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Epoxy Pro Success Story – Clarinet Clarity



Resin Restorations Ensure Woodwind Wellness

Music is enjoyed in so many ways - for relaxation, to elevate the spirit and alter mood, and as a stimulus for both physical activity and mentally creative inspiration. There are as many ways to listen or participate in this cultural phenomenon as there are musical styles. Dancing, singing and playing instruments are some of the great expressions of life!

Since music predates the dawn of recorded history, it is hard to pinpoint exactly when this art form began. Generally, it is thought that early mankind expressed rhythms and beats with drum style percussion-based “instruments” – probably consisting of rocks and sticks. Early wind and stringed instruments have been discovered from thousands of years ago tracing music history back to ancient and even prehistoric times.

As musical instruments continued to evolve, so too did the complexity of musical arrangements. Today, as in years gone by, composers may leverage a wide variety and number of instruments into their

compositions - from the four recognized classifications of instruments that we use today - brass, woodwind, percussion and strings.

Musical instruments all have one thing in common however, to perform at their best they must be crafted with exacting standards, maintained regularly, and repaired as needed. And the beat goes on...

Daniel Ciarcia has a passion for music. As a singer and songwriter, he has honed his skills on a number of instruments - playing the guitar, drums, mandolin – and woodwinds, such as the clarinet. Over the years, this passion has evolved from an enthusiastic hobby to a business focused on restoring vintage clarinets and offering handcrafted instruments.



The moniker *Martin Freres* that Dan acquired, is one of the original clarinet crafting companies. The Martin Brothers established their tradition of craftsmanship in France in 1740, and their own firm in 1840. It is this history and spirit that Dan honors today with his own efforts to source only the best materials and follow the old-world manufacturing dictates of handcrafted attention to detail and quality.



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The clarinet easily lends itself to being worthy of the respect of time-honored restoration techniques. The woodwind instrument is generally believed to have been created around 1700 by Johann Christoph Denner, a woodwind maker of some renown, in Nurnberg, Germany. Denner improved upon the clarinet's predecessor, the chalumeau (a small mock trumpet) by improving the reed pipe and elongating the barrel thereby enabling playing in the upper register with steadier, clearer notes. (source: [Encyclopedia Britannica](#))

Antique and vintage musical instruments consist of components that are decades, and at times hundreds, of years old. The wooden barrels and bells that make up the majority of the clarinet for instance, take on an attractive patina over time, but age and use may also lead to cracking and therefore the need for restoration. That's where Dan's expertise comes into play...

A recent clarinet refurbishment featured the repair of a "barrel through-crack repair," whereby the instrument had suffered a hairline fracture in the Grenadilla wood that hampered the integrity of sound due to air leaks causing the instrument to be unplayable (see image).



Clarinet Barrell with "crack through"

Dan prepared the barrel for repair by lightly sanding the piece with 150-grit, then 250-grit sandpaper, then fine steel wool. From a scrap piece of Grenadilla wood from his stock, he made a small pile of wood shavings and dust to mix into the epoxy resin for tint to match the instrument. Then the mixture was applied to the barrel crack using a hard-bristle artist's brush to apply the epoxy...



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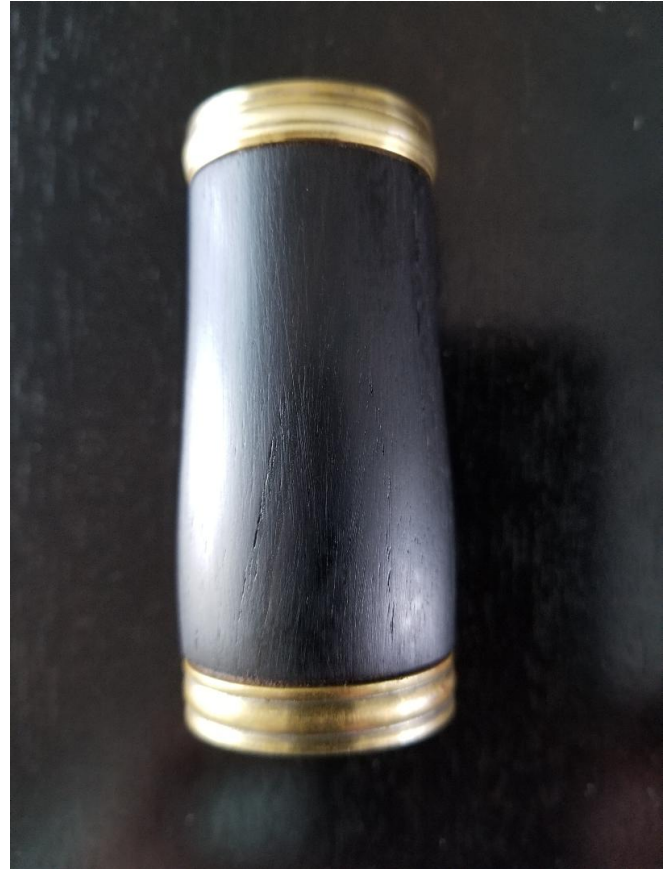


Grenadilla Wood Shavings & Dust



Epoxy resin mixed with wood shavings for tint

Hard woods like Grenadilla or African Blackwood, a member of the rosewood family, have been used for centuries to construct musical instruments like clarinets due to their durability. After curing, the barrel repair made the instrument fully resonant once again. The clarinet was just lightly sanded with successively higher grit sandpaper (250-5000) and wiped down with a microfiber cloth.



Restored clarinet with repaired barrel

“Many boutique clarinet makers still exist building instruments by hand in much the same way as did the early makers,” Dan explains. “The instrument evolved slowly over time from simple tubed instruments into the four-keyed clarinet that Denner created. Today’s clarinets may be 17 or 18 keys depending upon the maker and type – and the musical composition and tonality sought by composers and musicians. I’m proud to be part of this legacy – keeping the time-honored traditions of this great instrument alive!”