

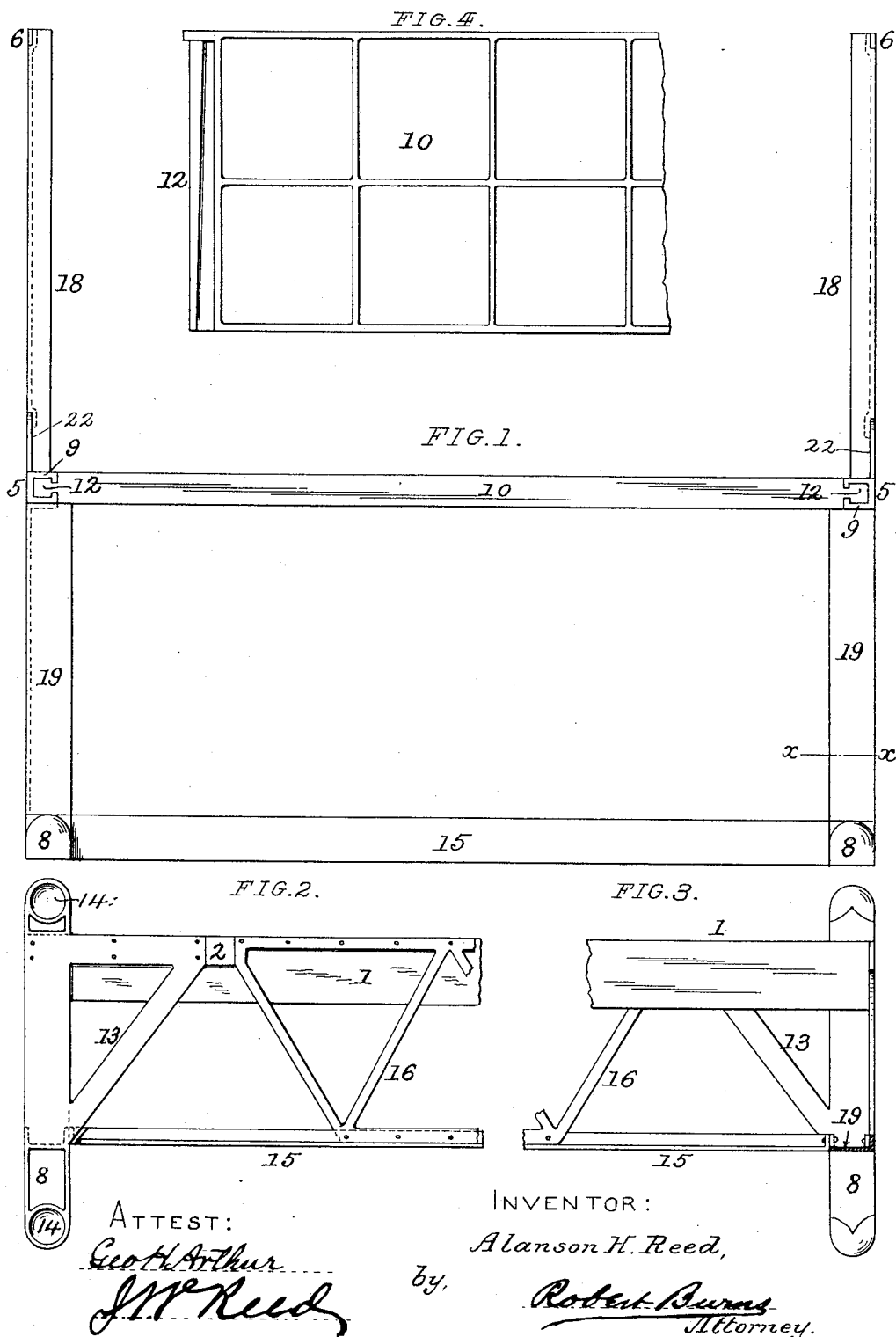
(No Model.)

2 Sheets—Sheet 1.

A. H. REED.
PIANO FRAMING.

No. 464,993.

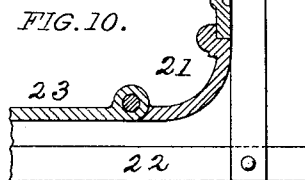
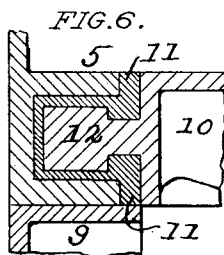
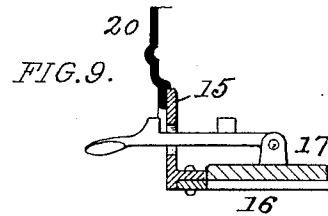
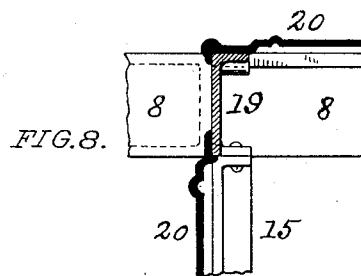
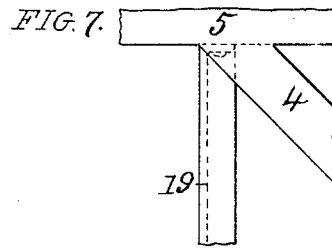
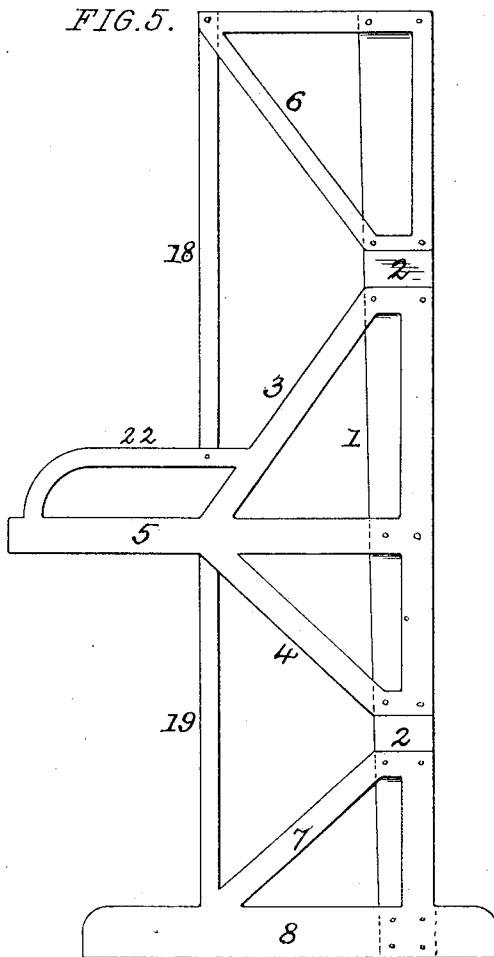
Patented Dec. 15, 1891.



A. H. REED.
PIANO FRAMING.

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ATTEST:

Geo. H. Arthur
J. W. Reed

INVENTOR:

Alanson H. Reed,
by *Robert Burns*
Attorney.

UNITED STATES PATENT OFFICE.

ALANSON H. REED, OF CHICAGO, ILLINOIS.

PIANO-FRAMING.

SPECIFICATION forming part of Letters Patent No. 464,993, dated December 15, 1891.

Application filed February 17, 1891. Serial No. 381,759. (No model.)

To all whom it may concern:

Be it known that I, ALANSON H. REED, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Piano-Framing; and I do hereby declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a front elevation of the framing of a piano constructed in accordance with my present invention; Fig. 2, a detail inverted plan view of the framing with the piano back in place; Fig. 3, a detail horizontal section at line *x x*; Fig. 4, a detail inverted plan view of the key-board bottom of a piano; Fig. 5, a side elevation; Fig. 6, an enlarged detail section illustrating the attachment between the piano-arm and the key-board bottom; Fig. 7, an enlarged detail side elevation of the joint between the piano-arm and the lower corner upright; Fig. 8, an enlarged detail section of the front corner of the piano at line *x x*, illustrating the attachment of the ornamental outer casing; Fig. 9, an enlarged detail vertical section of the lower front edge of the piano, illustrating the arrangement of the pedal-board; and Fig. 10, an enlarged detail vertical section illustrating the arrangement of the upper and lower fall-boards of the piano, &c.

Similar numerals of reference indicate like parts in the several views.

Referring to the drawings, 1 represents the main back or frame of a piano, preferably of the type described in my former application for Letters Patent for improvement in piano backs or frames, filed February 6, 1891, Serial No. 380,542, and having ribs or stops 2 on its sides and bottom, as described in said application, to constitute abutments or stops for the brace members 3 and 4 of the side arms 5 of the piano, as well as for the upper side framing or bracing 6 for the upper part of the piano and the lower side bracing 7 for the feet 8 of the piano.

In the present invention each arm 5 of the piano is preferably formed integral with its

side bracing members 3 and 4, of a suitable wrought material—such as steel, aluminium alloy, or vulcanized fiber—pressed into shape in suitable dies or forms from a plate or mass of an approximating form or shape.

A part of the present invention consists in forming the arms 5 of a hollow construction to constitute key or slide ways 9 of a dovetail or other usual form, in which the key-board bottom 10 slides and is supported in proper position. While the dovetail formation (preferably of a square type) may be formed directly in the material of the arm, it is preferable to form it in the shape of an inserted bushing 11, properly secured in place, in that such bushing can be made of a more costly, non-corrodible, and friction-reducing metal, and will afford a more accurate and inexpensive construction. The key-board bottom will be provided on its ends with dovetailed extensions or splines 12 to slide in said arms, and the said splines and recesses therefor are preferably made tapering or with a “draw,” so as to insure a tight and accurate fit when the key-board bottom is pushed into place.

By the ready detachment and accuracy of replacement insured by the above-described construction it is possible and practicable to remove the piano-keys, key-board, &c., bodily from the piano in adjusting or repairing any of the piano parts to the rear of the same, &c.

The feet 8 of the piano are of the usual end pattern, and in the present invention are formed integral with their side and bottom braces 7 and 13, by which they are attached in a firm and substantial manner to the main back 1 of the piano by rivets, bolts, or other usual means, and the body of each foot and the braces 7 and 13 I form integrally of wrought material—such as steel, aluminium alloys, or vulcanized fiber pressed into shape between dies—from a mass or body having an approximating shape. By such mode of construction I am enabled to form ample recesses 14 on the under side of the feet and near the ends of the same for the reception of the casters upon which the piano is mounted, and at the same time construct said feet of a recessed formation, so as to be of equal if not greater lightness than the ordinary wooden feet heretofore used.

The upper side framing or bracing 6 for the

upper ends or corners of the piano is of a triangular open paneled form with its lower corner abutting against the uppermost stop 2 at the sides of the main back 1.

5 15 is the lower front rail of the piano-framing, of an angle form, secured at its ends to the inner sides of the feet, as shown, and connected to the main back 1 by diagonal bracing 16, that forms a bed or support for the
10 pedal-board 17.

18 and 19 are the upper and lower corner-uprights forming the front corners of the piano, having the angle form, as shown, and constituting, in connection with the other
15 frame parts above described, a skeleton frame; the front and side surfaces of which are plane, so as to afford easy and convenient means for the attachment of the outer casing 20, which may be of suitably-paneled or otherwise ornamented sheets or plates of any desired metallic or non-metallic substance.

21 is the upper fall-board, supported on the upper-rail members 22 of the piano-arms 5, and 23 the lower fall-board, hinged thereto in
25 the usual manner and adapted to cover and protect the keys when the piano is not in use.

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

30 1. In a framing for pianos, the key-board arms provided with dovetailed slideways adapted to receive dovetailed extensions or splines on the ends of the key-board bottom, substantially as set forth.

35 2. In a framing for pianos, the key-board arm provided with dovetailed slideways formed by inserted bushings 11, adapted to receive dovetailed extensions or splines on the ends of the key-board bottom, substantially as set forth.

40 3. In a framing for pianos, the key-board arm and side-bracing members formed in one integral piece, substantially as set forth.

4. In a framing for pianos, the key-board
45 arms having an upper integral rail member 22, adapted to form a support for the upper fall-board of the piano, substantially as set forth.

5. In a framing for pianos, the key-board
50 arm having an upper rail member and side-bracing members formed in one integral piece, substantially as set forth.

6. In a framing for pianos, the key-board

arms, in combination with the main back 1, having stop-lugs on its sides, substantially as
55 set forth.

7. In a framing for pianos, the key-board arm provided with a slideway and the side-bracing members formed in one integral piece of pressed wrought material, substantially as
60 set forth.

8. In a framing for pianos, the molded foot 8, having a recessed formation, as described, and provided with means for attachment to the main back 1, substantially as set forth.

9. In a framing for pianos, the foot 8, formed of pressed wrought material and having easter-recesses 14 and integral side braces 7, substantially as set forth.

10. In a framing for pianos, the foot 8, formed of pressed wrought material and having easter-recesses 14 and integral side and bottom braces 7 and 13, substantially as set forth.

11. In a framing for pianos, the combination, with the corner-uprights, of the upper triangular-shaped side bracing 6, substantially as set forth.

12. In a framing for pianos, the combination, with the main back 1, of the feet 8, lower
80 front rail 15, and diagonal bracing 16, adapted to form a bed for the support of the pedal-board.

13. A skeleton framing for pianos, comprising, in combination, the main back 1, side
85 arms 5, upper side framing 6, feet 8, bottom rail 15, and upper and lower corner-uprights 18 and 19, connected together so as to present a plane outer surface, substantially as set forth.

14. A skeleton framing for pianos, comprising, in combination, the main base 1, the side arms 5 and their bracing members 3 and 4, the upper triangular side framing 6, the feet 8 and their side bracing 7, the bottom rail 15, and upper and lower corner-uprights connected together so as to present a plane outer surface for the attachment of the outer casing, substantially as set forth.

In testimony whereof witness my hand this
14th day of February, 1891.

ALANSON H. REED.

In presence of—

J. W. REED,

ROBERT BURNS.