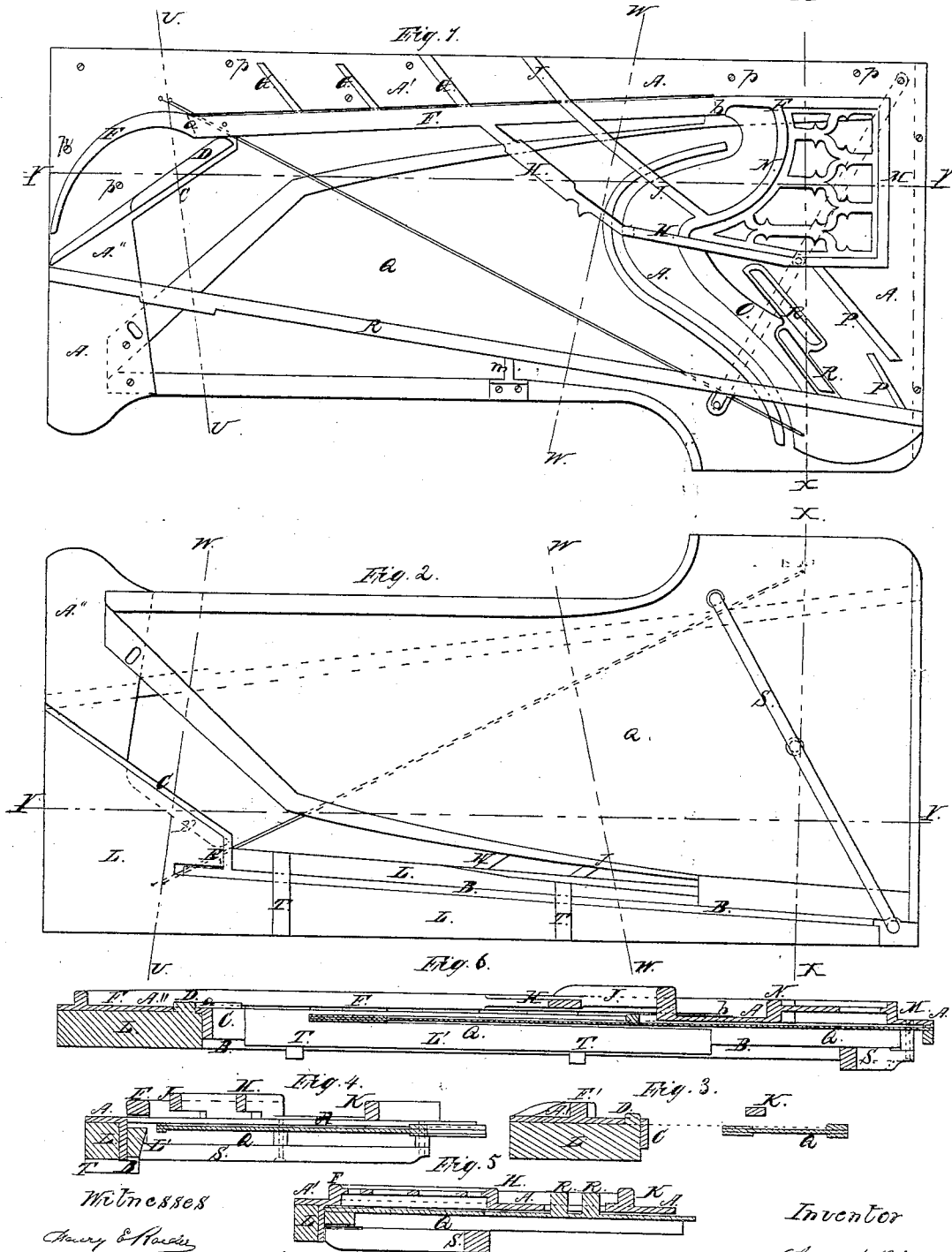


# A. Ludloff, Piano Frame,

No 52,725

Patented Feb. 20, 1866.



Witnesses  
Henry & Parsons

David Forbes

Inventor  
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# UNITED STATES PATENT OFFICE.

AUGUST LUDOLFF, OF NEW YORK, N. Y.

## IMPROVEMENT IN IRON FRAMES FOR PIANO-FORTES.

Specification forming part of Letters Patent No. 52,725, dated February 20, 1866.

*To all whom it may concern:*

Be it known that I, AUGUST LUDOLFF, of New York, in the county and State of New York, have invented a new and Improved Frame for Piano-Fortes; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in the construction and arrangement of the iron frame or plate for a piano-forte in such a manner as to dispense with those heavy wooden blocks called the "long" and "cross" blocks at present required in all piano-fortes.

Figure I represents a top view, and Fig. II a bottom view, of my improved plate, with the wrest-plank and sounding-board attached. Fig. III is a section at line U U. Fig. IV is a section at line W W. Fig. V is a section at line X X, and Fig. VI is a section at line Y Y.

Similar letters represent similar parts.

The plan and top configuration is nearly similar with the plates at present used and represented in the drawings by A, A', and A''.

Under the after part of the frame A' a strong rib, B, is provided, running nearly the whole length of the frame. On the left-hand after corner from the part A'' a strong rib, C, is made, firmly attached to the part of the plate A'', and leaving a space between its after side and the corner edge of the plate for the wrest-plank D to project through between. The end of this plate or rib C may be connected with the rib B by a rib, E. (See Fig. II.)

At the front of the after part, A', an iron wrest-plank bar, F, is arranged. This bar F is from the point *a* to the point *b* situated some little distance above the top surface of the plate A', while from the right of the point *b* and from the left of point *a* the same is firmly joined with the plate similar to a raised rib on the top surface. The part F' of said bar F on the left of the point *a* runs in a curve toward the center of the outside edge of the plate A''.

The bar F, where the same is situated some

little distance above the top surface of the plate A', is joined to said plate A' by means of the ribs G G G, and by the bridge H this bar F is connected with that part of the plate marked A, and by the bridge J this bar F is joined to the part of the plate marked A', as well as with that part marked A.

From that part of the plate marked A'' to the forward part of that part of the plate marked A a bridge, K, is arranged, running diagonally. That part of the plate marked A is further strengthened by strong ribs N and M, connecting the continuations of the bar F and of the bridge J, as well as by a further rib, O.

Ledges P P are provided on the plate A, in which the hitch-pieces for the strings are placed. Openings are provided in that part of the plate marked A for the sounding-board bridges R for the covered strings to pass through. That part of the plate marked A is further strengthened by a brace, S, situated at the under side and below the sounding-board, (see Fig. II,) and provided with legs or hubs passing upward, through which bolts pass to secure said brace at the middle and after end to the plate A and at its forward end to the bridge K. Behind the ribs B and C, below the plate A' and A'', the wrest-plank L is secured and attached to said plate by means of screws *p p*.

On the front of the rib B, and below the bar F, a wrest-plank, L', is secured and fastened to the wrest-plank L by means of brackets T T. (See Fig. II.)

The sounding-board Q is made in the usual manner, fastened at its extreme left and forward end to that part of the plate marked A'' and on the right-hand side to that part of the plate marked A. At the front side, near the middle, a bracket, *m*, is fastened to the bridge K, to which that part of the sounding-board is attached.

By dispensing with the long and cross blocks at present usually employed more room for the piano-forte action will be obtained, as well as a richer and fuller sound, as the sounding-board can be directly attached to the frame.

I contemplate the use and application of an iron frame, as herein set forth, and substan-

tially as described, in the square, grand, and all other styles of pianos.

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

The arrangement of the plate A A' A'', with flanges B and C on the under side, in combination with the wrest-planks L and L' against

the same, constructed substantially as described.

AUGUST LUDOLFF.

Witnesses:

HENRY E. ROEDER,  
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