

# Power Tools in the Ship Model Shop

Greg Herbert

*Presented at the*



April 1 & 2, 2011  
Newport Beach, CA

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*The Fully Framed Model (Volume 3): Building the Swan Class Sloop Pegasus 1777.* ISBN 978-0-9820579-4-0



[www.shipmodelersassociation.org](http://www.shipmodelersassociation.org)



[www.nhnm.org](http://www.nhnm.org)

# Power Tools in the Ship Model Shop

or

*How to Spend Hundreds of  
Dollars to Make a Two Dollar Part*



How Byrnes Model Machines might have changed history!

### Slide 3

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**GH2**

You know Rob's a pretty smart guy and has recently published a wonderful book on a Navy Board model. I believe they were made for the shipwrights to use in the actual construction of the ships but the model builders were so slow they never finished in time.

Greg Herbert, 2/9/2011

# Why I Use Power Tools





Three eye surgeries later performed by  
renowned Palm Beach Ophthalmologist

# Power Tool Pros and Cons

Advantages	Disadvantages
Fast, easy removal of large amounts of wood	Messy
Precision cuts and miters	Loud
Accuracy	Dangerous
Ability to create shapes that would be very difficult with hand tools.	Expensive



# The Workshop













GH1



twenty minutes later...

Slide 11

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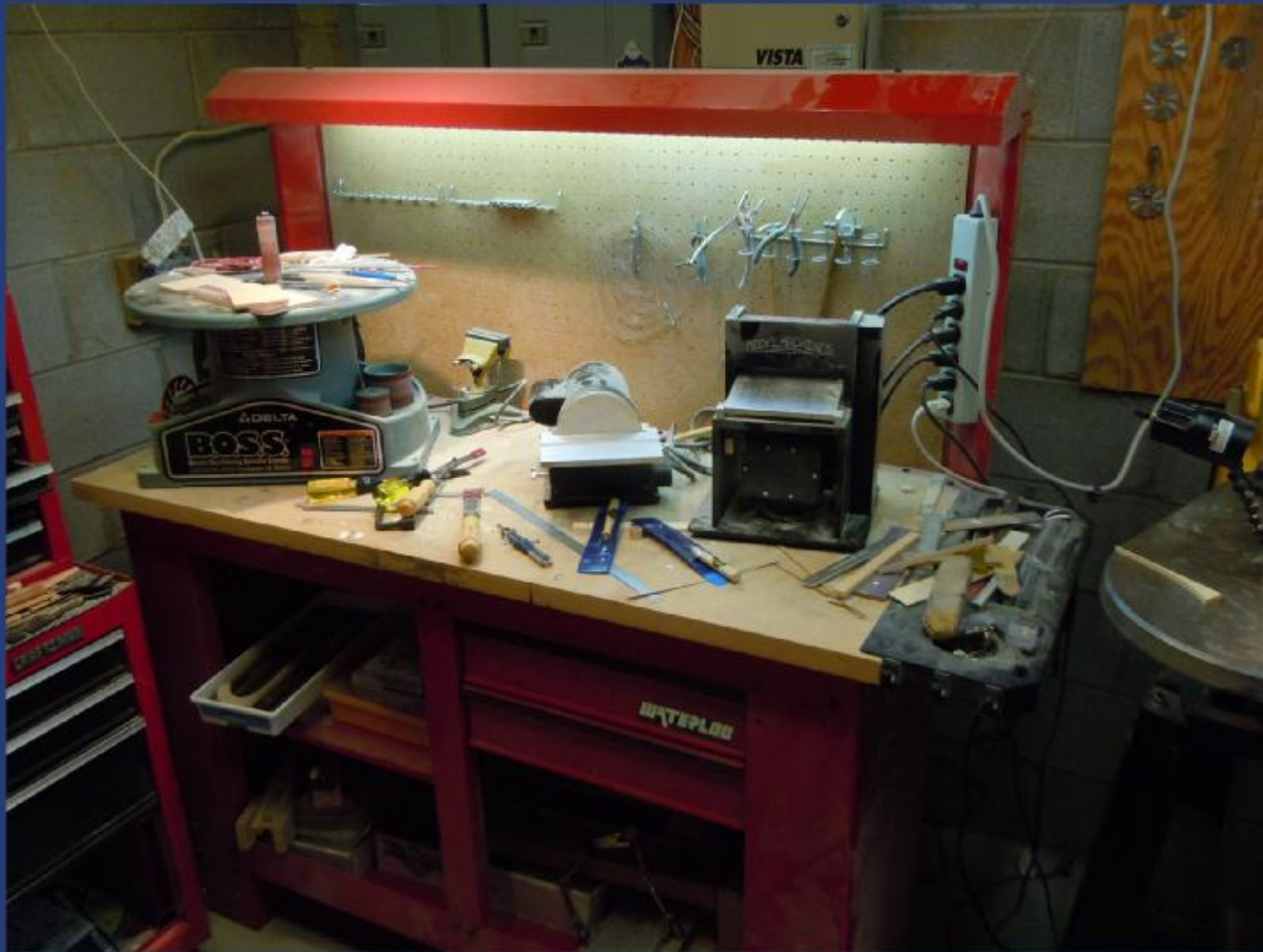
GH1

**Most dangerous object in this slide - TV**

Greg Herbert, 2/9/2011



GH3





Slide 12

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**GH3**

**Any machinists out there are having a heart attack at the way the chisels are laying all over the place.**

Greg Herbert, 2/9/2011

# Power Tools Are Not Toys!



"Before we use any power tools, let's take a moment to talk about shop safety. Be sure to read, understand, and follow all the safety rules that come with your power tools. Knowing how to use your power tools properly will greatly reduce the risk of personal injury. And remember this: there is no more important safety rule than to wear these — safety glasses."

Mandatory legal disclaimer – the speaker is full of \*#@\*! He frequently disables safety features and sustains painful injuries. Often he lies to his wife about the source of these injuries, blaming them on vicious Pit Bulls encountered in his urban veterinary practice.

Slide 13

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**GH6**

**One of the reasons I like power tools so much is because of this guy.**

Greg Herbert, 2/10/2011



(Mandatory product placement photo to appease publisher)









"I don't need no stinkin blade guard..."

## The Ship Modelers Best Friend\*



\* Mandatory legal disclaimer – Dr. Herbert doesn't treat humans so this advice is intended only if your pet injures himself on the table saw.

# Cost of Power tools



## Real Cost of Workshop\*



\*Florida condo available for rent. Please see speaker after presentation. No power tools allowed in condo.

Slide 20

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**GH5**

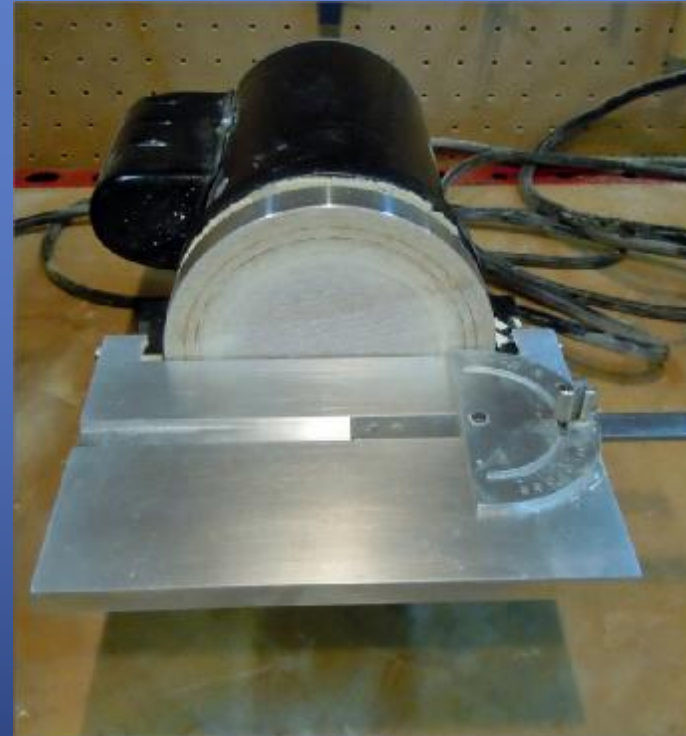
the cost of a condo in Florida. This is why my wife is so supportive of my hobbies. For others it may be a dinette set or new clothes for your spouse.

Greg Herbert, 2/9/2011

## My Top Two Power Tools



Dewalt scroll saw

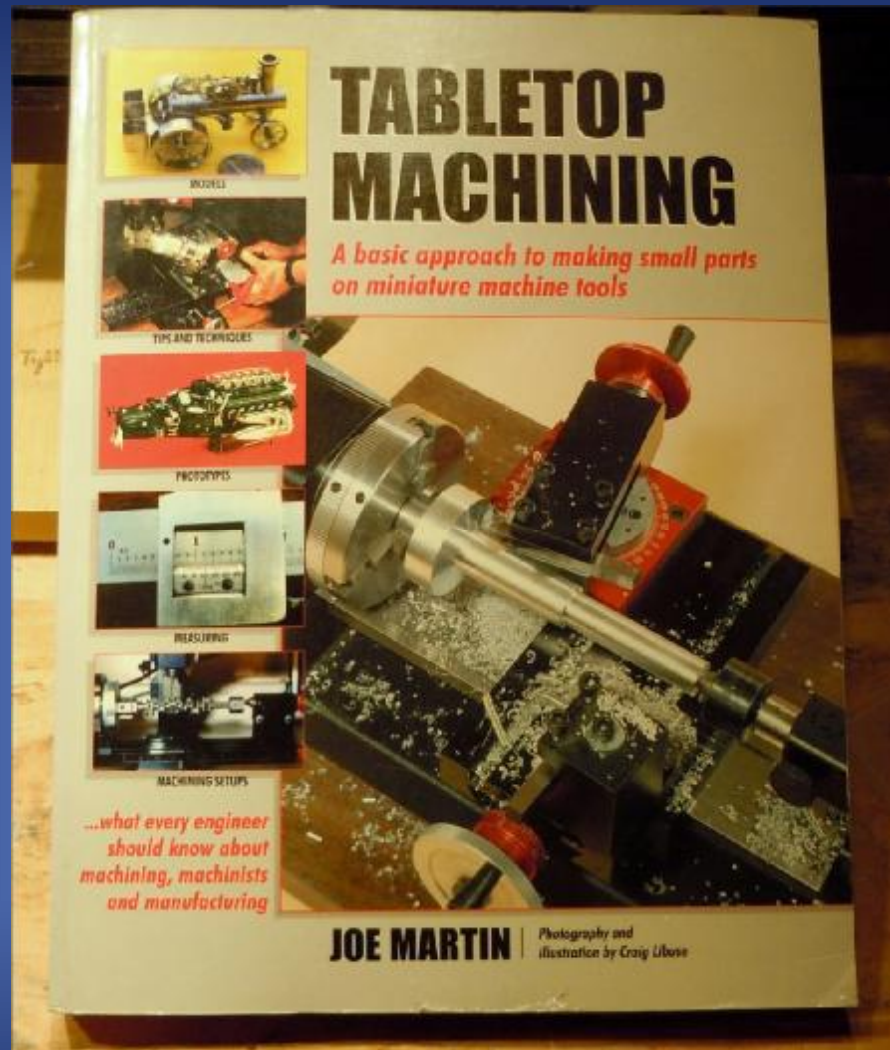


Byrnes Model  
Machine Disk Sander



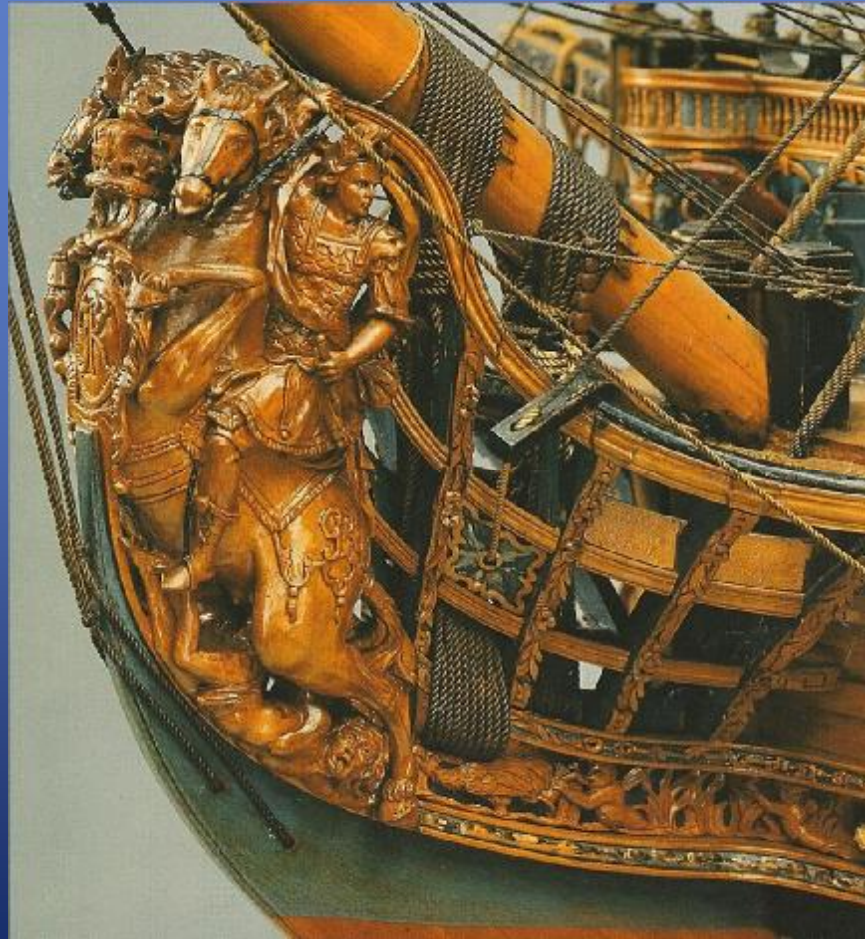
# My Most Used Workshop Tools





*Tabletop Machining, by Joe Martin, [www.sherline.com](http://www.sherline.com)*

# PROJECTS USING POWER TOOLS

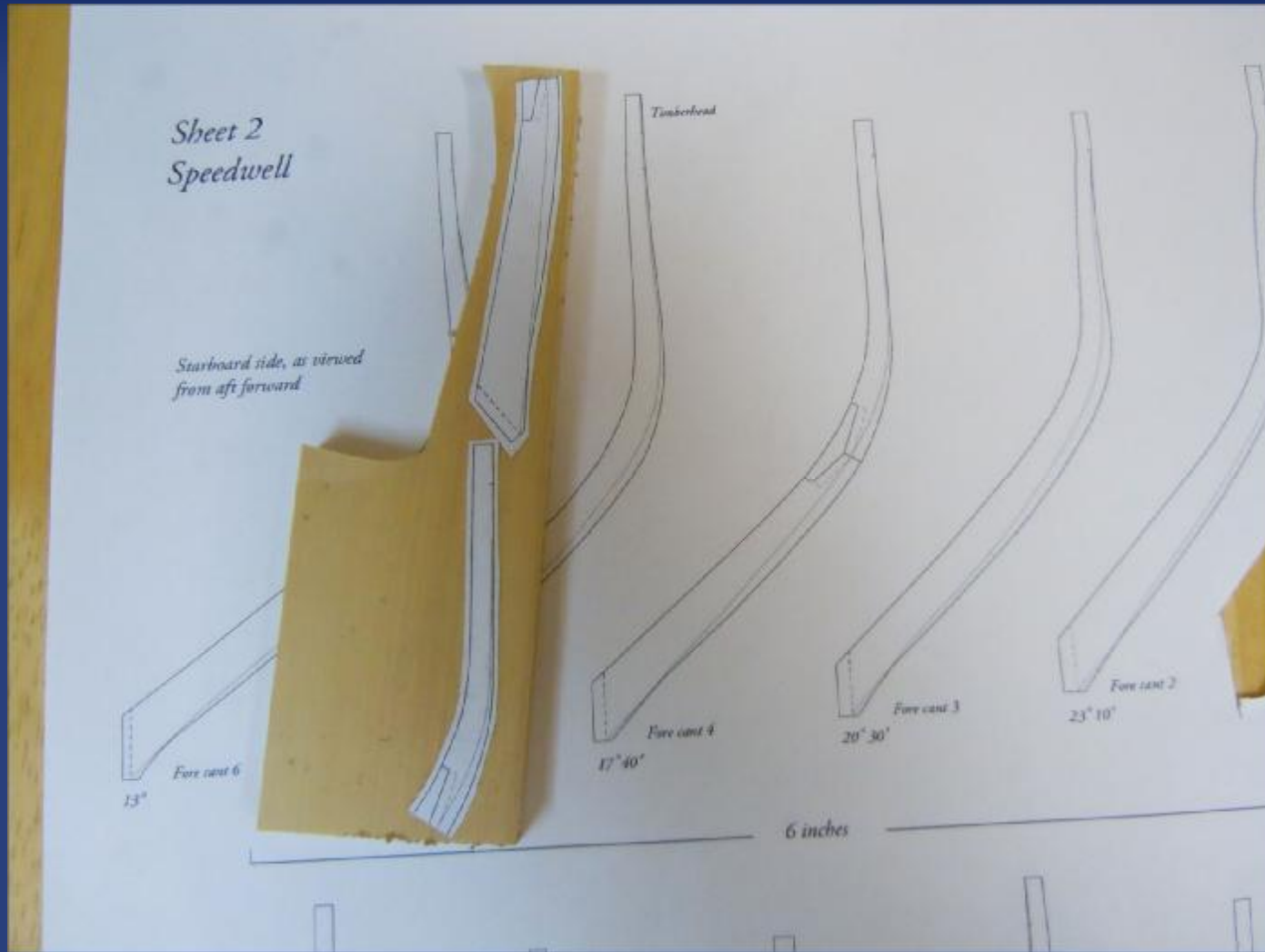


## Cant Frame



*HMS Speedwell, ketch rigged sloop of war, 1752*



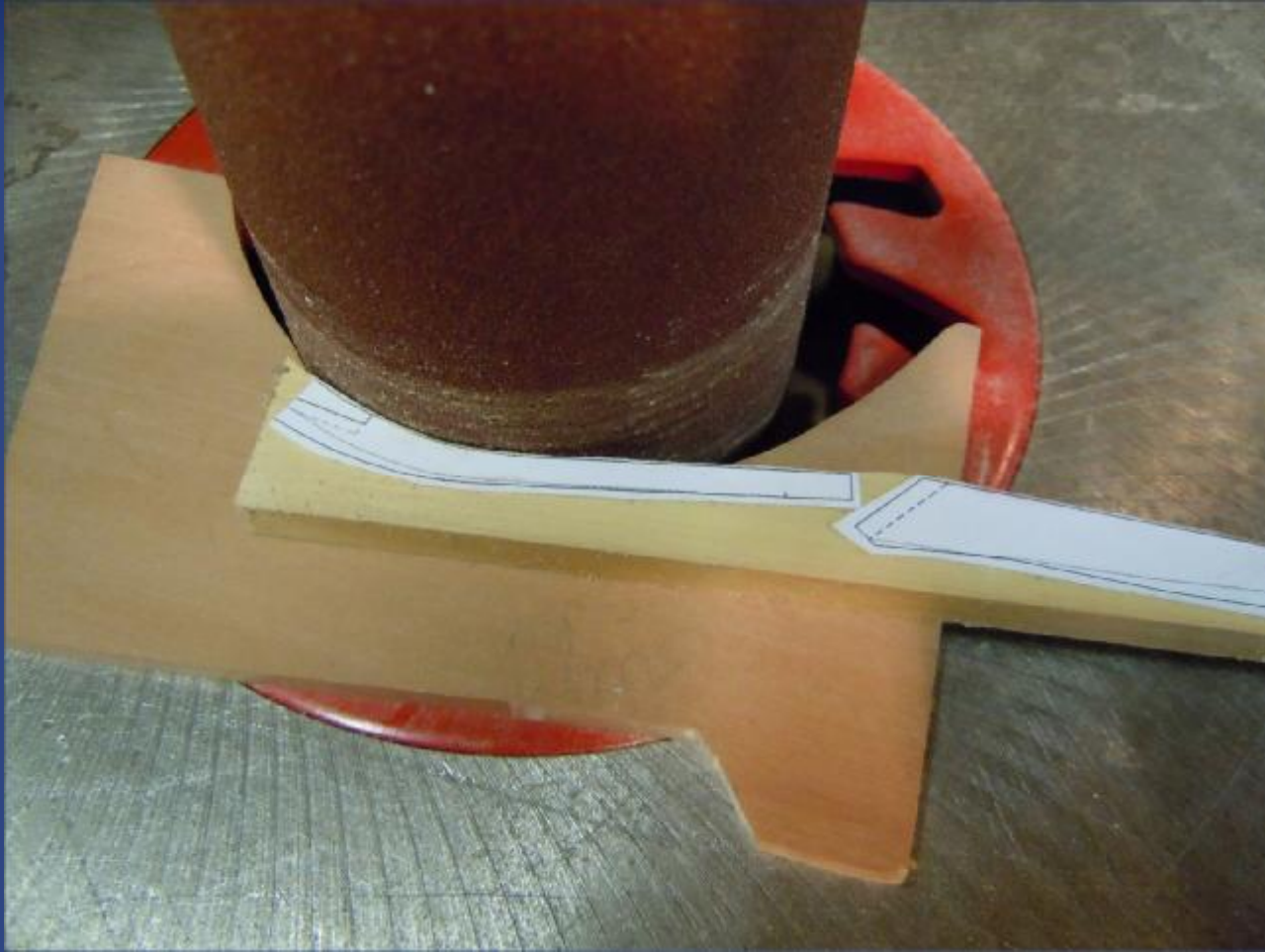


From *The Fully Framed Ship Model*, by David Antscherl



Scroll saw

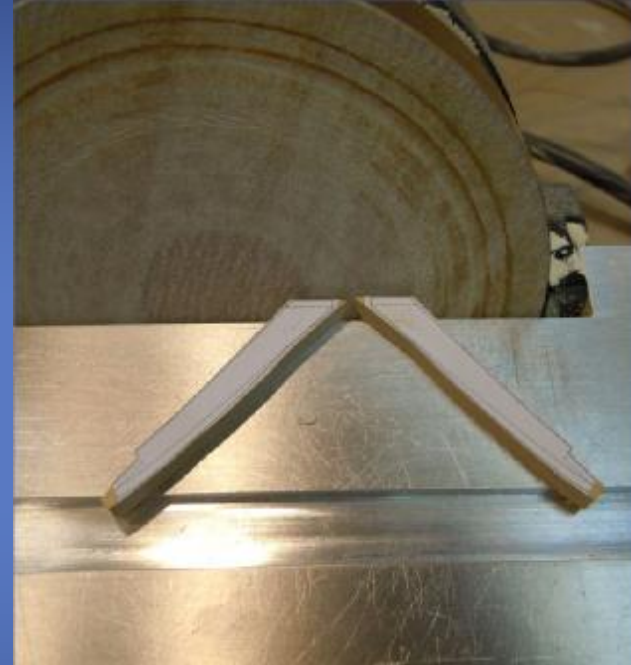




Oscillating spindle sander



17° 20'

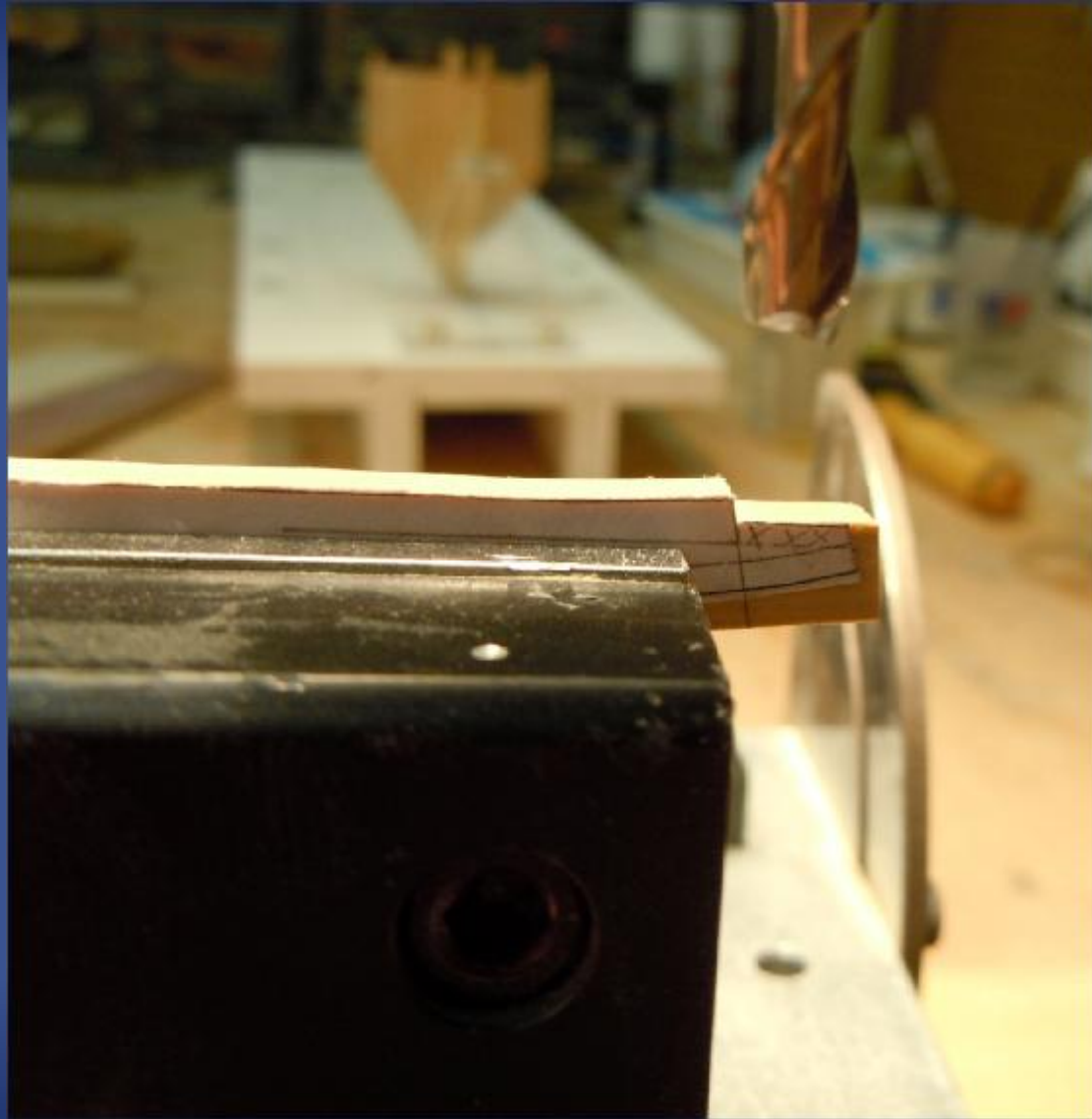


17° 20'

Disc sander



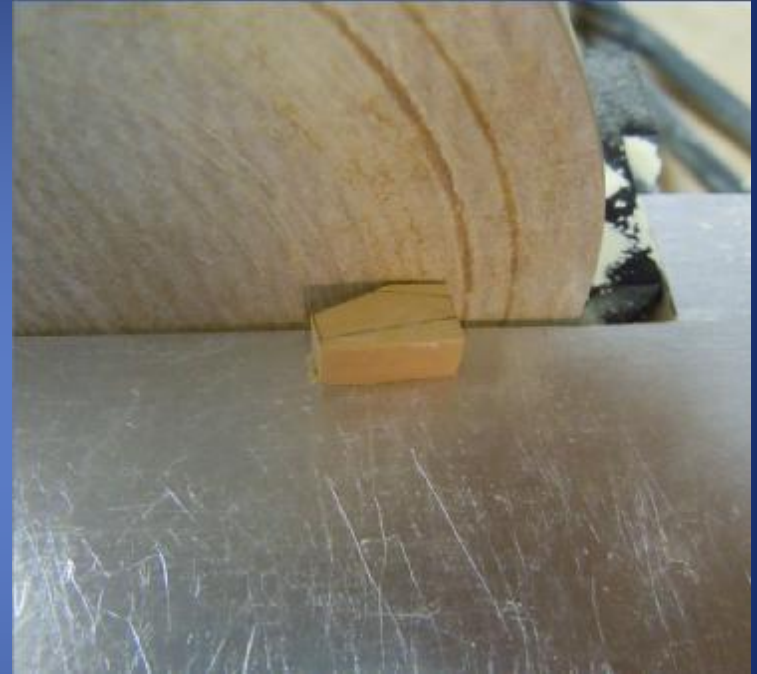
Mill with angle plate attached, 8° bevel cut



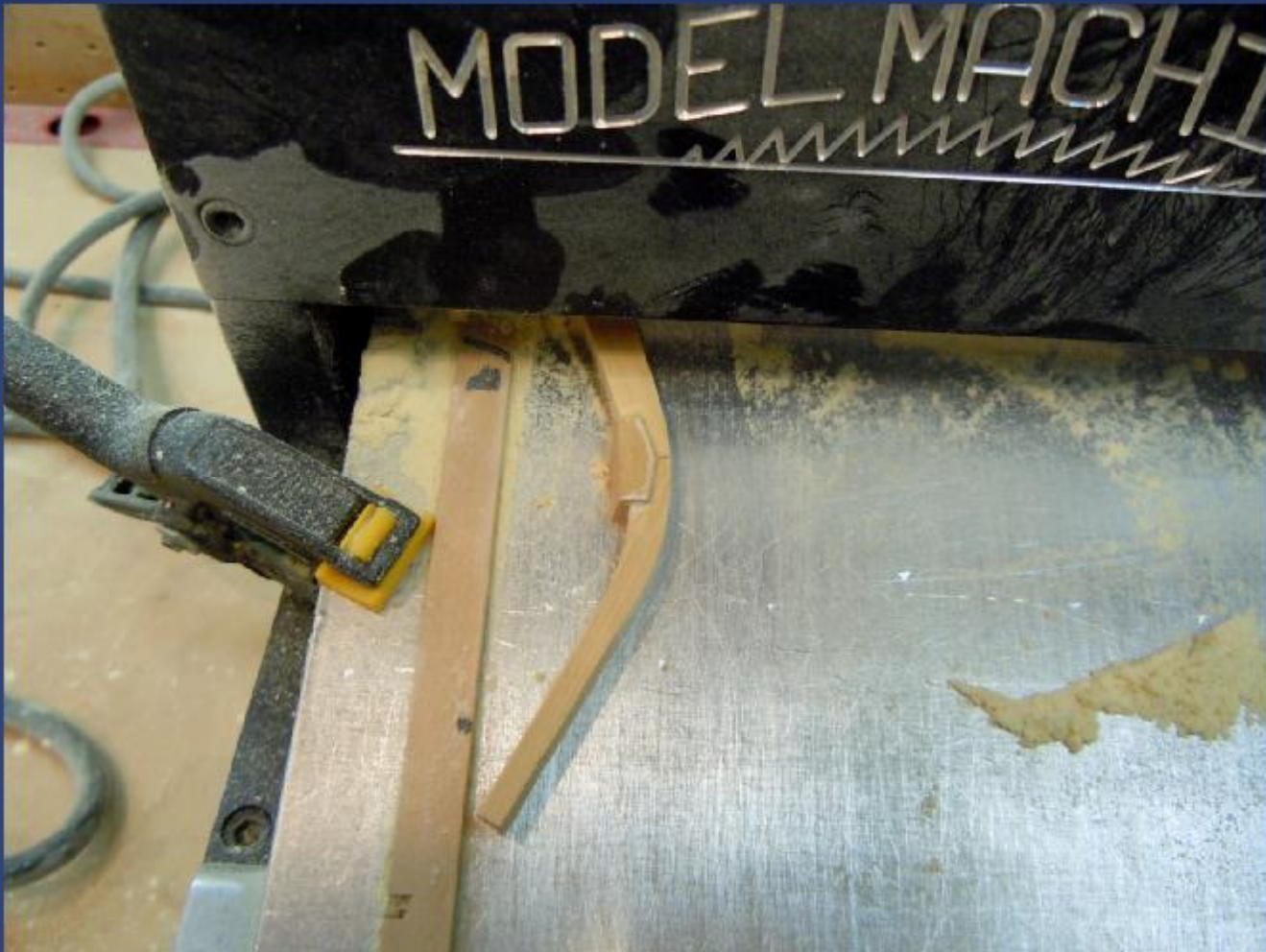






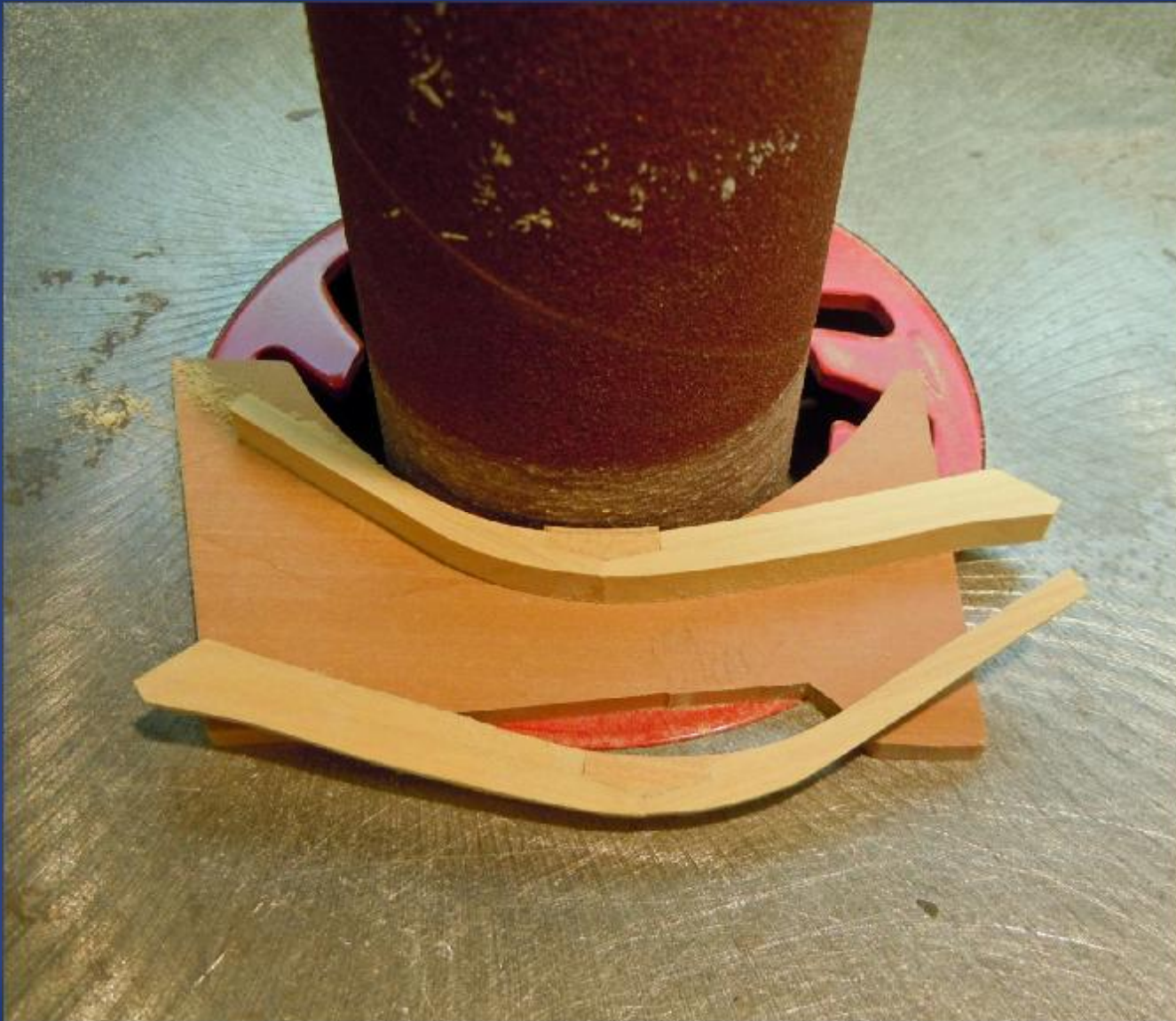


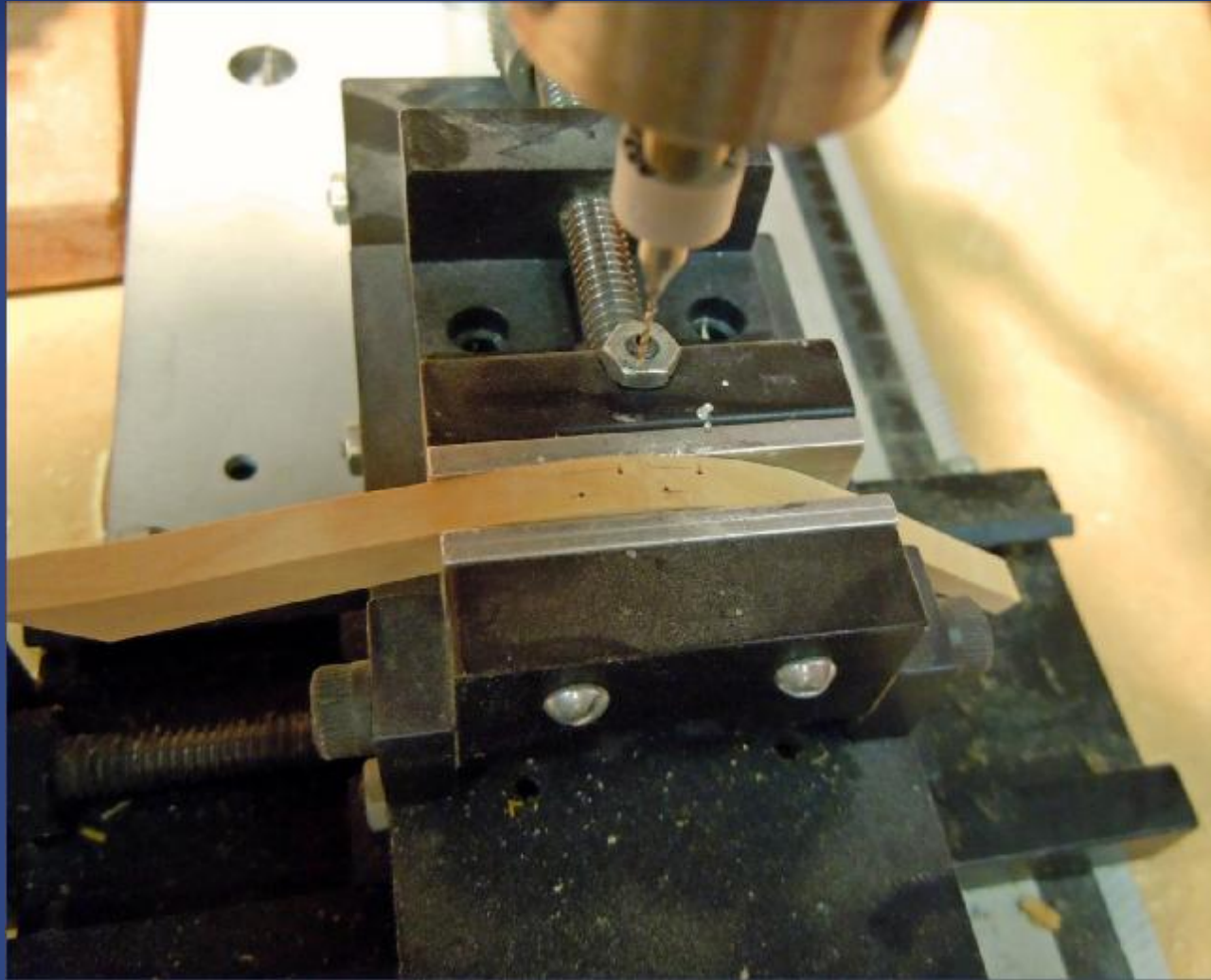




Thickness sander

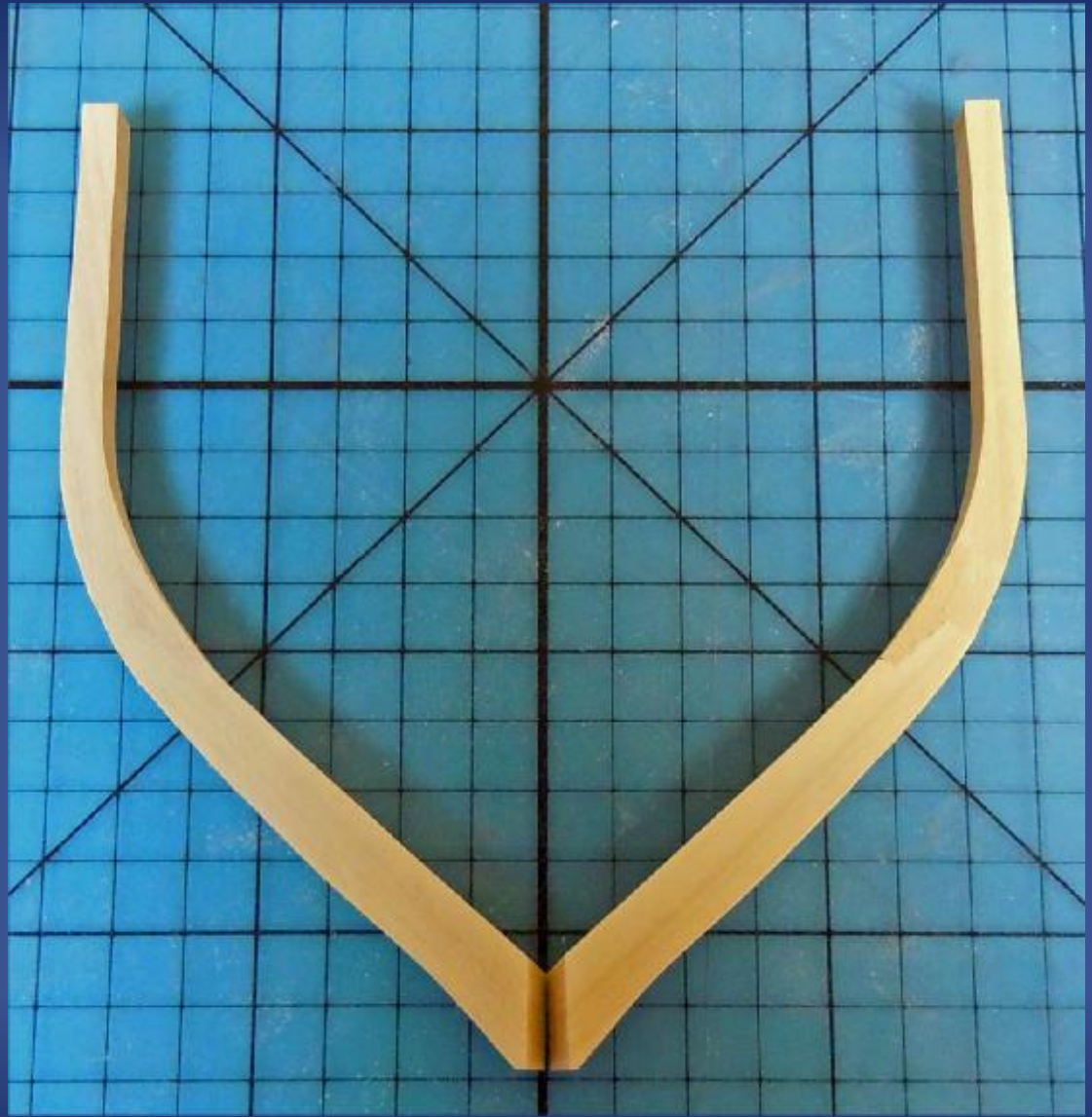






Mini drill press







# Barrels





Barrel staves

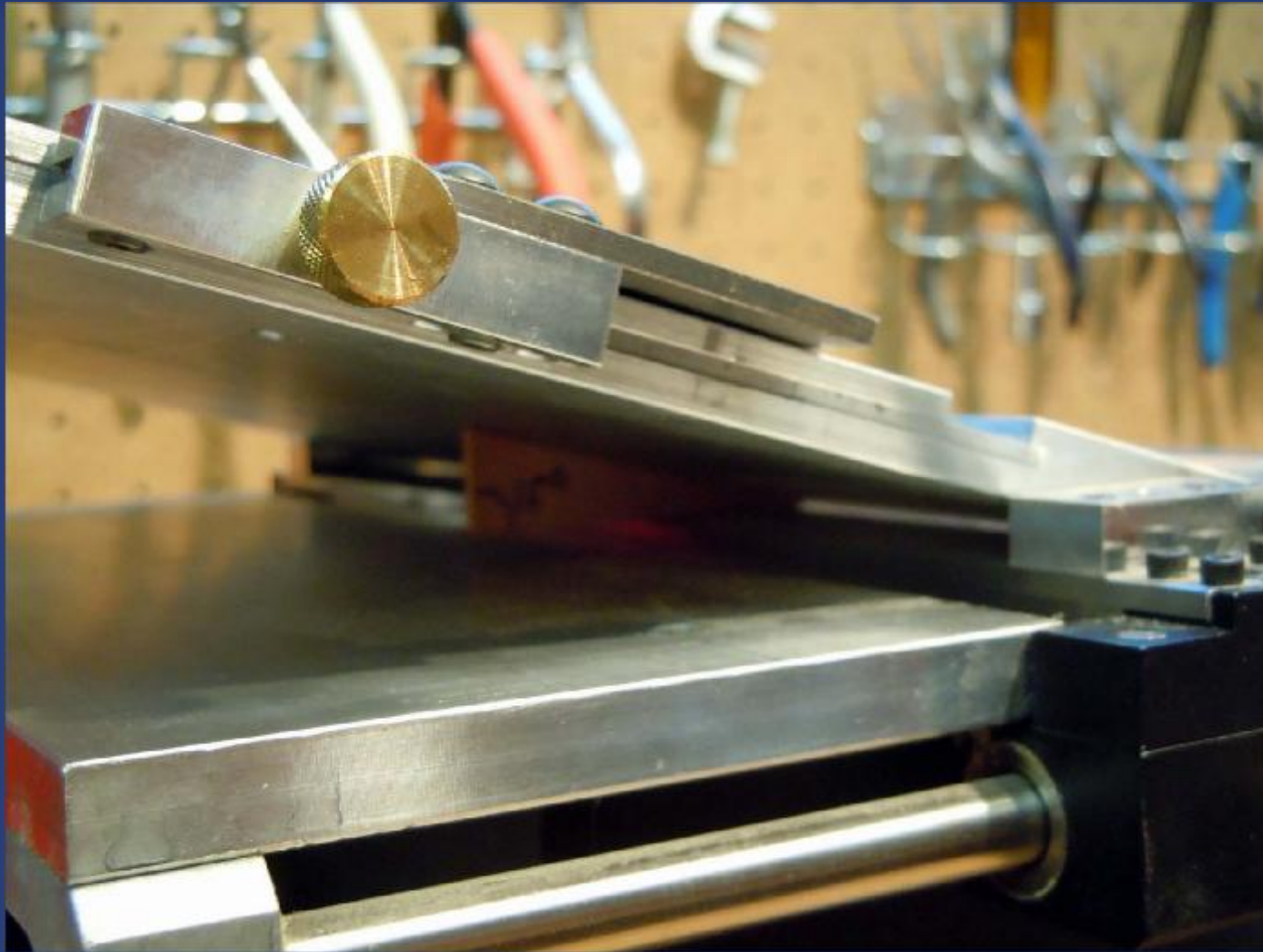




*Nautical Research Journal, December, 1992*







Byrnes Model Machines table saw with auxiliary tilting fence











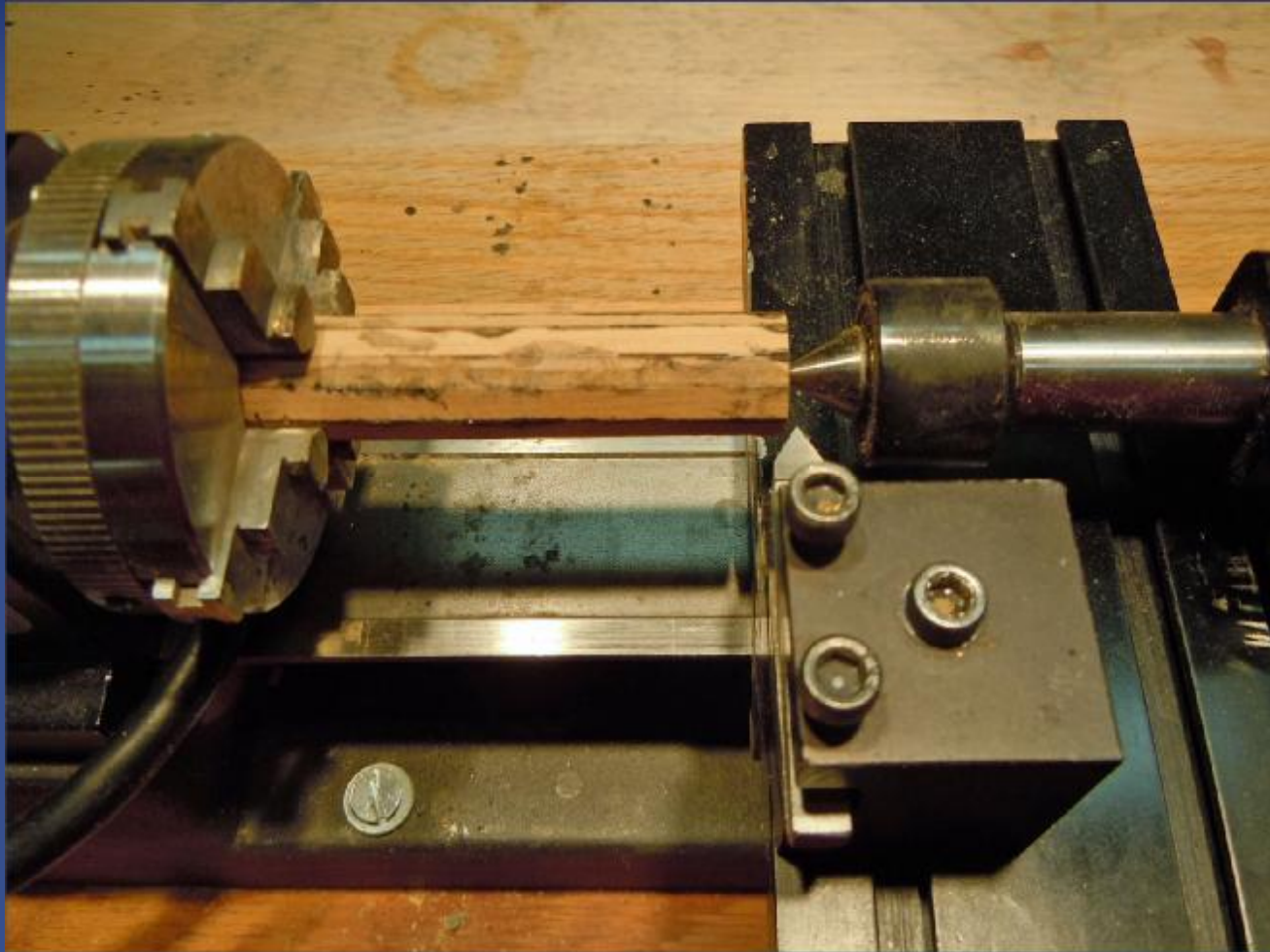


Aliphatic glue mixed with black rare earth pigment



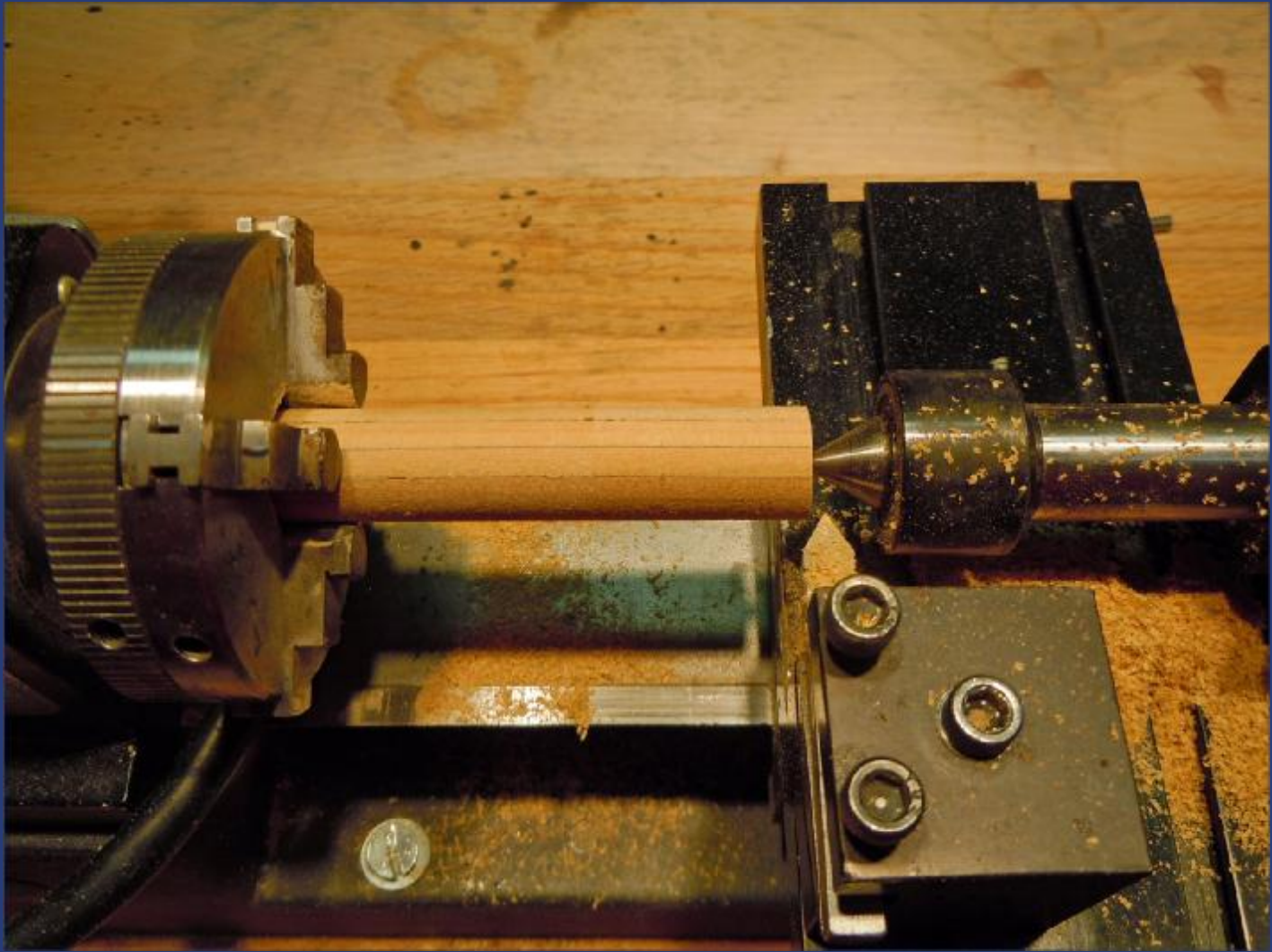


Liberally coat with cyanoacrylate

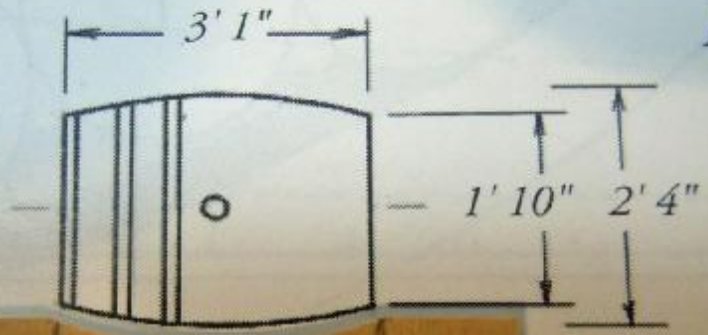


Sherline lathe





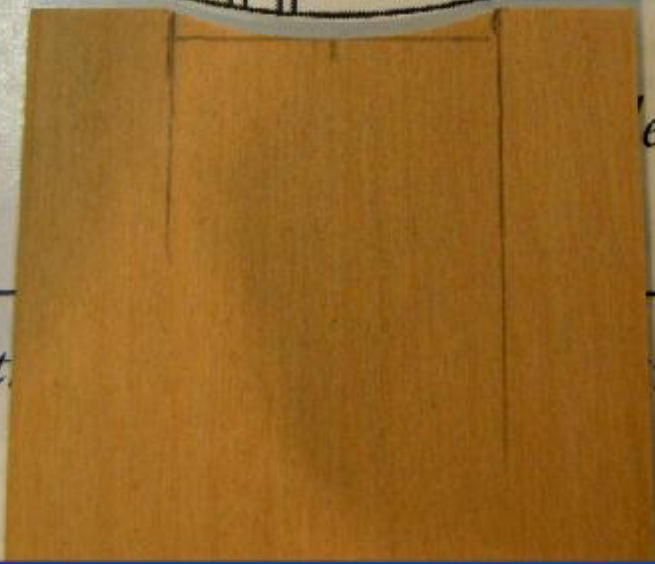
until 1827.  
70 Imperial  
2½ Imperial  
ally two tiers  
the largest  
of this.

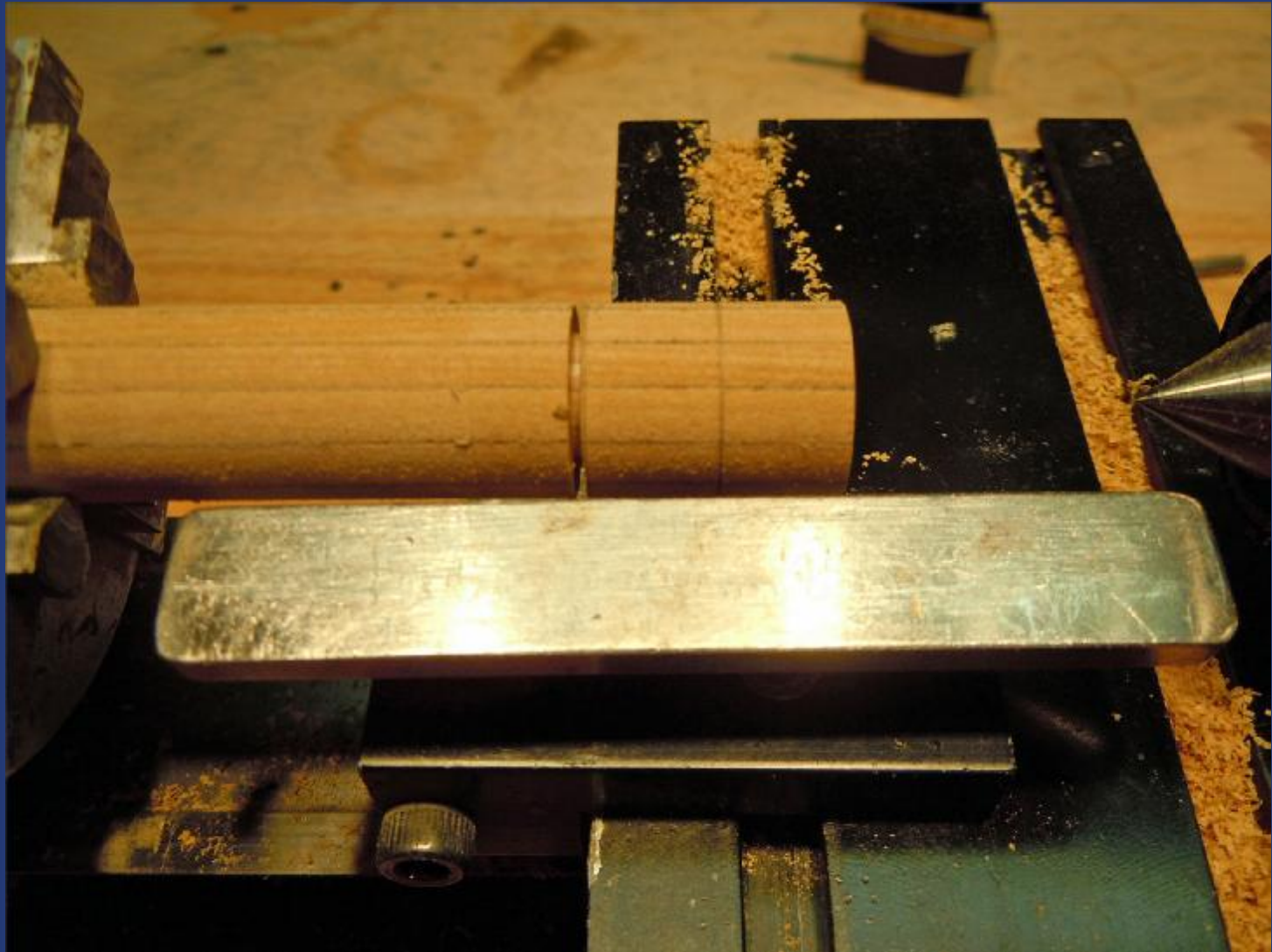


Hogshead

Arming and Fitt

r 1600-1815,





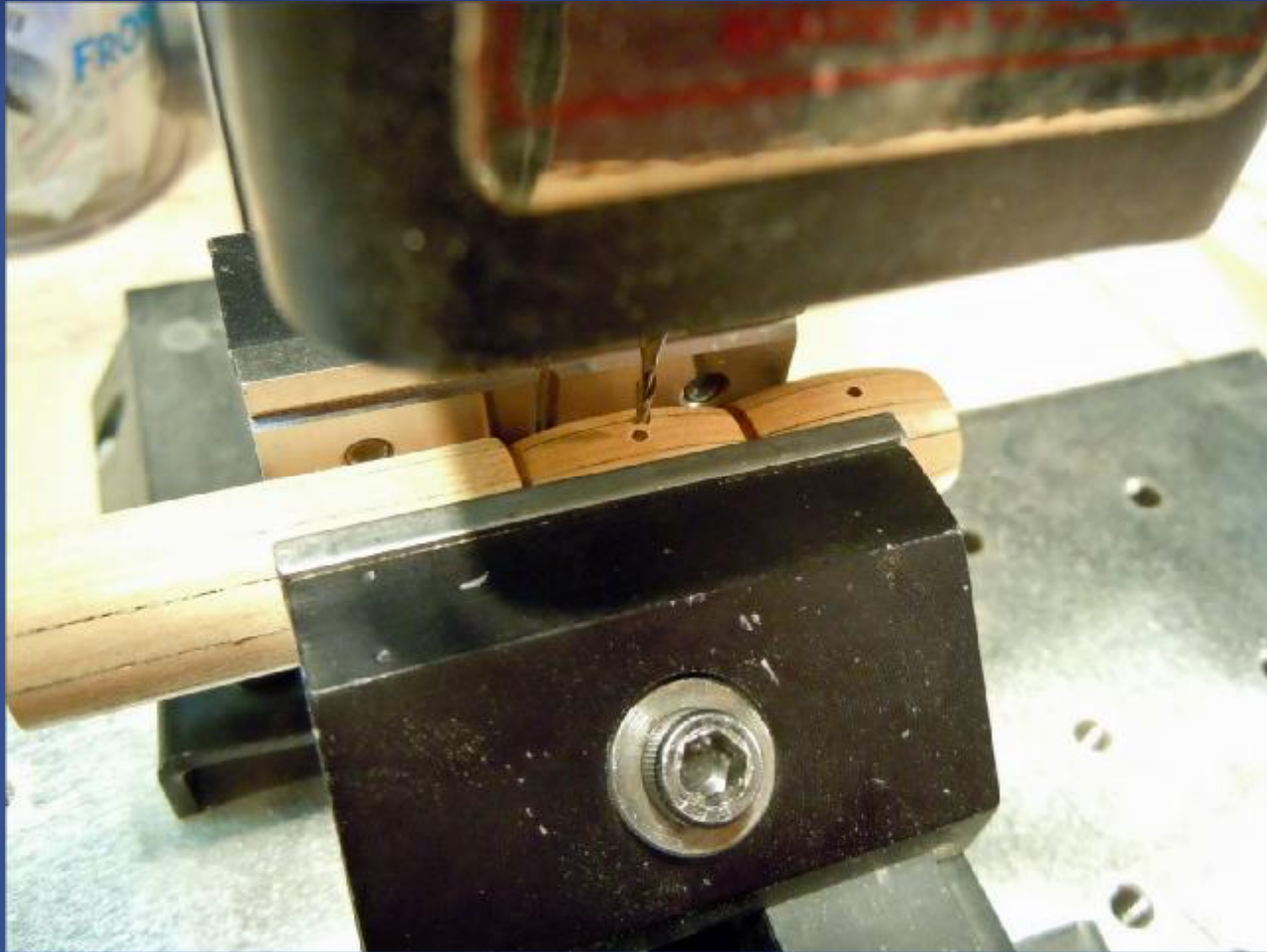




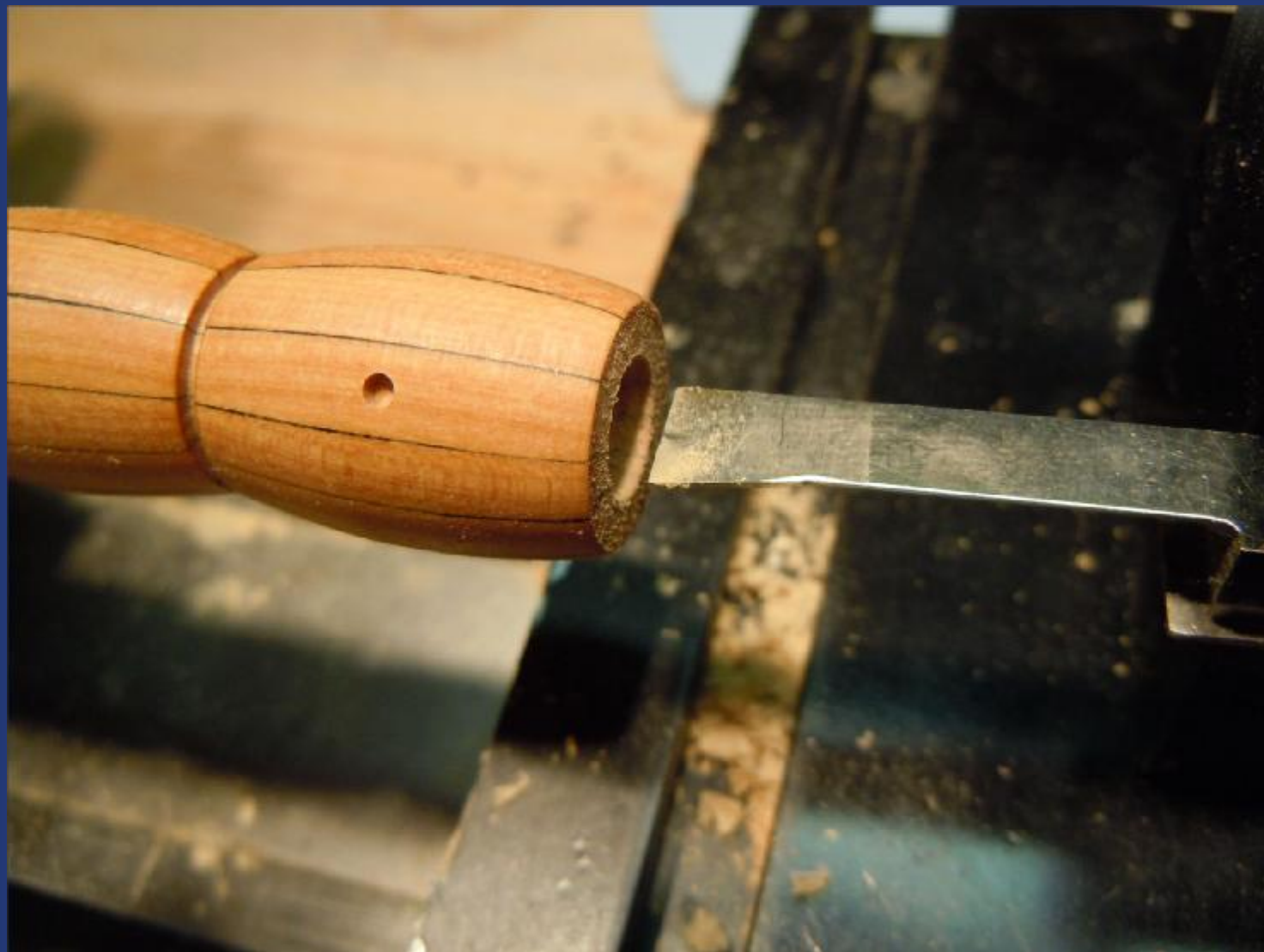








Sherline mill







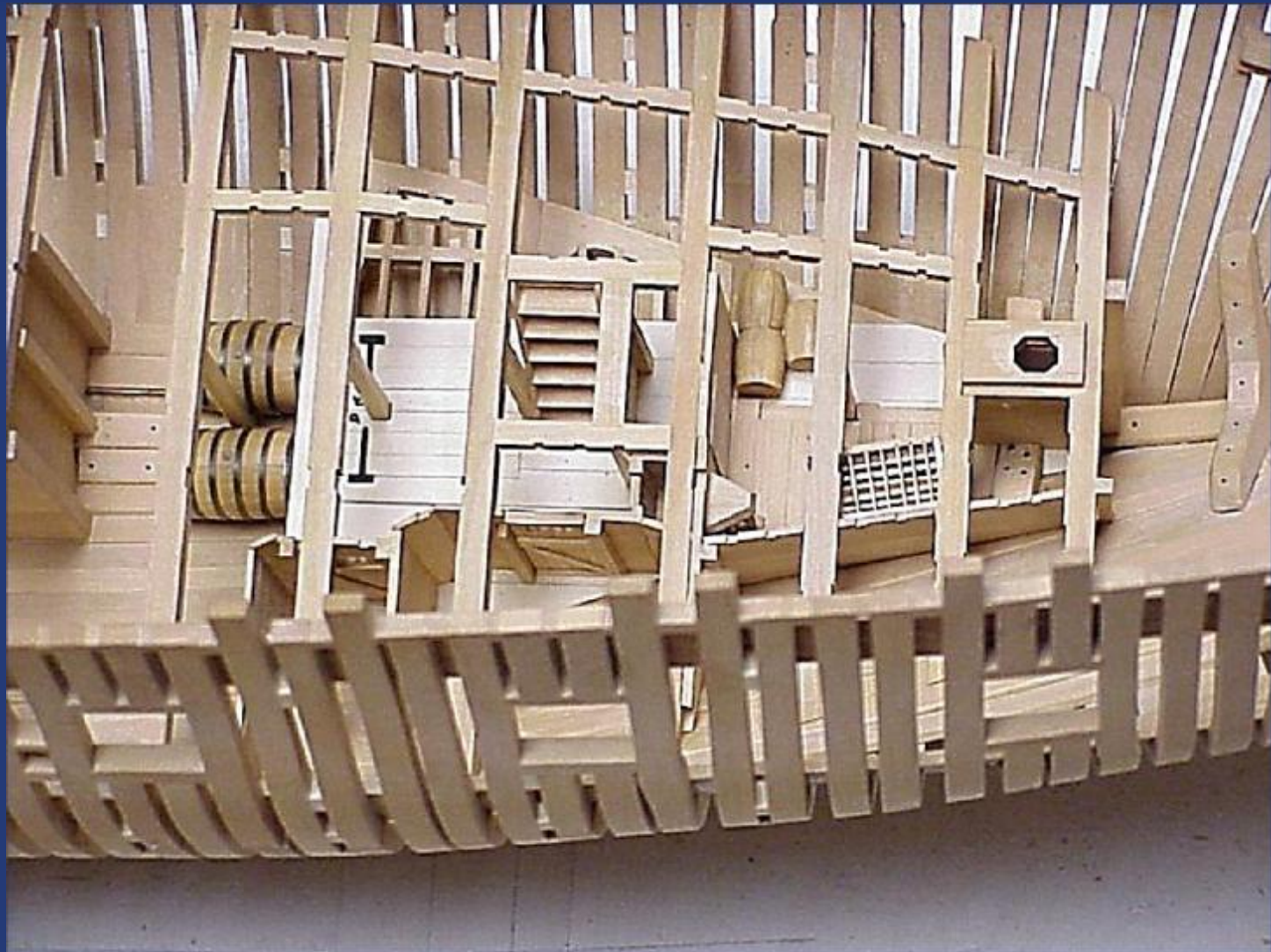










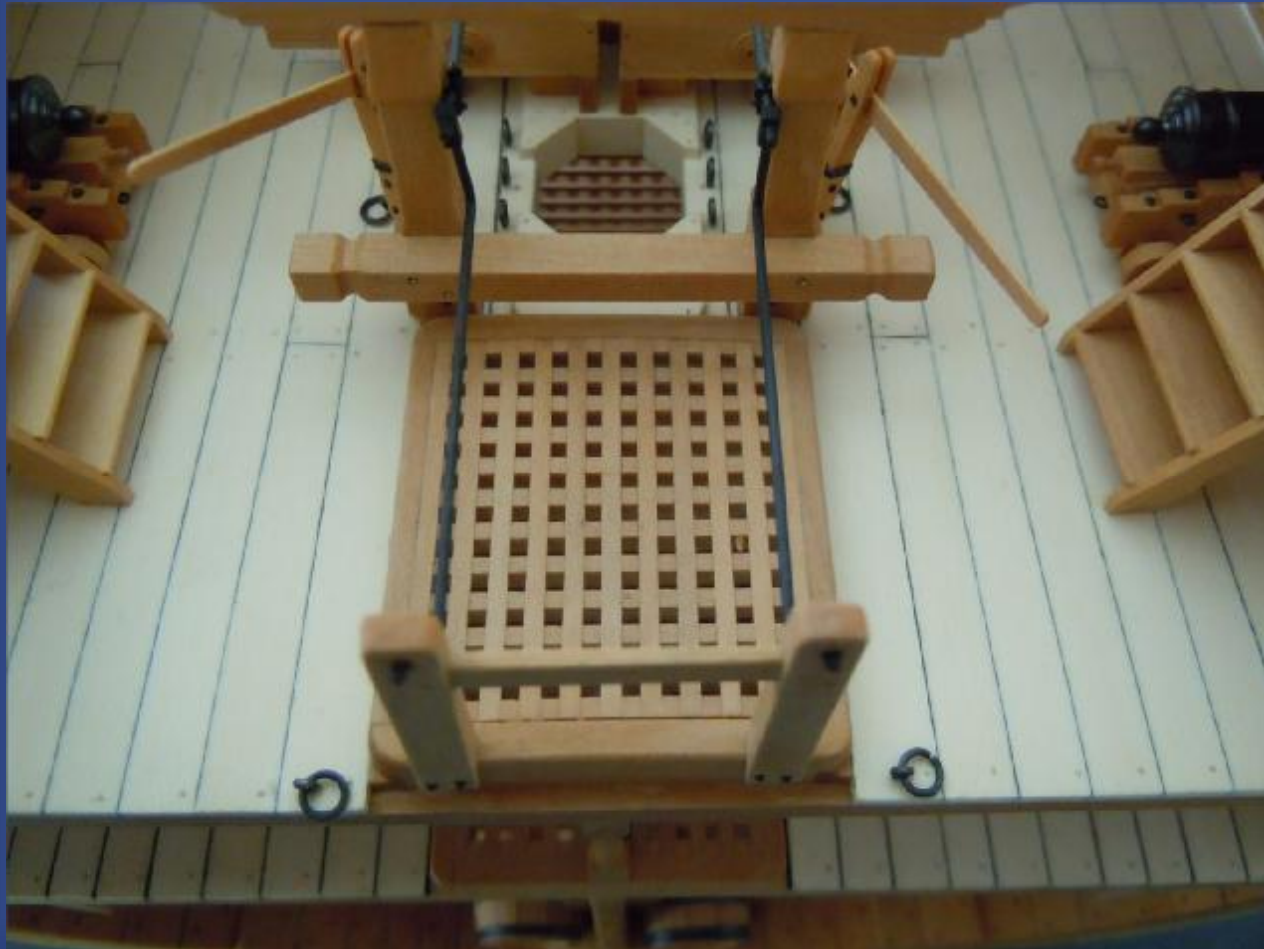


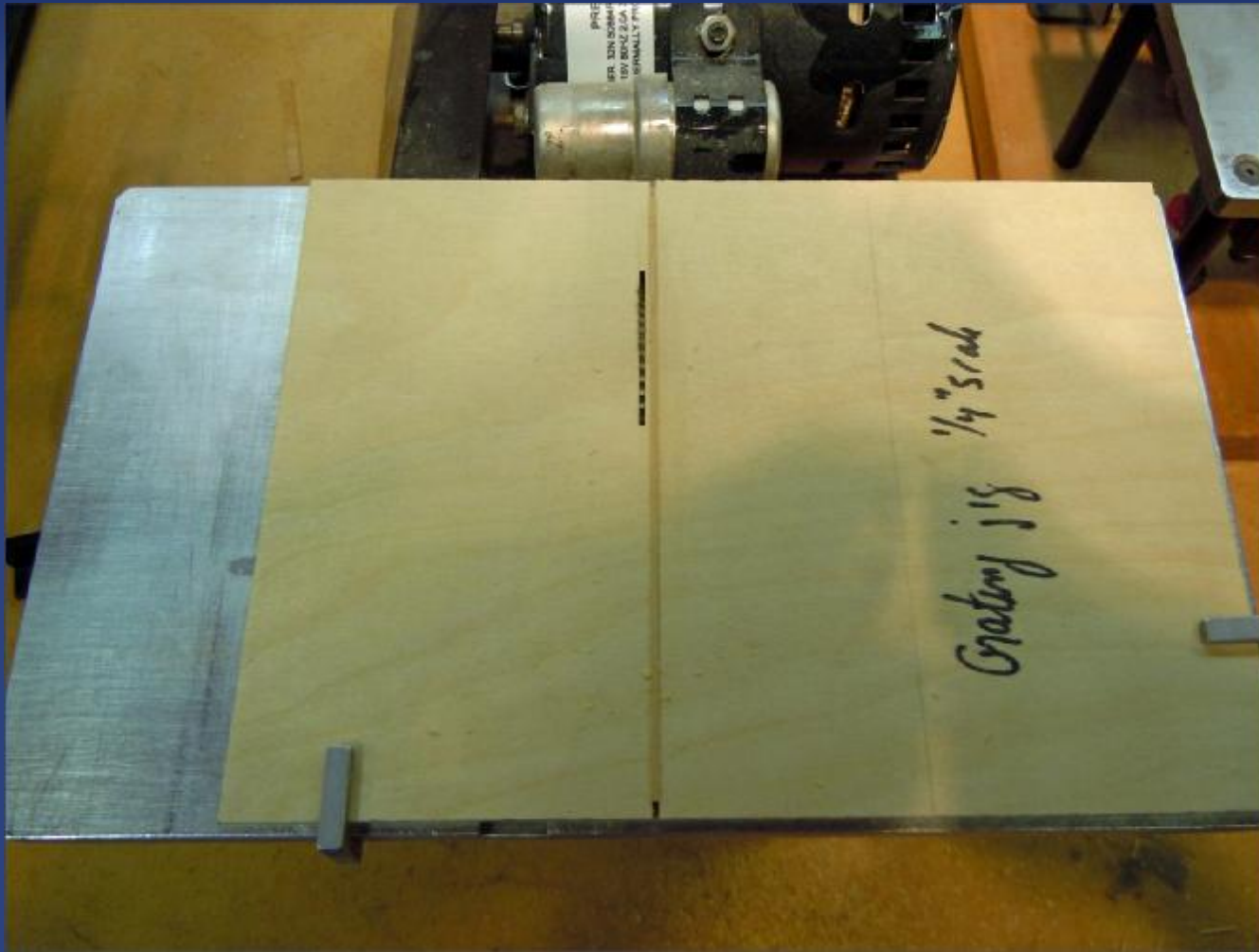
*HMS Pegasus, Swan class sloop of war, 1777*





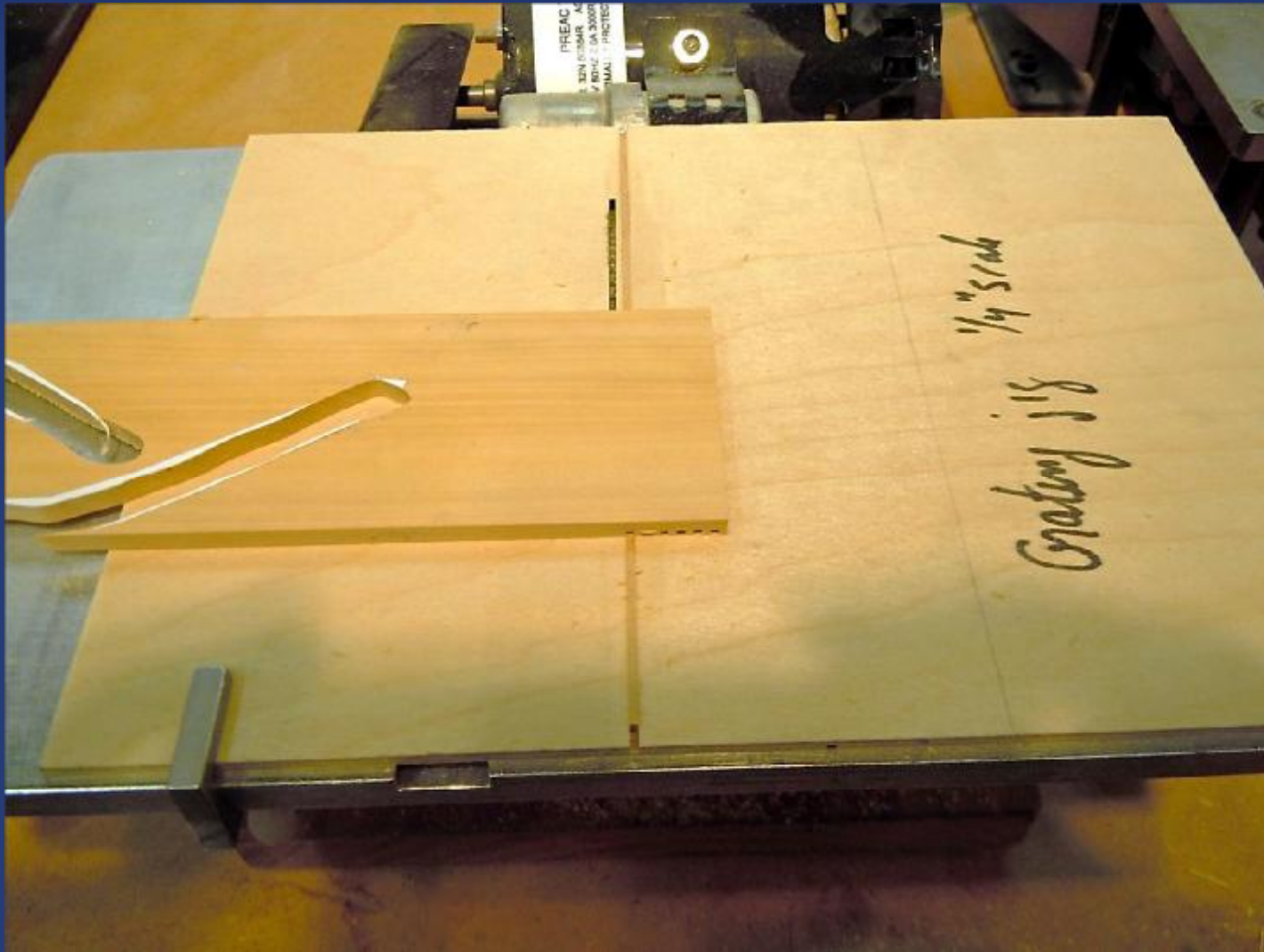
# Gratings





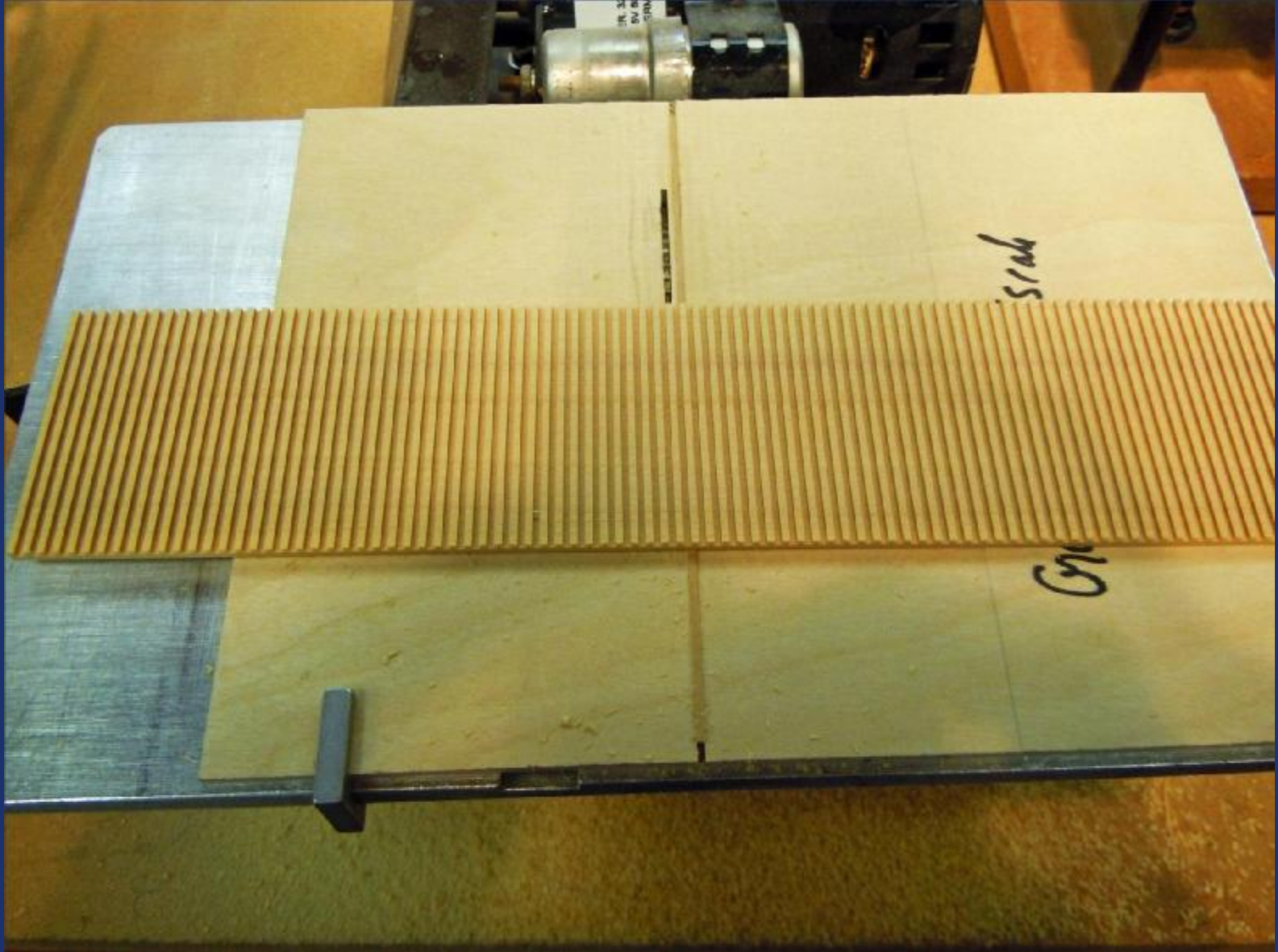
Gratings jig, 1/4" scale, .051 blade



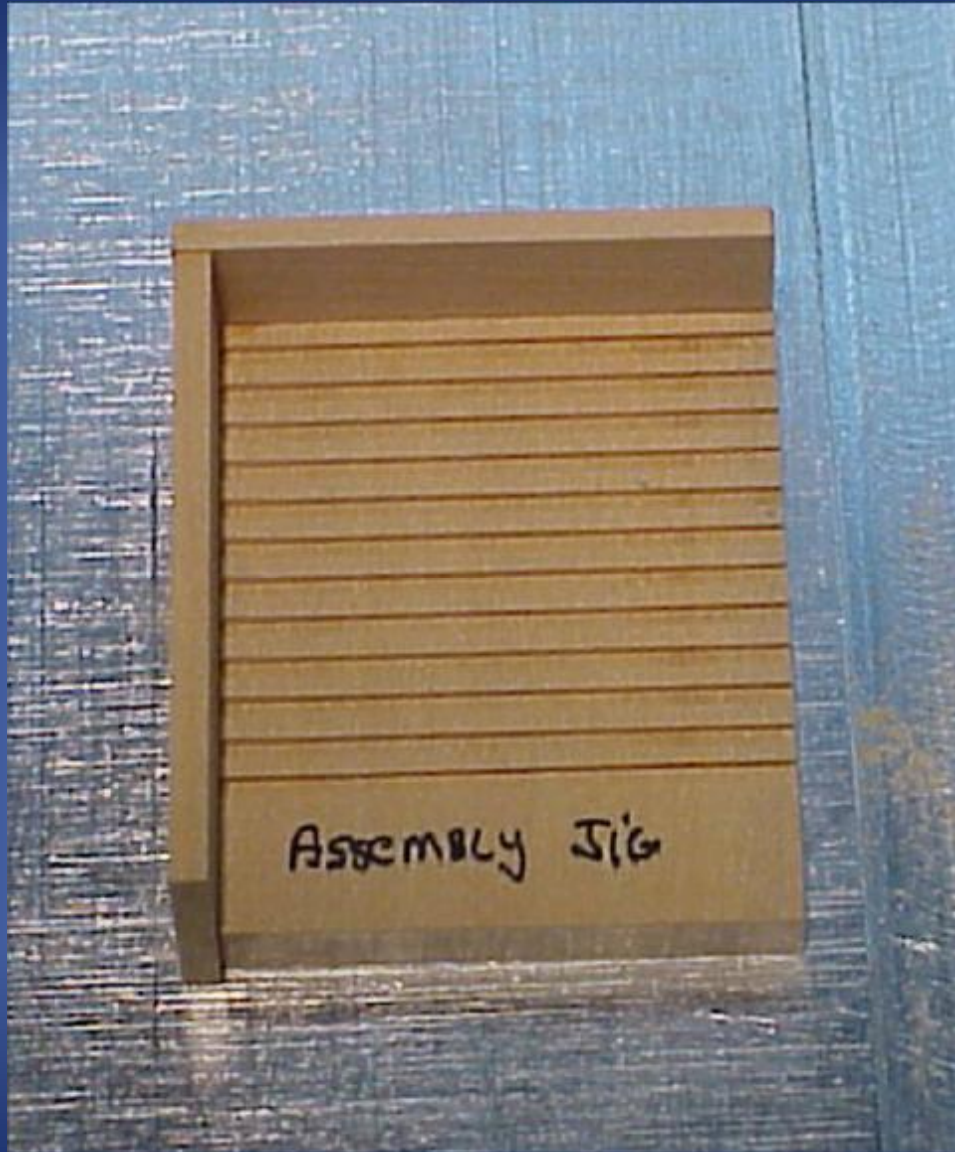


Mass production of ledges



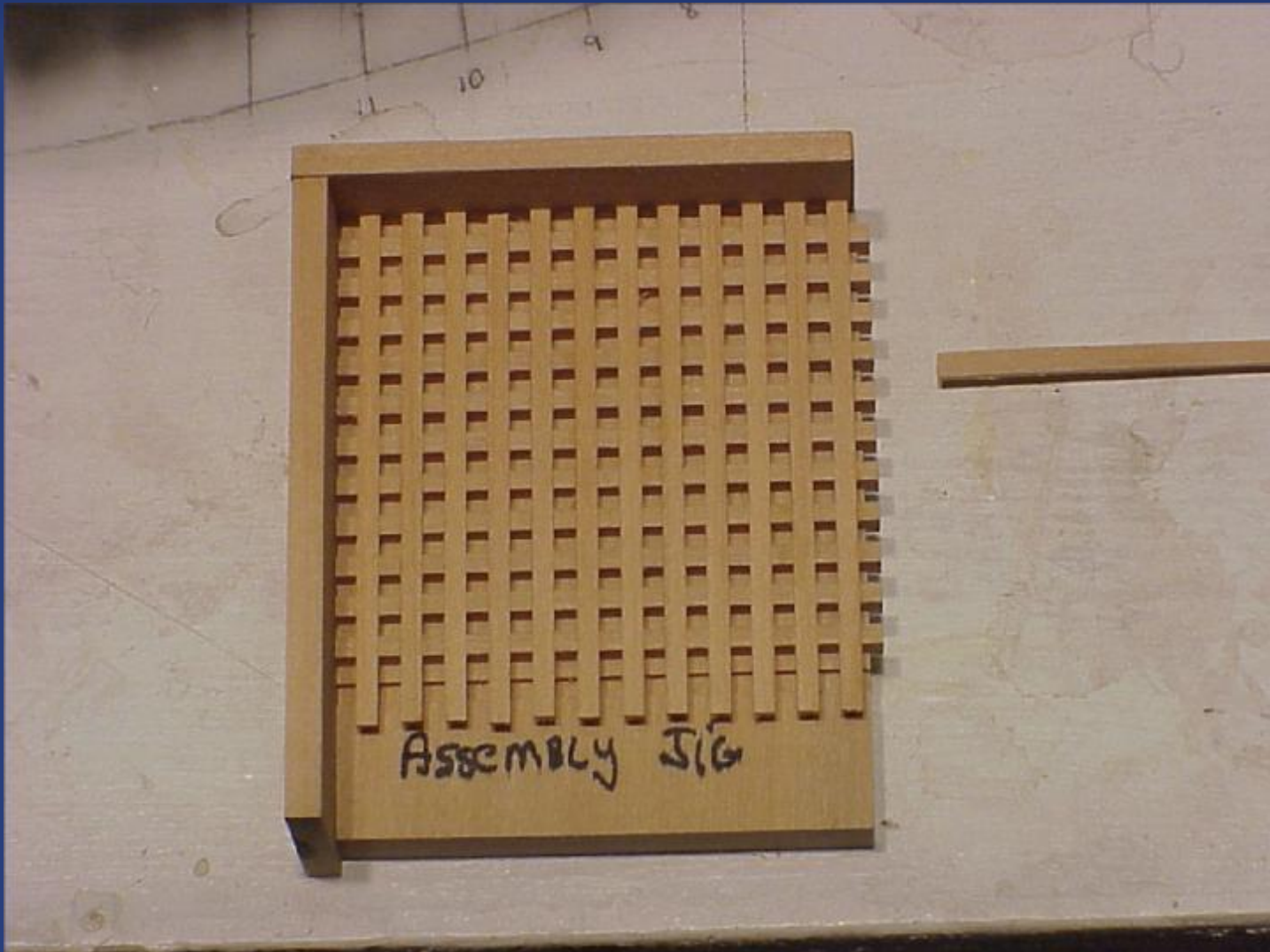






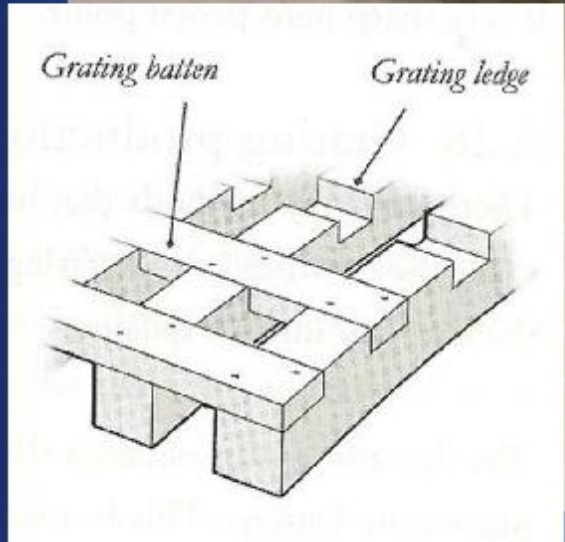
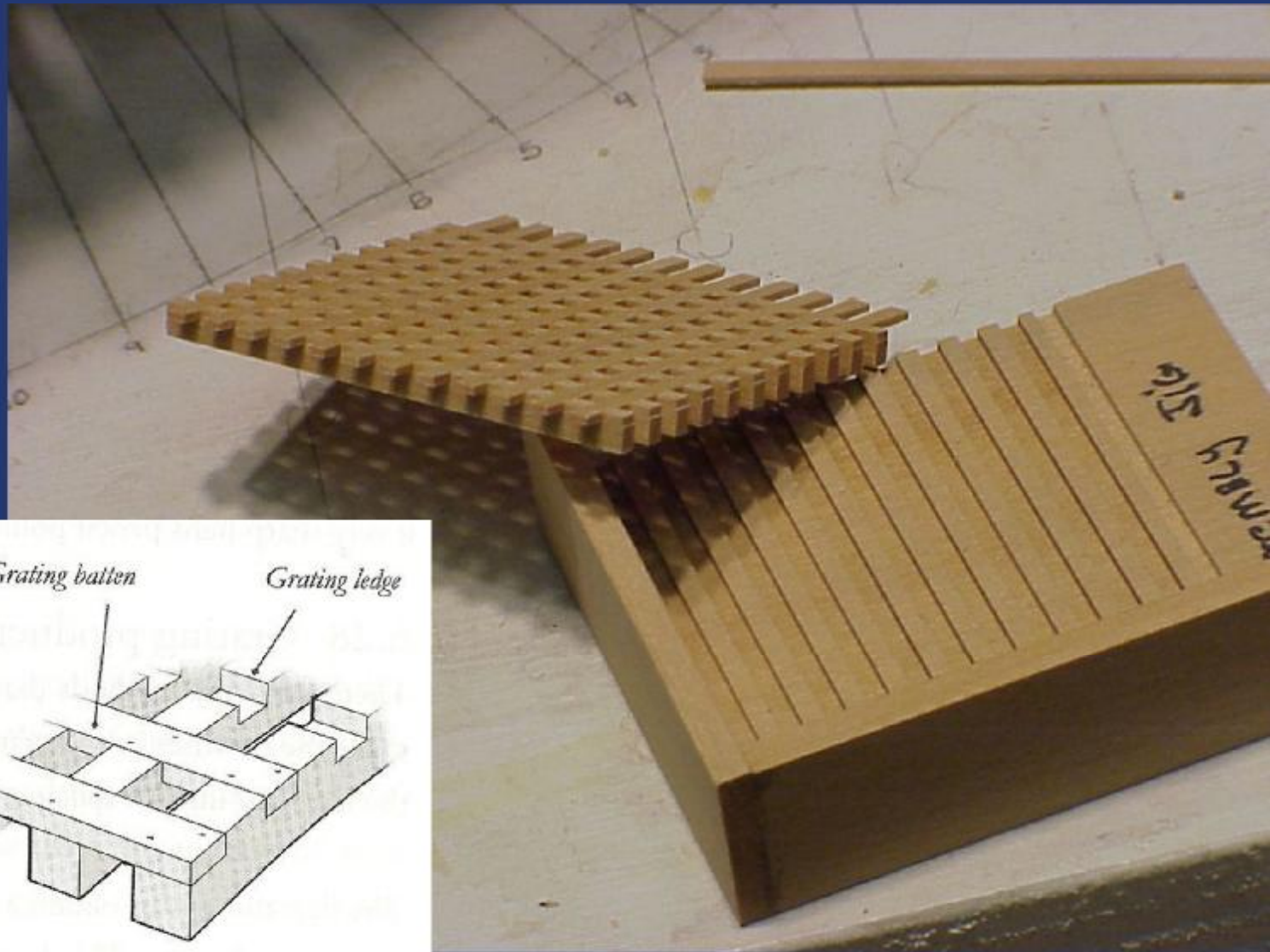


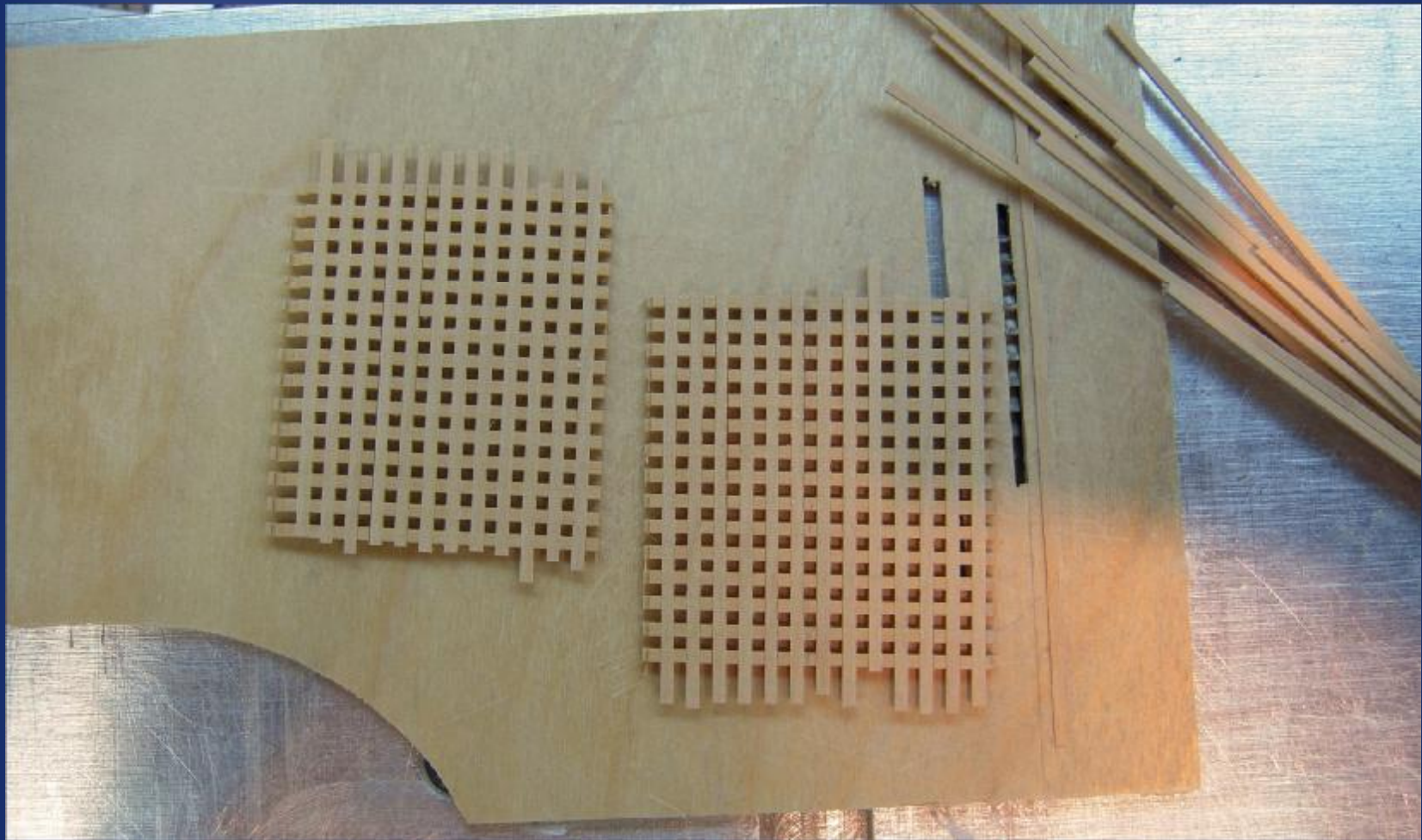




Battens inserted

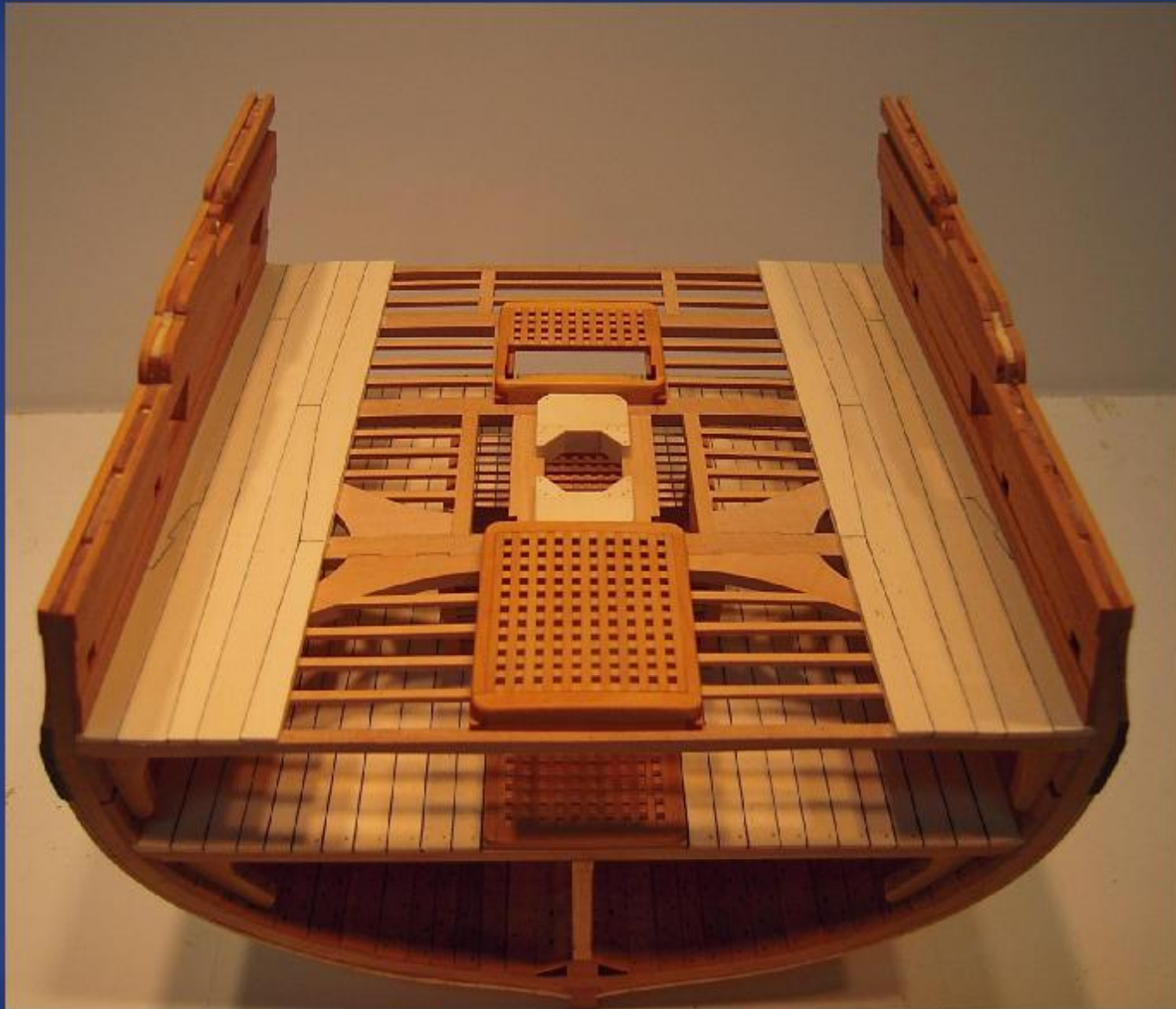








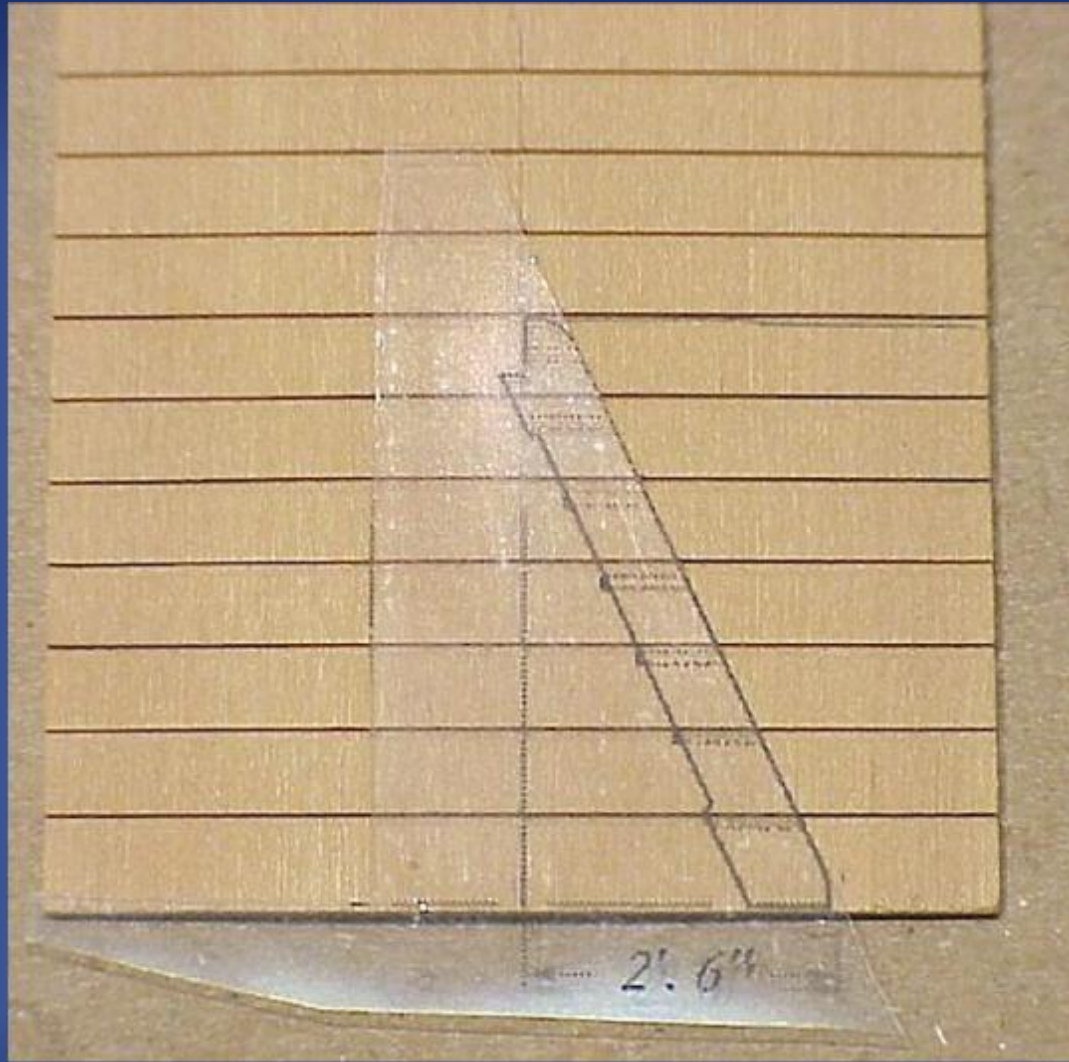






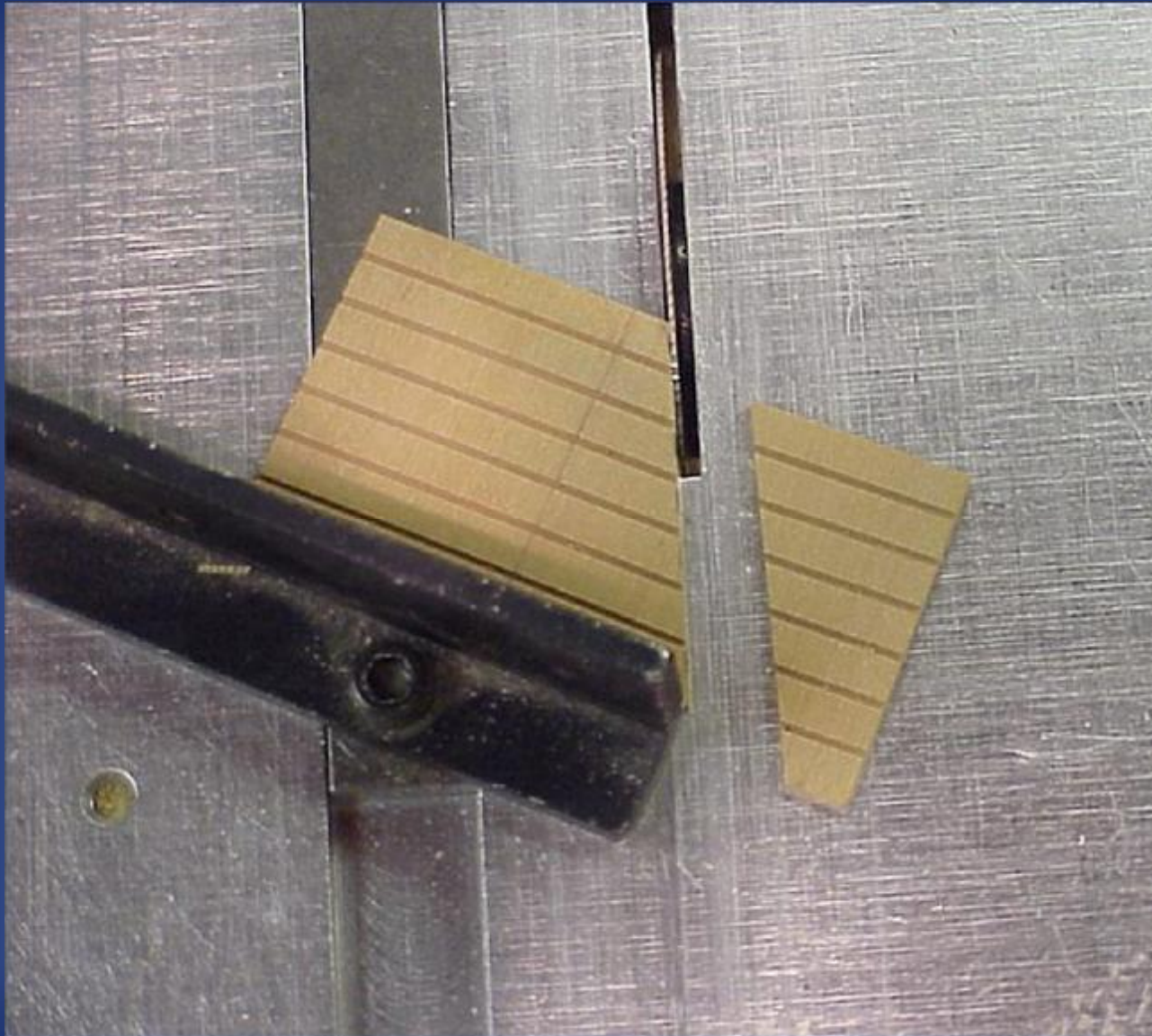
# Ladders

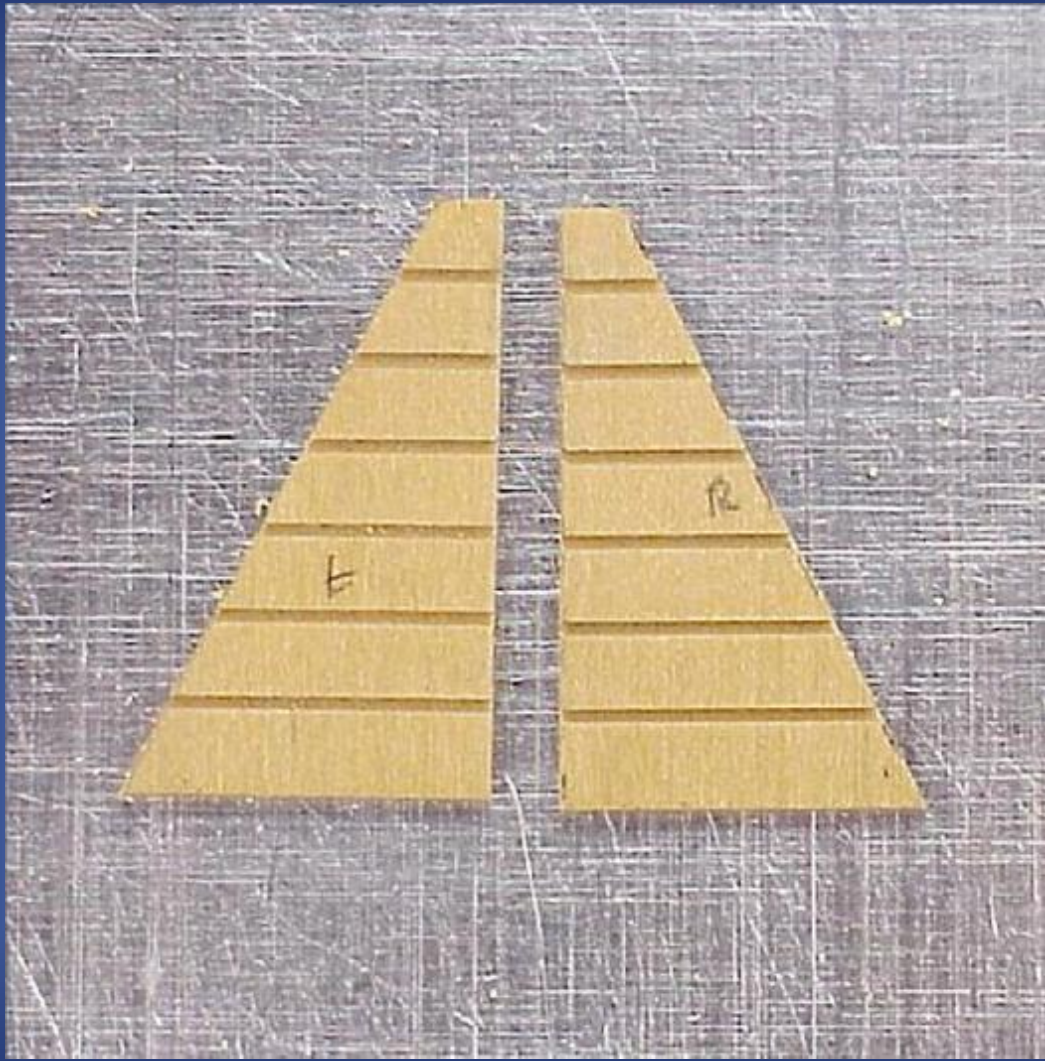


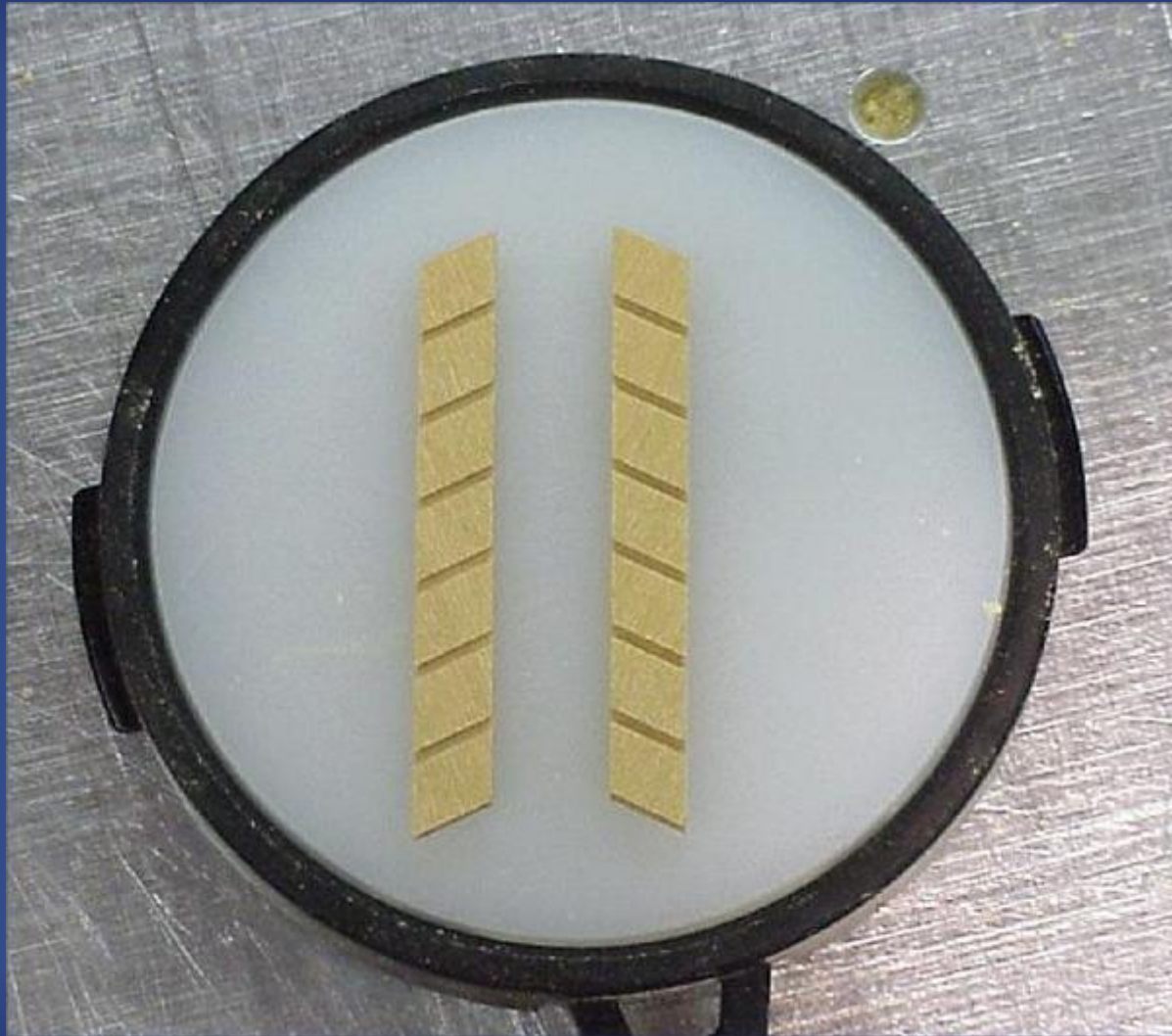


Dadoes cut on the table saw to create the styles









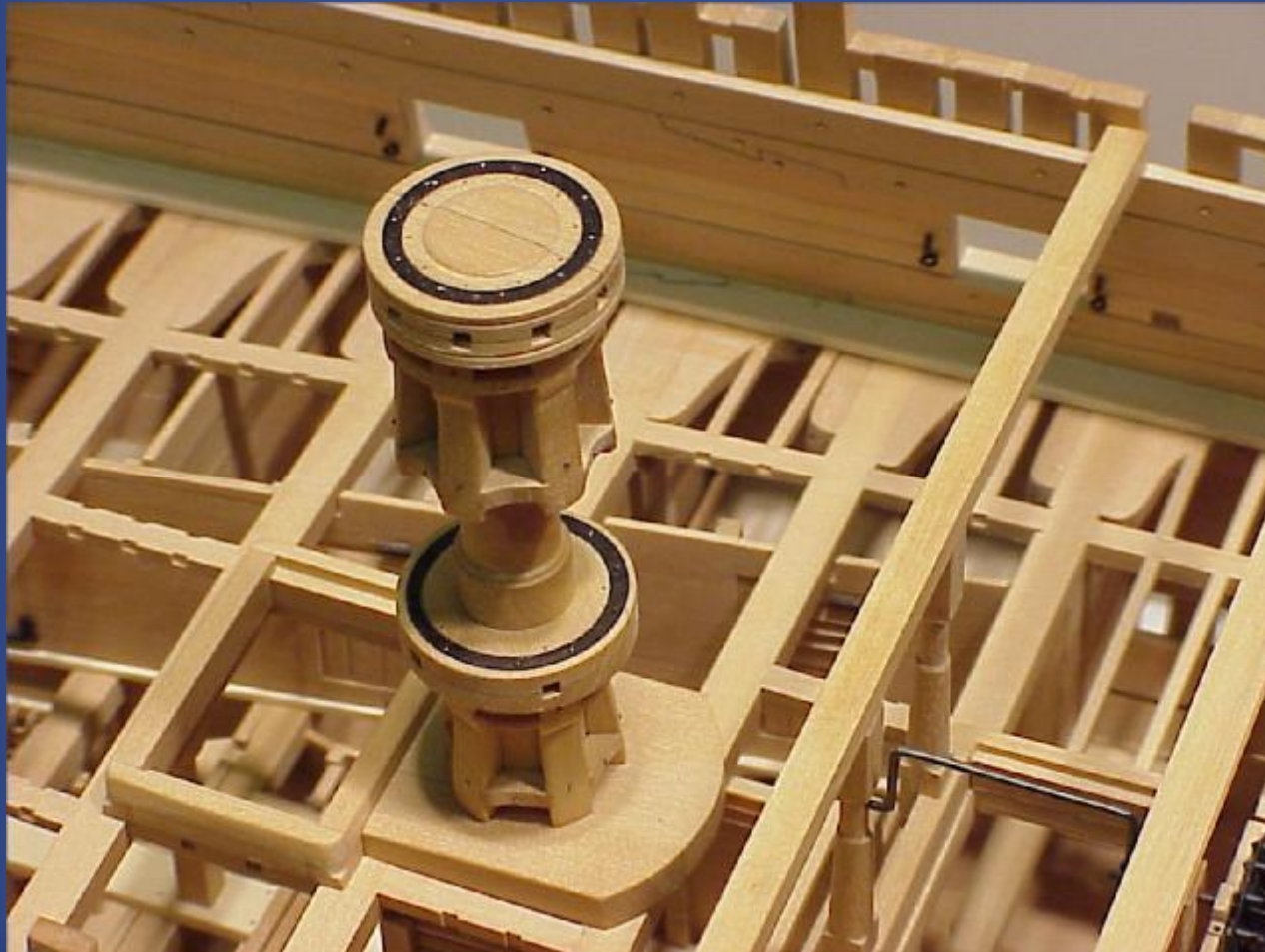






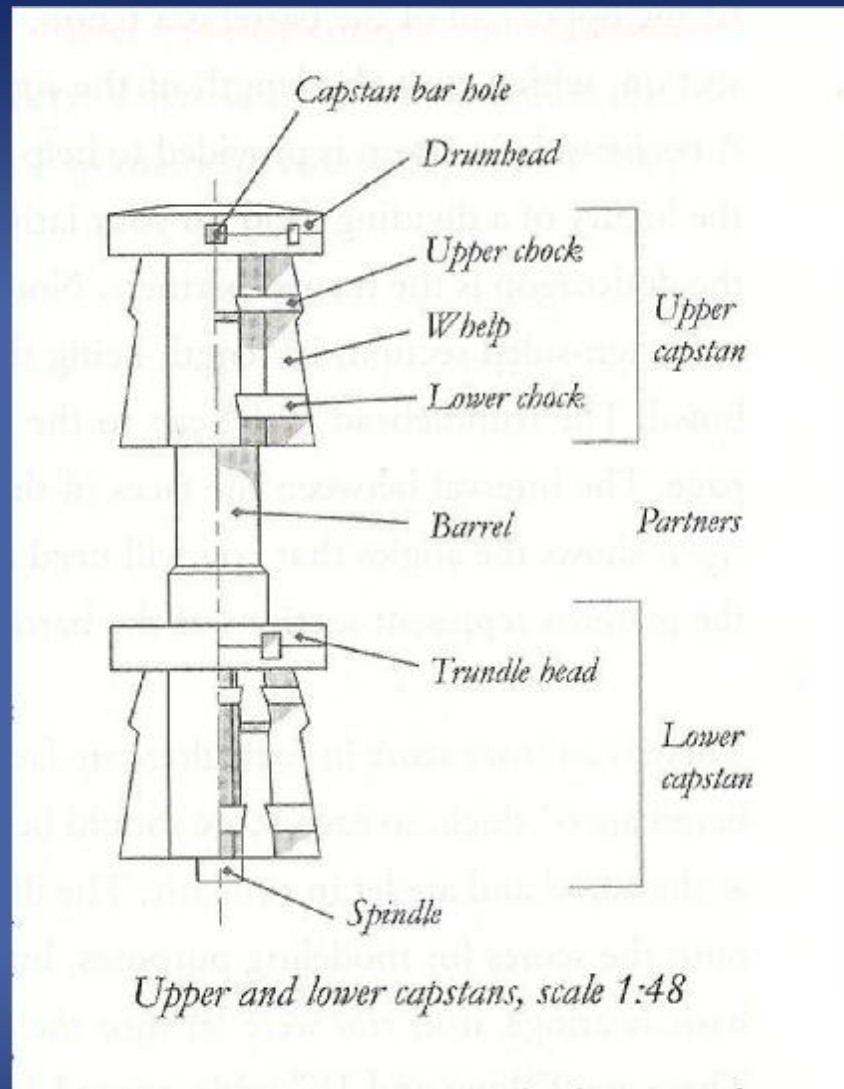


# Capstan



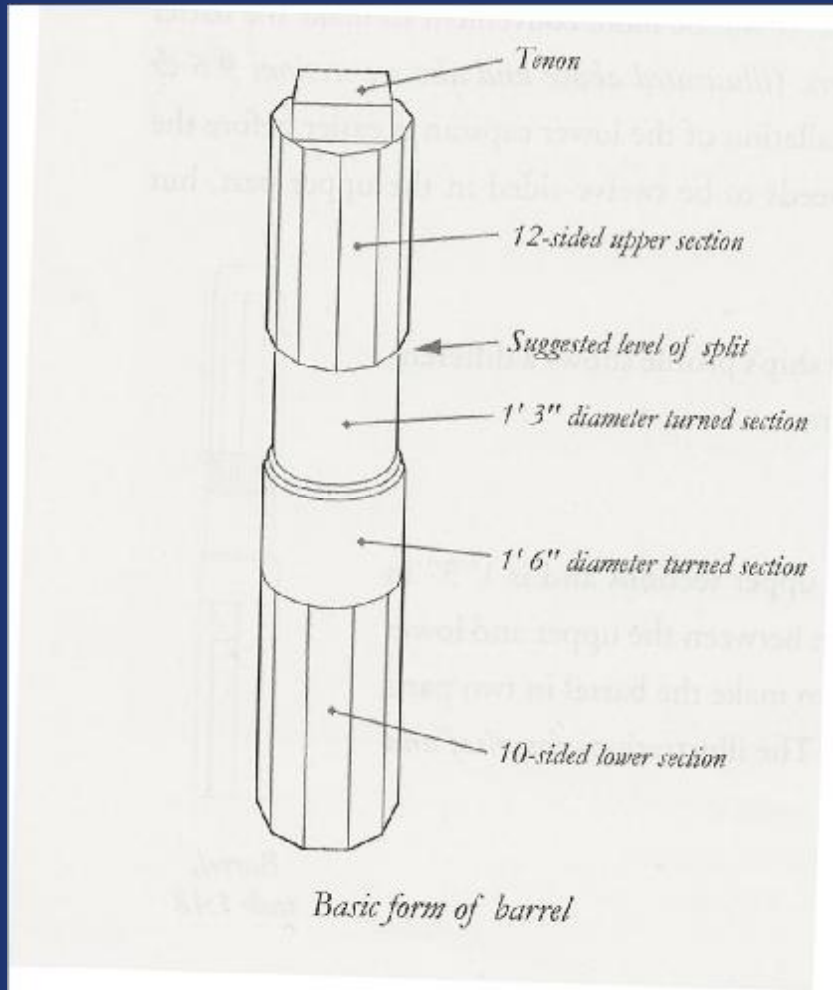


Model 43- *Swan* class sloop of war, United States Naval Academy Museum

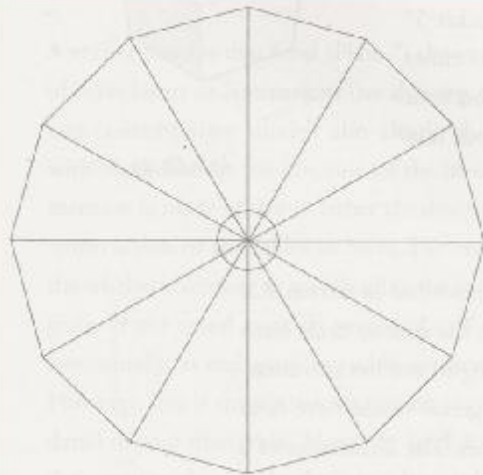
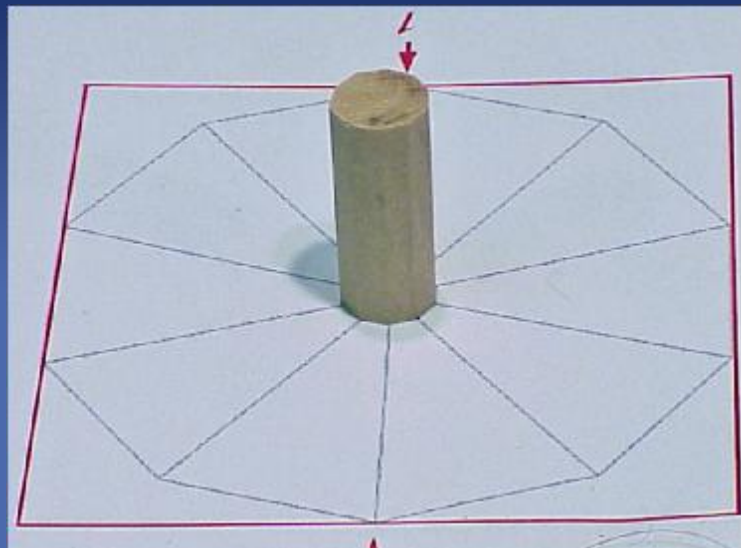


From *The Fully Framed Ship Model*, by David Antscherl

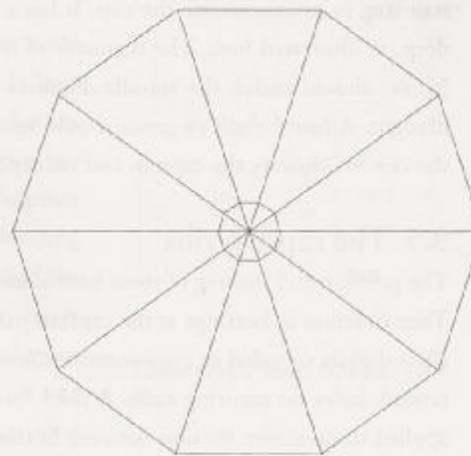




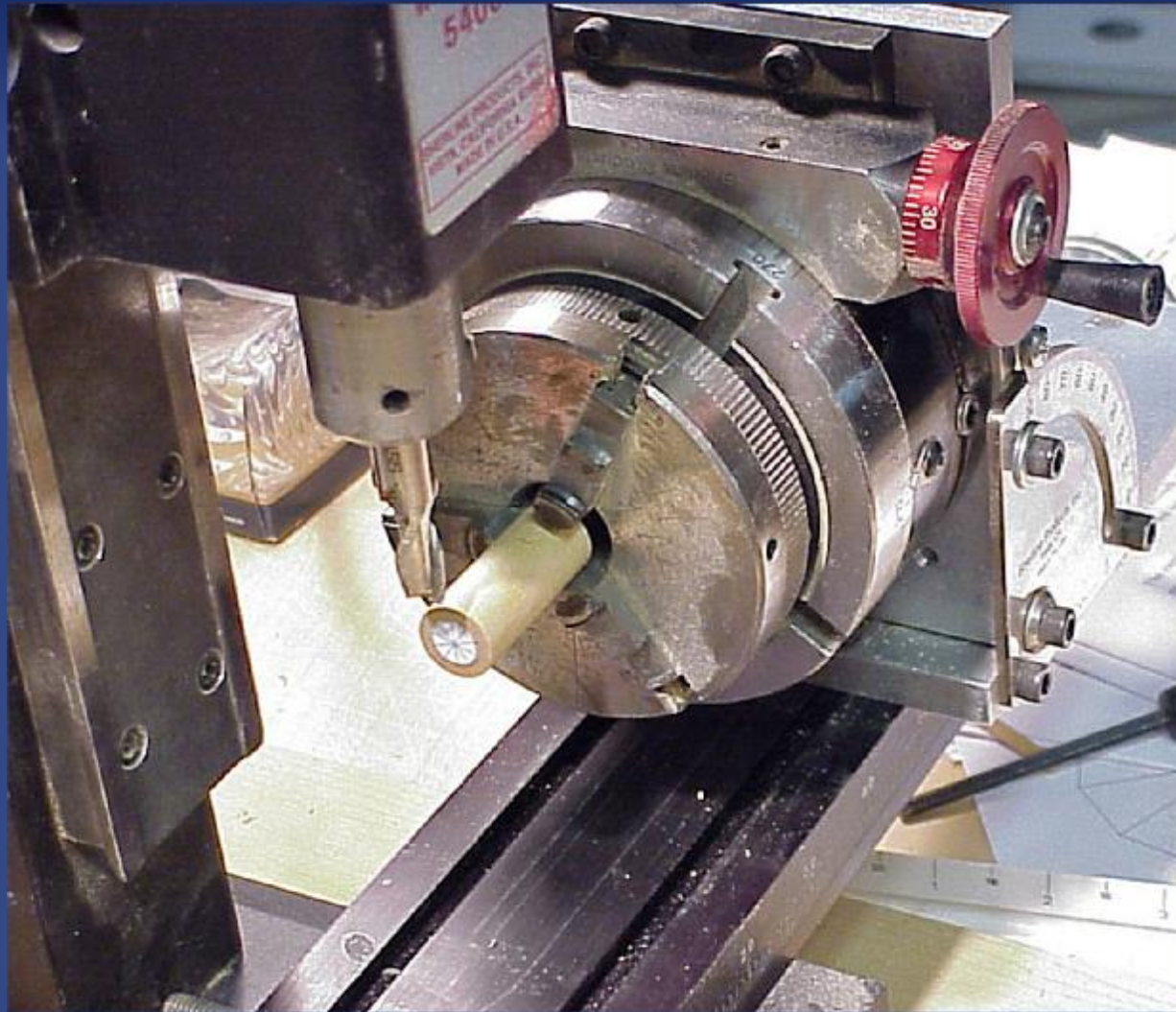
From *The Fully Framed Ship Model*, by David Antscherl



*12-sided pattern for upper capstan*

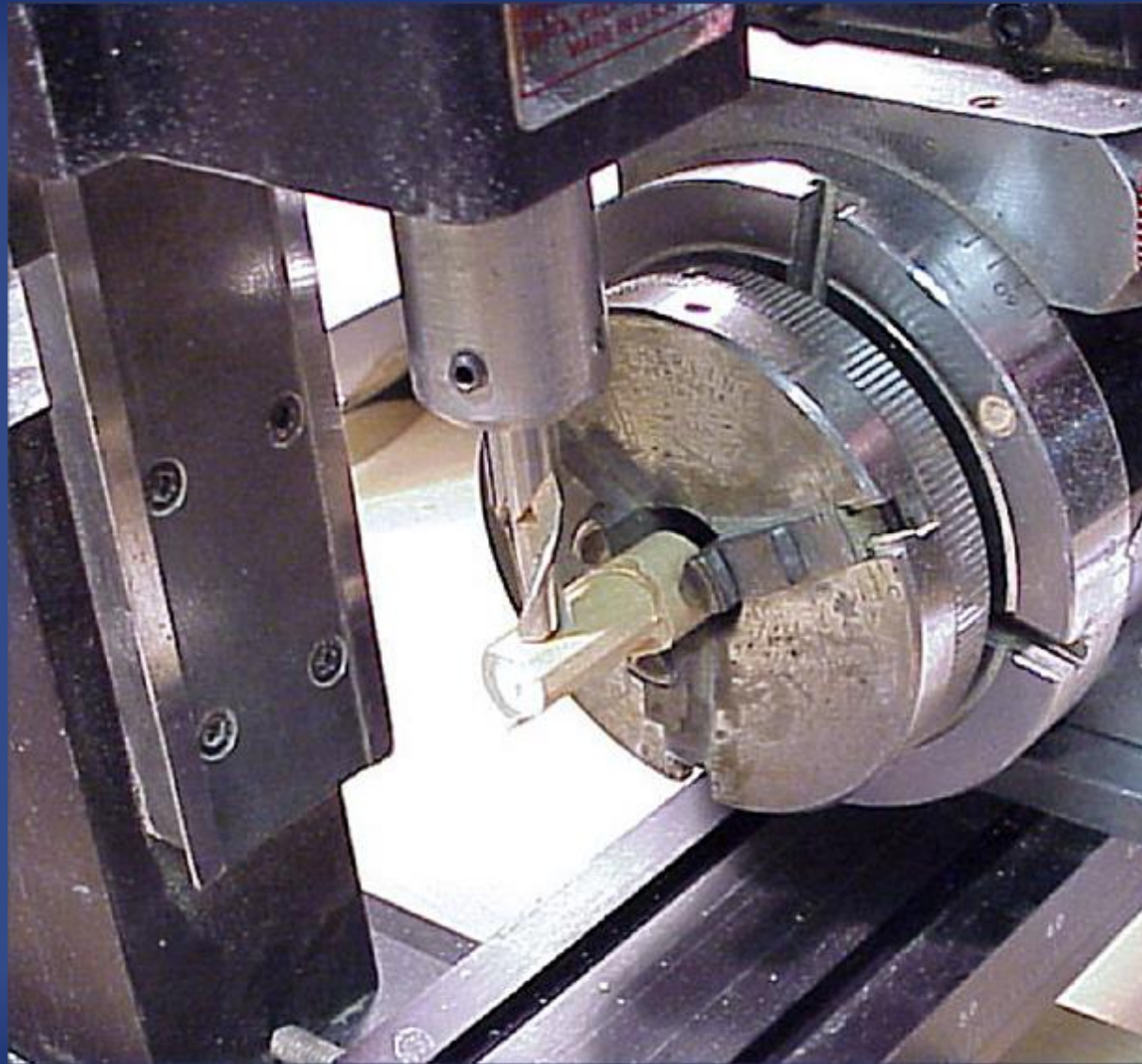


*10-sided pattern for lower capstan*

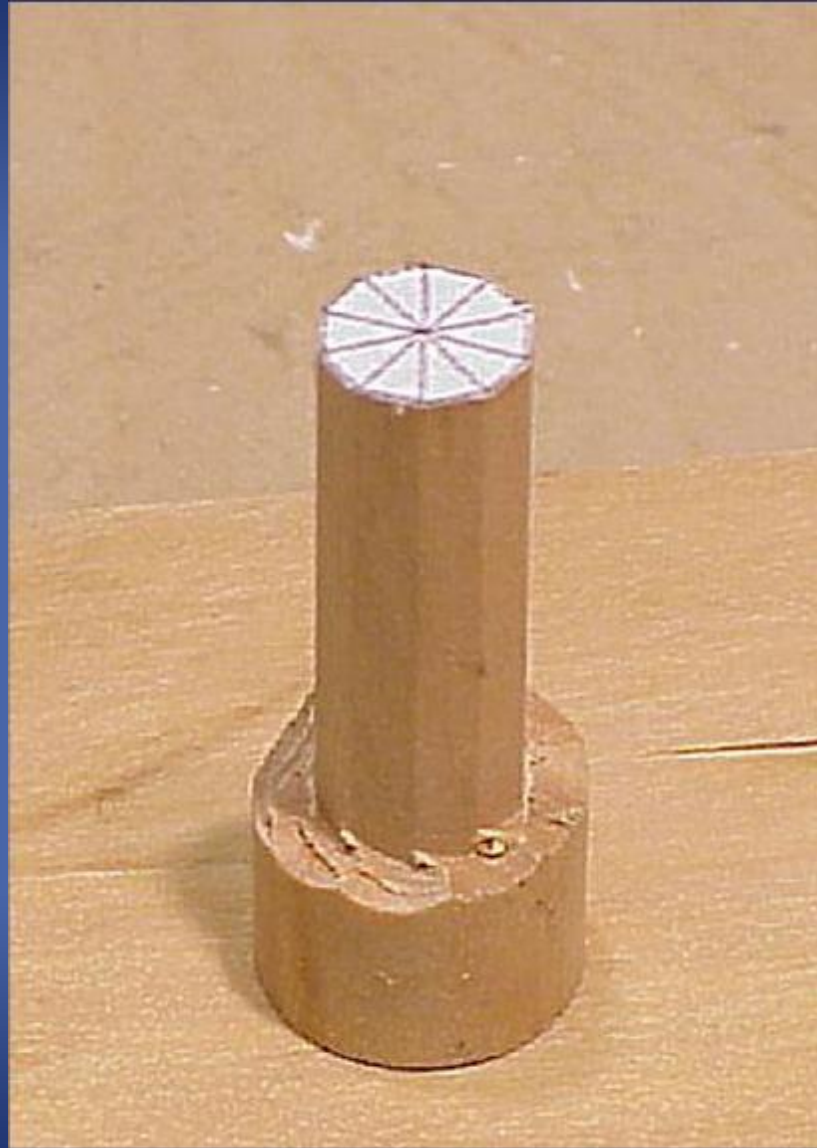


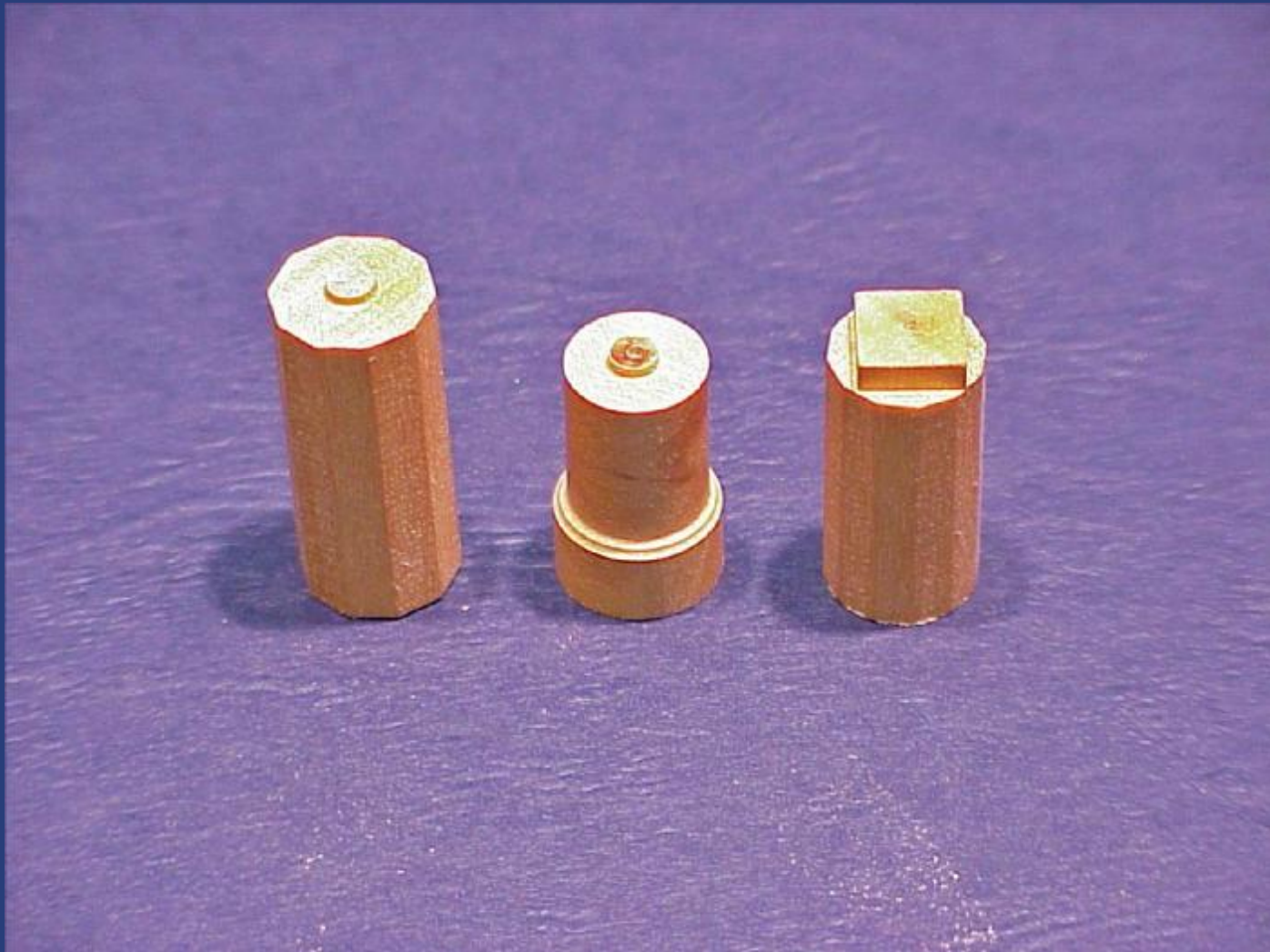
Mill in rotary table mounted on 90° angle plate







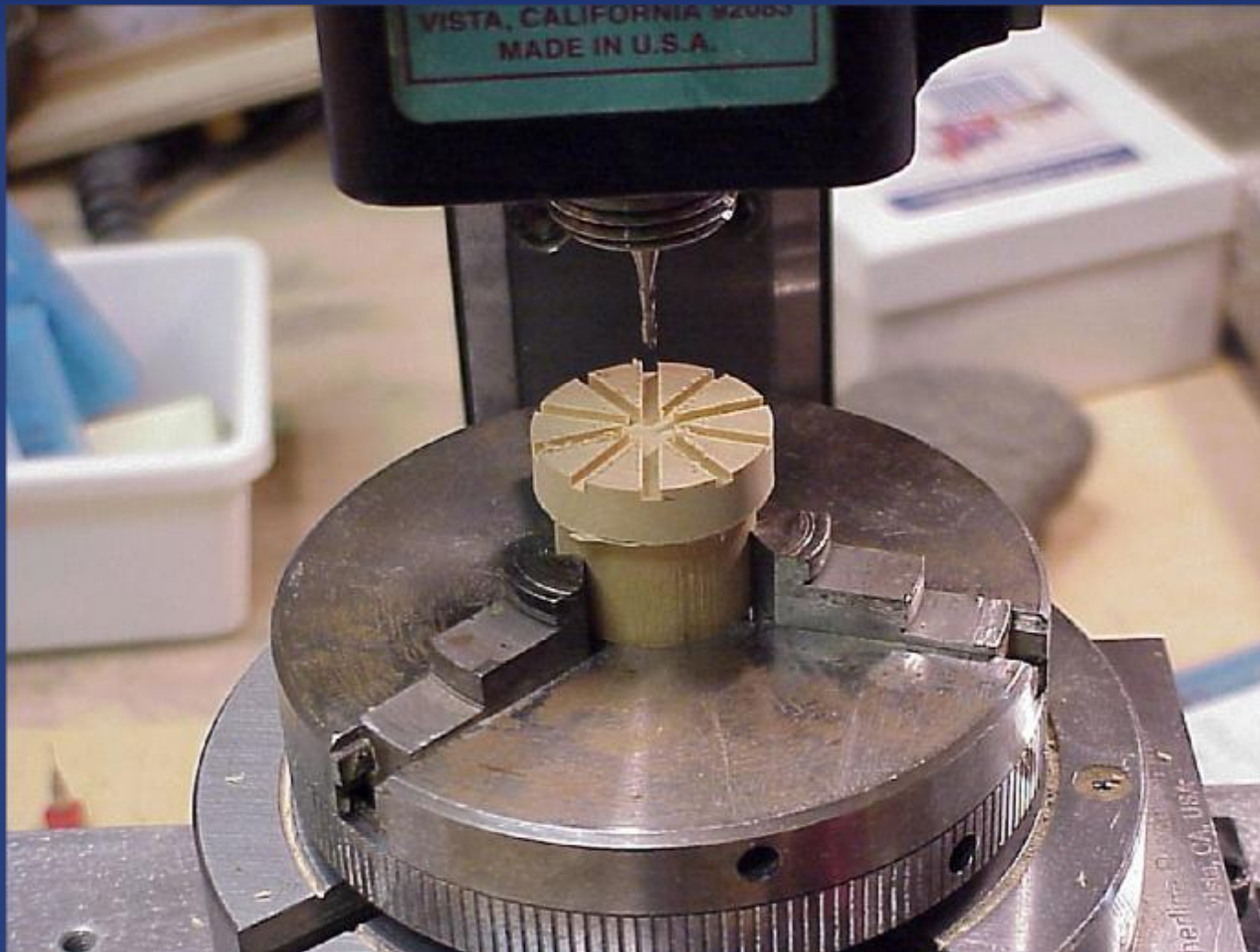








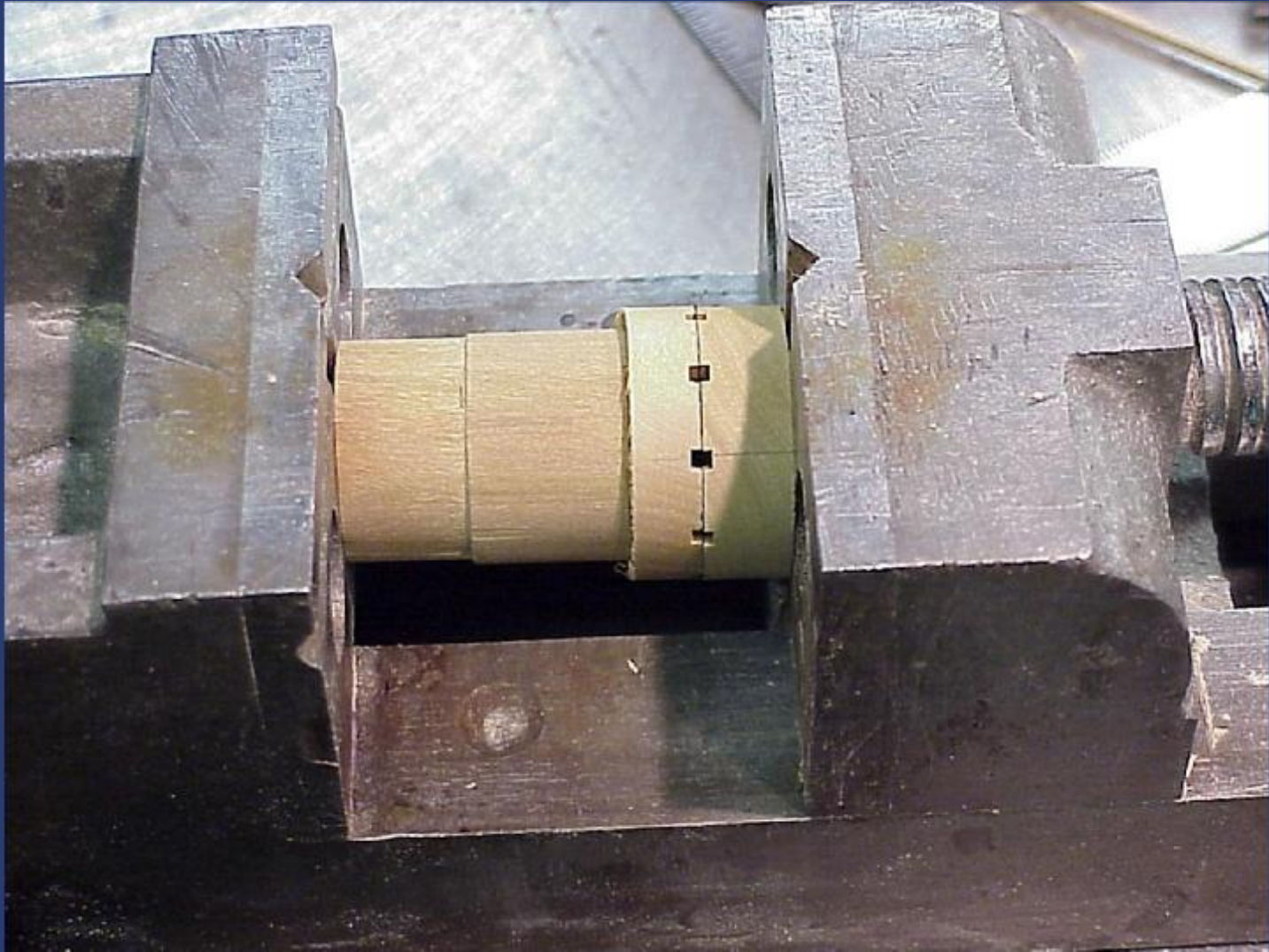
Drumhead turning on the lathe



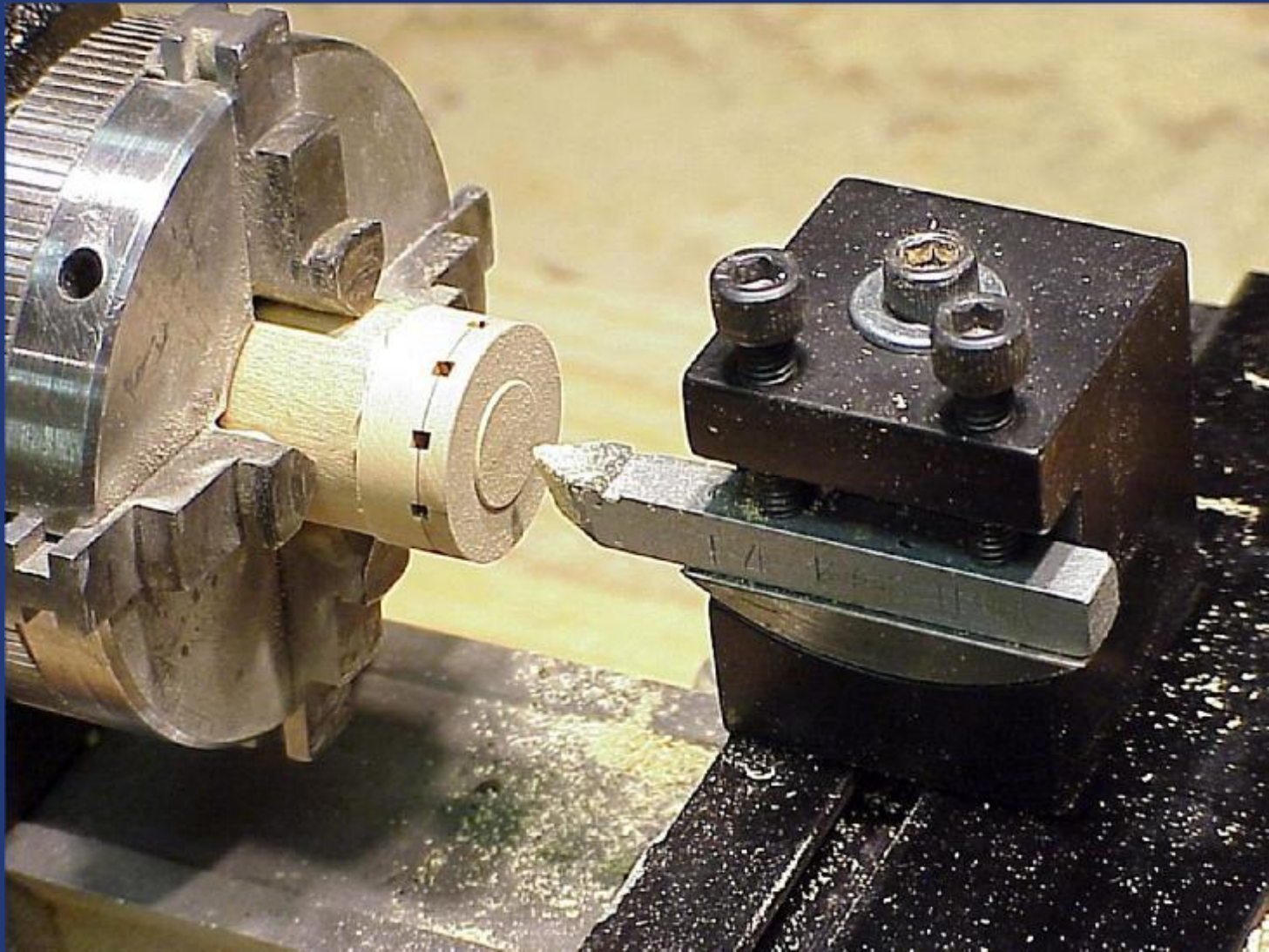
Milling slots for capstan bars on rotary rable











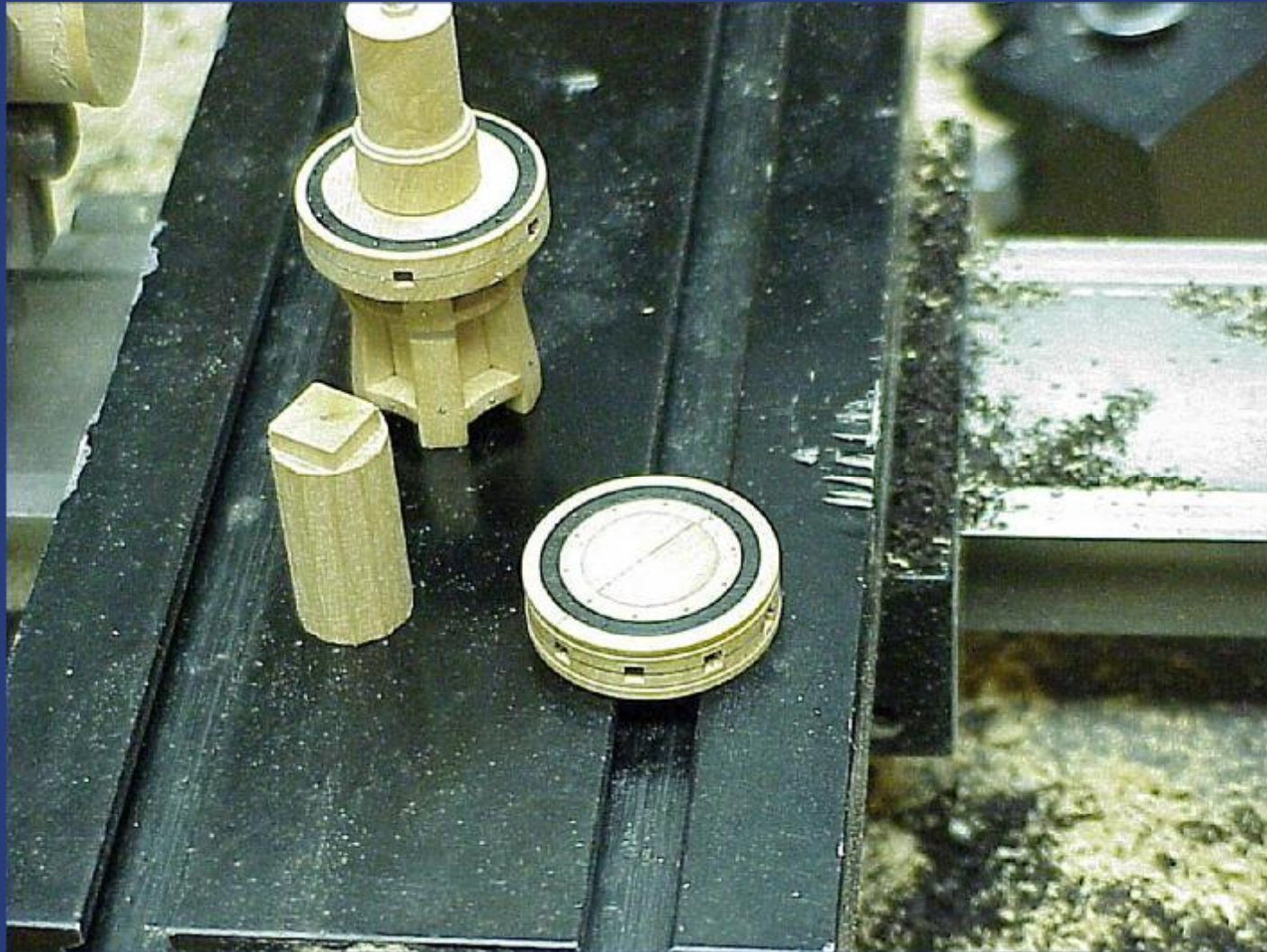


Milling recess for the iron reinforcing ring

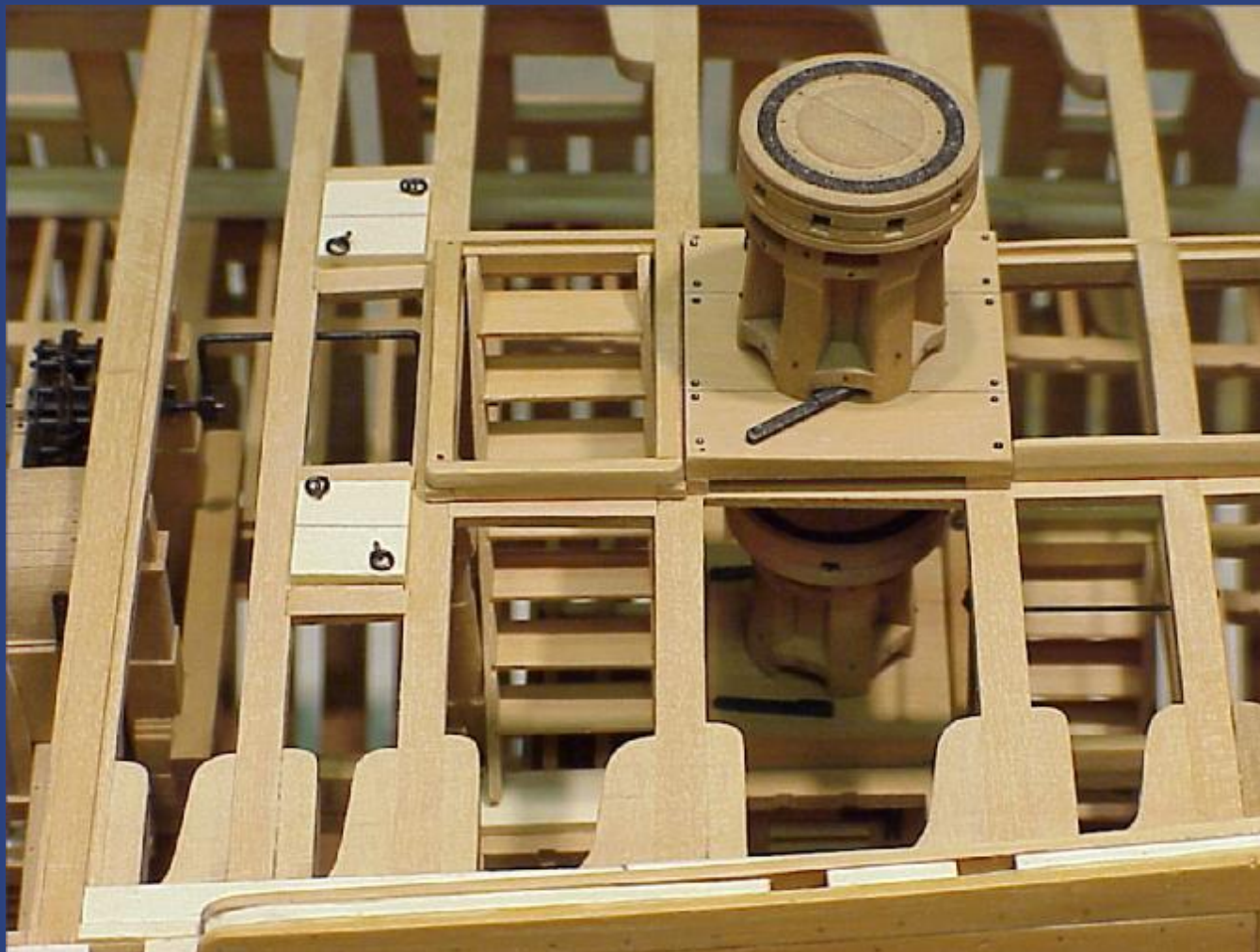




Holes drilled for reinforcing ring  
and pins for capstan bar retaining pins



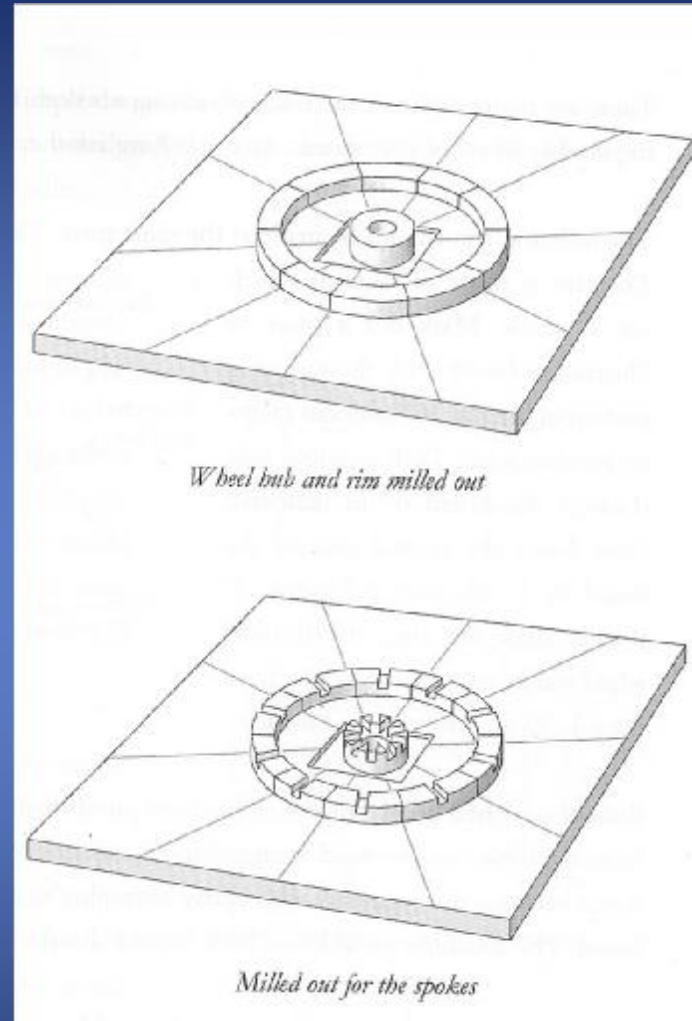
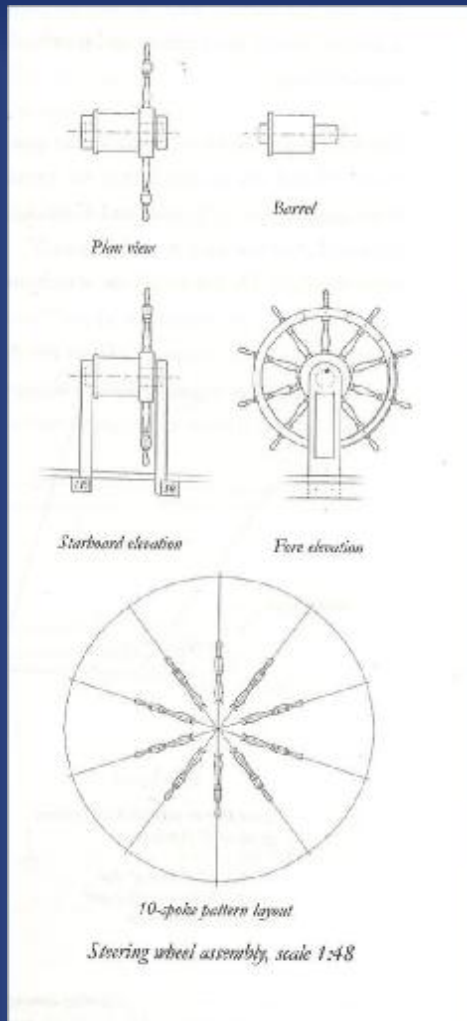






# Ships Wheel

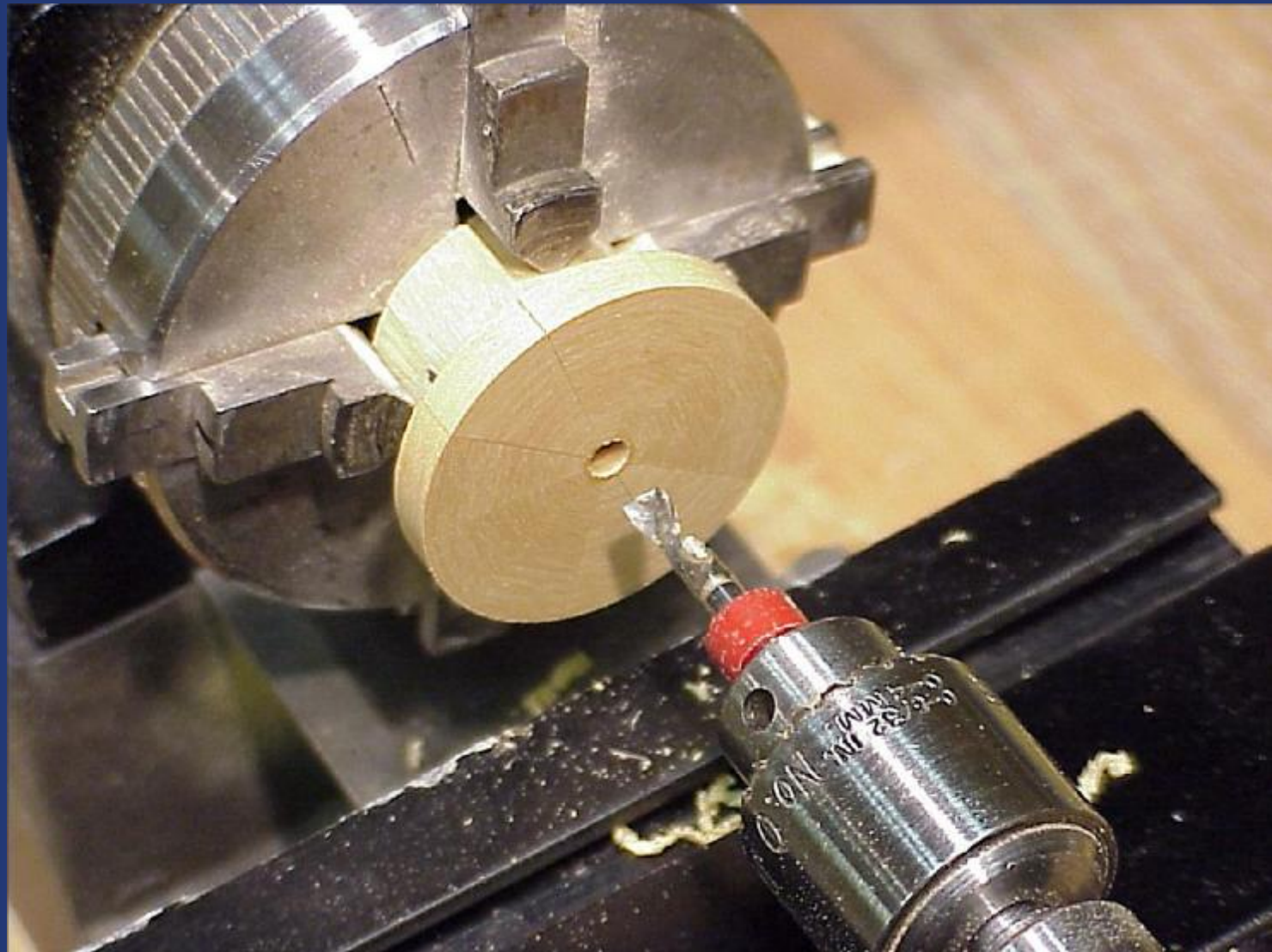


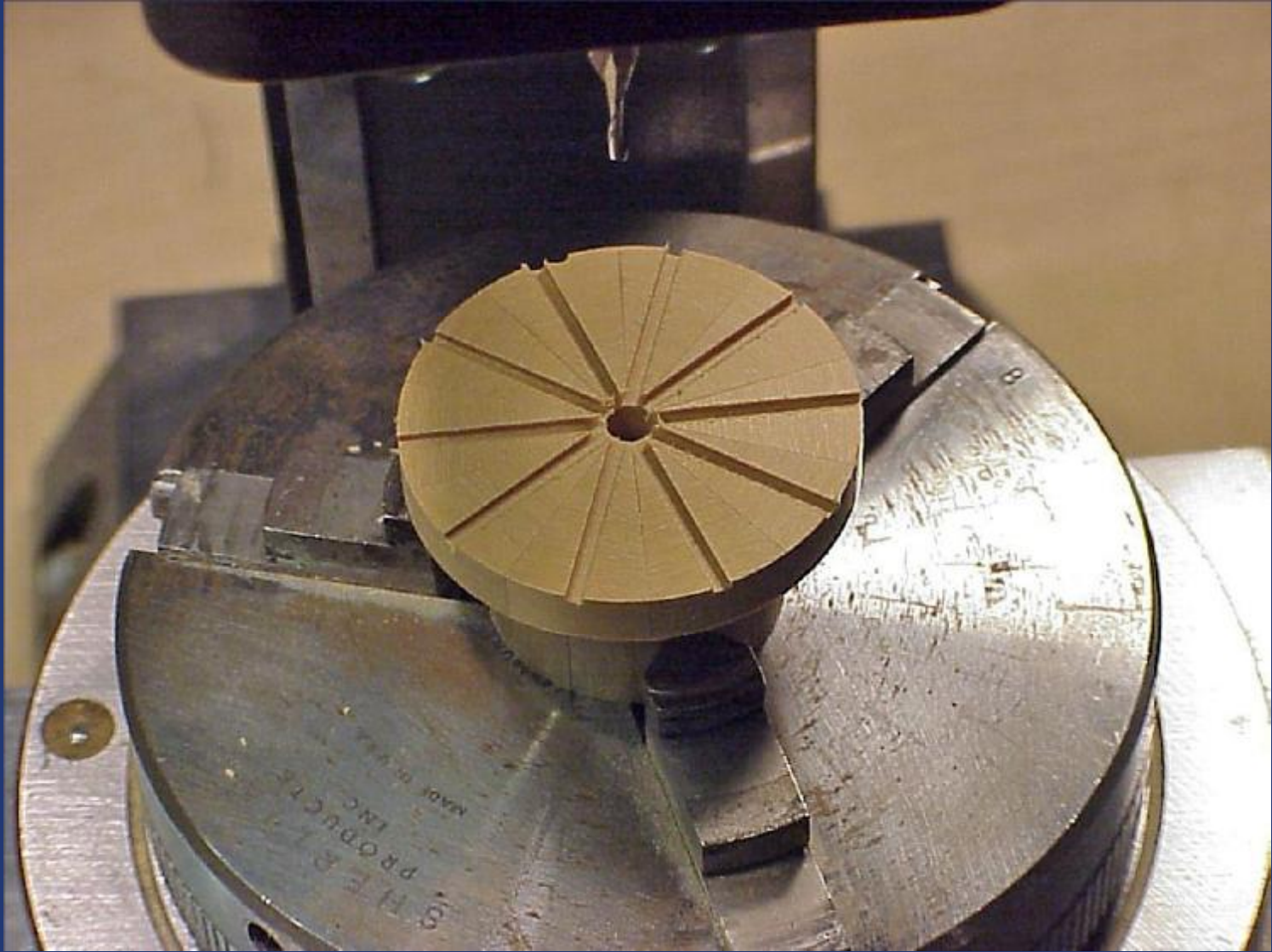


From *The Fully Framed Ship Model*, David Antscherl

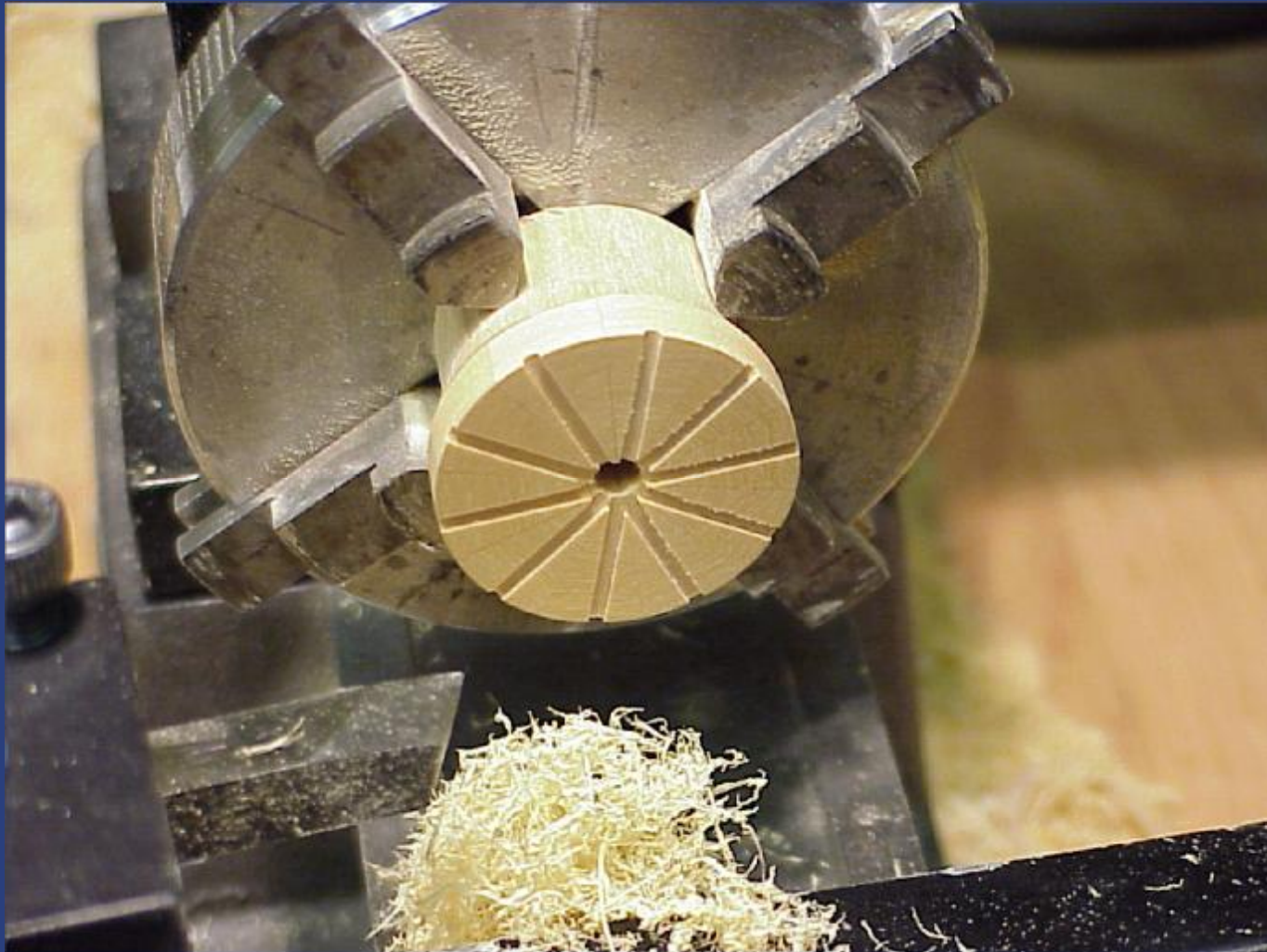




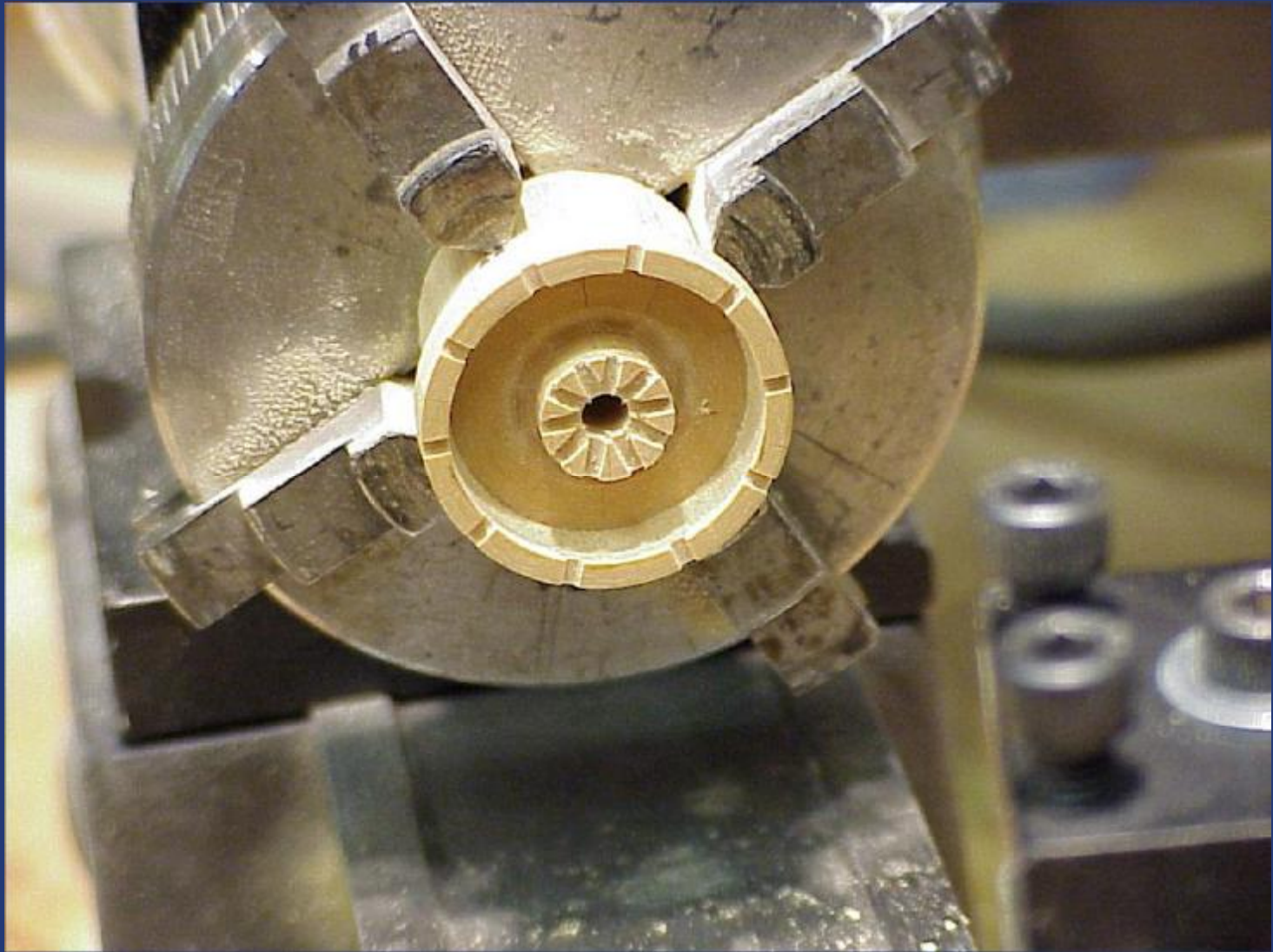


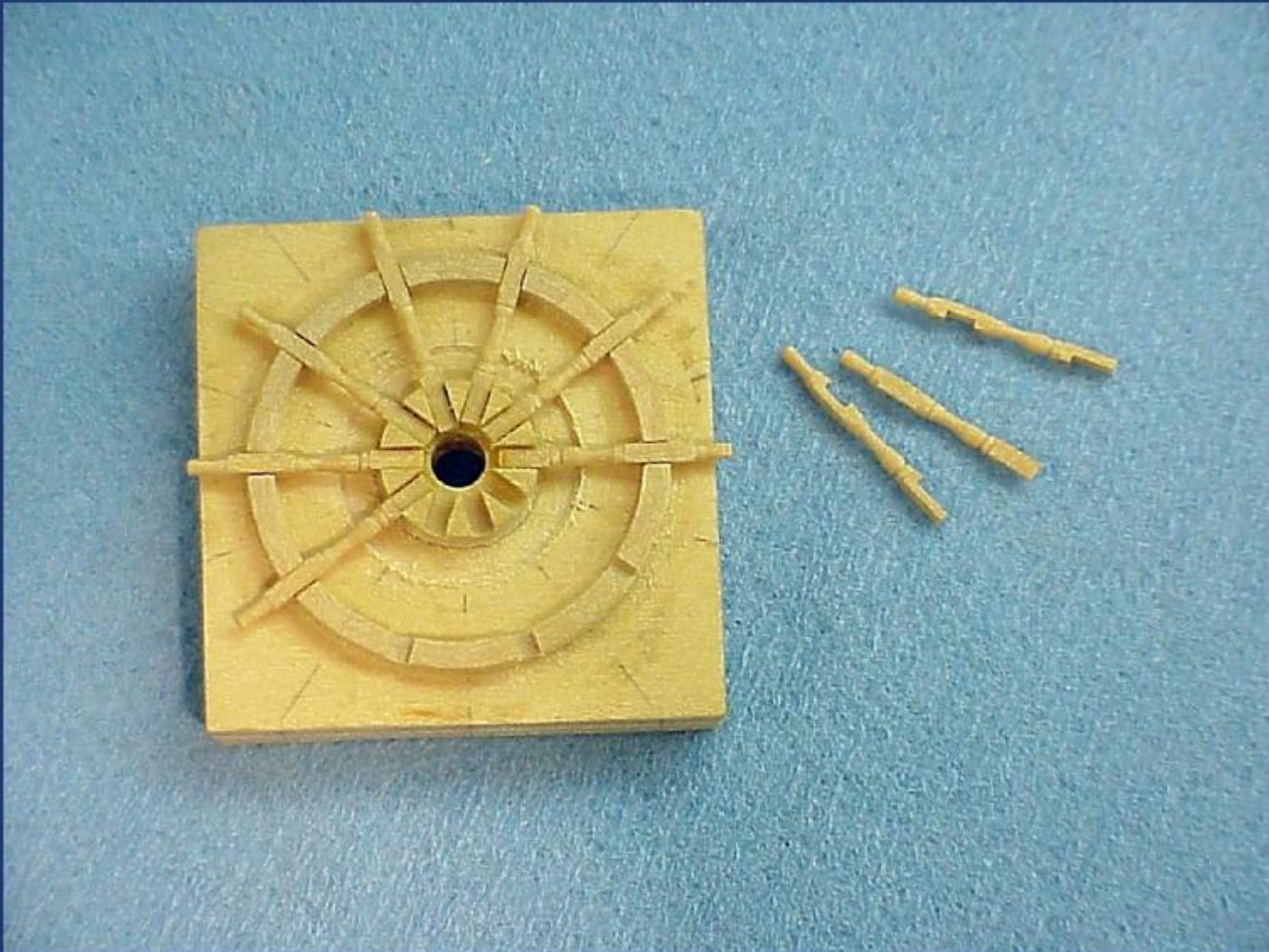




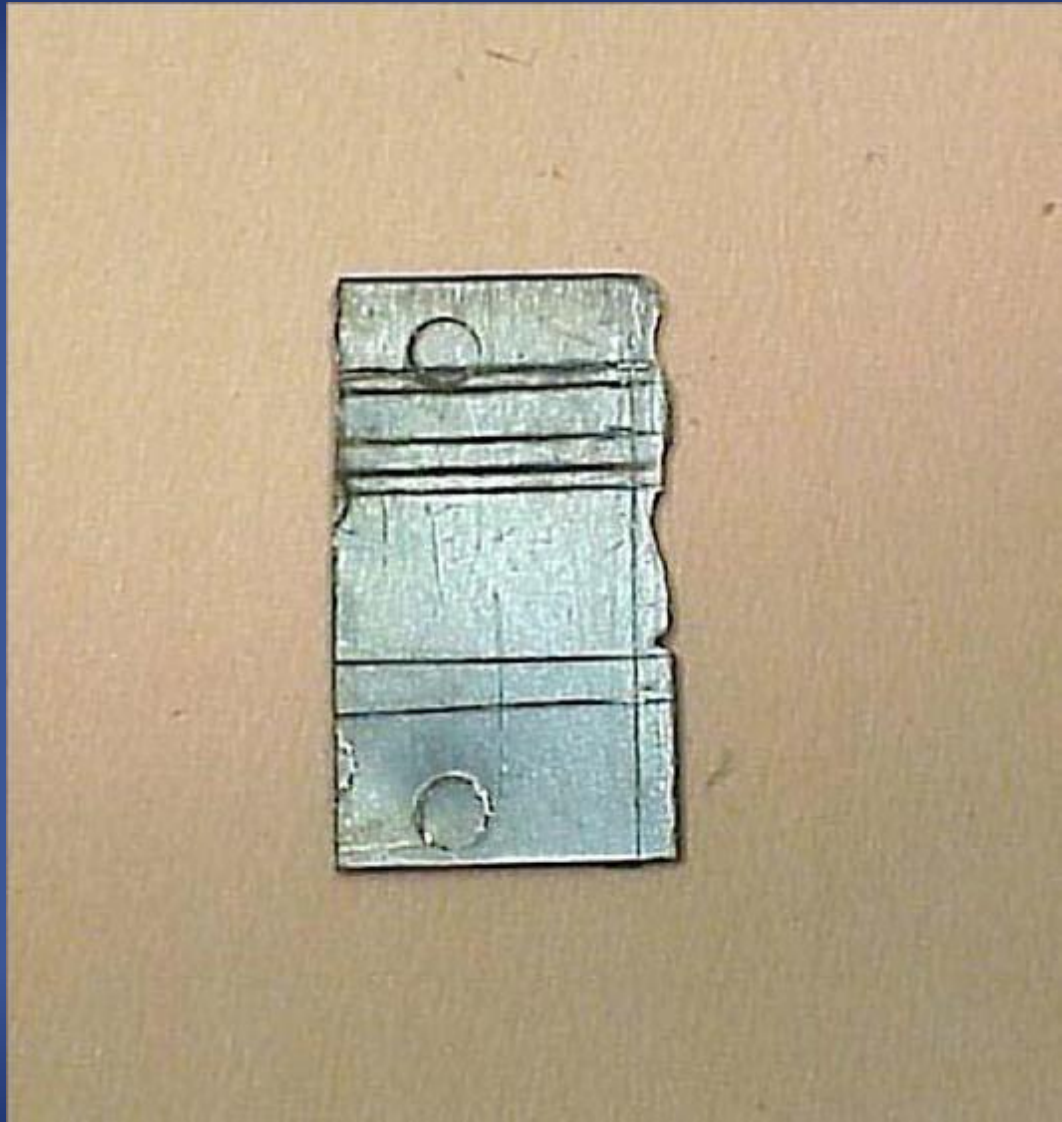




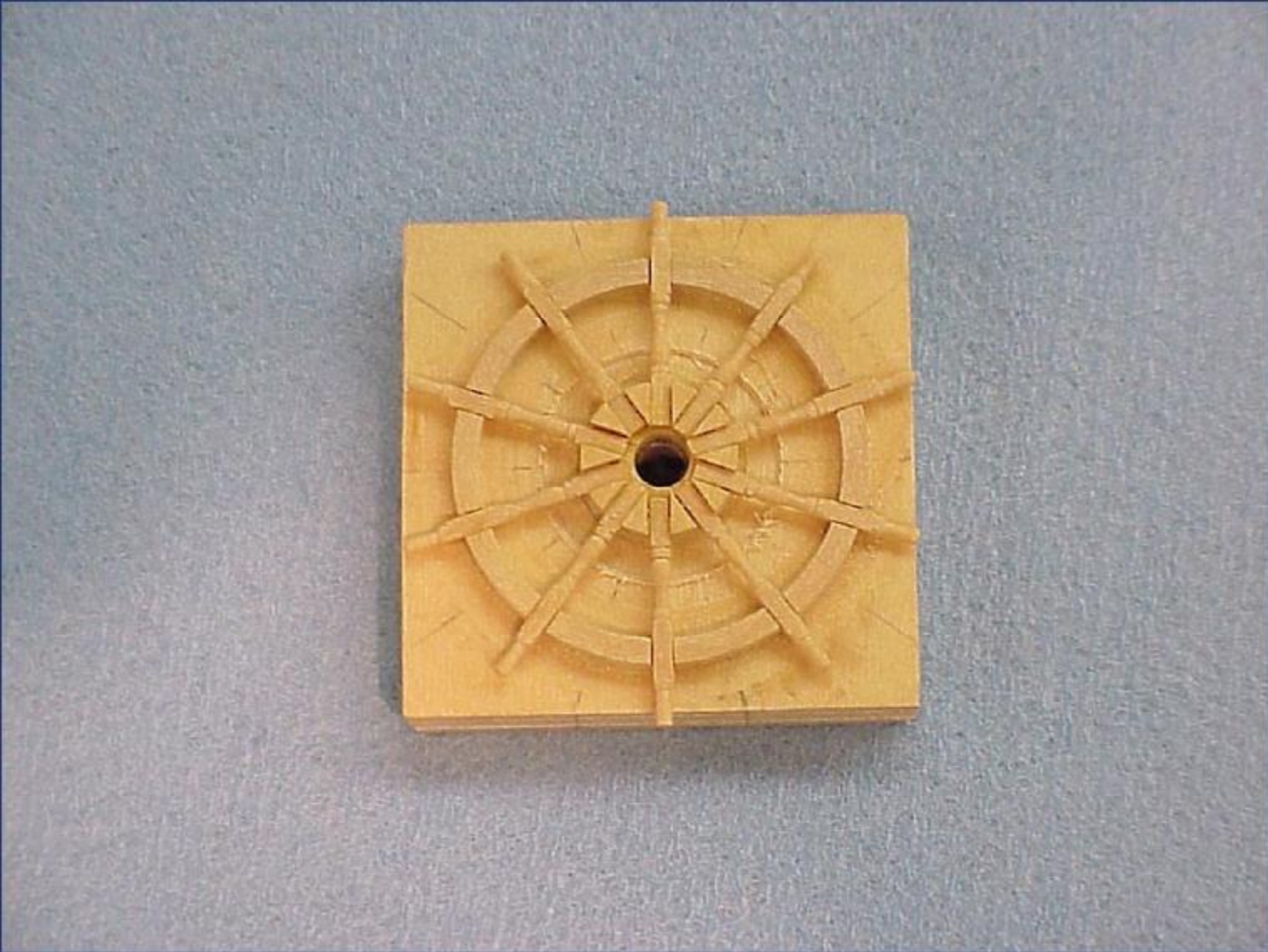


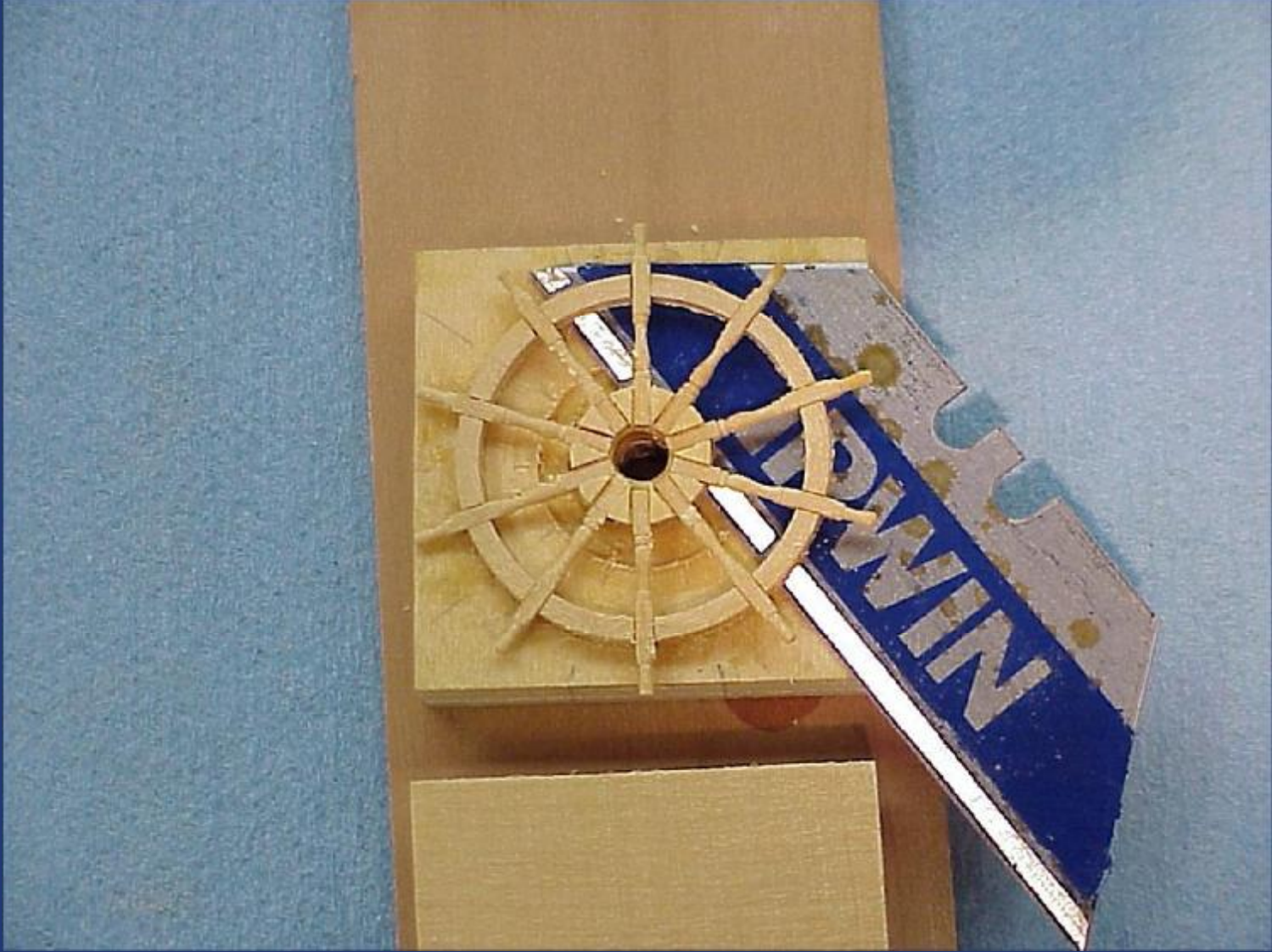














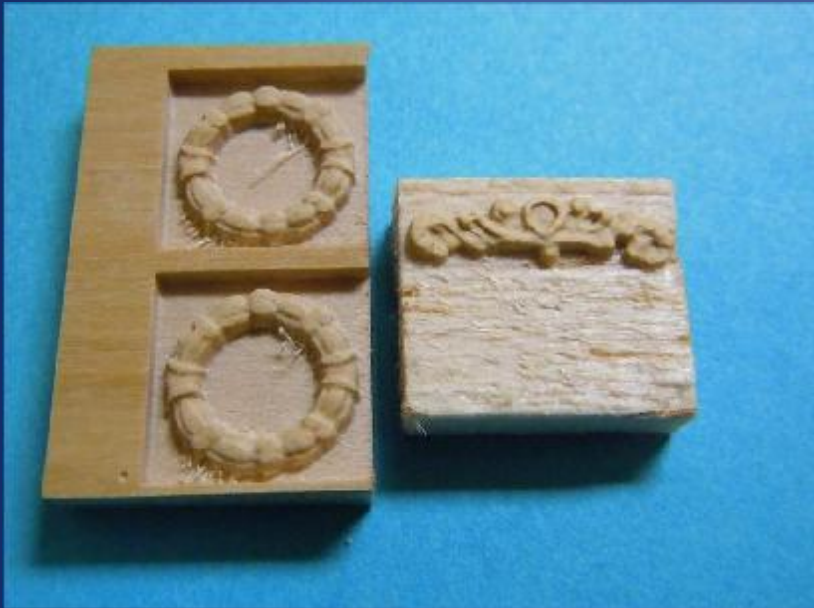








# Conclusion



CNC carving by Clyde Emerson



CNC turned cannon