(No Model.)

A. G. KRETSCHMAR.

BOW FOR STRINGED INSTRUMENTS.

No. 566,718. Patented Aug. 25, 1896

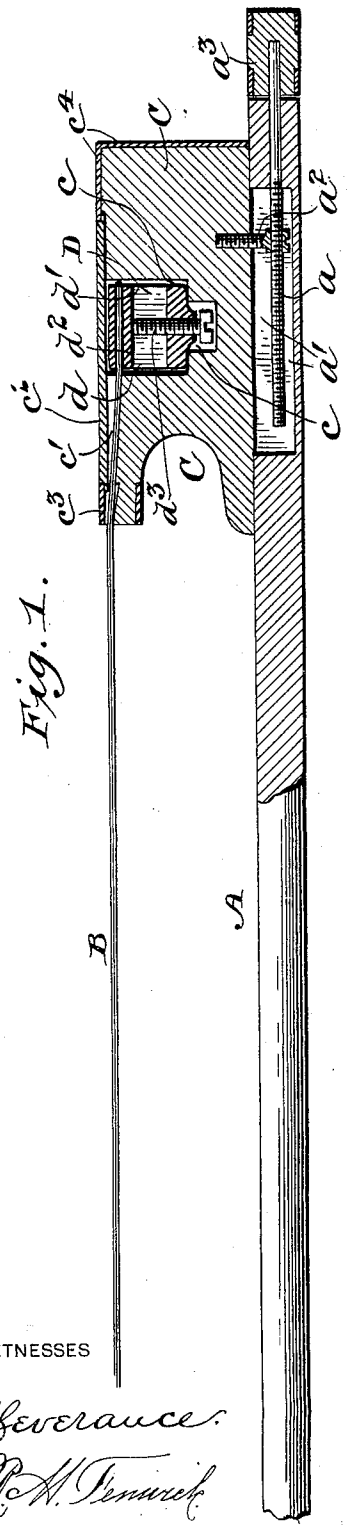

Fig. 1.

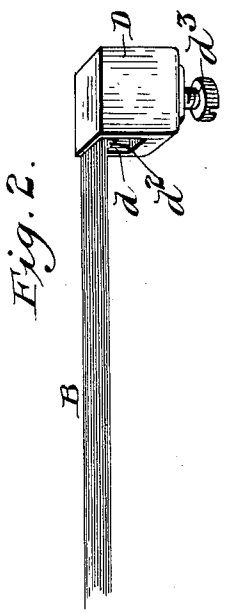

Fig. 2.

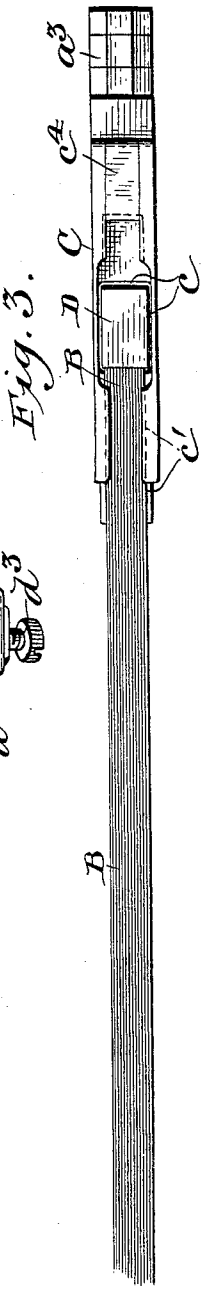

Fig. 3.

WITNESSES

Severance.

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UNITED STATES PATENT OFFICE.

ALBERT GUSTAVE KRETSCHMAR, OF DULUTH, MINNESOTA.

BOW FOR STRINGED INSTRUMENTS.

SPECIFICATION forming part of Letters Patent No. 566,718, dated August 25, 1896.

Application filed April 22, 1896. Serial No. 588,661. (No model.)

To all whom it may concern:

Be it known that I, ALBERT GUSTAVE KRETSCHMAR, a citizen of the United States, residing at Duluth, in the county of St. Louis and State of Minnesota, have invented certain new and useful Improvements in Bows for Stringed Instruments; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in violin-bows; and it consists of certain novel means for securing the hair in the movable frog.

In the accompanying drawings, forming part of this specification, Figure 1 represents a side elevation, partly in section, of a violin-bow with my invention applied thereto. Fig. 2 represents a detail perspective view of the hair-clamping box, and Fig. 3 represents a detail top plan view of the movable frog with its top plate removed.

A in the drawings represents the bow proper; B, the hair; C, the movable frog-piece, and D the clamping-box.

The rear end of the bow is provided with the usual tightening-screw a, having the usual thumb-piece a^3. This screw passes through the end of the bow into a longitudinal groove a', formed in the upper surface of said bow. The sliding frog-piece C is provided with a pendent screw a^2, the lower apertured head of which projects downward into the groove a' and is engaged by the screw a to move the frog back and forth in the usual manner. The said frog-piece is also provided with a recess c to accommodate the hair-clamping box D. This box is hollow and preferably of rectangular form. It is provided near its top with two horizontal slots d d' in its front and rear walls, respectively. These slots are to permit the ends of the hairs to be inserted in the upper part of the box. Within the box is a vertically-movable clamping plate or plunger d^2, that is adapted to be forced upward by a vertical screw d^3, passing through the bottom of the box, to clamp the hair firmly between it and the under side of the top of the box. A groove c' is formed in the upper surface of the frog to accommodate the hair as it passes from the front of the frog-piece rearwardly to the clamping-box. This groove is covered by a removable plate c^2 and the front projection of the frog is bound by a sliding ring c^3. The rear of the frog is also provided with an ornamental binding-plate c^4.

The forward end of the hairs are secured to the forward end of the bow in any usual and well-known manner. When the hair is to be applied to the frog, it is first combed straight and its ends inserted through the horizontal slots in the top of the clamping-box. The sealing-wax is next inserted through the slots onto the hair and the clamp applied by tightening the screw. The wax is softened, so as to thoroughly permeate the strands of hair, by heating the top plate of the clamping-box. The clamp is then again tightened while the wax is soft and thus secures all the strands of hair firmly in the clamping-box. After the hair has been secured in the clamping-box the latter is slipped into its recess in the frog and the plate c^2 and ring c^3 applied in position, whereby the clamping-box is altogether concealed.

The ends of the hair that protrude from the rear slot of the clamping-box are removed by burning them away at the time of heating the top plate of the clamping-box. After the clamping-box has been applied in the frog-piece the hair is tightened in the usual manner by turning the screw a and thus moving the frog backward. It will be observed from the above that when the hair is once clamped in the clamping-box and sealed it is impossible for any one of its strands to slip or become loosened, as the soft wax is forced by the clamping-plate completely about all of said strands, and when set holds them all firmly in position independently of the clamping actions of said plate. It will be observed that the hair is secured in the clamping-box before the latter is applied in the frog, and thus any damage that might happen to the frog from the operation, if performed after the box were in place, is avoided and greater freedom of action is secured in the operation.

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

1. A hair-clamp for a bow for stringed instruments provided with a cap above the

hairs, a passage for the hairs below the cap, and a clamping-plunger made adjustable toward the hairs by means of a screw operated below the plunger, said clamp adapted to be fitted in a frog and which is adjustable longitudinally, substantially as described.

2. In a violin-bow, the combination with a movable frog of a hair-clamp mounted therein and comprising a clamping-box having horizontal slots cut in its walls for the insertion of the ends of the hair, a plunger in said box, and a screw for moving said plunger toward the top of the box whereby the hair is clamped between it and the top of the box, substantially as described.

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

ALBERT GUSTAVE KRETSCHMAR.

Witnesses:
JAMES T. WATSON,
JOHN H. BRIGHAM.