

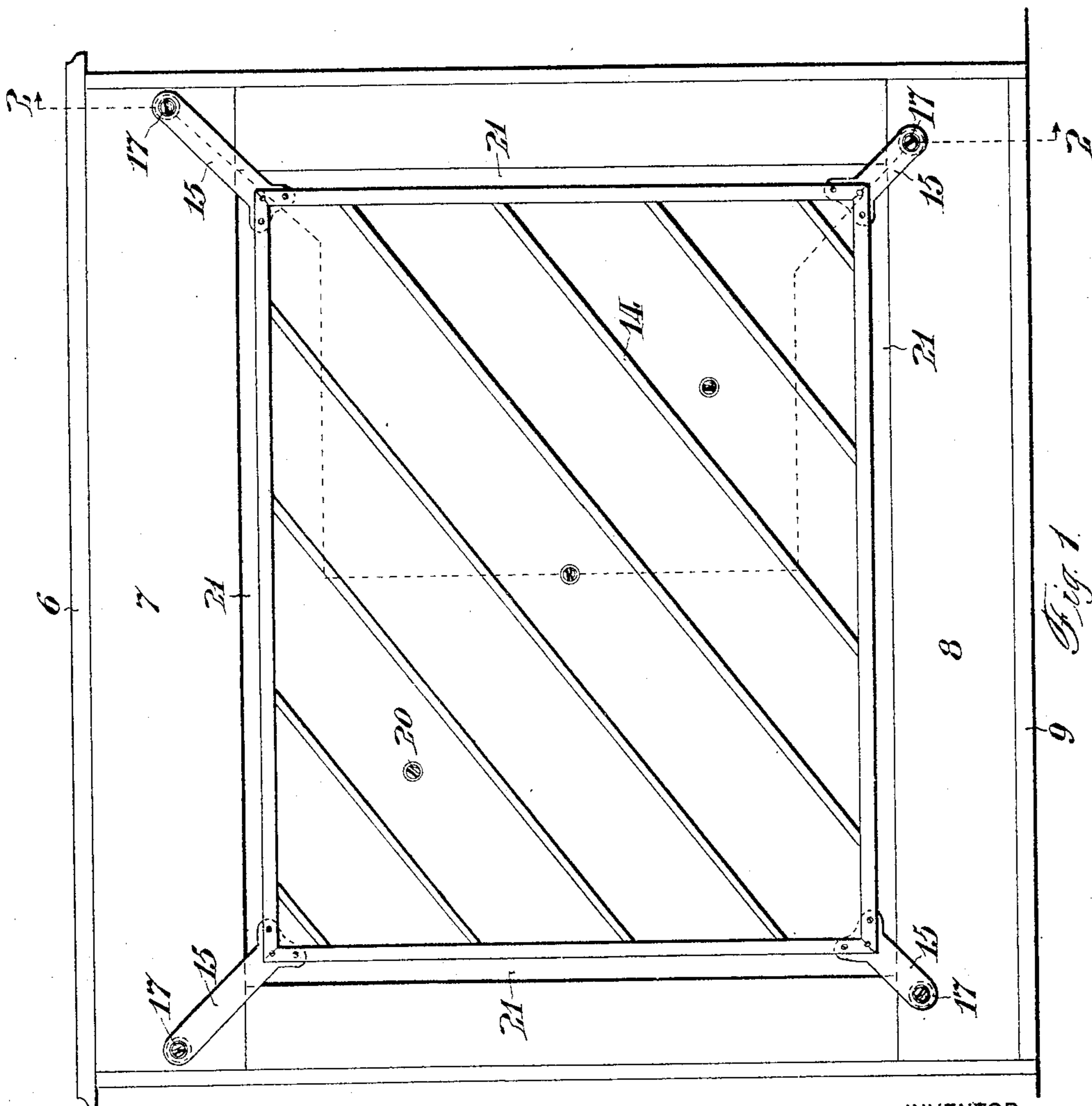
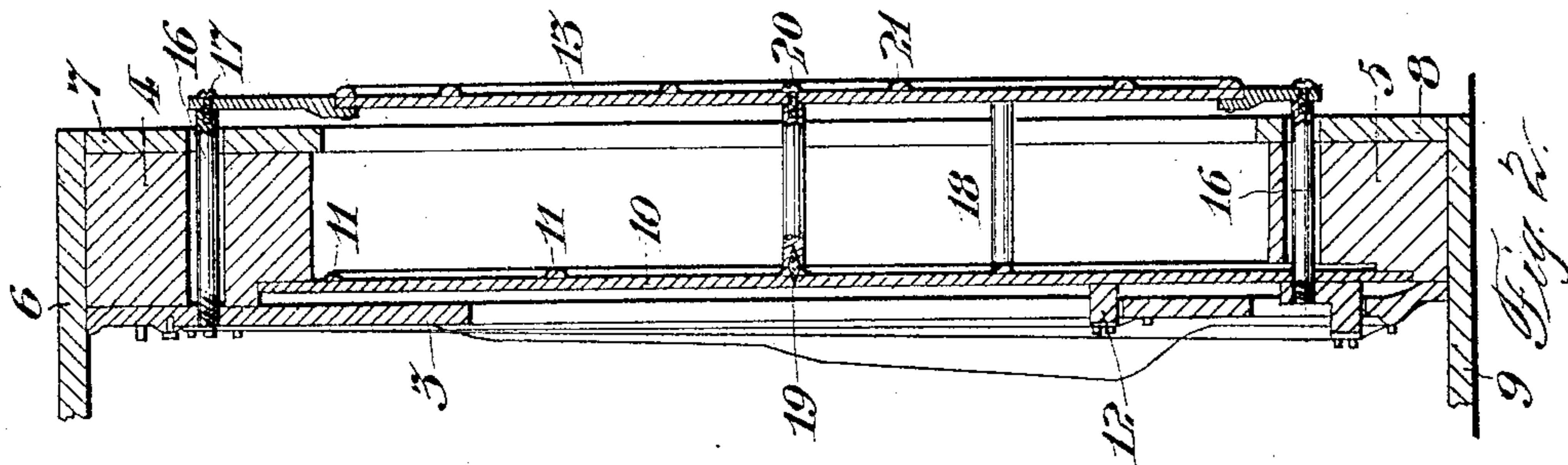
No. 750,248.

PATENTED JAN. 26, 1904.

W. J. BRASHEARS.
SOUNDING BOARD FOR PIANOS.

APPLICATION FILED JUNE 10, 1903.

NO MODEL.



WITNESSES

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UNITED STATES PATENT OFFICE.

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MESNE ASSIGNMENTS, TO C. J. HEPPE & SON, OF PHILADELPHIA, PENN-
SYLVANIA, A FIRM.

SOUNDING-BOARD FOR PIANOS.

SPECIFICATION forming part of Letters Patent No. 750,248, dated January 26, 1904.

Application filed June 10, 1903. Serial No. 160,800. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. BRASHEARS, a citizen of the United States, residing at Wil-
mington, in the county of Newcastle and State
5 of Delaware, have invented certain new and
useful Improvements in Sounding-Boards for
Pianos, of which the following is a specifica-
tion.

My invention relates to the casing and
10 sounding apparatus of musical instruments,
such as pianos and the like; and the object of
the invention is to provide such an instrument
with a supplementary sounding board or
boards in addition to the ordinary main sound-
15 ing-board usually inclosed within the casing.

My improvements are particularly applica-
ble to upright pianos. Ordinarily such a piano
is provided with a main sounding-board lo-
cated behind the strings and attached either
20 to the string-frame or to the framing of the
casing. In such arrangements the vibrations
of the sounding-board are projected from the
back of the instrument, with the disadvantage
that when the instrument is placed with its
25 back toward a wall the wall interferes with
the projection of the vibrations from the main
sounding-board at the back of the piano, and
thus minimizes the effect. In order to cure
this defect, my invention provides in an up-
30 right piano a supplementary sounding-board,
located at the back of the instrument, where-
by regardless of the position of the piano the
sympathetic vibration of the supplementary
sounding-board enhances the power and qual-
35 ity of the tones produced by the vibration
transmitted from the strings and the main
sounding-board.

Although my improvements are most ad-
vantageously employed in upright pianos, I
40 desire it to be understood that I do not limit
myself to such application of the invention.

My invention consists in the improved con-
struction, arrangement, and combination of
parts hereinafter fully described and after-
45 ward specifically claimed.

In the accompanying drawings I have illus-
trated an embodiment of my invention in an

upright piano of ordinary construction, in
which—

Figure 1 represents a view of the piano in 50
rear elevation with my supplementary sound-
ing-board in position thereon. Fig. 2 is a
transverse section through the rear portion of
the casing of the piano, taken on the irregu-
lar dotted line 2 2 of Fig. 1, the front portions 55
of the piano being omitted as unnecessary to
illustrate.

Referring specifically to the drawings, 3 in-
dicates the ordinary metallic string-frame
upon which the strings are stretched, which 60
frame, as is usual, is mounted upon wooden
cross beams or supports 4 and 5 at the top and
bottom, respectively, such beams or supports
being of ordinary construction and applica-
tion in upright pianos and serving to provide 65
supports for the adjacent parts of the casing,
as indicated at 6, 7, 8, and 9.

In the rear of the string-frame is mounted
the main sounding-board 10, which may be of
any usual construction and is formed with ribs 70
or stiffeners 11 on its rear surface. This
sounding-board 10 is shown as secured to the
beams or supports 4 and 5, although it may be
secured to the string-frame 3, if desired, and
it carries the usual string-bridges 12, which 75
project through openings in the metallic
string-frame 3 and support the strings in the
usual manner.

At the rear of the instrument I have pro-
vided a supplementary sounding-board 13, 80
which, like the main sounding-board, may be
of any suitable material or construction, being
provided with diagonal ribs 14 on its rear sur-
face for well-known stiffening purposes. This
supplementary sounding-board 13 is slightly 85
less in area than the rear opening of the piano,
leaving spaces 21 all around it to permit of the
free distribution of the atmospheric vibrations
from the sounding-board.

At each corner of the supplementary sound- 90
ing-board 13 is a hanger or bracket, as shown
at 15 15 15, by means of which the sounding-
board is supported from screw bolts or pins
16, which are threaded into the metallic string-

frame 3, passed through enlarged holes or openings in the framework and casing out of contact with the sides of said openings, and secured to the brackets 15 by means of screws 17, passing through the brackets or hangers and threaded into the outer ends of the bolts or pins 16.

The supplementary sounding-board 13 may be connected with the main sounding-board 10 by means of pins or sounding-posts 18, which at their inner ends are connected by double-pointed screws 19 or other suitable means with the main sounding-board and at their outer ends with the supplementary sounding-board by means of screws 20, passing through said supplementary sounding-board and threaded into the ends of said pins or sounding-posts.

By means of the construction described the two sounding-boards are caused to vibrate in unison by the vibration of the strings, and their vibrations are distributed uniformly in and from the casing to the atmosphere at both front and rear of the piano, thus augmenting the tones produced by the vibration of the strings.

The supplementary sounding-board may be wholly supported from the string-frame by means of the bolts or pins 16 or may be supplied also with the sounding-posts 18, as may be desired. The string-frame may be either removably or permanently fixed in the casing of the piano, as may be preferred, and, as stated before, the main sounding-board may be secured to the frame of the piano-casing, as herein shown, or may be attached to the string-frame.

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

1. In a piano, the combination with the casing, of a string-frame mounted therein, a main sounding-board also mounted in the casing and carrying the string-bridges, and a supplementary sounding-board supported from the string-frame, substantially as described.

2. In a piano, the combination with the casing, of a string-frame mounted therein, a main sounding-board also mounted in the casing and carrying the string-bridges, a supplementary sounding-board supported from the string-frame, and connections between the main sounding-board and the supplementary sounding-board, substantially as described.

3. In a piano, the combination with the casing, of a string-frame mounted therein, a main

sounding-board supported solely by the casing independently of the string-frame, and a supplementary sounding-board supported by the string-frame independently of the casing, substantially as described.

4. In a piano, the combination with the casing, of the string-frame mounted therein, the main sounding-board, and a supplementary sounding-board in the rear of the piano supported from the string-frame, substantially as described.

5. In a piano, the combination with the casing, of the string-frame mounted therein, the main sounding-board also mounted in the casing, a supplementary sounding-board in the rear of the piano supported from the string-frame, and pin connections between the main sounding-board and the supplementary sounding-board, substantially as described.

6. In a piano, the combination with the casing, of the string-frame mounted therein, the main sounding-board also mounted in the casing, a supplementary sounding-board at the rear of the piano, and pins passing through the framing of the casing threaded into the string-frame at their front ends and supporting the supplementary sounding-board at their rear ends, substantially as described.

7. In a piano, the combination with the casing, of the string-frame mounted therein, the main sounding-board also mounted in the casing, a supplementary sounding-board in the rear of the piano of less area than the rear opening leaving spaces around the board, and connections from the string-frame supporting said supplementary sounding-board, substantially as described.

8. In a piano, the combination with the casing, of the string-frame mounted therein, the main sounding-board also mounted in the casing, a supplementary sounding-board at the rear of the piano, brackets or hangers secured to the edges of the supplementary sounding-board, and pins threaded at their forward ends into the string-frame and connected at their rear ends with said brackets or hangers thereby supporting the supplementary sounding-board from the string-frame, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM J. BRASHEARS.

Witnesses:

SHIPLEY BRASHEARS,
IDA J. FORD.