

T. Marshall,
Stringing Pianos,
No 34,114,
Patented Jan. 7, 1862.

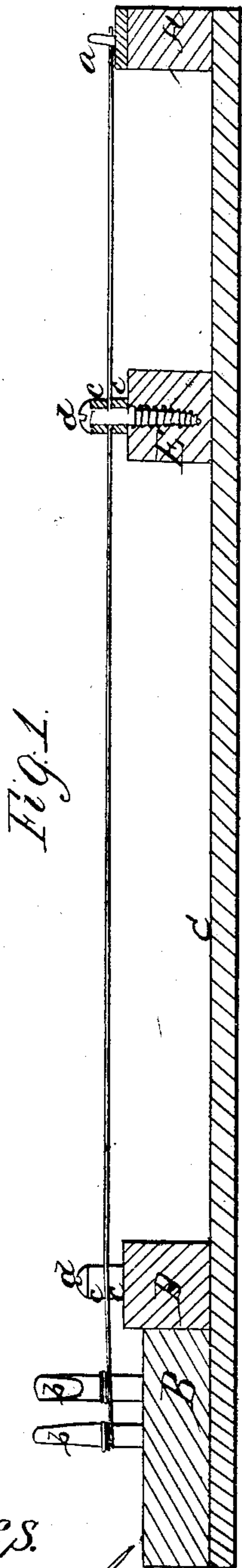


Fig. 1.

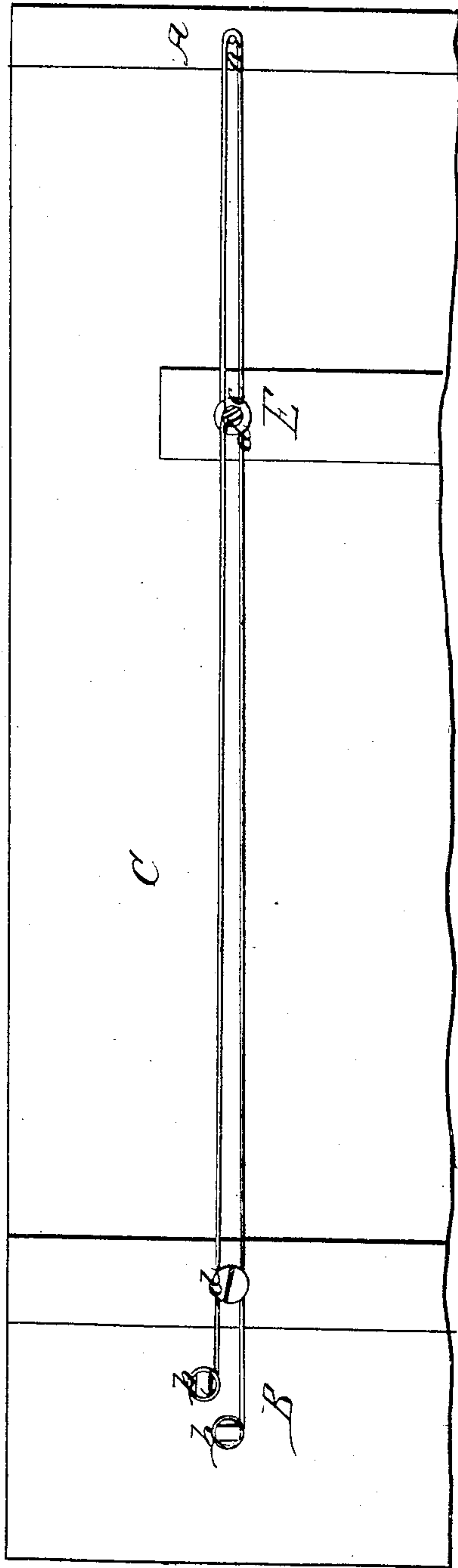


Fig. 2.

Witnesses.
A. P. Moulton
Th. Warner

Inventor
Theodore Marshall

UNITED STATES PATENT OFFICE.

THEODORE MARSCHALL, OF NEW YORK, N. Y.

IMPROVEMENT IN PIANO-FORTES.

Specification forming part of Letters Patent No. 34,114, dated January 7, 1862.

To all whom it may concern:

Be it known that I, THEODORE MARSCHALL, of the city, county, and State of New York, have invented a new and useful Improvement in Piano-Fortes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a longitudinal vertical section of my invention. Fig. 2 is a plan or top view of the same, partly in section.

Similar letters of reference denote like parts in both figures.

This invention consists in the employment, for the purpose of holding the strings at either or each of the bearings or points between which they severally vibrate, of two rings applied in such a manner that they clamp the string or strings with the same screw which screws them to the block, and that the amount of pressure exerted by the strings on the sounding-board can be adjusted at pleasure.

To enable those skilled in the art to make and use my invention, I will proceed to describe it with reference to the drawings.

The string-block A and the wrest-plank B of my instruments are arranged relatively to each other and to the sounding-board C in the usual manner. The strings are carried round or secured to the pins *a* in the string-block, and they receive their tension by means of the wrest-pins *b*.

D is the wrest-plank bridge, and E the sounding-board bridge, between which those parts of the strings vibrate which are intended to give the several sounds.

Instead of the inclined pins, which in ordinary piano-fortes form the bearings of the strings on both the bridges D E, I employ two pairs of rings *c*, made of brass or other suitable material, one pair on either bridge. Between these rings the string or strings are clamped by means of the screws *d*, that serve at the same time to hold the rings down to their place. These rings are made just wide enough to afford room for the strings on either

side of the shank of the screw, and the height of the lowest ring of each pair is so adjusted in relation to the string-block, to the sounding-board bridge, and wrest-plank bridge that the strings pass over the sounding-board bridge nearly in a horizontal line or parallel to the sounding-board, and that the pressure exerted on the sounding-board is very trifling. In some cases, however, it is of advantage to have the strings exert a certain amount of pressure on the sounding-board, and in order to meet this contingency the rings are made of different height, those on the top being a little higher than those below the strings, so that by changing the position of the rings in relation to the strings the pressure exerted by said strings on the sounding-board can be regulated. Between the rings *c* the strings are firmly clamped, and however hard the screws *d* may be screwed down there is no danger of injuring the rings—neither are said rings likely to sustain any injury by the longitudinal motion of the strings in tuning the instrument—whereas other clamps that may have been previously employed for the same purpose—such, for instance, as those described in the Letters Patent of S. B. Driggs, March 13, 1860—are liable to bend under the pressure of the screws which hold them down to the blocks and their jaws are liable to become deranged by the longitudinal motion of the strings in tuning.

My rings can be made very cheap. They require no particular care in attaching them, and they are not liable to become out of order when once properly secured.

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

The employment, for the purpose specified, of the rings *c* and screws *d*, applied in the manner shown and described.

THEODORE MARSCHALL.

Witnesses:

N. B. MOUNTFORT,
TH. WARKER.