closures for Receptacles, of which the following is a specification.

This invention relates to a metal closure for bottles, jars, metal boxes, or other receptacles, and the object of this invention is to provide a cap which can be readily applied by either hand or machinery, and which will provide a positive and secure closure means under all conditions.

With this object, and other objects which may hereinafter appear, in view, I have devised the particular arrangement of parts hereinafter set forth, and more particularly pointed out in the claims appended hereto.

Reference is to be had to the accompanying drawing, forming a part hereof, in which—

Figure 1 is a side elevation, partly in section, of a metal closure, provided with my improvement:

Figure 2 is a side elevation, partly in section, of the upper end of a glass or like receptacle provided with my improvement; and

Figure 3 is a plan view of my improved closure cap.

Throughout the various views of the drawings, similar reference characters designate similar parts.

In the preferred embodiment of my invention, as disclosed in the accompanying drawing, 1 indicates a metal receptacle which is provided at its upper edge with a circumferential strengthening bead 2, and with a plurality of spaced apart lugs 3. These lugs are elongated members and are preferably situated at separated intervals as disclosed in the drawing. The lugs are provided with inclined faces 4 and shoulders 5, which are engaged by lugs on the cap to be hereinafter described.

In the case of a metal container as disclosed in Figure 1, the lugs 3 may be formed by forcing outward or distorting the metal from which the container is formed. In the case of a glass container, or a container of like substance, these lugs 3 are formed integrally with the container as disclosed in

Figure 2. The closure cap is indicated at 6, which is in this case provided with a dome 7 and a continuous circumferential downwardly extending flange 8, said flange being provided with inwardly projecting lugs 9. These lugs 9 are preferably formed at the extreme lower edge of the flange 8 and are produced by forcing inwardly the metal of the flange 8. These lugs 9 are provided with rounded shoulders to aid them in passing under the lugs 3 on the container. There are preferably as many of these inwardly projecting lugs 9 on the flange 8 as there are the outwardly projecting lugs 3 on the upper end of the container. It will also be noted that the spaces between the lugs 3 on the container are wide enough to permit the lugs on the cap to pass therethrough for the purpose of removing the cap when desired.

Intermediate the upper edge of the container 1 and the inner face of the cap is provided a washer or gasket 10 for the purpose of sealing the closure when the cap is placed down upon the container. It will be seen that by reason of the construction above described, the cap may be forced down upon its container, and it will provide an effective seal therefor without being rotated to place it in position. The lugs 9 on the flange 8 of the cap contact with the inclined faces 4 of the lugs 3 on the container or receptacle, and are expanded sufficiently until they reach a point below the shoulder 5 on the lugs 3 when they snap into engagement therewith at the same time forcing the gasket or washer 10 tightly between the inner face of the cap 6 and the bead 2 or upper edge of the receptacle. To remove the cap it is simply necessary to rotate the same until the lugs 9 on the flange 8 come into registration with the spaces 11 intermediate of the lugs 3 and the cap can then be lifted off.

It will be noted that in view of the fact that the cap can be placed upon the container without the necessity for rotating the cap, it can be placed upon the container by machinery, as a simple downward pressure is all that is required to place the cap in position.

It will also be seen that the only contact of the flange 8 with the container is at the points where the inwardly bent lugs 9 contact therewith. The cap 6 is preferably made of a resilient metal so that while the same is being placed in position on the re-

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ceptacle and the lugs 9 are riding on the inclined surfaces 4 of the lugs 3, these parts of the flange 8 situated intermediate the lugs 9 can distort slightly to permit the lugs 9 to pass over the lugs 3 without excessive strain on the flange 8 of the cap. The parts of the flange 8 situated intermediate of the lugs 9 being spaced away from the container, permit this temporary distorting of the flange and the resiliency of the cap causes the flange to spring back into its normal circular shape the moment that the lugs 9 snap into position below the shoulders 5 on the lugs 3.

15 In Figure 2, I have shown the device as applied to a glass or earthenware jar or receptacle, which operates in substantially the same manner as in connection with a metal closure as above described.

20 From the foregoing it is obvious that my invention is not to be restricted to the exact embodiment shown, but is broad enough to cover all structures coming within the scope of the annexed claims.

25 Having described my invention, what I claim is:

1. A device of the class described comprising a receptacle having a plurality of spaced-apart lugs on its outer face and adjacent its upper end, a closure cap having a continuous flange of a diameter adapting it to be spaced away from the sides of the receptacle, and having a plurality of spaced-apart inwardly projecting lugs formed by forcing inwardly portions of the flange, and a sealing gasket spaced between the upper end of the container and the cap, the lugs on the cap being so arranged with respect to the lugs on the container whereby the lugs on the cap may be caused to ride over the lugs on the container and engage beneath the same and the gasket compressed, by direct downward pressure and the cap may be removed from the container by rotary movement.

2. In a device of the class described, a container having a plurality of outwardly projecting spaced-apart lugs on its exterior face near its upper edge, said lugs having inclined faces, and a closure cap provided with a continuous flange having a plurality of inwardly extending lugs adapted to slide over said inclined faces and engage beneath the lugs on the container when the cap is forced directly downward, said lugs on the closure cap being of a width to permit them to pass between the spaces separating the lugs on the container, whereby the cap can be removed by a rotary movement which brings the lugs on the cap in

alignment with the spaces between the lugs on the container.

3. A device of the class described comprising a container having a plurality of spaced-apart lugs, a closure cap therefor having a continuous flange provided with a plurality of inwardly extending lugs adapted to pass over and engage beneath the lugs on the container when the cap is forced downward by direct downward pressure, and also adapted to pass through the spaces situated intermediate of the lugs on the container when brought into alignment with said spaces by rotary movement of the cap.

4. A device of the class described comprising a receptacle having a plurality of spaced-apart lugs, said lugs being provided with inclined faces, a closure cap having a continuous flange of sufficient resiliency to permit distortion, said flange being provided with a plurality of inwardly projecting lugs adapted to ride on the inclined faces of the lugs on the receptacle and engage beneath the lower edges of said lugs when the cap is forced downwardly by direct downward pressure, said lugs on the receptacle being situated at spaced-apart intervals whereby the closure cap can be rotated to bring its lugs in registration with the spaces located between the lugs on the receptacle and the lugs on the cap can be moved through said spaces.

5. A device of the class described comprising a container having a plurality of spaced-apart lugs provided with inclined outer faces, a cap having a downwardly extending continuous and resilient annular flange capable of being distorted, portions of said flange at the lower edge thereof being inwardly bent to provide a plurality of spaced-apart lugs on the flange, said cap being capable of being placed on said container by direct downward pressure and removed by a rotary movement, the flange on said cap having those portions situated intermediate of its lugs spaced away from the sides of the container, the lugs on the flange being adapted to pass over the inclined faces of the lugs on the container and engage beneath the same when the cap is forced downward by direct downward pressure whereby temporary distortion of those portions of the flange located between the lugs thereon is caused during such downward pressure on the cap.

Signed at the city of New York, county and State of New York, this 12th day of March, 1920.

EDMUND HOFFMAN.