

W.F. Senior,

Piano Bottom,

No. 4,282,

Patented Nov. 21, 1845.

Fig. 1

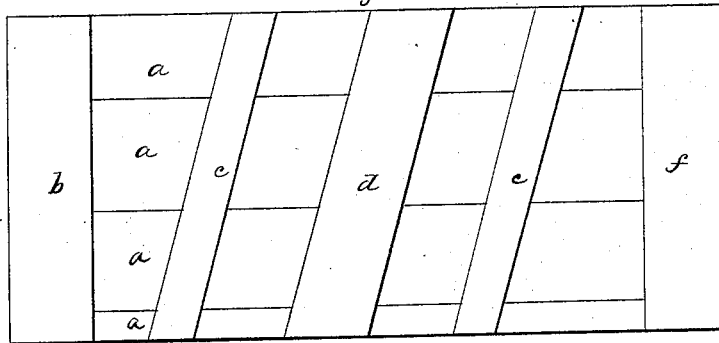


Fig. 2

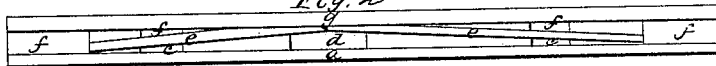
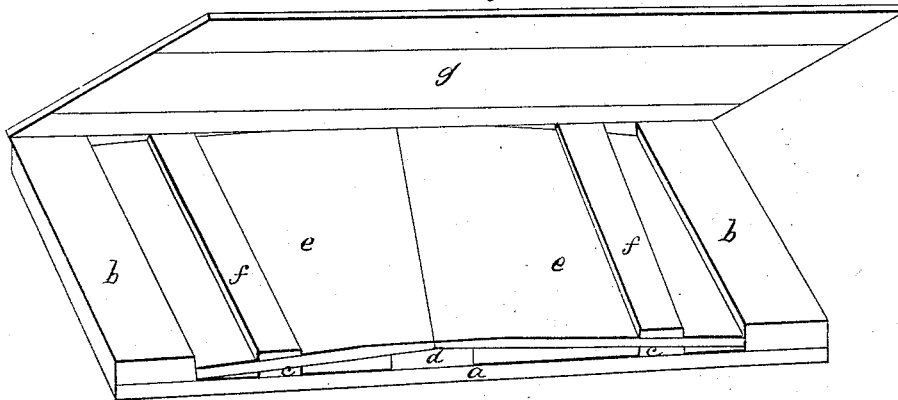


Fig. 3



UNITED STATES PATENT OFFICE.

WM. F. SENIOR, OF NEW YORK, N. Y.

CONSTRUCTION OF BOTTOMS FOR PIANOFORTES.

Specification of Letters Patent No. 4,282, dated November 21, 1845.

To all whom it may concern:

Be it known that I, WILLIAM F. SENIOR, of the city, county, and State of New York, have invented a new and Improved Mode
5 of Making the Bottoms for Pianofortes; and I do hereby declare that the following is a full and exact description.

The nature of my invention consists in so
10 arranging the planks and timbers, that the interior or middle layer shall form an arch springing from an abutment at each end on the underside coming together at the middle and joining the top, thus applying that
15 principle in obtaining increased strength and power of resistance.

In order to enable others skilled in the art to make and use my invention, I will proceed to describe its construction, and operation.

20 Having selected suitable boards or plank I cut them in the lengths required (Figure 1, *a, a, a, a*) and glue the edges of a sufficient number together to form the necessary width planing these to a level and proper
25 thickness. I then glue across each end of the boards thus prepared, two strips of plank (two inches thick and eight inches wide or thereabout) which forms part of the cross bracing and the abutment of the
30 arch, as seen at *b, b*, Figs. 1, 2, 3. (*F, 1, C, C*.) are two smaller and thinner strips glued on the bottom board but in a diagonal direction across it. *d, d, d*, Figs. 1, 2, 3, is a piece of plank about eight inches wide
35 glued in a diagonal direction across the middle of the bottom, on this piece the two central ends of the pieces forming the arch rest. *e, e*, Figs. 2 and 3 is the arch plank forming the center of the bottom and is the
40 main principle of this invention, this piece is made by gluing up several pieces of plank of about "one inch stuff" but in an angular direction so that the seams and grain will run as it were from corner to corner of the
45 bottom and parallel with the strings of the instrument it is glued at each end firmly to the bottom planks *a, a, a, a*, and also to the cross pieces *b, b, c, c*, meeting in

the middle it forms a "butt joint" resting on the cross piece, *d*, to which it is firmly
50 attached. *f f* Figs. 2 and 3 are two small strips of plank glued on the arch piece *e e*, but diagonally across, immediately over and parallel to the strips shown at *c c*. Nothing now remains but to glue down the top
55 "doubling" or floor *g*, (Figs. 2 and 3) (which is made in all respects like the under floor *a, a, a, a*.) upon the tops of *b, b, f, f*, and upon a small part of the arch pieces *e, e*, near the center joint over *d* which is
60 planed off to a faint level to receive it. The four small strips *c, c, f, f*, being glued about midway on either side of the arch *e, e*, prevents it from springing either up or down adding to the stiffness of the arch and other-
65 wise bracing it.

Fig. 1 represents the ground plan of the bottom with the manner of laying the cross pieces. Fig. 2 is a view of the front of the bottom when complete. Fig. 3, is a per-
70 spective view of the whole bottom, the top "doubling" not yet glued down but resting on one edge showing the interior, with the manner of laying the arch.

What I claim as my invention and desire
75 to secure by Letters Patent, is—

The introduction of the arch in the middle of the bottom, whereby I am enabled to obtain great power of resisting the strain caused by the tension of the wire strings of
80 the pianoforte, besides other advantages in improving the qualities of the instrument by keeping the case always in shape so that it can not draw up or "wind," as is invariably the result in the present mode of
85 manufacture and consequently keeping the instrument in tune and order for a much longer period.

Witnessed the sixth day of September in the year of our Lord one thousand eight
90 hundred and forty-five.

WILLIAM F. SENIOR.

Witnesses:

JAS. PIRSSON,
JULIAN G. DAVIES.