J. ZECH.

WREST PLANK BRIDGE-PLATE FOR PIANO-FORTE.

No. 175,813. Patented April 4, 1876.

Fig. 1.

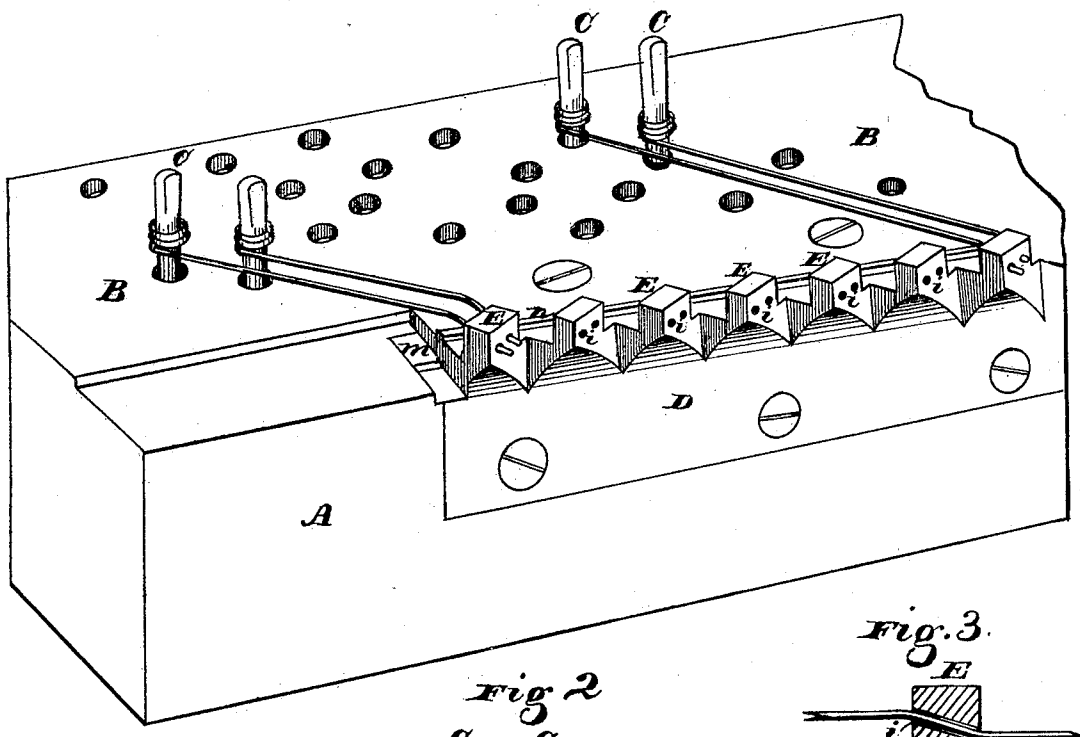


Fig. 2

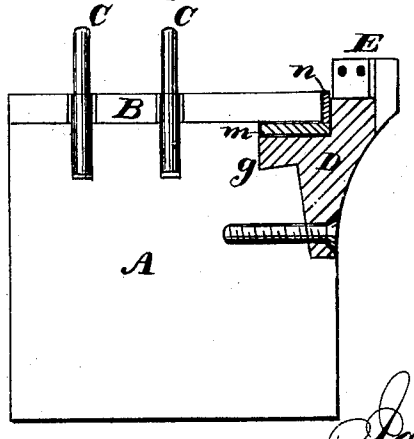
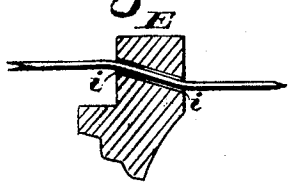


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

JACOB ZECH, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN WREST-PLANK BRIDGE-PLATES FOR PIANO-FORTES.

Specification forming part of Letters Patent No. **175,813**, dated April 4, 1876; application filed February 21, 1876.

To all whom it may concern:

Be it known that I, JACOB ZECH, of San Francisco city and county, State of California, have invented an Improved Double-Bearing Bridge for Pianos; and I do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or improvement, without further invention or experiment.

My invention relates to an improvement in the construction of pianos; and it consists in a novel double-bearing bridge, on which I form a continuous and solid bearing for the strings, and so secure it to the wrest-plank that it is entirely free from contact with the iron frame of the instrument.

By this construction I avoid, first, the use of a number of separate pins or supports for the strings, each of which must be separately secured; and, secondly, I do away with a disagreeable tone which is produced by the necessity of securing these separate supports to the iron frame itself.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a perspective view, Fig. 2 an end view, partly in section, and Fig. 3 is a cross-section of a portion of the agraffe-plate.

A is the wrest-plank of a piano, and B the iron frame, which is perforated with holes, as shown, for the insertion of the tuning-pins C. These are driven into holes in the plank, and serve to turn the strings which are wound around them. From these pins the strings ordinarily pass over what is termed the agraffe, as shown in Patent No. 134,194. This agraffe has hitherto been formed by boring a hole at right angles through a pin and then screwing the pin into the iron frame at such an angle as to provide a bearing at each end of the hole.

My improvement consists in the use of a continuous brass plate, D, having projecting lugs E E at suitable intervals, through which angular holes *i* are bored to receive the strings, substantially as herein set forth. This plate may be made of any length suitable for the position which it is designed to occupy in the instrument, and is formed, as shown in Fig. 2, with the front of the plate extending down the face of the wrest-plank, to which it is securely fastened.

A projection, *g*, is formed with this plate and extends back at right angles with it beneath the frame B. A strip of wood, *m*, is placed between the part *g* and the frame, and the edge of the frame is similarly faced at *n*, so that there will be no contact between the bridge or any portion of it and the frame.

By this construction I greatly improve the tone of the instrument, and am enabled to make a solid, substantial bridge, which is of superior durability and less expensive than the present method.

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

The continuous double-bearing bridge-plate D, secured to the wrest-plank, as shown, with the projection *g* and the wood facing-strips *m* and *n*, substantially as and for the purpose herein described.

JACOB ZECH.

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