

No. 625,848.

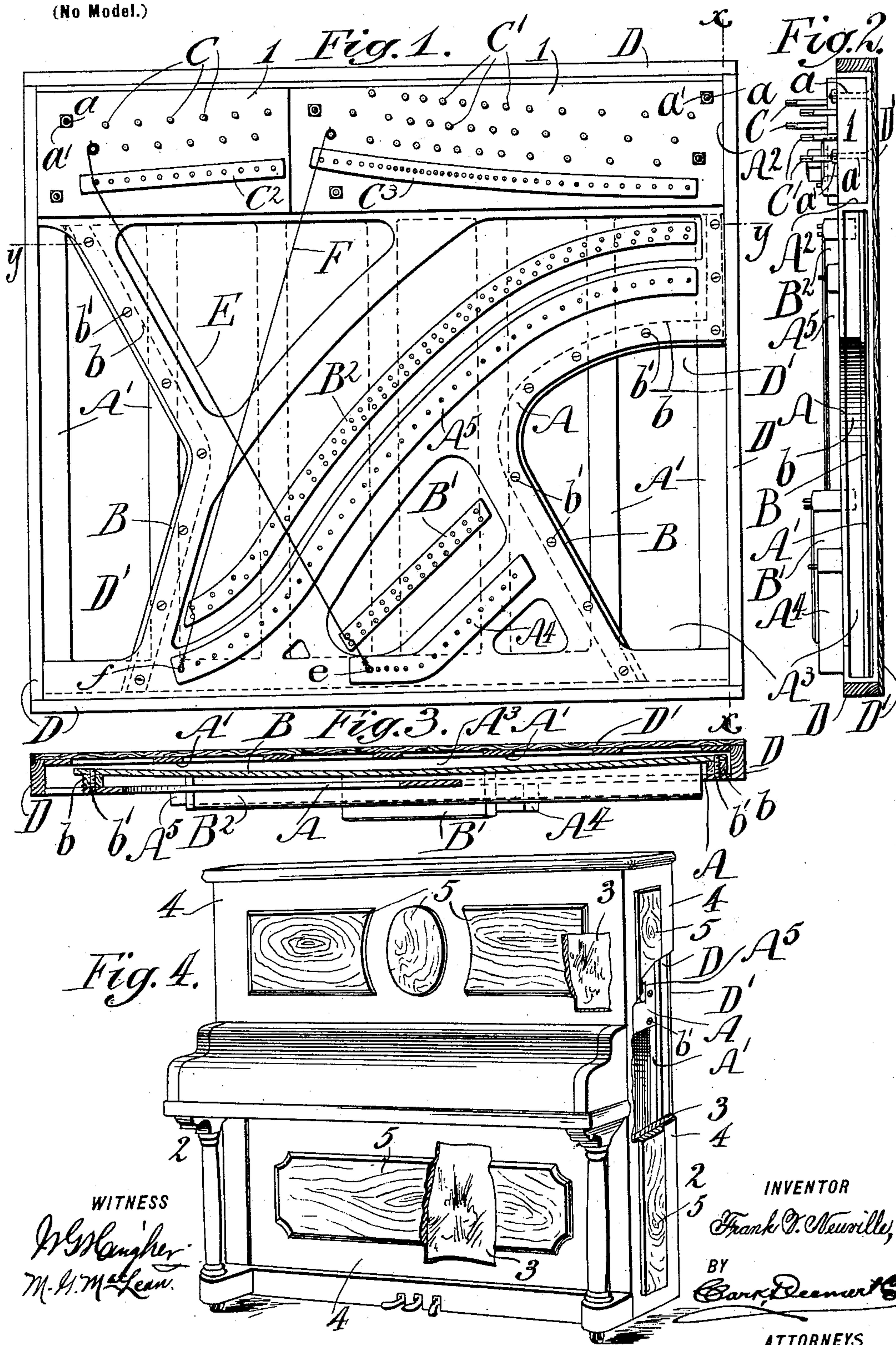
Patented May 30, 1899.

F. V. NEUVILLE.

COMBINED PIANO PLATE AND BACK.

(Application filed Oct. 19, 1898.)

(No Model.)



UNITED STATES PATENT OFFICE.

FRANK V. NEUVILLE, OF NEW YORK, N. Y.

COMBINED PIANO PLATE AND BACK.

SPECIFICATION forming part of Letters Patent No. 625,848, dated May 30, 1899.

Application filed October 19, 1898. Serial No. 694,005. (No model.)

To all whom it may concern:

Be it known that I, FRANK V. NEUVILLE, a citizen of the United States, and a resident of New York city, county of New York, and State of New York, have invented certain new and useful Improvements in a Combined Piano Plate and Back, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts.

This invention relates to an improved combined piano plate and back, the objects thereof being to produce a durable structure of this class adapted to resist the strain of the strings and to afford greater purity of tone to the instrument than similar backs now in use.

The invention will be hereinafter fully described, and specifically set forth in the annexed claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a front elevation of my improved device. Fig. 2 is a vertical sectional elevation taken on the line $x x$ of Fig. 1. Fig. 3 is a sectional plan view taken on the line $y y$ of Fig. 1, and Fig. 4 is a perspective view of an upright piano having my improvement attached thereto and showing portions of the case broken away.

In the practice of my invention I use a hollow piano-back constructed of metal and comprising the plate A and the uprights A' and formed with the recess A², all of the parts of said hollow back forming a homogeneous structure, they being cast together or welded in such a manner as to leave no open joints, whereby the tone of the instrument is improved. The compartment A³ between the plate A and the back uprights A' admits of the sound-waves having free movement to the rear of the plate, and the said plate is of a shape and contour adapted to stand the strain of the piano-strings, and it is lightened to a sufficient extent by having apertures cut therethrough. These said apertures not only lighten the structure, but they are so placed as to allow the bridges B' and B², which are secured to the sounding-board B, to pass beyond the surface of the plate for the purpose of engaging the strings, as will be hereinafter described.

The sounding-board B, composed of any suitable material, is attached to the rear of the plate A by means of side strips b , which are tapered upon their inner surfaces to engage the convexity of the board, the strips and the board being securely attached to the plate by means of screws b' .

The plate A is supplied upon its front surface with integrally-formed tail-bridges A⁴ and A⁵, and the wrest-plank 1, composed of wood, is secured to the recess A² by means of the bolts a and the nuts a' . This said wrest-plank contains the tuning-pins C and C' for attachment, respectively, to the bass and treble strings. Upper bridges C² and C' are also secured to the face of the said wrest-plank.

As a means for securing the back to the piano-casing a wooden frame D is connected around the four edges thereof and the whole is inclosed by means of a thin wooden backing D', adapted to throw the sound-waves in a forward direction to increase the volume of the instrument.

In stringing up the device bass strings E are secured at their lower ends to the pegs e upon the tail-bridges A⁴. They are then strung over the bridges B' and C² to the tuning-pins C. The treble strings F are connected at their lower ends to the pegs f of the tail-bridge A⁵, and they are strung over the bridges B² and C³ to the tuning-pins C'. In the drawings I have only shown one bass and one treble string; but it is obvious that any suitable number may be added, and by the use of this structure a great number of heavy strings may be employed without danger of bending the plate A, because of its integral formation with the rear uprights, as clearly shown in the drawings.

It will be noted that the plate A is cut away at each side thereof at places where metal could not be advantageously employed, and the sounding-board B is of a contour to fit the said cut-away portions, thus leaving a space around the sounding-board whereby the waves of sound are not obstructed.

In securing this combined back and plate to the piano box or casing, the walls of said casing are glued or otherwise fastened to the edges of the frame D, whereby no direct con-

tact between the plate and the piano-box is necessary, and a strong-toned instrument is produced which, owing to its peculiar construction, obviates the necessity of placing
5 the piano with its back to a wall in order to to get the maximum of tone therefrom.

The casing or piano-box 2 is preferably composed of rough wood 3, coated with an ornamental covering of compressed fiber 4, having
10 raised ornamentation 5 thereon and formed integrally therewith, as illustrated by Fig. 4 of the drawings.

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

1. A combined piano plate and back, comprising a hollow metallic homogeneous structure embodying the plate and uprights, with the intervening compartment, and formed
20 with the recess in its upper portion, and a wrest-plank fitted within said recess, substantially as shown and described.

2. In a combined piano plate and back, the combination of a hollow metallic structure
25 comprising integrally the open-work plate having the tail-bridges and an open-work back, said hollow integral structure having an intervening compartment between said plate and back and being formed with a top

recess for receiving the wrest-plank, a frame 30 extending around the edges of said hollow metallic structure, and a backing closing the latter, substantially as shown and described.

3. In a combined piano back and plate, the combination of a hollow metallic structure 35 comprising a plate and rear uprights formed integral with each other, said hollow integral structure having an intervening compartment between said plate and uprights and being formed with a top recess, the wrest- 40 plank fitting within said recess, and a sounding-board arranged within said intervening compartment and connected to the rear of said plate, the plate being supplied with tail-bridges, and the sounding-board having in- 45 termediate bridges passing beyond the surface of the plate, the wrest-plank being supplied with upper bridges, substantially as shown and described.

In testimony that I claim the foregoing as 50 my invention I have signed my name, in presence of two witnesses, this 17th day of October, 1898.

FRANK V. NEUVILLE.

Witnesses:

DUDLEY W. HAYNES,
M. G. MACLEAN.