

Bacon & Raven,

Stringing Pianos,

N<sup>o</sup> 8,320.

Patented Aug. 26, 1851.

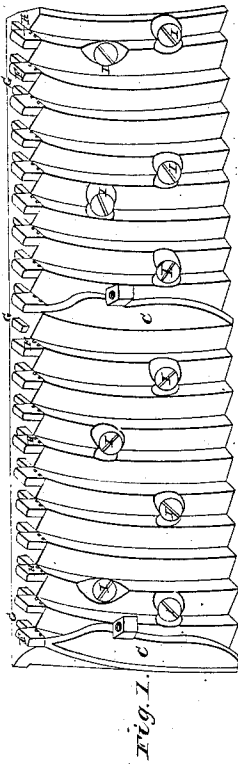


Fig. 1.

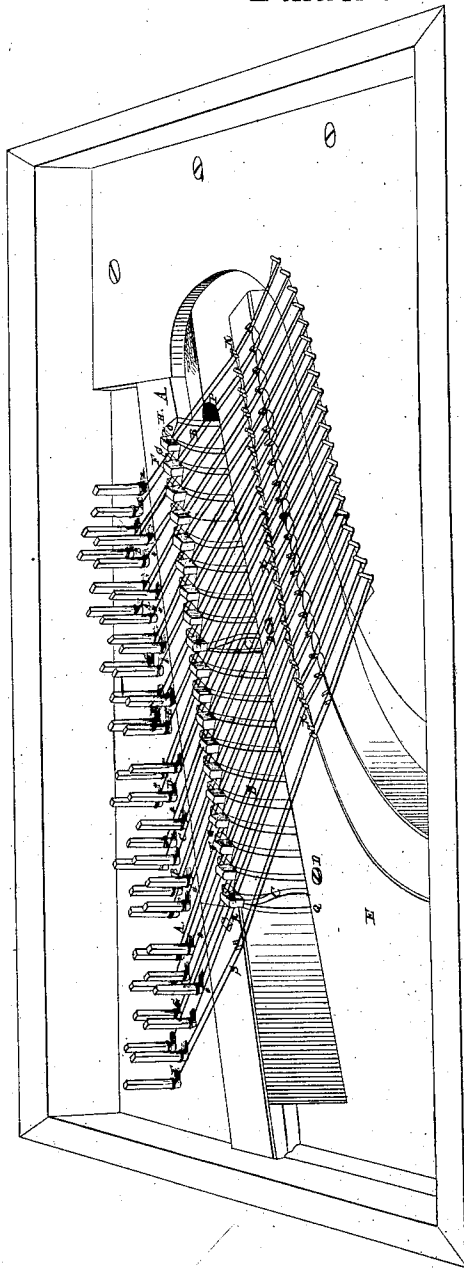


Fig. 2.

# UNITED STATES PATENT OFFICE.

GEO. BACON AND RICHD. RAVEN, OF NEW YORK, N. Y.

## HORIZONTAL SQUARE PIANOFORTE.

Specification of Letters Patent No. 8,320, dated August 26, 1851.

*To all whom it may concern:*

Be it known that we, GEORGE BACON and RICHARD RAVEN, of New York city, in the county of New York and State of New York, have invented a new and Improved Mode of Rendering the Treble Notes of the Horizontal Square Pianoforte Clear and Musical and Obviating their Present Woody Tone; and we hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and the letters of reference marked thereon.

The nature of our invention consists of substituting for the portion of the long wooden or metal bridge heretofore used running under the treble strings an upright bridge made of cast iron or other metal or metals, extending downward from one to seven inches, which is to be screwed firmly on to the front face of the tuning pin block, as seen projected in the drawing No. 2 from O by P and Q to R, the screws by which it is fastened to the tuning pin block being shown at I, I, I, I, I, I, I, I, I, in the drawing No. 1, the said bridge to be extended indefinitely from the highest note down toward the bass as may be desired to improve the tone of the instrument's treble notes.

To enable others skilled in the art to make and use our invention we will proceed to describe its construction and operation.

It is to contain a sufficient quantity of cast iron or other metal to secure the necessary firmness and solidity; say from one to seven pounds—and to have cast on its face at convenient distances, brackets which are to take the place of the brackets that can be detached from the bridge which are now alone in use. The said brackets are seen in drawings Nos. 1 and 2 at C, C on a shoulder or projection of which the sounding board E (as seen in drawing No. 2) is to rest and be screwed or riveted, as shown at D in drawing No. 2. We pass the strings through holes to receive and fit them drilled in a flange (as seen at F in drawings Nos. 1 and 2) for each note, which flange is cast on our improved bridge, and then we continue the strings over a button (as seen at G in drawings Nos. 1 and 2) so cast behind each flange as to support the strings of the higher note next above, the surface of the said but-

tons being higher than the holes in the flanges they are to pinch or press the strings against the upper surface of the holes; making, thus, a reverse bearing in the holes. In this manner we obtain greater solidity and firmness in the tension and general bearing of the strings, obviating the unsteadiness and want of firmness in the set of the strings on their bearings in the bridges heretofore in use as shown at S in drawing No. 2, where, as will be seen the strings have only a downward and backward bearing against iron or brass pins driven or set in the edge of the long block bridge formed of wood or metal. Or an upper bearing has heretofore been obtained by reversing the bridge and pins as seen at S in drawing No. 2, and fastening the bridge of metal or wood so reversed and so pinned for the bearing of the strings, down to the top of the long block by a sufficient quantity of screws to prevent its being pulled up by the upward bearing of the strings from their rest pins to the turning pins.

We form the flanges so as to stand with their faces (as seen at H in drawings Nos. 1 and 2) in such position to the strings passing through them as to make both strings of each note of an equal length, which though before done on grand pianos, has never before been done in the construction of a horizontal square piano on a bridge of cast iron or other metal or metals, the flange F in our invention being so diagonally placed or shaped as to make the distance on both strings of a note (between the belly or sounding board bridge at K, K, K, in drawing No. 2 and the holes of our flanges F) in all cases equal. This equality in the length of the treble strings of each note when heretofore obtained having been accomplished in all cases by setting back each alternate bridge pin.

What we claim as our invention or improvement and desire to secure by Letters Patent, is—

Connecting and combining in the horizontal square piano forte in one piece of cast iron or other metal or metals the bridge A, the brackets C, the upper bearing by the flanges F, the reverse bearing on the buttons G the application to the long bridge of the horizontal square piano forte, of the method of firmly securing the whole to the rest

plank by means of the screws I; and the application of the diagonal position of the face of the flange so as to make both strings of each note of equal length to metal bridges  
5 on horizontal square piano fortes as seen at H, in the manner and for the purpose intended, described in this specification and

seen in the model and drawings by which it is accompanied.

GEO. BACON.  
RICHD. RAVEN.

Witnesses:

D. B. TAYLOR,  
JOHN RYON.