

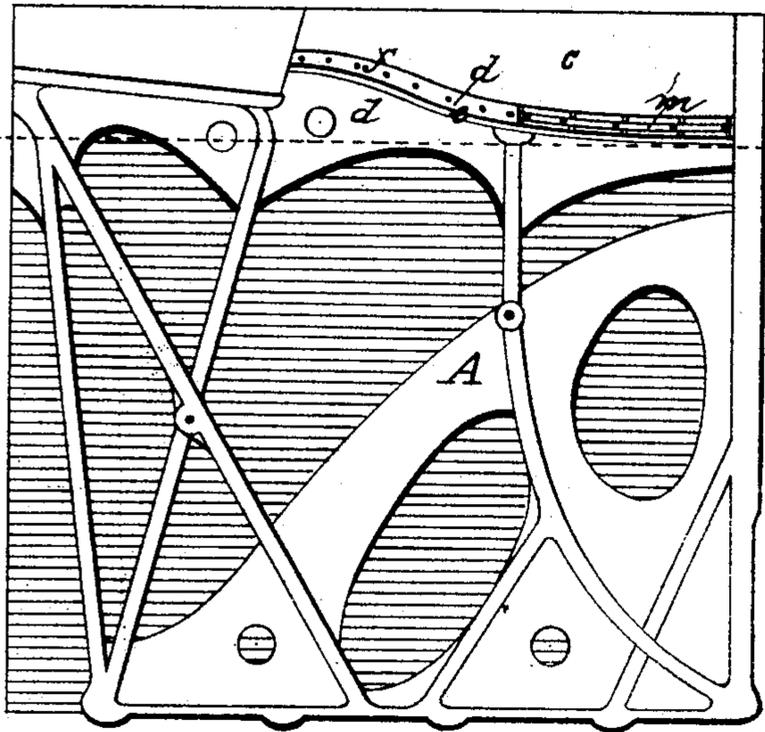
(No Model.)

J. W. MACY.  
PIANO.

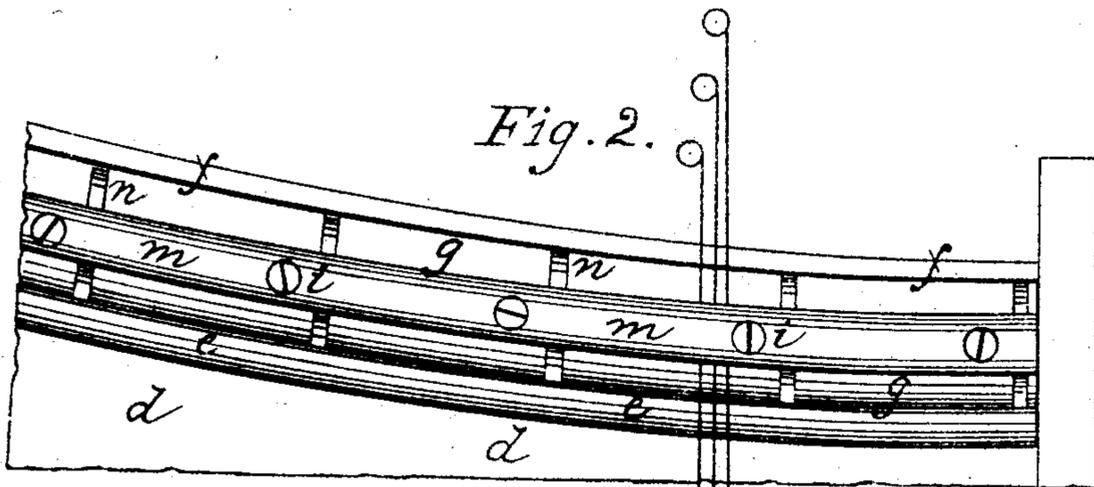
No. 502,524.

Patented Aug. 1, 1893.

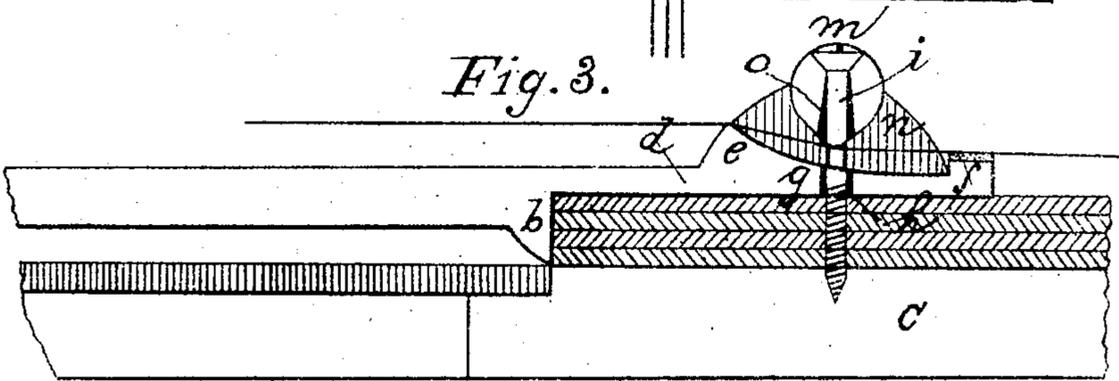
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



WITNESSES:

*Charles Joslin*  
*Horace R. Blinn*

INVENTOR:

*John W. Macy*

# UNITED STATES PATENT OFFICE.

JOHN W. MACY, OF CINCINNATI, OHIO.

## PIANO.

SPECIFICATION forming part of Letters Patent No. 502,524, dated August 1, 1893.

Application filed June 15, 1892. Serial No. 436,790. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN W. MACY, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain Improvements in Bridge-Plates and Capo Tasto Bars for Upright Pianofortes, of which the following is a specification.

My improvement relates to the manner of stringing in which the upper part of the metal string frame is utilized as a fixed bridgeplate in combination with an improved capo tasto bar the whole forming a triple bearing for the strings as hereinafter described.

In the accompanying drawings, Figure 1, shows the metal string frame for an upright piano with bridgeplate, having the capo tasto bar in position. Fig. 2, is an enlarged view of the same in detail showing the manner of stringing. Fig. 3, is a view in detail of the bridgeplate and bar in section.

Similar letters of reference indicate corresponding parts.

Across the top portion of the metal string frame A, there is an inwardly projecting flange b, that affords a bearing for the wrestplank c. Ordinarily the line of this flange forms the top edge of the metal frame A.

My invention consists in an extension d, of the upper portion of the metal frame A, beyond the line of the flange b. This extension is cast much thinner than the main web of the metal frame, the line of the upper edge of which is curved so as to conform to the shape of the scale.

Along the upper curved edge of the extension d, are cast the two down bearings of the strings, the agraffe bridge e, and the bearing f. The portion of the plate g, separating these bearings is curved from the top of the agraffe bridge e, to the bottom of the bearing f, and is provided with a series of holes h, through which the screws i pass that secure my capo tasto bar in position, and hold the extension d in contact with the wrestplank c. This feature of my invention since it is a constituent part of the metal frame, I term a fixed bridgeplate to distinguish it from the separate bridgeplates that are fastened directly to the wrestplank.

My improved capo tasto bar m, forms the up bearing and together with the down bearings e, and f, of the bridgeplate constitute the triple bearing for the strings. This bar differs from those in ordinary use by having cast on its underside a series of lugs n, placed at regular intervals shaped so as to conform to the curved portion g, of the bridgeplate d, on which they rest when the bar is in position; by this arrangement the line of contact between the bar and bridgeplate becomes an inclined curve, and the bar is forced in close contact with the bearing f, by the screws i. The bar thus becomes immovable in its relation to the plate, and its position is not disturbed by outside influences.

The holes o, in the bar m, are so placed that the screws i sustain equally the tension of the strings, each screw supporting the strain of three or more notes. Said holes are counter-sunk from the under side, allowing the screws freedom of movement due to the expansion and contraction of the wrestplank without disturbing the position of the bar. This freedom of movement is further favored by drilling the holes h, in the bridgeplate d, somewhat larger than the screws i.

By the application of my bridgeplate and capo tasto bar the dimensions of the scale are not affected by climatic influences, the brilliancy of the tone throughout the treble is enhanced and the capacity of the instrument to remain in tune increased.

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

1. A fixed bridgeplate d, cast integral with the metal frame A, the upper edge of which conforms to the shape of the scale and along said edge are cast the two down bearings e and f for the strings, substantially as described and set forth.

2. A fixed bridgeplate d, along the upper edge of which are cast the two down bearings for the strings e, and f, said bearings being separated by an intervening portion having a concave surface inclined from the top of the bearing e to the bottom of the bearing f, substantially as herein described and set forth.

3. A capo tasto bar m, on the under side

of which are cast a series of lugs  $n$ , formed so as to correspond to the shape of the concave portion  $g$ , of the bridgeplate  $d$ , on which they rest when supporting the bar in position  
5 substantially as set forth.

4. The combination of the capo tasto bar  $m$ , and the bridgeplate  $d$ , the bar being secured to the plate by the screws  $i$  in the man-

ner described, by which the lugs  $n$ , are held in contact with the bearing  $f$ , substantially as set forth. 10

JOHN W. MACY.

Witnesses:

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