

No. 713,959.

Patented Nov. 18, 1902.

J. E. CASE & W. T. CONWAY.

METALLIC VESSEL.

(Application filed May 28, 1902.)

(No Model.)

Fig. 1.

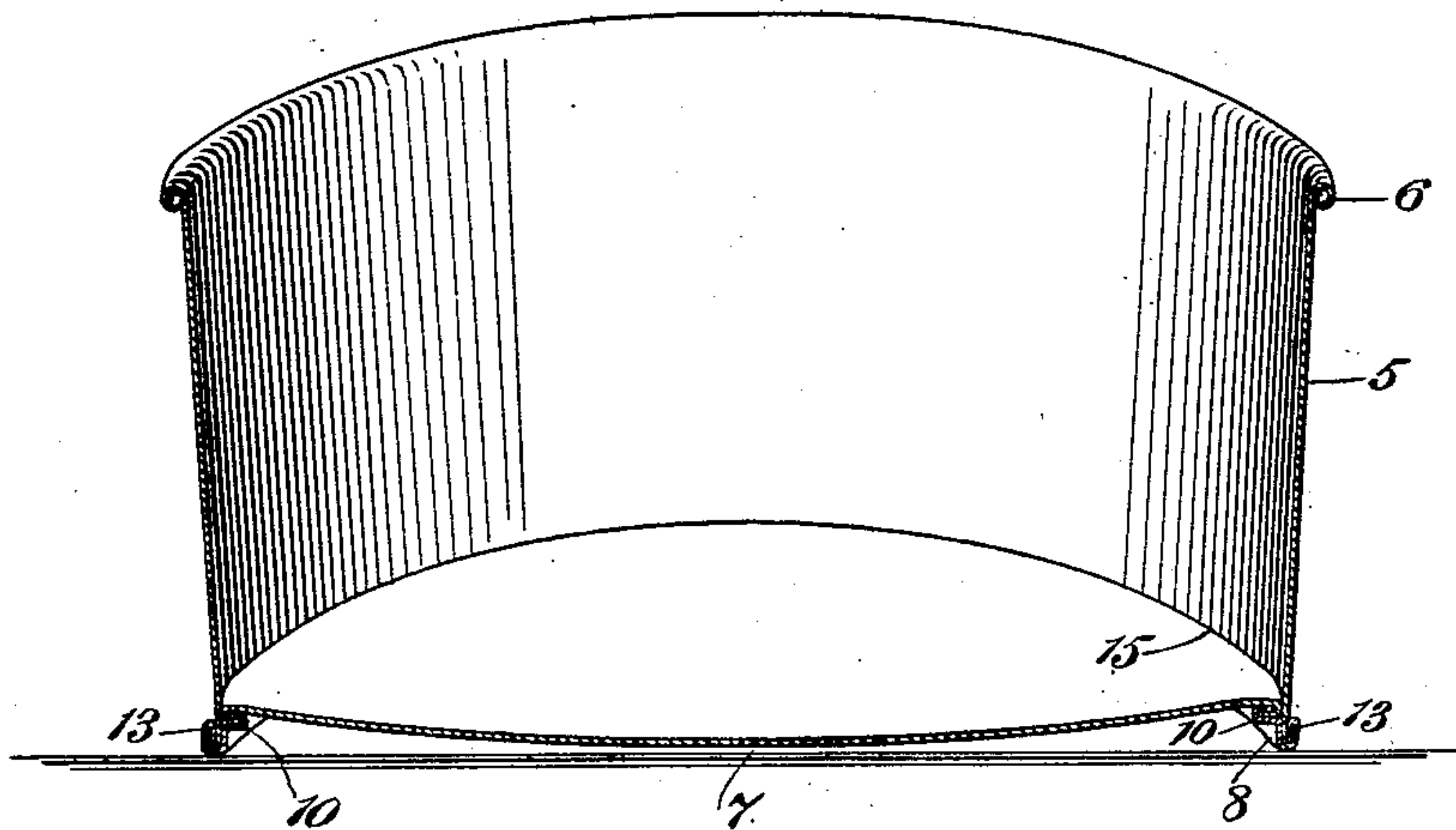


Fig. 2.

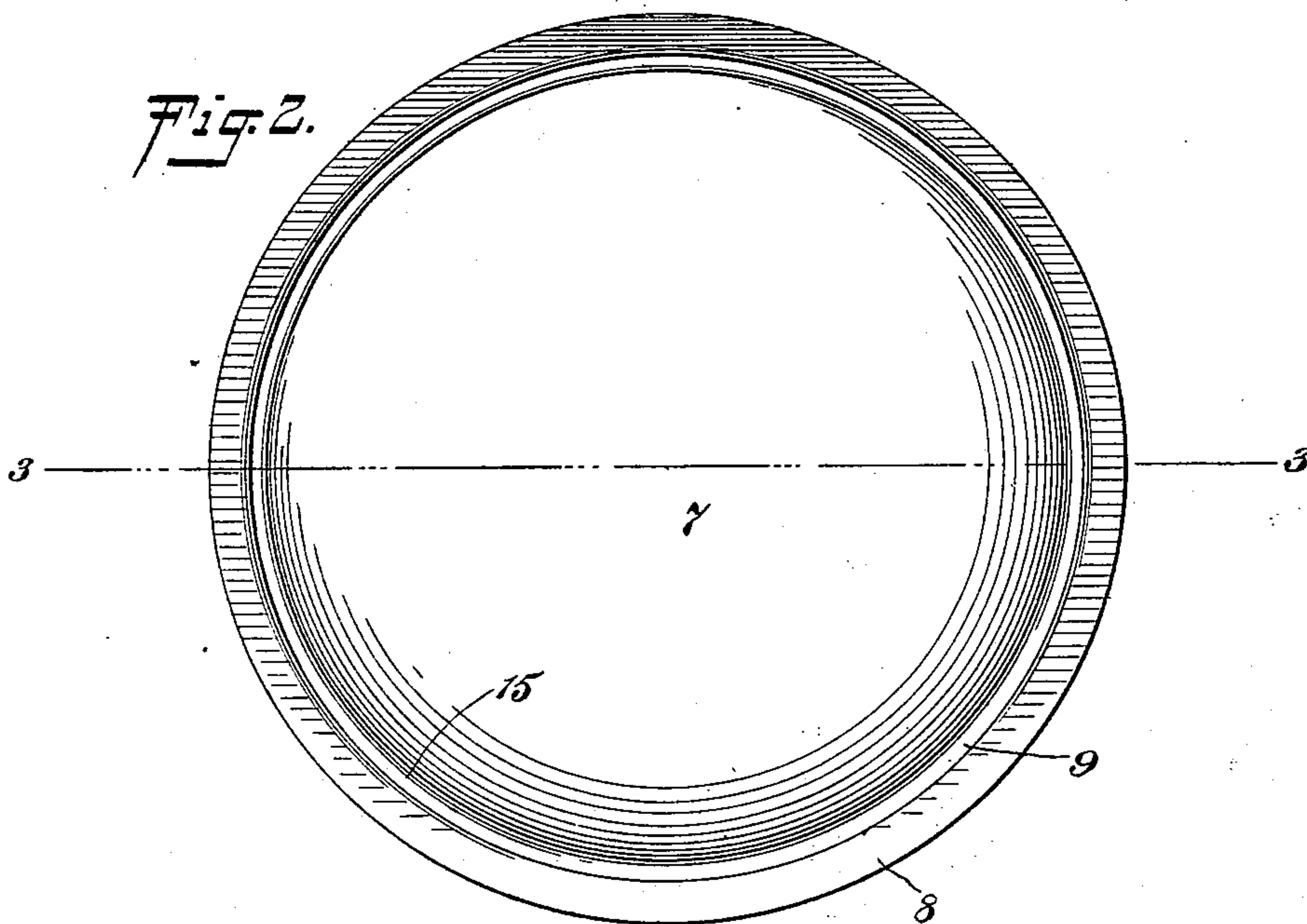
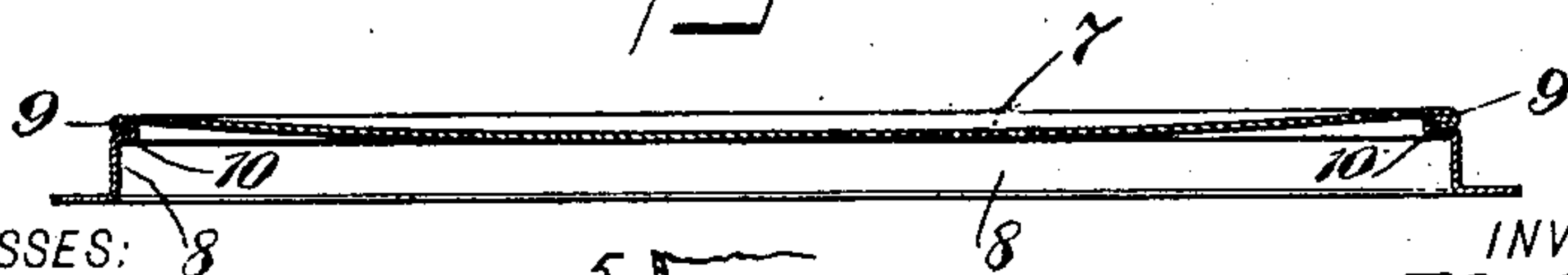


Fig. 3.

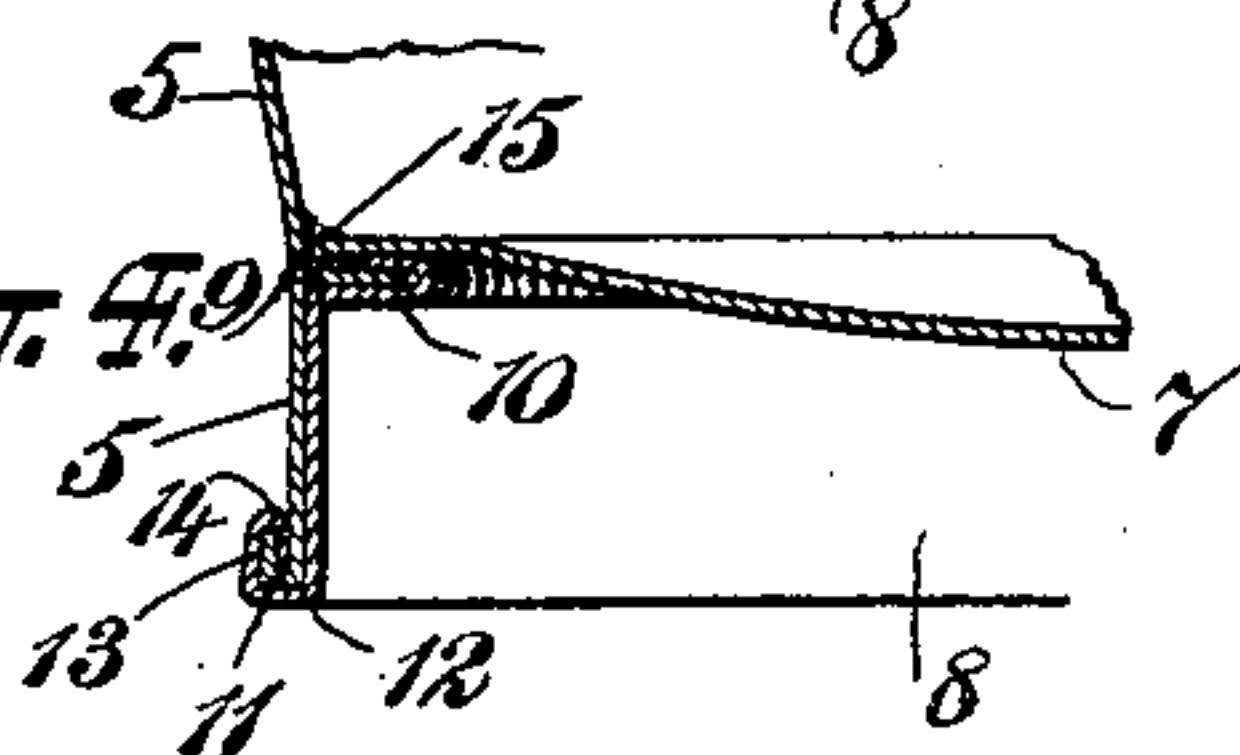


WITNESSES:

William P. Goebel.

H. J. Beruhap

Fig. 4.



INVENTORS

John E. Case
William T. Conway

BY

Mumford
ATTORNEYS

UNITED STATES PATENT OFFICE.

JOHN E. CASE, OF CLIFTON SPRINGS, AND WILLIAM T. CONWAY, OF
CANANDAIGUA, NEW YORK.

METALLIC VESSEL.

SPECIFICATION forming part of Letters Patent No. 713,959, dated November 18, 1902.

Application filed May 28, 1902. Serial No. 109,305. (No model.)

To all whom it may concern:

Be it known that we, JOHN E. CASE, a resident of Clifton Springs, and WILLIAM T. CONWAY, a resident of Canandaigua, in the county of Ontario and State of New York, citizens of the United States, have invented certain new and useful Improvements in Metallic Vessels, of which the following is a full, clear, and exact description.

Our invention relates to improvements in metallic vessels; and the principal object that we have in view is the provision of an improved bottom for all kinds of metallic vessels, said bottom being so constructed and arranged that it will not rust or corrode and is capable of manufacture at a reduction in cost as compared with other styles of bottoms used on certain classes of vessels.

It is well known that pails, pans, and other vessels manufactured of tin-plate or sheet metal are liable to have the bottoms thereof deteriorate through rust when placed on the ground, in a sink, or otherwise subjected to the action of moisture. We overcome the objection by the employment of a non-corrosive material in the manufacture of the bottom, the same being made of galvanized sheet metal, zinc, aluminium, or the like, although other materials may be adopted.

According to our invention the bottom consists of two pieces, one of which is a plate of any suitable form and the other a ring or annulus. These two plates are joined together by an interlocking seam, which is disposed horizontally on the under side of the plate, so as to lie radially to the ring and be housed wholly within the latter, and this arrangement brings the circumferential edge of the plate flush with the outer edge of the ring, whereby the bottom may be placed in the body, so that the edge thereof will engage with the body, and the bottom may be united directly by a single solder-joint, which effectually closes the space between the bottom and the body against the leakage of liquid. The ring or annular member lies within the lower edge of the body, and it is united to the latter preferably by bending the edges of the ring and the body into interlocking en-

agement, thus providing a lower reinforced edge to the vessel, which prevents the article from breaking, chipping, or scaling as a result of prolonged or rough usage.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a vertical transverse section with the vessel shown partly in perspective. Fig. 2 is a plan view of the two-piece bottom removed from the vessel. Fig. 3 is a transverse section on the line 3 3 of Fig. 2; and Fig. 4 is an enlarged sectional view through a portion of the body, the bottom, and the interior ring, showing the detailed form of the joints between the several parts.

The body of the vessel may be of any suitable construction, shape, and dimensions, because our improved bottom is intended to be used generally on all classes of metallic vessels in which it is desired to provide a non-corrosive bottom. As shown by Fig. 1, the body is cylindrical in form and provided with a beaded or rolled top edge 6, so as to resemble the body of an ordinary pail; but it will be understood that we do not restrict ourselves to this particular shape of body. The bottom consists of two parts—i. e., a plate 7 and a ring 8—and in the manufacture of this bottom the plate is made by stamping it from a single piece of non-corrosive material, such as galvanized or zinc-coated sheet metal, zinc, aluminium, or any other metal having non-corrosive properties. This plate member of the bottom is susceptible of manufacture at a very low cost, because it can be stamped by suitable dies at one operation, and hence we make said plate member 7 exceedingly simple in form. As shown by Figs. 1 to 3, inclusive, the plate member 7 is dished or slightly concavo-convex in cross-section, and this member is provided with a circumferential flange, said flange and the dished form being given to the member at the time it is stamped from a plate of sheet metal. The other member 8 of the bottom is in the form of a ring, having an inwardly-extending flange at its top edge and an outwardly-extending

flange at its bottom edge, said ring member of the bottom being formed of any suitable metal and made in one piece by any suitable operation.

5 After having manufactured the plate member and the ring member we assemble these parts together and interlock the outward flanged edge of the plate member to the upper flanged edge of the ring member. This
10 interlocking of the two parts is secured by a double-seamed joint, which is shown more clearly by Figs. 3 and 4, said joint being produced in dies or on a machine of any suitable well-known construction. The outer flanged
15 edge of the plate member 7 is turned or doubled inwardly, as indicated at 9, whereas the upper flanged edge of the ring member is turned inwardly and then outwardly, as indicated at 10, this bending of the ring serving to provide a space in which is received
20 the inturned edge 9 of the member 7. The doubled or folded edges 9 10 of the two members are interlocked tightly together, and thereby produce a seam which necessarily
25 lies on the under surface of the member 7 and on the inner face of the ring member 8, said seam extending inwardly or radially in relation to the bottom. The seam thus lies wholly below and within the bottom, and the
30 folded edge 9 of the plate member 7 is disposed in flush relation with the circumferential exposed edge of the ring member 8, all as more clearly shown by the drawings.

The diameter of the bottom thus produced
35 conforms to the interior diameter of the lower part of the metallic vessel-body 5, and the entire or complete bottom may be easily fitted into said lower part of the body, so that the folded edge part 9 of the plate member 7 will
40 come in contact with the inner surface of the body, and at the same time the ring member 8 will also engage with the lower edge portion of the body. In our invention the ring-like member 8 is not riveted, soldered, or fastened
45 in any common way to the lower edge of the body; but the union between the body and the ring member 8 is effected by the formation of an outwardly-trending interlocked joint, the same being shown more clearly by Fig. 4.

50 The lower edge of the body 5 is doubled or folded upon itself, as indicated at 11, in order to leave an intervening space, and the corresponding edge of the ring member 8 is bent outwardly at 12, then upwardly at 13, and
55 finally inwardly and downwardly at 14, the last-mentioned part of the ring member fitting in the space left by the folded edge 11 of the body, whereby the ring member 8 has its lower edge folded around and securely interlocked with the bent edge 11 of the body.
60 A double-locked seam or joint is thus provided between the lower edges of the ring and the body, and this construction provides a thickened and substantial bearing edge,
65 which not only materially strengthens the

vessel at the part where it rests on the floor or ground, but it prevents the vessel from bending and minimizes the tendency of the scale or coating of the bottom from dropping off, thereby preventing rough surfaces on the
70 bottom and exposing the metal to the deteriorating influence of water and moisture.

The manufacture of the article is completed by filling in the joint between the folded edge 9 of the bottom and the inner face of the body
75 with a film of solder, as indicated at 15. This fusible joint unites the upper face portion of the plate member 7 and the inner side of the body 5 directly together, so as to strengthen the structure at the line between the bottom
80 and the body, and also prevents any leakage of fluid from the body into the space between the plate member and the ring member of the bottom, thus minimizing the tendency of the bottom to corrode by the leakage of fluid into
85 the crevice between the body and the bottom.

One of the special advantages of our invention is that the bottom is thoroughly rust-proof on the inside as well as on the outside, because the plate member 7 is made of non-
90 corrosive material and is joined to the body in a manner to effectually exclude the entrance of moisture at the joints between the several parts.

Having thus described our invention, we
95 claim and desire to secure by Letters Patent—

1. A metallic vessel comprising a body, and a non-corrosive bottom consisting of a plate and a ring, the edge of said plate being inter-
100 locked with the upper edge of the ring by a folded seam arranged to bring the edges of the two parts into flush relation, said plate being united directly to the body by a fusible joint, and the ring being attached at its lower
105 edge to the corresponding edge of the body by an interlocking joint; said body extending downwardly past the joint between the plate and the ring, and inclosing the latter.

2. A metallic vessel comprising a body, and
110 a non-corrosive bottom formed by a plate and a ring which have their edges united flush with one another by an interlocking seam arranged to extend inwardly and located on the under side of the plate and within said ring,
115 said ring being attached at its lower edge to the body and the plate being united to said body by a fusible joint; said body extending downwardly past the joint between the ring and the plate, and said ring being arranged
120 within said extended portion of the body.

3. A metallic vessel comprising a body, and a non-corrosive bottom formed of two parts, one of which is a plate and the other a ring, the upper edge of said ring being united to
125 the edge of the plate by a double-locked seam which lies wholly below the plate and within the ring, said seam extending inwardly with relation to the parts, and the edge of the plate being disposed in flush relation to the
130

5 face of the ring, said plate of the bottom being united directly to the body by a fusible joint located to conceal the line between the body and the plate, and the ring being attached at its lower edge to the corresponding edge of the body by a double-locked outwardly-trending joint or seam.

In testimony whereof we have signed our

names to this specification in the presence of two subscribing witnesses.

JOHN E. CASE.

WILLIAM T. CONWAY.

Witnesses:

MICHAEL W. TUOHY,

SHERMAN H. REED.