anatomy of the

Violin & Bow

The first violins were created in the early 16th century in Italy, as evidenced in paintings by Italian Renaissance painter Gaudenzio Ferrari. These paintings depict musical instruments that have visual similarities to the modern day violin such as curved front and back plates, 3 strings that feed into peg boxes with side pegs, and f-holes. The image below illustrates the various parts and functions of a modern day violin.

VIOLIN

A. SCROLL The scroll is located at the top of the violin. It is a decorative part that is usually hand carved into a curved design.

B. PEGBOX & TURNING PEGS The pegbox is where the tuning pegs are inserted, and is where the strings are attached at the top. The end of the string is inserted into a hole in the peg, which is then wound in order to tighten the string and adjusted to tune the violin.

C. NUT - The nut has four grooves that support the strings so they are evenly spaced and at a good height from the fingerboard.

D. NECK & FINGERBOARD The neck is the long piece of wood that sticks out from the body of the violin and supports the strings, holding much of the strings' tension. The fingerboard is a strip of wood glued onto the neck of the violin underneath the strings. When a violinist plays, the player presses down the strings on the fingerboard, thus changing the pitch.

E. STRINGS A violin has four strings that are tuned a fifth apart to the following notes: G-D-A-E, from lowest to highest. Strings can be made from different materials, such as aluminum, steel, and gold, as well as animal intestines.

F. BODY The largest part of the violin is the hollow body. Its main function is to amplify the sound of the strings. The body is made up of the back, belly (top) and ribs (sides).

G. C BOUTS (WAIST) The violin has cutouts in the middle on both sides, known as the waist or c-bouts, to make room for the bow and give the violin body its distinctive shape. C bouts allow the bow to pass over the strings at a variety of extreme angles without hitting the side of the body.

H. F HOLES The F holes are located in the middle of the violin. It is called an "F hole" because the hole is shaped like a cursive "f." After the vibration from the string reverberates within the body of the violin, the sound waves are directed out of the body through the F holes. Altering the size of the F hole can affect the sound of the violin.

I. BRIDGE - The bridge supports the strings at the lower end of the violin and is held in place by the strings' tension. The position of the bridge is essential as it directly relates to the quality of sound produced by the violin. Bridges come in varying angles of curvature. A smaller angle makes it easier to play two or three strings at the same time. More curved bridges make it easier to hit the right notes without scraping across a wrong string.

J. TAILPIECE The tailpiece holds the strings at the bottom of the violin, close to the player's chin, and is attached to the violin with the end button.

K. FINE TUNERS Fine tuners can be found either on all four strings, or just the E string. They are essentially a screw that presses down a lever that then tightens the string fractionally.

L. CHIN REST While playing, the violinist can use his chin to hold the violin in place. Both hands can be freed up - one hand to move up and down the fingerboard and the other to use a bow.

M. END BUTTON The end button holds the tailpiece firmly in place. It is found at the end or bottom of the violin body and is usually made from a hardwood like ebony or rosewood.

BOW

N. TIP Rounded and slightly lifted, the tip of the bow is where the hair connects directly to the bow stick. The tip is where you will find yourself if you want to produce the most quiet sounds possible on the violin. Because it is so far from the frog, it has very little weight which makes it easier to reduce the volume you are producing.

O. STICK The main stick of the bow is usually made of wood, sometimes with a metal core. The stick needs to be supple and flexible to be able to support the tightening and loosening of the bow hair. A good bow should be light, and have a balance point which allows the violinist to perform advanced technical movements.

P. BOW HAIR The hair of the bow is the part that touches the string when playing. Usually made of either a synthetic material or horse hair, these strands need to be well-rosined to produce sound. If the bow hair is not well rosined, it slips on the string and produces a softer, whisper-like tone.

Q. GRIP The grip, or pad, is where one places their first finger on the bow. It is just above the frog on the bow stick. There are two parts to the grip - one is the rubber or leather material at its base and the other is the metal winding that extends towards the tip.

R. FROG The frog is the part of the bow that the violinist holds. The frog is where all the mechanics of the bow happen.

S. TENSION SCREW The tension screw is on the end of the frog and tightens and loosens the bow hair to create the desired amount of tension.