W. G. BRYANT.

VIOLIN BOW.

APPLICATION FILED MAR. 20, 1909.

965,072. Patented July 19, 1910.

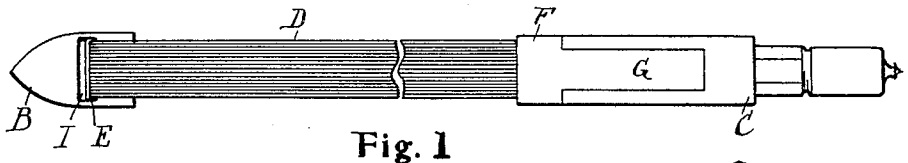

Fig. 1

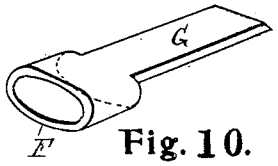

Fig. 10.

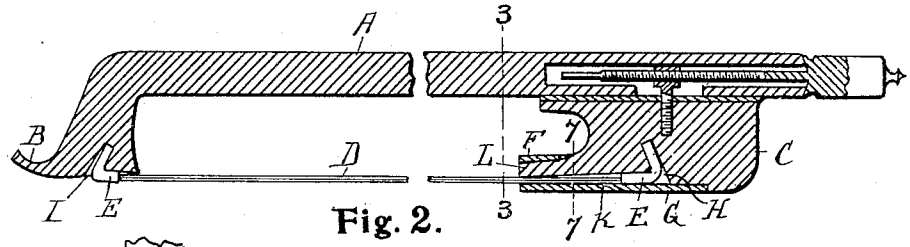

Fig. 2.

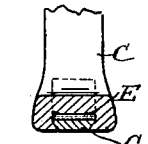

Fig. 7.

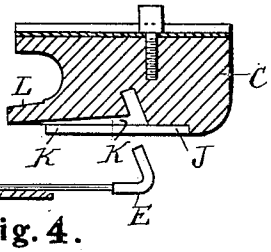

Fig. 4.

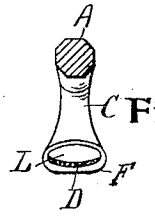

Fig. 3.

Fig. 5

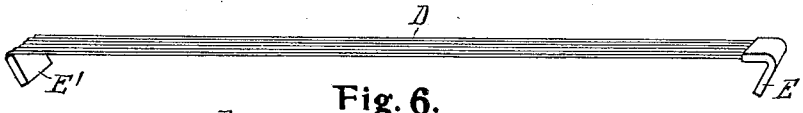

Fig. 6.

Fig. 9.

Fig. 8.

Witnesses

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UNITED STATES PATENT OFFICE.

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VIOLIN-BOW.

965,072. Specification of Letters Patent. **Patented July 19, 1910.**

Application filed March 20, 1909. Serial No. 484,836.

To all whom it may concern:

Be it known that I, WILLARD G. BRYANT, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Violin-Bows, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to violin bows and an object of my improvements is to provide an improved bow in which the hairs may be adjusted by one mechanically unskilled in such work. I attain this object in the device shown in the accompanying drawings, in which,—

Figure 1 is a plan view, partly broken away, of a violin bow embodying my invention. Fig. 2 is a longitudinal section of the same. Fig. 3 is a section on the line 3—3 of Fig. 2 looking from the left of the section plane. Fig. 4 is a detailed sectional view showing the frog and end of the hairs and attaching parts separated from each other. Fig. 5 is a perspective view of the hairs with their attaching ends. Fig. 6 is a view similar to Fig. 5, showing a modified form of one of the attaching ends. Fig. 7 is a section on the line 7—7, Fig. 2, looking from the left of the section plane. Fig. 8 is a detailed sectional view of a part of the hairs and attached end, showing the form of Fig. 5. Fig. 9 is a detailed section similar to Fig. 8, showing the form of attaching end at the left of Fig. 6. Fig. 10 is a detailed view of the ferrule utilized to bind the hairs to the frog.

A is the rod of a violin bow, B is the head, C the frog.

D indicates the hairs, E, E are the attaching ends, made in the shape of an enveloping ferrule bent back upon itself at an angle, as shown, the hairs extending substantially through the ferrule, or from end to end thereof. The frog C is cut away and forms a projection smaller at the left end and gradually increasing in thickness toward the body of the frog, as indicated at L, Figs. 2 and 4.

F is a sleeve having an extension G. The sleeve F is adapted to fit tightly over the projecting portion of the frog C at L, so as to bind the hairs against the lower surface of the frog and to confine said hairs to a definite form, as indicated in Fig. 3, and to more certainly distribute and shape the hairs the projection L has a convex surface, as indicated in said figure.

H is a slot cut in the frog C, extending inward from the lower portion of said frog and slanting toward the head B, as indicated in Fig. 2. I is a slot similarly cut in the head B and slanting toward the frog C, as indicated in said figure. The frog C is cut away and slants from the end L inward toward the rod, as indicated at K, Figs. 2 and 4, to form a space for the ends of the hairs, which contact with the inside of the frog only at the inner end of the projection L, which as has been before pointed out is provided with a convex portion against which the hairs are held by the ferrule T. The sides of the cut away portion K are dove-tailed to admit of the passage of the projection G and to retain said projection in place. (See Fig. 7).

The modification of the attaching ends shown at the left of Fig. 6 consists in forming the ferrule as a straight piece without a bend in it which shall cause said ferrule to protrude from the head, the hairs being bent backward beyond the end of said ferrule. Of course the hairs are secured in the ferrule by cement or some similar substance, as wax or shellac.

The method of attaching the hairs is as follows:—The ferrules are placed in the slots H and I, as indicated in Fig. 2, when the frog is adjusted toward the head B. The sleeve F through which the hairs have been passed is then placed over the projecting end of the frog C at L, the projection G from said sleeve passing under the overhanging edges of the cut away portion and the sleeve passing over the projecting end of the frog C at L and binding the hairs against the lower surface of the frog C at the cut away portion. Thus the hairs are secured firmly in position and the apparatus is of such a form that the hairs may be adjusted by an unskilled person. The forward and back walls of each of the slots H and I are parallel and slant inward toward the center of the bow so that the ferrules are caused to bind against said walls and are forced more firmly into engagement therewith by the tension of the hairs.

Claims:—

1. In a violin bow, a frog having a slot therein and a projection extending toward the center of the bow, a set of hairs lying against the underside of said projection, a ferrule surrounding the ends of said hairs and fitting bodily into the slot in the frog, and a sleeve fitting over the projecting portion of the frog and clamping the hairs directly against the underside thereof, said sleeve being provided with a projection integral therewith overlying the ferrule surrounding the ends of the hairs.

2. A violin bow provided with a slot in one end thereof having a rigid wall sloping inwardly toward the center of the bow, a set of hairs, a ferrule surrounding the ends of the hairs and bent intermediate its ends at an acute angle to form a hook, the outer end of which is adapted to fit into the slot in the end of the bow.

3. In a violin bow, a frog having a slot therein and a projection extending toward the center of the bow provided with a portion convex in cross section, a set of hairs lying against said convex portion, a ferrule surrounding the ends of said hairs and fitting into the slot in the frog, and a sleeve passing over the projecting portion of the frog and clamping the hairs against the convex portion thereof, said sleeve being provided with a projection integral therewith overlying the ferrule surrounding the ends of the hairs.

4. In a violin bow, a frog having a projection L provided with a surface convex in cross-section, hairs lying against said surface, and a sleeve F so constructed as to pass over said hairs and projection and press said hairs against said convex surface, for the purpose described.

In testimony whereof, I sign this specification in the presence of two witnesses.

WILLARD G. BRYANT.

Witnesses:
VIRGINIA C. SPRATT,
ELLIOTT J. STODDARD.