(No Model.)

C. F. CHICKERING.

PIANO FORTE.

No. 247,887. Patented Oct. 4, 1881.

Fig. 3.

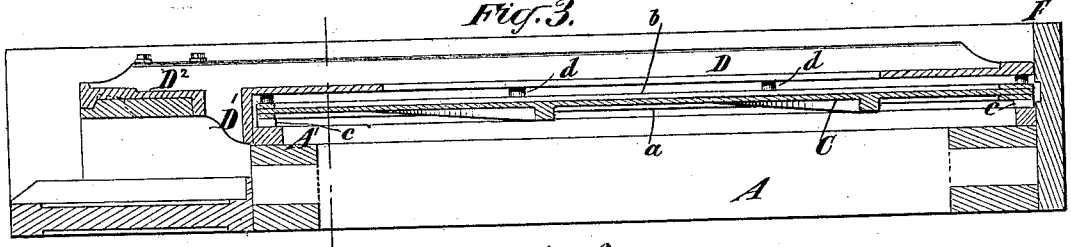


Fig. 4.

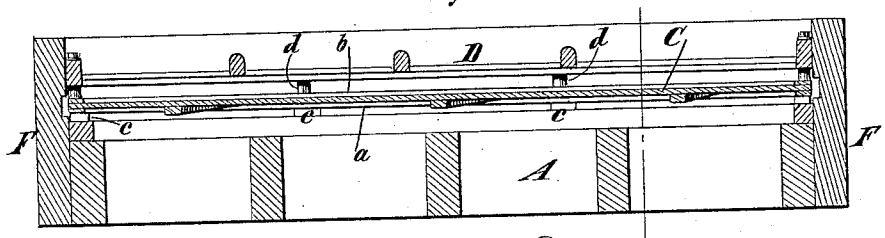


Fig. 2.

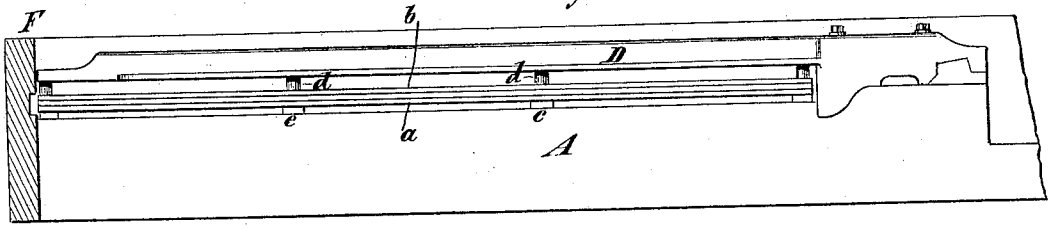


Fig. 1.

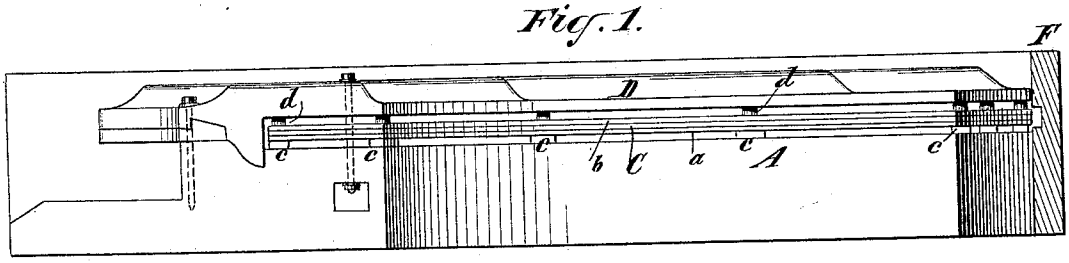
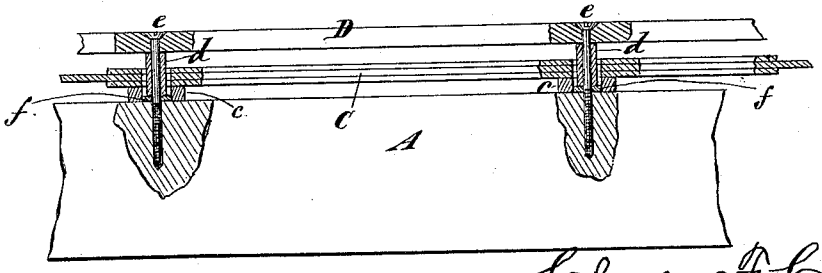


Fig. 5.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES F. CHICKERING, OF NEW YORK, N. Y.

PIANO-FORTE.

SPECIFICATION forming part of Letters Patent No. 247,887, dated October 4, 1881.

Application filed June 21, 1881. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. CHICKERING, of the city of New York, in the county and State of New York, have invented certain new and useful Improvements in Piano-Fortes, of which the following is a specification.

The object of these improvements is to increase the loudness and enhance the quality of the tones produced by a piano-forte.

To this end the improvements consist in the combination, with the skeleton or main frame of a piano-forte, of a sounding-board supported upon said main frame at isolated or distant points along its edges and an iron plate or frame supported upon said skeleton or main frame independently of said sounding-board, whereby the said sounding-board is afforded opportunity for free vibration, and its effectiveness is materially enhanced. The said iron plate or frame is preferably sustained by supports passing freely through openings in said sounding-board and erected upon the skeleton or main frame.

The improvements also consist in the combination, with the skeleton or main frame of a piano-forte and a sounding-board supported only at isolated or distant points along the edges, of a case provided with a groove opposite the edges of the sounding-board, so as to be out of contact therewith.

In the accompanying drawings, Figure 1 is a side view of the skeleton or main frame, the sounding-board, and the iron plate or frame of a piano-forte, including certain appurtenances and a vertical section of part of the case. Fig. 2 is a similar view of the opposite side of said parts, including a like section of a portion of the case. Fig. 3 is a vertical longitudinal section through the said parts. Fig. 4 is a vertical transverse section of the said parts; and Fig. 5 is a sectional side view of a portion of the skeleton or main frame, the sounding-board, and the iron plate or frame on a larger scale.

Similar letters of reference designate corresponding parts in all the figures.

A designates the skeleton or main frame of a piano-forte. It may be made in the usual or any other suitable manner.

A′ designates what I term the "belly-rail" of said skeleton or main frame.

C designates the sounding-board, which may be made after any approved method, but has a rib, *a*, on the under side, around the edges, for strengthening it. It is shown as also having a corresponding rib, *b*, on the upper side, and for the same purpose. This sounding-board, instead of having a continuous support around its edges, is supported only at isolated or distant points around the edges by blocks or analogous devices *c*, erected upon the skeleton or main frame A; hence it is free to vibrate freely throughout its extent.

D designates the iron plate or frame. This may be of any desirable style. It is sustained by supports passing loosely through the sounding-board C. In this example of my invention these supports consist of tubes *d*, passing through holes of much larger diameter in the sounding-board and sustaining the iron plate or frame, screws *e*, passing down through the iron plate or frame and tubes and entering the skeleton-frame, being employed to secure the parts together. These tubes *d* and screws *e* are here shown as passing through the blocks or devices *c*, whereby the sounding-board is supported, and I provide washers *f*, fitting around the said screws *e*, and fitting snugly in the blocks *c* for retaining these screws, the tubes *d*, the sounding-board, and the iron plate or frame in their proper relative positions.

The iron plate or frame, near the front end, is provided with a downwardly-extending rib, D′, which bears against the front of the belly-rail A′ of the skeleton or main frame A, but is out of contact with the sounding-board. The iron plate or frame is also provided with a projection, D^2, extending onto the pin-block E. The flange D′ and projection D^2 resist the tendency of the springs acting on the agraffes to pull up the iron plate or frame, and this without interfering with the free vibration of the sounding-board.

F designates the case of the piano-forte. In order that it shall not interfere with the free vibration of the sounding-board, it is out of contact therewith. This result is, in this instance, accomplished by forming in its inner side a groove or rabbet opposite the edges of the sounding-board.

It will be seen that by my invention I provide for a free vibration of the sounding-board without hinderance from the skeleton or main frame, the iron plate or frame, or the case, and

hence that I materially increase the loudness and enhance the quality of the tones from a piano-forte.

I am aware that the sounding-boards of piano-fortes have been supported continuously along their edges upon the skeletons or main frames; and I am also aware that sounding-boards have been supported at isolated points only on the metal frames or plates.

I am also aware that the metal frames or plates have been supported at intervals on the skeletons or main frames, independently of the sounding-boards having an approximately-continuous support along their edges.

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

1. The combination, with the skeleton or main frame of a piano-forte, of a sounding-board supported upon said skeleton or main frame at isolated or distant points along its its edges, and an iron plate or frame supported upon said skeleton or main frame independently of said sounding-board, whereby the said sounding-board is afforded opportunity for free vibration and its effectiveness is materially enhanced, substantially as specified.

2. The combination, with the skeleton or main frame of a piano-forte, of a sounding-board supported upon said skeleton or main frame at isolated or distant points along its edges and an iron plate or frame sustained by supports passing freely through openings in said sounding-board and erected upon said skeleton or main frame, whereby the said sounding-board is afforded opportunity for free vibration and its effectiveness is materially enhanced, substantially as specified.

3. The combination, with the skeleton or main frame of a piano-forte and a sounding-board supported only at isolated or distant points along the edges, of a case provided with a groove opposite the edges of the sounding-board, so as to be out of contact therewith, substantially as specified.

CHARLES F. CHICKERING.

Witnesses:

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