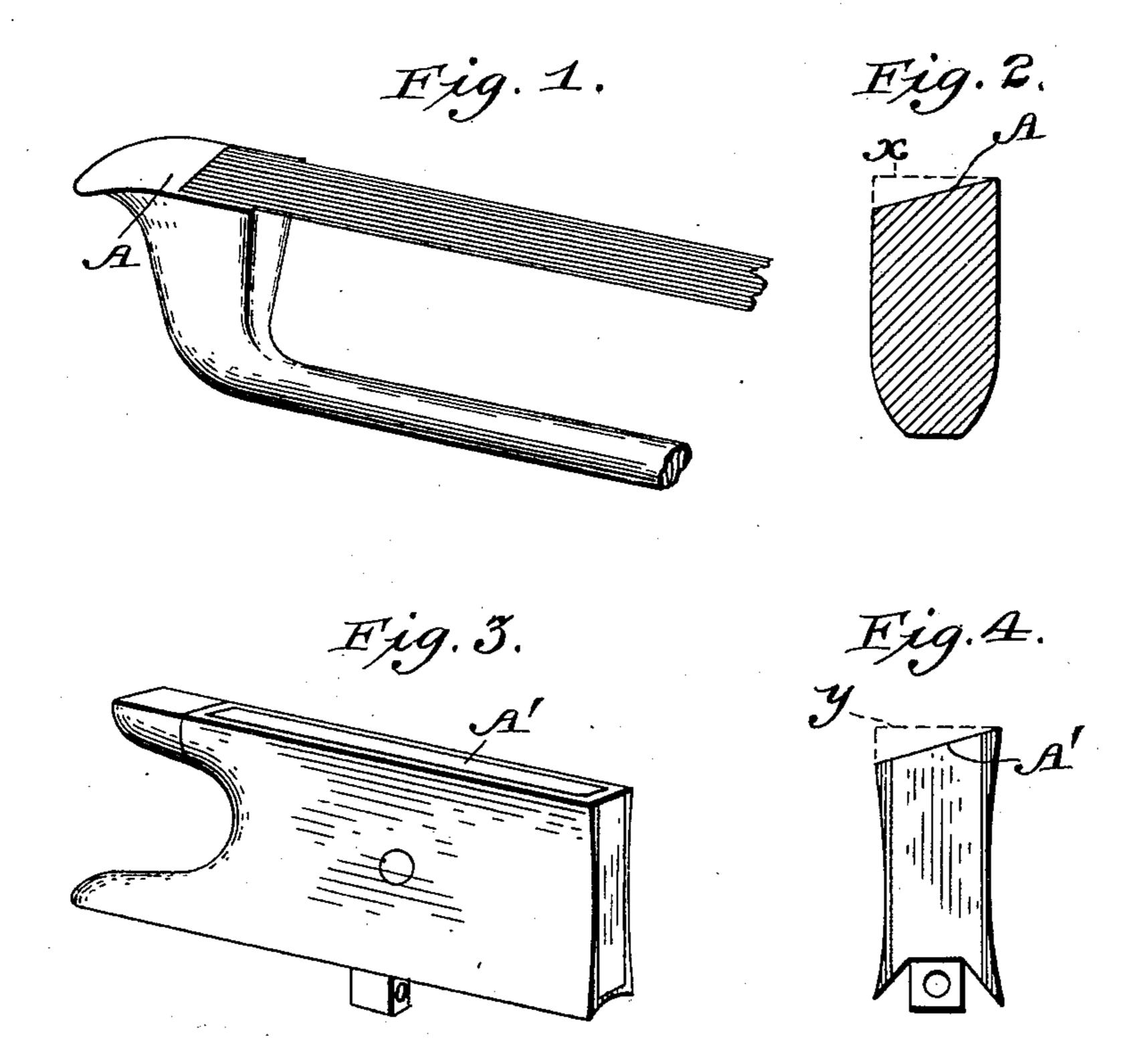
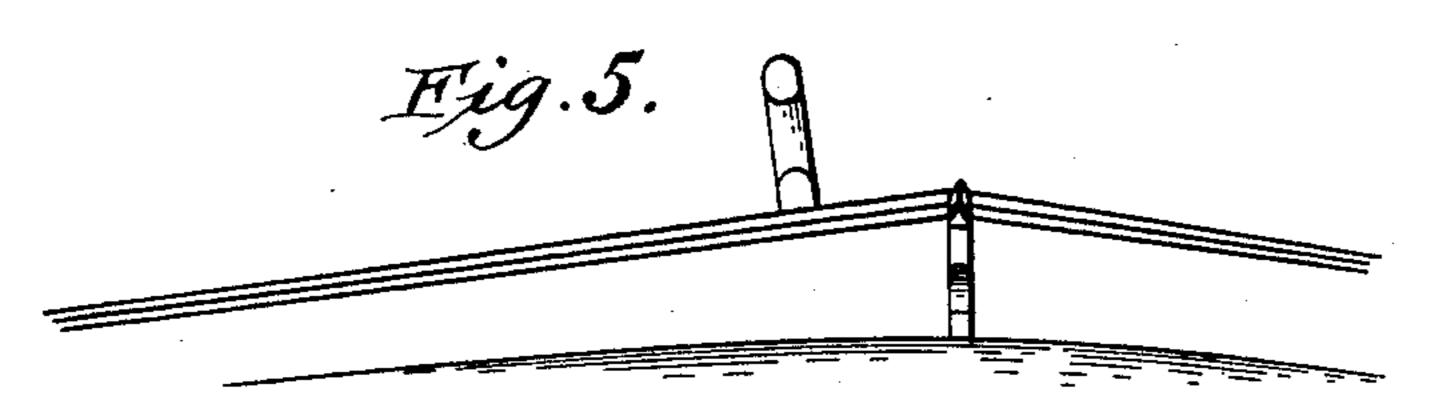
(No Model.)

## E. O. SPITZNER. VIOLIN BOW.

No. 565,395.

Patented Aug. 4, 1896.





WITNESSES

Heverauce. Fur Wright. Ernest O. Spitzner by T. J. Geislen Atty.

## United States Patent Office.

ERNEST O. SPITZNER, OF PORTLAND, OREGON.

## VIOLIN-BOW.

SPECIFICATION forming part of Letters Patent No. 565,395, dated August 4, 1896.

Application filed March 23, 1896. Serial No. 584,546. (No model.)

To all whom it may concern:

Be it known that I, ERNEST O. SPITZNER, a subject of the Emperor of Germany, having declared my intention to become a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented a new and useful Improvement in Violin-Bows, of which the following is a specification, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to the manufacture of bows used in playing stringed instruments, as the violin, viola, violoncello, and double bass; and its object is to incline the face of the hair so that when the bow is brought in contact with the strings and is being properly drawn across the same it will present a full breadth of hair, the bow from end to end evenly vibrating the strings.

Referring to the accompanying drawings, Figure 1 is a perspective view of the upper end of a bow. Fig. 2 is a vertical section of the same. Fig. 3 is a perspective view of the frog. Fig. 4 is a vertical end view of the same, and Fig. 5 is an illustration of the well-known inclined position in which a bow when properly handled is drawn across the strings.

The letters designate the parts referred to. As is illustrated by Fig. 5, the strings of 30 the instrument are elevated to their highest point by means of the bridge, and from here one end declines toward the finger-board. The tendency of the bow is therefore to move away from the bridge, and to overcome this 35 the trained player unconsciously inclines the stick of his bow from the bridge and exerts a sufficient counter-pressure to overcome gravity and keep the bow in its proper place, and he must at the same time skilfully ma-40 nipulate his wrist so as to not play on the edge of the hair, but to place the full breadth thereof on the strings. I am of the opinion that the full breadth of hair should be used for

the extreme piano as well as for the forte passages, and that the volume of tone should be 45 alone regulated by the force employed in pressing the bow upon the strings while playing; and in this line of reasoning I reached the conclusion that every hair in the face of the bow that can be brought in contact with 50 the strings should be brought in contact therewith, so as to obtain an even vibration and round, beautiful tone.

It is well known that a finer quality of piano can be obtained from a dozen skilled violinists playing in unison than from a single one. To facilitate the use of the bow as I have explained, and to enable the student to readily acquire the art of doing good bowing, I have inclined the face A of the head of the bow 60 and A' of the frog of the bow so that when the ends of the ribbon of hair are embedded therein the same will be in such position that when properly placed upon and drawn across the strings the full width of the ribbon of hair 65 will lie against the string played upon.

In the sectional end views, Figs. 2 and 4, the upper solid lines designated by the letters A and A' represent about the line of incline given by me to the head and frog of the bow, 70 as distinguished from the usual horizontal face of the parts referred to, (represented by the broken lines x and y.)

Having thus described my invention, what I claim is—

A bow having a head and frog, the faces of which are inclined, and hold between them in an inclined position a ribbon of hair, substantially as and for the purposes described.

In testimony whereof I have hereunto set 80 my signature, in the presence of two witnesses, this 7th day of March, 1896.

ERNEST O. SPITZNER.

Witnesses:

T. J. GEISLER, GEO. T. WATSON.