

J. HERALD.
PIANO-FORTE BRIDGE.

No. 191,587.

Patented June 5, 1877.

Fig. 1.

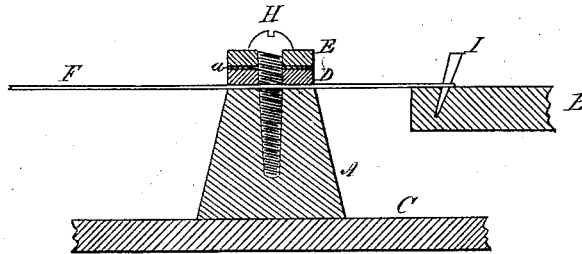
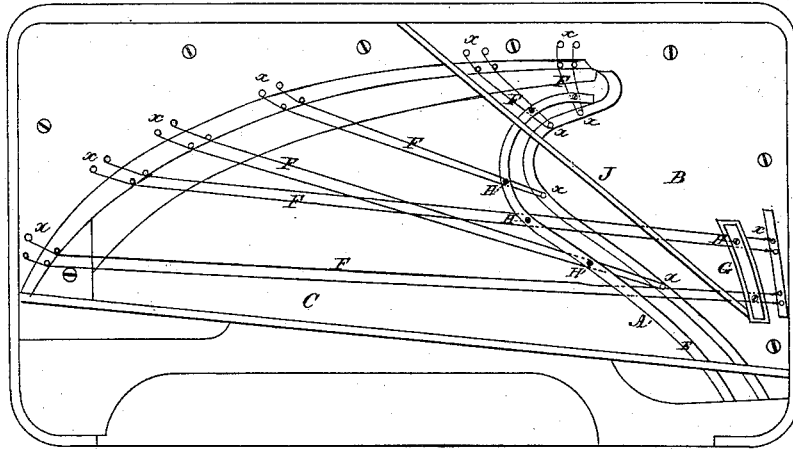


Fig 2

Witnesses
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UNITED STATES PATENT OFFICE

JOSEPH HERALD, OF HAMILTON, ONTARIO, CANADA.

IMPROVEMENT IN PIANO-FORTE BRIDGES.

Specification forming part of Letters Patent No. **191,587**, dated June 5, 1877; application filed November 29, 1876.

To all whom it may concern:

Be it known that I, JOSEPH HERALD, of the city of Hamilton, in the county of Wentworth, in the Province of Ontario, Dominion of Canada, have invented a certain new and useful Improvement in Piano-Fortes; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same.

The improvement relates more particularly to a new method of supporting the strings upon the sounding-board bridges of pianos, whereby the tone is rendered purer and more sympathetic in quality, and the sounding-board more sensitive than by the ordinary methods.

My invention consists in laying the strings straight across the bridges, then placing a cap of wood or equivalent material (which shall conform to the bridges) upon the strings. Upon the cap rests a layer of cloth or other yielding material. Upon the cloth rests a metallic plate. The whole is then secured to the bridge by screws between each pair or trio of strings, all of which will be more fully described hereinafter.

By reference to the accompanying drawings, Figure 1 is a plan or top view of a piano, showing the iron plate, sounding-board, bridges, and a few of the strings. Fig. 2 shows a section of sounding-board bridge and plate.

The strings lie straight across the top of the bridges A, and are stretched between the points *x x*. B is the iron plate. C is the sounding-board. D is the cap. *a* is the cloth or other yielding material. E is the metallic plate which surmounts the whole.

The whole is secured to the bridge by means of the screws H, one of which is placed between each pair or trio of strings.

F, Fig. 2, shows one of the strings placed between the cap and bridge, and fastened to the plate B by the pin I.

The bridge G, on the right-hand side, may be constructed similar to the one A with cap, cloth, and plate, and the strings secured as above described.

The cap D may be made of different mate-

rial, according to taste, the (surface of the bridges being lined with similar material)—for instance, hard maple, harder and closer grained woods, ivory, &c. The softer material produces a soft tone, and the harder a more brilliant tone.

By this method of placing the strings upon the bridges there is no metallic contact with the string where it impinges upon the sounding-board bridge, as in the ordinary methods; but instead, a direct contact with the uniform material of the cap and bridge, thereby rendering the tone purer and more sympathetic in quality.

As the string passes over the bridge without deflection from the straight line there is no strain upon the bridge; but there is a strain when the strings are checked or bent from the straight line, as in the ordinary manner, which frequently causes the bridge to split or become deranged.

In consequence of the bridge being freed from strain the sounding-board is rendered more sensitive thereby. The combined cap may be made continuous or in sections.

The above improvement I call the "Herald Euphonic Piano-Bridge," and is applicable to all descriptions of pianos.

Having thus described my device, what I claim as my invention is—

1. The combination with a piano, a cap composed of wooden plate D or its equivalent, and the metallic plate E conformed to the bridges A G, the lower or wooden plate arranged to impinge upon the strings F on the bridges, the whole secured by a screw, H, passing between each pair or trio of strings.

2. A strip of cloth, rubber, or other yielding substance, *a*, when interposed between the plates D and E of a piano sounding-board bridge, substantially as and for the purpose set forth.

Dated at Hamilton, Canada, this 25th day of November, A. D. 1876.

JOSEPH HERALD.

In the presence of—
WM. BRUCE,
H. G. STONE.