

(No Model.)

T. G. F. DOLBY.  
Sheet Metal Vessel.

No. 233,080.

Patented Oct. 12, 1880.

Fig. 1.

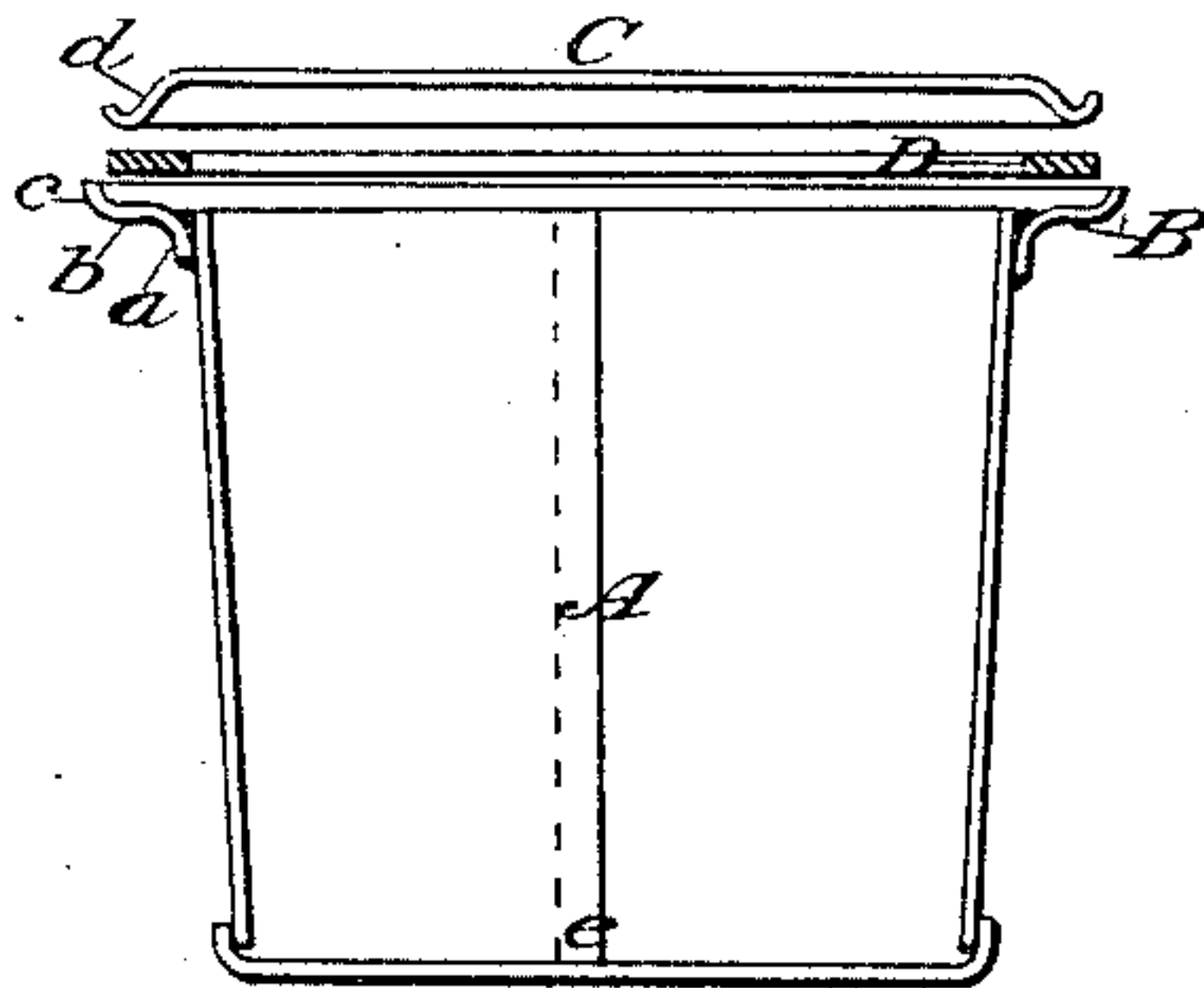


Fig. 2.

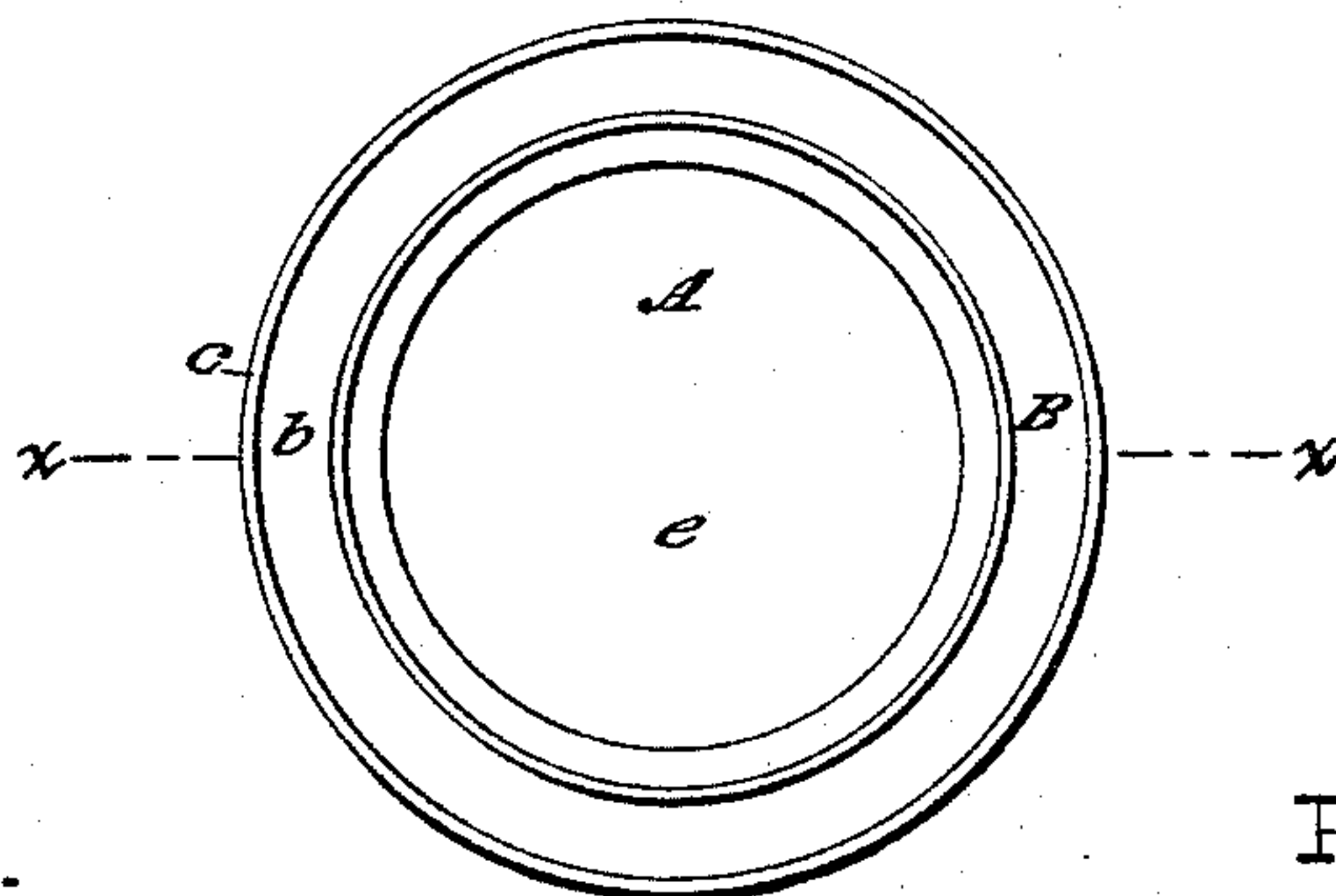


Fig. 3.

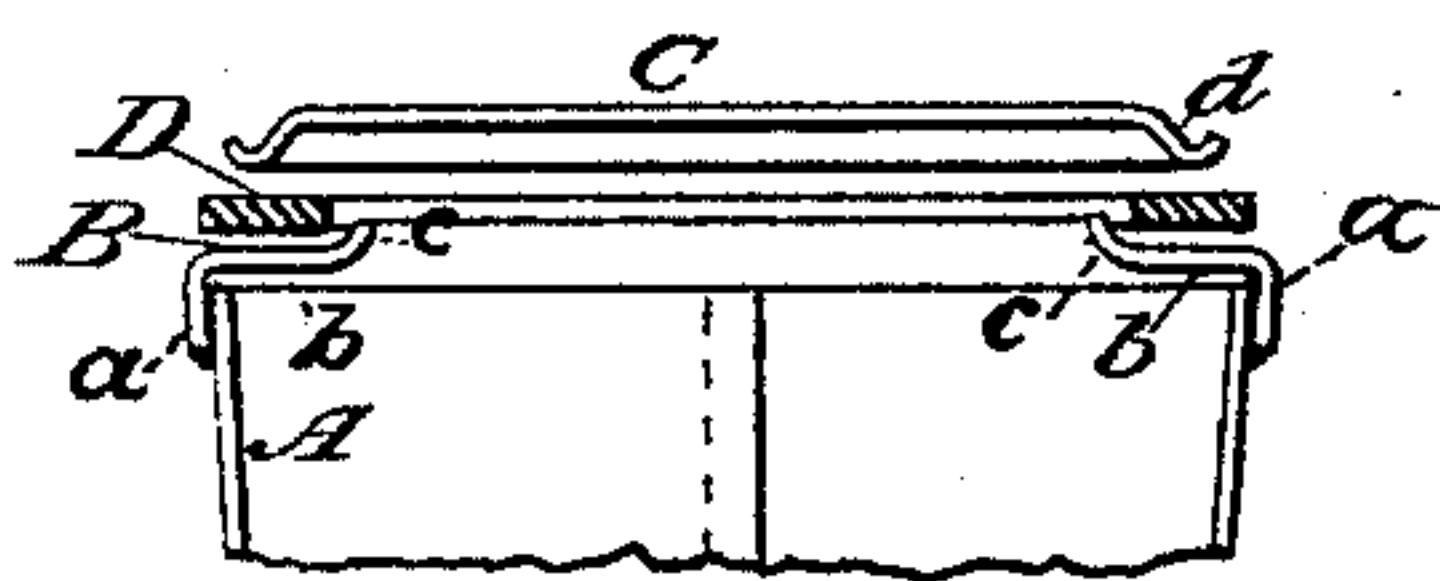


Fig. 4.

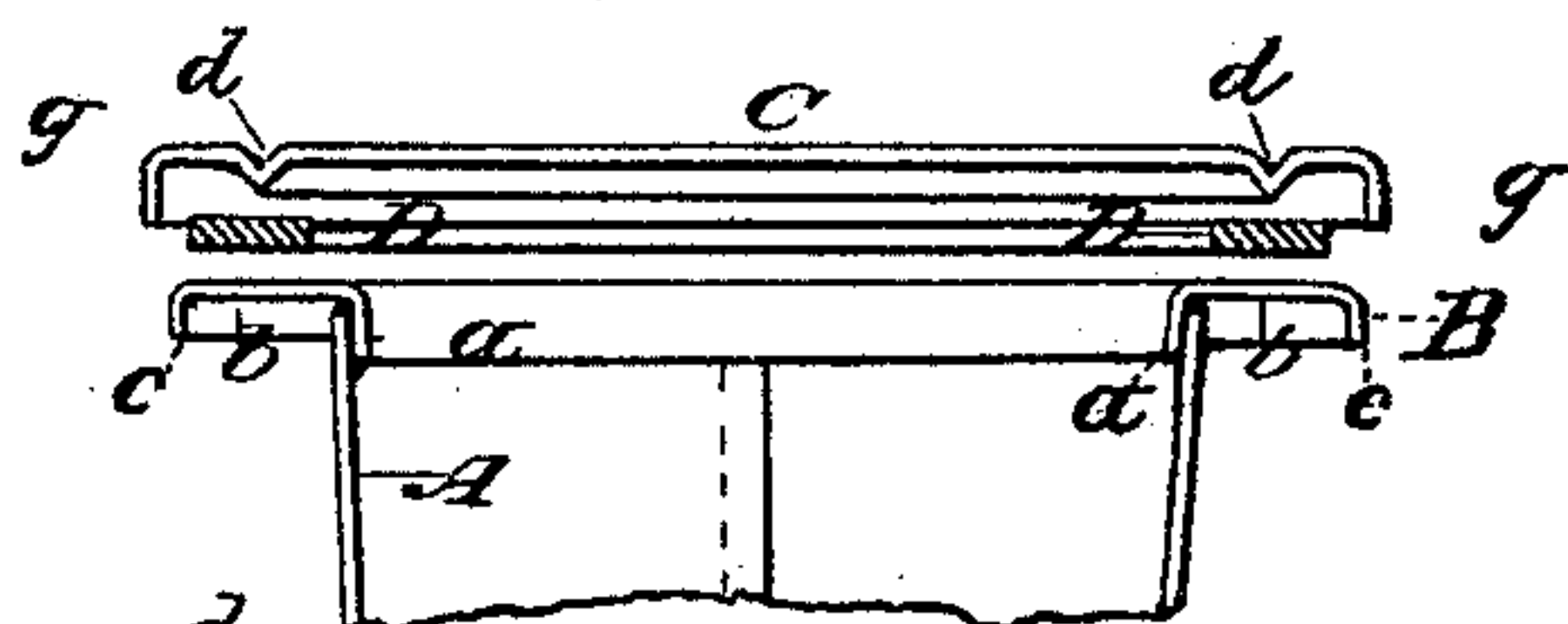
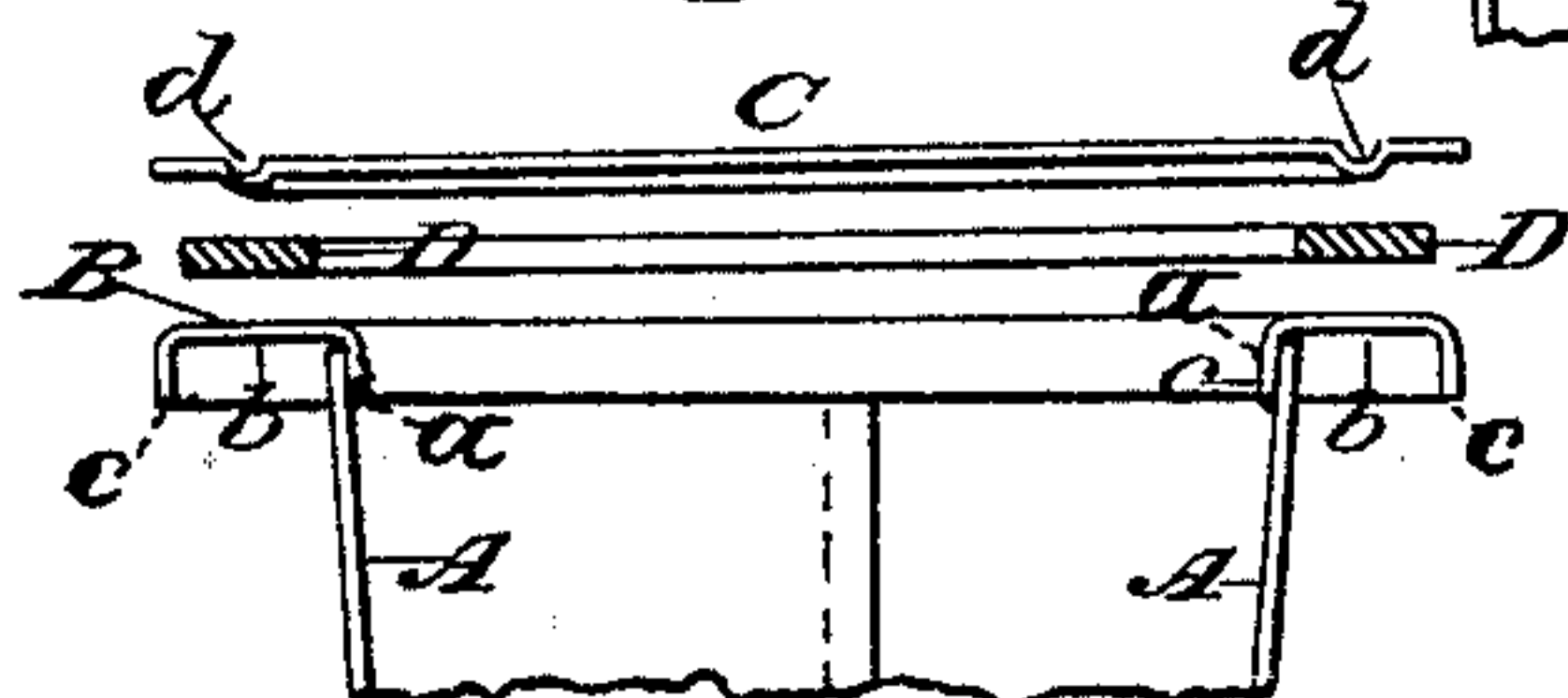


Fig. 5.



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# UNITED STATES PATENT OFFICE.

THOMAS G. F. DOLBY, OF LONDON, ENGLAND.

## SHEET-METAL VESSEL.

SPECIFICATION forming part of Letters Patent No. 233,080, dated October 12, 1880.

Application filed June 14, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS G. F. DOLBY, a subject of the Queen of Great Britain, and residing in London, England, have invented or discovered certain new and useful Improvements in Sheet-Metal Vessels or Cans, of which the following is a specification.

My invention has especial reference to tin cans or vessels to be employed for preserving food, and which are to be hermetically closed by a lid or cover kept down by atmospheric pressure only. In constructing these vessels it is essential, in order to obtain the desired hermetic closing, that the flange or seat upon which the cover and the interposed packing-ring are to rest shall be perfectly smooth and level all round, whether the flange be turned in or out. To produce a vessel of this kind in which the top shall be entirely open, or substantially so, when the cover is removed is the object of my present invention, which I will now describe.

In the drawings, Figure 1 is a vertical mid-section of a can and its cover provided with my improvement, the section being taken on line *x x*, Fig. 2. Fig. 2 is a plan of the can-top, showing the seat for the cover. Figs. 3, 4, and 5 are mid-sectional views of cans illustrating modifications of the construction shown in Fig. 1.

Let A represent the body or cylindrical part of the can, which is made of sheet metal, and has a seam up the side in the usual way. Where the flange to receive the cover and form a seat therefor is turned over, either inside or out from the body of the can, as has been done, the lap of the two edges forms an inequality, which renders it practically impossible to make a hermetic joint that can always be relied on. In my patent of November 11, 1879, No. 221,539, I described a method of surmounting this difficulty; but the construction required unusual care and would sometimes prove unreliable. I seek to avoid this difficulty in my present invention by striking up the flange-seat for the cover out of a flat plate in the form of a ring, B, provided with a pendant flange, *a*, a level seat, *b*, to receive the packing-ring, and a protecting-flange, *c*. This

ring, being formed with dies, is perfectly level and true, and there are no irregularities to interfere with the close seating of the cover. The ring B is soldered to the top of the can, as shown in Fig. 1, the dependent flange *a* being made to snugly encircle the same.

C is the cover, which is formed with dies, so as to present the form indicated in Fig. 1. The flange *d*, on its margin, is, by preference, slightly curved outward, as shown, so as to form a true and reliable and preferably narrow face to rest on the interposed packing-ring D, and which narrow edge of the face sinks deep into the yielding packing and makes a tight joint.

For some purposes—such as in canning butter—I make these cans to taper slightly, being smaller at the bottom than at the top. With this form of can I am enabled to economize material by cutting the bottom *e* of the can out of the center of the piece from which the ring B is made, whereby there is no waste of material. It also enables the butter to be removed in one piece.

In Fig. 3 I have shown a can constructed similar to that above described, except that the ring B is inverted and the upright flange fits inside the flange on the cover, instead of outside, as in Fig. 1. In this case the flange of the ring projects inward, and the orifice in the can-top is not quite so large as the body of the can.

In Fig. 4 I have shown the flanges *a* and *c* on the ring B both turned down, the flange *g* on the cover C arranged to take over the outer edge of the ring; and to provide a narrow edge to sink into the elastic washer I indent the cover so as to form an annular ridge, *d*, on its under face, extending all around.

In all of the above-described constructions the lid is protected against accidental displacement by the flange on the ring.

In Fig. 5 I have shown the same construction as that in Fig. 4, except that the cover has no overhanging flange *g*, but is properly provided with the annular ridge *d* to sink into the rubber, and this will form a protection against accidental displacement.

The cover is attached by exhausting the air



from the can, and the soft yielding packing-ring D insures a hermetic joint.

Having thus described my invention, I claim—

5 The combination, with the seamed can-body, of the ring B, made without a seam and soldered to its top, and provided with a true and level flange, *b*, to receive the packing-ring, a flange, *a*, to embrace the can-body, and a flange,  
10 *c*, the said packing-ring, and the cover C, pro-

vided with an annular narrow edge or bead, *d*, to rest on the packing-ring, substantially as herein shown.

In witness whereof I have hereunto signed my name in the presence of two subscribing  
witnesses.

THOMAS G. F. DOLBY.

Witnesses:

H. N. ELDRIDGE,

A. C. BLOFFING.