2024

THE BRAZILWOOD NICKEL-WOUND VIOLIN BOW

TECHNICAL DESCRIPTION

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Contents

1. General Description of the Brazilwood Nickel-Wound Violin Bow

The Brazilwood Nickel-Wound Violin Bow is a musical instrument, and part of a violin outfit, used to create vibrations on the strings of the violin. The bow consists of horsehair attached to a tensioned stick made of brazilwood, also known as Pernambuco wood [1]. The player holds the violin at the frog, at the bottom of the bow, and moves the bow hair along the metal strings of a violin to make sound.

The bow referenced in this document is for a full size, or 4/4, violin. The Brazilwood Nickel-Wound Violin Bow can also come in smaller sizes: 1/4, 2/4, and 3/4. The 4/4 Brazilwood Nickel-Wound Violin Bow weighs 62-65g and is 74.9cm long (**See Figure 1**). The bow is 2.7cm wide at its widest point and 0.8cm wide at its thinnest point. It is 1.3cm thick. The Brazilwood Nickel-Wound Violin Bow is $45.00 on the Fiddlershop website [2].

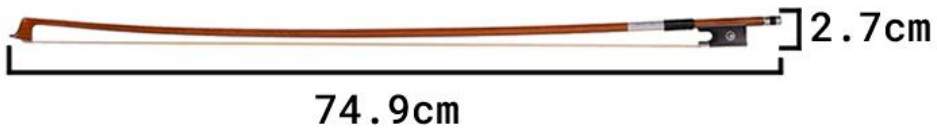

FIGURE 1: THE BRAZILWOOD NICKEL-WOUND VIOLIN BOW

2. Part-By-Part Breakdown of the Brazilwood Nickel-Wound Violin Bow

The Brazilwood Nickel-Wound Violin Bow is comprised of two parts: (1) the bow stick and (2) the frog (**See Figure 2**).

FIGURE 2: MAIN PARTS OF THE BRAZILWOOD NICKEL-WOUND VIOLIN BOW

2.1 Bow Stick

The bow stick is the main structure of a violin bow, it is the largest component of the bow and holds the hair of the bow in place. The bow stick must remain curved inwards towards the bow hair. Otherwise, when the bow stick is straight or curved outwards, the bow hair is wound too tight, which causes damage to both the hair and the stick [3]. The bow stick is 66.7cm long from the tip to the bottom of the bow grip and is 0.8cm thick (**See Figure 3**).

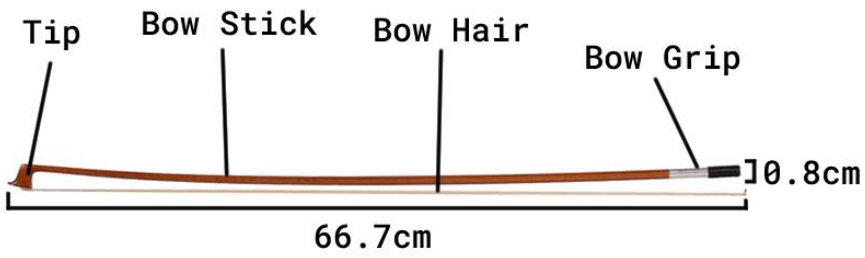

FIGURE 3: PARTS OF THE BOW STICK

The violinist will, on average, play near the balance point of the bow, which is about 33% of the way up from the bottom of the bow stick [4]. The balance point of the Brazilwood Nickel-Wound Violin Bow is 28.4cm, or 39%, up from the bottom of the bow. To play quietly, the violinist typically uses the top half of the bow stick. Consequently, the violinist uses the bottom half of the bow stick to play loudly.

The bow stick consists of four parts: (1) the stick body, (2) the tip, (3) the bow hair, and (4) the bow grip.

2.1.1 Bow Stick Body

The bow stick body is a flexible stick of brazilwood used to hold the tension of the violin bow when the hairs are tightened. Lengthwise, the bow stick body is octagonal in shape. The body of the bow stick is 60.4cm long and 0.8cm thick (**See Figure 4**).

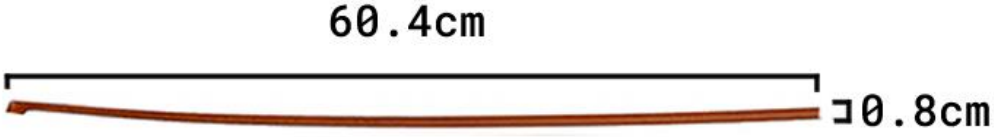

FIGURE 4: THE BOW STICK BODY

2.1.2 Tip

The bow tip is an extension of the bow stick where the hair connects to the top end of the bow. It is a curved shape with a point on the end (**See Figure 5**). Where it curves out from the end of the bow stick, the bow tip is 2.2cm wide and 2.7cm tall at its largest point. The hair is attached to the stick via the tip plate. The tip plate is made of synthetic materials as a replacement for the traditional ivory. The tip plate protects the bow hair where it connects to the bow stick at the top end of the bow. To keep balance in the bow, the tip is slightly weighted [4].

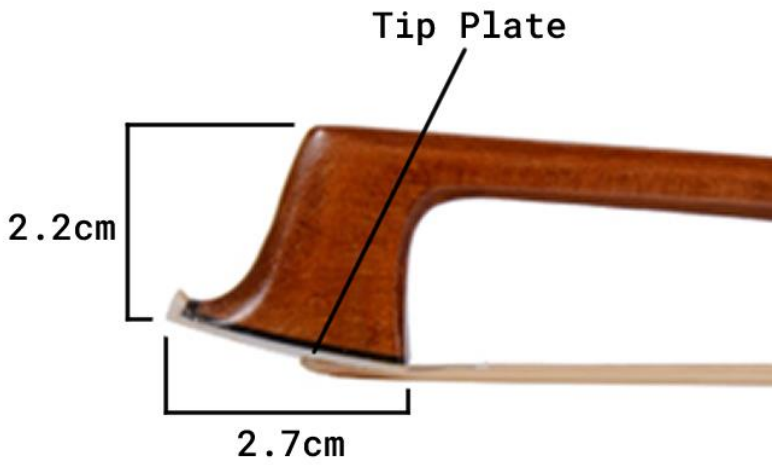

FIGURE 5: CLOSEUP OF TIP OF THE BOW STICK

2.1.3 Bow Hair

The bow hair is a coil of horsehair stretched across the violin bow and is moved across the strings on a violin to make sound. Beforehand, rosin is applied to the hair, which makes the hairs stick to the metal strings on the violin. Extensive or aggressive use of the violin bow can cause the hair to wear out. Therefore, depending on use, the bow is due for a rehair every six months to one-to-three years [5].

The hair on the Brazilwood Nickel-Wound Violin Bow is made of horsehair. Any violin bow contains 170 to 200 strands of horsehair. The bow hair on the Brazilwood Nickel-Wound Violin Bow is 65.9cm long and 1.2cm thick (**See Figure 6**) when slack.

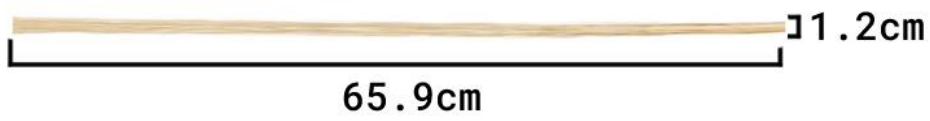

FIGURE 6: THE BOW HAIR

2.1.4 Bow Grip

The bow grip is the protective cover at the end of the bow stick where the violinist rests their fingers when playing. There are two components that make up the bow's grip: (1) the winding and (2) the thumb leather (**See Figure 7**).

FIGURE 7: CLOSEUP OF THE BOW GRIP

2.1.3.1 Winding

The winding is a metal plate used to protect the bow stick from the violinist's fingers [4]. It is composed of nickel and is 0.9cm thick and 3.5cm long.

2.1.3.2 Thumb Leather

The thumb leather is a leather pad wrapped around the bow stick where the violinist is meant to rest their thumb when playing. Like the winding, it is also used to protect the stick from the player's fingers [4]. The thumb leather is made of imitation leather and is 1.2cm thick and 2.8cm long.

2.2 Frog

The frog is a weighted mechanism attached to the end of a violin bow and is used to create space between the bow hair and the stick. This gives space for the violinist to grip the bow and allows the bow stick to have curve without the bow hair contacting it. The interior of the frog holds the mechanism for tightening and loosening the bow hair. The frog on the Brazilwood Nickel-Wound Violin Bow is 2.1cm wide and 4.4cm long and is made of ebony. It is comprised of three parts: (1) the eye, (2) the ferrule, and (3) the screw (**See Figure 8**).

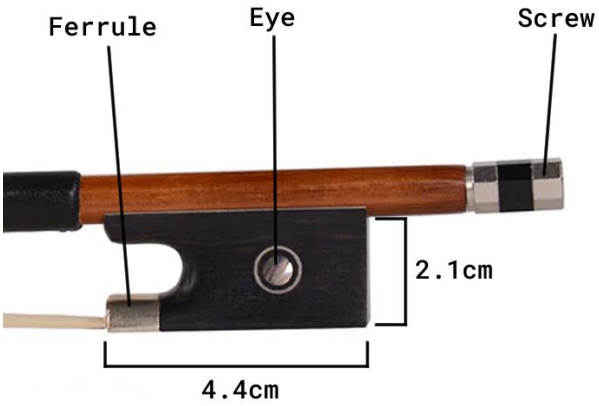

FIGURE 8: PARTS OF THE FROG

2.2.1 Eye

The eye is a decorative design on the side of the bow's frog made with mother of pearl [2]. The Brazilwood Nickel-Wound Violin Bow's eye comes with two design options: the "classic" (sometimes called the Parisian Eye) double-layered circle or a Fleur-De-Lis. The circular eye is 1.0cm in diameter and the Fleur-De-Lis eye is 1.9cm long and 1.2cm wide (**See Figure 9**).

FIGURE 9: CLOSE UP OF THE CIRCULAR EYE AND THE FLEUR-DE-LIS EYE.

2.2.2 Ferrule

Like the tip plate, the ferrule is a small plate used to protect the bow hair where the hair connects to the bow stick [4]. The ferrule sits on the frog at the bottom end of the bow stick. The ferrule is made of metal and can be removed from the bow. The ferrule is 1.0cm long and 0.6cm thick (**See Figure 10**).

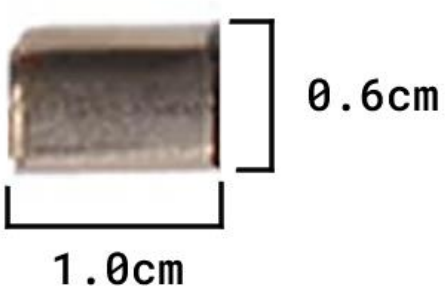

FIGURE 10: CLOSEUP OF THE FERRULE

2.2.3 Screw

The screw is the mechanism that the violinist uses to tighten and loosen the bow hair. On the Brazilwood Nickel-Wound Violin Bow, the screw is 1.4cm long and the same width as the bow stick at 0.8cm (**See Figure 11**). The screw is made of metal.

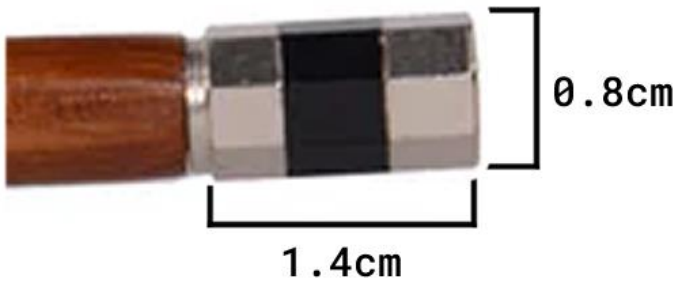

FIGURE 11: CLOSEUP OF THE SCREW

3. Conclusion

The Brazilwood Nickel-Wound Violin Bow is an accessible, quality option for a beginner violin bow. The Brazilwood Nickel-Wound Violin Bow is available on the Fiddlershop website as a part of the Tower Strings Entertainer Violin Outfit as well as on its own. This conclusion will detail the (1) Cycle of Operations and the (2) Value of the Brazilwood Nickel-Wound Violin Bow.

3.1 Cycle of Operations for the Brazilwood Nickel-Wound Violin Bow

The Brazilwood Nickel-Wound Violin Bow requires 2 different cycles of operation to detail (1) how to use the bow and (2) how to store the bow.

3.1.1 How to Use the Brazilwood Nickel-Wound Violin Bow

First, the bow is taken out of its case and the hairs are tightened using the screw. To check tension, a pencil is slid between the stick and the hairs in the middle of the bow [3]. If the pencil fits comfortably in that space, the tension is about right. Next, the bow is played on the strings of the violin to check the amount of rosin on the bow. If the bow struggles to make a clear sound or slips off the strings, rosin will be applied. When applying rosin, the chunk of rosin is rubbed against the bow hairs about 10-15 times up and down in increments of about 15-20cm until rosin has been applied to every part of the bow hairs. This process is repeated until the sound of the bow on the violin strings is warm and clear. Then, the violin is ready to play.

3.1.2 How to Store the Brazilwood Nickel-Wound Violin Bow

The Brazilwood Nickel-Wound Violin Bow must be stored inside a violin case when not in use. To ensure to damage comes to either the bow hairs or the bow stick, the bow hair is loosened using the screw. If the bow is loosened too much, the tension screw may unthread, so the bow must only be loosened until the hair is slack [5]. Then, the bow is put in the case, fastened in place so the bow does not slip around inside the case. The violin case is kept in a stable, preferably room-temperature, location.

3.2 Value of the Brazilwood Nickel-Wound Violin Bow to the User

The Brazilwood Nickel-Wound Violin Bow is an excellent choice for beginner violinists. Compared to other violin bows, the Brazilwood Nickel-Wound Violin Bow is a low price for the quality of the bow. The Brazilwood Nickel-Wound Violin Bow offers a clear sound, one that is of a higher quality than that of carbon fiber bows at the same price [2]. When the bow wears out, buying a new Brazilwood Nickel-Wound Violin Bow costs less than rehairing the old one [2]. The Brazilwood Nickel-Wound Violin Bow is made for beginner violinists and functions as a good replacement bow.

References

[1] A. Fein and I. Truong, “Pernambuco Wood or Carbon Bows- Which Are Better?,” *Feinviolins.com*, Apr. 29, 2020. http://blog.feinviolins.com/2020/04/pernambuco-wood-or-carbon-bows-which.html (accessed Nov. 12, 2024).

[2] “Brazilwood Nickel-Wound Violin Bow,” *Fiddlershop*, 2024. https://fiddlershop.com/products/brazilwood-silver-wound-bow-1-4-to-4-4?_pos=1&_psq=brazilwood&_ss=e&_v=1.0&variant=32123965308979 (accessed Nov. 12, 2024).

[3] A. Tobin, “Violin Bows- Too Tight, Too Loose, Just Right,” *Feinviolins.com*, Jun. 04, 2011. http://blog.feinviolins.com/2011/06/bow-tension-how-much-is-enough.html (accessed Nov. 12, 2024).

[4] “Parts of the Violin Bow: A Complete Overview,” *Violinspiration*, Apr. 13, 2021. https://violinspiration.com/violin-bow-parts/ (accessed Nov. 12, 2024).

[5] D. Krein, “Bow Care 101,” *Feinviolins.com*, Apr. 30, 201AD. http://blog.feinviolins.com/2011/04/bow-care-101.html (accessed Nov. 14, 2024).