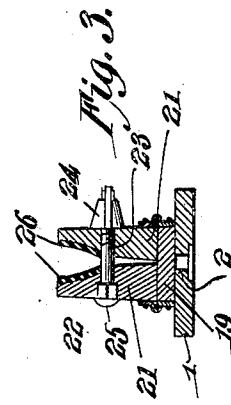
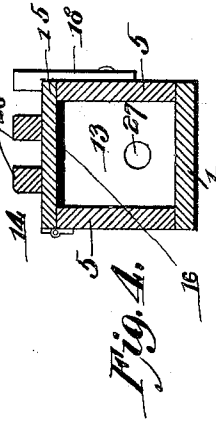
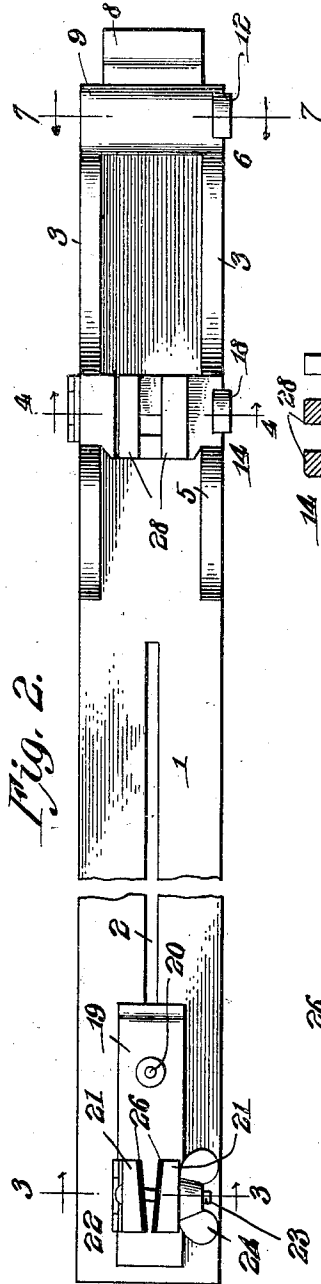
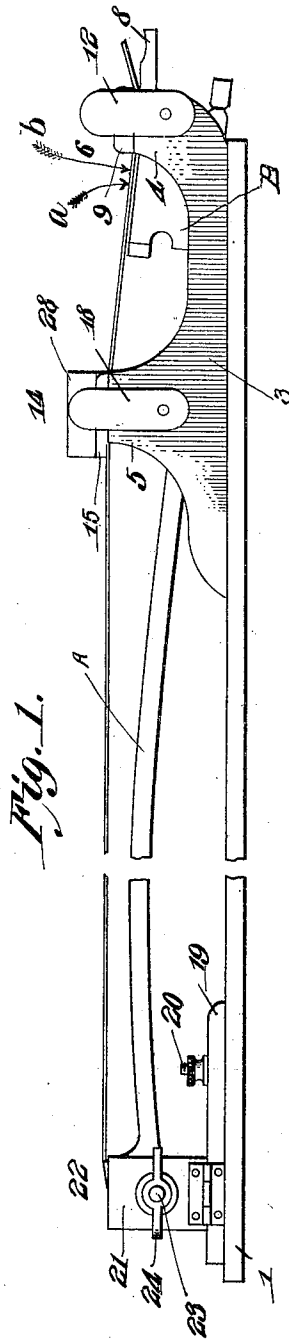


W. H. McKINNEY.
 DEVICE FOR HAIRING VIOLIN BOWS.
 APPLICATION FILED JULY 16, 1909.

993,184.

Patented May 23, 1911.

2 SHEETS-SHEET 1.



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Fig. 5.

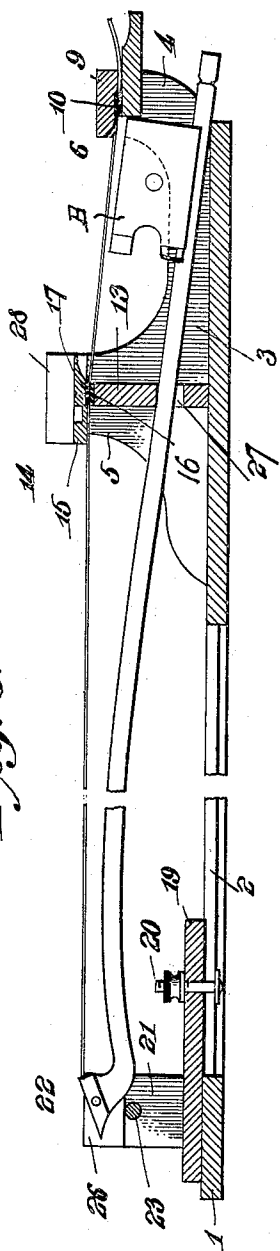


Fig. 7.

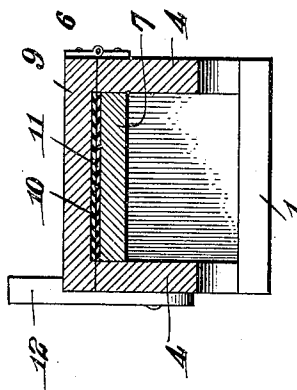
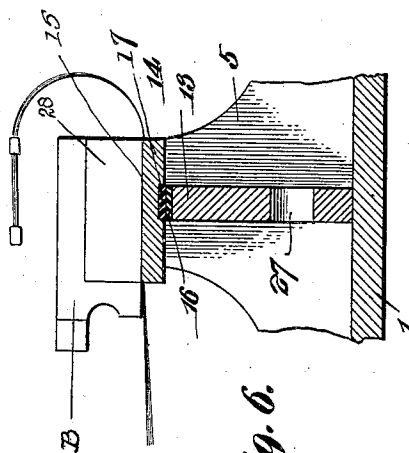


Fig. 6.



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WILLIAM H. MCKINNEY, OF SUMTER, SOUTH CAROLINA.

DEVICE FOR HAIRING VIOLIN-BOWS.

993,184.

Specification of Letters Patent.

Patented May 23, 1911.

Application filed July 16, 1909. Serial No. 508,018.

To all whom it may concern:

Be it known that I, WILLIAM H. MCKINNEY, a citizen of the United States, residing at Sumter, in the county of Sumter and State of South Carolina, have invented new and useful Improvements in Devices for Hairing Violin-Bows, of which the following is a specification.

This invention relates to a device for hairing violin bows, and an object of the invention is to provide simple and novel means for holding the stick of the bow and the hair while filling, means also being provided whereby the exact length of hair required for the filling can be accurately determined.

Another object of the invention is to provide simple and novel means for clamping the stick of the bow without mutilating or injuring the same.

A still further object is to provide adjustable means whereby bows of different sizes can be effectively operated upon.

Other objects and advantages will be apparent as the nature of the invention is better disclosed and it will be understood that changes within the scope of the appended claims can be made without departing from the spirit of the invention.

In the drawings forming a portion of this specification and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a side elevation of the device. Fig. 2 is a top plan view of the same. Fig. 3 is a detail transverse section taken on the line 3—3 of Fig. 2. Fig. 4 is a detail transverse section taken on the line 4—4 of Fig. 2. Fig. 5 is a longitudinal sectional view through the device. Fig. 6 is a detail section taken through a portion of the device showing the frog support. Fig. 7 is a detail transverse section taken on the line 7—7 of Fig. 2.

My improved hairing and rehairs device consists broadly of a bed plate or base member 1 which is provided with a longitudinally extending slot 2 for a purpose to be hereinafter described. At one end of the base member or bed plate supports a pair of vertically extending supports 3 which are spaced from each other, and as illustrated these supports are provided with upwardly extending portions 4 and with upwardly extending portions 5.

A clamp 6 is carried by the device and it comprises a horizontally disposed jaw 7 which is secured at its side edges between

the upwardly extending portions 4 of the support 3. The said jaw is provided with a portion 8 which is dishd or curved upon its upper surface. One of the portions 4 has horizontally connected thereto a jaw 9 which forms the other member of the clamp 6. This jaw is mounted for vertical swinging movement toward or away from the jaw 7. The under surface of the jaw 9 is provided with a rubber or other elastic cushioning element or lining 10 which is adapted for coöperation with a similar rubber or elastic cushioning element 11 upon the upper surface of the jaw 7. The upper sides of the jaw 9 are curved to facilitate the engagement of a pivoted retainer or dog 12 with the said jaw 9. This construction is such that the dog when in its engaged position with the jaw 9 firmly holds the same operatively associated with the jaw 7 as will be appreciated.

While it is preferable to use a dog or retaining member of the form herein illustrated it is obvious that I might resort to the use of any well known retaining means.

The upwardly extending portions 5 of the hereinbefore described supports have confined therebetween a jaw member 13 of a clamp 14. The other jaw 15 of the clamp is pivoted for vertical swinging movement to one of the upwardly extending portions 5. The upper surface of the jaw 13 is provided with a rubber or other elastic cushioning element 16 which coöperates with a similar rubber or other elastic cushioning element 17 upon the jaw 15. One of the portions 5 carries a dog or retaining member 18 which in this instance is identical in construction with the dog 12 hereinbefore mentioned.

A plate 19 is mounted upon one end of the bed plate or base member 1 and is provided with a vertically extending adjusting screw 20 which is operatively movable in the slot 2 and engaged with the walls thereof so that the said plate 19 can be accurately held in its adjusted position. The plate 19 is provided with a pair of jaws 21 which are disposed directly opposite to each other and are hinged at their lower extremities to the side edges of the plate 19. These jaws form portions of a clamp 22, and as shown one jaw carries an adjusting screw 23. One end of the screw is loosely mounted in a passage 23 formed in the other jaw member of the clamp, and the extreme outer extremity of the screw is threaded and has engaged there-

with a winged clamping nut 24. In order to prevent casual rotation of the screw 23 during adjustment of the nut 24, I form one end of the screw with a square head or portion 25 which is seated in a correspondingly formed recess or passage in one of the jaw members of the last mentioned clamp. The inner faces of the jaw members 21 of the clamps are beveled in opposite directions and these portions carry rubber or similar elastic cushioning elements 26.

The jaw member 13 of the clamp 14 is extended downwardly between the portions 5 of the supports 3 and has its lower edge engaged with the bed plate or base member 1. The main body portion of the said jaw has formed therein a horizontally disposed passage 27 which is located in a direct line with the jaw members 21 of the clamp 22. The jaw member 15 of the clamp 14 is provided with a pair of longitudinally extending spaced plates 28.

Having particularly described the details of construction of my device I will briefly describe its operation as follows:—Should it be desired to rehair a bow, the old hair is entirely removed, after which the tip of the bow stick A is placed between the jaw members 21 and the set screw actuated so as to effectively bring the jaws into clamping engagement with the side portions of the tip. Upon reference to Fig. 5 of the drawings it will be appreciated that previous to placing the tip of the bow stick between the just described jaws the frog is removed so as to permit the stick to be passed through the passage 27 in the body portion of the jaw 13. In this manner the stick is accurately positioned. The hair is afterward engaged at one end with the tip of the bow. After this operation the hair may be wet and combed and stretched and then confined between the jaw members of the hereinbefore described clamps. The arrow *a* in Fig. 1 indicates the point at which the hair is tied. After the hair is tied the jaw 9 is then opened and surplus hair is then cut off at the point indicated by the arrow *b* in Fig. 1. The tied end of the hair is then placed upon the frog B of the stick and the frog adjusted so as to accurately determine the exact length of hair required for the filling. After this has been determined the frog is entirely removed from the stick and is placed between the plates 28 and the terminal of the hair is then brought around over the frog, as shown, and it is then operatively associated with such frog in the

usual well known manner. After the frog has been positioned as just mentioned the hair is properly engaged in the groove of the frog and the latter can be then placed upon the stick of the bow and adjusted to acquire the desired tension of the hair.

The device described and shown by me is extremely simple, may be manufactured at a small cost and affords means whereby the hairing and rehairing of a bow can be accurately done and the work to this end greatly facilitated. By providing the dished upper surface of the extension 8 of the jaw member 7 I facilitate holding the hair with the thumb and forefinger of the right hand smooth and evenly while closing the clamps 9 and 17 with the left hand. The hair is held against the dished part 8 with the thumb, the forefinger being disposed directly underneath the end of the extension of 7.

The device as described is such that a bow of any standard size can be operated upon as described, hence the provision of the adjustable plate 19. The plate 19 may be moved on the bed member 2 with respect to the clamp 6 so that the bow can be secured in the said clamp 6 and in the clamp 22 of the plate 19.

Having thus described the invention what is claimed as new is:—

1. A device for hairing violin bows comprising a bed member, relatively movable clamps thereon for holding the bow on the bed member, a clamp located near one of the first named clamps for engaging the hair of the bow, and a pair of spaced plates extending upwardly from said last named clamp, and spaced to receive the frog of the bow between them.

2. A device for hairing violin bows comprising a bed member, a fixed clamp at one end of the member, a longitudinally movable clamp at the opposite end of the member, an apertured member carried by the bed member, the said apertured member having an elastic surface, a jaw having an elastic surface for cooperating with the elastic surface of the apertured member, and a pair of upwardly extending plates carried by said jaw, said plates being spaced to receive the frog of the bow between them.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. MCKINNEY.

Witnesses:

R. E. WILDER,
S. M. McLEOD.