GETTING THE MOST FROM NYLON STRINGS.

By Joel Hooks.

Nylon strings for banjos are becoming more popular everyday. The biggest complaint that I hear is that they are too quiet. There are a number of factors that can cause this. Most can be altered with little to no cost. I would like to share how I get the most from my banjos while using nylon strings.

One of the important things to consider is the construction of the modern banjo. Steel strings became popular around 1900 and by the 1920's gut strings for banjos were mostly a thing of the past. To keep up with the times, banjo manufacturers began to incorporate improvements to withstand the added tension of wire strings. Elements like steel reinforced necks and thicker rims were necessary to keep the instrument neck straight and the pot round. Modern banjos are overbuilt for steel strings.

The main banjo component that affects the sound and volume is the bridge. Today one can purchase all kinds of bridges. Some are made from hundred year old wood, wood from the bottom of a lake, more arches, less arches, etc. These all have one thing in common, they are designed for wire strings.

In the 19th century, gut strings dominated the banjo world. In that era, banjos were built for getting the most out of gut strings. Converse wrote in *Frank B. Converse's Analytical Banjo Method, 1886,*

> "The tone is also affected or qualified by the bridge, the material of which it is constructed, its height, and location upon the drum. A bridge of pine causes a sharp and short sound; if of maple, ebony, or any material of greater density than pine, a softer tone is obtained. It should be high enough to remain firmly in its position under pressure of the strings, and when located at one third the distance from the end (rim,) the most powerful and musical tone of the instrument will be obtained."[1]

The most common shape of bridges sold in the late 19th century was the two-footed variety. They are also much smaller then the modern counterparts. The size used during this era was typically 1/2". The standard today is 5/8".

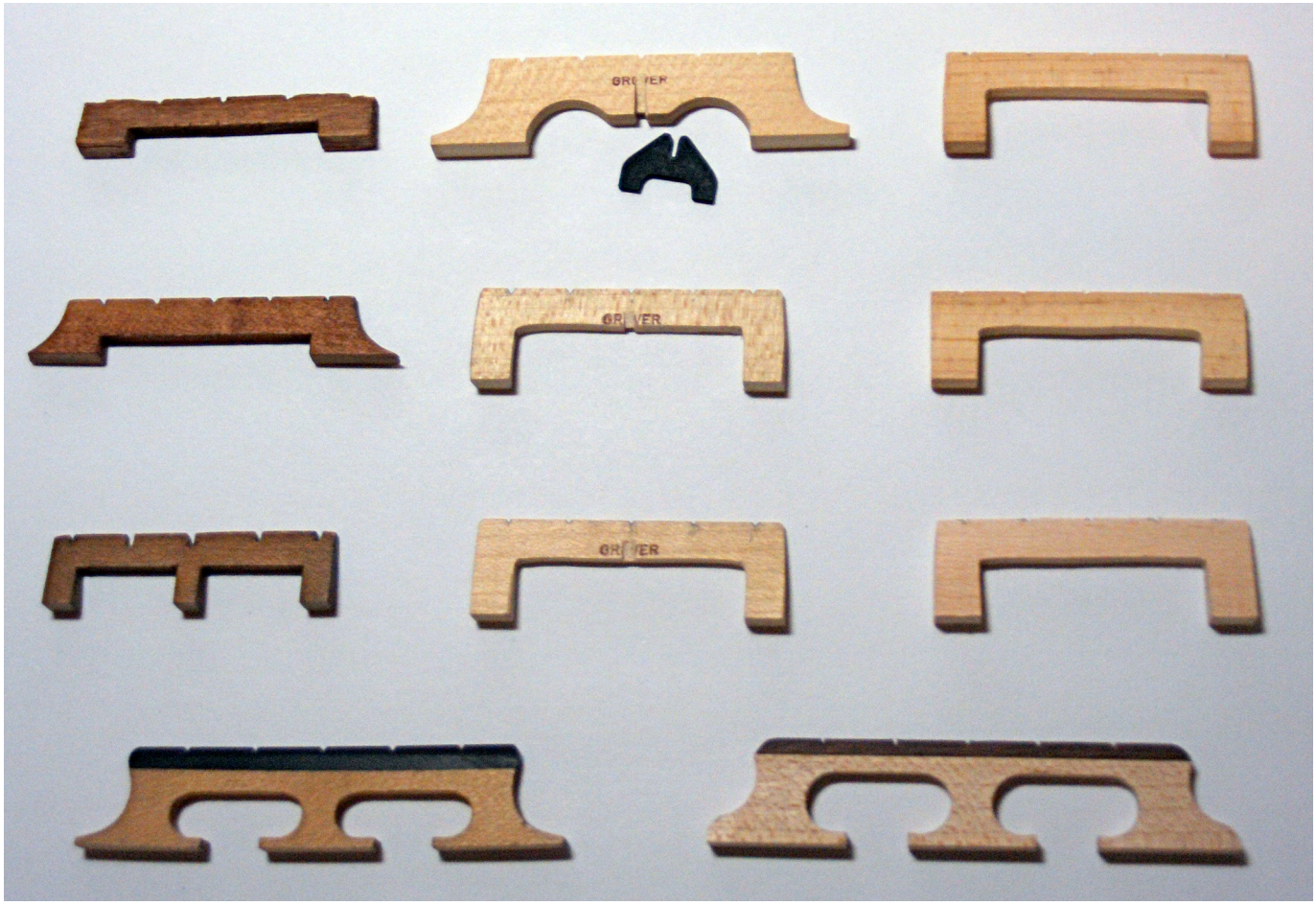
The ebony cap of modern bridges is the first part that needs to be removed. It greatly increases the weight of the bridge and muffles the sound. Next, remove the center foot. It was incorporated to prevent sagging caused by the tension of steel strings and is not necessary when using nylon. We are left with a simple two-footed bridge, built using only one type of wood.

Look at the examples in the photo. The bridges on the left are some of the antique bridges I have. Notice the size. The last in that row came off of an English banjo, and is a later make. Even with the center leg, it is very small.

Next, are the maple Grover two footed bridges with a center support to keep them from tipping over.[2] These are modern and are readily available. Compare the top bridge with the next two in the column. I used a one-inch belt sander to remove quite a bit of wood, and that made them closer in size to the older style.

In the last row are some that I cut from scratch. The top two are made from pine and the third from basswood. Basswood is my favorite material because gives me the most volume and sharpest tone. Surprisingly, I have had no problems with sagging, breaking, or the string notches wearing out. These woods are very easy to work with. Anyone could make their own bridges using very basic tools.

Finally, compare all the above with the two at the bottom of the photograph. It is astonishing to see the size difference. Various devices have been invented for dampening or to mute the volume of the banjo. Most of these attach to the bridge. This adds mass and prevents the bridge from vibrating and transmitting sound to the head. The large, heavy, modern makes do exactly that when using nylon strings.



Another key factor in banjo tone is the head. Calfskin is the most desirable. Choose a thin processed white head and keep it tight. You do not need to bother with "pre-mounted" hide, putting them on is very easy. Hide does have its drawbacks. In damp weather it will get soft and the sound will become muffled. In fact any change in the weather will require tuning adjustment.

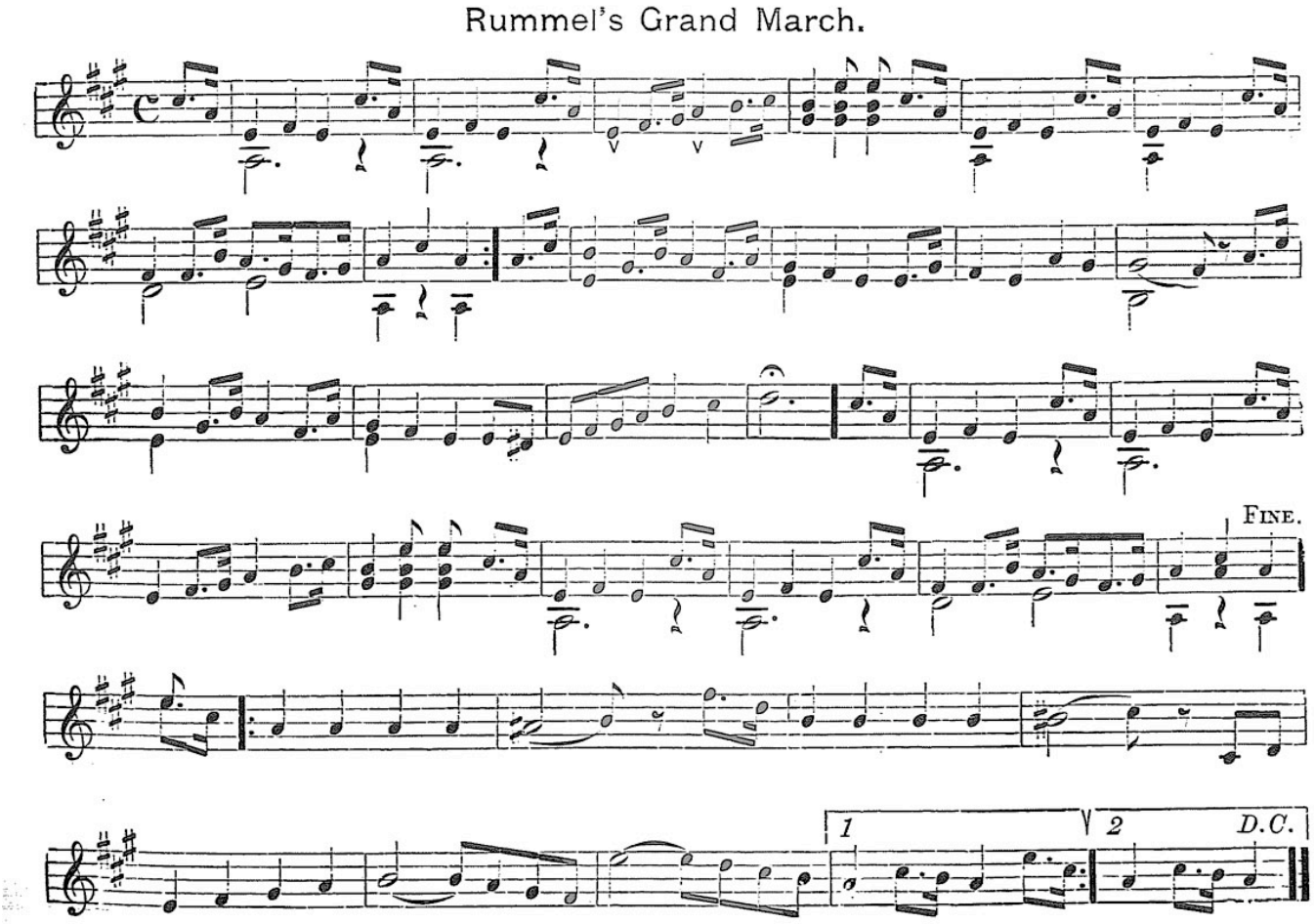
For the best in weather proof, the plain white top frosted plastic head is best. Once again, keep it tight. A small amount of acetone on a cotton ball will remove any brand stamp, but work slowly and gently. Contrary to current popular opinions, this style has a more appropriate look for a late 19th banjo then the unprocessed skin. Avoid the plastic heads that are made to look like "cowhide" because they are thick and can stifle the volume.

Other factors that contribute to volume and tone include finishes, wood types, rim construction, and tailpieces. A book could be written on tailpieces alone. Most of these cannot be altered quickly and cheaply. With a few small changes most banjos can be made to sound great with plenty of volume.

We will never know for certain what banjos and players sounded like in the mid to late 19th century, when gut strings were the most popular. Thomas Edison perfected his phonograph in 1888. Late 1890s and early 1900s recordings by Fred Van Eps and Vess L. Ossman point towards a brighter staccato sound. Contemporary periodicals and catalogs also support this using the terms "Bell like," "sharp and brilliant," and "snap." In *S. S. Stewart's Banjo and Guitar Journal* it is common to read the word "tubby" as derogatory. Just like today, musical tastes were constantly changing with the times.

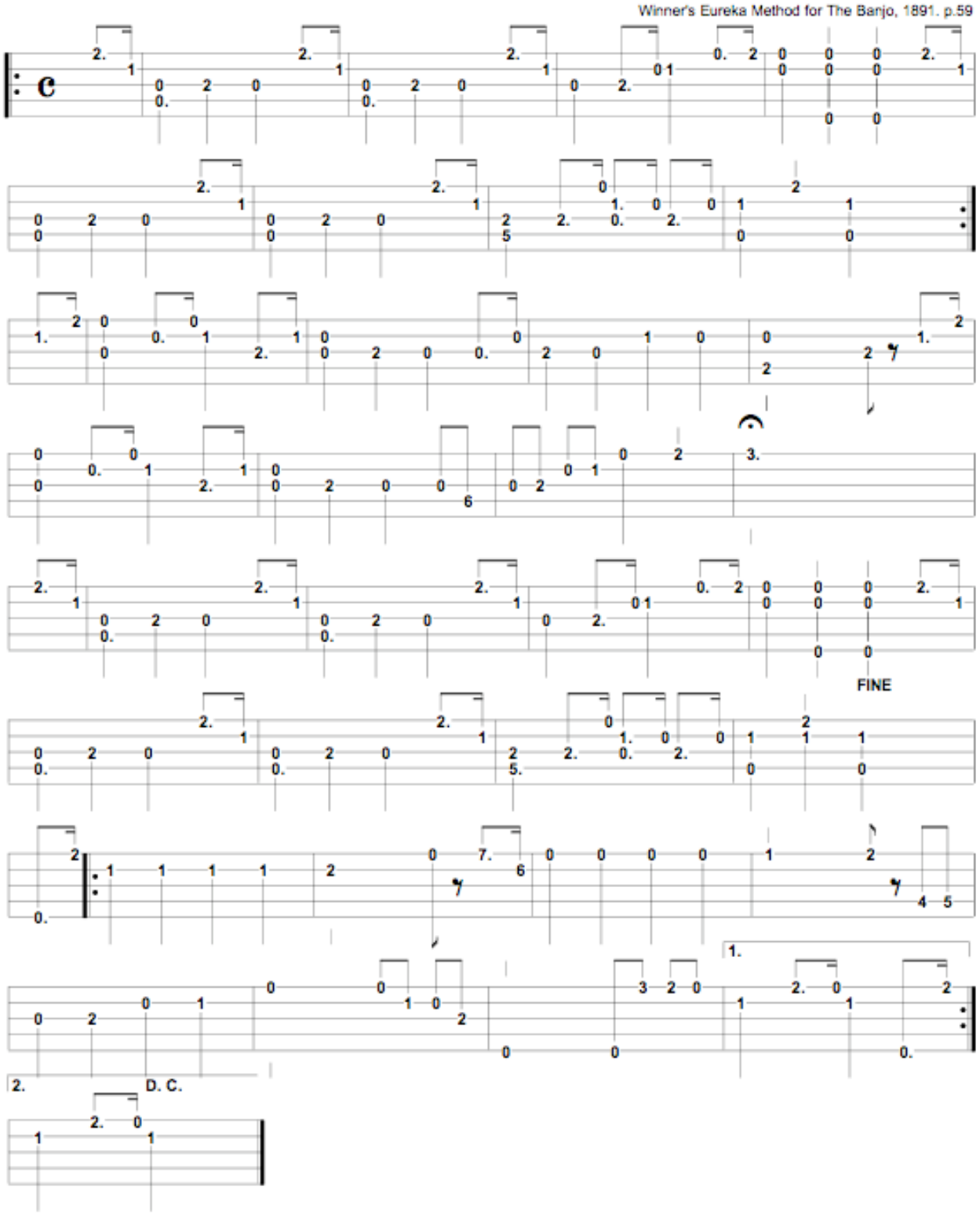
Modern open-back "old time" banjo players tend to go for a deep "plunk" like sound. Today, it is not uncommon for builders to shorten the scale in order to position the bridge towards the center of the head. Another relatively modern element is to "scoop" the neck. This, like a lot of these designs are to tame the shrillness of wire strings and is counterproductive for clarity and power of tone when using nylon.

"Rummel's Grand March" comes from *Winner's Eureka Method for the Banjo,* 1891 page 59, original courtesy of www.classicbanjo.com. Played in guitar or finger style and written in common time. Scruggs style players should have no problem with it. Classic banjo pieces are written in standard "C" (gCGBD) tuning unless otherwise noted.



RUMMEL'S GRAND MARCH.

Transcribed by Joel Hooks 2008



Rummel"s grand March MP3

Download the MP3: http://banjosessions.com/dec08/RummellsGrandMarch.mp3

A correction for my last article is needed. The thimble is not worn on the ring finger, but the first finger of the right hand.

About The Author:

Joel Hooks was born and raised in Dallas Texas. He has been interested in music his whole life. As a reenactor of the late 19th century American West, he began to study historical banjo styles about three years ago. Since then, he has built a minstrel style fretless banjo. He also plays the bones, harmonica, and has recently taken up the fife and guitar.

Visit Joel at http://TheJoelHooks.com

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[1] Frank Converse *Frank B. Converse's Analytical Banjo Method.* (Hamilton S. Gordon, New York 1887,1887). Courtesy of Tim Twiss' collection http://www.milfordmusic.com/Banjo%20Audio.htm

[2] U.S. patent 769,649 issued September 6, 1904