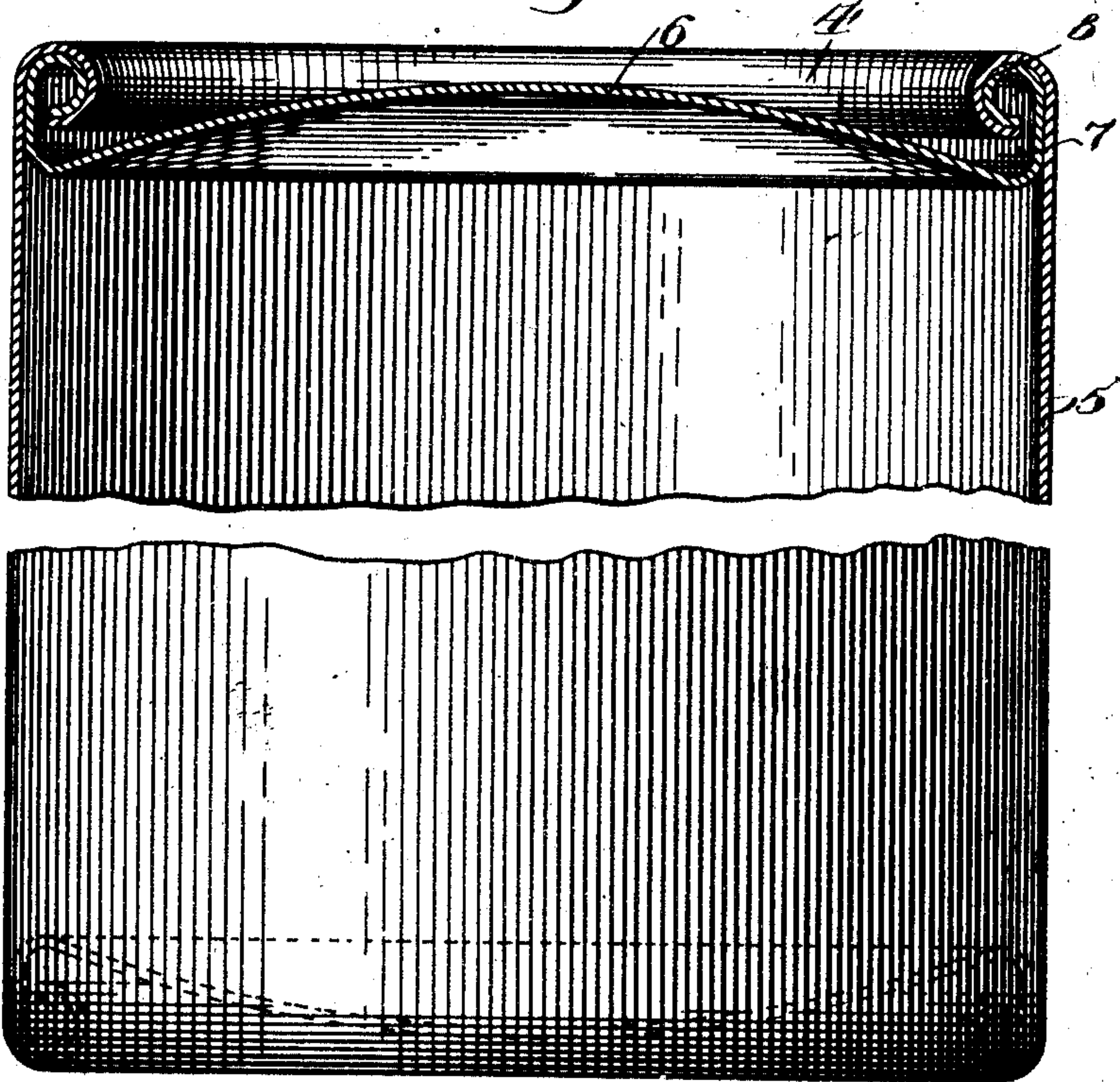


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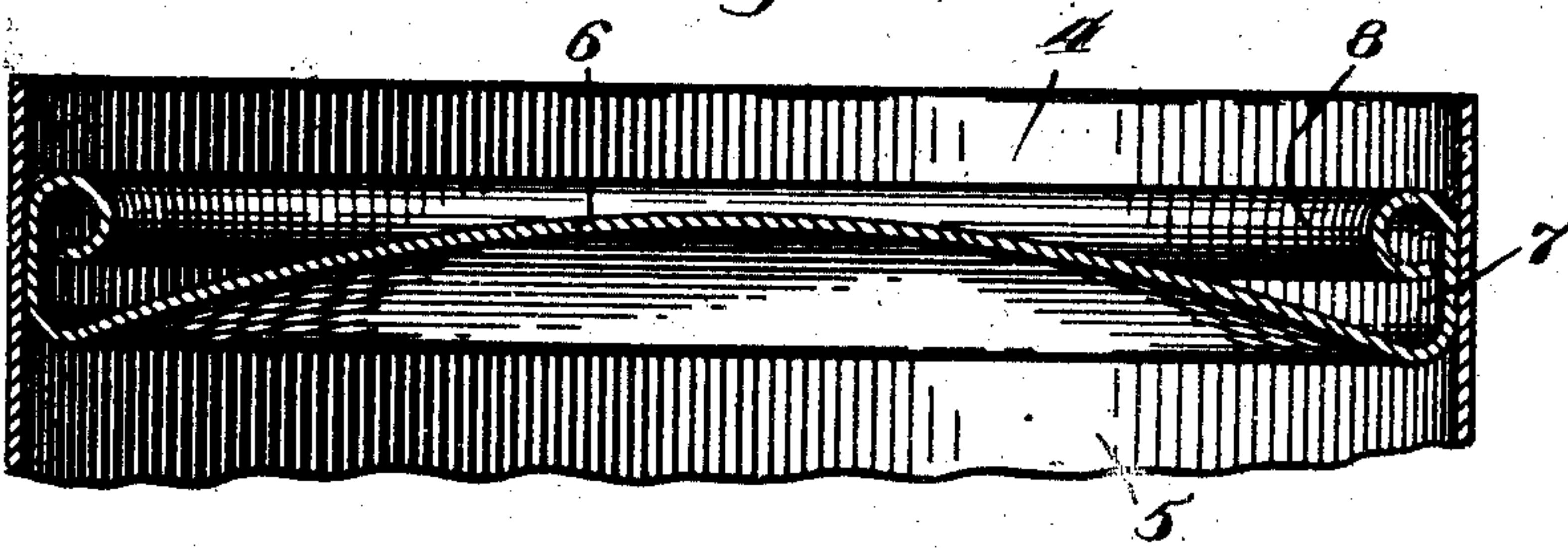
PATENTED MAY 21, 1907.

H. S. REYNOLDS.  
BARREL OR RECEPTACLE.  
APPLICATION FILED APR. 20, 1905.

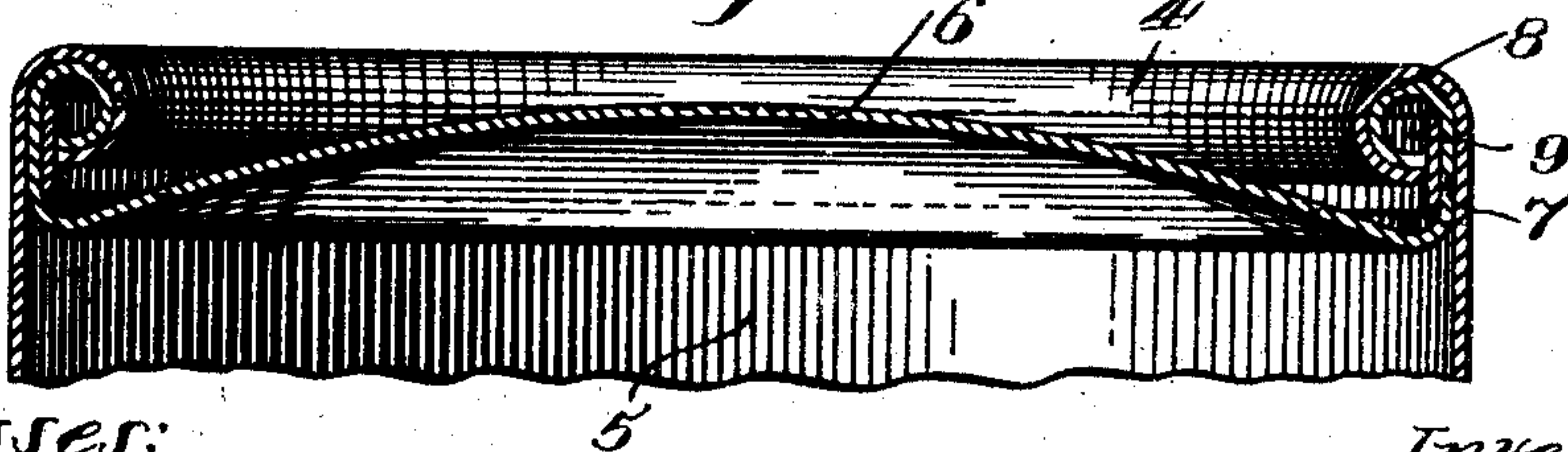
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses:

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Inventor:  
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By his attorney,

*J. A. Richards*



# UNITED STATES PATENT OFFICE.

HENRY S. REYNOLDS, OF BROOKLYN, NEW YORK.

## BARREL OR RECEPTACLE.

No. 854,237.

Specification of Letters Patent.

Patented May 21, 1907.

Application filed April 20, 1905. Serial No. 256,545.

*To all whom it may concern:*

Be it known that I, HENRY S. REYNOLDS, a citizen of the United States, residing in the borough of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Barrels or Receptacles, of which the following is a specification.

This invention has reference to the art of securing the bottom or end member in a vessel or receptacle, and particularly relates to a vessel whose sides, or body portion, is tubular or cylindrical in one integral piece and formed of sheet metal.

One of the objects of the invention is to provide an improved form of end member, that in its process of assemblage will readily permit of a solder joint being formed between it and the body portion, which may be readily tested to insure a hermetic joint being formed, before the final bending.

A further object of the invention is to provide in such a device a form of jointure in which there are no portions projecting beyond or outwardly from the body portion.

Another object of the invention is to provide such a joint wherein the weight of the vessel when resting upon such end, will be directly received by a part of the body portion of the vessel, instead of by a part of the end or bottom portion.

In the drawing accompanying and forming part of this specification, showing an embodiment of my invention, Figure 1 is a broken view, one part being a side elevation, and the other part an axial longitudinal section. Fig. 2 is a broken longitudinal section showing one state in the process of assembling the end member; and Fig. 3 is a view similar to the upper part of Fig. 1, but showing an annular band inserted between the extremities of the two members and the flanged portion of the end member.

The sides or body portion in the present instance is shown as composed of a tubular member 5, that may be constructed of sheet metal, such as wrought iron, copper, or other readily malleable metal. The end member, when the body portion is tubular, will have a disk portion 6, provided with a peripheral annular flanged portion 7, whose perimeter is equal to the inner perimeter of the body portion 5. The end portion of the flange 7 is bent or rolled inwardly upon itself at 8, as shown in Fig. 2, but leaving an annular or

cylindrical portion 7, between the roll and the adjacent disk portion of the member.

The end member is assembled by inserting it in the end of the body 5 as shown in Fig. 2, until the distance between the engaging annular portion of the flange 7, and the extremity of the body is substantially equal to the perimeter of the roll portion 8 of the flange, for the reason that when at a subsequent stage in the assemblage, the end portion 4 of the body projecting beyond its flange engaging portion, as shown in Fig. 2, is rolled over and inward upon the said rolled portion 8 of the flanged member, the extremity of the body portion will be substantially coincident with the extremity or edge of the flanged portion. After the end member provided with the flange 7 and the roll 8, has been inserted into the body portion and brought to the said position as indicated in Fig. 2, the now engaging portions of the flange 7 and the body member are joined by solder, or if preferred, by brazing. This soldering action may be facilitated by previously applying suitable flux or soldering fluid to such engaging surfaces. From Fig. 2 it will be observed that there is a gutter or trough formed by the adjacent roll portion of the flange and the body member, immediately above the engaging surfaces to be soldered, which will obviously greatly facilitate the act of soldering, as this trough will receive both flux and solder, and upon application of the soldering iron or other heating means, the molten material will flow by gravity to the engaging surfaces. Before proceeding to the next stage in the operation, it is desirable to test this joint, to ascertain if the members have hermetically united. This can be readily done by placing water upon either side of the joint and then if any should percolate through, the exact place of the leak will be apparent, and such defect can be easily removed by further soldering at such place.

The next state in the operation is to bend over and inward the portion of the body projecting beyond the soldered joint, onto and around roll 8. This will produce the structure set forth at the upper part of Fig. 1, and by having inserted the end member the correct distance, the extremity or edge of the body member will be brought coincident with the extremity or edge of the roll portion 8 of the end member. This will form a continu-



ous engagement of the body member and the flange portion, from their first engaging portions united by solder, to their extremities. The double roll thus formed is preferably continued until the ends of each member are brought into engagement with the inner side of the annular flange portion 7 of the end member, which will greatly enhance the strength of the joint. The joint can be further strengthened by inserting a band or hook 9 between the registering edges of the two members, and the inner face of the flange. The band will be put in such position before the roll 8 is formed on the end member. When such end member is used at the bottom of the vessel, it will be observed that the strain is first received upon the portion of the body member, and not of the end member; but this roll portion of the bottom member is reinforced and strengthened by being firmly united with the roll portion of the end member. It will be further observed that as the roll portions of the member are bent inwardly, there is no projection whatever beyond the perimeter of the body portion, that would be objectionable in the handling of the vessel. One advantage of such mode of assembling the end member lies in the fact that the two members are joined by solder, and thereupon tested for leakage, before the rolled portions are brought together.

Having thus described my invention, I claim:

35 1. A barrel comprising a tubular body

member, and a head comprising a central disk portion and a flange portion, the flange portion of the head comprising a cylindrical portion adjacent the disk portion in engagement with the inner wall of the body a short distance removed from the end, the said flange portion having its end extremity curved inwardly forming a roll or bead, the end portion of the body member being similarly rolled inwardly in contact with the bead portion of the head member, the flange portion at the portions where the annular portion merges into the roll portion, being secured to the contacting portion of the body member by brazing or soldering.

2. The method of securing the end member to the tubular body member of a receptacle which consists in forming the end member with an annular flange having an end portion of the flange bent inward, inserting the end member into the body member beyond its extremity for a sufficient distance to provide a bending portion at the end of the body, thereupon uniting the engaging portions of the flange and body by soldering or brazing, and thereupon bending the end body portion not so united down upon the said bent portion of the end member.

Signed at Nos. 9 to 15 Murray street, New York, New York this nineteenth day of April, 1905.

HENRY S. REYNOLDS.

Witnesses:

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