

(No Model.)

W. W. McEWAN.
MANUFACTURE OF PAPER BOARD TUBS.

No. 481,239.

Patented Aug. 23, 1892.

Fig. 1.

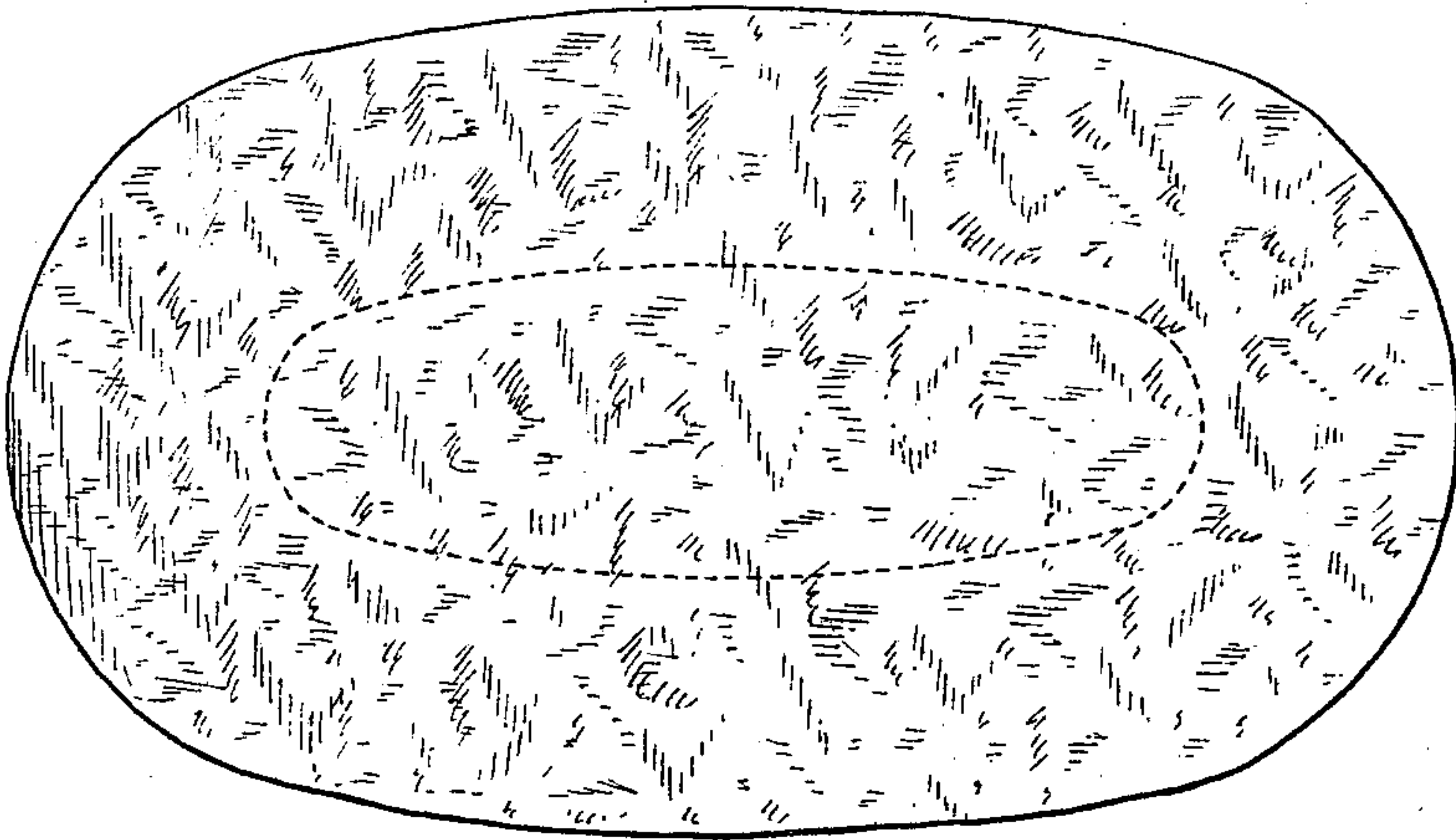


Fig. 2.

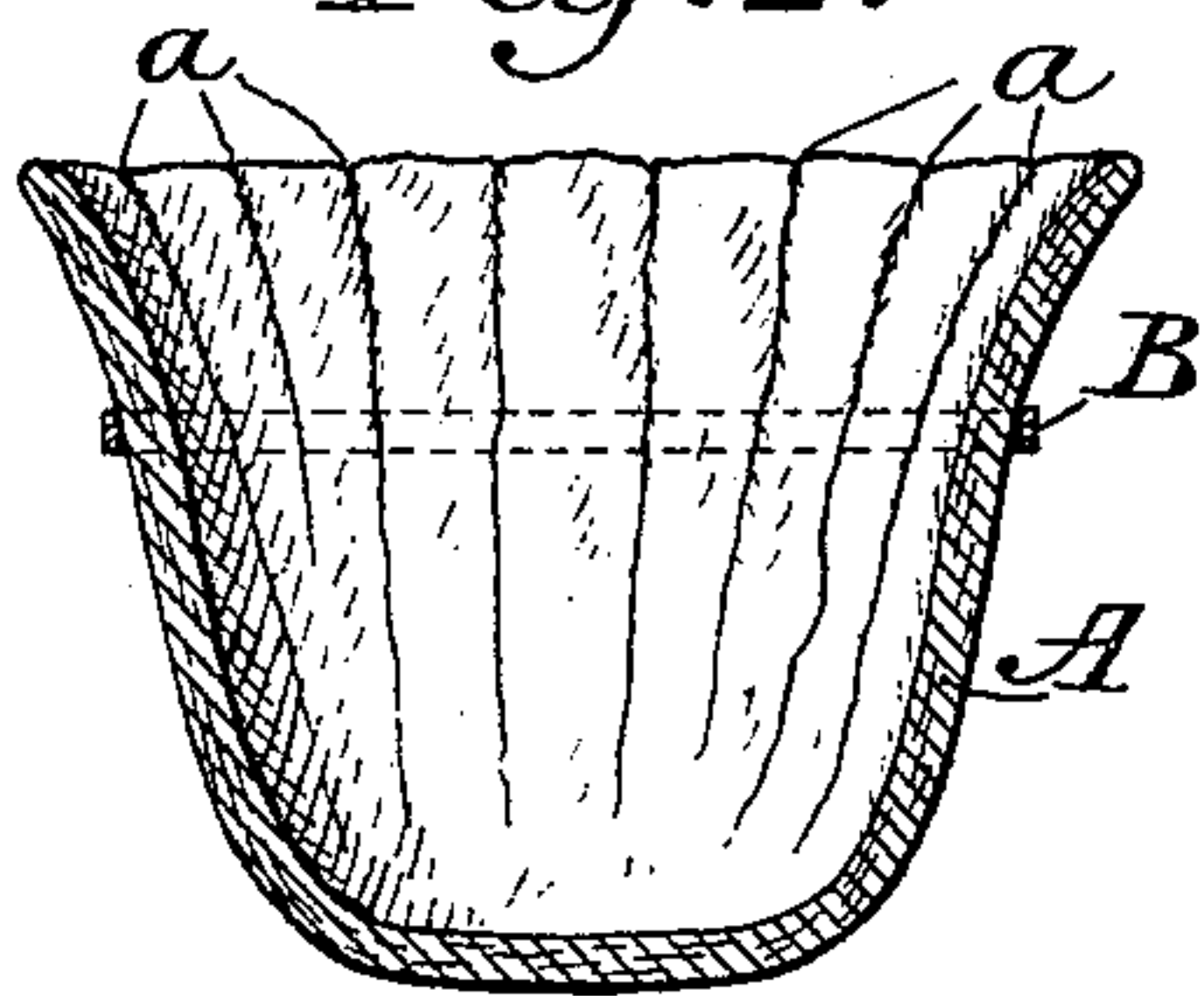


Fig. 3.

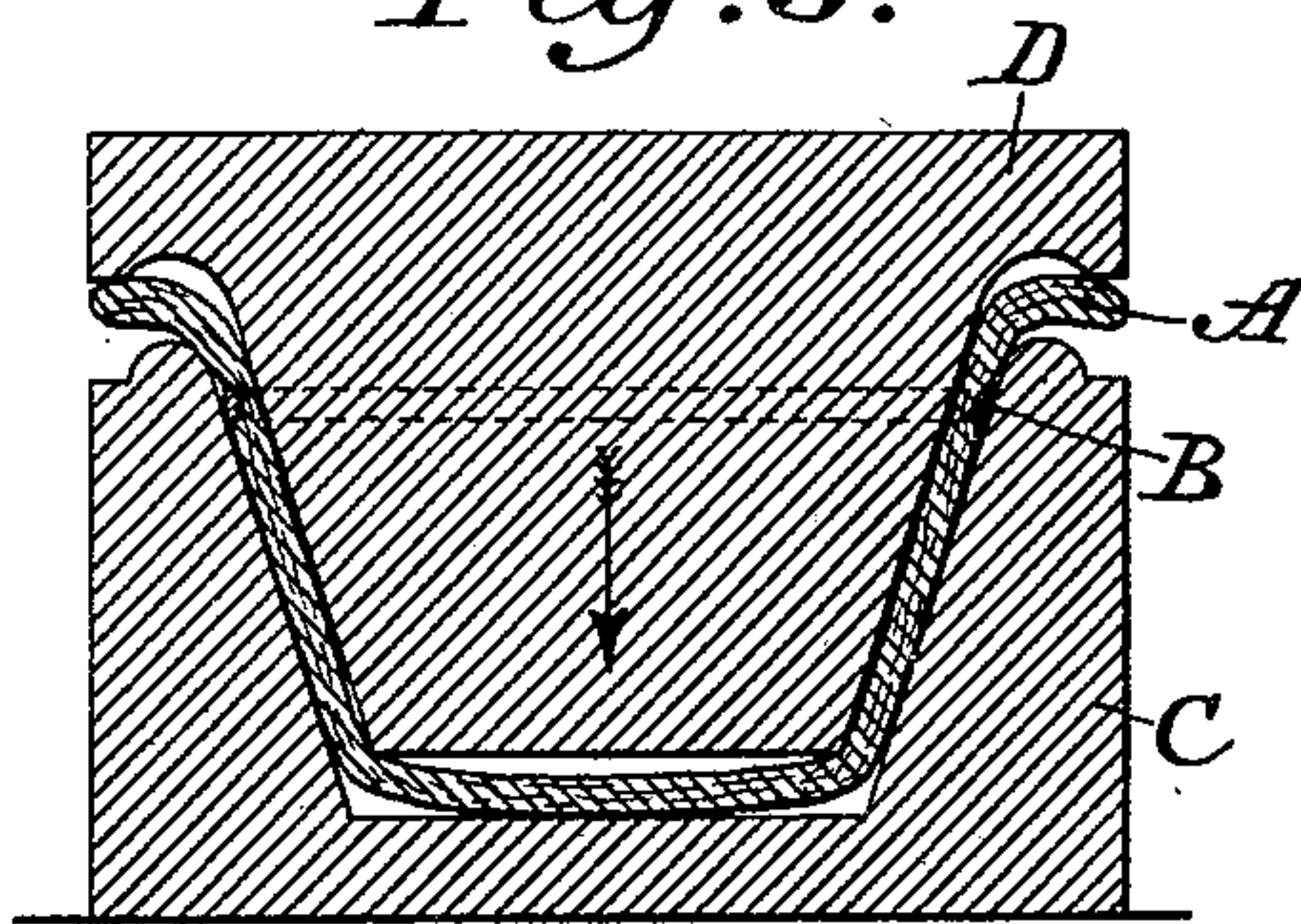


Fig. 4.

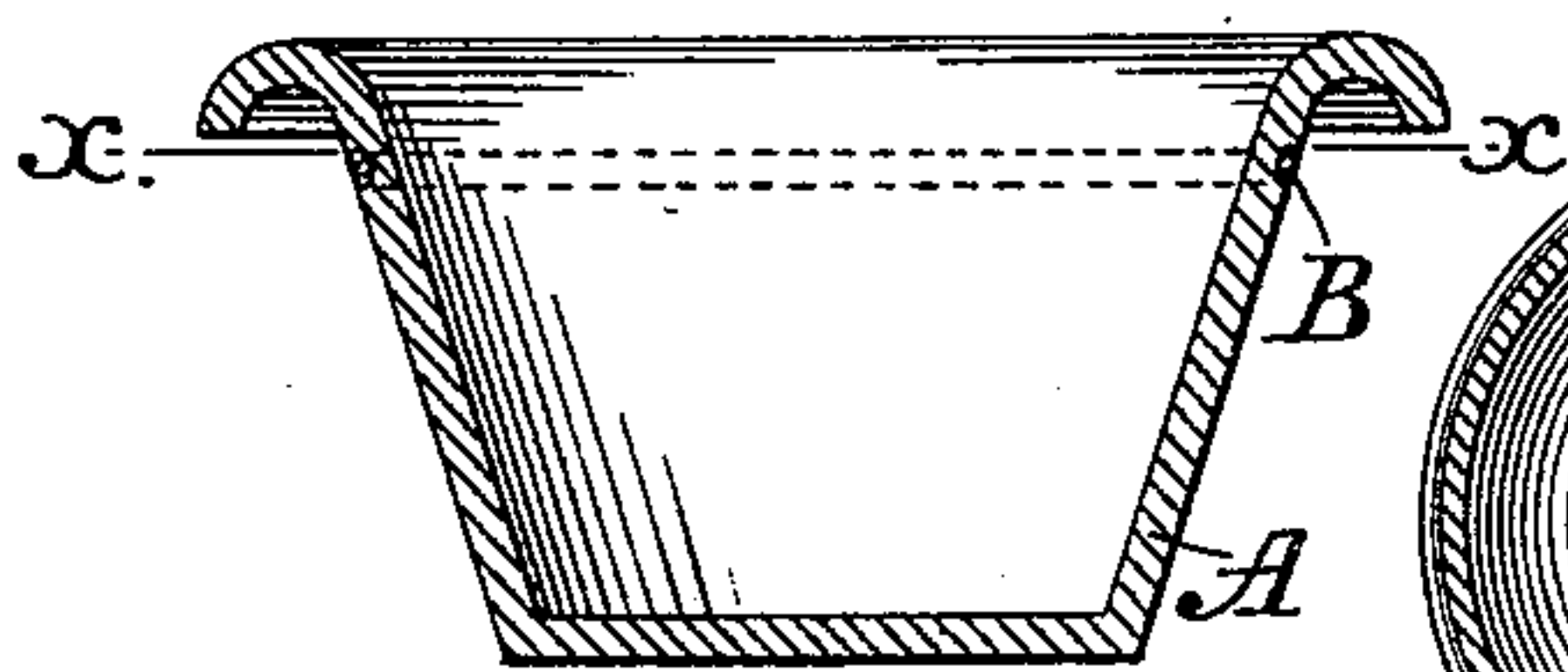
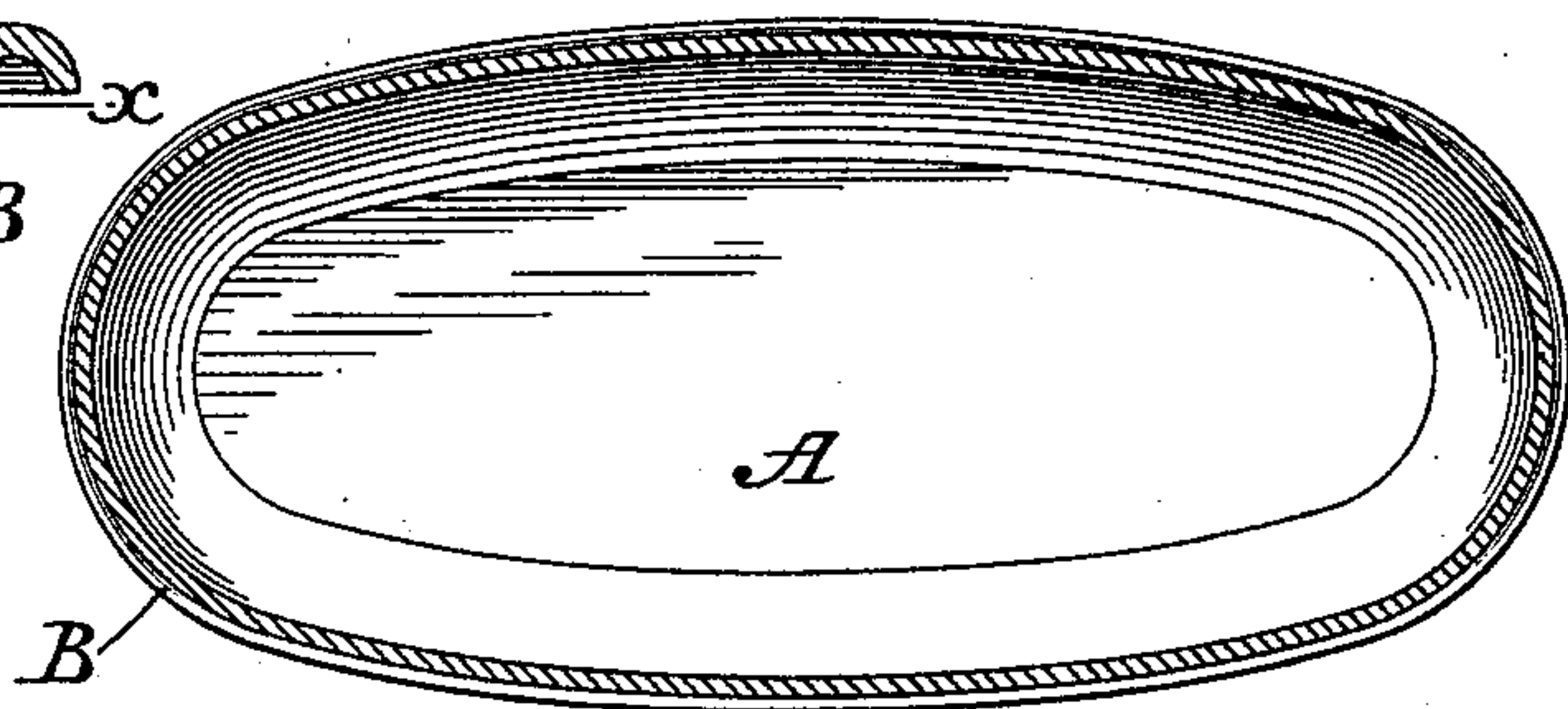


Fig. 5.



Attest:

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UNITED STATES PATENT OFFICE.

WILLIAM W. McEWAN, OF BELVIDERE, NEW JERSEY.

MANUFACTURE OF PAPER-BOARD TUBS.

SPECIFICATION forming part of Letters Patent No. 481,239, dated August 23, 1892.

Application filed November 27, 1891. Serial No. 413,211. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. McEWAN, of Belvidere, in the county of Warren and State of New Jersey, have invented a new and
5 useful Improvement in the Manufacture of Paper-Board Tubs, &c.; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of
10 reference marked thereon, making a part of this specification.

In the manufacture of foot-tubs and other articles of hollow ware from paper-board and the like by drawing up or manipulating a single flat sheet of the material it necessarily
15 happens that the material is more or less pliated toward the upper edge of the article. The consequence is that unless the article is encircled by a rigid band any considerable
20 pressure from within is liable to open these plications and to crack the enamel or other finish upon the surface of the article. It is sought to prevent this spreading and cracking by applying a hoop to the exterior of the
25 article; but the hoop can only be held in place with the requisite rigidity, particularly upon articles which have much flare, by riveting. This is injurious to the appearance of the article and is otherwise objectionable. Were
30 it attempted to secure the hoop in place by sinking it in a groove in the article after it had been dried the article would be weakened dangerously in a line where it should be strong.

35 It is the object of my invention to overcome all these objections; and to that end it consists in the method of making the articles referred to, as hereinafter described and claimed.

In the accompanying drawings, wherein I
40 have illustrated the several steps of the method, Figure 1 is a plan view of a sheet of material of suitable shape to form a foot-tub. Fig. 2 is a cross-section of the foot-tub after manipulation or drawing up. Fig. 3 is a cross-
45 section of the foot-tub and press. Fig. 4 is a cross-section of the foot-tub as it comes from

the press, and Fig. 5 is a horizontal section of the same on the line *xx* of Fig. 4.

The sheet of material to be employed, in a suitably soft and moist condition, is drawn 50 or manipulated substantially into the shape of the desired article, as shown at A in Fig. 2, and is encircled by the hoop B. In this condition the plications *aa* are very apparent. It is then placed in a pot or female die C and 55 expanded from within against the walls of the pot, as by a plunger D, as indicated in Fig. 3. As the hoop rests against the walls of the pot, it becomes embedded in the material of the tub or other article, as shown in Figs. 4 and 60 5. The material is packed snugly about the hoop without further change of its structural character than an additional compression in the vicinity of the hoop. When the article is dried, it will be held securely in position 65 with no possibility of becoming even slightly loose, and thereby permitting the expansion and opening of the plications. The subsequent treatment and finishing or enameling of the article will quite conceal the hoop, and 70 the complete article will have a smooth and unbroken surface both exteriorly and interiorly, while the opening of the plications under pressure from within and the consequent cracking of the enamel will be effectually pre- 75 vented.

I claim as my invention—

The herein-described method of making hollow ware from paper-board and the like, which consists in drawing or manipulating 80 the material substantially into the desired shape, encircling the article with a hoop, expanding the article against the hoop to embed the same, and finishing or drying the article, substantially as shown and described. 85

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM W. McEWAN.

Witnesses:

A. N. JESBERA,
W. B. GREELEY.