

(No Model.)

J. P. RICHARDSON.

PIANO FORTE.

No. 388,720.

Patented Aug. 28, 1888.

Fig. 1.

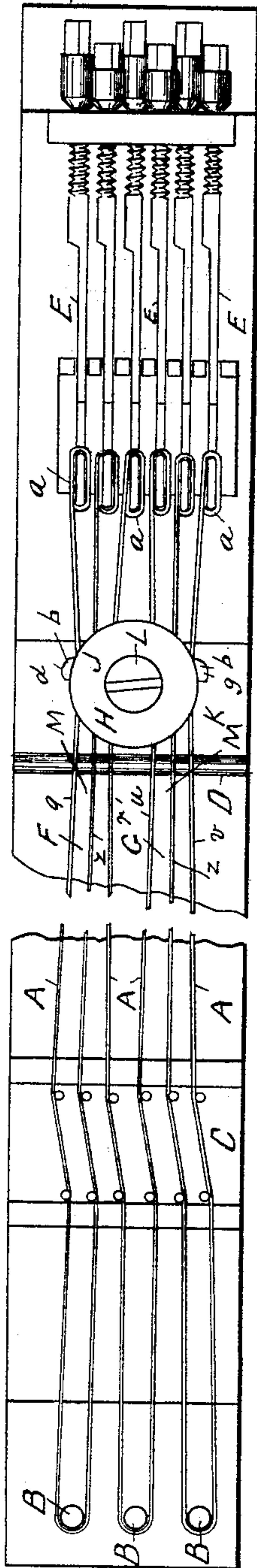


Fig. 2.

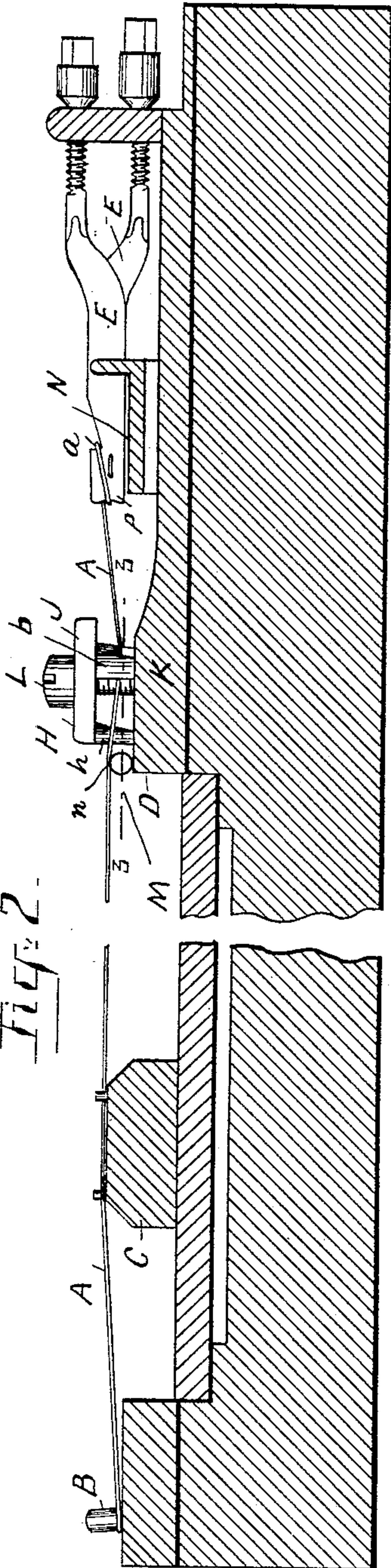


Fig. 3.

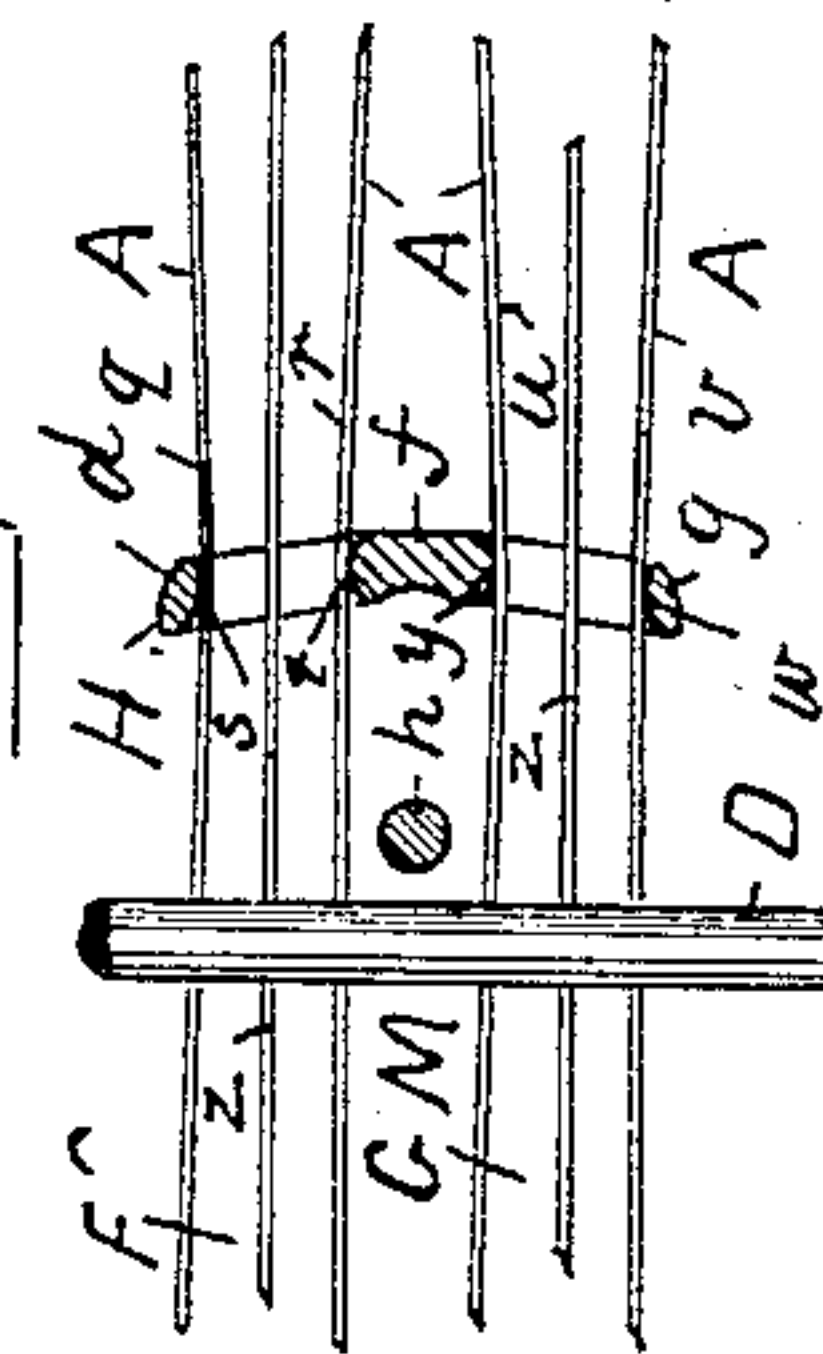


Fig. 4.

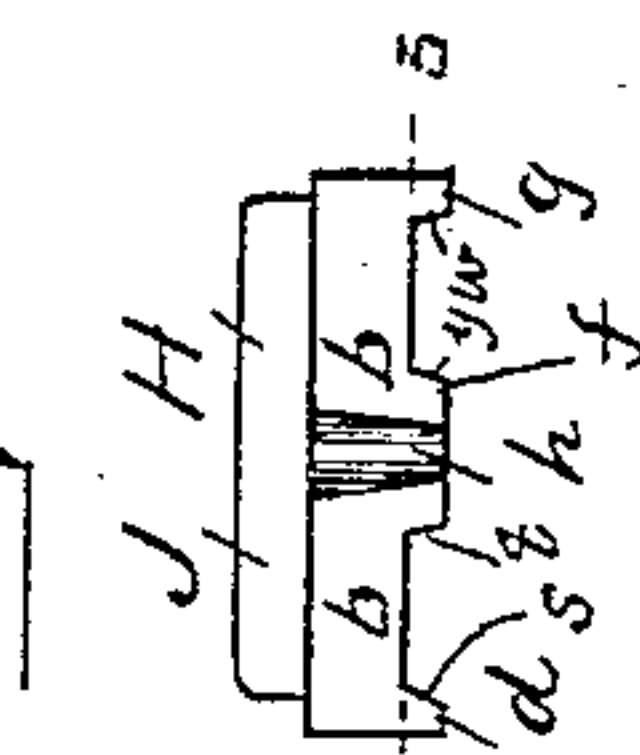


Fig. 5.

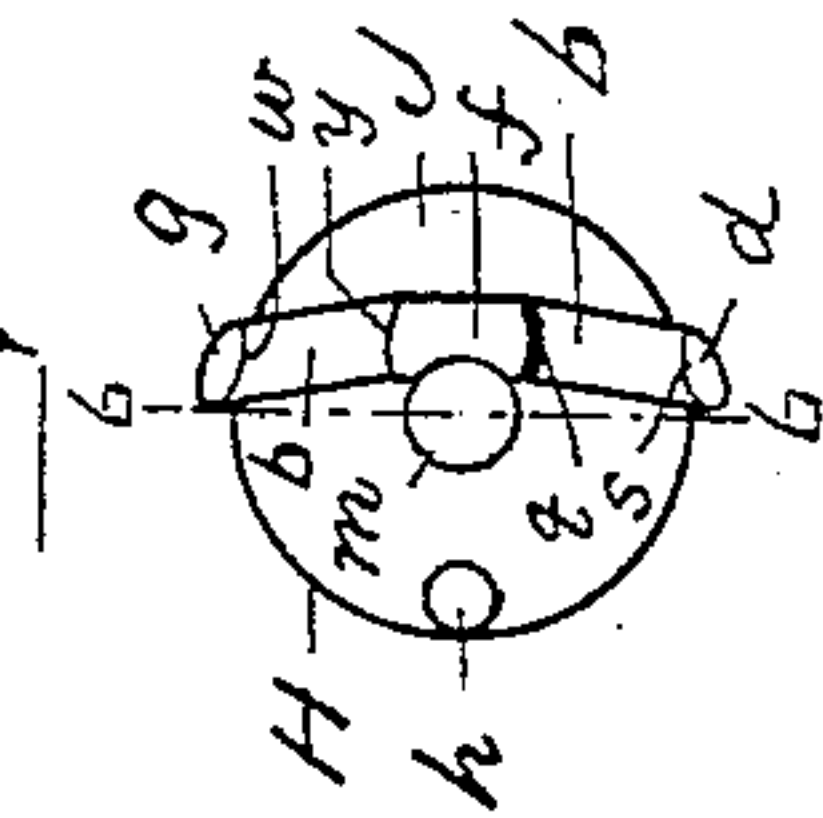
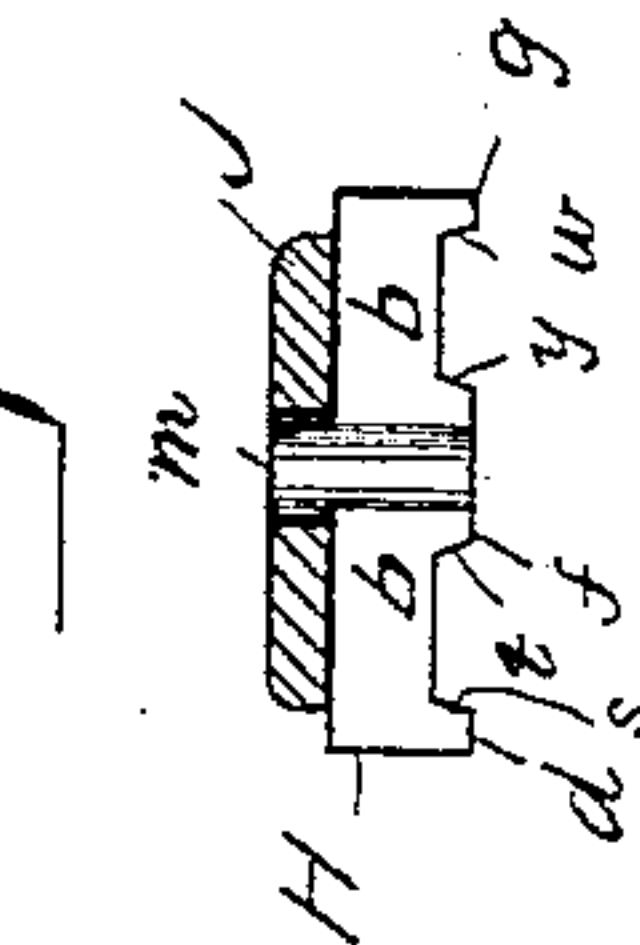


Fig. 6.



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PIANO-FORTE.

SPECIFICATION forming part of Letters Patent No. 388,720, dated August 28, 1888.

Application filed February 1, 1887. Serial No. 226,180. (No model.)

To all whom it may concern:

Be it known that I, JOHN P. RICHARDSON, of Cambridge, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Piano-Fortes, of which the following is a full, clear, and exact description.

The object of the present invention is to provide a device to bear down upon the strings of a piano-forte between the tuning-pins and the bridge nearest thereto, to prevent the strings vibrating at such place and to hold them firmly upon said bridge, and to laterally space and retain and hold the strings, representing, preferably, two notes, so that laterally, at or near the bridge, they will be in proper position for the hammer of the piano-action to strike and sound them; and the invention consists of a clamp or plate or bar adapted to be secured over the strings, preferably representing two notes, at a proper distance above, and to the iron plate between the tuning-pins and the bridge nearest thereto, and provided with a down-bearing edge or edges or rib or ribs for the strings, and side bearing surfaces or edges for the strings of each note, where two strings constitute a note, or for the two outer strings of each note, where three strings constitute a note, all substantially as hereinafter fully described.

In the accompanying plate of drawings is illustrated the present invention, Figures 1 and 2 representing, respectively, a plan and side view of the strings of a piano-forte secured to their pins, bridges, and to their respective tuning-pins; Fig. 3, a detail under plan view above section-line 3 3, Fig. 2. Fig. 4 is a front view of the device detached. Fig. 5 is an under plan view. Fig. 6 is a vertical cross-section on line 6 6, Fig. 5.

In the drawings, A A represent the strings of a piano-forte secured around hitch-pins B, and thence passing over and bearing on the bridges C and D, the end *a* of each string being secured to its respective tuning-pin E, the strings representing two notes, F G, of three strings to each note, all as usual in piano-fortes, and needing no particular description herein.

H is a device, its construction and application constituting the present invention. This

device consists of a circular plate, J, having an edge or rib, *b*, on its under side, which edge or rib has three downwardly-projecting legs, *d f g*, resting by their respective ends on the iron plate K of the piano, and another downwardly-projecting leg, *h*, at the front, also adapted to rest on the plate K, the device being secured in position just back of the bridge D, and between it and the tuning-pins E, by a screw, L, passing through a center hole, *m*, in the plate, and screwing down into the iron plate K, by which the device is firmly secured in its place to and on the iron frame. When secured in position on the iron plate, the strings representing the note F bear up against the under edge, *b*, of the rib, between its legs *d f*, and the strings of the other note, G, bear up against the under edge, *b*, between the legs *f g*, as shown in Fig. 3, the legs *d, f, g*, and *h* being of such length that the edges of the rib *b* will be lower down or nearer to the iron plate than the upper surface or edge, *n*, of the bridge and the ends *p* of the tuning-pins E, which rest on the block L of the iron frame, thereby holding the strings A down and consequently firmly upon the bridge D. The outer strings *q r*, of the note F are arranged to bear against the inner vertical edges *s t*, respectively, of the leg *d* and the middle leg, *f*, and the outer strings *u v*, of the other note, G, are arranged to bear against the inner vertical edges *w y*, respectively, of the leg *g* and of the middle leg, *f*, and such edges are arranged in respect to their distances from each other that the two outer strings of each note will be held in such relation to their middle string, *z*, and each other that the three strings of each note will be in proper position laterally at M in front of the bridge D for the hammer of the piano-action to properly strike and sound the strings. This device enables the tuning-pins E, as well as the hitch-pins B, to be arranged farther apart laterally for their better attachment to and location on the piano-frame, giving them more room for such attachment.

The top or plate portion, J, although made of circular or round shape, as shown, which is preferable, as is obvious, can be of any suitable form; but the under bearing-edge of the rib *b*, with its legs and their bearing-edges,

must be, however, properly located in reference to each other and the proper bearing down of the string and distance they should be apart.

It is preferable to make the device so as to include the strings representing two notes, although it can be applied to the strings of only one note, or to more than two notes, if desired, also to make it of the present shape and form, and to secure it to the frame, as described, although it can be secured in any suitable manner.

The front leg, *h*, rests on the frame *K*, and is of a diameter small enough to lie between the series of strings representing the two notes and not touch or interfere with them, and in the arrangement of the strings the middle string, *z*, of each note is in a straight line, or substantially so, from its bridge *C* to its tuning-pin *E*.

This invention dispenses with notches in the bridge *D* for the several strings by which they are now sometimes spaced or arranged for their proper distances apart laterally at the bridge, as in this case the device itself produces this result, the bridge *D* being perfectly smooth and

straight on its string-bearing edge, and also the edge can be made round, as shown in the drawings, in lieu of an inverted-V-edge, now sometimes used; also the device can be placed and secured to the frame between the bridge *C* and the hitch-pins *B*; but its most desirable place is as described and shown.

Having thus described my invention, what I claim is—

The combination, with the strings of a piano representing two notes, of a plate or bar, *J*, having an under bearing edge, *b*, for the strings and legs *d f g h*, by which it rests upon the iron frame and secured thereto by a screw passing through a central opening in the plate, the legs *d f g* having side bearing edges, for the purpose specified.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOHN P. RICHARDSON.

Witnesses:

EDWIN W. BROWN,
PERCY BRYANT.