W. H. Towers

Guitar,

No. 10,934. Patented May 16, 1854.

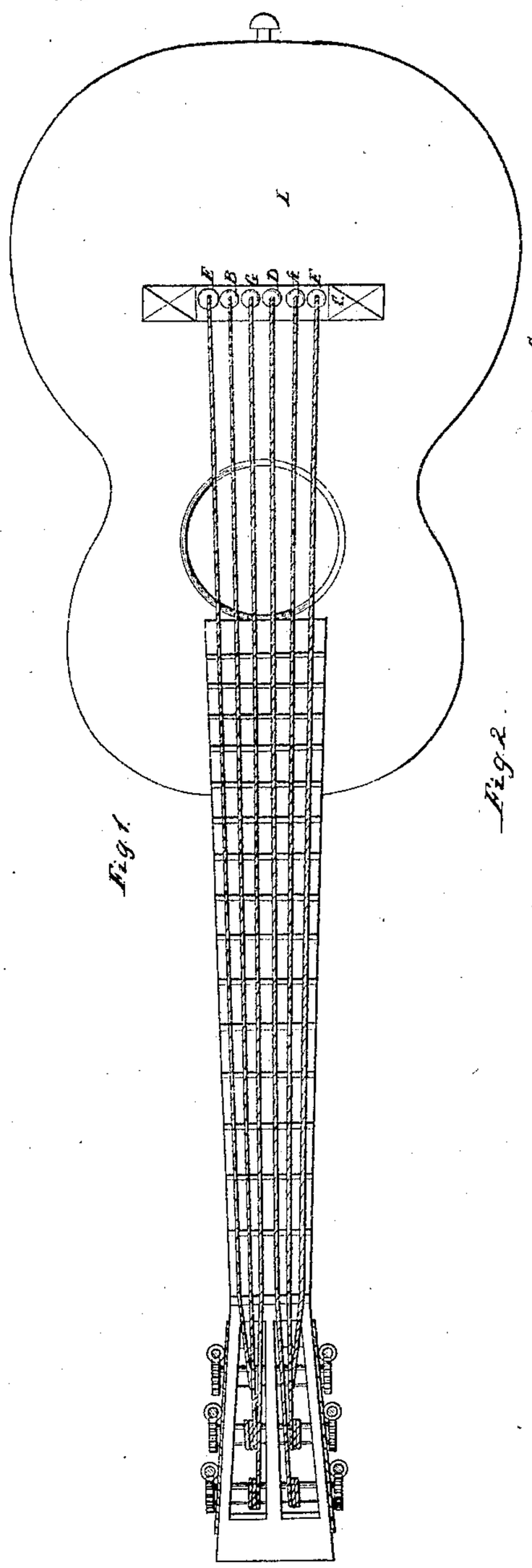

Fig. 1.

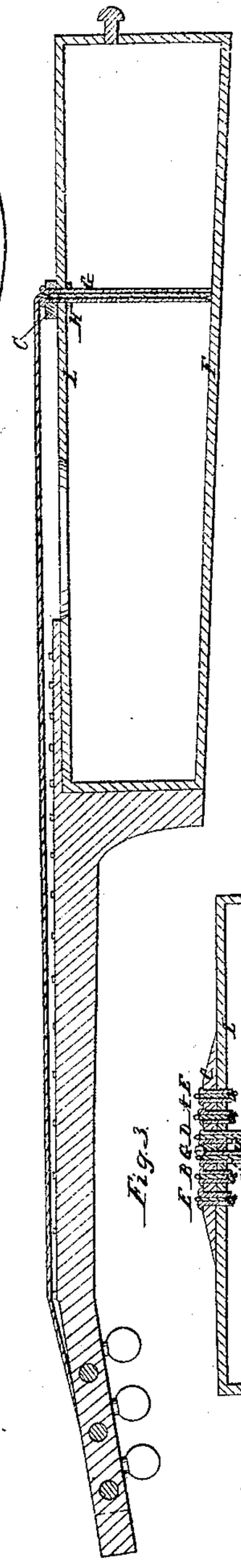

Fig. 2.

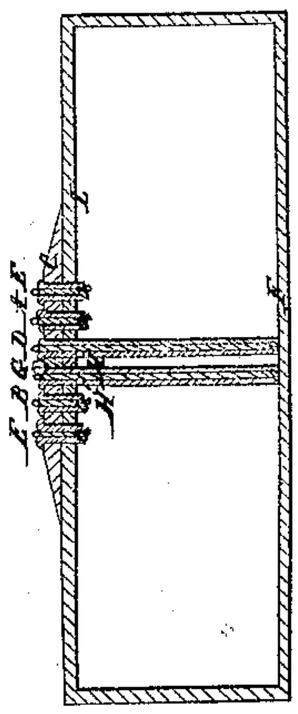

Fig. 3.

UNITED STATES PATENT OFFICE.

WILLIAM H. TOWERS, OF PHILADELPHIA, PENNSYLVANIA.

GUITAR.

Specification of Letters Patent No. 10,934, dated May 16, 1854.

To all whom it may concern:

Be it known that I, WILLIAM H. TOWERS, of the city and county of Philadelphia and State of Pennsylvania, 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 same, reference being had to the annexed drawings, making part of this specification.

Figure 1 is a top or bird's-eye view of a guitar, with the improvement attached. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a cross section of the same.

Similar letters in the several figures refer to corresponding parts.

In employing a bridge and passing the strings over the same from the sides of the pins, as heretofore, the tension of the strings is exerted downward on the bridge, which acts as a fulcrum, and the sounding board at this point is pressed downward with a force corresponding with the angle formed by the strings and their degree of tension, which not only lessens the volume and richness of tone of the guitar, but the bridge also cuts and wears the strings where they are drawn over its sharp edge with great tightness in harmonizing their tone and at other times. To remedy these defects I arrange the pins E, B, G, D, A, E, in the same positions in the center board C, as in ordinary guitars, or they may be placed in any other position to suit the taste of the maker, but instead of making them solid, as heretofore, I form them with openings in their centers, extending from end to end, so that each pin forms a tube with a caliber the proper size to admit its string, which is passed through it and held when tuned by a knot at its lower end. The two center pins G, D, are extended to the bottom board F, of the guitar and are forced on the surface of the same with a slight degree of pressure by means of pins H inserted in openings next the upper or sounding board I, and against the under surface of which they press with the same force as the end of the pins below, making these two center pins in fact perform the same function as the sounding post of a violin, in addition to their usual office of holding the strings. The other pins E, B, A, E, project the usual distance below the center board L, and the openings in them, as well as the openings in the center pins G, D, are made flaring and rounding at their upper ends, so as to present a curved surface, over which the strings pass and rest when drawn tight at the head of the instrument, forming the points at the foot, where the vibrations of the strings terminate, which in the usual formed instrument is where they cross the bridge.

By dispensing with the bridge and forming the pins to hold the strings in the manner described their tension is in a more direct line from the center board to the frets at the head of the guitar than heretofore, and consequently the force exerted by them on the sounding board, being more longitudinal and less downward, will allow greater elasticity to it, and the slight downward impingement caused by the strings will be exerted more generally over its surface, between the foot and center board, thus enabling the vibrations of the strings over the surface of the sounding board to produce tones of greater volume and richness than if it were impinged or pressed downward at any particular part of the grains of the wood. The strings, moreover, being passed over the rounded or curved surfaces of the tops of the pins (where their vibrations terminate) they will have less tendency to wear at these points than if passed over a bridge, as heretofore, and their extent of vibration will be increased toward the foot of the instrument, the distance between the tops of the pins and the points where the usual bridge is situated, thereby enabling them to give a greater resonance of sound than heretofore.

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

1. Passing the strings through openings in the pins, extending from end to end, and over their flared and rounded heads, and thence to the head of the finger board of the guitar, for the purpose of increasing the volume and richness of its tones, substantially as before described.

2. I claim extending the two center pins to the bottom board of the guitar, against which their lower ends are made to press by the pins, so as to cause them to act as sounding posts, in addition to serving as holdfasts for the strings, as herein set forth.

WILLIAM H. TOWERS.

Witnesses:

STEPHEN F. SIMMONS,

JAMES I. FRANCIS.