(No Model.)

# C. F. T. STEINWAY.

## PIANO FRAME.

No. 314,740. Patented Mar. 31, 1885.

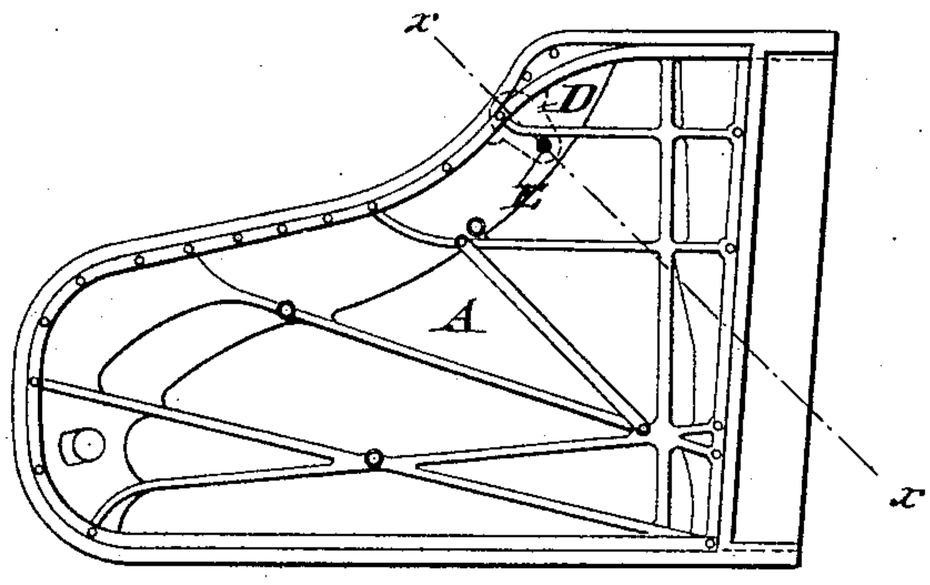



Fig: 1.

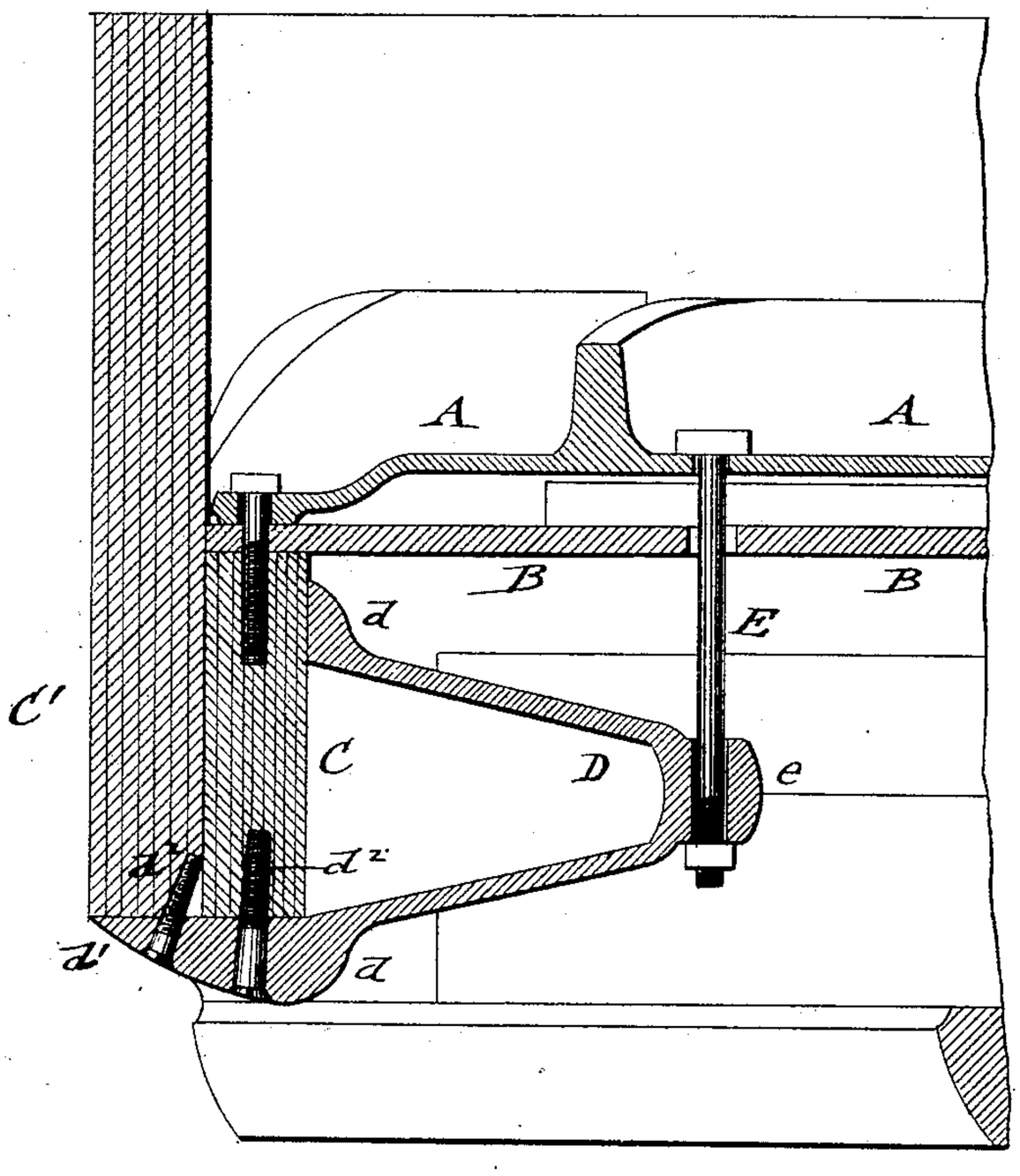



Fig: 2.

Fig: 3.

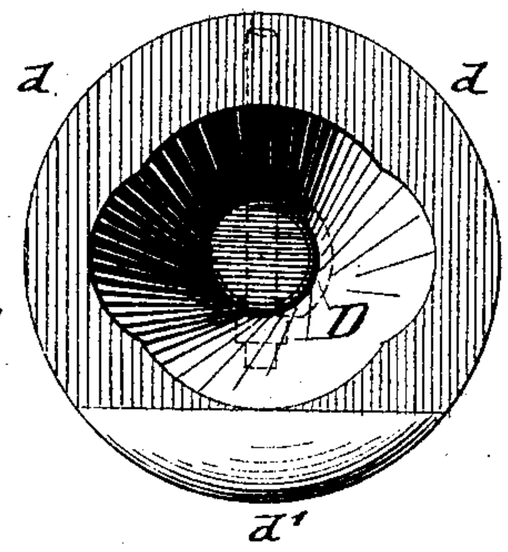
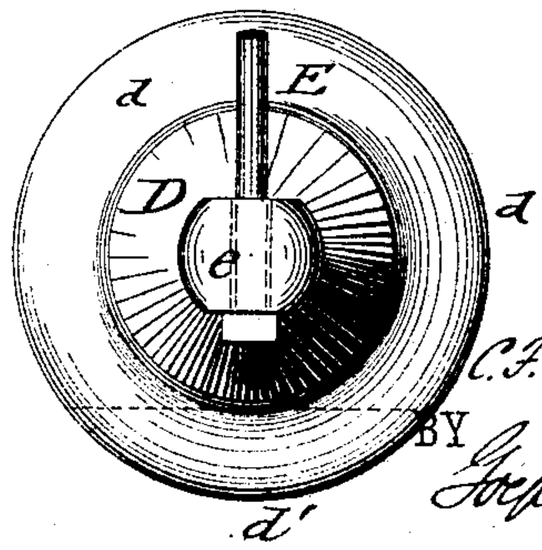



Fig: 4

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# UNITED STATES PATENT OFFICE.

C. F. THEODOR STEINWAY, OF NEW YORK, N. Y.

## PIANO-FRAME.

SPECIFICATION forming part of Letters Patent No. 314,740, dated March 31, 1885.

Application filed March 26, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, C. F. THEODOR STEINWAY, of the city, county, and State of New York, have invented certain new and useful Improvements in Treble-Supports for Piano-Frames, of which the following is a specification.

The tension of the strings exerts a lifting action on the treble portion of the metallic string-frame of the piano, so that the same assumes the shape of a flattened longitudinal arch. It is therefore of the utmost importance to give to the treble portion of the string-frame an exterior support, whereby the frame is better adapted to resist the strains of the strings and to impart thereby to the treble-strings an increased singing quality of tone.

The object of this invention is to furnish for the upper treble-section of the string-frame an exterior point of support, so that the lifting of the frame under the tension of the treble-strings is prevented; and the invention consists of a hollow conical or bell-shaped bracket that is attached by its annular base and a tapering tongue-shaped extension to the rim and extended at right angles to the rim inwardly below the treble-section of the string-frame. The inner end of the bracket is connected by a brace-bolt with the treble portion of the metallic frame.

In the accompanying drawings, Figure 1 represents a plan of a grand piano, showing my improved treble-support in dotted lines. Fig. 2 is a vertical transverse section of the same on line *x x*, Fig. 1, drawn on a larger scale; and Figs. 3 and 4 are respectively end views of the bell-shaped bracket, showing, respectively, the base end and the apex end of the same.

Similar letters of reference indicate the same parts.

In the drawings, A represents the metallic string-frame of a grand or other piano-forte, and B the sounding-board, which are both supported on the inner rim, C, of the case of the piano.

Below the treble portion of the metallic string-frame A and the sounding-board B is arranged a hollow cone or bell-shaped bracket, D, which extends inwardly at right angles to the rim and rests by a circumferential base-rim, *d*, on the inner surface of the rim C, as shown in Fig. 2. The lower part of the base-rim *d* of the bell-shaped support D is extended outwardly below the base of the inner and outer rims, C and C′, of the case in the form of a tapering extension or tongue, *d*′, which is attached by bolts $d^2$ $d^2$ to the inner and outer rims, C C′, as shown in Fig. 2. The annular base-rim *d* and the tapering tongue *d*′ support the bell-shaped bracket D rigidly on the rims C C′, so that the vibrations of the rims are propagated in longitudinal direction through the hollow bell-shaped bracket D, without being interrupted or impeded thereby. The inner end or apex, *e*, of the bell-shaped bracket D, to which I have given the name of "treble-bell," has a vertical perforation and is connected by a vertical brace-bolt, E, passing through an opening of the sounding-board B, with the string-frame A. The brace-bolt E serves to prevent the lifting of the treble-frame, owing to the strains of the strings upon the same, and retains it thereby in position, so as to impart to the strings of the treble a greatly-improved singing quality of tone.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, in a piano, with a metallic string-frame, of a hollow bell-shaped bracket attached to the rim of the case below the treble portion of the frame, and of a brace-bolt that connects the string-frame with the apex of the bell-shaped bracket, substantially as set forth.

2. The combination of the string-frame A, a hollow bell-shaped bracket, D, having an annular base-rim, *d*, and tapering extension-tongue *d*′ attached to the inner and outer rims, C C′, and a brace-bolt, E, connecting the apex of the bell-shaped bracket with the treble portion of the string-frame, substantially as set forth.

3. A bell-shaped bracket for the treble portion of the string-frame, formed of a hollow conical or bell-shaped body having an annular base-rim and an outwardly-extending tapering tongue, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

C. F. THEODOR STEINWAY.

Witnesses:

LOUIS C. RAEGENER,

SIDNEY MANN.