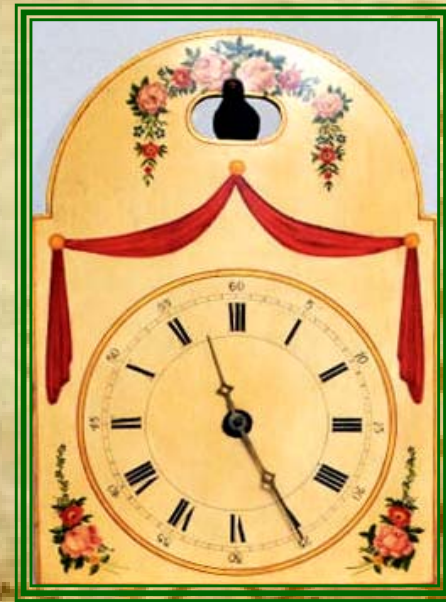


Welcome to the World of Musical Black Forest Clocks



Presentation Overview

- ❖ *Black Forest Clock Manufacturing*
- ❖ *First Patented Black Forest Clock Producing
a Musical note*
- ❖ *Variations of Trumpeter, Flute Clocks and other
Black Forest Musical Clocks*
- ❖ *Musical Clock Repair Overview*
- ❖ *Various Black Forest Clock Repairs*
- ❖ *Questions and Answers*

The History of Black Forest Clocks

- ❖ Black Forest clock production started in the mid 17th century as part of an in-house cottage industry for farmers to supplement their income during the long cold winters.
- ❖ The first series of clocks were for practical use and in simple design. Popularity of clocks from Black Forest grew and plates and dial face became more sophisticated.



The History of Black Forest Clocks

- ❖ Black Forest clocks gained popularity especially the famous cuckoo clocks, which were developed in their typical style in 1854.
- ❖ For a long time, the cuckoo clock was attributed to Franz Anton Ketterer, a clockmaker of some repute from the Black Forest village of Schönwald.
- ❖ It was believed that Ketterer created the cuckoo in the 1730s, inspired by the bellows of church organs to adapt the technology in lieu of the chimes then typically used in clocks.



1700's Black Forest Shield Clock



Early shield clocks had both wooden gears and were rope driven movements. As manufacturing production techniques progressed these would become all brass in the second half of the 18th century .



Rope Drive



Jacob Bäuerle Trumpeter Clock

- ❖ Jakob Bäuerle of Furtwangen Germany had filed the first patent that combined a mechanism that produces a trumpeters call with a clock, it is estimated that he produced the first clock of this type in the year 1857.
- ❖ As shown in the photo, the very early movements were constructed of wood and had several bellows to provide the air pressure to the reeds for the trumpeter sound.
- ❖ This example has three horns to sound the notes which is supported by three bellows that provide the air to the reeds.





*“Emilian Wehrle”
Trumpeter and Flute Clocks*

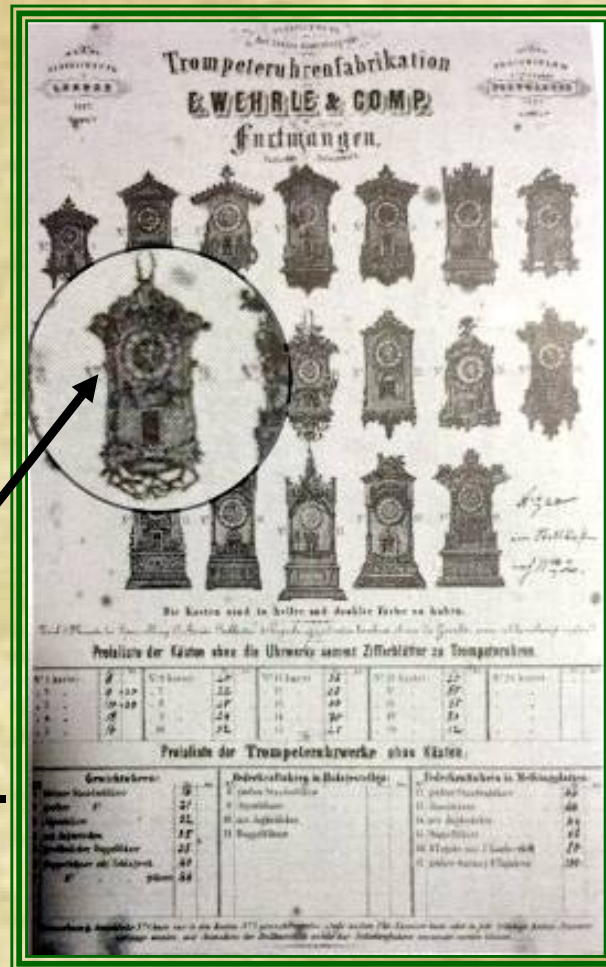
Emilian Wehrle

- ❖ Emilian Wehrle (1832 – 1896, born in Schönenbach (Furtwangen), was a reputed Black Forest clockmaker famous for his high-quality musical clocks.
- ❖ These musical clocks included the trumpeter clock, flute clock, singing bird clock, and rooster clock. These timepieces call the hour with the sound of a trumpeter, flute, bird and rooster respectively.
- ❖ Emilian Wehrle never produced clocks in high numbers compared to other Black Forest makers. Instead he developed a niche selling his expensive musical clocks to people who could afford them.
- ❖ Today these clocks are very rare and command very high prices.
- ❖ He was also a maker of cuckoo clocks, but these were not the primary focus of the firm.



Wehrle "Four Horn" Trumpeter Clock

- ❖ This early example was manufactured in the year of 1866 by the Emilian Wehrle factory.
- ❖ As shown in this 1866 Wehrle catalog of the clock.



Wehrle "Four Horn" Trumpeter Clock

- ❖ Very early 1800's four horn trumpeter clock grape leaf motif with a figure of a hunter with trumpet horn .
- ❖ This particular clock plays extremely well for a four horn.
- ❖ The tune represents a hunters call during a fox hunt.

[Four Horn Trumpeter
Clock Wehrle
\(presentaion-video\).mp4](#)



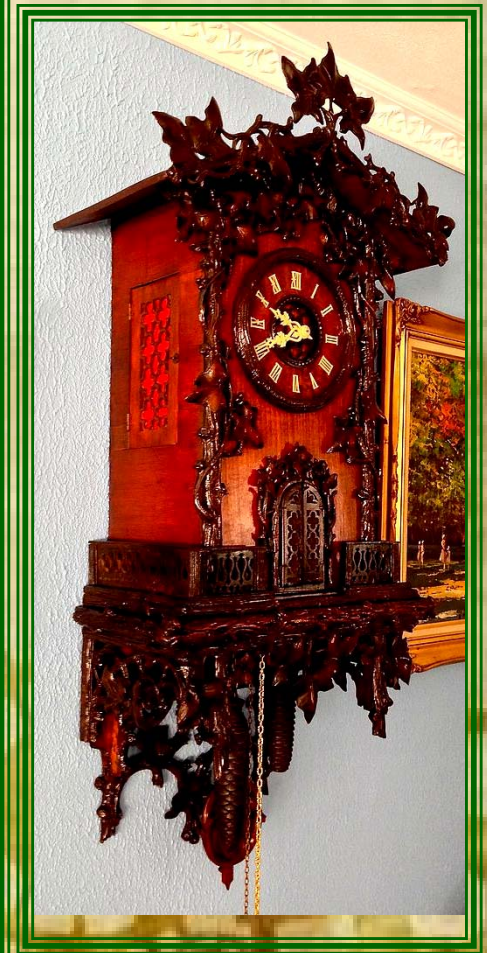
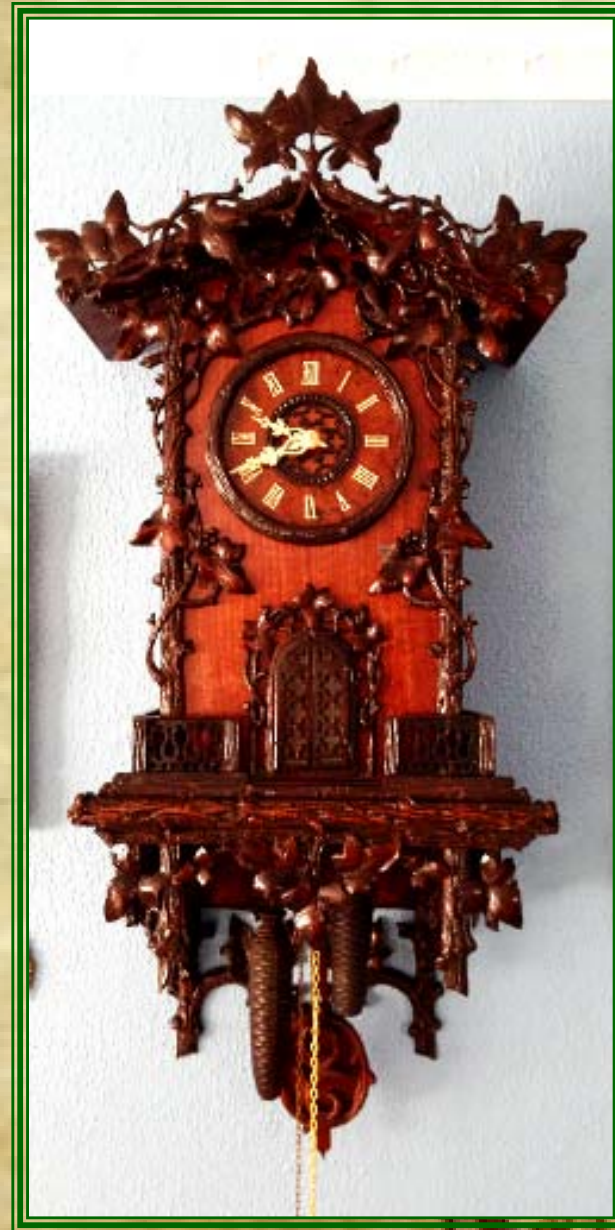
Wehrle "Four Horn" Trumpeter Clock

"Movement Restoration Photos"



Wehrle "Five Horn" Trumpeter Clock

- ❖ This clock is a very fine example of an early five horn trumpeter clock with a wood plate movement Circa 1857. This is one of the earliest clocks produced by the Wehrle factory.
- ❖ Although this is a very early production clock, the tune it produces is quite complicated.



Wehrle "Five Horn" Trumpeter Clock

Bellow pressure springs

Twin Bellows

Valve Lifting Levers and Pins

Bellows lifting levers

Pinned Music Wheel



Example of a Music Pin Wheel Mechanism

Valve Lifting Pins

Pins that lift the levers that open the air valves



Wehrle "Five Horn" Trumpeter Clock

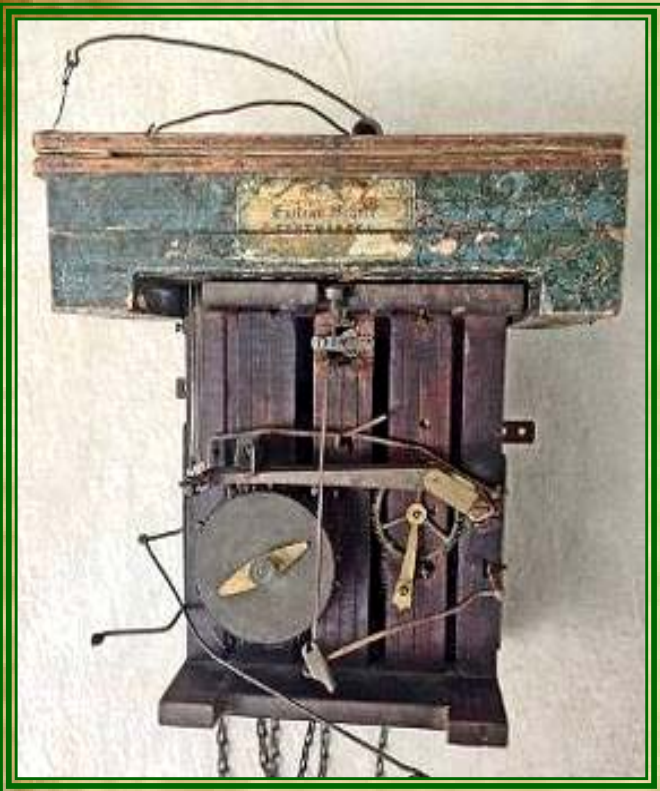
- ❖ Five horn trumpeter wood plate movement in action.

[5 horn Wehrle Trumpeter
Clock Movement
\(presentation-video\).mp4](#)

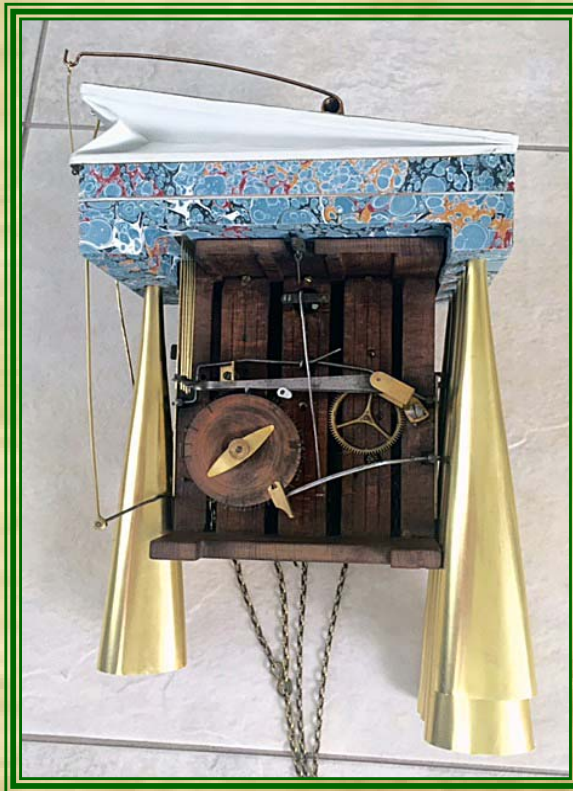


1867 Wehrle "Six Horn" Trumpeter Clock

Original Wood Plate
Movement unrestored



Restored Movement



"Six Horn" Trumpeter Clock Wind Chest

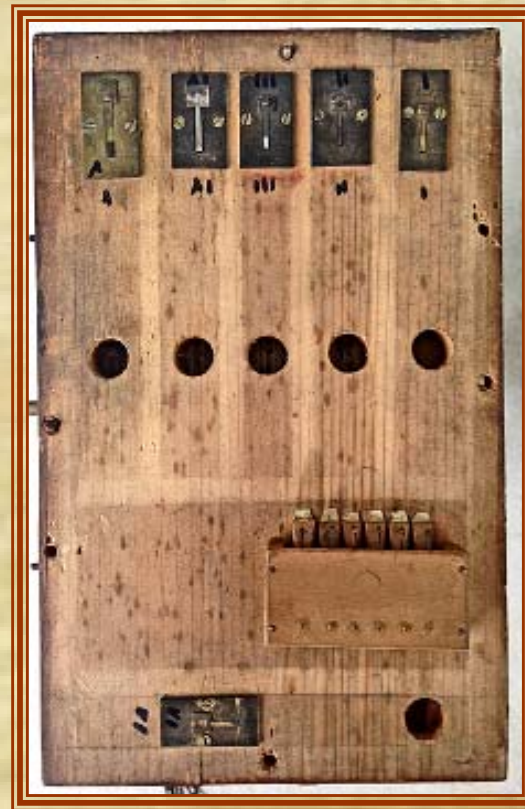
Spring Loaded
Air Valves



Air Valves



Reed Plate



Air pressure
chamber



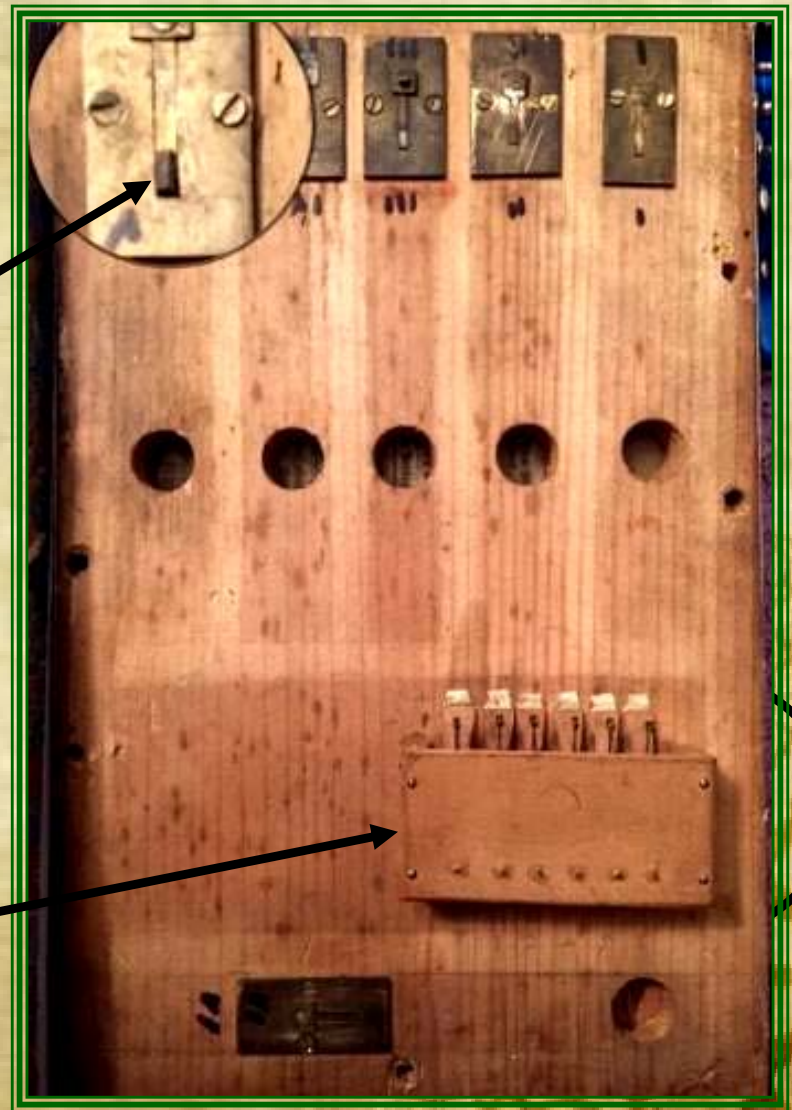
"Six Horn" Trumpeter Clock Wind Chest

Early paper used in sealing the wind-chest actually assisted in dating this five horn clock manufacturing date at 1867

Air inlet valves



"Six Horn" Trumpeter Clock Wind Chest



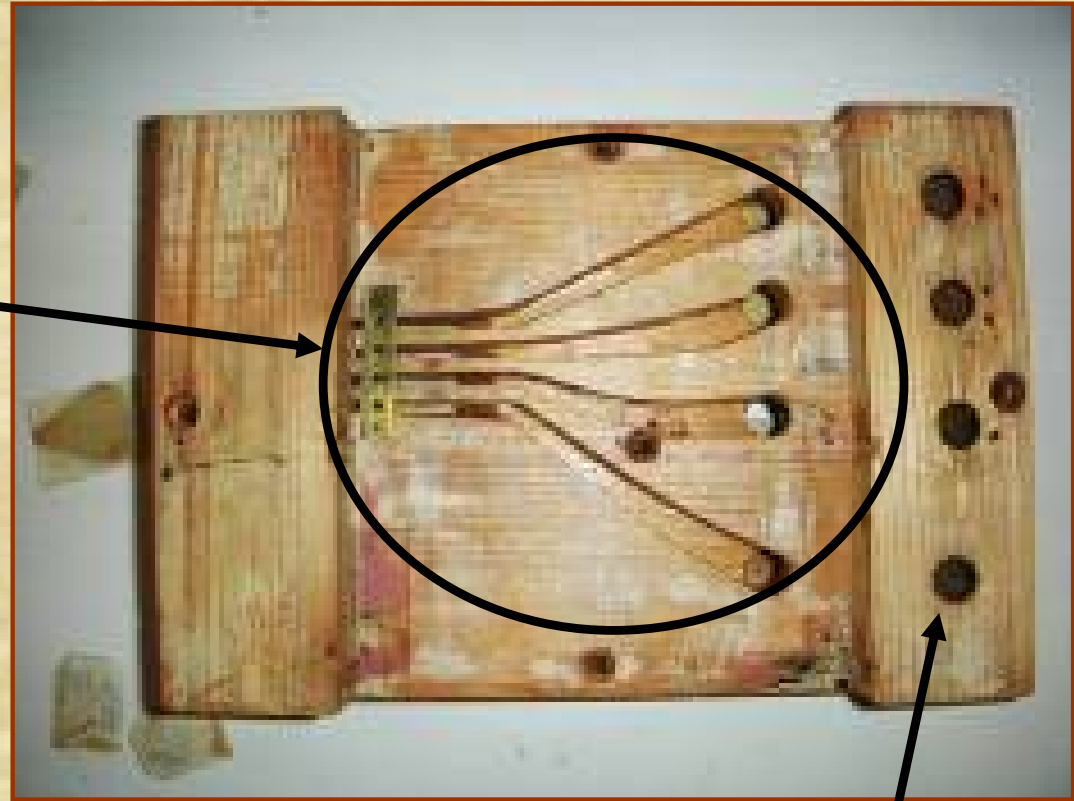
Trumpeter clock reeds

* Note this particular reed has a weight affixed to it which provides a lower pitch note.

Air valves

Trumpeter Clock Wind Chest

Air passageways from reeds to horns. Note: that the same configuration is used on flute clocks .



Mounting holes for trumpeter horns

Wehrle "Seven Horn" Trumpeter Clock

- ❖ This particular seven horn trumpeter clock was a special factory order. It has an extra large case with two quite large pheasants.
- ❖ It plays the *William Tell* overture which premiered in 1829. The tune is quite commonly found on trumpeter clocks.

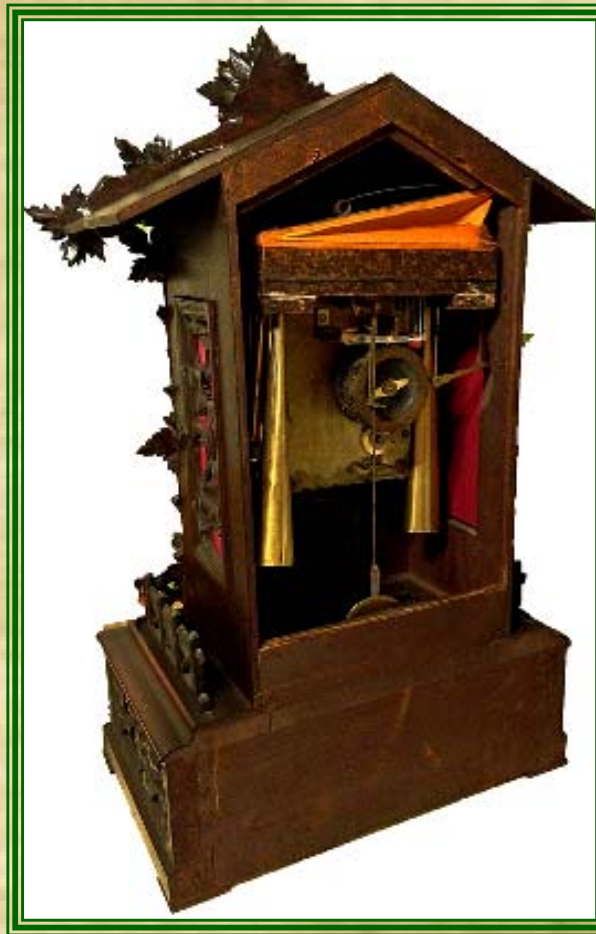


[Trumpeter Clock
Wehrle Pheasant
Motif\(presentation-
video\).mp4](#)



Wehrle "Nine Horn" Trumpeter Clock

- ❖ This is an example of a shelf style trumpeter clock that plays nine notes.
- ❖ The motif by Wehrle standards is very plain compared to the more elaborate carved clocks that depict hunting scenes.



Wehrle "Eight Pipe" Flute Clock

- ❖ Wehrle eventually gave customers the option of flute music rather than the standard trumpeter sound.
- ❖ The flute music is a more pleasing sound. At the time they were sold at a premium price due to the extra work to produce the wooden flute pipes
- ❖ Due to the high cost of the Wehrle clocks they were only purchased by the very wealthy. As compared to other Black Forest clocks.
- ❖ Today they command a very high price as the flute clock version is even rarer and very few examples exist today.

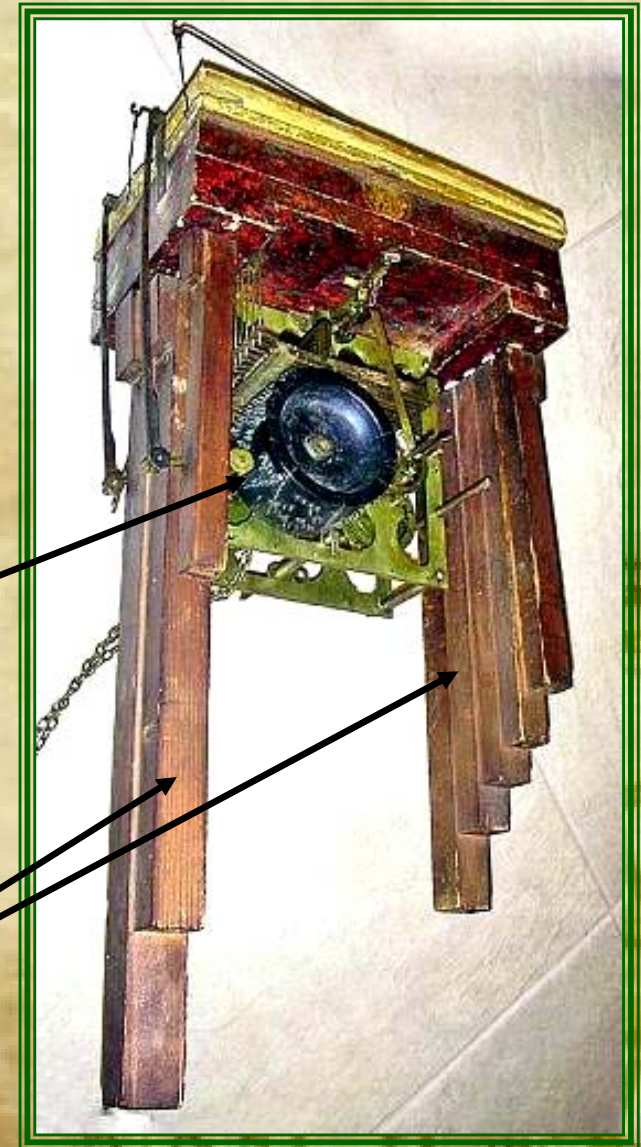
[Wehrle Flute Clock\(presentation-video\).mp4](#)



Wehrle "Eight Pipe" Flute Clock

- ❖ Eight pipe musical flute clock in its original un-restored condition.
- ❖ The flute mechanism plays "two" distinct tunes by shifting the pinned music wheel via a knob on the front chapter ring.
- ❖ Note: the size of the music wheel and the amount of pins, which is an indication of the complication of the tune and the ability to play two tunes.

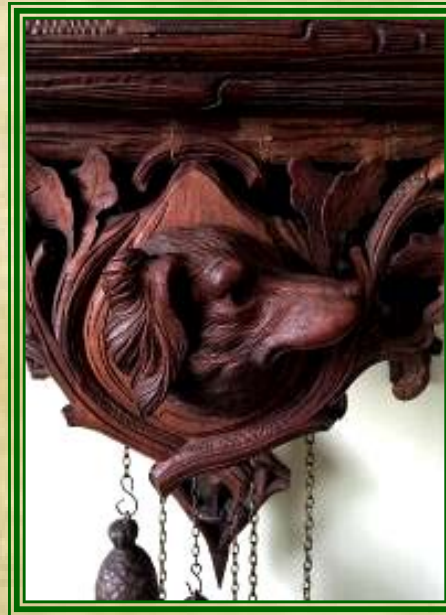
[Wehrle Flute
Clock Wind
Chest
Rebuild
\(presentation-
video\).mp4](#)



Wooden Flute pipes

Wehrle "Eight Pipe" Flute Clock

- ❖ This eight pipe flute clock is in the typical hunter motif as found on many Black Forest clocks
- ❖ This particular example also plays two tunes on eight wooden flute pipes



[Wehrle Clock
Eight Pipe Flute
Hunter Motif
\(presentation-
video\).mp4](#)



Lamy & Shone Trumpeter clock



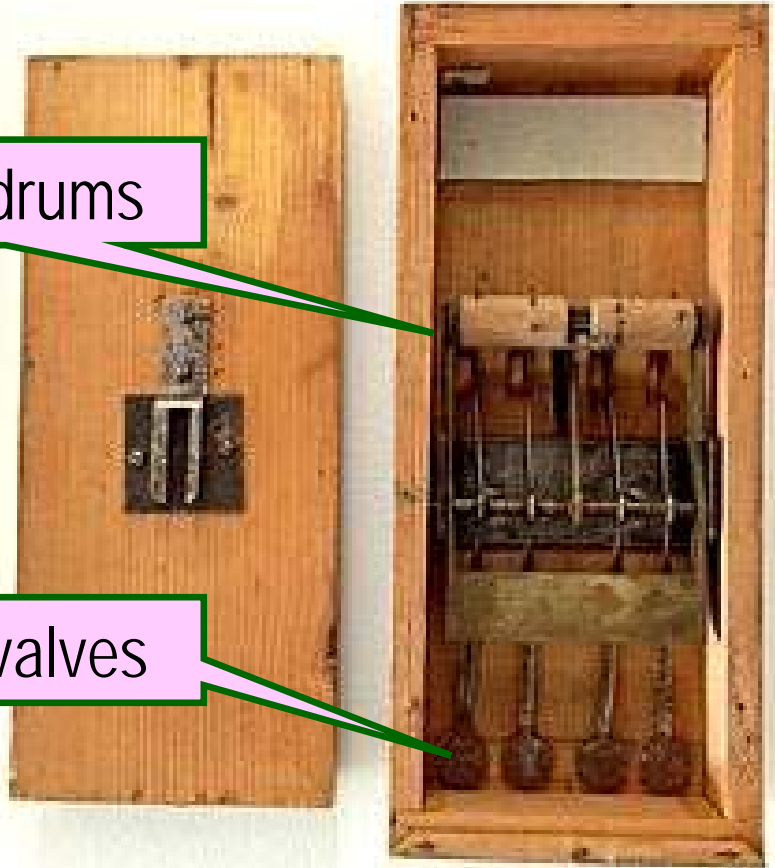
Lamy & Shone Trumpeter clock


❖ The Lamy Trumpeter clock uses a large wind chest that holds four musical reeds that are fired off by a series of poppet valves.

❖ The valves are opened by a pinned music drum located inside the sealed air chest.

Pinned drums

Poppet valves

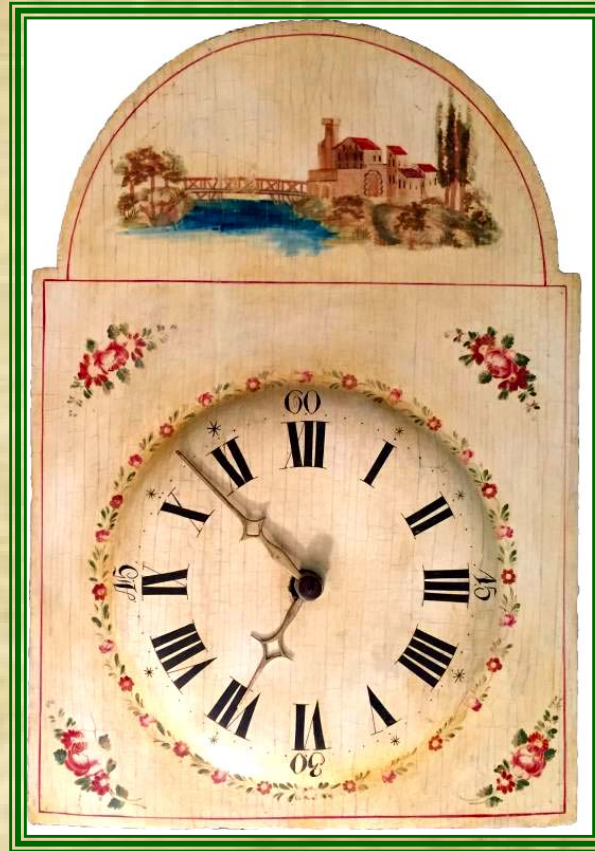


The background is a light beige, textured surface. In the bottom right corner, there is a cluster of golden gears of various sizes, some overlapping. The corners of the page are decorated with ornate, golden scrollwork designs. A central horizontal band with a light pink background and a green border contains the text.

“Flute Clocks” & “Organ Clocks”

Flute Clock "Flötenuhr"

- ❖ This clock plays six tunes on fifteen wooden pipes.
- ❖ The painting on the shield depicts a castle on the Rhine River
- ❖ The shield is 18" tall making it one of the smallest flute clocks.



[Black Forest Shield Flute Clock \(presentation-video\).mp4](#)

Flute Clock "Flötenuhr"

❖ In this view it shows the flute movement with the shield removed.

❖ You can also see in this photo the fifteen wooden pipes that provide the notes for the six tunes.

[Black Forest
Shield Flute
Clock Part Two
\(presentation-
video\).mp4](#)

Note: The clock movement shares the same wood frame as the music section.



Organ clock with "Automa"

- ❖ Original example of a organ or flute clock with 23 pipes and automation.
- ❖ The clock's motif is of a Spanish galleon off the coast of an island with a castle.
- ❖ The two figures of the period play six different tunes to welcome the sailors back ashore.



[Black Forest Organ Clock](#)
Circa 1800%27s with 23 pipes
(presentation-video-).mp4



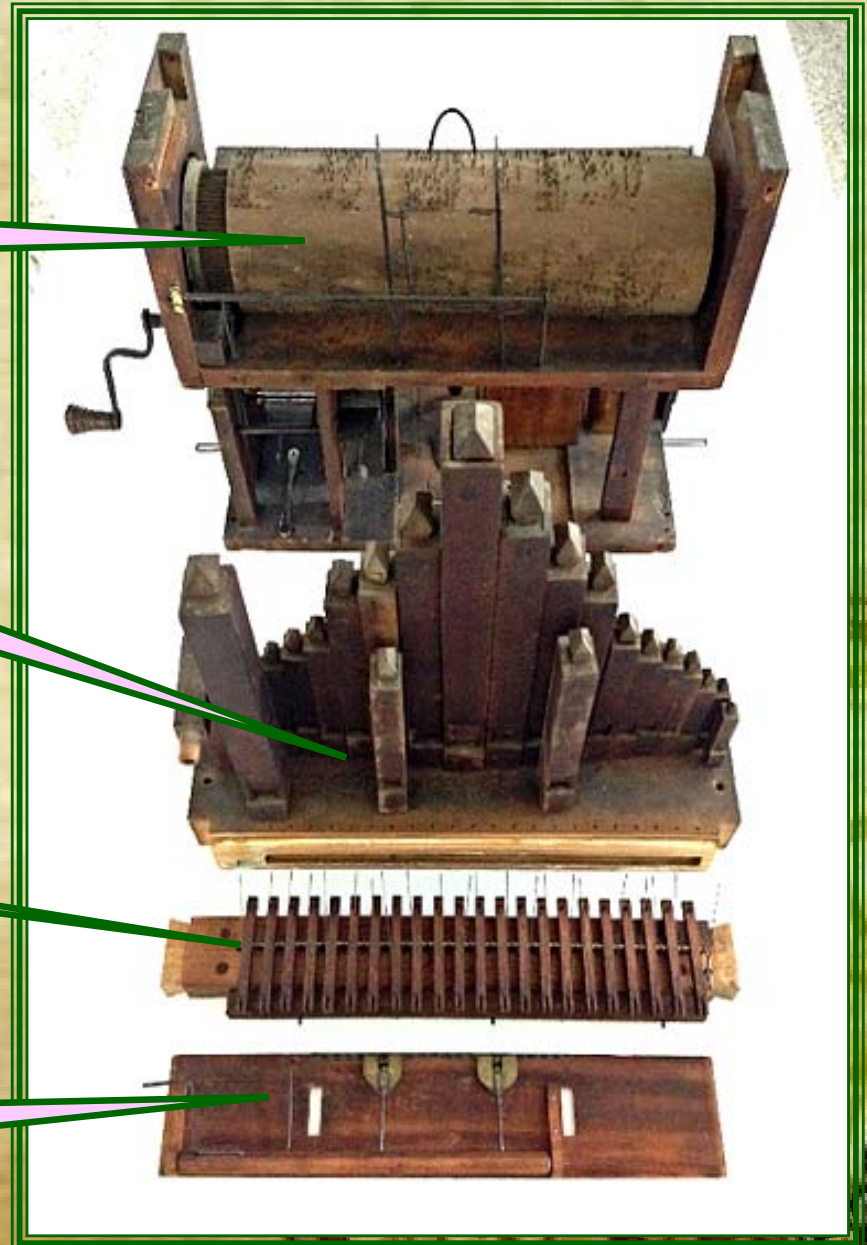
Organ clock with "Automa"

Pinned Music Wheel
Six Tunes

Flute Pipe and
Manifold Assembly

Air Valves Lifters

Automated Figures
Mechanism



Organ clock with "Automa"

Flute Pipes

Air Feed Manifold

Air Valves



Organ clock with "Automa"

Restored Organ
Clock Assembly

Bellows Assembly
with pressure springs

Pressure Relief Valve



Organ clock with "Automa"

- ❖ Automa linkage that moves the figures arms up to simulate the playing of the instruments.



Organ clock with "Automa"

Automa Linkage

Pinned music drum

Strike hammer that sets off music section of clock

Standalone clock movement

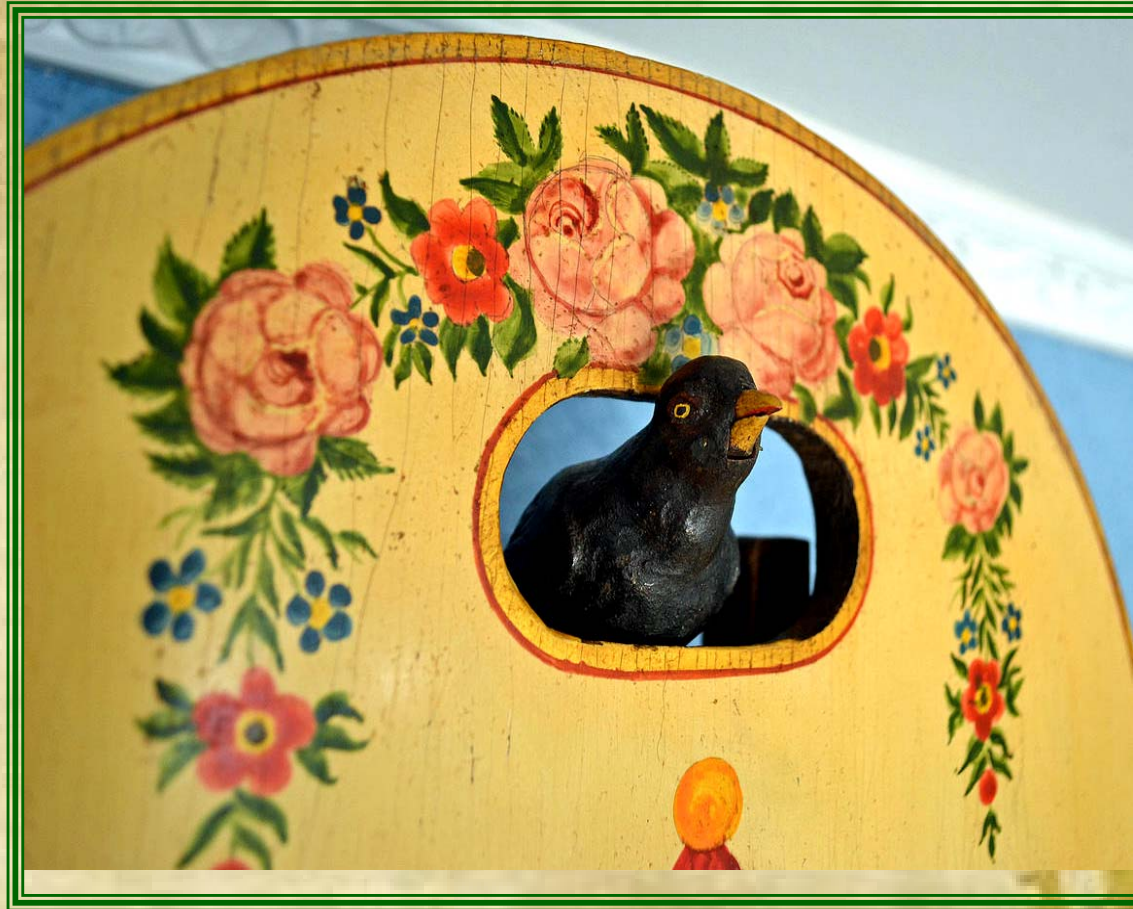


Blackbird Flute Clock "Flötenuhr"

- ❖ Blackbird clocks are amongst the rarest of the black forest clocks. Very few examples were manufactured and still exist today.
- ❖ The shield is 22" tall and 16" wide and the movement is completely rope driven.
- ❖ This automata is quite unique as the blackbird moves back and forth, and the mouth opens and closes to simulate singing the tune.



Blackbird Flute Clock "Flötenuhr"



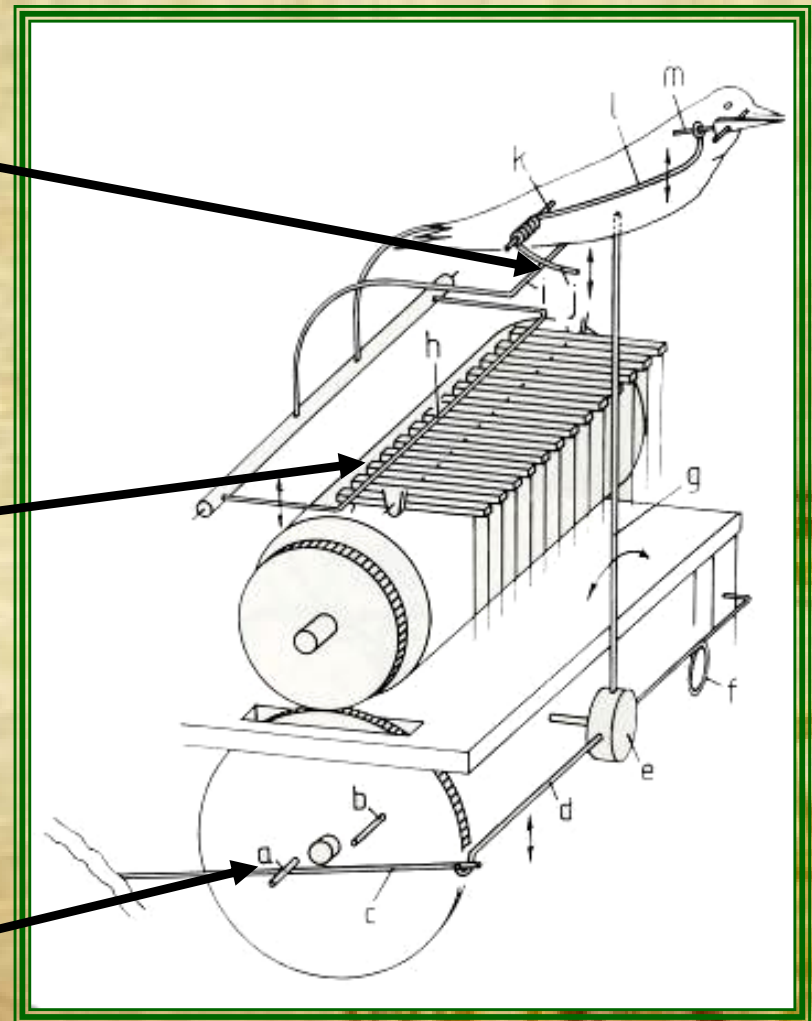
[Black Forest Blackbird Flute -
Flotenuhr- clock\(presentation-
video\).mp4](#)

Backbird Flute Clock "Flötenuhr"

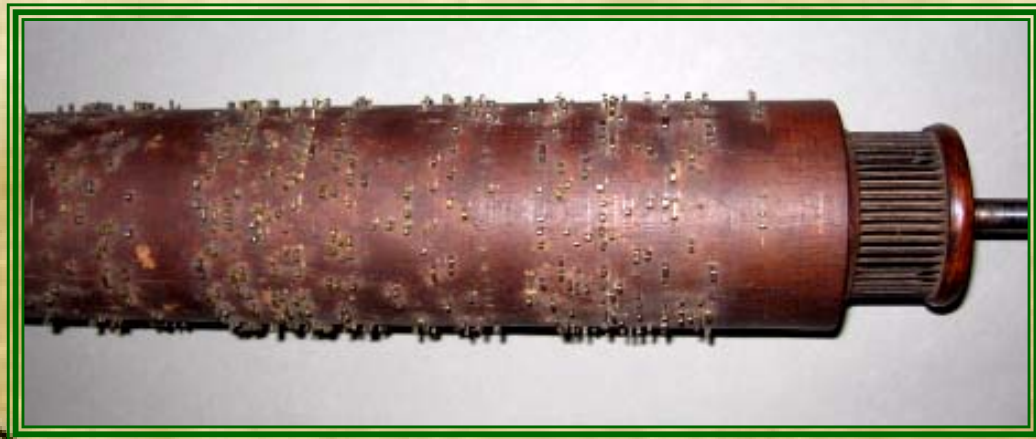
Lifting lever which actuates the birds beak

Rod runs along the top of the valve lifting levers so that the birds mouth opens and closes in perfect sequence of the tune that is playing

This mechanism rocks the bird back and forth as it sings the tune



Backbird Flute Clock "Flötenuhr"

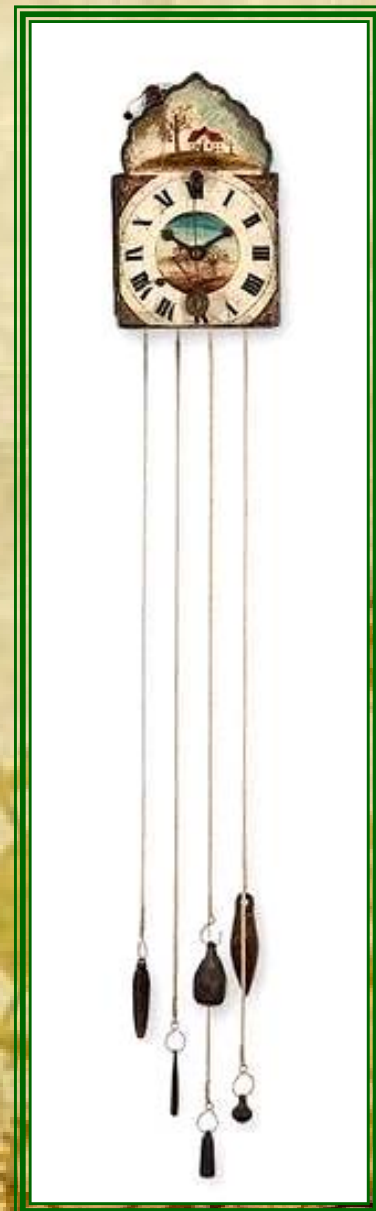


Glass Bell Clock Circa 1700's

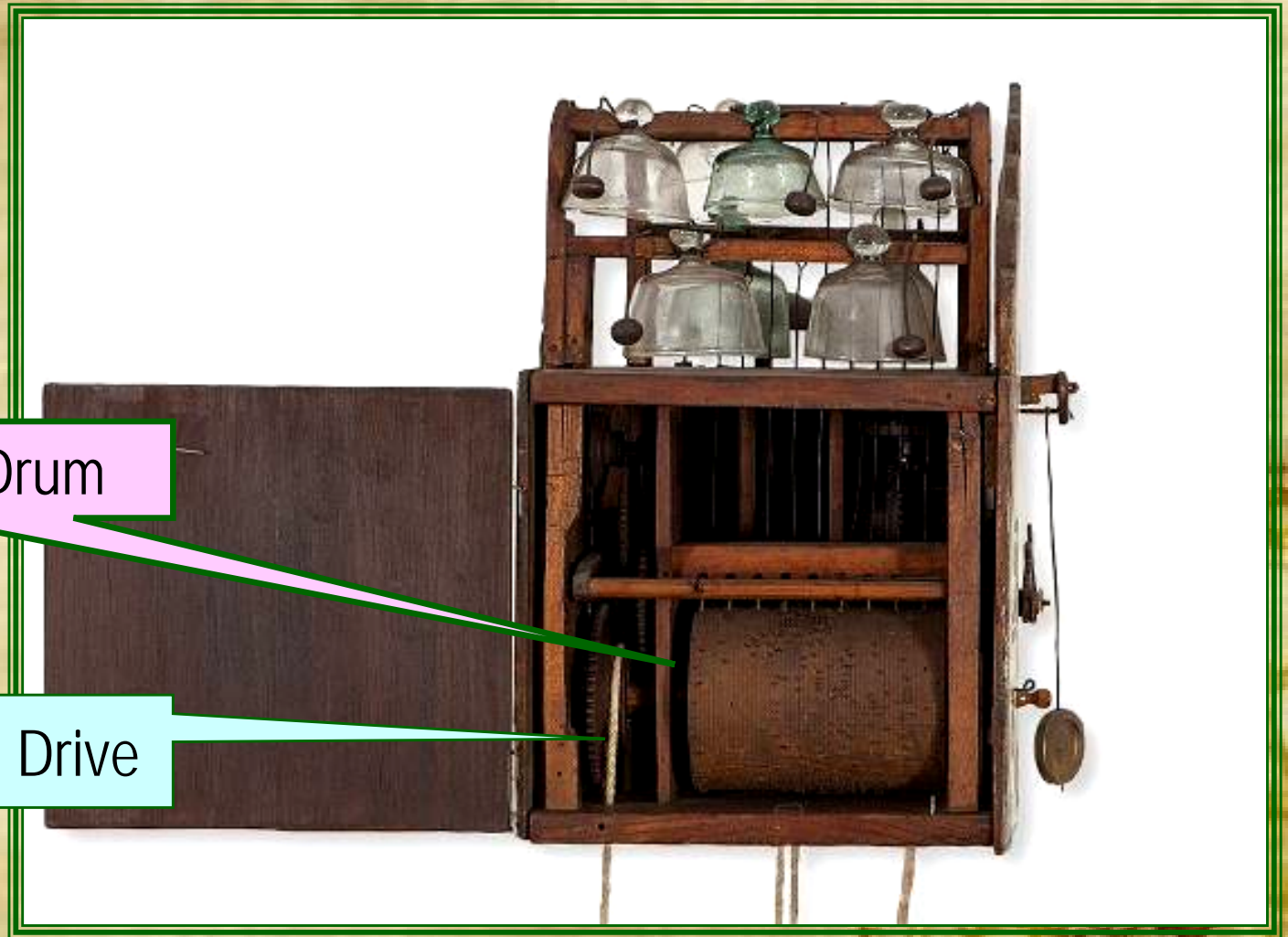
❖ Amongst the earliest of Black Forest clocks glass bell clocks are extremely rare due to their construction of all wooden gears and hand blown glass bells



Note: The cowtail pendulum



Glass Bell Clock Circa 1700's



Pinned Music Drum

Rope Drive

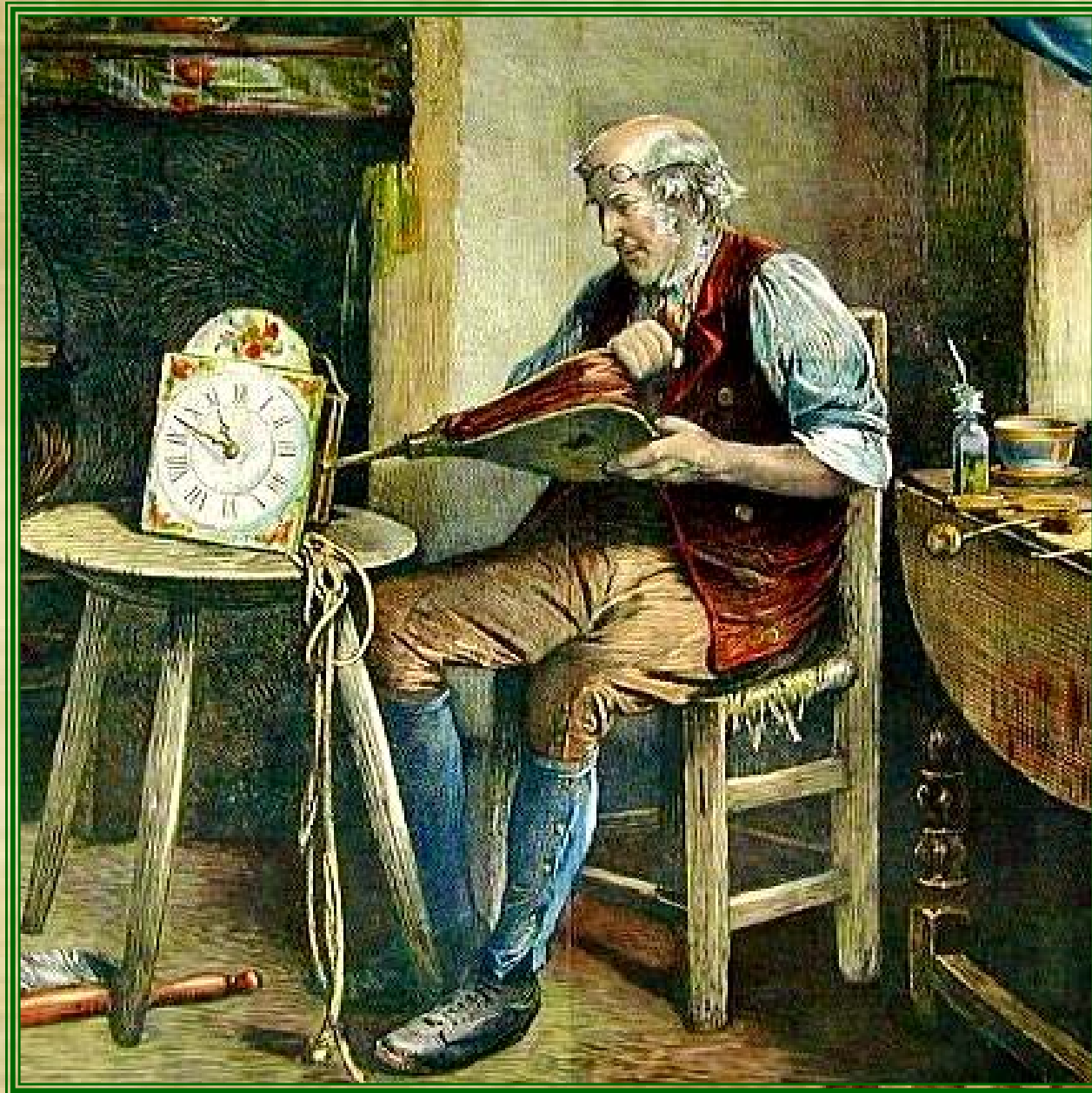
Glass Bell Clock Circa 1700's

Hand Blown
Glass Bells

Wooden
Strikers



Black Forest Clock Restoration



Wind Chest Restoration



Wind Chest Restoration



Wehrle 8 pipe wind chest front
untouched original

Wind Chest Restoration



Wehrle 8 pipe wind chest
back untouched original

Wind Chest Restoration



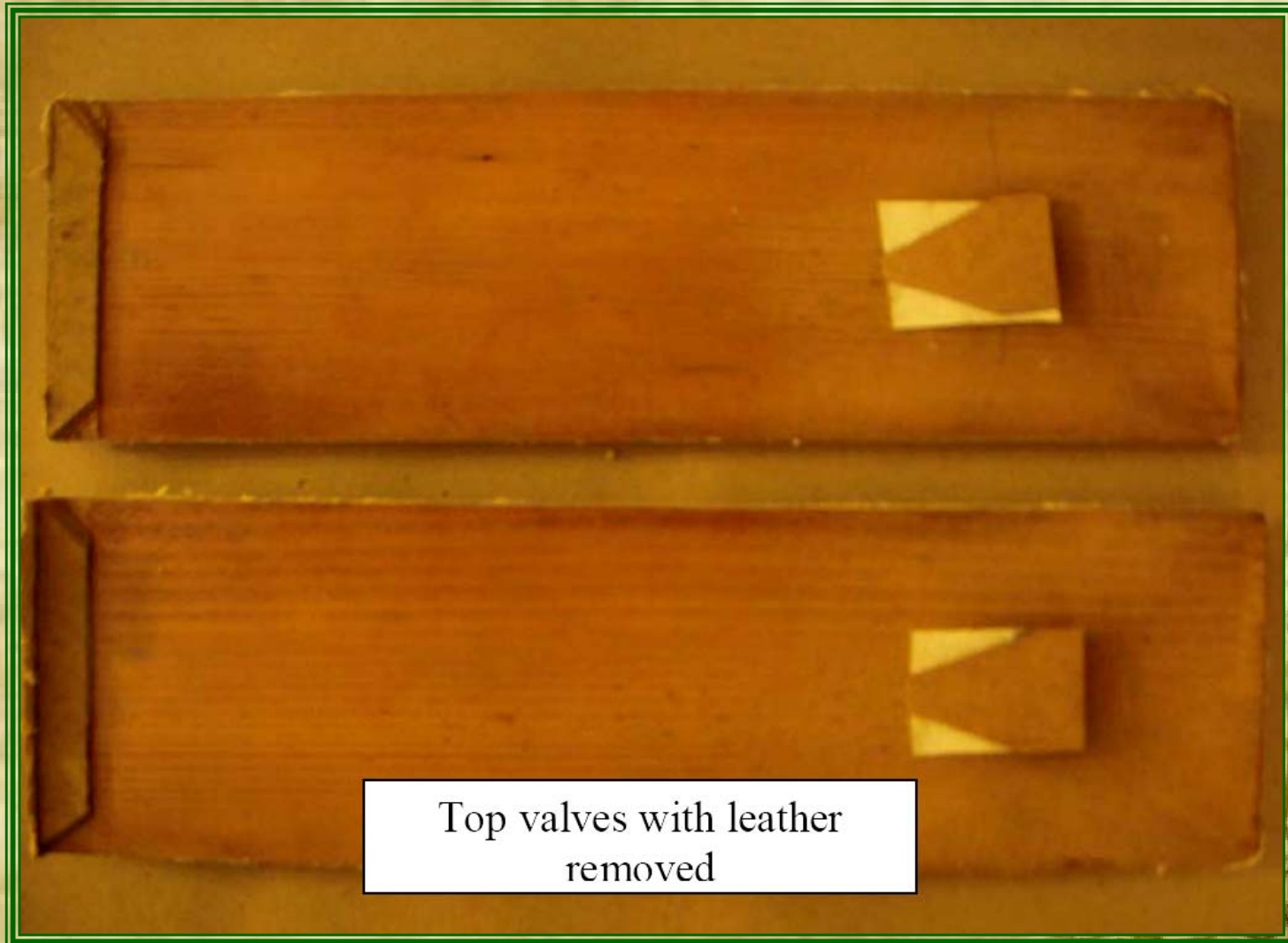
Removing leather covering
using Xacto knife

Wind Chest Restoration



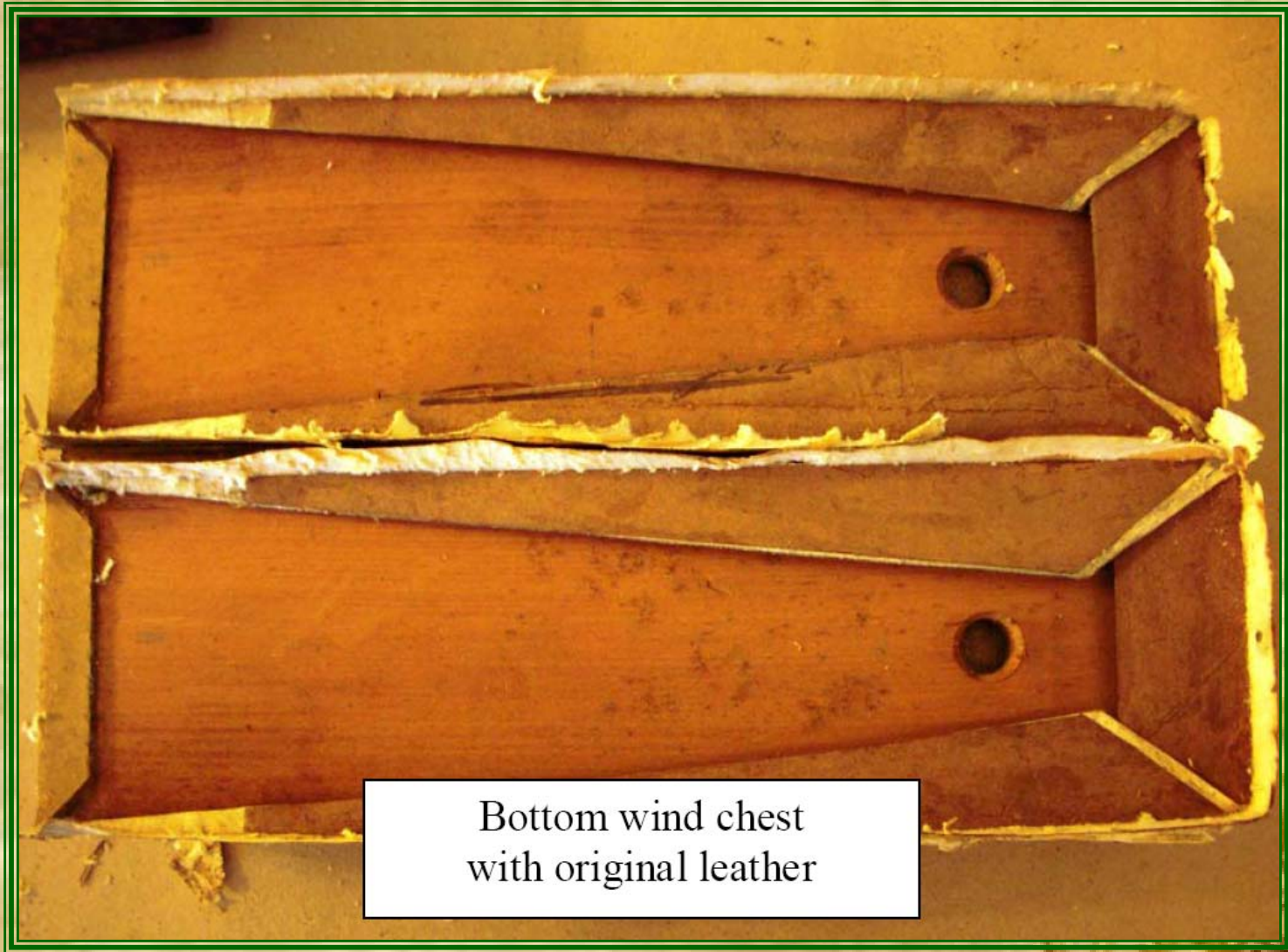
Removing lift levers and
spring hooks

Wind Chest Restoration



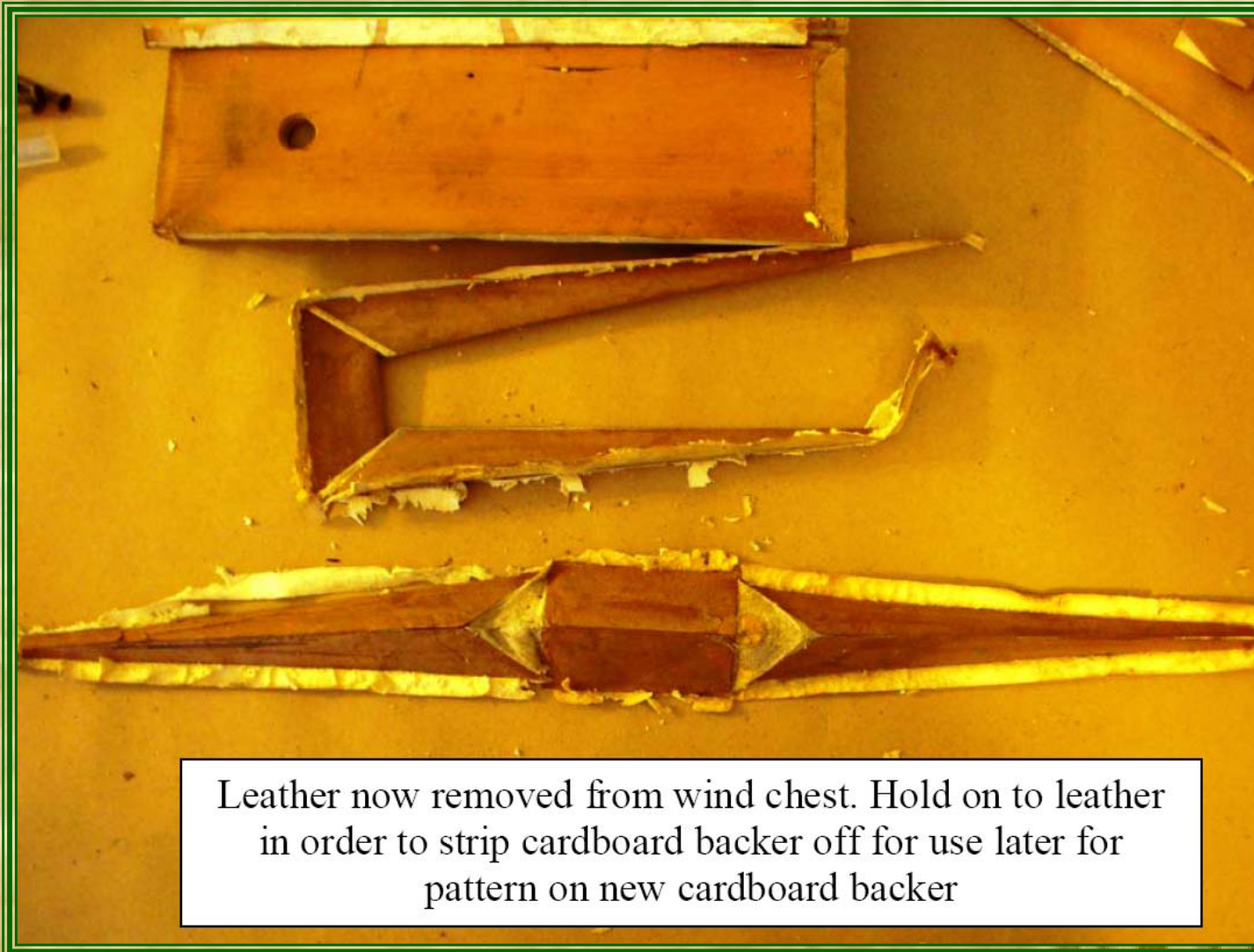
Top valves with leather
removed

Wind Chest Restoration



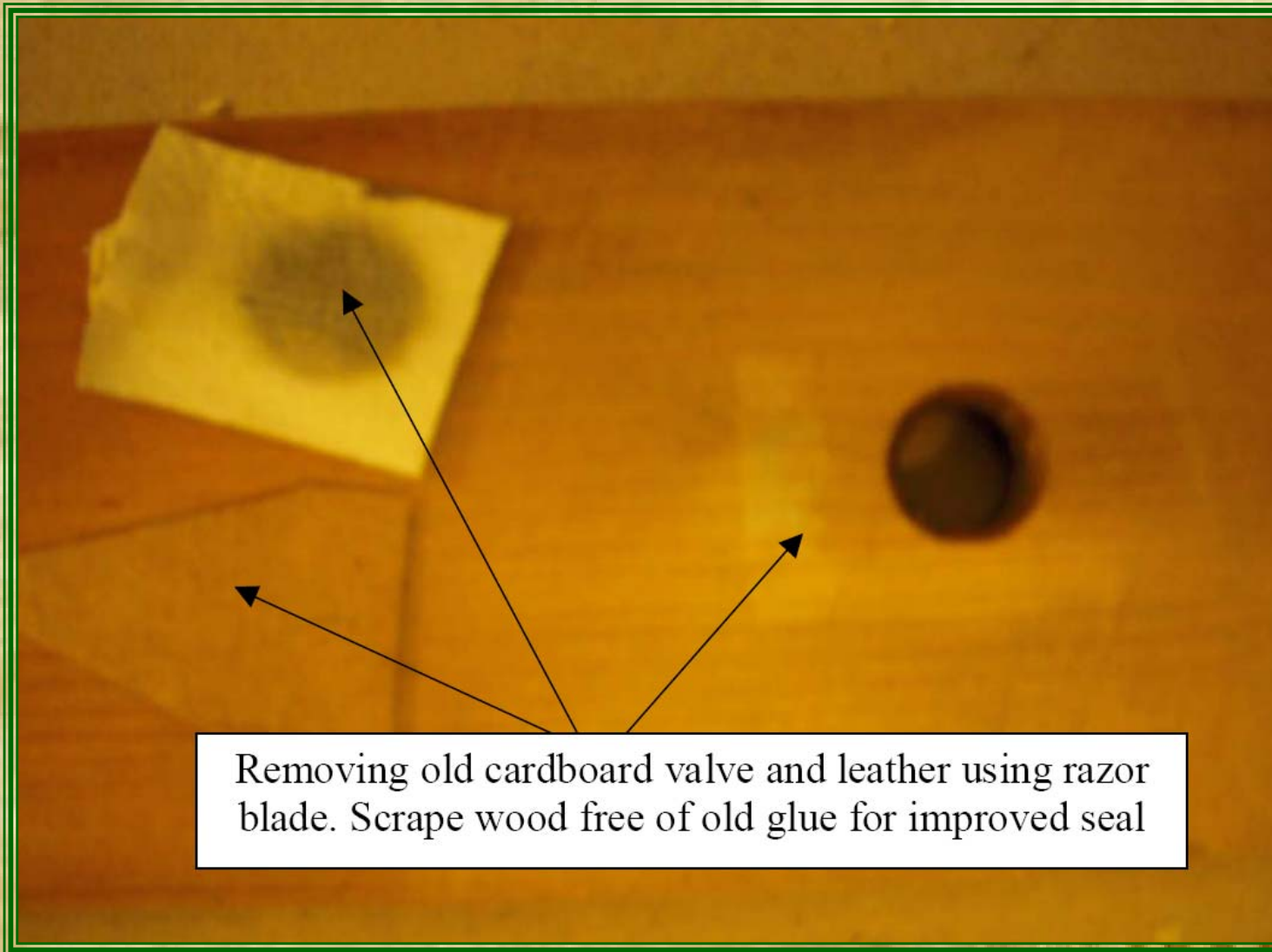
Bottom wind chest
with original leather

Wind Chest Restoration



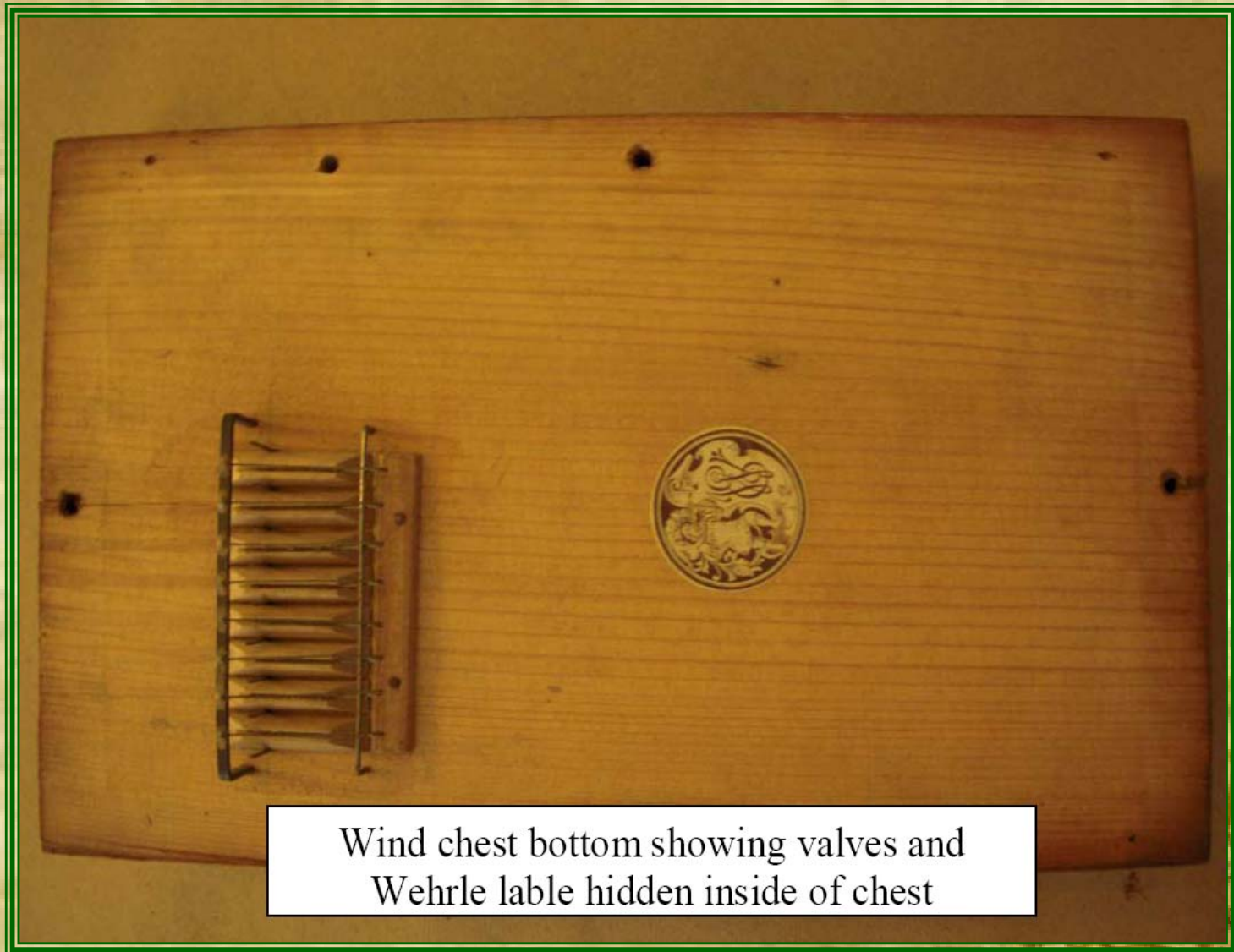
Leather now removed from wind chest. Hold on to leather in order to strip cardboard backer off for use later for pattern on new cardboard backer

Wind Chest Restoration



Removing old cardboard valve and leather using razor blade. Scrape wood free of old glue for improved seal

Wind Chest Restoration



Wind chest bottom showing valves and
Wehrle lable hidden inside of chest

Wind Chest Restoration



Original Wehrle label

Wind Chest Restoration



Removing center wind chest leather
and center wood support

Wind Chest Restoration



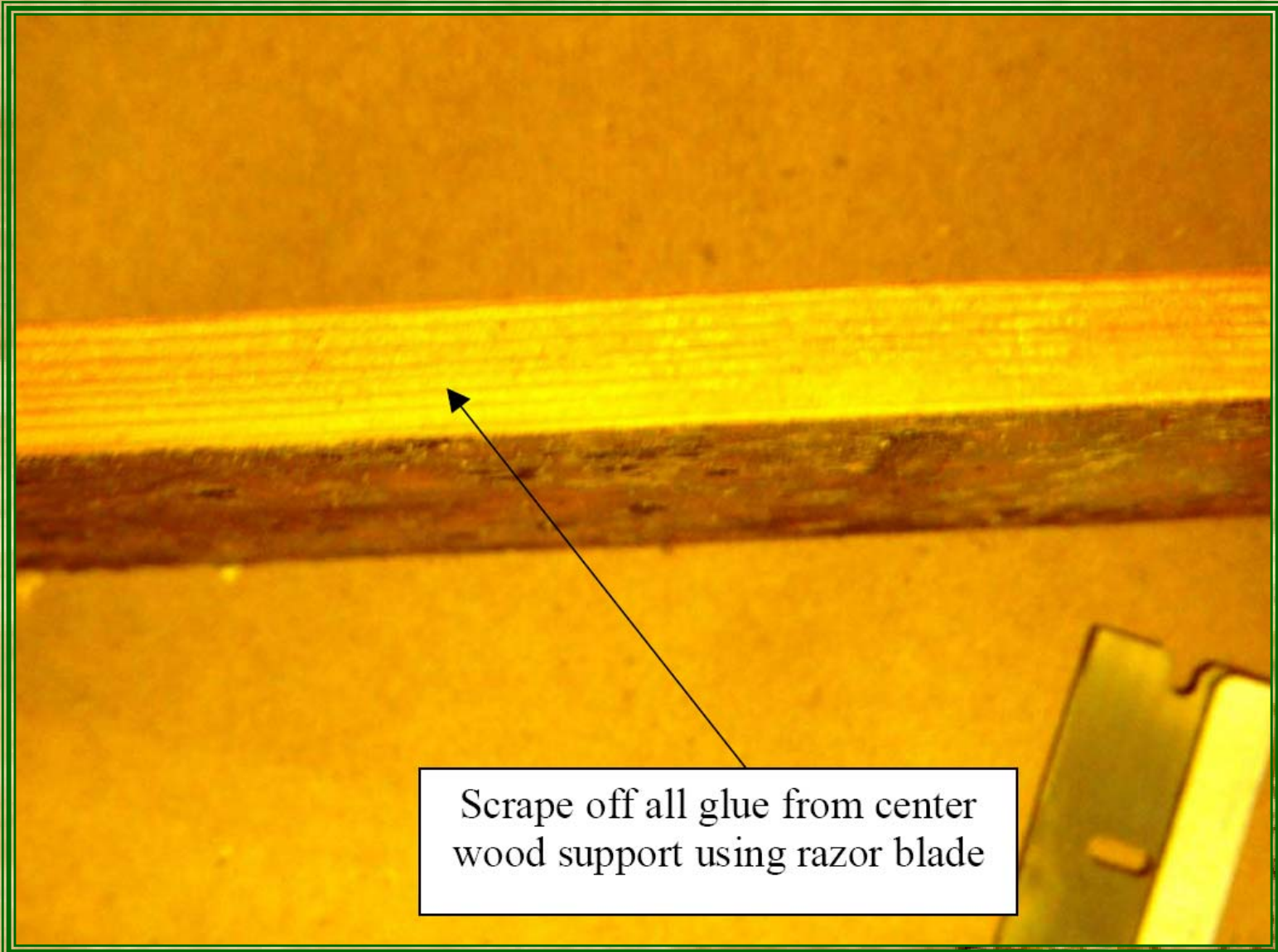
Use Xacto blade to remove the glue
and center wood seal support

Wind Chest Restoration



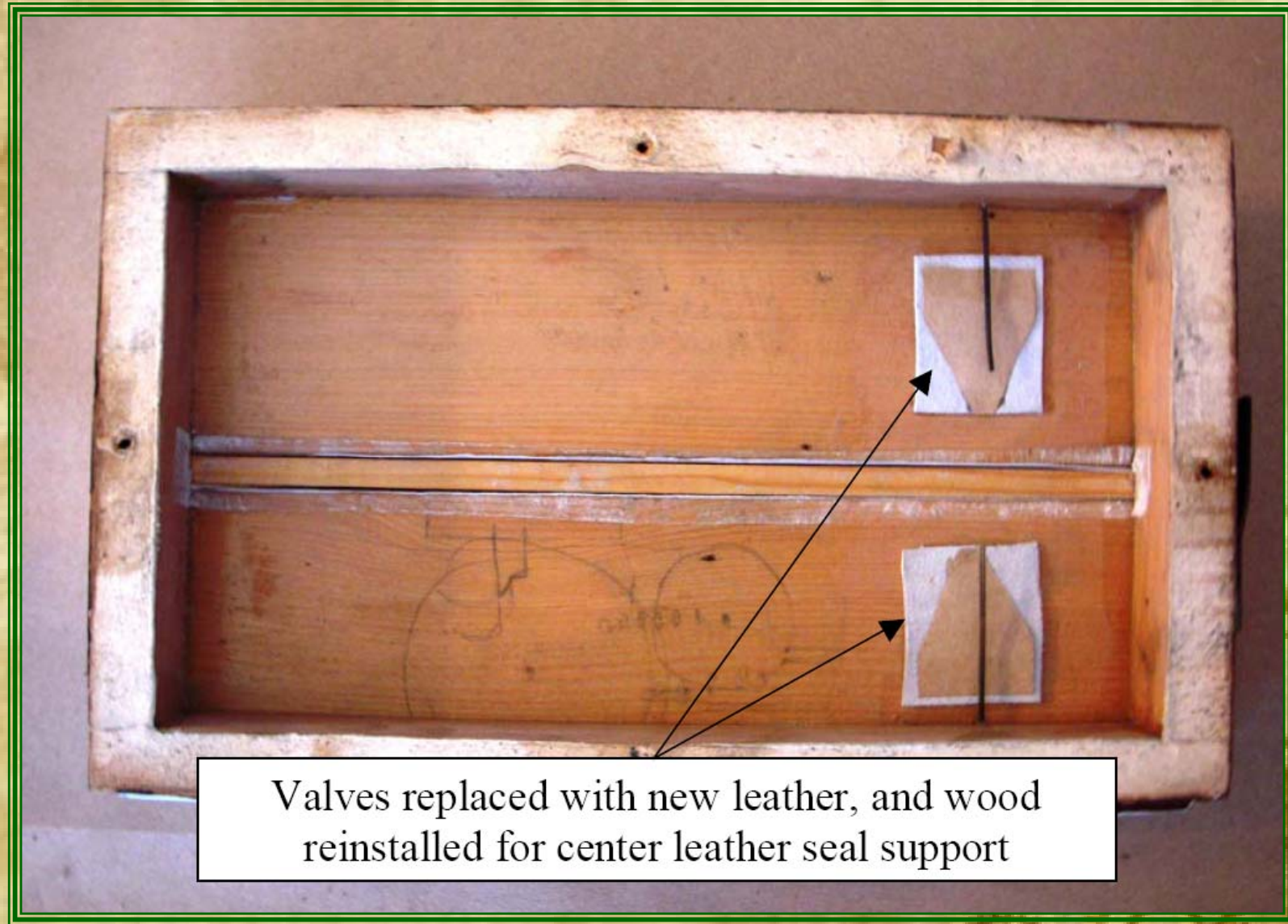
Center wood seal support removed

Wind Chest Restoration



Scrape off all glue from center
wood support using razor blade

Wind Chest Restoration



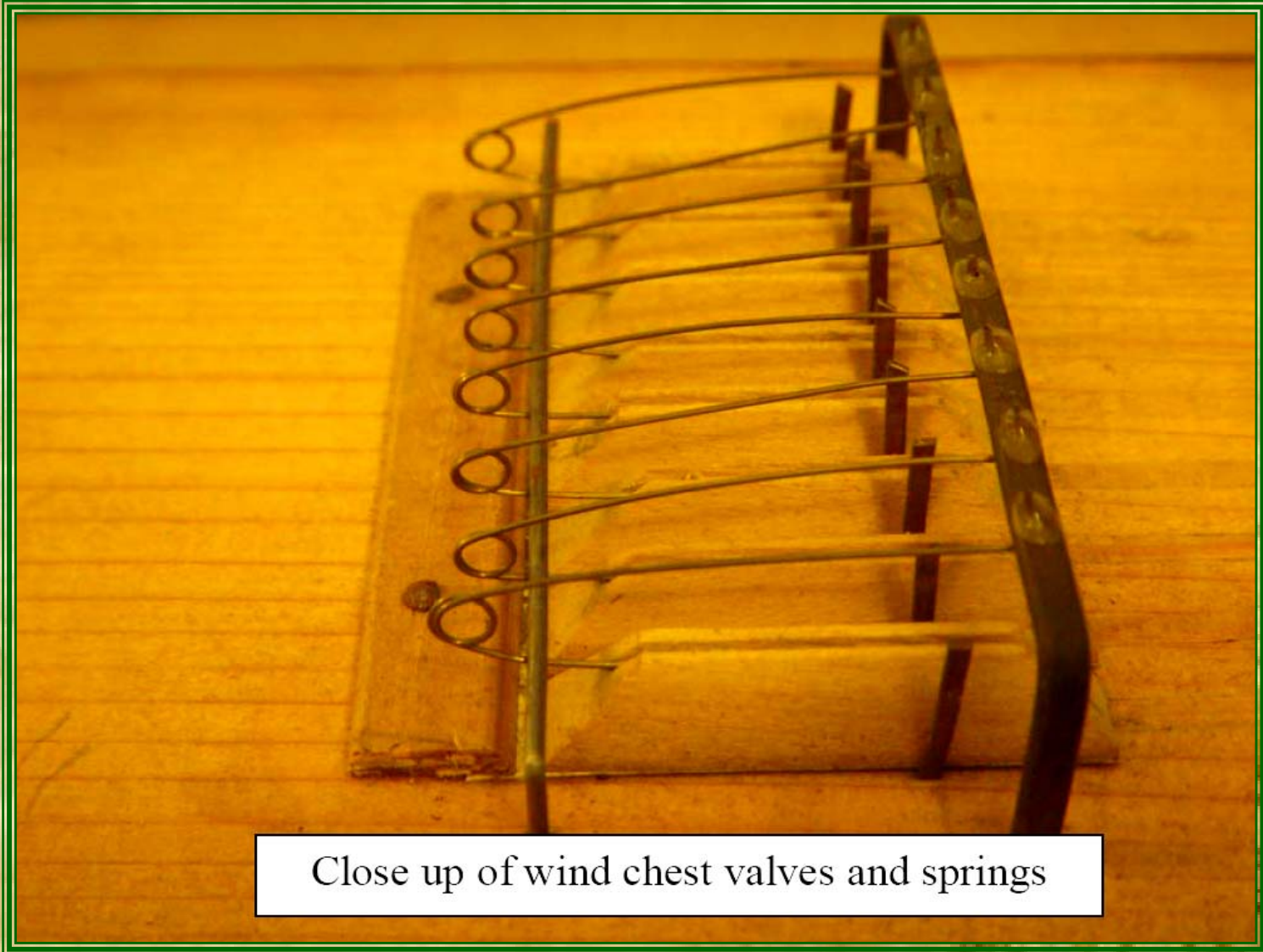
Valves replaced with new leather, and wood
reinstalled for center leather seal support

Wind Chest Restoration



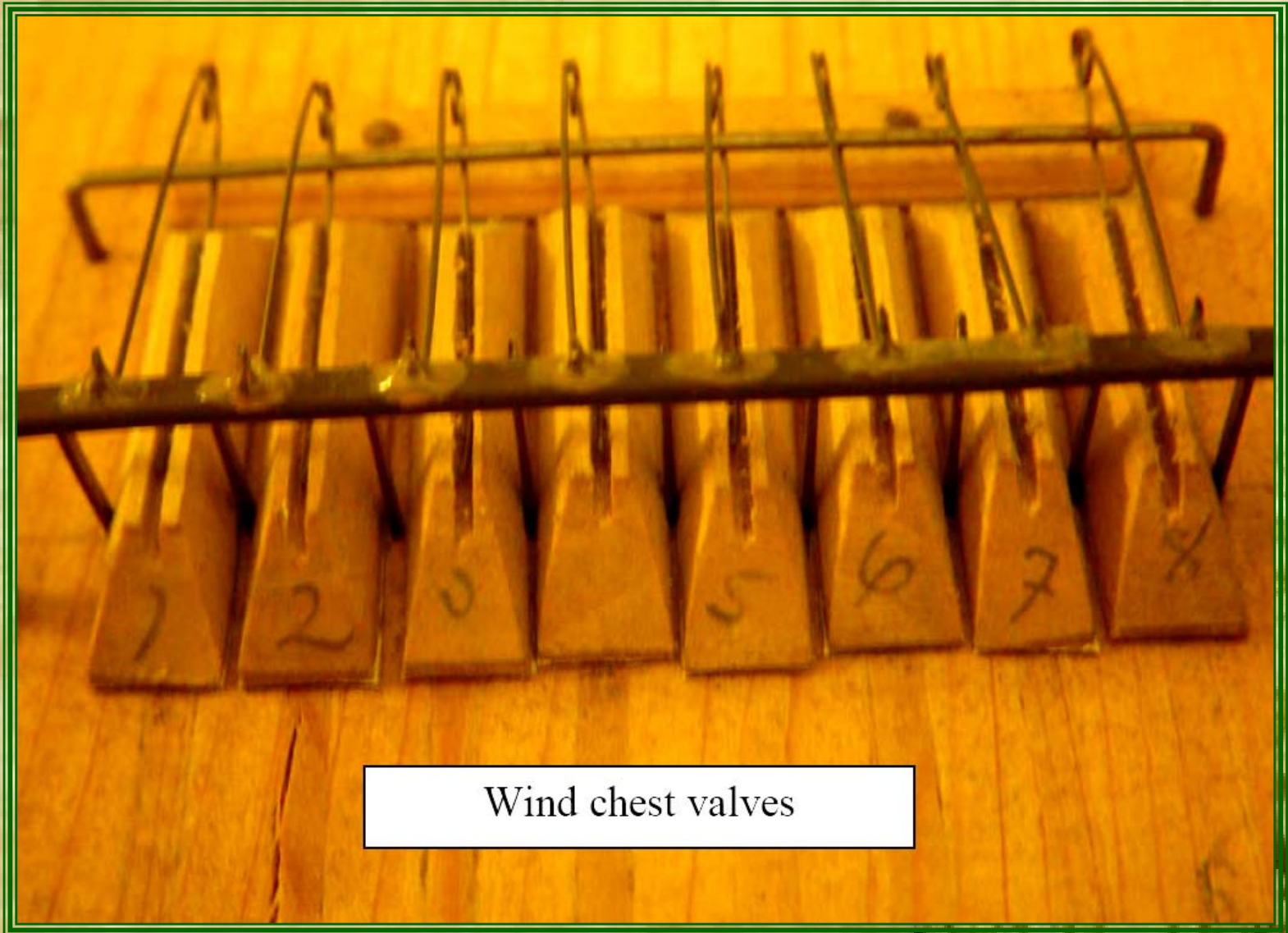
New center leather seal installed

Wind Chest Restoration



Close up of wind chest valves and springs

Wind Chest Restoration



Wind chest valves

Wind Chest Restoration

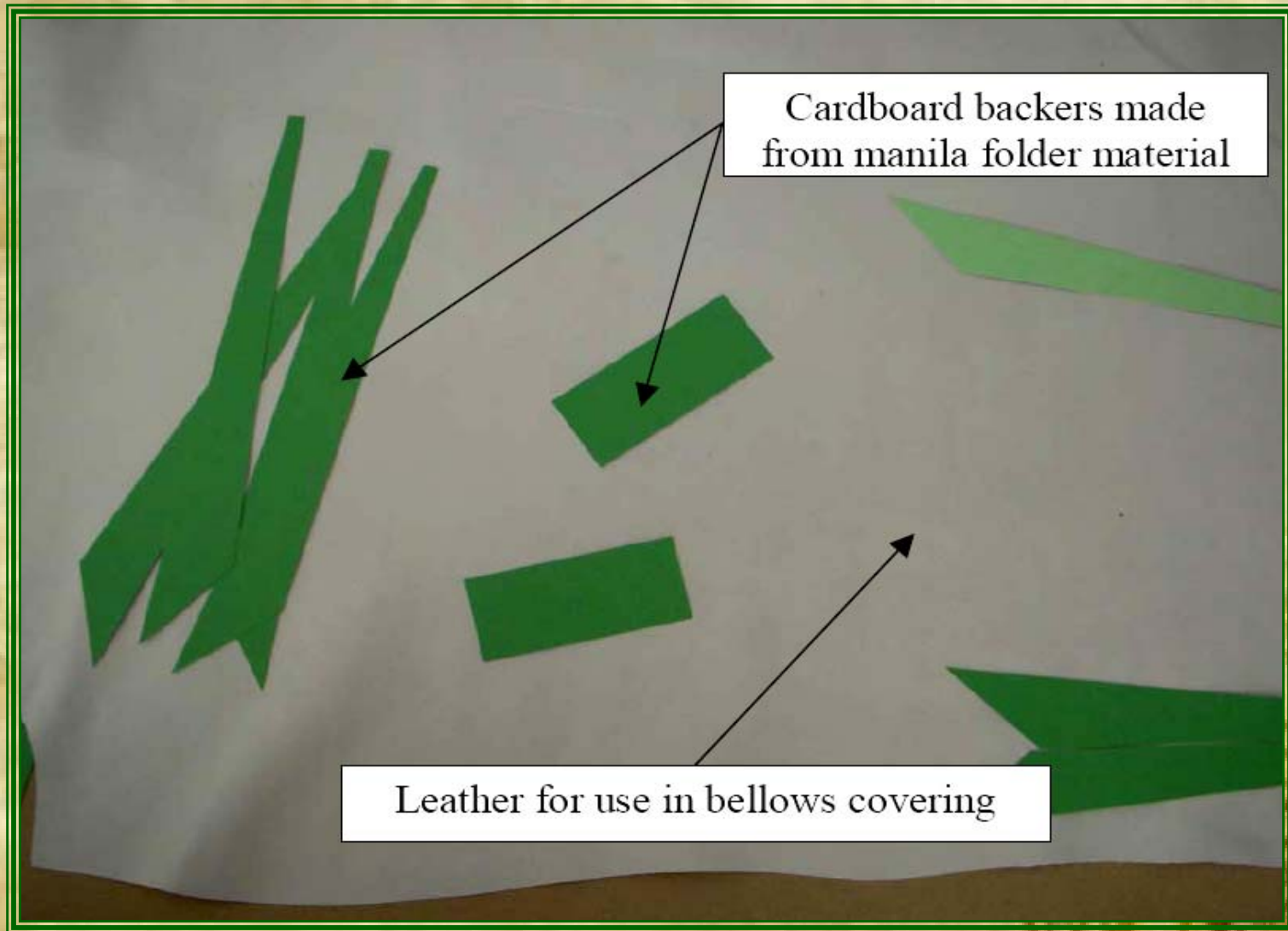


COLUMBIA ORGAN LEATHERS
HIGH TACK FISH GLUE

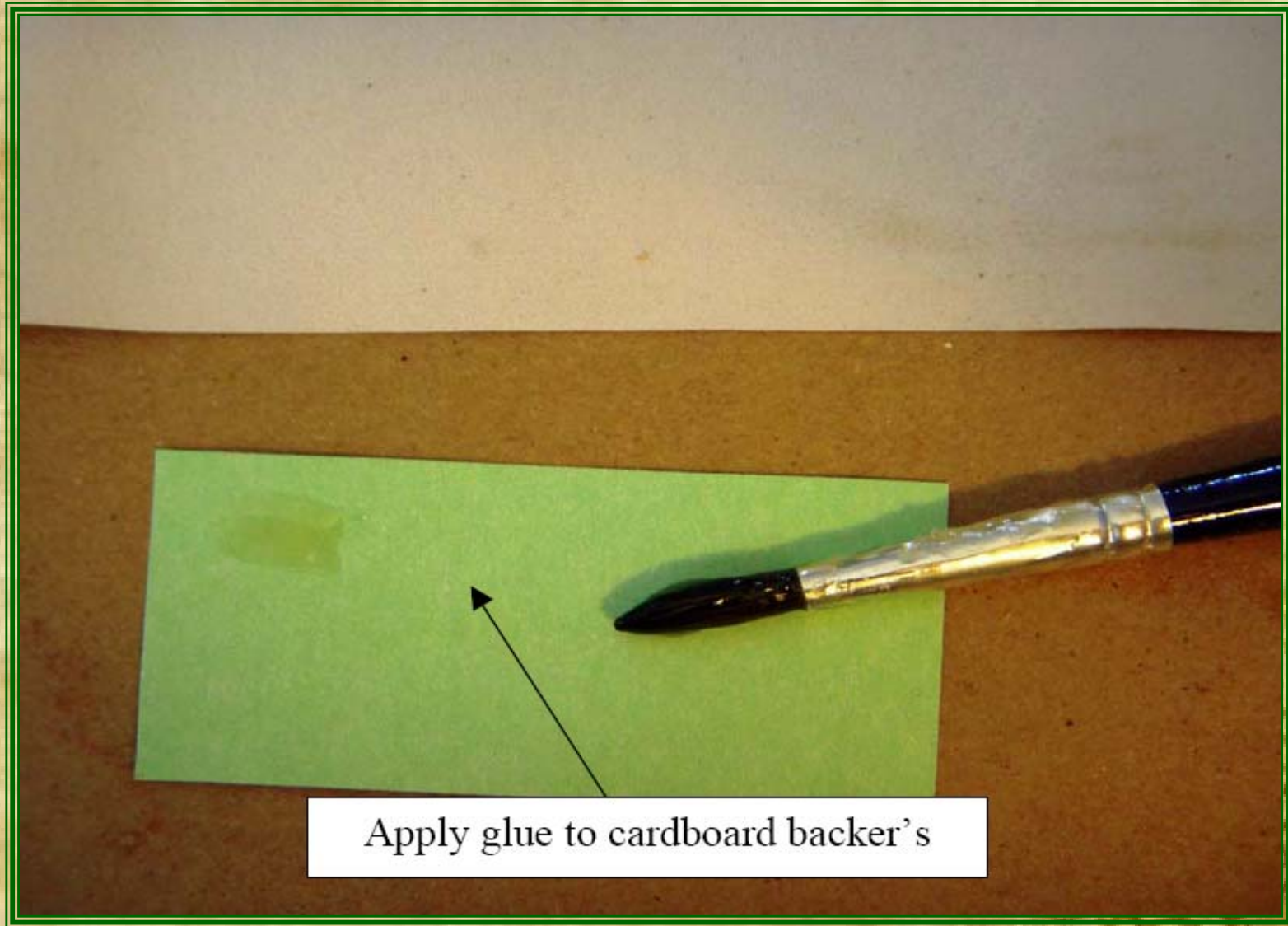
915 Lancaster Ave - Columbia, PA 17512
CALL TOLL FREE: 1-800-423-7003

Glue used on leather assemblies

Wind Chest Restoration

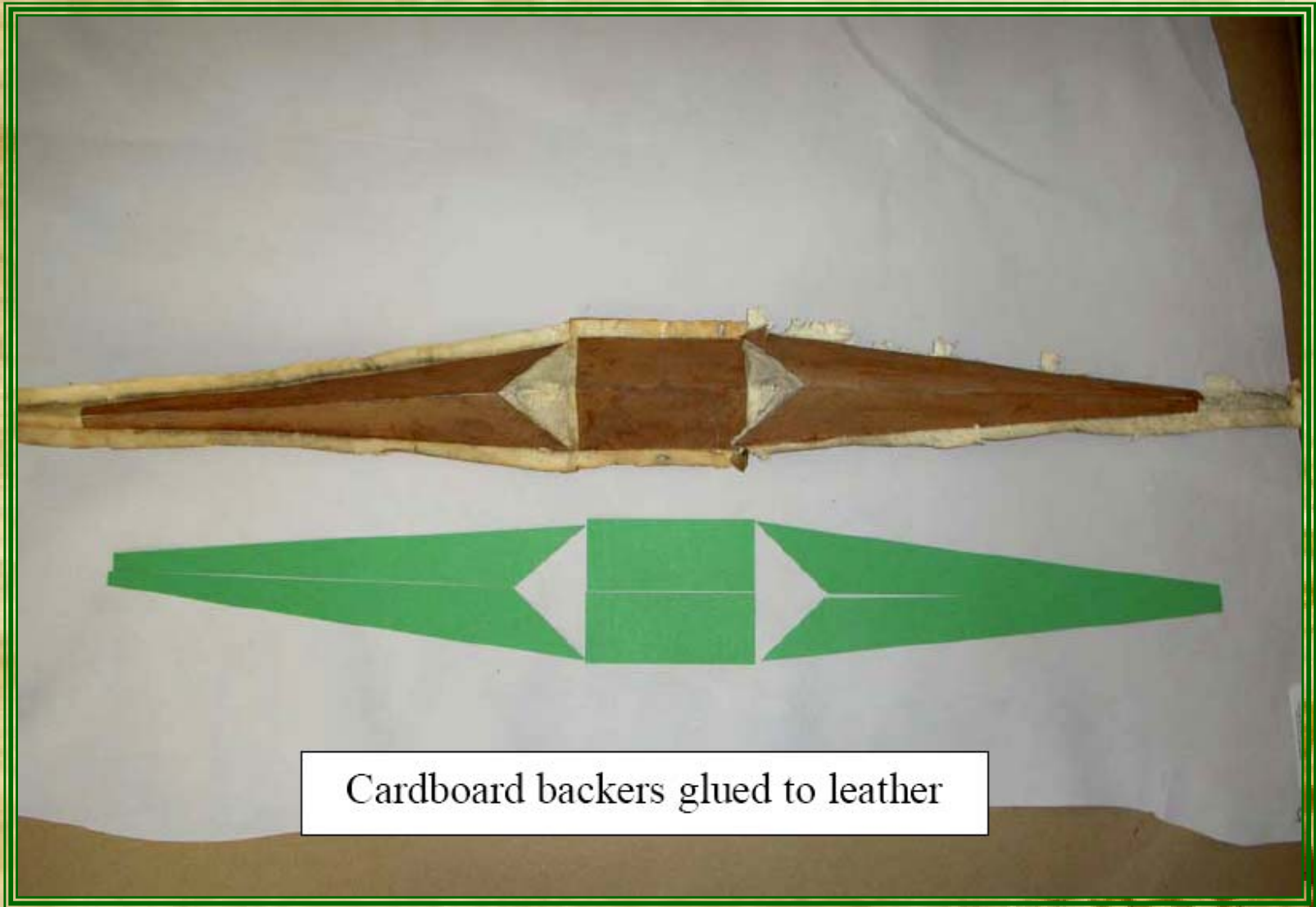


Wind Chest Restoration



Apply glue to cardboard backer's

Wind Chest Restoration



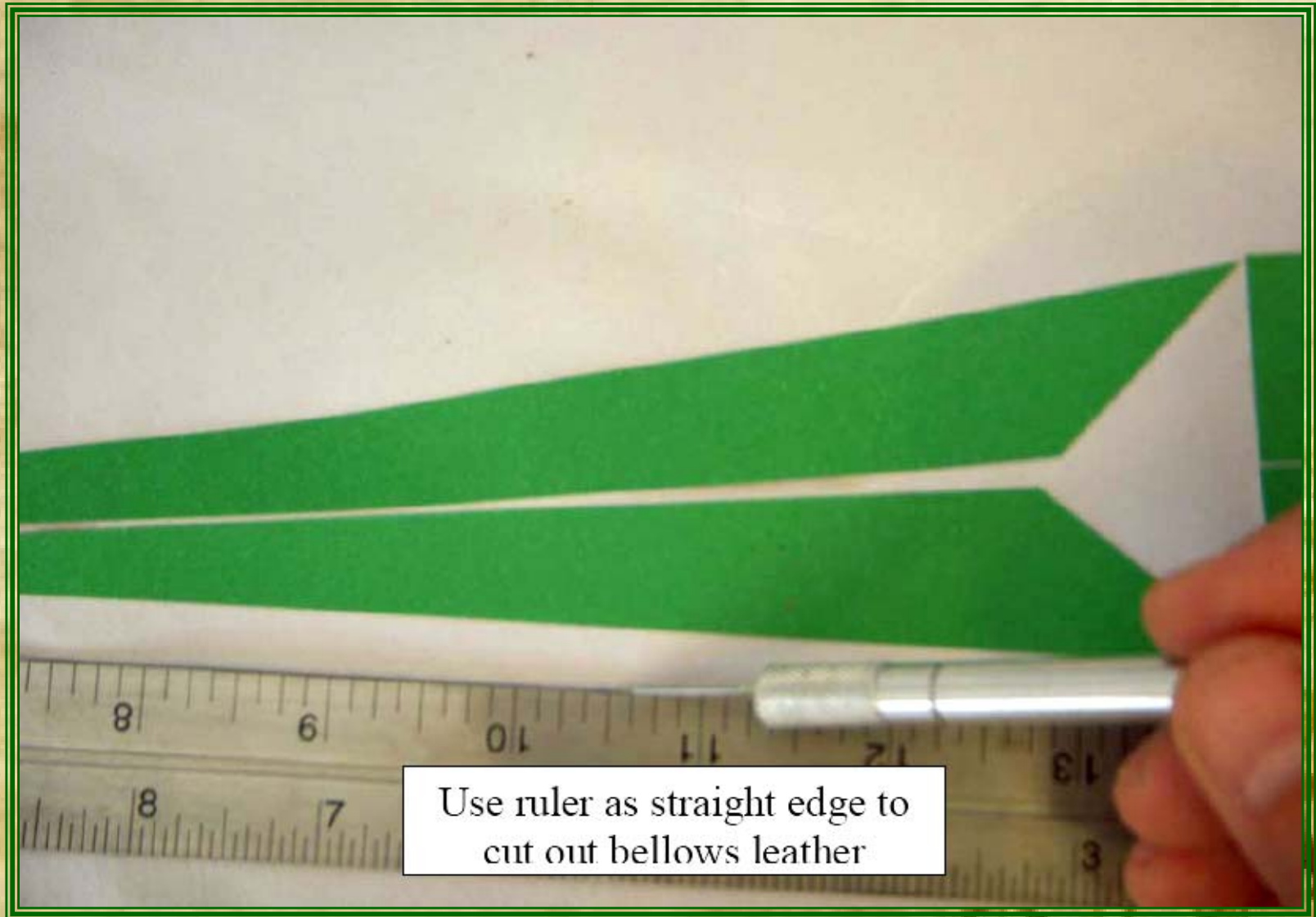
Cardboard backers glued to leather

Wind Chest Restoration



Cut with Xacto knife

Wind Chest Restoration



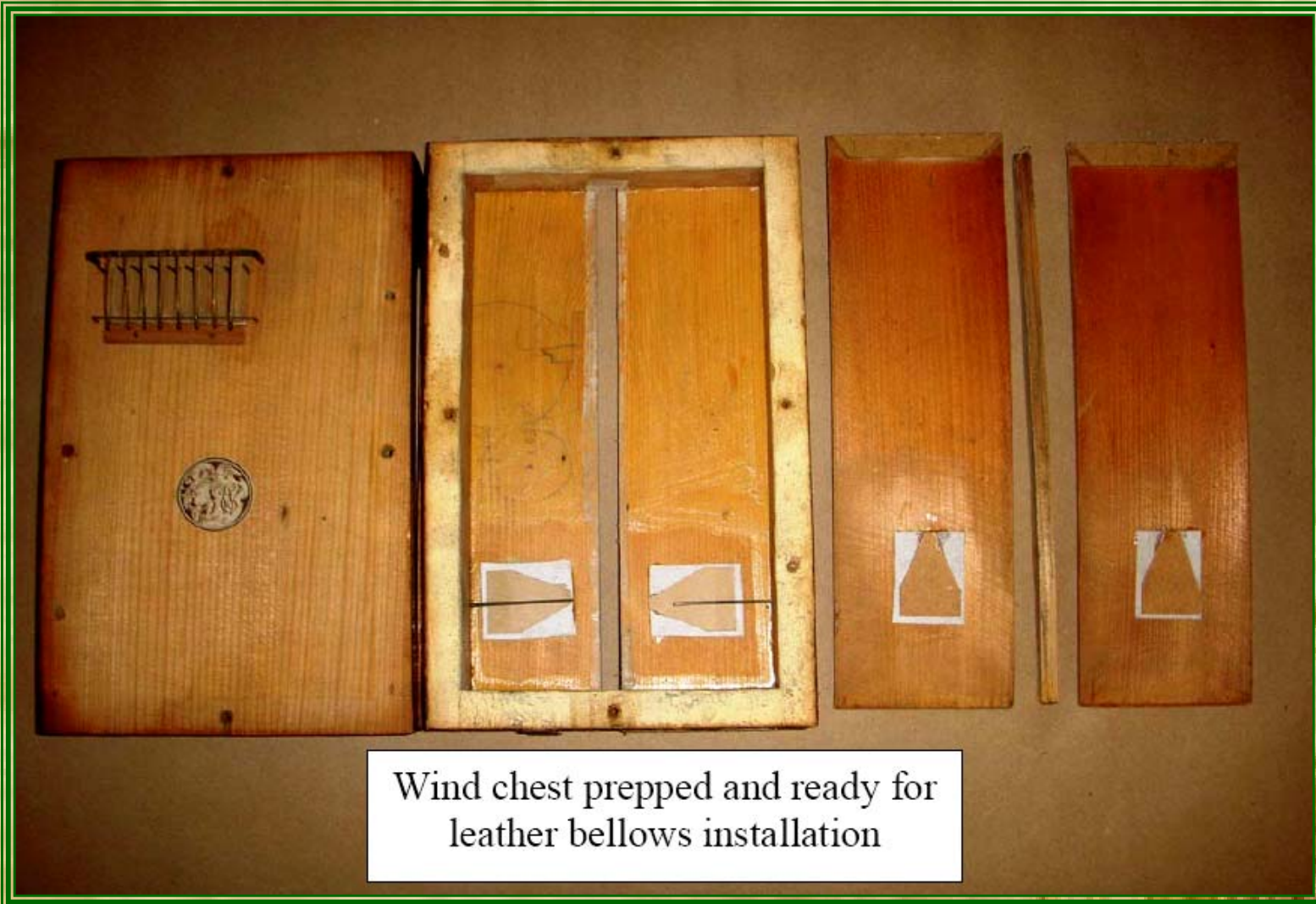
Use ruler as straight edge to
cut out bellows leather

Wind Chest Restoration



Bellows leather ready for installation

Wind Chest Restoration



Wind chest prepped and ready for
leather bellows installation

Wind Chest Restoration



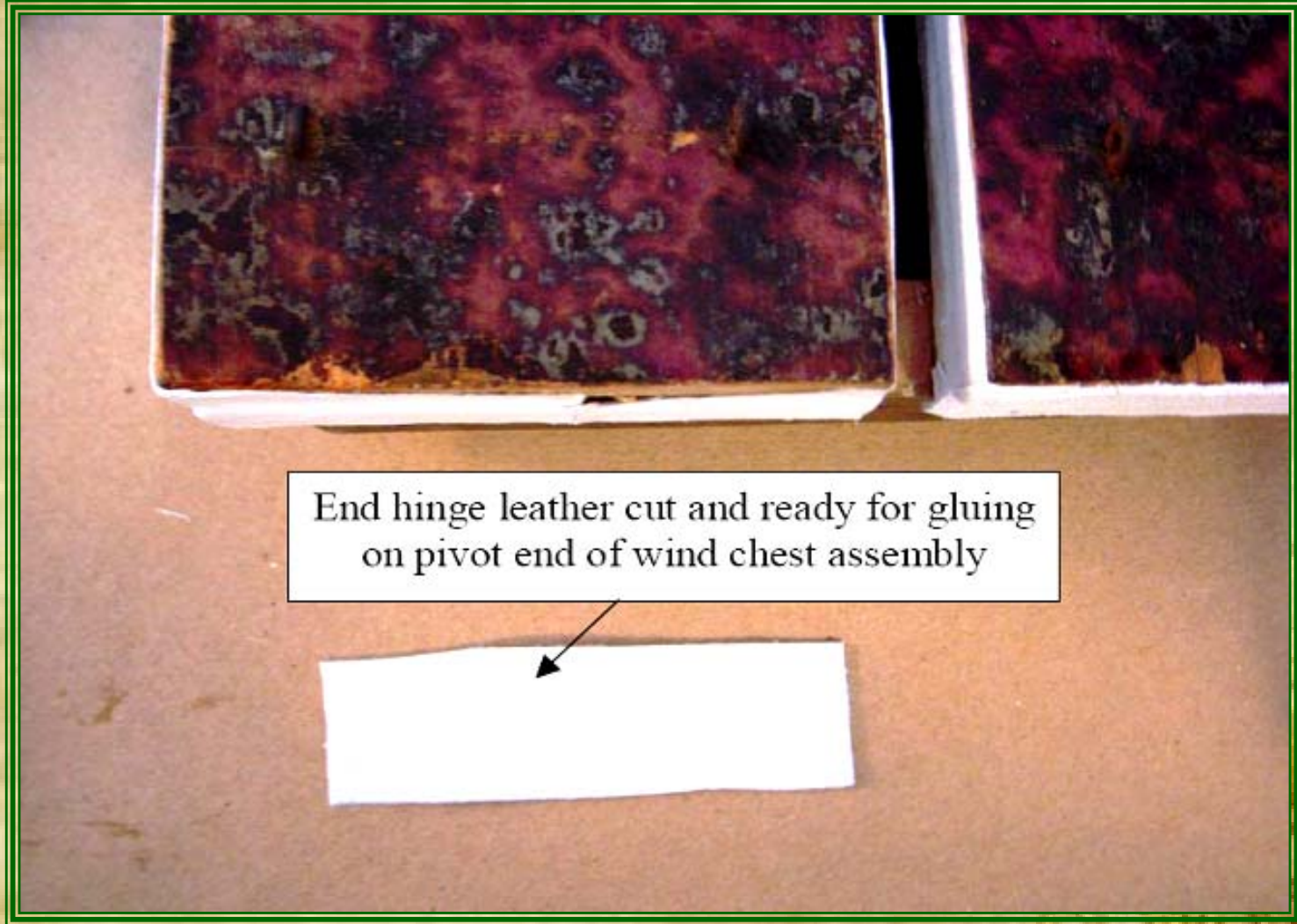
Leather bellows formed and ready
for the gluing to the bellows tops

Wind Chest Restoration



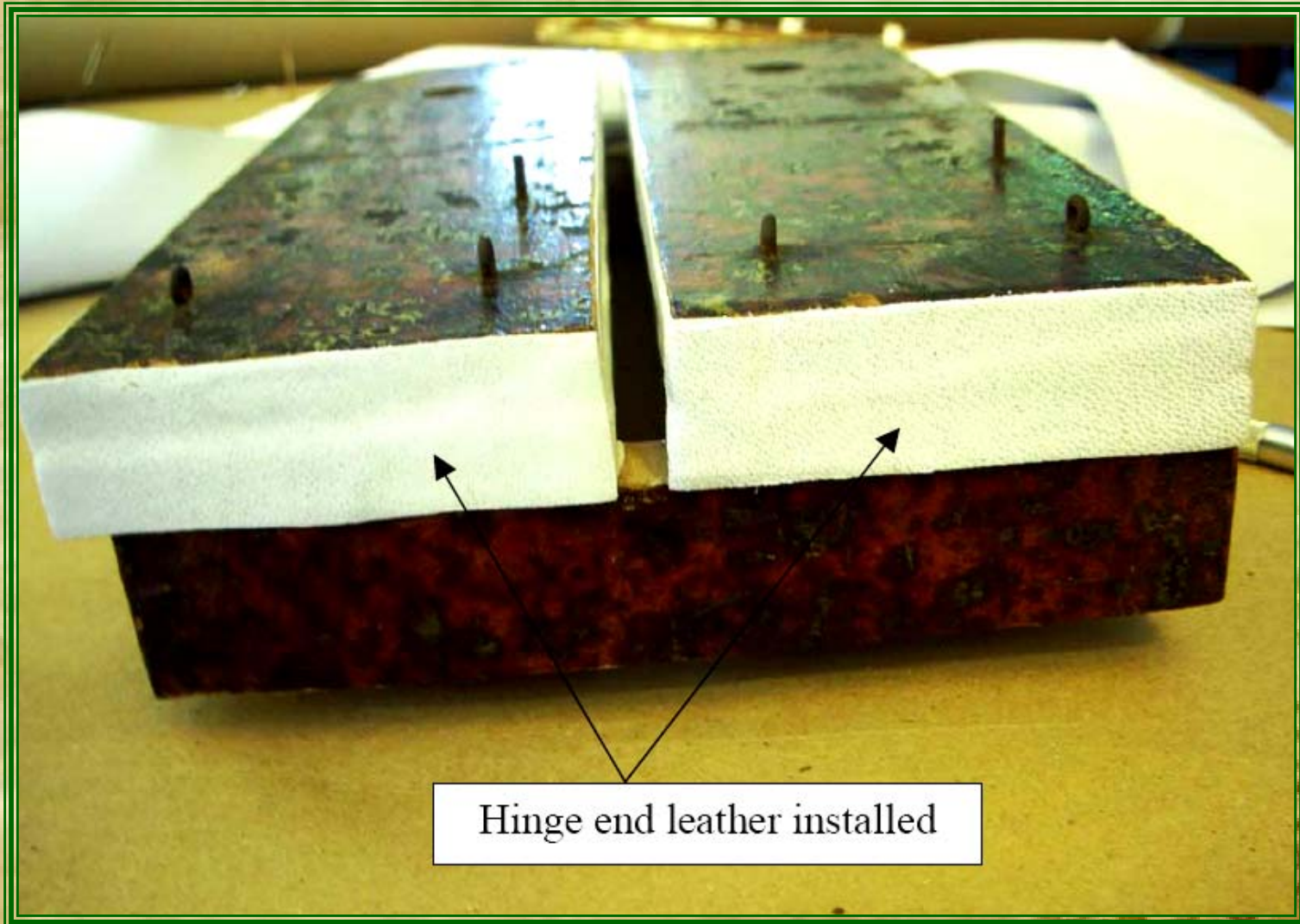
Leather glued to bellows tops

Wind Chest Restoration



End hinge leather cut and ready for gluing
on pivot end of wind chest assembly

Wind Chest Restoration



Hinge end leather installed

Wind Chest Restoration



Wind chest top complete

Wind Chest Restoration



Wind chest assembly complete and ready for reinstall on movement

Figure Restoration



Figure Restoration

Original figures



Damaged figures
missing parts



Figure Restoration

Support armatures
installed



Plaster applied and formed



Figure Restoration

Figures painted
ready for horns



Horn Fabrication using
solder and brass rod



Figure Restoration

Horns installed
ready for paint




Completed figures
ready to install



Figure Restoration Complete!

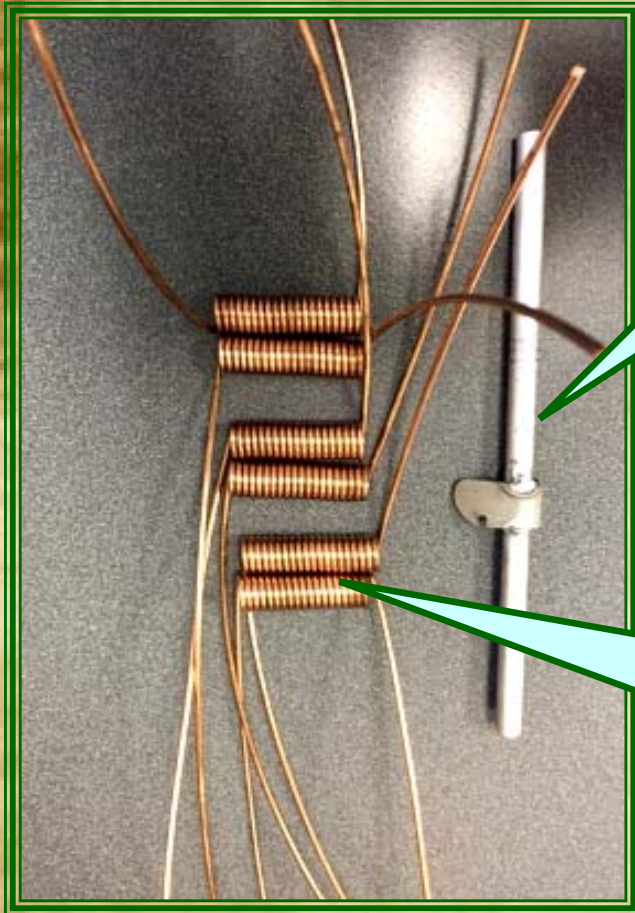


The background is a textured, light beige surface. In the bottom right corner, there is a cluster of several interlocking gears of various sizes and colors, including gold, brown, and red. The corners of the page are decorated with ornate, golden-brown scrollwork designs.

Fabrication of Replacement Parts

Wind Chest Spring Fabrication

Wound Springs



Spring
Winding Arbor

Phosphorus
Bronze
Springs

Completed Springs



Trumpeter Horn Fabrication

Forming Arbor for Horn

Horn Final
Form Mandrel



Weight Fabrication

Silicone Weight Mold



Lead Weight 11 lbs



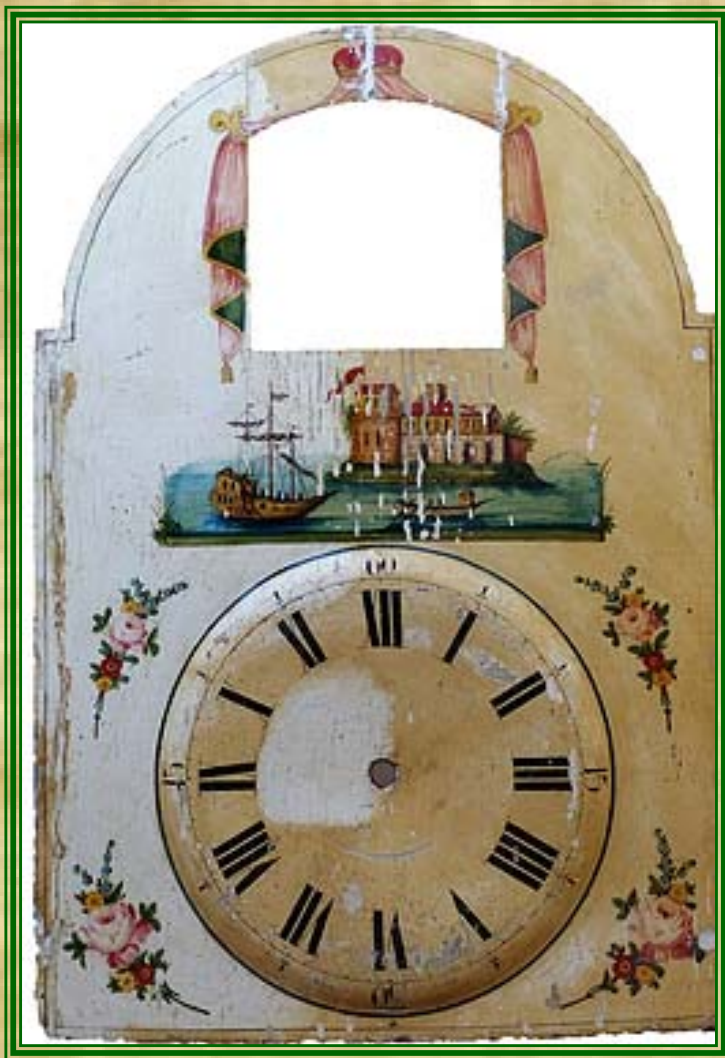
Completed Music
Section Weight



Black Forest Clock Dial Faces



Dial Face Restoration



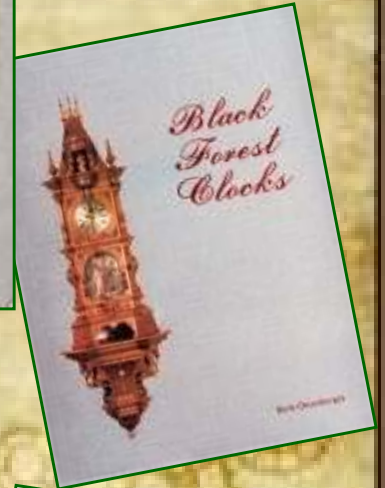
Black Forest Clock Bone Hands



Black Forest Clock Wooden Items



Black Forest Clock Books



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PHOTOS-VIDEOS

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BOOKS

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FOR SALE

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BLACK FOREST CLOCK COLLECTORS WEBSITE AND FORUM


*Welcome to the
Antique Black Forest Clock
Collectors Website and Forum*

*Your Source for the Latest
Black Forest Clock Collecting News and Information*

<http://www.blackforestclockcollectors.com/>

<http://www.blackforestclockforum.com>

Thank You!

The image features a vintage-style background with a parchment-like texture. A decorative border with ornate, golden-brown corner flourishes frames the page. In the bottom right corner, there is a cluster of interlocking gears in various shades of gold and brown, creating a steampunk aesthetic. The text "Thank You!" is centered in a black, elegant cursive font.