

(No Model.)

W. McAUSLAND.
MANUFACTURE OF OVAL OR OBLONG SHELLS FOR PLATED WARE, &c.
No. 493,108.

Patented Mar. 7, 1893.

Fig. 1.

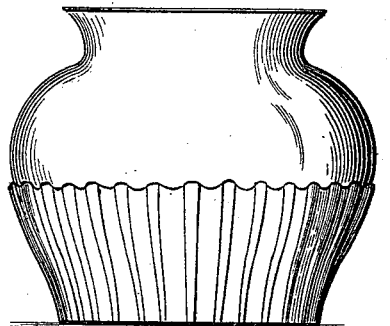


Fig. 2.

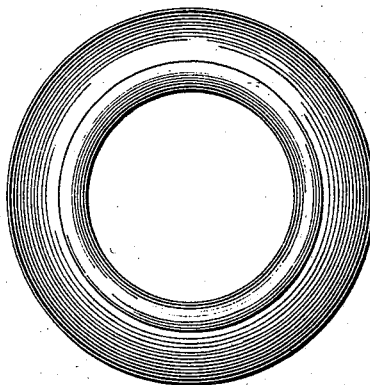


Fig. 3.

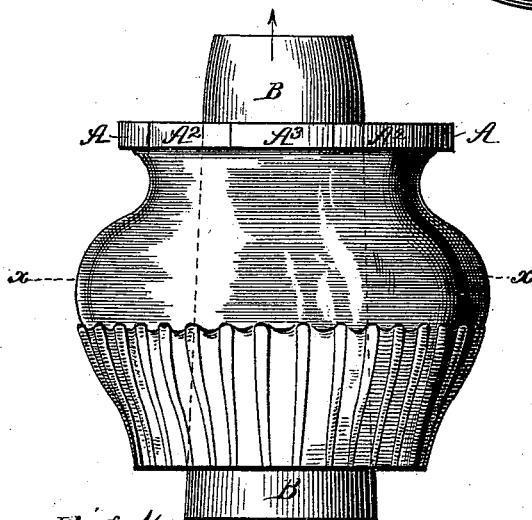
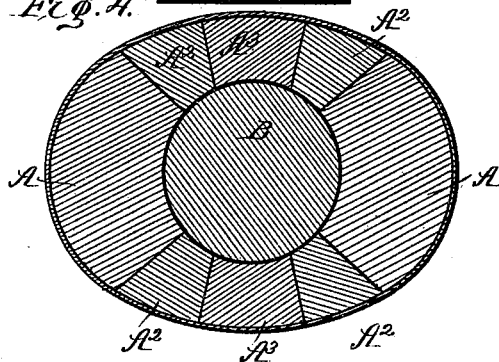


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM MCAUSLAND, OF TAUNTON, MASSACHUSETTS, ASSIGNOR TO THE
REED & BARTON CORPORATION, OF SAME PLACE.

MANUFACTURE OF OVAL OR OBLONG SHELLS FOR PLATED WARE, &c.

SPECIFICATION forming part of Letters Patent No. 493,108, dated March 7, 1893.

Application filed October 3, 1892. Serial No. 447,746. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM MCAUSLAND, of Taunton, in the county of Bristol and State of Massachusetts, have invented a new and useful Improvement in the Manufacture of Oval or Oblong Shells for Plated Ware, &c., of which the following is a specification.

My invention relates to the manufacture of oval and oblong bodies or shells for hollow plated ware, and it consists of an improved method of manufacturing oval or oblong shells which is quite inexpensive, and whereby at the same time a seamless oval or oblong shell is obtained as hereinafter fully described with reference to the drawings in which

Figure 1 is a side and Fig. 2 a plan view of a round seamless metal shell which is treated by my method to form an oval seamless shell. Fig. 3 is a side elevation, and Fig. 4 a transverse section through line $x-x$ of the round shell applied to an expanding former of special construction, whereby it is converted into an oval seamless shell without destroying or marring its surface ornamentation.

I construct a special former whose body part is made of a number of longitudinal sections $A^2 A^3$ whose outer peripheries when assembled correspond to the oval or oblong shape desired, and whose inner surfaces form a longitudinal tapering hole extending entirely through the former. Within this tapered hole there fits a tapered central plug B of circular or other cross section, which fits tightly into the sectional former and when driven in expands it.

To give the oval or oblong shape to the shell shown in Figs. 1 and 2, the two largest sections A of the former, which form the prolate ends of the ellipse, are first inserted in the round shell and the central plug driven in between, the result being that the shell is at once elongated and begins to be drawn into an oval shape. The plug is then driven back and one or more sections inserted, the plug again driven, again removed, and another section inserted, and so on, until the two lateral or oblate side sections A^3 are inserted, when the plug is finally driven to place, fully expanding the former and permanently converting the shell into an oval or oblong symmetrical shape without disturbing the surface ornamentation, and without seams, and in an inexpensive and expeditious manner.

I am aware that sectional chucks are not broadly new as they have been made both round and oval for many years.

I am also aware that expanding formers composed of equal sections have been expanded by a central plug to expand a small circle to a larger one, but something more than this is done in my case where a circle is to be expanded into an oval or oblong figure. In my case a different construction and mode of operation is employed as follows. The former sections are not of equal size, but those which give shape to the prolate ends of the figure are much larger than those which form the sides, and in the operation of expanding, these prolate sections are first inserted without the others, the plug driven in, and a preliminary expansion is given to the ends, the plug removed, the next set of sections inserted, another expanding operation made, and so on successively the sections are inserted and an expansion made until the desired contour is attained.

I do not confine myself to the use of wood in constructing the former, as metal or other material may be used. Neither do I confine myself to shaping metal shells, as shells of pasteboard, wood fiber, rubber, or any other material which is pliable or ductile may be thus treated.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The method herein described of forming seamless oval or oblong shells of ductile or plastic material, which consists in first making a round seamless shell, and then expanding it to an oval or oblong shape by introducing successively sectional former blocks of different size and shape, and expanding these blocks progressively by a tapering plug forced centrally through the same, the larger end sections being first inserted expanded and retained, and the smaller side sections being successively added substantially as shown and described.

WILLIAM MCAUSLAND.

Witnesses:

JAMES P. HERSEY,
E. R. HICKS.