

# The Black Unicorn Blanket Chests of Bern, PA

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# PENNSYLVANIA GERMAN “BLACK UNICORN” BLANKET CHEST

ABOUT 30 “BLACK UNICORN” CHESTS WERE MADE IN BERN BETWEEN 1776 AND 1803

8 MAKERS, 4 DECORATORS

About 10 other related objects



Pook, \$280K, 2018



Christie's, \$300K, 2018



Historic Trappe



Private Collection



Reading Public Museum



The Met, NYC

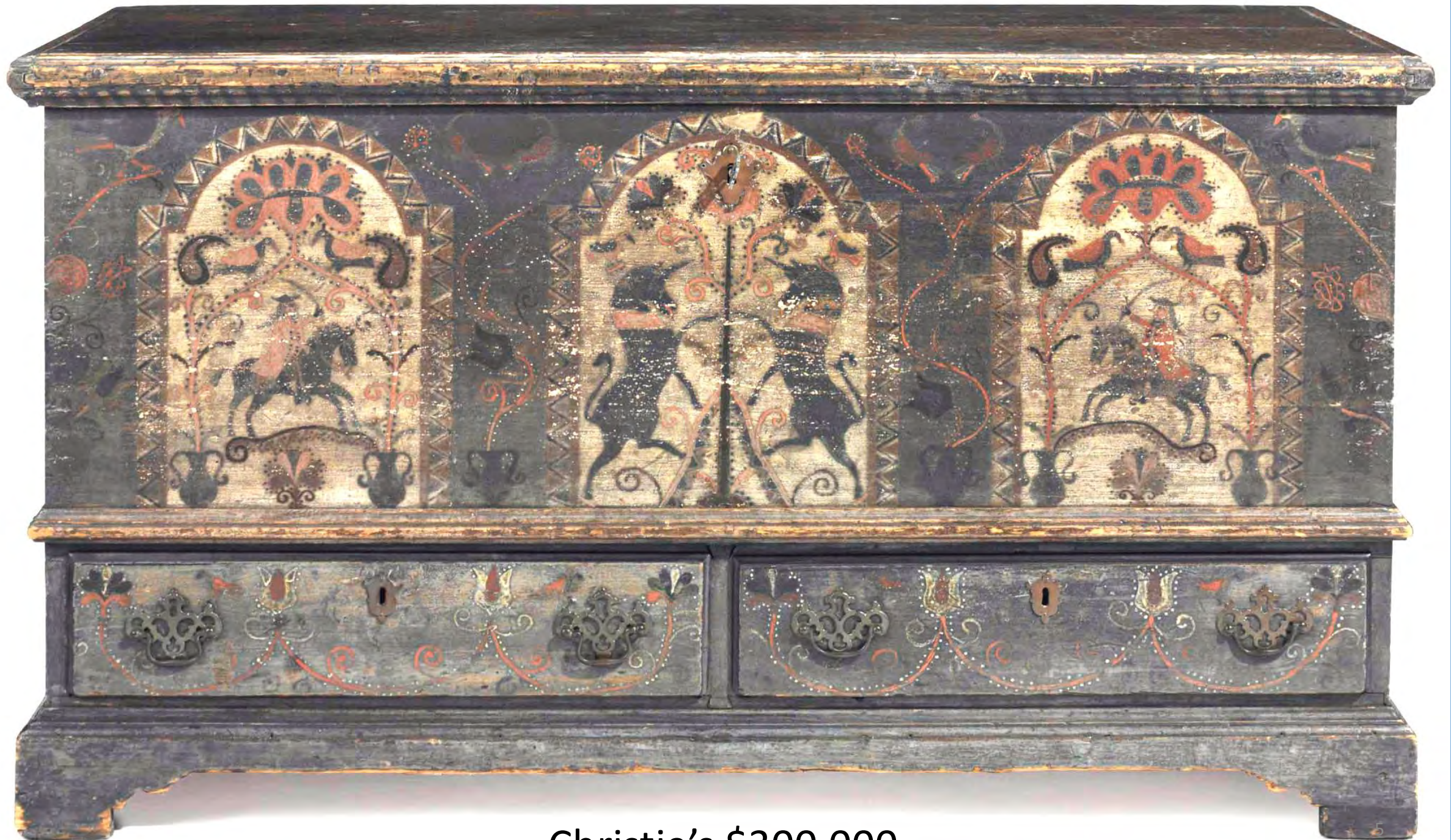


Metropolitan Museum of Art,  
New York City



Philadelphia Museum of Art





Christie's \$300,000



Prices4Antiques – Pook & Pook,  
Furniture: Dower Chest; Ellinger (David),  
Pine, Painted & Decorated, signed.  
Furniture: A Pennsylvania painted pine  
dower chest, circa 1800, decorated by  
David Y. Ellinger (American, 1913-2003),  
signed on lid.

# The Pennsylvania-German Decorated Chest



Monroe H. Fabian



A Schiffer Book for Collectors

# THE Pennsylvania Dutch

AND THEIR FURNITURE



JOHN G. SHEA

**DIETRICH'S, BASED ON A PRIVATELY OWNED ORIGINAL  
ON DISPLAY AT HISTORIC TRAPPE  
MADE IN BERN TOWNSHIP, BERKS COUNTY,  
PENNSYLVANIA, dated 1784**



**THE IMPACT OF WOOD MOVEMENT  
MAY BE NOWHERE AS APPARENT AS  
ON THE SIMPLE BLANKET CHEST.**

# HOW MUCH DOES WOOD MOVE?

This example illustrates the importance of accounting for seasonal wood movement in woodworking. A frame-and-panel door may require substantial allowance for expansion or shrinkage depending on the species, **Moisture Content (MC)\*\*** of the wood and the time of year it is built.



Given the following sample conditions:

- Panel width: 13-1/4"
- Material: Black Walnut, quartersawn (radial)
- MC fluctuation\*\*: 6 (from 6% in mid winter to 12% in mid summer)
- Time of year: Mid winter

**Step 1.** Look up the chart movement value (B) for Black Walnut. Since the panel is quartersawn the value for radial movement is required: 0.0019

**Step 2.** Find the actual seasonal movement. Multiply the chart movement value by the width of the panel by the seasonal MC fluctuation which, as shown above, we are assuming to be 6.

$$\begin{aligned} \text{Projected seasonal movement} &= \text{chart movement value} \times \text{panel width} \times \text{MC fluctuation} \\ &= 0.0019 \times 13.25 \times 6 \\ &= 0.151" \end{aligned}$$

**Step 3.** Add a safety margin to guard against greater than normal fluctuation

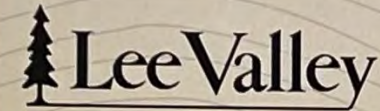
$$\begin{aligned} \text{Actual seasonal movement} &= \text{Projected seasonal movement} + 25\% \text{ safety margin} \\ &= 0.151" + (0.151" \times 0.25) \\ &= 0.151" + 0.038" \\ &= 0.189" \text{ (3/16")} \end{aligned}$$

**Expansion allowance = 0.189" (3/16")**

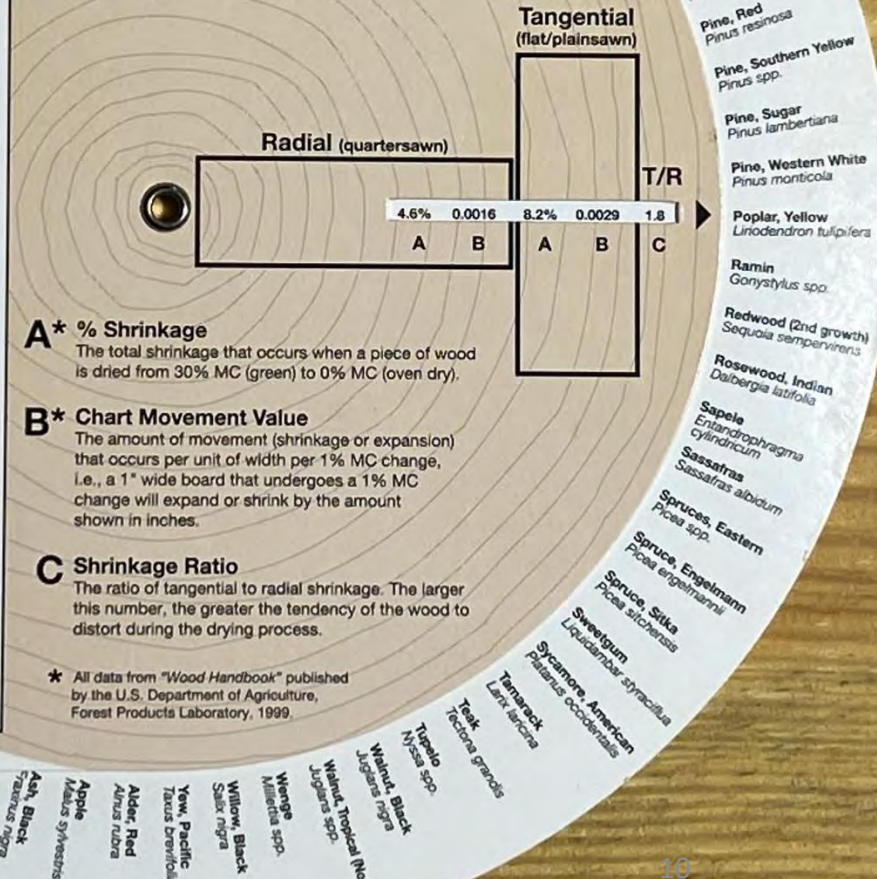
## Coping with wood movement:

- The data in this guide applies to wood that is already at **Equilibrium Moisture Content (EMC)**. If you are using wood that has not adjusted to the EMC in your shop, it will be swelling or shrinking while you are working on it.
- You will have to compensate if the EMC in your shop (e.g., 4%) is outside the range that your finished project will be subject to (e.g., 8% to 11%); in this case, take into account initial expansion caused by an increase of at least 4% MC.
- All the data in this guide applies to wood that has no finish or a light finish such as wax. If wood is to be finished with urethane, paint or varnish, the amount of expansion/shrinkage will be far smaller.
- Apply the same amount of finish to both sides of a workpiece. Uneven moisture absorption will cause distortion.

\*\* See other side for methods to estimate MC fluctuation.



## Wood Movement Reference Guide



# HOW MUCH DOES WOOD MOVE?

- ASSUMPTIONS

- Flatsawn, 6% annual moisture content fluctuation (12% summer, 6% winter)
- 22" wide top

- POPLAR

- = 22" wide X 6% moisture fluctuation X .0029 (factor for flatsawn poplar)
- = .3828" = 3/8"

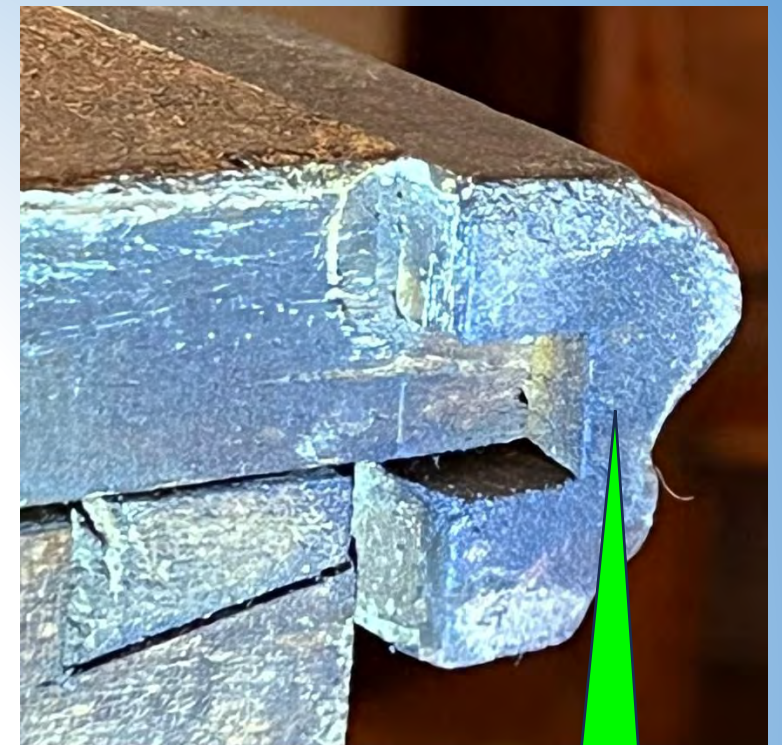
- SOUTHERN PINE

- = 22" wide X 6% moisture fluctuation X .0026 (factor for flatsawn poplar)
- = .3432" = 11/32" or nearly 3/8"

# TOPS & MOLDING

# TOP MOLDING METHODS & ISSUES

- Pegged thru molding onto edge of top
  - Molding works loose creating gaps
  - Top may split
  - Molding may pop off
  - Can push front molding away from chest
- Through mortised into ends of top and front pegged
  - Top may split
  - Can push front molding away from chest
- Bread board ends (if holes in mortises not elongated to allow movement)
  - Top may split
  - Can push front molding away from chest
- Front corners bridal joint, flush butt joint (may be pegged), mitered
  - If movement allowed, simply creates underlaps or overlaps
  - If movement not allowed, can push molding away from chest
- Mitered may push side or front molding away from chest and create gap
- Top shrinks and front molding sits on top edge of chest, chest won't close



REAR  
CORNER  
SHRINKAGE



FRONT TOP  
CORNERS  
SHRINKAGE

SCHWENKFELDER  
MUSEUM  
1796



**SCHWENKFELDER  
MUSEUM  
1826**



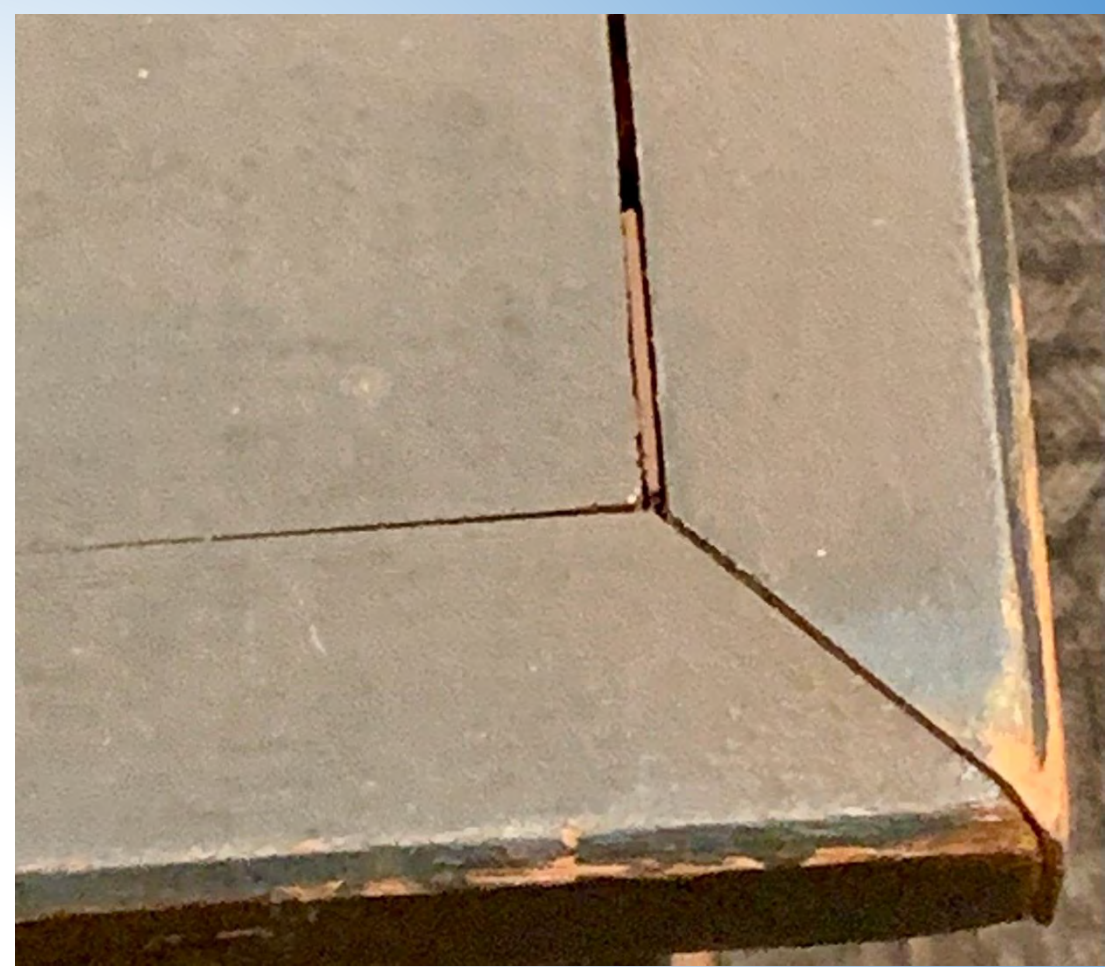
**SCHWENKFELDER  
MUSEUM  
1815**



**SCHWENKFELDER  
MUSEUM  
1801**



**SCHWENKFELDER  
MUSEUM  
1729 GERMANY**



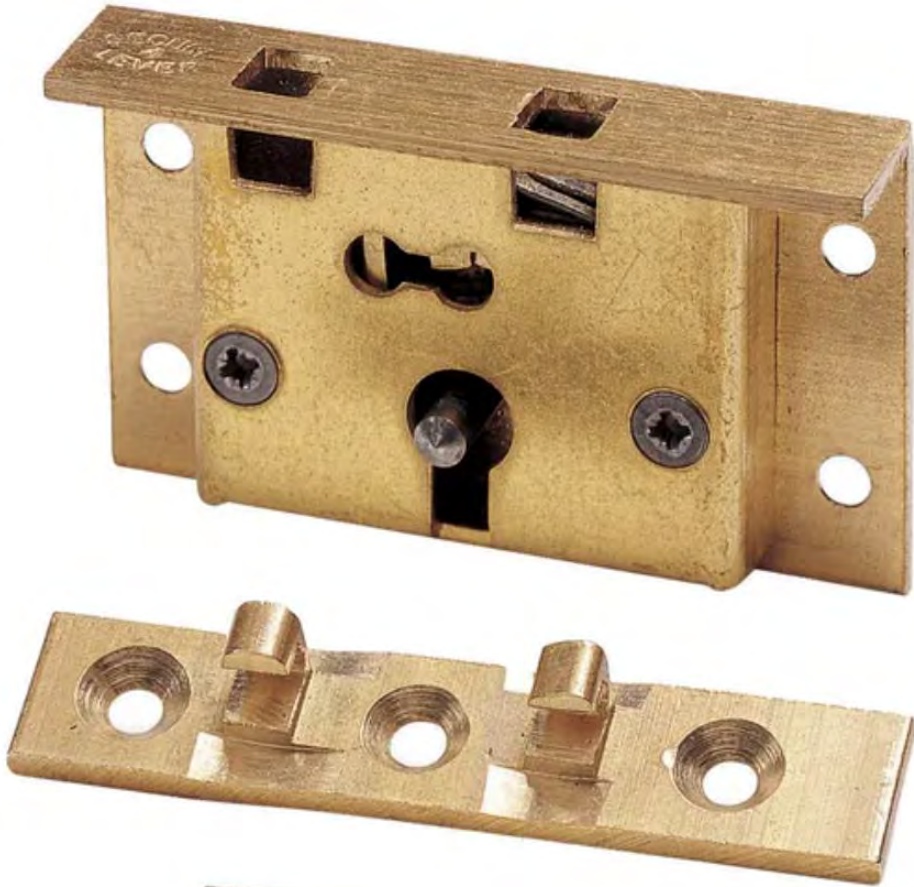
**SCHWENKFELDER  
MUSEUM  
1829**



**Historic Trappe  
1784  
Lid Won't Close**



# ENGLISH vs GERMAN LOCK



## ENGLISH

**Very Little Travel**

**Lid jams, won't open, won't close, keeper removed**



## GERMAN

**Much More Travel**

**Still works when lid expands and contracts**

# BOTTOMS & BASE MOLDING

# BOTTOM ATTACHMENT METHODS & ISSUES

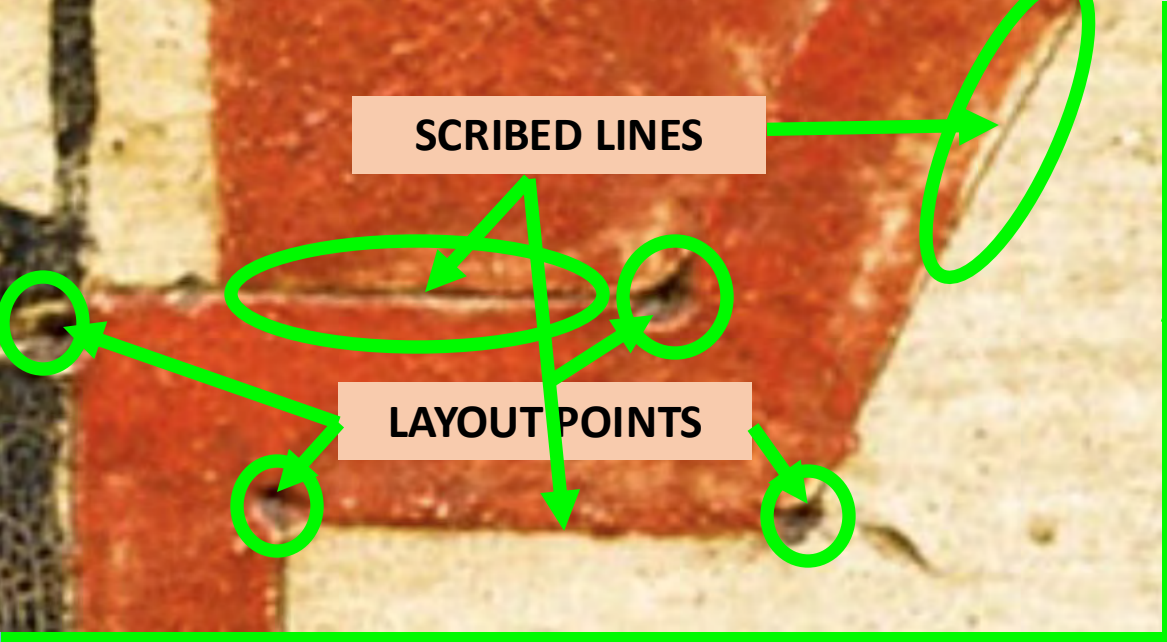
- Flush with and pegged through front, back, and ends
  - Boards shrink, gaps on floor of chest in front and or back
  - Floor may sag or pop off
  - Boards may split
  - Floor may expand and push front molding loose or all the way off
- Inset in dados
  - Boards shrink, gaps on floor of chest in front and or back
  - Floor may sag or pop off
- Nailed or pegged onto bottom edge of front, back, and ends
  - Floor may split and/or pop off
  - Floor may expand and push front molding loose or all the way off



**In storage in  
Williamsburg,  
model for Ferry  
Farm  
Bottom sagged**

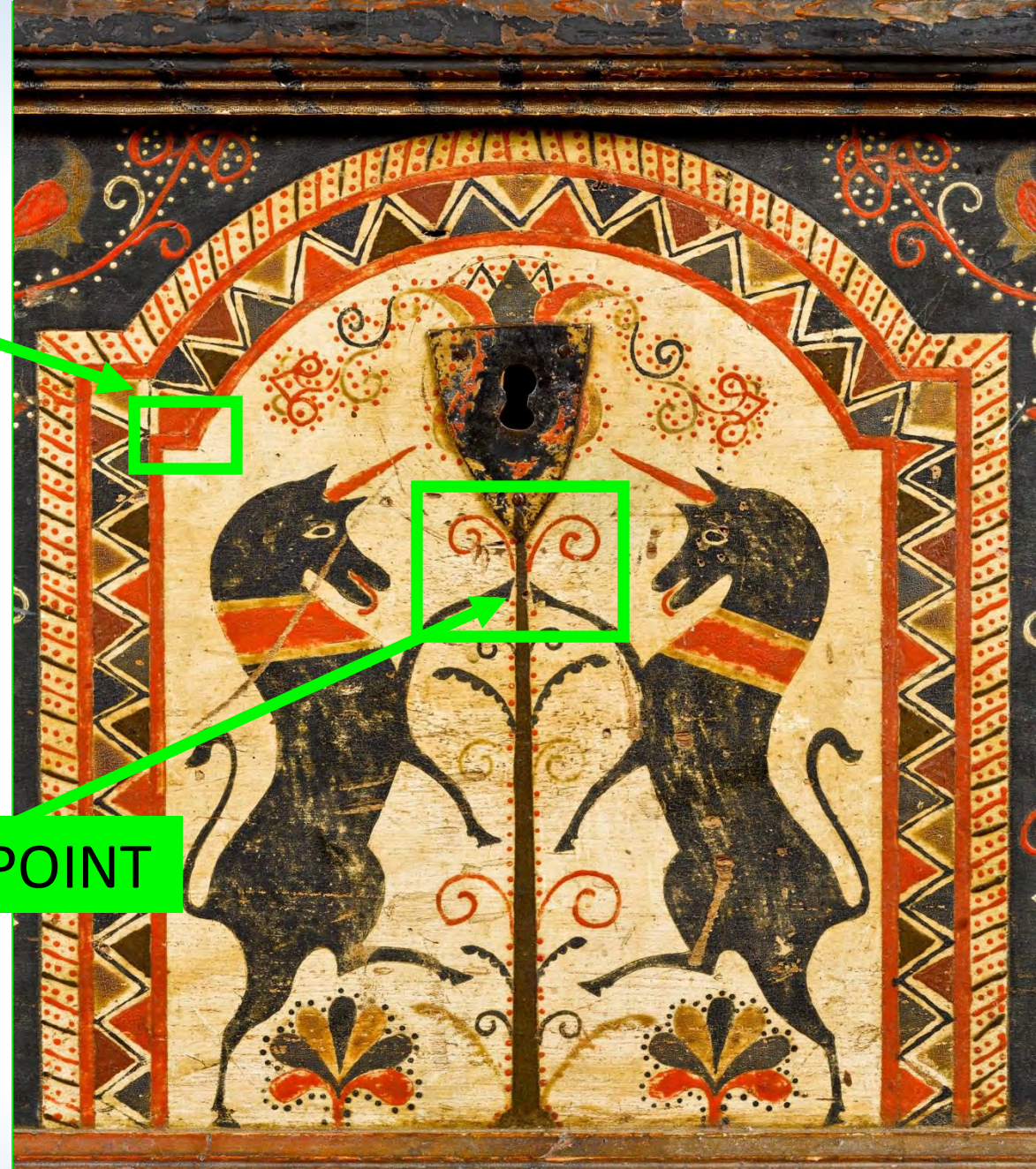


# HOW DID THEY DO IT?

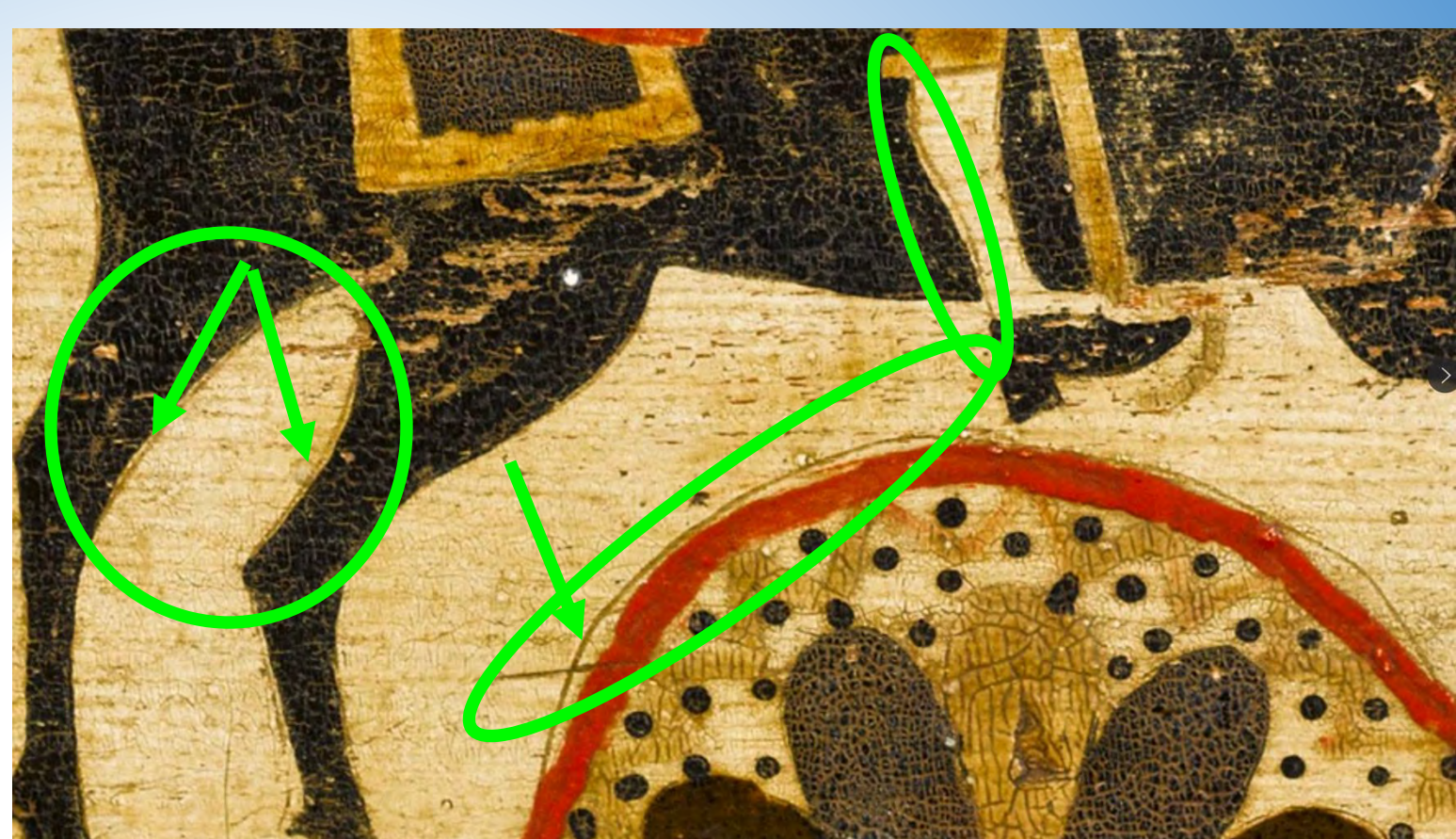


Decorations  
combination  
of:

- Pattern
- Template (trace)
- Freehand



Designs laid out using dividers or trammel points and scribed lines





**BOX AT THE MET**



**SCHWENKFELDER  
MUSEUM  
1826**

# HOW DID I DO IT?



Shoulders &  
top of arches  
on same  
planes

Different  
radii

1 arch  
center  
2 arches  
flankers

How to find  
radius from  
less than half  
of a circle?

Center  
panel wider

1 arch center  
panel

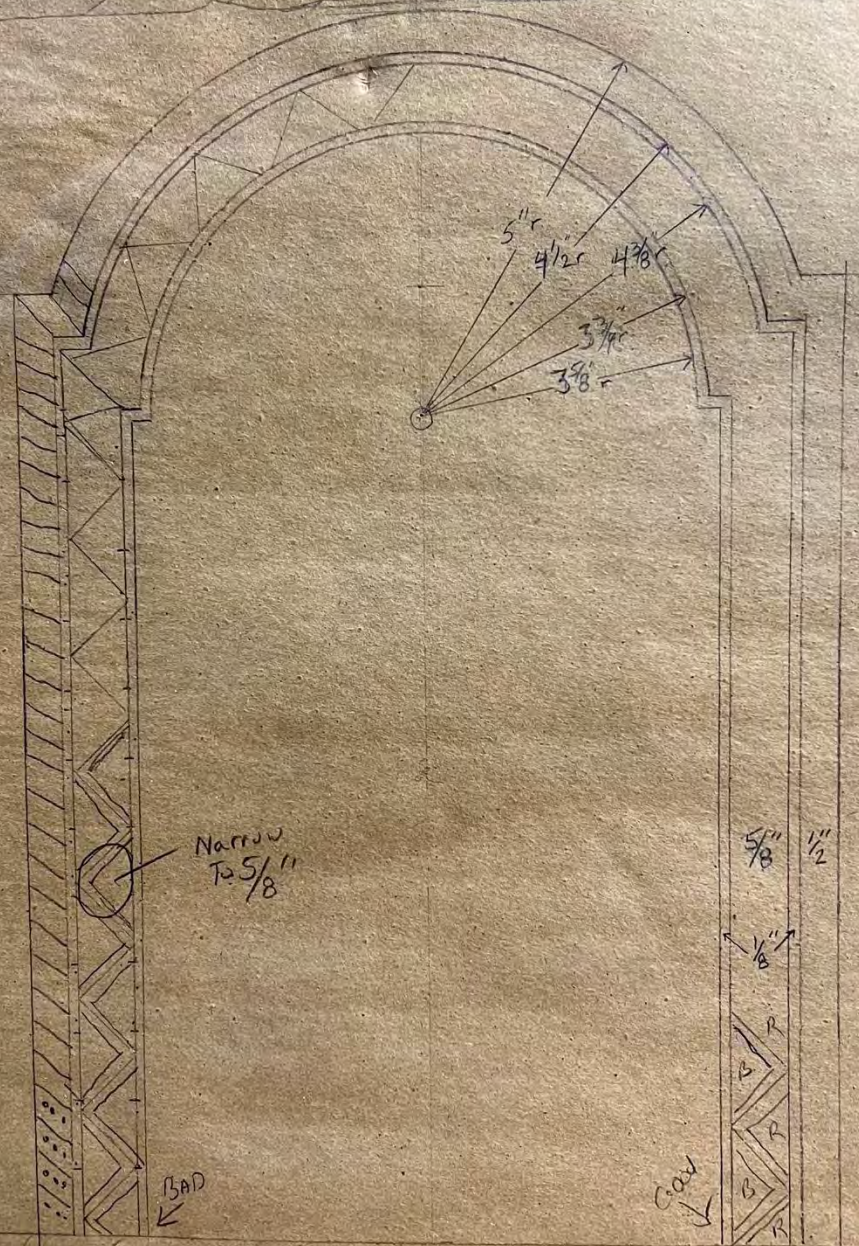
2 arches  
flankers

**HISTORIC  
TRAPPE**

# The Met, NYC

Shoulders  
and top of  
arches on  
same plane

Pivot Points  
for Different  
Radii



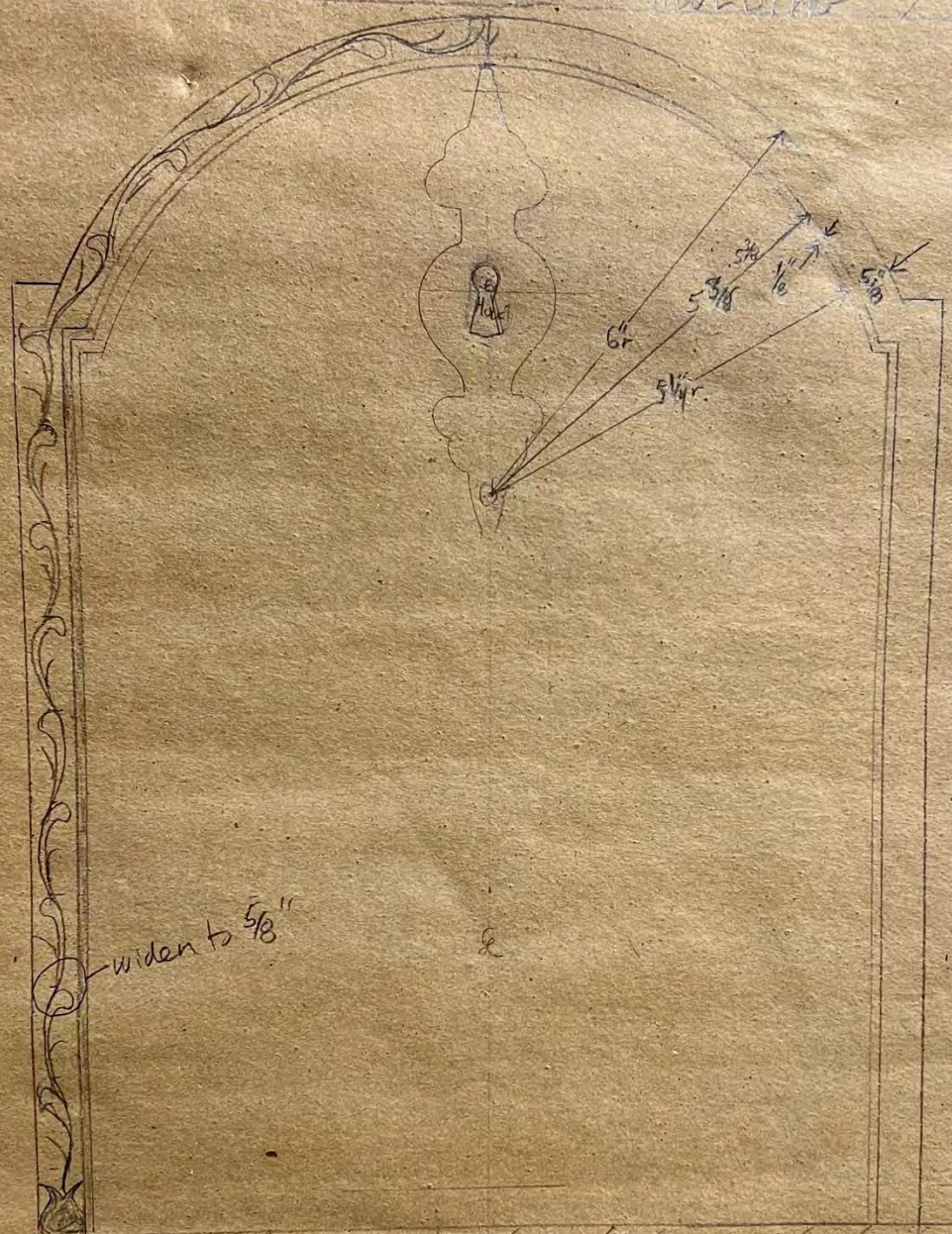
Narrow To 5/8"

BAD

Good

10"

3 3/8"



widen to 5/8"

1/2" BTWN PAINT & MOLDING

BASE MOLDING

12"

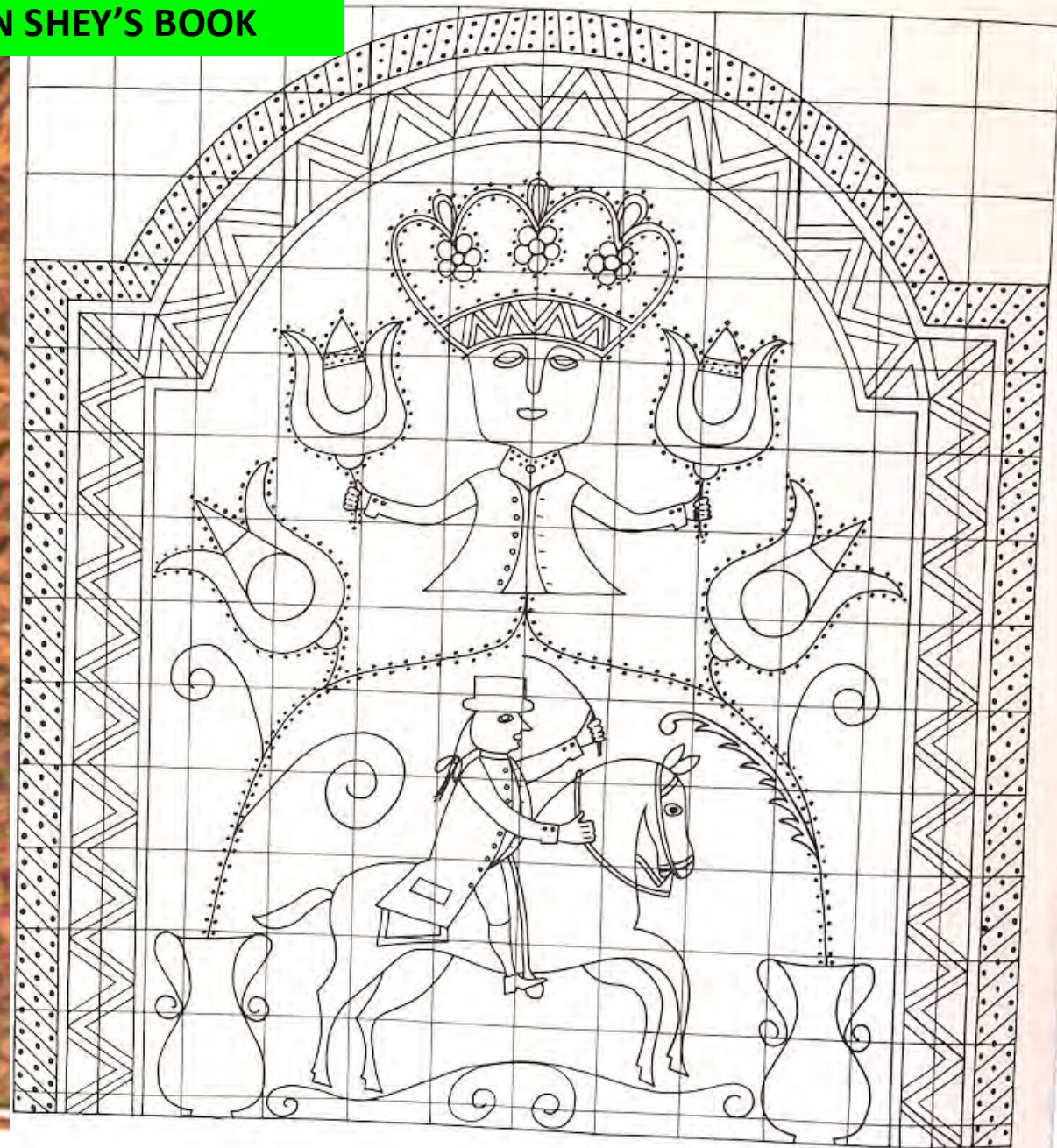
48"

30 3/8"



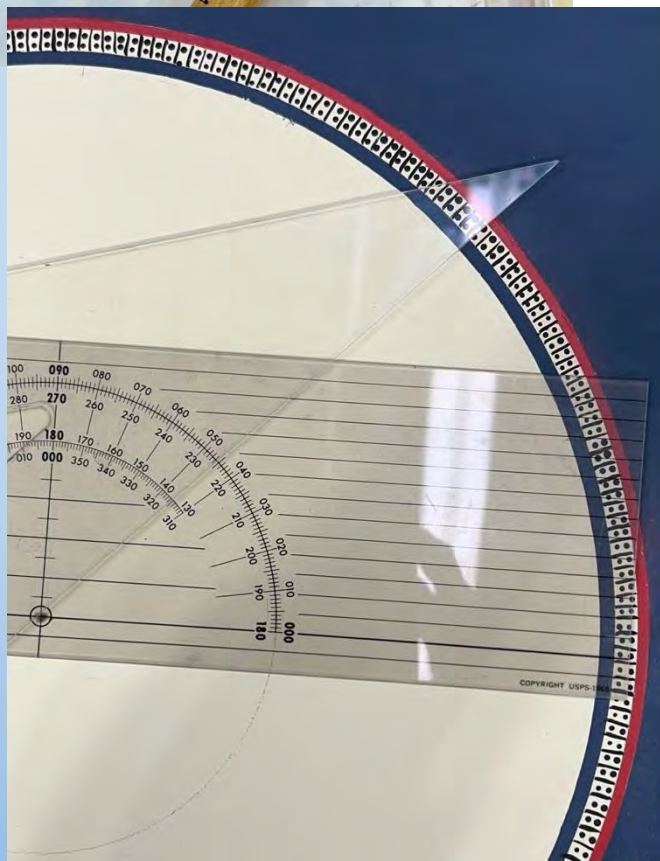


PATTERNS IN SHEY'S BOOK

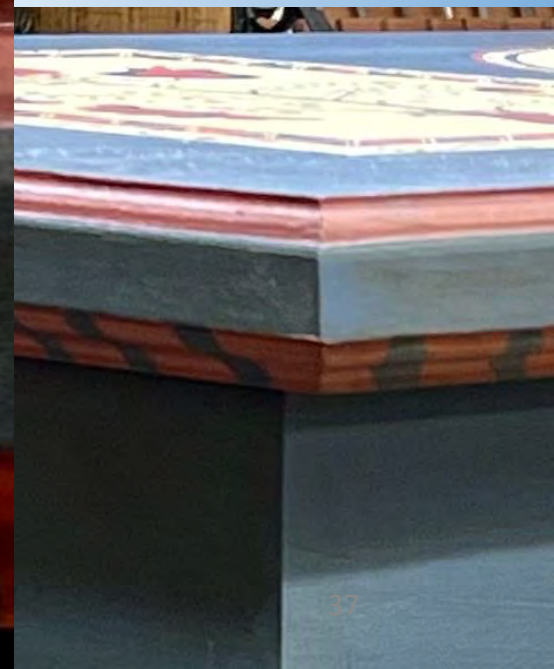
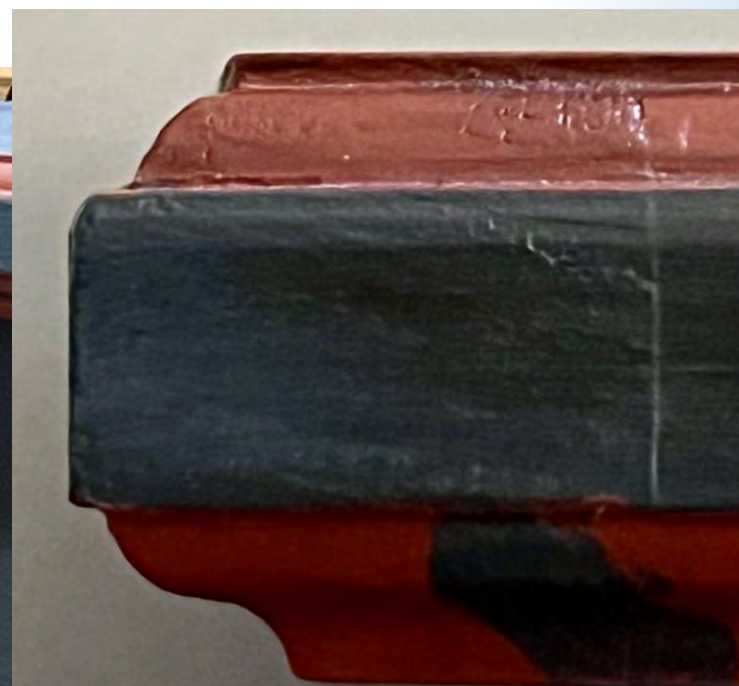


DESIGN ON A GRID – EITHER ON ITEM OR TRANSFER USING CARBON PAPER













# HOW DID I DO?



**Historic Trappe Original**

**Dietrich Version**



Historic Trappe Original



Dietrich Version





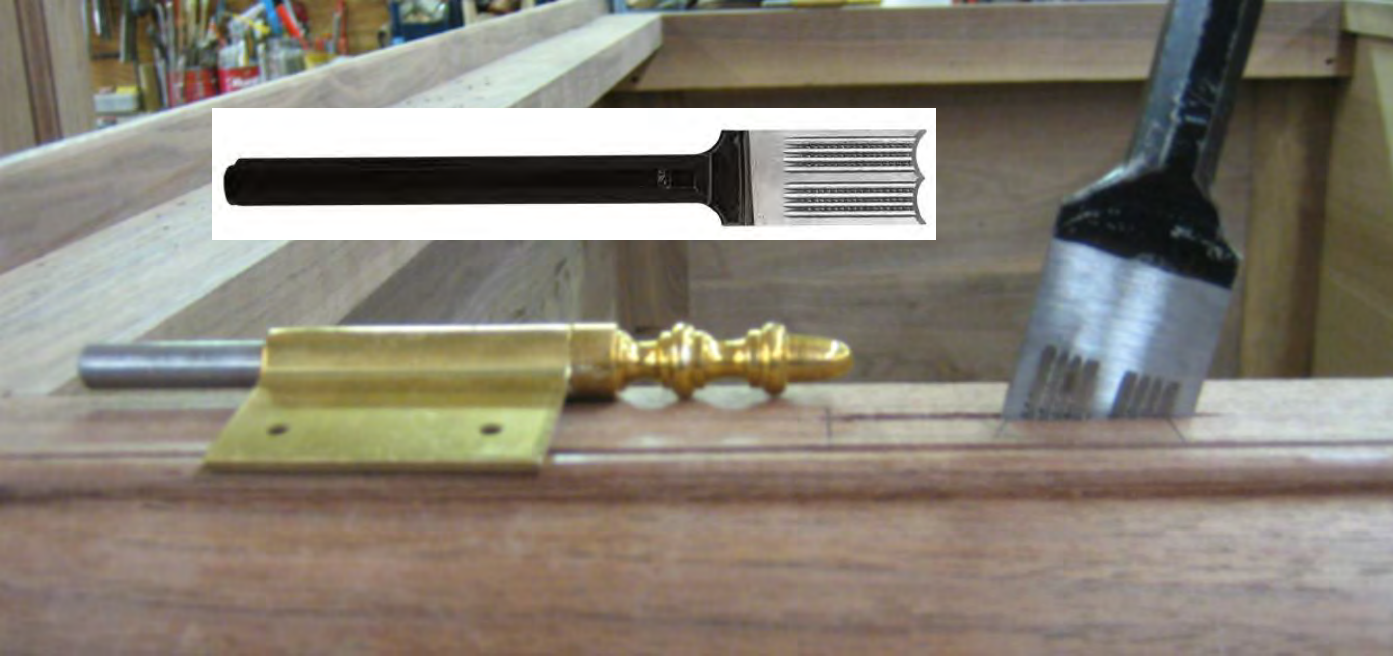
# BACKUP?



Black Unicorns  
Bern, Berks County, PA.  
40 examples, 1777 -1803  
8 makers, 4 painters

Historic Trappe, Trappe, PA  
Bern, PA, 1784





FICHE  
HINGE

