E. R. MOLLENHAUER.

Violin.

No. 218,761. **Patented Aug. 19, 1879.**

Fig: 1.

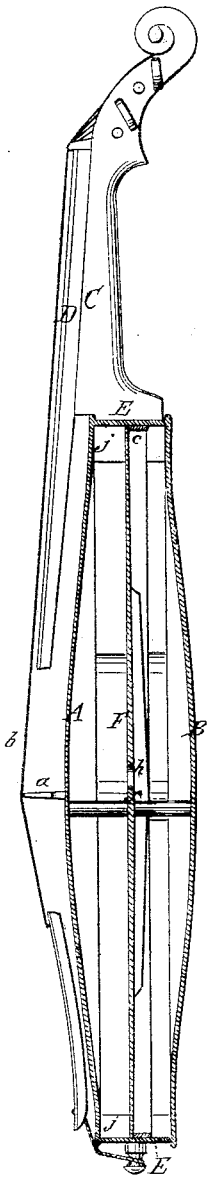
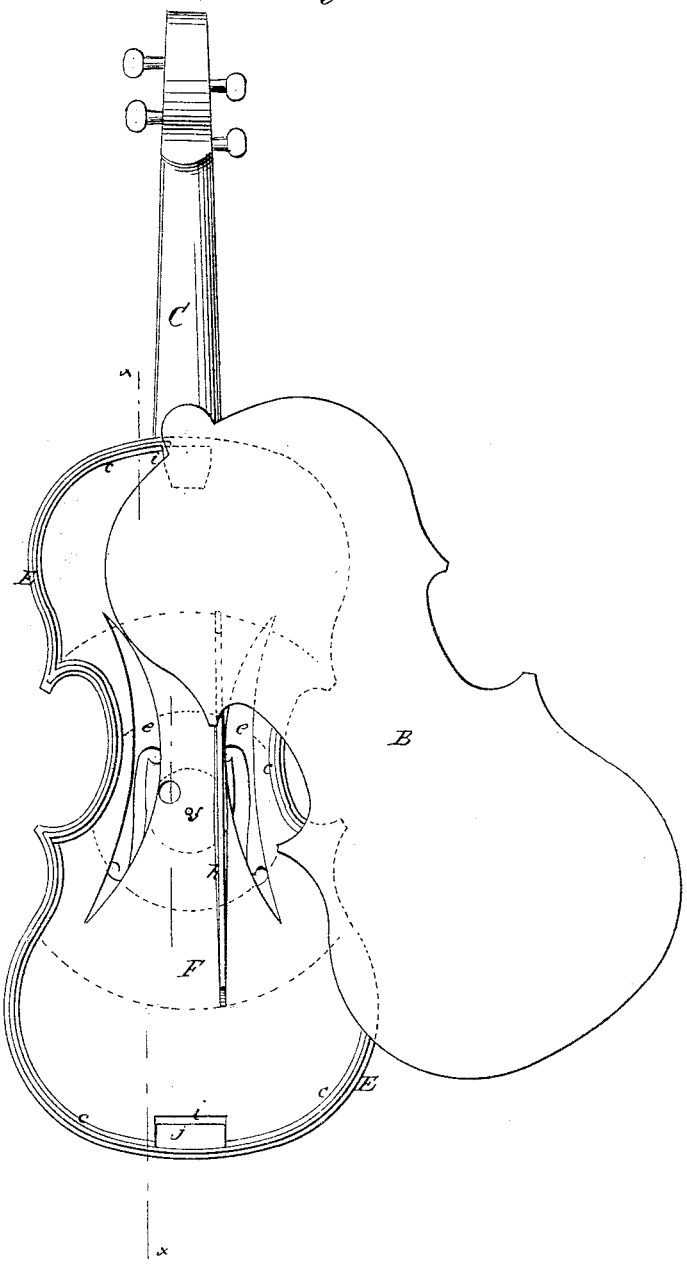


Fig: 2.



WITNESSES:

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EDWARD R. MOLLENHAUER, OF NEW YORK, N. Y.

IMPROVEMENT IN VIOLINS.

Specification forming part of Letters Patent No. **218,761**, dated August 19, 1879; application filed December 23, 1878.

To all whom it may concern:

Be it known that I, EDWARD R. MOLLENHAUER, of the city, county, and State of New York, have invented a new and useful Improvement in Violins, of which the following is a specification.

My invention relates specifically to improvements in the arrangement of the interior of violins, effected without changing their outward form or structure or altering the manner of playing them.

The object of these improvements is to enhance the power of the instrument and give greater roundness and fullness to its tone without sacrificing any of its special and peculiar properties.

The invention consists in interposing a board at any intermediate point between the belly and back of the instrument, parallel thereto, so as to divide the interior into two chambers, and providing the said board with sound-post, sound-ports, and a bass-bar.

In the accompanying drawings, Figure 1 is a longitudinal section of a violin provided with my improvements, and Fig. 2 is a view of the same with the back partially removed.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, the belly of the instrument is designated by the letter A, and the back by B. C is the neck; D, the finger-board; E, the sides; *a*, the bridge, and *b* the strings. These several parts retain precisely the same relative form, arrangement, and functions in a violin provided with my improvements.

In the interior of the instrument a purfling, *c*, narrow and thin, is fixed to the sides of the instrument, and furnishes a support for the intermediate board, F. This board is made of wood of the kind usually employed for sounding-boards of the same shape as the violin, and of such superficial area that it will fit closely within the instrument, with its edges in contact with the sides E, thus dividing the instrument, so that it has two chambers.

The board itself is made in a peculiar manner, as follows: From a point, *f*, immediately below the center of the bridge the surface (on the under side) is planed off toward the edges, so as to give it convexity, the point *f* being the thickest point in the board, whence it is evenly reduced to the edges, the difference being about one-eighth of an inch. This form of the board gives it great freedom of vibration. At the waist of the board, on either side of the medial line, are two crescent-shaped sound-ports, *e e*, immediately below the *f*-opening in the belly. The sound-post may rest upon the board F.

On the opposite side, under the G-string, a bass-bar, *h*, is glued to the under side of the board, parallel to the medial line. The purpose of this bar is to check the vibrations of said string.

Notches *i i* are made at the ends of the board to admit the back and front blocks, *j j*, and the board is placed in the instrument with its edges resting on the purfling, and glued to the latter and to the sides E, as shown in Fig. 1. This arrangement of an intermediate board in violins is found to greatly improve the tone of the instrument, not only increasing its volume, but giving it greater roundness and enhancing its qualities in so marked a degree that a very inferior instrument with this addition obtains a timbre equaling the very finest.

This invention is applicable only to violins, violas, violoncellos, and double-bass where the outward form of a close body is retained, as no remodeling of the instrument is contemplated, but only an addition to the interior, obtained without interfering with its mode of construction or any change in the manner of playing it.

I therefore disclaim all inventions contemplating or including any change in the body of the instrument, such as shown in Letters Patent to M. H. Collins, dated July 23, 1872, and May 22, 1877, and numbered 129,653 and 191,029, respectively.

I also disclaim a sounding-board made of crystal, or one that does not extend the whole length and breadth of the instrument, such as that shown in English Patent No. 2,071 of 1866, to Henry Bell, as my invention comprehends solely an intermediate wooden board extending the whole interior length and breadth of the violin, and applicable solely to the well-known instrument of that name, and without changing its construction.

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

1. As an improvement in violins, a board placed within the instrument, and extending its whole length and breadth, and with its edges in contact with the sides, when supported upon and attached to a purfling, *c*, for the purpose of increasing the power and quality of the tone of the instrument, substantially as described.

2. The board F within the violin, extending the whole length and breadth of the instrument, with its edges in contact with the sides E, in combination with the belly A, back B, and purfling *c*, substantially as described.

3. In combination with a violin of the usual construction, a board, F, arranged in the interior thereof, in the manner substantially as described.

4. In combination with a violin, a board, F, arranged to extend the whole length and breadth of the instrument, having crescent-shaped sound-ports *e*, sound-post hole *g*, and bass-bar *h*, substantially as described.

5. The board F, with convex surface, inclosed in the interior of the violin, so as to reach the whole length and breadth thereof, and having its edges secured to the sides of the instrument, substantially as described.

EDWARD R. MOLLENHAUER.

Witnesses:
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