W. B. Tilton,

Guitar,

No. 10,380, Patented Jan. 3, 1854.

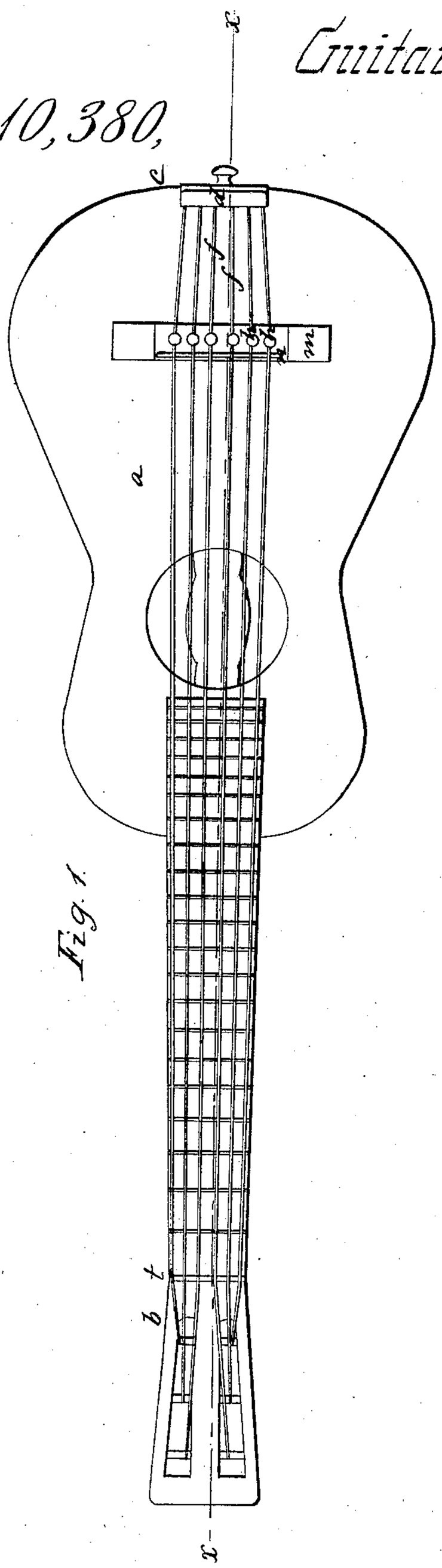

Fig. 1.

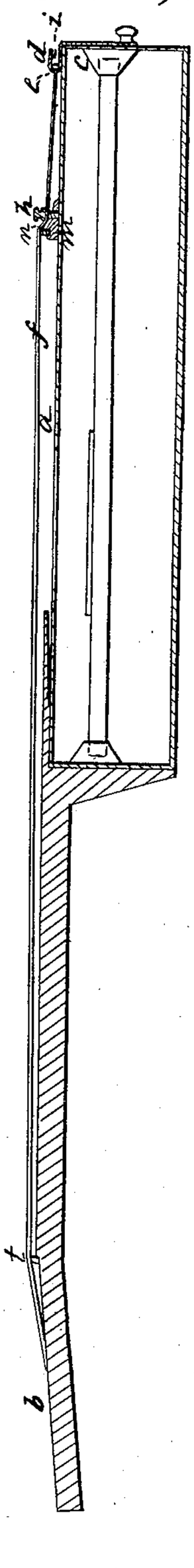

Fig. 2.

UNITED STATES PATENT OFFICE.

WILLIAM B. TILTON, OF NEW YORK, N. Y.

GUITAR.

Specification of Letters Patent No. 10,380, dated January 3, 1854.

To all whom it may concern:

Be it known that I, WILLIAM B. TILTON, of the city, county, and State of New York, have invented a new and useful Improvement in Guitars; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, forming part of this specification, in which—

Figure 1 is a face view of the instrument, and Fig. 2 is a section on line *x x* of Fig. 1, taken perpendicular to the sounding board.

Similar letters of reference in the several figures denote the same part of the instrument.

The object of my invention is to stretch the strings of the guitar, so as to give greater vibration to the sounding board, and consequent clearness of tone to the instrument.

It consists in attaching the strings to the foot of the guitar, and carrying them through perforations in permanent pins, at the usual place of fastening, and over a bridge directly in front of said pins to the head of the instrument, thus rendering the strings incapable of lateral movement on the bridge, and giving an additional length of string between the pins and foot; the bridge becoming a fulcrum for increasing the tension of the strings, by the downward action of the pins, thus giving the requisite tension of string between the head and the usual point of attachment, with the advantage gained in tone by the additional string between the pins and foot.

In the drawings *a* is the sounding board, *b* the head and *c* the foot of the instrument. Fastened to the foot is the broad hooked plate *d*, having in it the holes *e* through which the strings *f* pass while the knots *i* on their extremities are drawn against the inner face of the hook as shown in Fig. 2. The strings *f* pass through the pins *h* fastened in the bridge piece *m*, and over the bridge *n* to the head of the instrument where they are drawn tight by the usual arrangement of screws. Instead of the separate pins *h* there may be used a single piece fastened to the bridge piece *m*, with holes the proper distance apart to accommodate the strings; or, there may be a straight bar placed the proper distance above the bridge piece *m*, under which the strings shall be carried before they are passed over the bridge *n*, the modifications having the effect of the perforated pins *h* in drawing the strings over the bridge *n*.

By the above described arrangement, the requisite degree of tension is obtained between the bridge *n* and the nut *t*, while the fastening of the strings at the foot and carrying them over the bridge *n*, precludes the necessity of the bracing usually required under the sounding board, which always has a tendency to injure the tone of the instrument.

I am aware that strings have been fastened at the foot of guitars or similar instruments, but in all such cases there is either no bridge, or if one be used, the strings pass loosely over it, and move laterally as each chord is struck, producing a discordant twanging sound, and preventing the beneficial effects which should result from fastening the strings at the foot. This disadvantage I obviate by the use of the perforated pins *h*, or their equivalent, so as to cause the strings to rise over the bridge *n* and receive the requisite tension, while the relief thus given to the sound board causes the instrument to have a full, clear, and prolonged tone.

By my invention I give the requisite tension to the usual length of string, upon which every note is made, and by the additional length of string between the pins and the foot, together with the relief of the sound board from obstruction, produce a vibration which gives a fullness and richness of tone not obtained on any instrument of this character.

To enable the instrument to be made in the lightest manner and still bear the increased tension due to the extension of string I use the device secured by my patent of September 2d 1851, though for the application of the present improvement it is not absolutely necessary that the invention covered by that patent should be employed.

I do not claim extending the strings from the foot to the head of the instrument. But

What I do claim as my invention and desire to secure by Letters Patent, is—

Depressing the strings of guitars slightly below the bridge, by passing them through perforations in the ordinary pins or pegs *h* or by any means substantially the same, when the strings are fastened at the foot of

the instrument, for causing the bridge to act as a fulcrum, in producing the tension of the strings and so relieving the sound board as to give the instrument a richer, fuller and a more complete tone as herein fully set forth.

In testimony whereof, I have hereunto signed my name before two subscribing witnesses.

WM. B. TILTON.

Witnesses:
ROBERT H. JOHNSTON,
ALFRED CHANCELLOR.