

C. F. Chickering, Piano.

N^o 32,119.

Patented Apr. 23, 1861.

Fig 1.

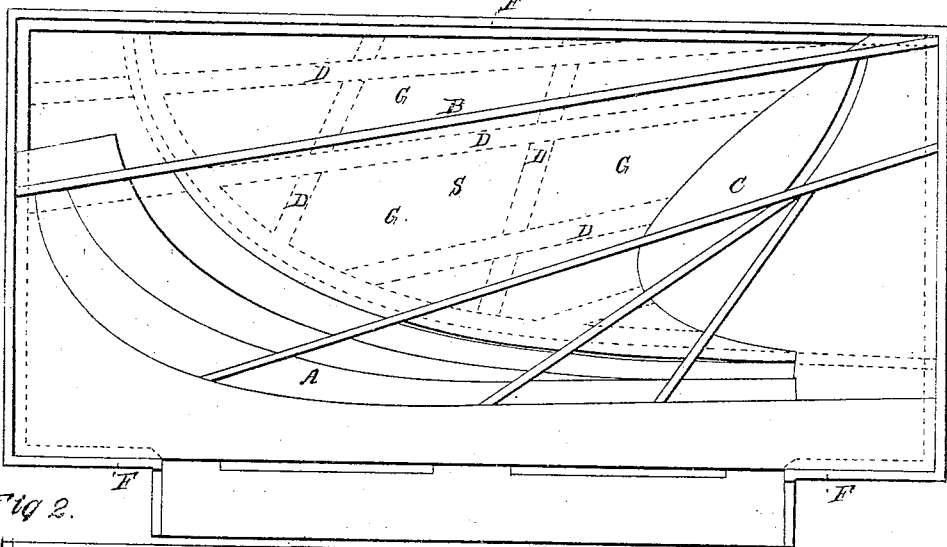


Fig 2.

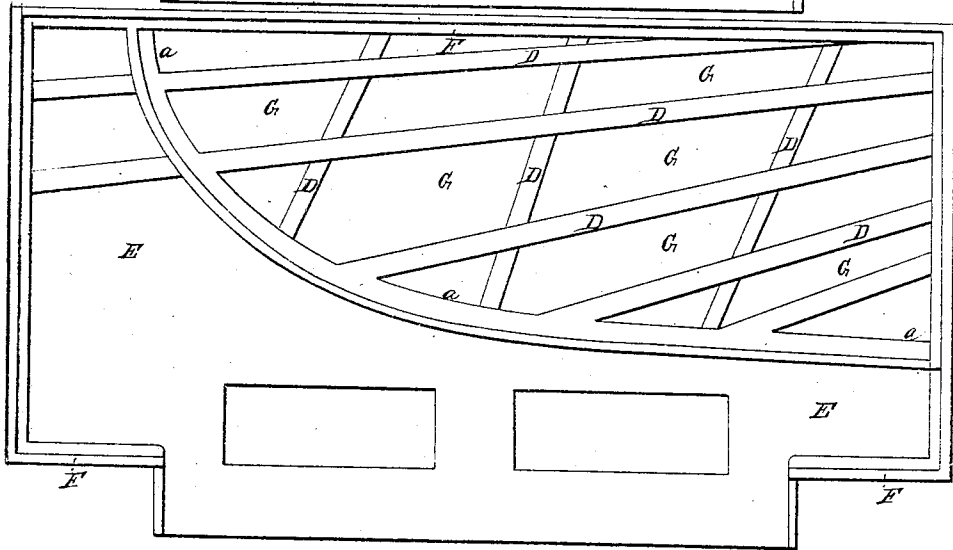
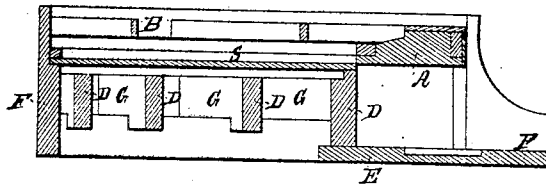


Fig 3.



Witnesses.
Wm. H. ...
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UNITED STATES PATENT OFFICE.

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

IMPROVEMENT IN SQUARE PIANO-FORTES.

Specification forming part of Letters Patent No. 32,119, dated April 23, 1861.

To all whom it may concern:

Be it known that I, C. F. CHICKERING, of the city, county, and State of New York, have invented a new and useful Improvement in Square Piano-Fortes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings forming part of this specification, in which—

Figure 1 is a plan of a square piano-forte with the top of the case removed, showing the string-frame and wrest-plank, but omitting the strings and action. Fig. 2 is a plan of the interior of the case without any of the internal parts. Fig. 3 is a transverse section corresponding with Fig. 1.

Similar letters of reference indicate corresponding parts in the several figures.

One reason of the superiority of the grand over the square piano-forte as heretofore constructed, is owing to the former having the portion of the bottom of its case below the strings and sound-board almost entirely open, or composed only of a series of bars, which permits a freedom of vibration of the strings not otherwise to be obtained. The great obstacle to the construction of the case of the square piano-forte with an open or barred bottom of similar character has been its contracted horizontal area and the proportion of room occupied by the key-board and action, which, with the ordinary arrangement of the wrest-plank and other portions of the string-frame, has rendered it impracticable to have an opening below the strings of such size as to be of any advantage.

My invention consists in a certain relative arrangement of the wrest-plank and other portions of the string-frame, the sound-board, and an open or merely barred portion of the bottom of the case of the square piano-forte, whereby that portion of the case is made to correspond in form and coincide in position with the scale or string-frame and sound-board, and the same free vibration of the strings and sound-board obtained as in the grand piano-forte is provided for.

To enable others skilled in the art to make and use my invention, I will proceed to describe it with reference to the drawings.

My arrangement of the wrest-plank and string-frame or scale is precisely the reverse, so far as the back and front of the case are

considered, of that commonly adopted in square piano-fortes—that is to say, the wrest-plank A is arranged in front and the longer strings and main brace B at the back, the broader portion of the wrest-plank being at the right-hand end and the hitch-plate or portion C of the frame, in which the hitch-pins are secured, at the left-hand end of the case, as shown in Fig. 1. This necessitates the use of long keys at the left-hand end, and short keys at the right-hand end of the keyboard, as will be readily understood, though I have not represented the key-board, the long keys for playing the base and the short for playing the treble. The form of the scale or string-frame is not changed further than that its position is reversed as above mentioned. The position of the sound-board S is reversed to correspond with the string-frame, but its form is not otherwise changed. The whole of the front and left-hand end portion E of the bottom of the case extending below the keys is made solid or close, but from the back right-hand corner, nearly to the back left-hand corner and nearly to the front right-hand corner, and to a curved line, *a a*, nearly coinciding with the hammer-line and inner edge of the wrest-plank A, it is merely composed of a series of strong bars, D D, of wood, intersecting and bracing each other in such a manner as to give as much strength as a solid bottom, the spaces G G between such bars being entirely open.

I do not claim of itself the reverse arrangement of the wrest-plank and other portions of the string-frame and of the sound-board, as herein described, nor do I claim, broadly, the construction of a square piano-forte with the bottom or lower portion of the case composed of bars with openings between them; but

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

The combined arrangement of the wrest-plank, hitch-plate, brace, and sound-board, and of the open or merely barred portion of the bottom of the case in a square piano-forte, substantially as and for the purposes herein described.

C. F. CHICKERING.

Witnesses:

J. W. COOMBS,
R. S. SPENCER.