

W. C. ELLIS.
Piano-forte Bridges.

No. 138,012.

Patented April 22, 1873.

Fig. 1

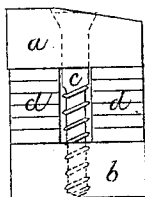
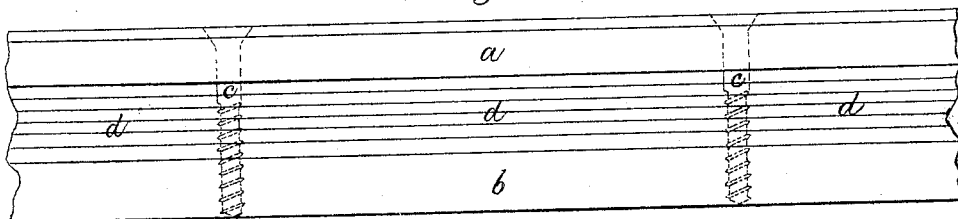


Fig. 2



Witnesses
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by his atty.
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UNITED STATES PATENT OFFICE.

WILLIAM C. ELLIS, OF WORCESTER, MASSACHUSETTS.

IMPROVEMENT IN PIANO-FORTE BRIDGES.

Specification forming part of Letters Patent No. **138,012**, dated April 22, 1873; application filed September 10, 1872.

To all whom it may concern:

Be it known that I, WILLIAM C. ELLIS, of Worcester, in the county of Worcester and State of Massachusetts, have invented certain Improvements in Piano-Forte Bridge, of which the following is a specification:

Figure 1 of the accompanying drawing is a longitudinal view, and Fig. 2 is a side view, of my invention.

The present invention relates to certain new and useful improvements in piano-forte bridges; and has for its principal object the prevention of the absorption or retention of the vibration caused by the direct connection of the wooden bridge with the block, and to improve the quality of tone. My improvements consist, mainly, in a glass or other suitable insulator, secured between the wooden bridge and tuning-pin block of a piano-forte, as will be hereinafter more fully described.

In the drawing, *a* represents a portion of a bridge of a piano-forte, between which and the tuning-pin block *b* is placed and held, by means of screws *c*, or otherwise, one or more glass or other suitable insulating-blocks, *d*, which may be arranged in several separate pieces, as shown, or made in one bar or piece with screw-holes formed at proper intervals in it.

Instead of the bridge being of wood and connected with a block, a cast-iron bridge, forming part of an iron frame, is sometimes used; but this arrangement is objectionable on account of the inferiority of tone produced compared with a wooden bridge, which, when connected directly with the block, is also objectionable on account of the absorption of the vibration; but by my improvements these objections are obviated by the use of the insulator *d*, above described, which prevents the transmission of the vibration from the bridge to the block, and at the same time the tone is reflected from the former to the sounding-board and greatly improved in quality.

Having thus described my improvements, what I claim as my invention, and desire to have secured to me by Letters Patent, is—

The bridge *a*, in combination with the block *b* and insulator *d*, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM C. ELLIS.

Witnesses:

CARROLL D. WRIGHT,
SAML. M. BARTON.