

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

5 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.

10 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.

15 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
20 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 en- 25 hanced, 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
30 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
35 skeleton or main frame, whereby the said sounding-board is afforded opportunity for free vibration and its effectiveness is materially en- hanced, substantially as specified.

3. The combination, with the skeleton or main frame of a piano-forte and a sounding-
40 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, sub-
stantially as specified.

CHARLES F. CHICKERING.

Witnesses:

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