(No Model.)

C. W. REEVES.

VIOLIN CASE.

No. 348,055. Patented Aug. 24, 1886.

Fig. 1.

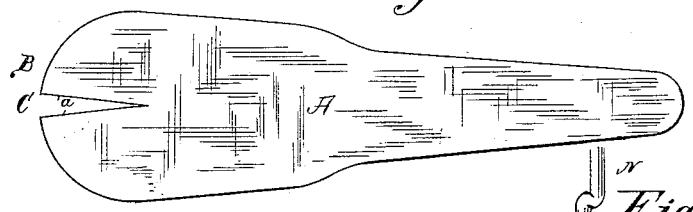


Fig. 4.

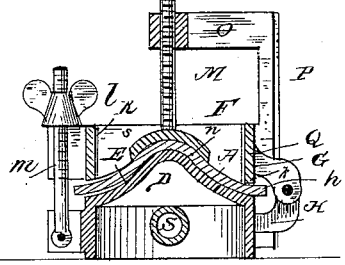


Fig. 2.

Fig. 3.

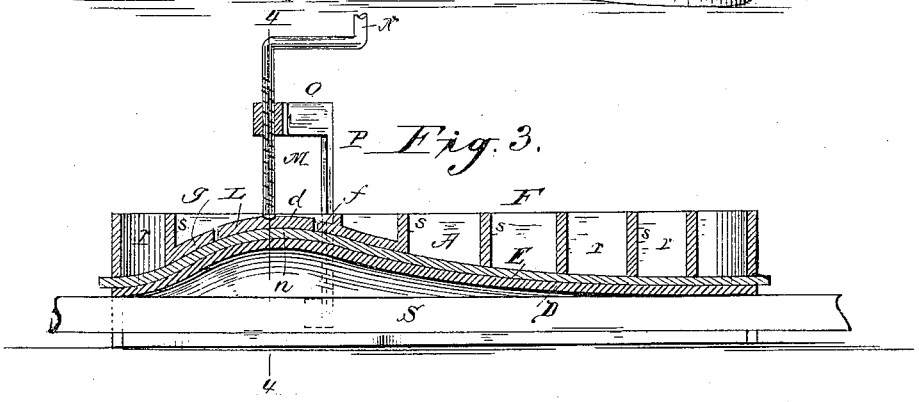
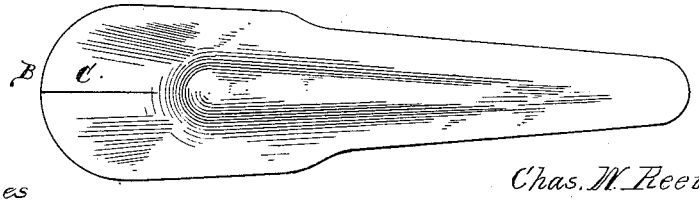


Fig. 5.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES W. REEVES, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO ETTIE J. FRANKENTHAL, OF SAME PLACE.

VIOLIN-CASE.

SPECIFICATION forming part of Letters Patent No. 348,055, dated August 24, 1886.

Application filed February 23, 1886. Serial No. 192,930. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. REEVES, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Tops for Violin-Cases and Methods of Producing the Same, of which the following is a full, clear, and exact description.

As well known, the top board of a violin case or box has an outward bulge, rounding in the direction of its width, and extending along its length, and at one portion of its length also rounding in the direction thereof, all so as the better to adapt the box, as to its top, for accommodating the neck, head, and tail-piece and bridge projections of the violin-body, and thereby keep the thickness of the body of the case, as a whole, at the minimum. Heretofore the rounding top board aforesaid has been worked, as for illustration, chiseled out from a solid board of the proper thickness, to enable the rounding desired to be produced, which, plainly, not only requires skilled labor, but otherwise is most expensive and tedious, requiring considerable time and labor.

The object of this invention is to produce a new and improved top board for violin and other cases and boxes, and under this invention the top board is produced from a board or blank of uniform thickness, and of the general outline of the top, by molding the same under pressure in a mold of suitable form, and all substantially as hereinafter described.

In the accompanying drawings, forming a part of this specification Figure 1 is a plan view of a board or blank from which to produce the top board, and under the method of this invention. Fig. 2 is a perspective view of an apparatus suitable to mold the top board of this invention, and which, while it is herein described, and shown in the drawings, constitutes no part of the present invention, but is to be made the subject of a separate application. Fig. 3 is a longitudinal section on line 3 3, Fig. 2. Fig. 4 is a transverse section on line 4 4, Fig. 3. Fig. 5 is a plan view of the molded top board of this invention.

In the drawings, A represents a wooden blank or board from which to produce the molded top board of this invention. This blank A is of a uniform thickness, and of the general outline of the box-top, and at its larger and rounded end B is cut a gore-opening, C, the edges *a* of which are in lines substantially radial with the center of the circle of the larger rounded end B, and in the molding of the board into a top, as will hereinafter appear, this gore-opening C is closed, Fig. 5.

A blank A, of the outline shown, and prepared with a goring-cut, C, as described, is molded into the shape desired for the top by means of a press—such as shown in Figs. 2, 3, and 4—and in a manner to be now described.

D is an iron bed, having an upper surface, E, of the form which the top board is to have, and F is an iron frame hinged at and along one edge, G, to the edge H of said bed D, and arranged to be swung over and across the upper and molding surface of the bed D, crossing the same by its several parallel cross bars or ribs *s*, the lower edge of each of which is of corresponding shape to that transversely of the bed contiguous thereto. In addition to these ribs, the frame at its part contiguous to the part of the bed which is shaped to produce the outward round of the top, both in the direction of and across its length, is provided with a molding-plate, L, of corresponding shape, and having its central portion, *d*, made separate from its end portions, *f g*, and adapted to be held firmly in position in the use of the apparatus, and with pressure by means of a vertical screw-rod, M, having an operating-handle, N, and screwing through the horizontal cross-piece O of an upright frame, P, rigidly fastened to the bed, and crossing the same diagonally.

The bed D and the frame F, hinged thereto, as described, are of the general outline of the top, and the blank A, from which the top is to be molded, first having been saturated with moisture in a bath of hot water, or otherwise, in any suitable manner, is placed upon the bed and then the frame brought down upon the same and made to grip the board at and along the edge *h* thereof, between the under edge, *k*, of the longitudinal rail Q of the frame thereat and the upper surface of the bed, and there secured by means of the screw-nut *l* and swinging screw-bolt *m*, operating upon the

frame at its opposite longitudinal rail, R, and under which rail the board extends, but is not confined. With the frame thus secured in position, the separate molding-plate *d* of the frame, placed upon the board, so located and held upon the molding-bed D, is then secured firmly in place by screwing down the screw-rod M, and thus with a gradual turning up of the screw-nut *l* the operation of molding the board goes on, finally resulting in the shaping thereof, with an outward rounding across the width of the board, extending for the whole of its length, and at the part *n* thereof, under the molding-plate L, in attached and unattached parts, with an outward rounding or bulge projecting beyond the rounding at each side thereof, and extending not only transversely, but longitudinally of the top.

To facilitate the molding of the board, as described, the bed is heated; and for this purpose a steam-pipe, S, is used, extending along the length of and under it, and suitably supplied with steam. This heating of the bed acts to dry the board being molded.

In the molding of the board A, as described, the gore-opening C becomes closed, or practically so, and so closed, its edges, preferably, are glued to secure them against opening.

The molded board is of even thickness throughout. The gore-opening C allows the wood to adjust itself for producing the bulging portion, and in lieu of providing therefor by one gore-opening it may be provided for in a series thereof, and, again, it or they may be located at other parts of the rounded end of the board than that particularly shown and described.

The openings *r* between the cross-rails *s* of the molding-frame give free escape to the moisture from the board as it dries; but obviously a perforated top plate for the frame may be substituted for the cross-rail construction particularly described.

Having thus described my invention, I claim—

As a new article of manufacture, a box or case for violins and other musical instruments, having a wooden top made of a board which is formed with a gore, C, and a pressed and molded rounded outward projection located at the larger end of the case, and having its round extending across the width and also lengthwise of the top, and the highest portion of the round substantially coincident with the intersection of the opposite lines of said gore, substantially as shown and described, for the purposes specified.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

CHARLES W. REEVES.

Witnesses:

ALBERT W. BROWN,

WM. S. BELLOWS.