No. 676,028. Patented June 11, 1901.

W. D. CONKLIN.

VIOLIN BOW FROG.

(No Model.) (Application filed Oct. 22, 1900.)

Fig 1

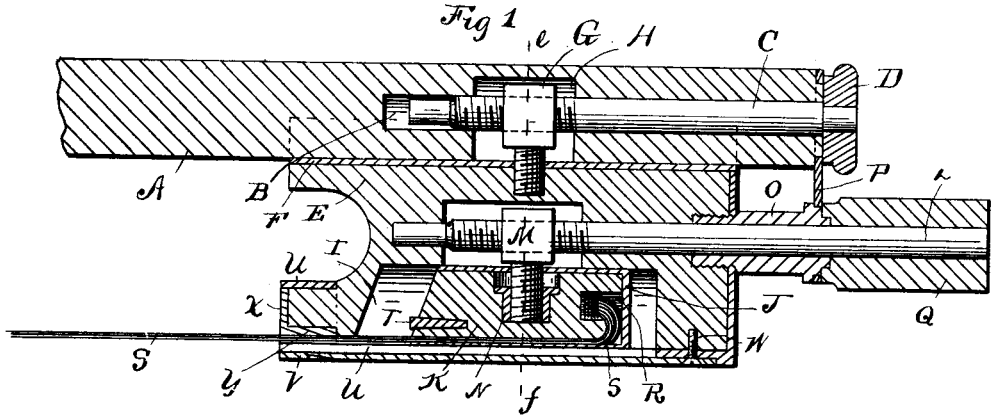


Fig 2

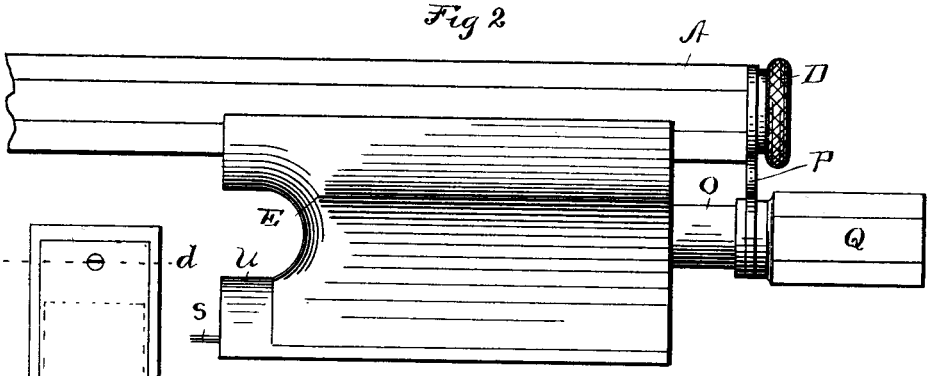


Fig 4

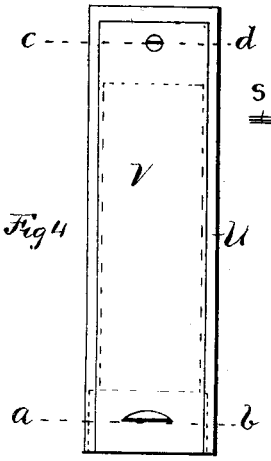
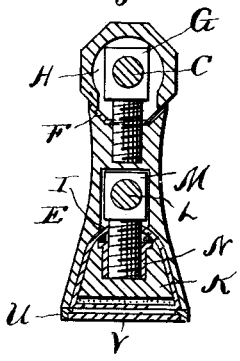


Fig 3



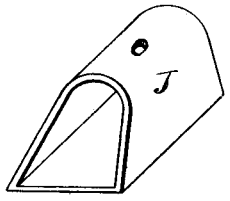
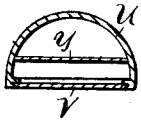


Fig 6

Fig 5



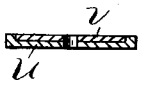


Fig 7

Witnesses.

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Inventor.

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By

Warren D. House,

His Attorney.

UNITED STATES PATENT OFFICE.

WILLIAM D. CONKLIN, OF NEVADA, MISSOURI, ASSIGNOR OF ONE-HALF TO C. ERNEST WELTMER, OF SAME PLACE.

VIOLIN-BOW FROG.

SPECIFICATION forming part of Letters Patent No. 676,028, dated June 11, 1901.

Application filed October 22, 1900. Serial No. 33,876. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM D. CONKLIN, a citizen of the United States, residing in Nevada, in the county of Vernon and State of Missouri, have invented a new and useful Improvement in Violin-Bow Frogs, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in violin-bows. It relates particularly to the construction of the frog and the manner of securing the same to the bow. It is applicable to bows for any kind of stringed instruments.

My invention provides means for adjusting the frog lengthwise on the stick, combined with independent means for adjusting the tension of the hair.

My invention provides further means for adjusting the frog lengthwise on the stick, combined with a longitudinally-movable hair-holding device and means for moving the said device independently of the adjustment of the frog on the stick.

My invention provides further a novel construction of hair-holding device.

Still other novel features of construction are provided, as hereinafter fully described and claimed.

With the use of my invention the frog may be moved lengthwise on the stick to a position where the desired "balance" is attained, after which the hair may be adjusted without in the least disturbing the balance of the bow.

In the accompanying drawings, which illustrate the application of my invention to a violin-bow, Figure 1 represents a vertical sectional view of the rear end of a violin-bow provided with my invention. Fig. 2 represents a side elevation view of the same. Fig. 3 represents a vertical sectional view taken on the dotted line *e f* of Fig. 1. Fig. 4 represents an under view of the cover secured to the under side of the frog. Fig. 5 represents a transverse vertical sectional view taken on the dotted line *a b* of Fig. 4. Fig. 6 represents a perspective view of the casing which incloses the hair-holding block. Fig. 7 represents a cross-section taken on the dotted line *c d* of Fig. 4.

Similar letters of reference indicate similar parts.

A indicates the stick, provided with a longitudinal hole B, in which is mounted a screw-threaded adjusting-screw C, provided at its outer end with a head D, by means of which the screw is turned. The frog E is provided in its upper side with a groove fitted to the periphery of the stick. A metal plate F may be inserted between the frog and the stick to prevent wear on the parts. A bolt G is secured vertically in the upper side of the frog and has its head disposed in a mortise in the under side of the stick, as indicated by H. The bolt-head is provided with a transverse screw-threaded opening in which is fitted the adjusting-screw C, the bolt-head thus serving as a nut. In the lower side of the frog E is a mortise I, in which is longitudinally movable a hair-holding device comprising an outer casing J of any desirable shape and having a flat under side. One end of the casing—the forward end—is open, through which may be slipped the hair-holding block K, preferably of hard rubber, wood, or other suitable material. The block K preferably fits the inner periphery of the casing J, excepting at the bottom, between which and the casing is provided a longitudinal recess or space, in which the hair lies. The hair-holding device is moved to and fro by means of an adjusting-screw L, rotatably mounted in a longitudinal opening provided therefor in the frog above the casing J. The mortise I in the frog is provided near its middle with an extension in which lies the upper end of a screw-threaded bolt M, through which is a screw-threaded transverse opening in which is fitted the inner screw-threaded end of the screw L. The lower end of the bolt M extends through the casing J into the block K, to which it is secured. I prefer to insert a thimble N in the upper side of the block K, the interior of the thimble being screw-threaded to fit the bolt M, thus preventing wear by contact of the bolt M with the block K. An adjustable sleeve O encircles the screw L and has its inner end externally screw-threaded and fitted in an opening provided for it in the end of the frog. The outer end of the sleeve O is shouldered and fits into a hole in the lower end of a vertical plate P, the upper end of which is provided with a hole in which is secured the end of the stick A. This plate P

serves as a support for the outer end of the frog. Upon the outer end of the adjusting-screw L is secured a finger-hold Q, preferably octagonal in form, by means of which the screw L is rotated. In the inner end of the block K is provided a recess R, in which the tied ends of the hairs S are placed. The recess R communicates with the recess or space under the block K. In the outer end of the block K is provided near the under side of the block a transverse slot, in which is placed a wedge T, the function of which is to force the thin portion or tongue formed by the slot against the hairs after they have been inserted and properly combed. Encircling the rounded reduced inner end of the frog is a metal ferrule U, provided with a horizontal rearward extension, which is fitted to the under side of the frog and has provided in it a hole through which the hair-holding device may be inserted or withdrawn. The inner sides of the extension, near the outer ends thereof, are provided with longitudinal grooves, in which is fitted the side edges of the cover V. The inner end of the cover V is provided with a hole, through which extends a screw W, which enters the frog and prevents the slipping out of the cover. The outer end of the ferrule U is closed by a vertical plate X, provided at its lower edge with a horizontal extension Y, against which the hairs bear when the same are tightened.

A frog constructed in accordance with the principles of my invention may be applied to a violin-bow stick of most any style, as nearly all are supplied with the longitudinal screw-hole and the mortise in the lower side. In applying my invention the frog is first placed upon the under side of the bow, with the bolt G inserted in the mortise in the stick. The adjusting-screw C is then inserted through the hole in the bolt and the screw turned until the frog is in the position to secure the proper balance of the bow. The sleeve O must be adjusted at the same time with the screw C by turning it to the right or left, as need be. The hair is then slipped through the ferrule and secured in position in the end recess in the block K, after which the block is inserted into the casing J. The hair is then combed, after which the wedge is inserted in the slot in the end of the block K thus holding the hair securely in position, it being noted that the wedge does not come into contact with the hair at all, but holds it by forcing the tongue of the block below the slot against the hair. The hair is consequently not disturbed by the insertion of the wedge, as is the case when the wedge is in direct contact with the hair. The bolt M is then inserted through the casing into the block K and the casing then inserted in the recess or mortise of the frog and the screw L engaged with the bolt M. The hair-holding device is now supported, and the cover V may be then put into its position and secured there by the screw W. The proper tension may then be imparted to the hair by turning the screw L in the proper direction. Thus the hair may be tightened without moving the frog or disturbing the "balance" of the bow.

My invention may be applied to old bows by removing the old frog from the stick and substituting my improved frog in its stead in the manner hereinbefore described.

My invention may be modified in many particulars without departing from its spirit.

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

1. In a violin-bow, the combination with the stick, of a frog, means for adjusting the frog lengthwise on the stick, and means for adjusting the tension of the hair independently of the adjustment of the frog, substantially as described.

2. In a violin-bow, the combination with the stick, of the frog, means for adjusting the frog lengthwise on the stick, a hair-holding device mounted on the frog, and means for moving the said device on the frog independently of the frog-adjusting means, substantially as described.

3. In a violin-bow, the combination with the stick, of the frog, means for adjusting the frog lengthwise on the stick, a hair-holding device movable lengthwise on the stick, a nut carried by the said device, and an adjusting-screw mounted in the frog and engaging the said nut, substantially as described.

4. In a violin-bow, the combination with the stick, of the frog, means for adjusting the frog lengthwise on the stick, a hair-holding block mounted slidably on the frog, means for securing the hair thereto, and means for sliding the block on the frog, substantially as described.

5. In a violin-bow, two members comprising a frog and a stick, the frog being movable lengthwise on the stick, a nut carried by one of the members, an adjusting-screw engaging the said nut and mounted in the other member, a hair-holding device mounted on the frog, and means for changing the position of the said device on the frog, substantially as described.

6. In a violin-bow, the combination with the stick, of the frog, means for adjusting the frog lengthwise on the stick, a hair-holding device comprising a block and a casing inclosing the same, means for securing the hair to the said device, and means for moving the said device lengthwise on the frog, substantially as described.

7. In a violin-bow, the combination with the stick, of the frog, means for adjusting the frog lengthwise on the stick, a hair-holding device comprising a block and a casing inclosing the same, a nut carried by the said device, an adjusting-screw mounted in the frog, and engaging the nut, and means for securing the hair to the hair-holding device, substantially as described.

8. In a violin-bow, the combination with the stick, of the frog, a mortise therein, a casing slidable in the said mortise, a block within the casing, means for engaging the hair between the block and the casing, and means for sliding the casing and block lengthwise in the mortise, substantially as described.

9. In a violin-bow, the combination with the stick, of the frog, provided with a mortise, a slidable casing within the said mortise, a block within the casing, means for securing the hair between the casing and the block, a nut carried by the block and an adjusting-screw mounted in the frog and engaging the said nut, substantially as described.

10. In a violin-bow, the combination with the stick, of the frog provided with a mortise, a slidable casing within the said mortise, a block within the casing, means for securing the hair between the casing and the block, means for sliding the casing within the mortise, and a cover over the mortise, substantially as described.

11. In a violin-bow, the combination with the stick, of the frog, a nut carried by the frog, an adjusting-screw mounted in the stick and engaging the said nut, a slidable hair-engaging device mounted on the frog, a nut carried by the said device, an adjusting-screw mounted in the frog and engaging the said nut, and means for securing the hair to the said hair-engaging device, substantially as described.

12. In a violin-bow, the combination with a stick, of a frog longitudinally movable thereon, a bolt carried by the frog and provided with a screw-threaded hole, an adjusting-screw engaging the said screw-threaded hole and mounted in the stick, a slidable block mounted on the frog, a nut carried thereby, an adjusting-screw mounted in the frog and engaging the nut, and means for securing the hair to the block, substantially as described.

13. In a violin-bow, the combination with the stick provided with a longitudinal hole and a mortise communicating therewith, of a frog slidably mounted on the stick, a nut carried by the frog, and extending into the mortise, an adjusting-screw mounted in the longitudinal hole in the stick and engaging the said nut, a hair-engaging device carried by the frog, and means for adjusting the position of the said device independent of the position of the frog on the stick, substantially as described.

14. In a violin-bow, a hair-holding device comprising an outer casing open at one end, a block fitted therein, a recess to receive the hair between one side of the block and the casing, and means for locking the hair within the said recess, substantially as described.

15. In a violin-bow, a hair-holding device comprising an outer casing open at one end, a block fitted therein with a recess between one side of the block and the casing, a recess at the inner end of the block communicating with the first recess, and means for securing the hair between the block and the casing within the two recesses, substantially as described.

16. In a violin-bow, a hair-holding device comprising an outer casing open at one end, a block fitted therein, means for preventing the slipping of the block within the casing, a recess between the block and the casing to receive the hair, and means for locking the hair within the recess, substantially as described.

17. In a violin-bow, a hair-holding device comprising an outer casing open at one end, a block fitted therein, a recess between one side of the block and the casing to receive the hair, a slot to receive a wedge in the block adjacent to the said recess, and means for locking the block and casing together, substantially as described.

18. In a violin-bow, a hair-holding device comprising an outer casing open at one end, a block fitted therein provided at one end with a recess to receive the hair and a transverse slot near one side of the block at the other end adapted to receive therein a wedge, a longitudinal recess between the block on the side adjacent to the said slot and the casing, the said longitudinal recess communicating with the recess in the block, and means for retaining the block within the casing, substantially as described.

19. In a violin-bow, the combination with the frog provided on its under side with a mortise, of a hair-holding device slidably mounted therein comprising an outer casing open at one end, a block fitted therein provided in its inner end with a hair-receiving recess and in its other end near its under side with a transverse horizontal slot adapted to receive a wedge, a nut extending through the side of the casing and into the block, an adjusting-screw mounted in the frog and engaging the nut, and a recess between the block and the casing communicating with the recess in the block and adjacent to the wedge-slot, substantially as described.

20. A hair-holding device for a violin-bow frog comprising an outer casing, a block fitted therein, a space being provided between one side of the block and the casing to receive the hair, and means for expanding a portion of the block so as to compress the hair against the casing, substantially as described.

21. A hair-holding device for a violin-bow frog comprising an outer casing having a flat side, a block fitted therein, a space being provided between the flat side of the casing and the block to receive the hair, and a transverse slot in the end of the block adjacent to the said space for receiving a wedge to expand the block when inserted therein, substantially as described.

In testimony whereof I have signed my name to this specification in presence of two subscribing witnesses.

WM. D. CONKLIN.

Witnesses:
J. H. KAYLOR,
W. T. THORP.