No. 881,769. PATENTED MAR. 10, 1908.

J. Y. BROWN.

ATTACHMENT FOR BOW INSTRUMENTS.

APPLICATION FILED SEPT. 26, 1906.

Fig. 1.

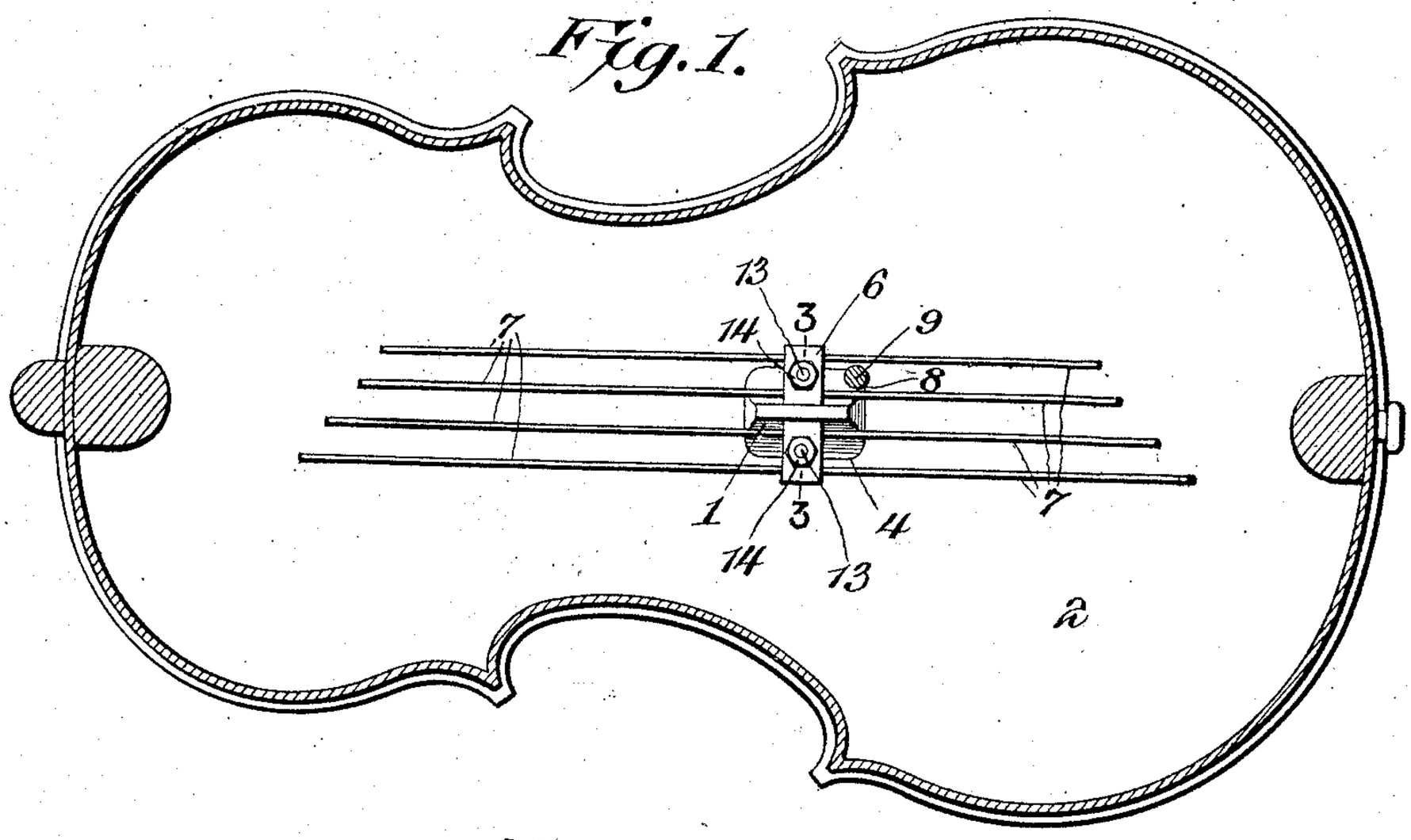


Fig. 2.

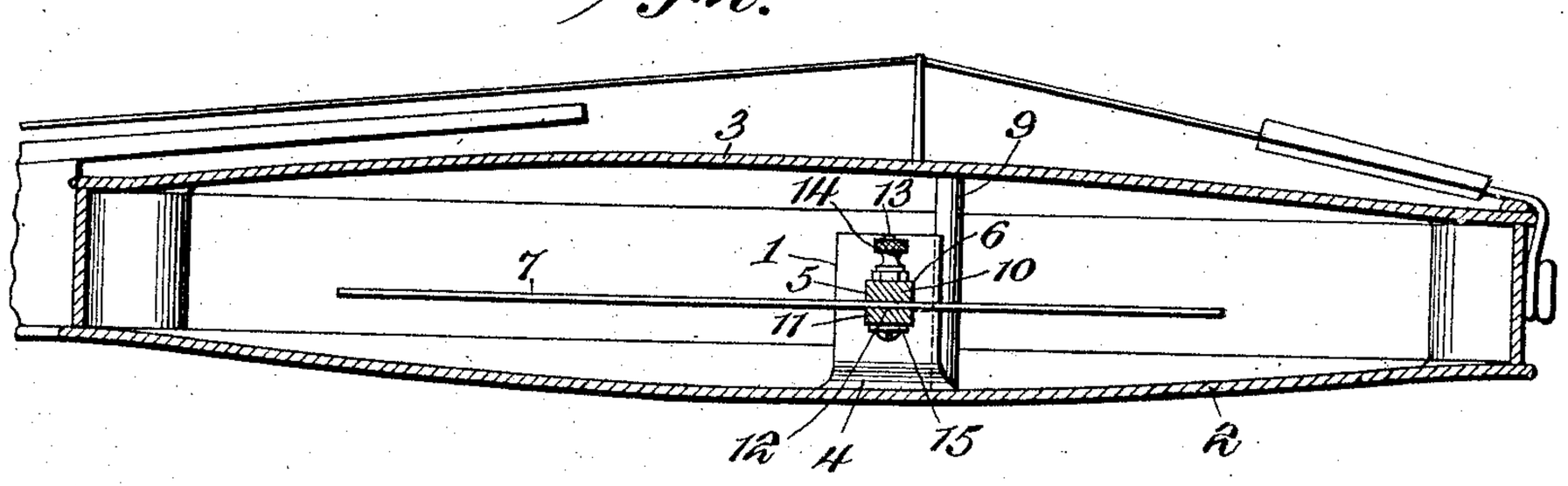
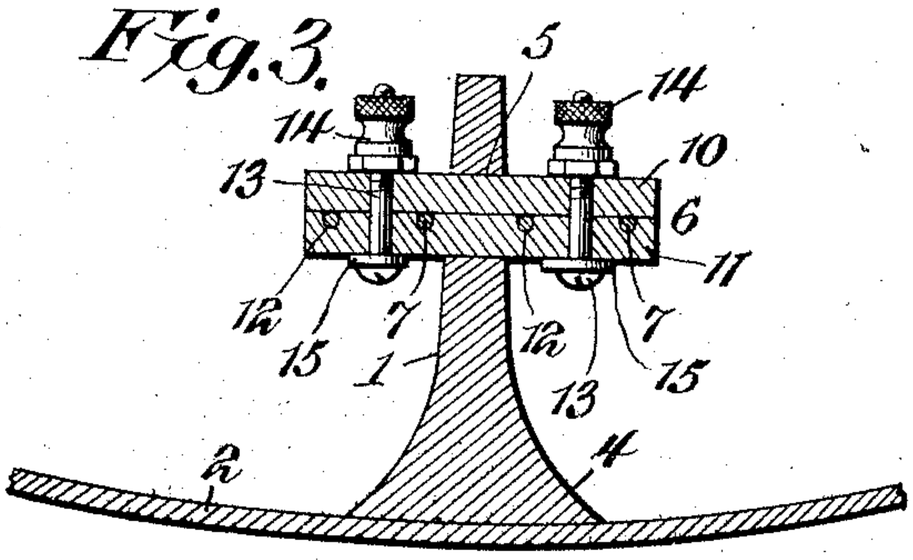


Fig. 3.



Witnesses
Howard D. Orr.
H. F. Riley

John Y. Brown, Inventor,
By E. G. Siggers.
Attorney

UNITED STATES PATENT OFFICE.

JOHN YOUNG BROWN, OF PROVIDENCE, KENTUCKY.

ATTACHMENT FOR BOW INSTRUMENTS.

No. 881,769. Specification of Letters Patent. Patented March 10, 1908.

Application filed September 26, 1906. Serial No. 336,313.

To all whom it may concern:

Be it known that I, JOHN YOUNG BROWN, a citizen of the United States, residing at Providence, in the county of Webster and State of Kentucky, have invented a new and useful Attachment for Bow Instruments, of which the following is a specification.

The invention relates to improvements in vibratory attachments for bow instruments.

The object of the present invention is to improve the construction of vibratory attachments for bow instruments, and to provide a simple, inexpensive and efficient sympathetic vibratory device adapted to greatly increase the power of a violin, or similar bow instrument, and capable of increasing the duration of tones and of improving the quality thereof.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawing, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:—Figure 1 is a horizontal sectional view of a violin provided with a sympathetic vibrating device, constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is an enlarged transverse sectional view taken substantially on the line 3—3 of Fig. 1.

Like numerals of reference designate corresponding parts in all the figures of the drawing.

1 designates a pedestal, designed to be constructed of hard wood, or other suitable material, and secured by glue or other suitable means to the inner face of the back of a violin 2, or other analogous bow instrument, and extending from the said back to and terminating short of the front 3 of the instrument. The pedestal, which has an enlarged base 4, tapers towards its center, and is provided near its upper or free end with an opening 5, in which is mounted a transversely disposed support 6 for vibratory rods 7. The base 4 of the pedestal 1 is arranged at the median line of the back of the violin, or other instrument, and is provided at one corner with a recess 8, which receives the sound post 9 of the instrument, and the vibratory device is connected with the front of the body of the instrument by the said sound post 9.

The support 6, which is arranged transversely of the body of the instrument, extends laterally from the opposite sides of the pedestal, and it is constructed of bone, ivory, or other hard material, and is preferably composed of two bars or pieces 10 and 11. The lower bar or piece 11 is provided with grooves 12 to receive the rods 7, which are intermediately supported and which extend in advance and in rear of the transverse support to form longitudinal vibratory members. The upper bar or piece 10 is rigidly secured to the lower bar or piece 11 by means of suitable bolts 13, having heads at their lower ends and provided at their upper ends with clamping nuts. Washers 15 are preferably interposed between the heads of the bolts, and the lower bar or piece 11, and the thumb nuts 14 are provided with milled edges. Any other form of bolt, however, may be employed.

The rods, which are constructed of hard steel, or other suitable material are preferably continuous, and when continuous, are four in number to provide eight vibratory members, in two sets of four each extending in advance and in rear of the supporting means. The vibratory members, which are disposed in the same general direction as the strings of the instrument, vary in length, correspond with, and are adapted to produce the eight tones of the scale in music, and they are tuned to give an octave, one of the notes of which is in unison with an open string of the instrument. For instance, the device may be in the pitch of "C" and the vibratory members may be tuned to correspond to the notes or tones of an octave below middle "C". The left hand vibratory member of the set in advance of the supporting means would then be tuned to correspond to "C", the lowest note of said octave. The second vibratory member would be "D"; the third vibratory member would be "E", and the fourth "F", the vibratory members being diminished in length from left to right. The left hand vibratory member of the set in rear of the supporting means would be "G", the second "A", the third "B" and the fourth "C". The device may be in any other pitch, and the vibratory members will

be tuned accordingly. It does not matter whether the vibratory members are keyed one or more octaves above or below the strings, as they will respond to the latter and will greatly increase the power of the instrument, and improve the quality and increase the duration of tones. In order to obtain the best result possible, the rods should extend in the same general direction as the strings, or rather, in parallelism with the major axis of the body of the instrument, with the cluster of rods, as a whole, at the center of the instrument. Experience has demonstrated that while reasonably fair results can be obtained by arranging the sympathetic device crosswise, or at an angle to the major axis of the body of the instrument, the results are decidedly better when the rods are arranged lengthwise. The sympathetic vibratory device is connected with the body of the instrument only at the point of attachment of the base of the pedestal, with the back of the body of the instrument so as not to interfere with the vibrations of the back, and it is spaced from the front and sides of the instrument. Should the sympathetic vibratory device become detached, it may be readily replaced without removing any part of the violin, or other instrument. This may be effected by means of two large needles about 5 or 6 inches in length, and a delicate brush having a handle 5 or 6 inches in length and of a size to be introduced through the *f* holes of the instrument. The violin is placed on its back and the needles are introduced into the *f* holes, and the device is turned on one side, and is held by the needles while glue, or other adhesive material is applied to the base of the pedestal and to the inner face of the back of the instrument by means of the brush. The device is then moved to the proper place by means of the needles, the sound post forming a stop or guide for the proper positioning of the device.

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

1. The combination with a bow instrument, of a sympathetic vibratory device comprising supporting means, and a plurality of vibratory members arranged in parallelism with the major axis of the body of the instrument and extended in advance and in rear of the supporting means and tuned to give an octave.

2. The combination with a bow instrument, of a sympathetic vibratory device arranged within the instrument and comprising a plurality of rods supported intermediate of their ends and forming vibratory members, said members being tuned to give an octave.

3. The combination with a bow instrument, of a sympathetic vibratory device comprising a plurality of rods supported intermediate of their ends and varying in length and tuned to give an octave.

4. The combination with a bow instrument, of a sympathetic vibratory device comprising a pedestal, a support extending laterally from the pedestal, and vibratory means extending in opposite directions from the support and tuned to give an octave.

5. The combination with a bow instrument, of a sympathetic vibratory device comprising a pedestal, a support mounted on the pedestal and extending from opposite sides thereof, and a plurality of rods mounted between their ends on the support and forming opposite vibratory members, said members being tuned to give an octave.

6. The combination with a bow instrument, of a sympathetic vibratory device comprising a pedestal, a support mounted on and projecting from opposite sides of the pedestal and composed of sections, and vibratory rods clamped between the sections and tuned to give an octave.

7. The combination with a bow instrument, of a sympathetic vibratory device comprising a pedestal, a support extending from opposite sides of the pedestal and composed of sections, vibratory rods arranged between the sections and tuned to give an octave, and clamping devices connecting the sections and holding the same rigidly in engagement with the rods.

8. The combination with a bow instrument, of a sympathetic vibratory device comprising a wooden pedestal, a support of hard non-metallic material extending from opposite sides of the pedestal, and a plurality of metallic vibratory rods mounted on the support and tuned to give an octave.

9. The combination with a bow instrument having a sound post, of a sympathetic vibratory device comprising a pedestal located within and secured to the back of the instrument and having a recess to receive the sound post, a support extending from opposite sides of the pedestal, and vibratory members projecting from the support and tuned to give an octave.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOHN YOUNG BROWN.

Witnesses:
GEORGE WILSON,
W. T. JOHNSON.