

Hull Planking Hints & Tips

By Don Dressel



HOW TO BUILD FIRST-RATE SHIP MODELS FROM KITS

BY BEN LANKFORD

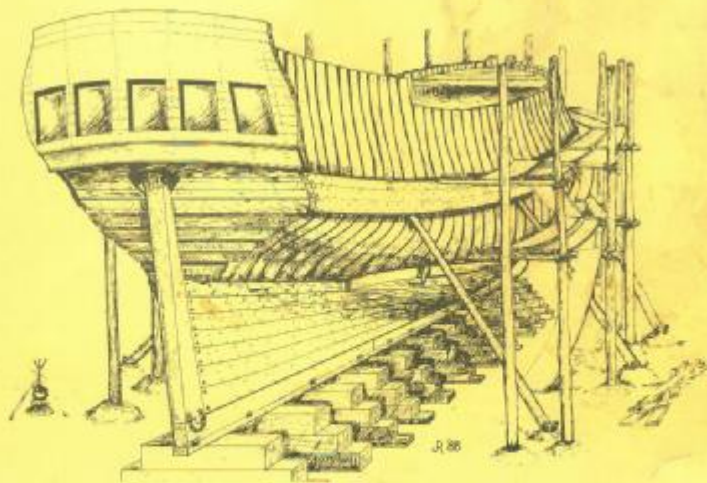


 MODEL EXPO, INC.

PLANKING THE BUILT-UP SHIP MODEL

A TECHNICAL AND PROCEDURAL GUIDE
FOR MODELERS BUILDING ALL TYPES OF
PLANK-ON-BULKHEAD AND PLANK-ON-FRAME
SHIP MODELS FROM SCRATCH OR KIT

Jim Rolats



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Planking Techniques for Model Ship Builders

2868

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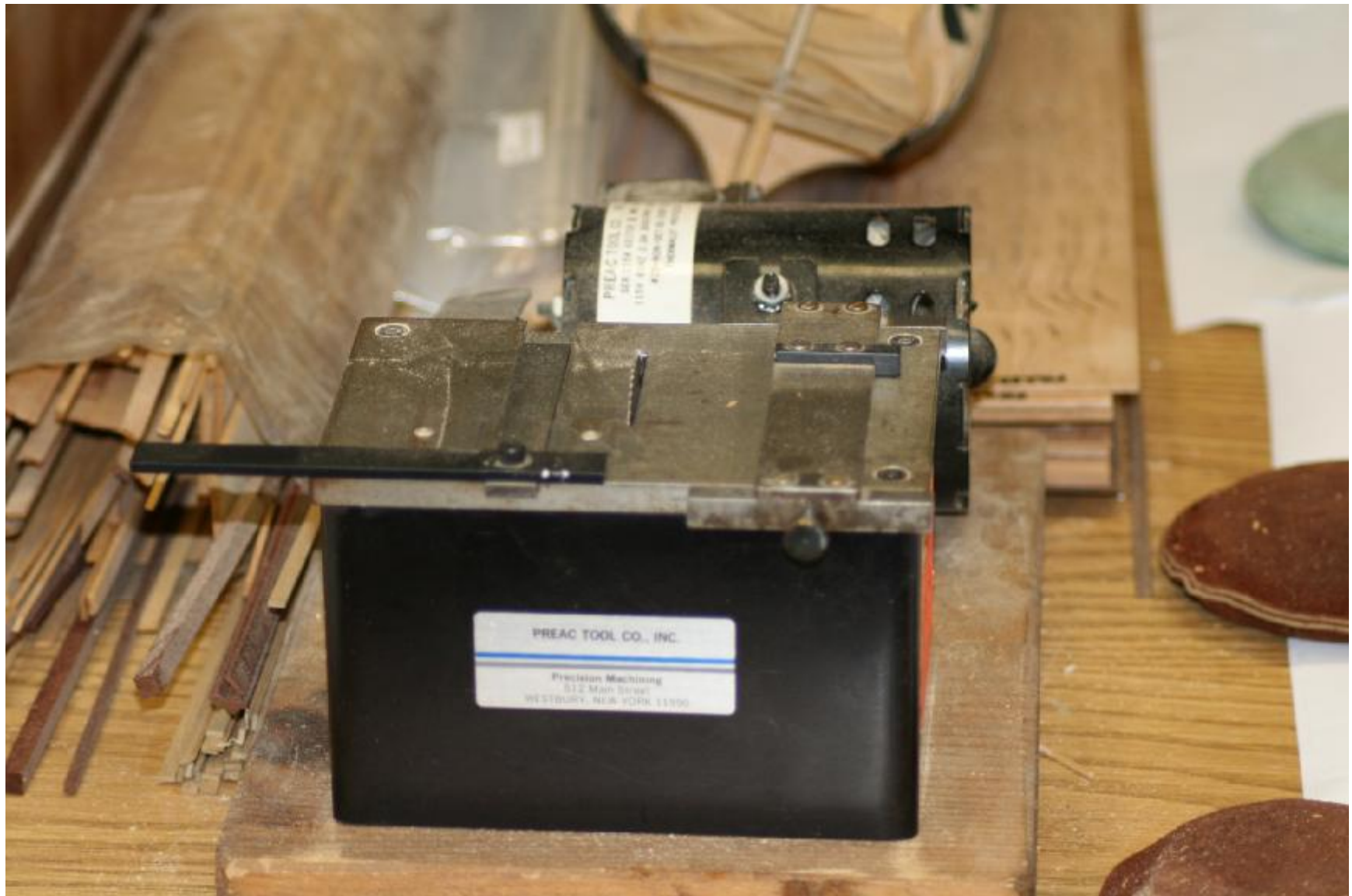


Planking Tools Required

- Basic planking tools:
 - 1. Wood strips
 - 2. Titebond glue
 - 3. Drawing materials
 - 4. Small Clamps, clips, clothespins, etc.
 - 5. Plus tools as indicated in the following slides.



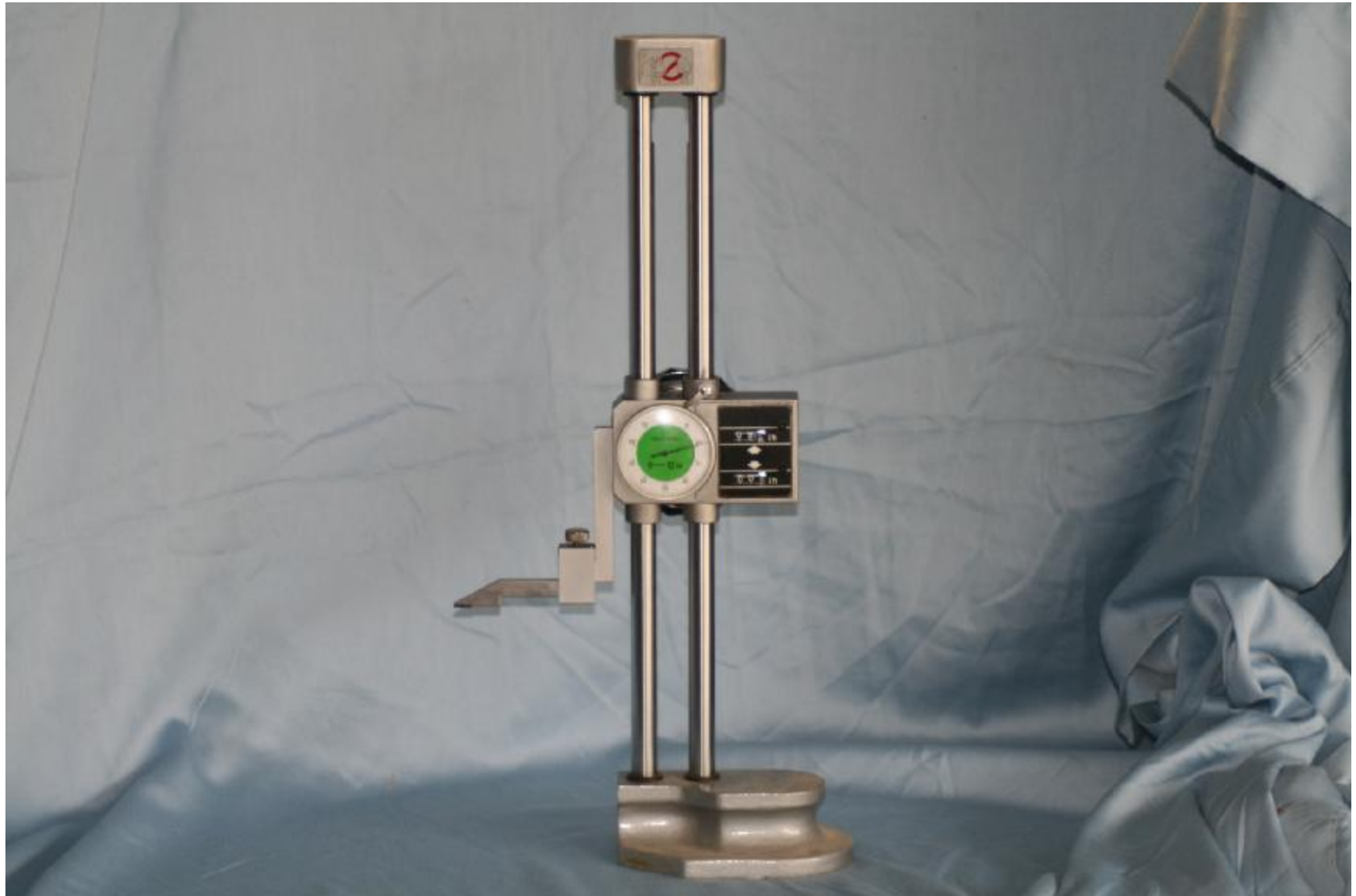




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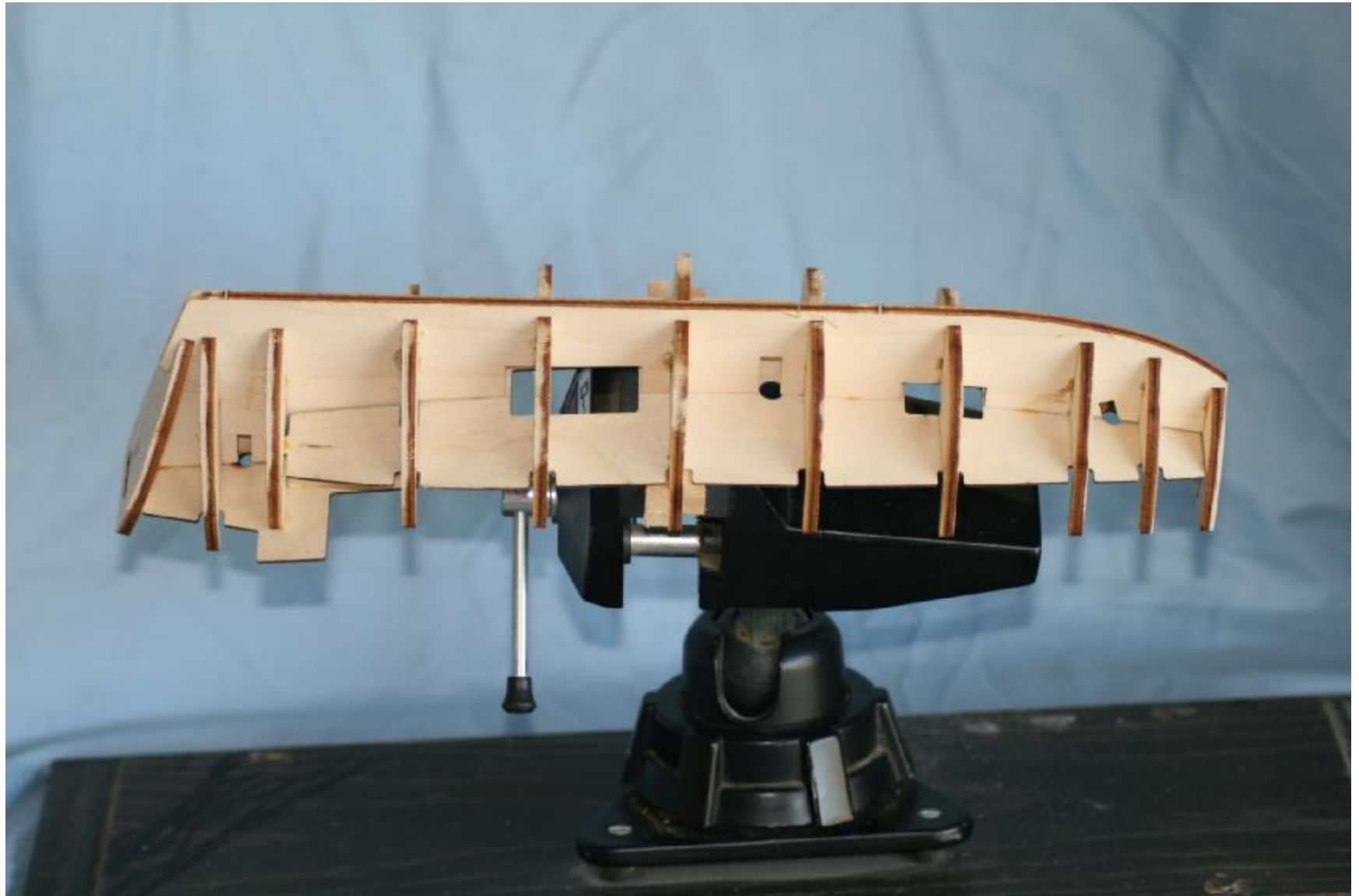
Preliminary steps

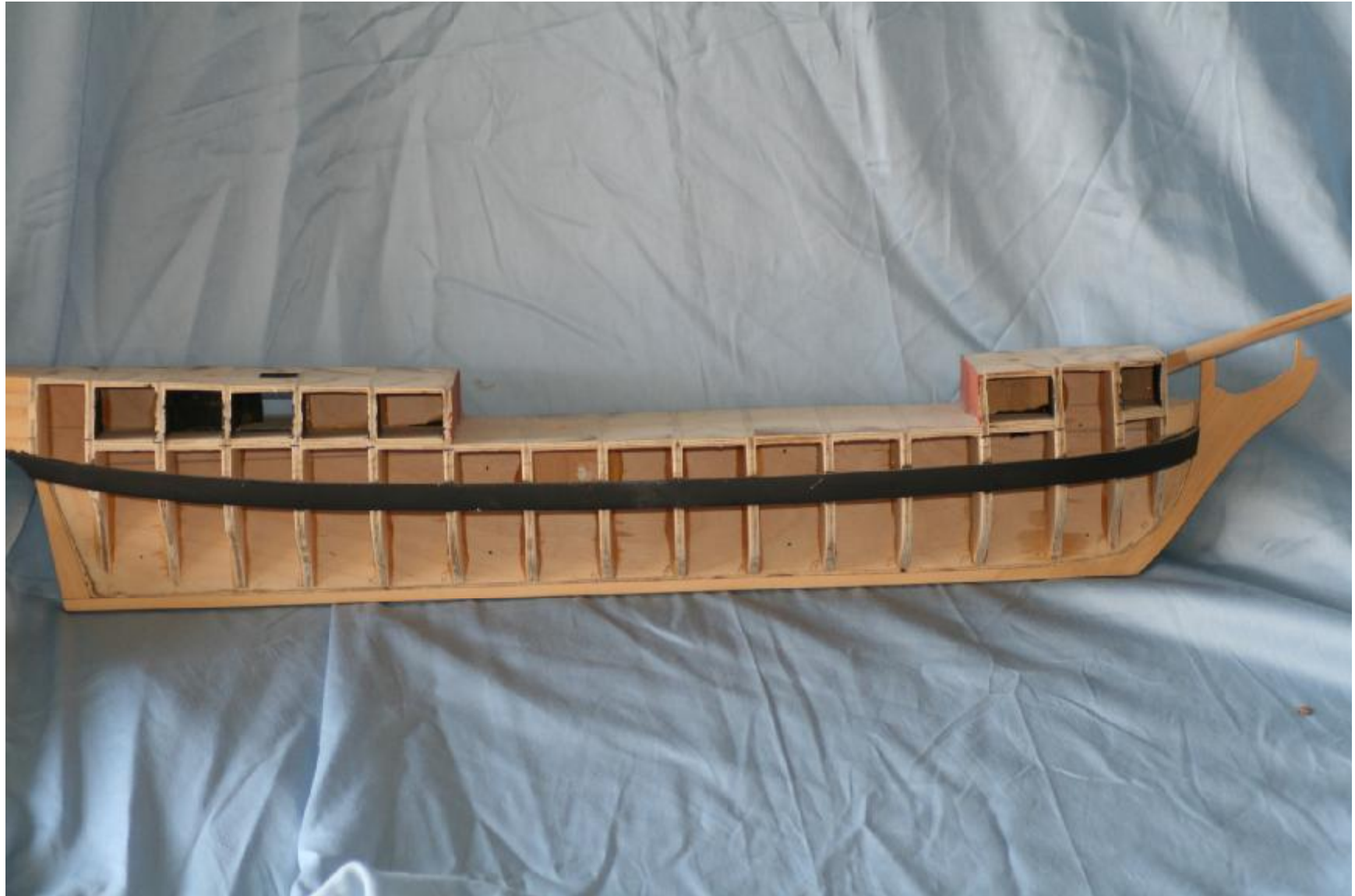
- The hull to which the planking is going to be installed must be adequately prepared. Planking can be done on solid, plank-on-bulkhead or plank-on-frame hulls.











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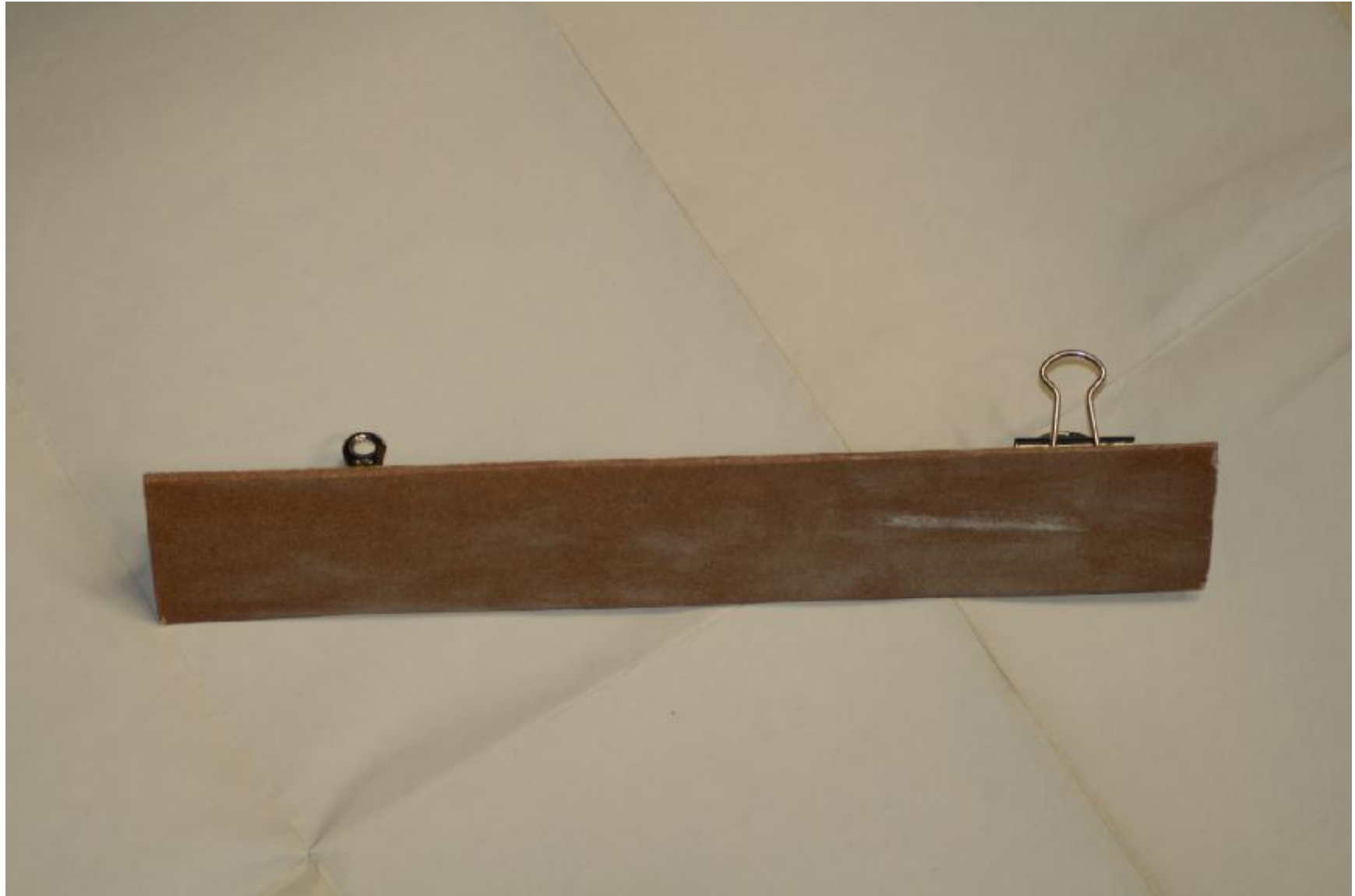






Tools for Foundation Preparation

- The only real tool required for hull preparation if it is a solid hull is sanding tools. Sanding blocks are very useful for all types of hulls, but should be long enough to span at least two to four frames at a pass.





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Plank bending

- Various methods are used to bend the planks.





Double planked kit model

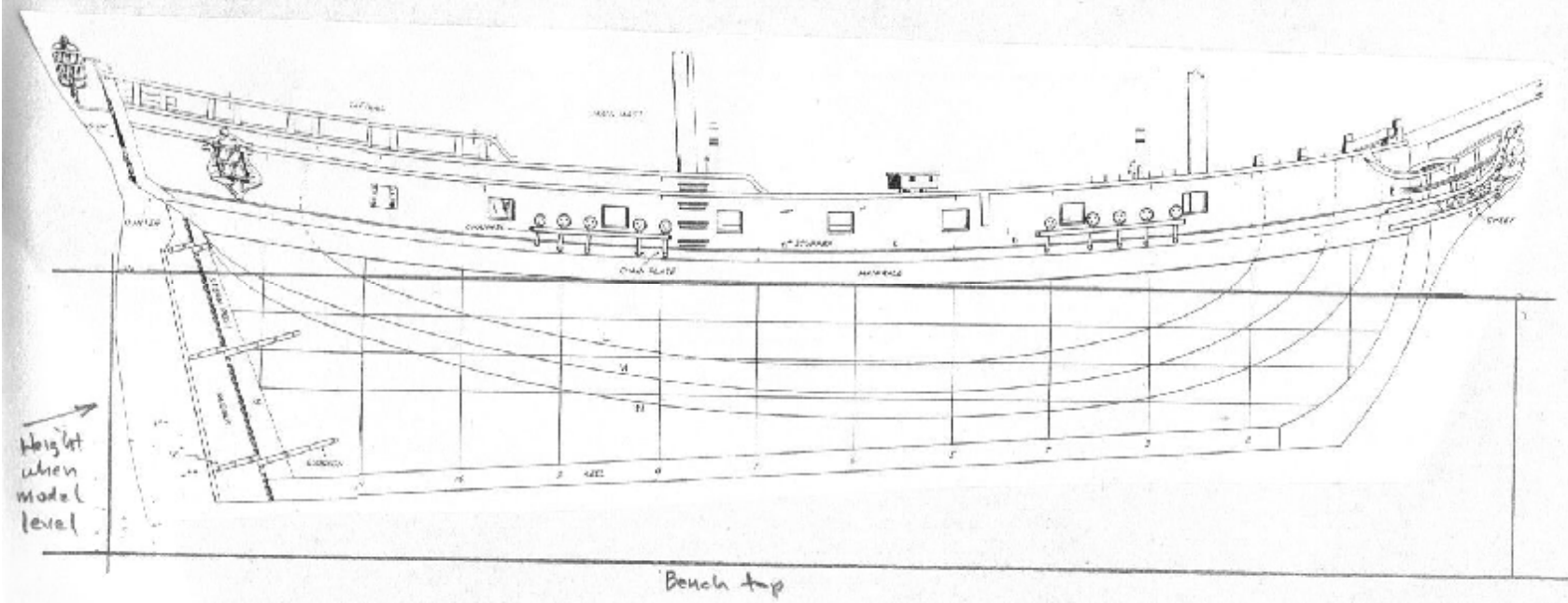
- The first layer of planks should be installed with no particular rule. It does help to be sure and install fillers at bow and stern.

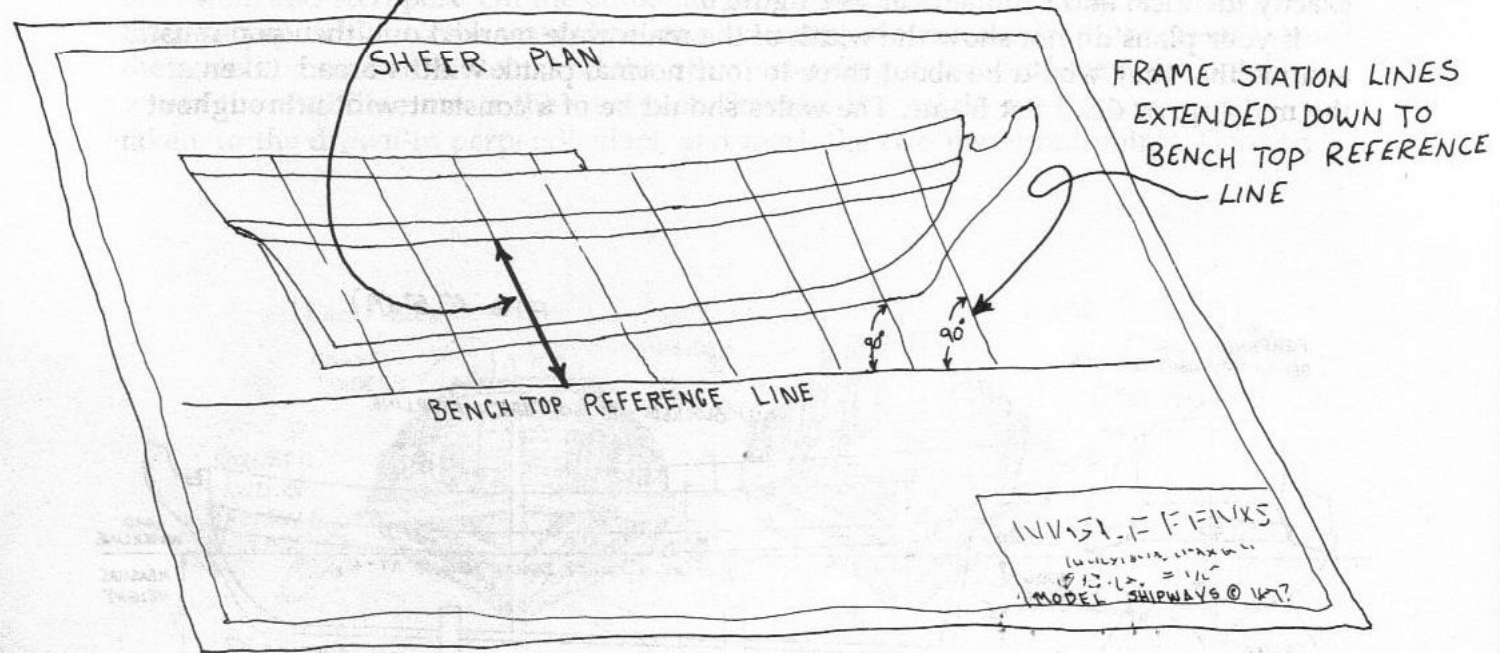
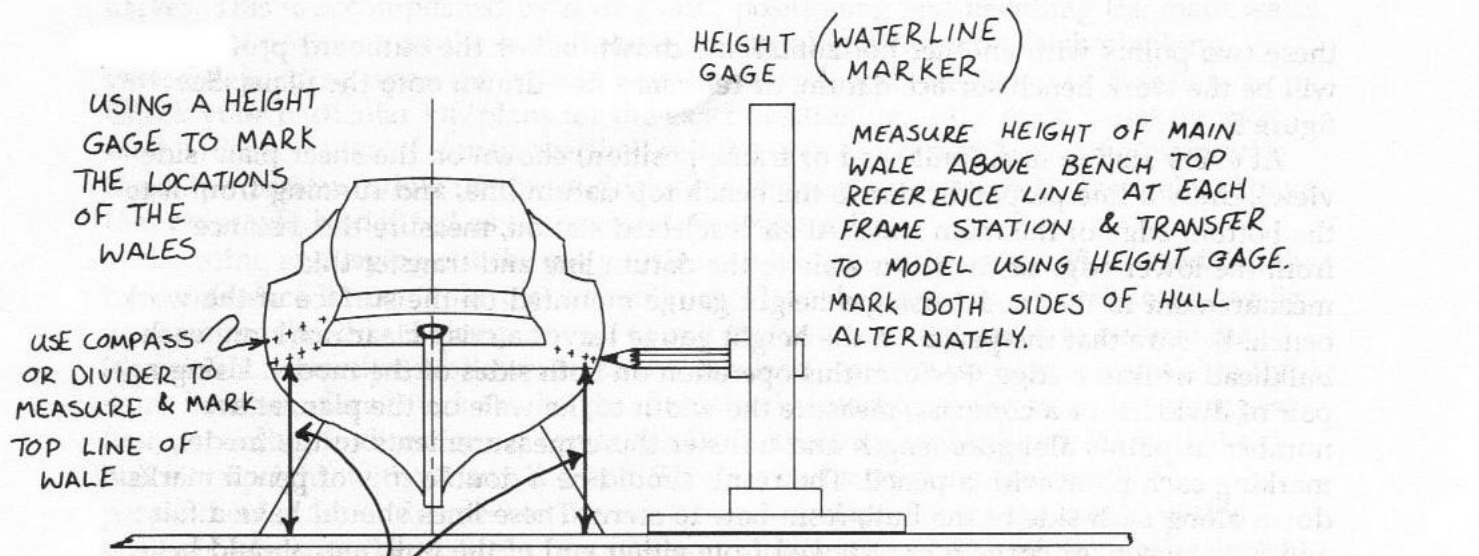


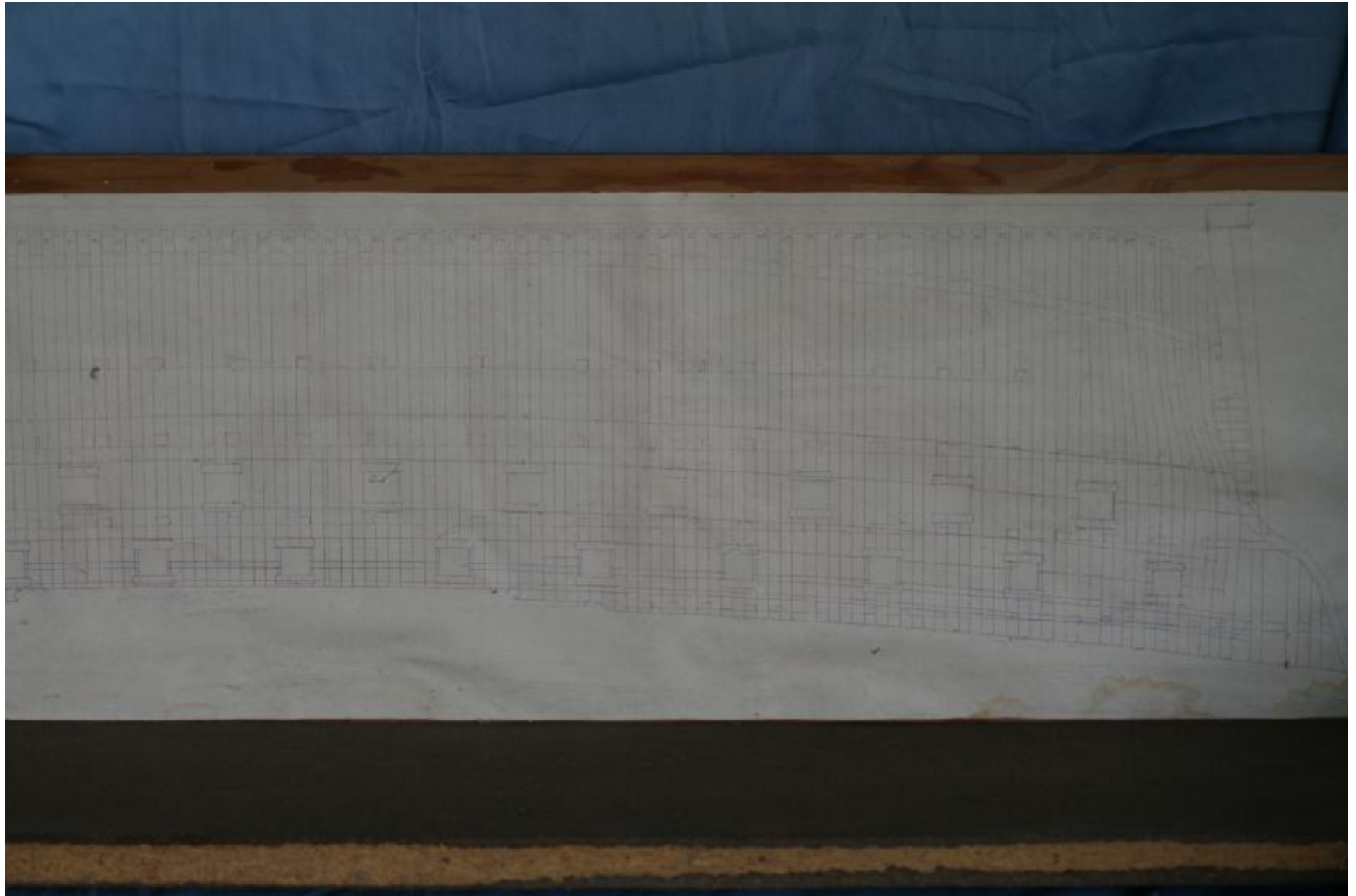


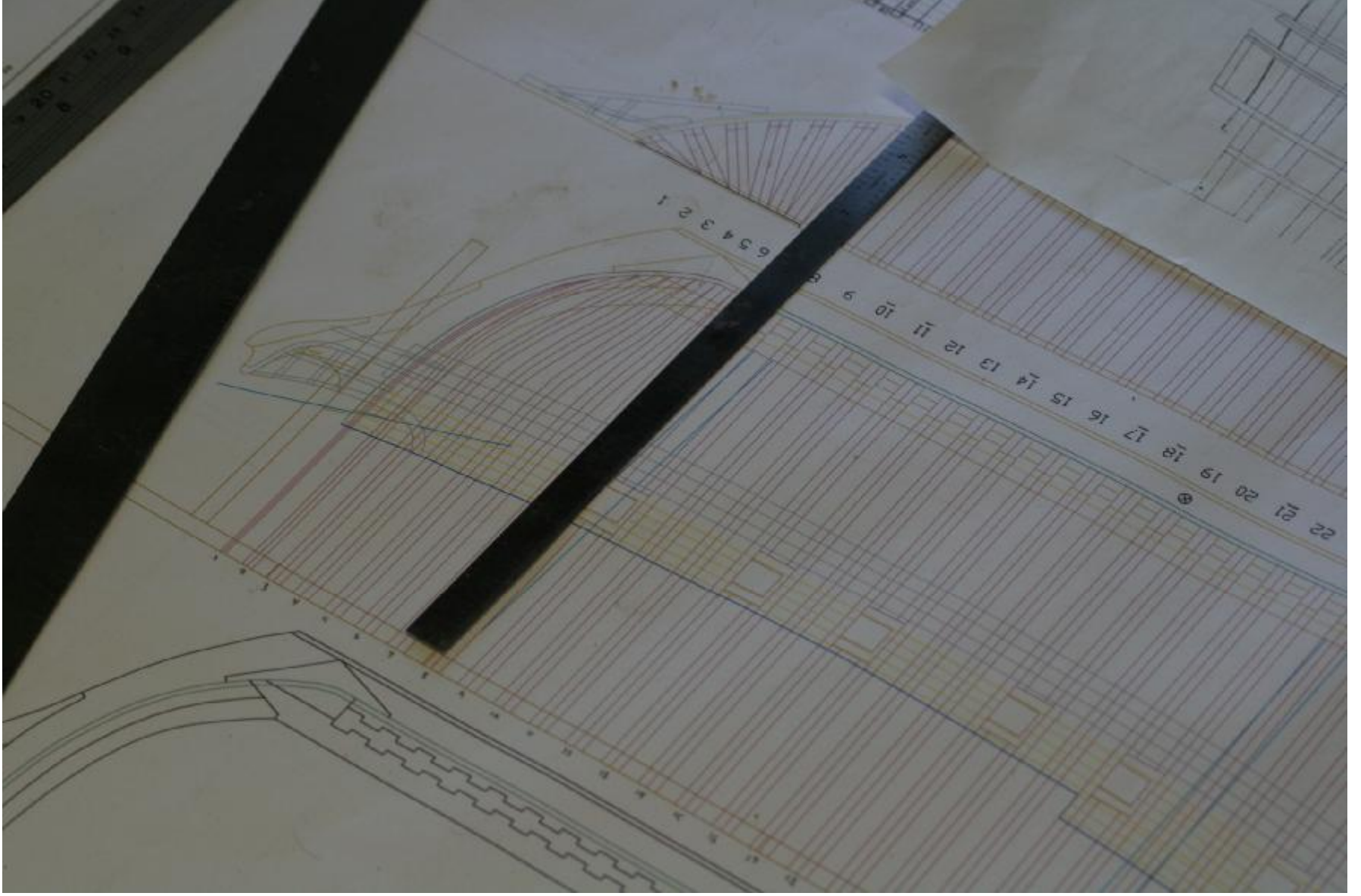
MAIN WALES

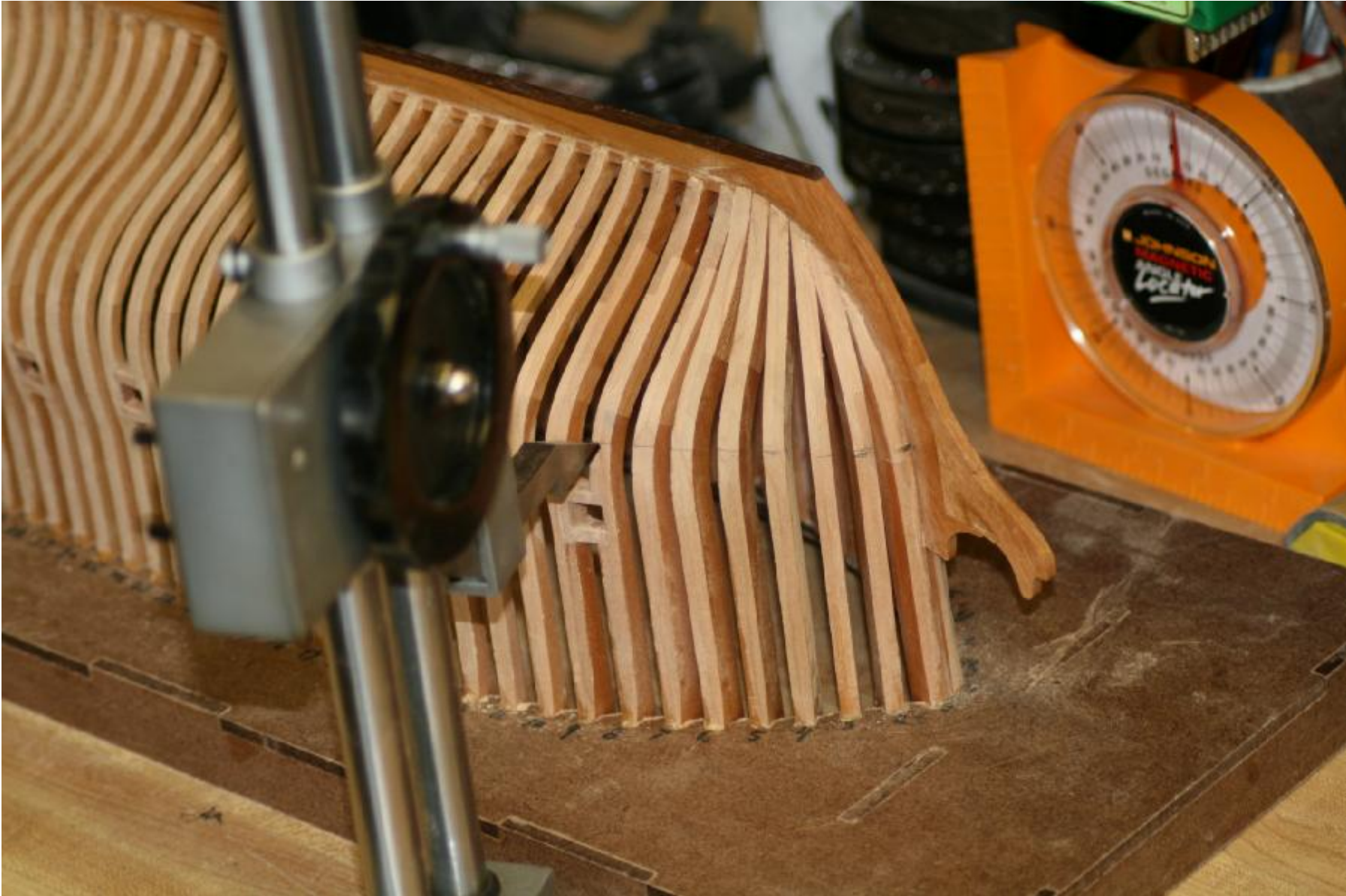
- The next step is locating and installing the main wales. These are not difficult to install if you carefully mount your model so that measurements can be taken from the plans to locate the main wale. Mark it on the hull, both sides (should be identical) and install port and starboard wales.



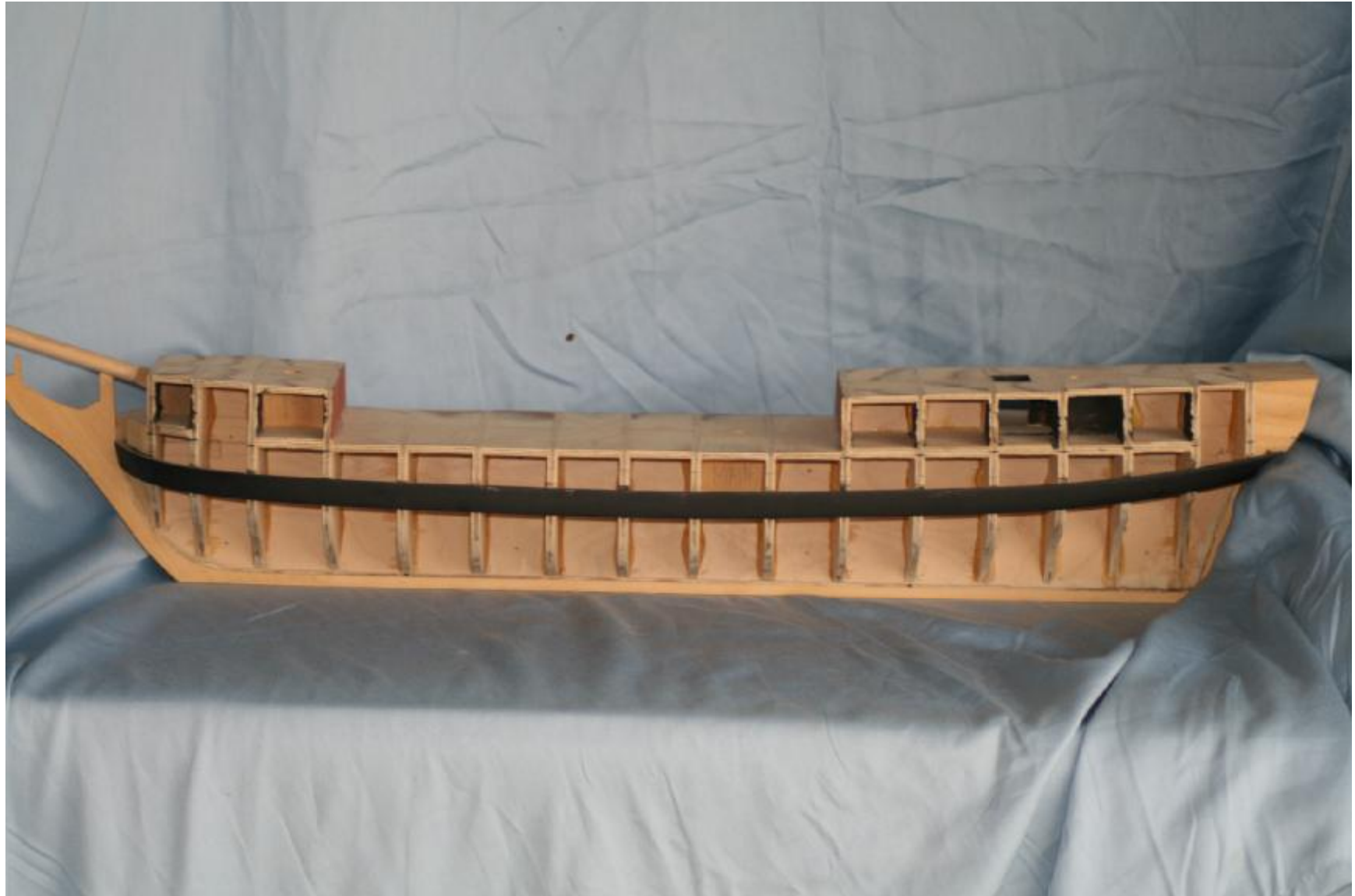










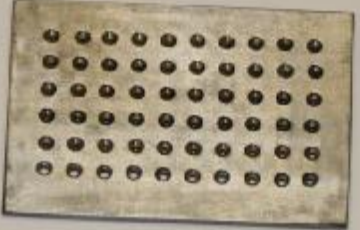
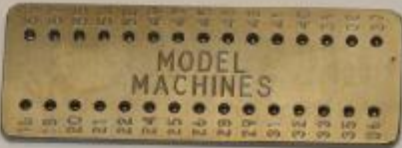


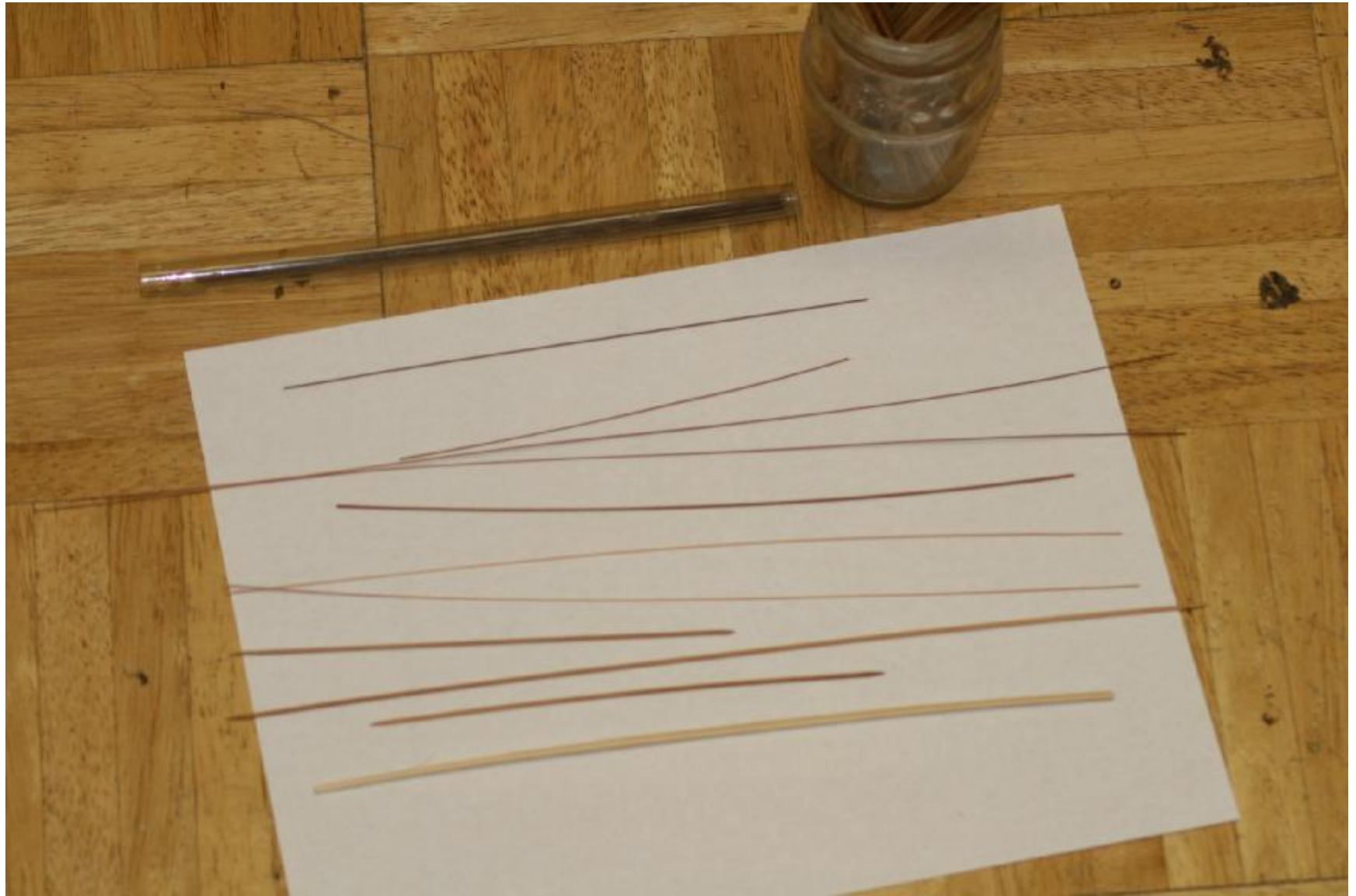




Treenails

- Making treenails is best done out of bamboo. Split the wood, do not cut it to shape. If not bamboo, then birch is a good substitute. 1/16 inch birch dowels can be purchased at many hobby shops in the model airplane section.





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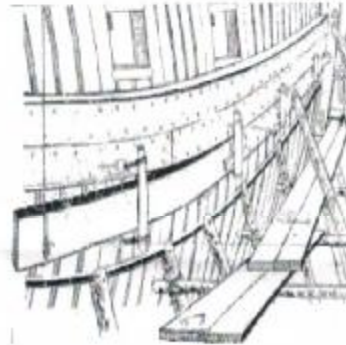
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Thousands of our cutters are in use worldwide, many by museum model shops and professional model builders, as well as the hobbyist.

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Now you can make your treenails that are to scale, matched to your planking, with an unlimited degree of contrast possible. The radial motion of the cutter leaves fine grooves which absorb and anchor the glue making the strongest possible joint. Someone once said "if it can be treenailed it should be done" and we think most modelers will agree with this. Considering the time and effort it takes to create a fine model, to rely on glue alone is risky, even under the best of conditions.



Stock size

- If you are building a kit, no problem. The wood strips are already supplied.
- Scale length of planks is about 20 feet. Scale width is determined by size and type of hull.



FA Bulwarks Planking
Boxwood

Fair American
Holly Deck Planking

White Oak

Clary Walnut

Battens

- The lower hull, below the now installed wale, is planked using battens, on both scratch and double planked hulls.



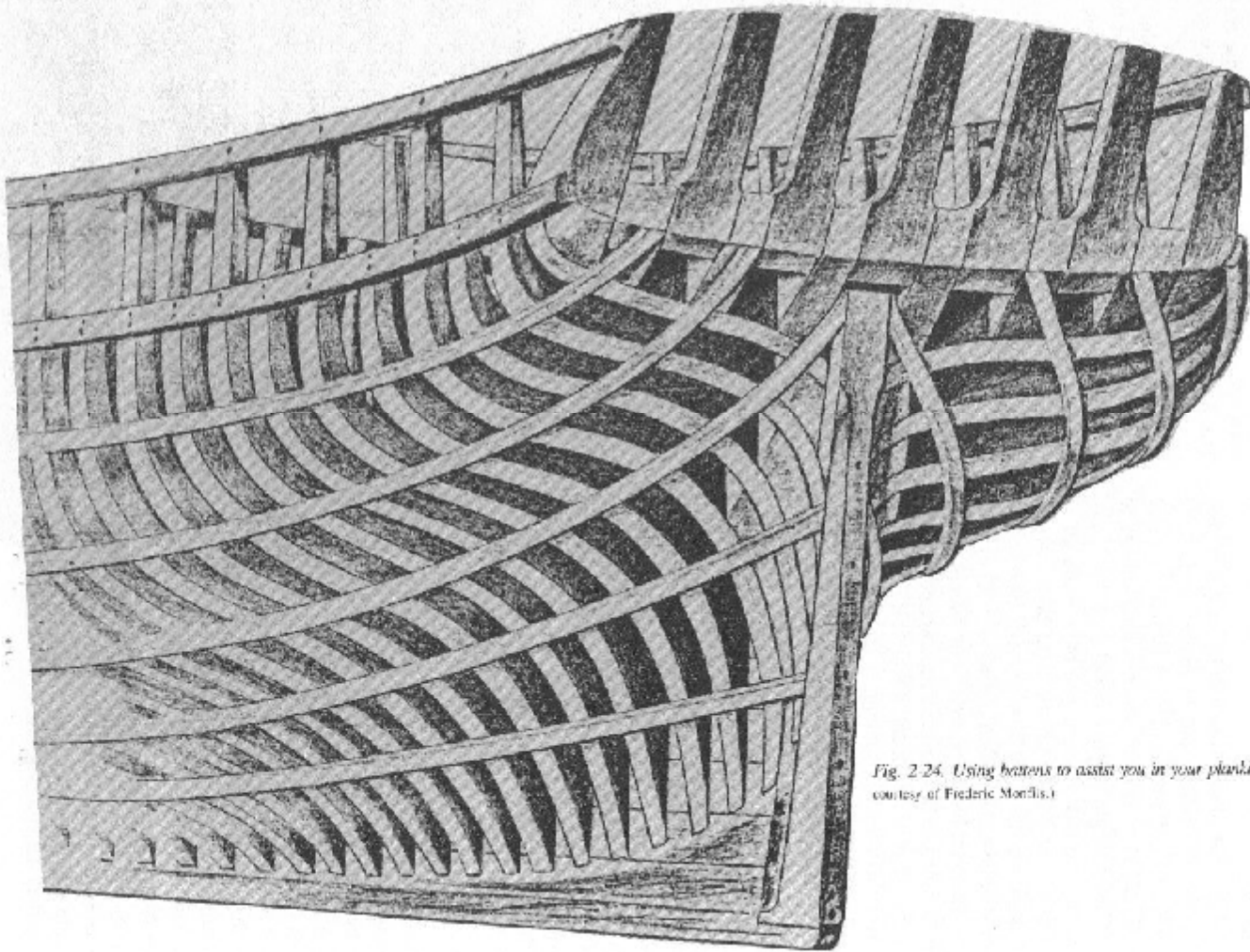
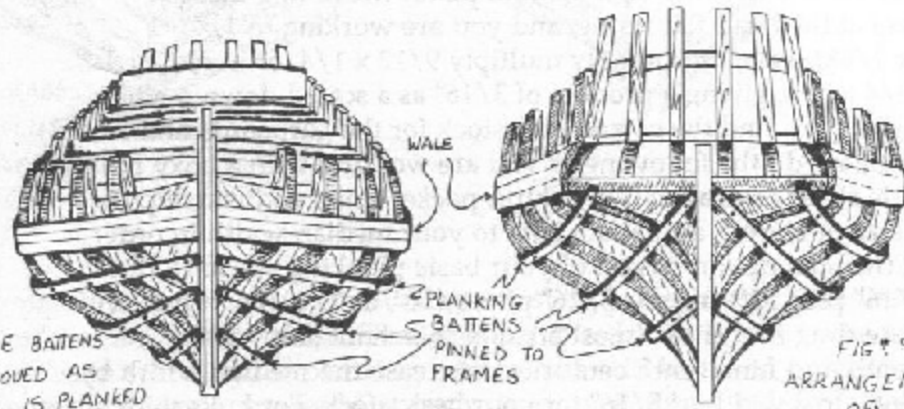
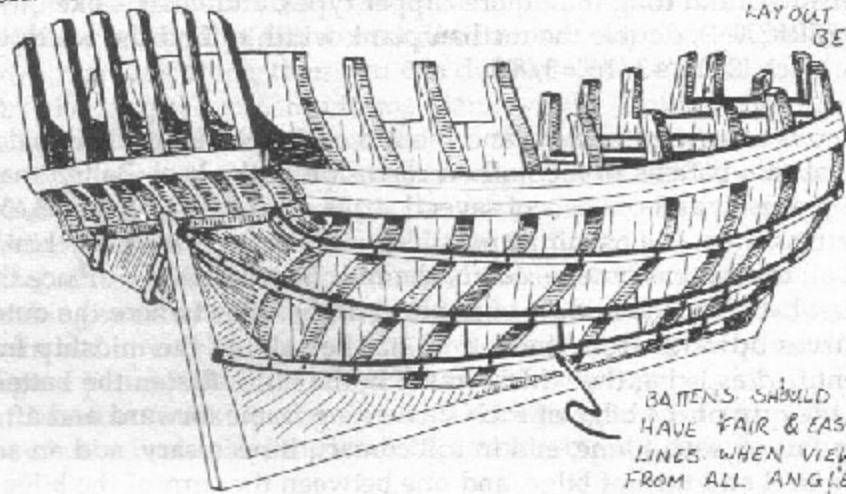


Fig. 2 24. Using beams to assist you in your planking. (Drawing courtesy of Frederic Monfils.)



NOTE: THE BATTENS ARE REMOVED AS THE HULL IS PLANKED UP & EACH BELT IS COMPLETED.

FIG. 9
ARRANGEMENT
OF
BATTENS &
LAYOUT OF PLANKING
BELTS



BATTENS SHOULD HAVE FAIR & EASY LINES WHEN VIEWED FROM ALL ANGLES.

Planking measurement

- Now you measure the distance between each batten to determine the number of planks required.

TO DETERMINE THE NUMBER OF MEDIAN WIDTH PLANKS AT THE MIDSHIP FRAME, DO EITHER OF THE FOLLOWING:

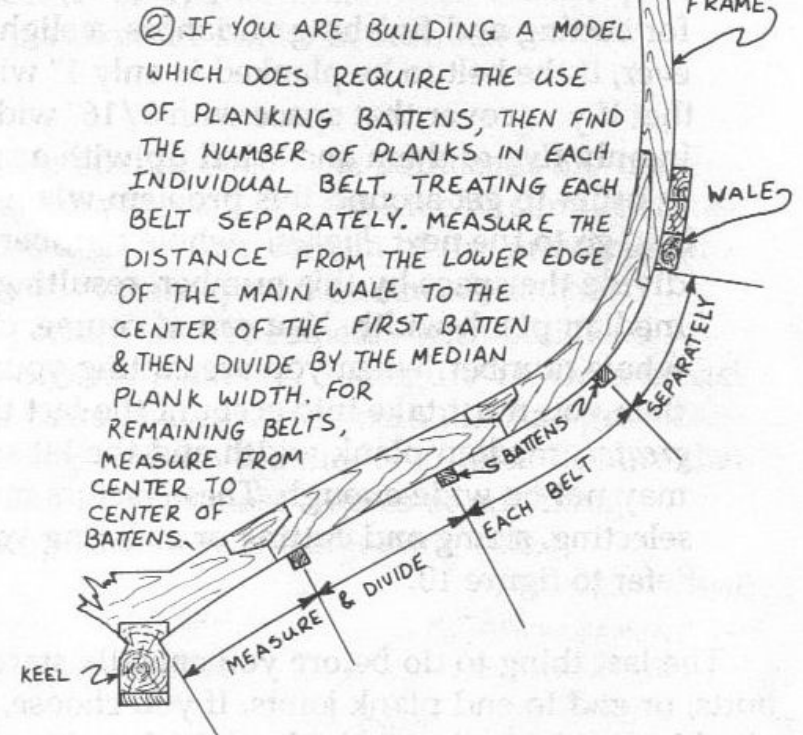
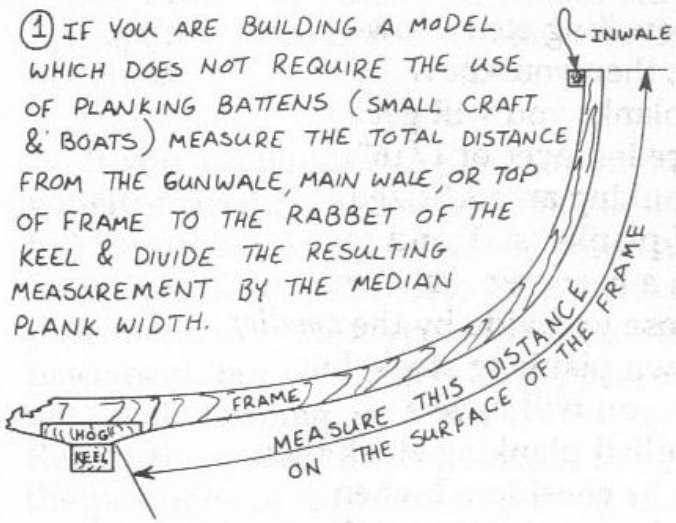
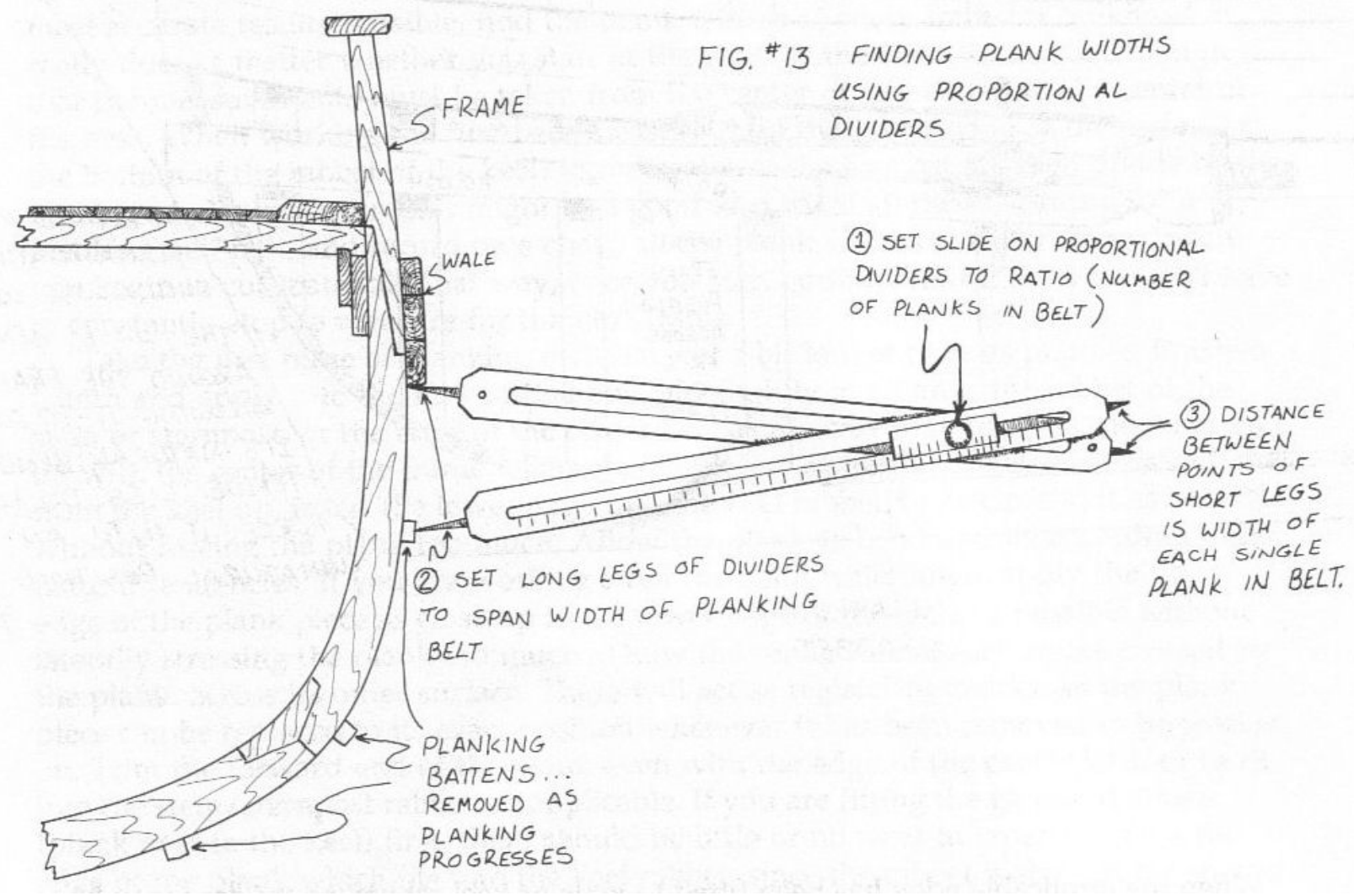


FIG. #10 FINDING THE NUMBER OF PLANKS AT THE MIDSHIP FRAME

FIG. #13 FINDING PLANK WIDTHS
USING PROPORTIONAL
DIVIDERS



DISTANCE MEASURED BETWEEN
BATTEN AND WALE

DIAL INDICATOR ON PROPORTIONAL
DIVIDERS SET AT NINE

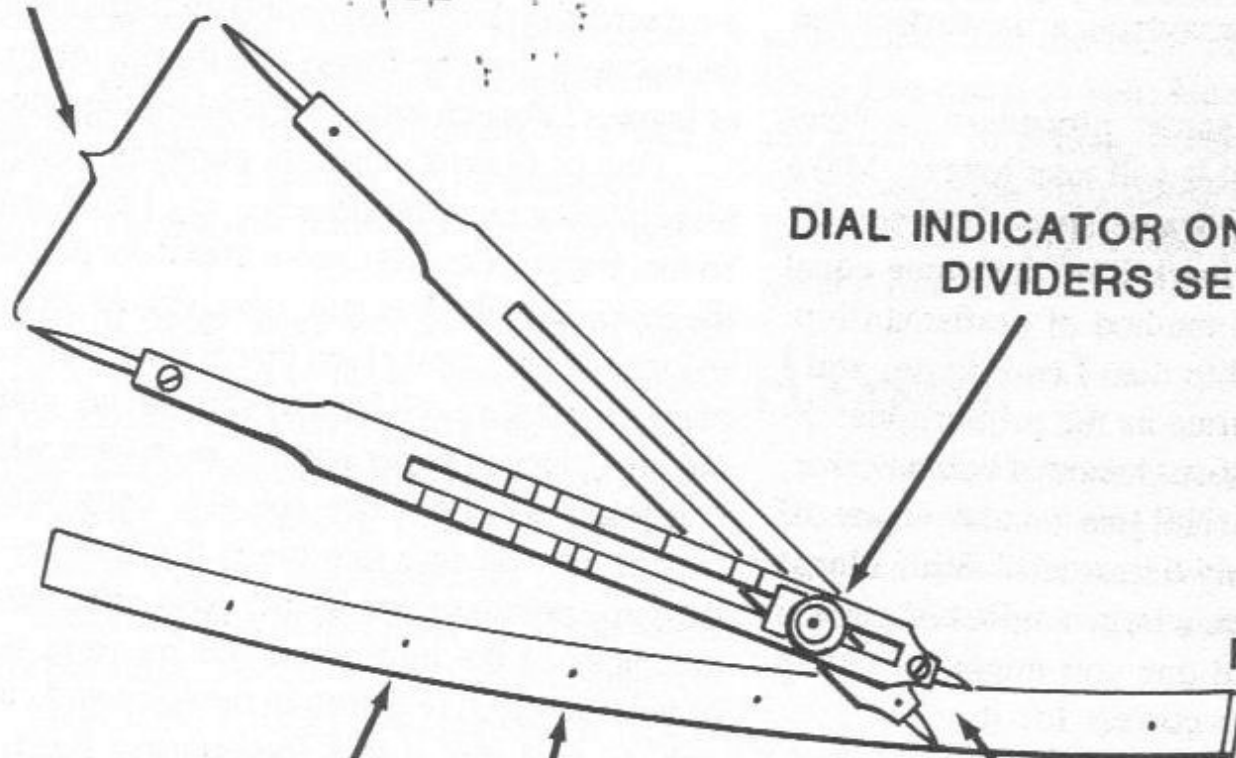
3/16 INCH
PLANK MATERIAL

NEXT FRAME

MIDSHIP FRAME
LOCATION

WIDTH OF ACTUAL PLANK
FROM PROPORTIONAL DIVIDERS

Fig. 3-25. The use of proportional dividers.

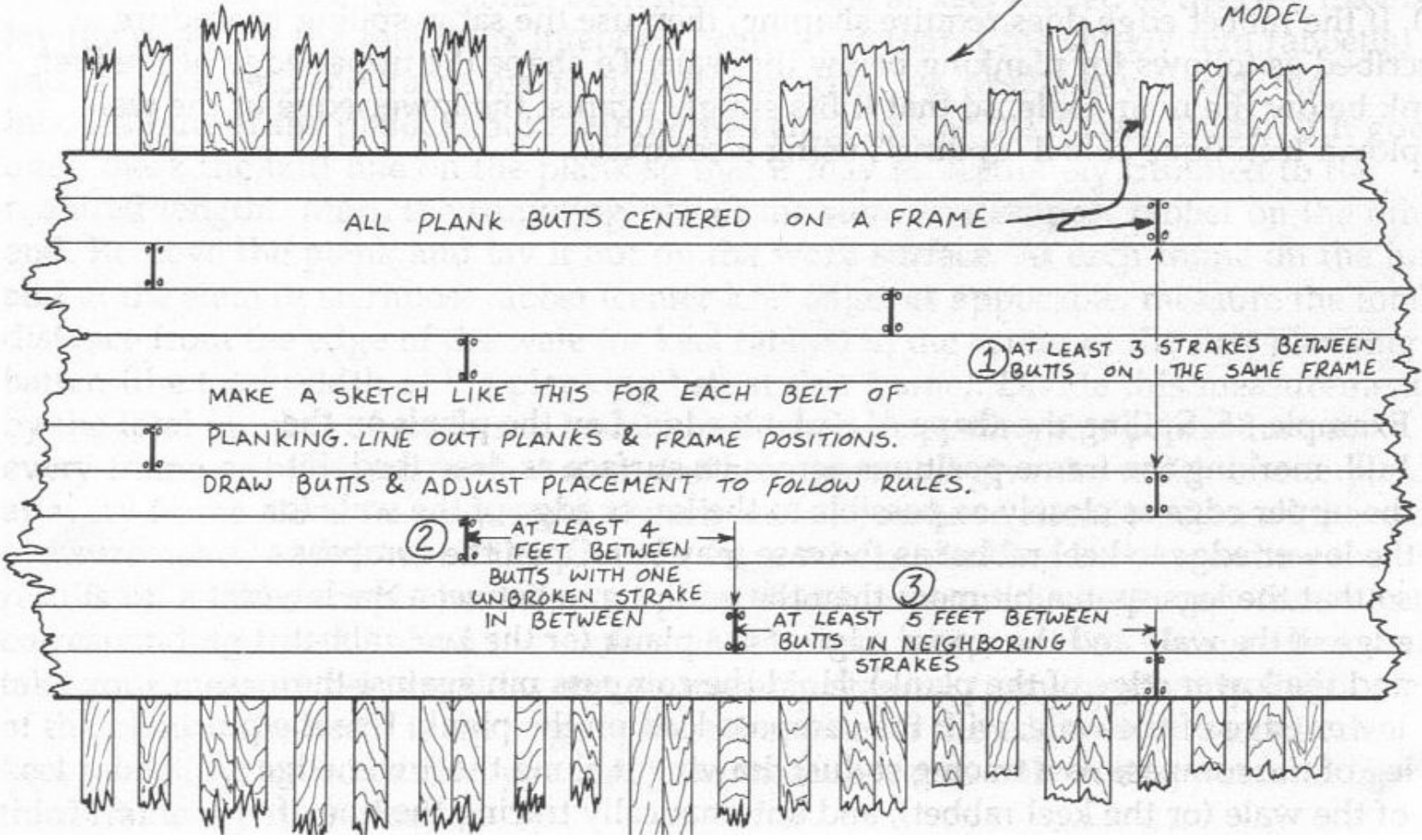


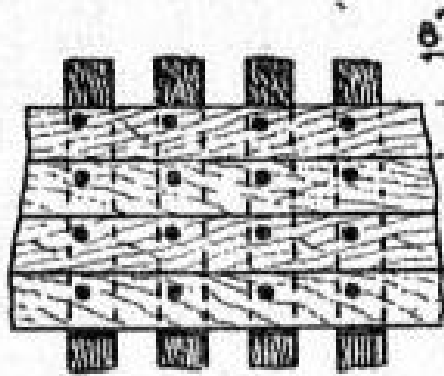
Planking Rules

- A determination must be made as to the size of the planking (width). Too small a plank will give problems. Better too large in width.
- Planking rules should be followed.

FIG.# 11 LAYING OUT THE SHIFT OF THE PLANK BUTTS.

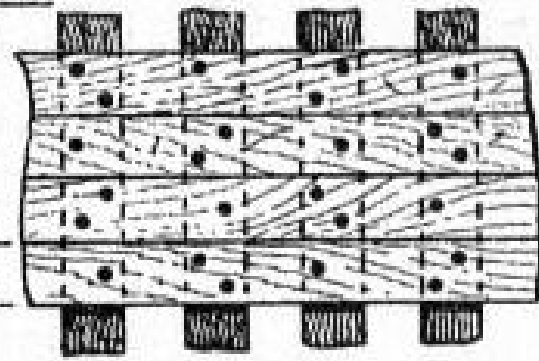
TYPICAL FRAME ARRANGEMENT ON SCRATCH BUILT MODEL





SINGLE FASTENINGS IN ALL PLANKS 8" WIDE OR UNDER

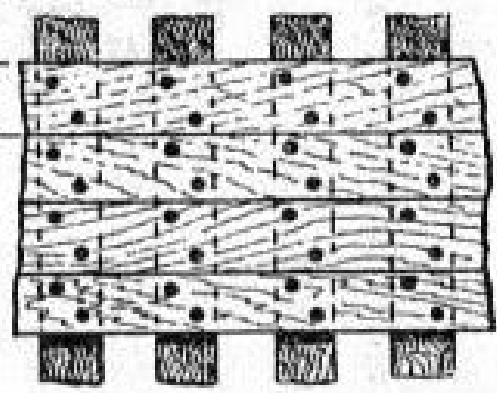
8" OR UNDER



ALTERNATE SINGLE & DOUBLE FASTENINGS IN ALL PLANKS 9" TO 11" WIDE

9" TO 11"

11" & OVER



DOUBLE FASTENINGS IN ALL PLANKS 11" WIDE OR OVER

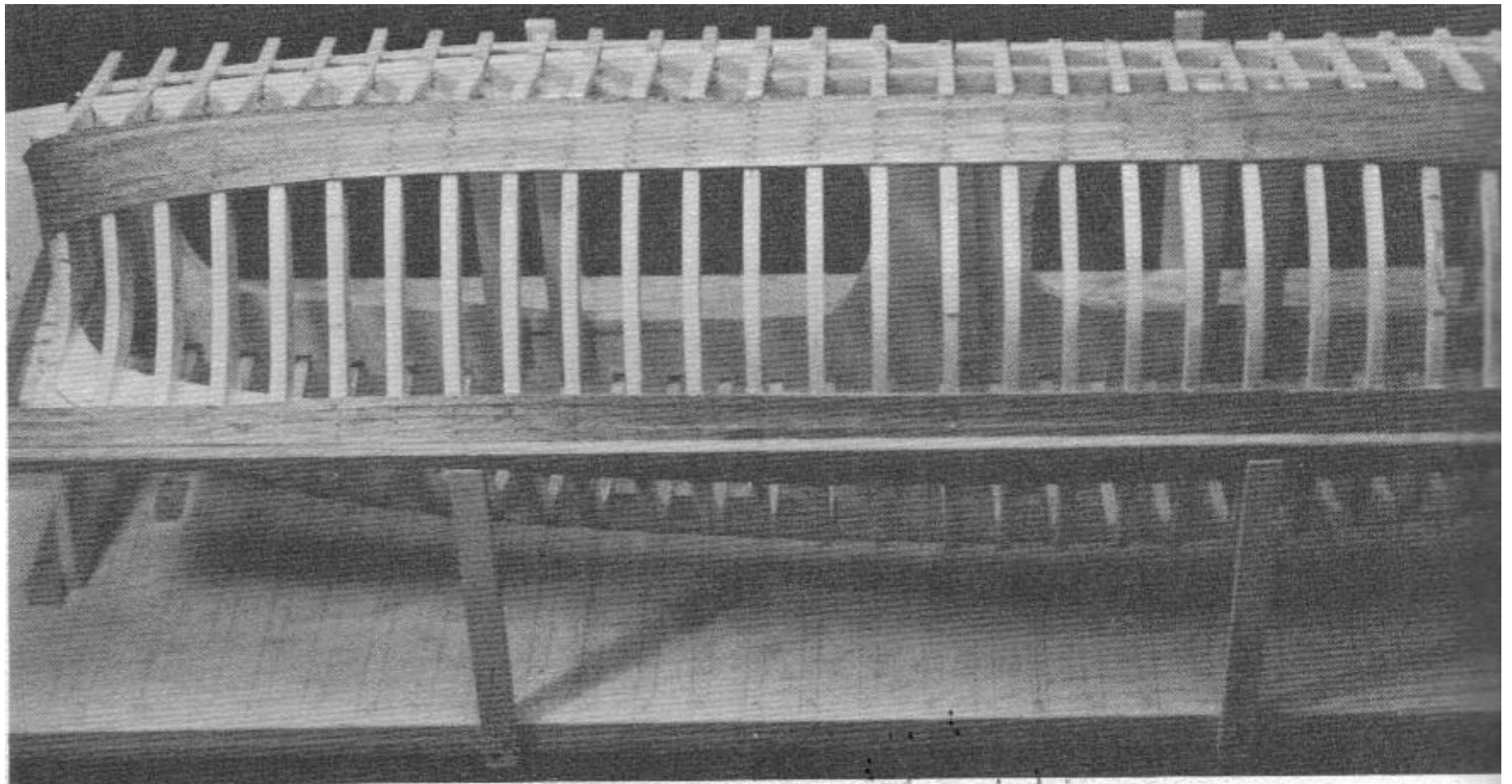
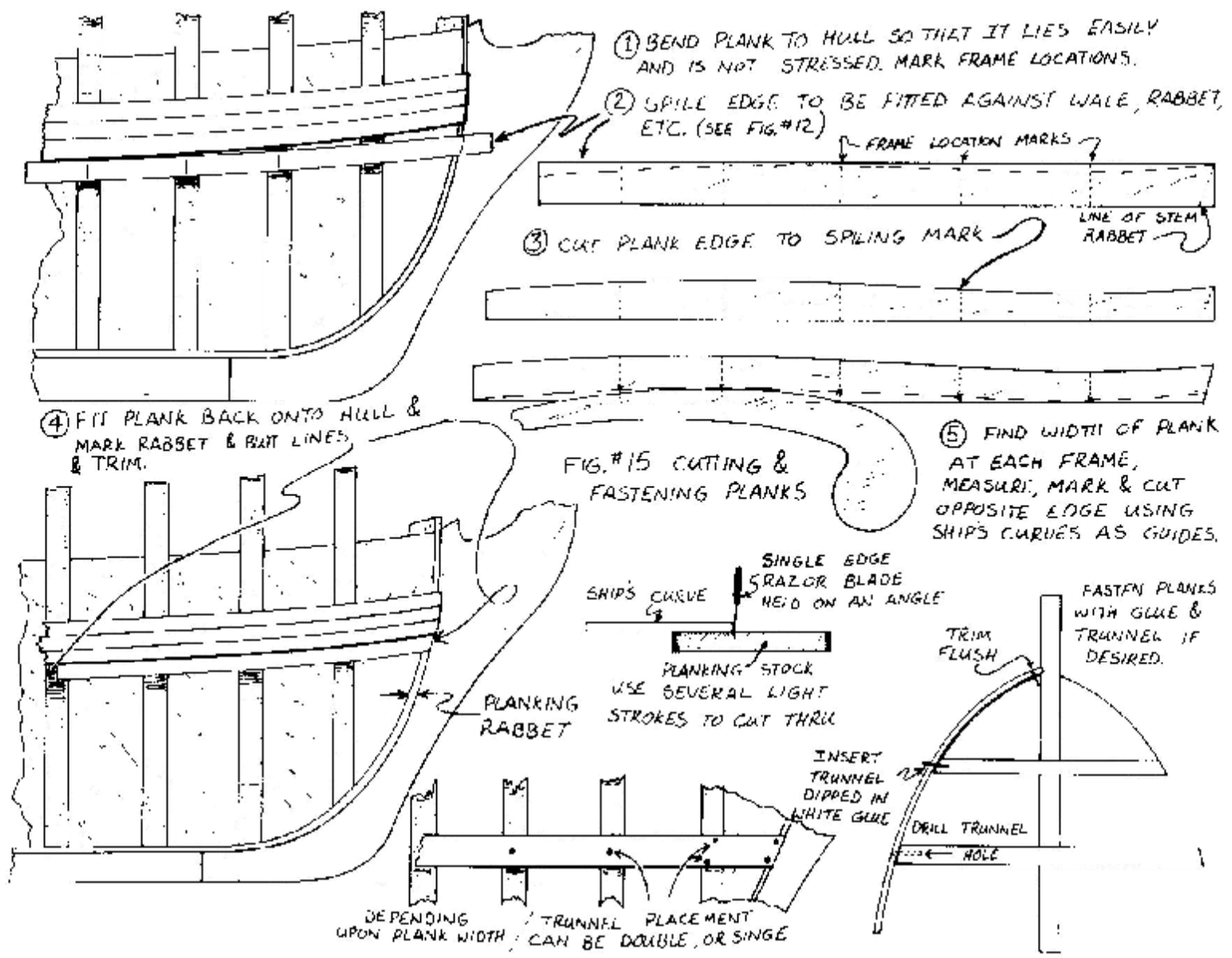


Fig. 3-4. A view of the Conqueror showing the planks being laid. Notice that the planks from both the bottom up and from the down. (Photo courtesy of Ed Marple.)



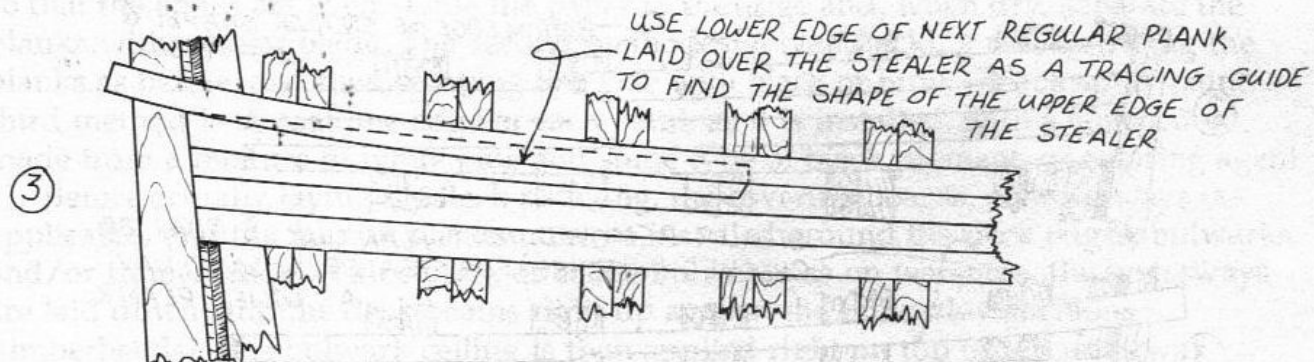
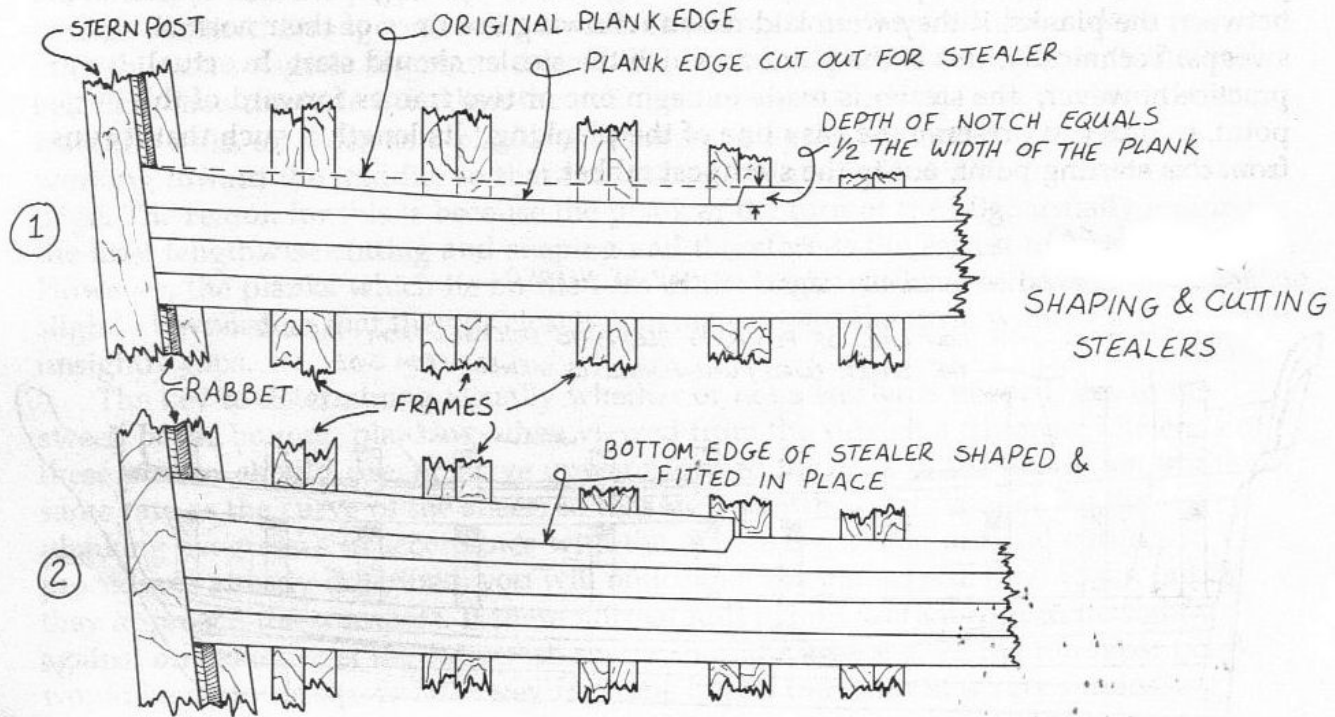


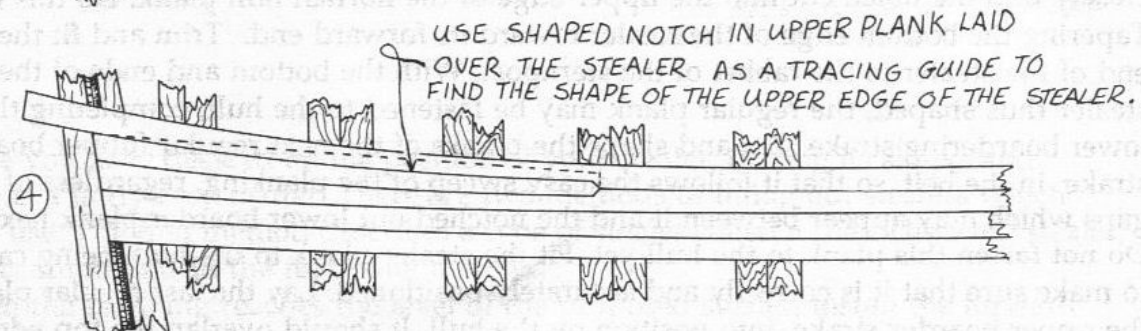
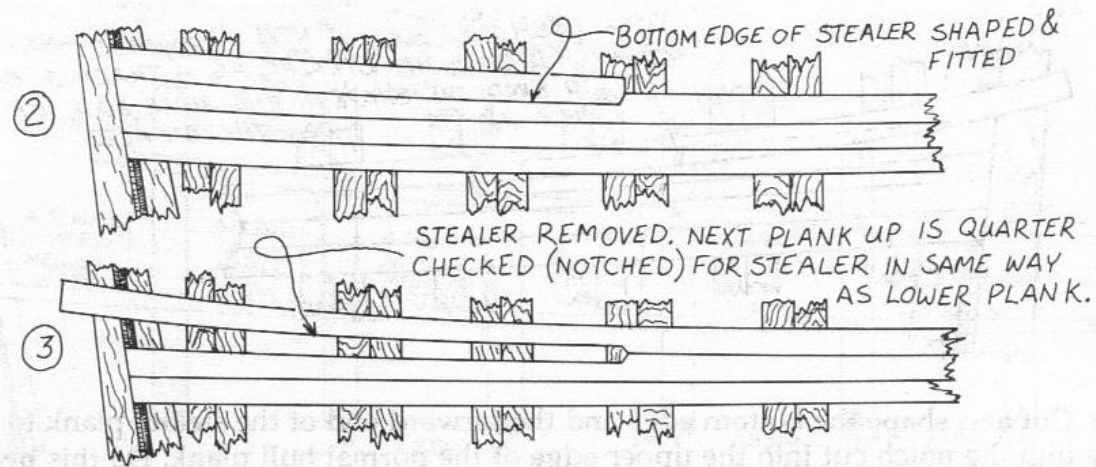
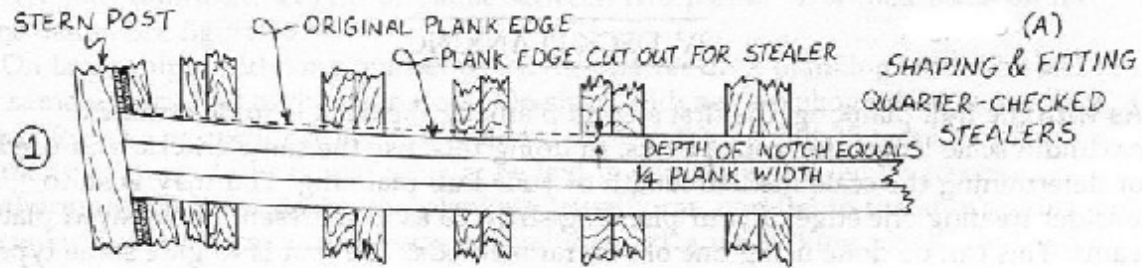


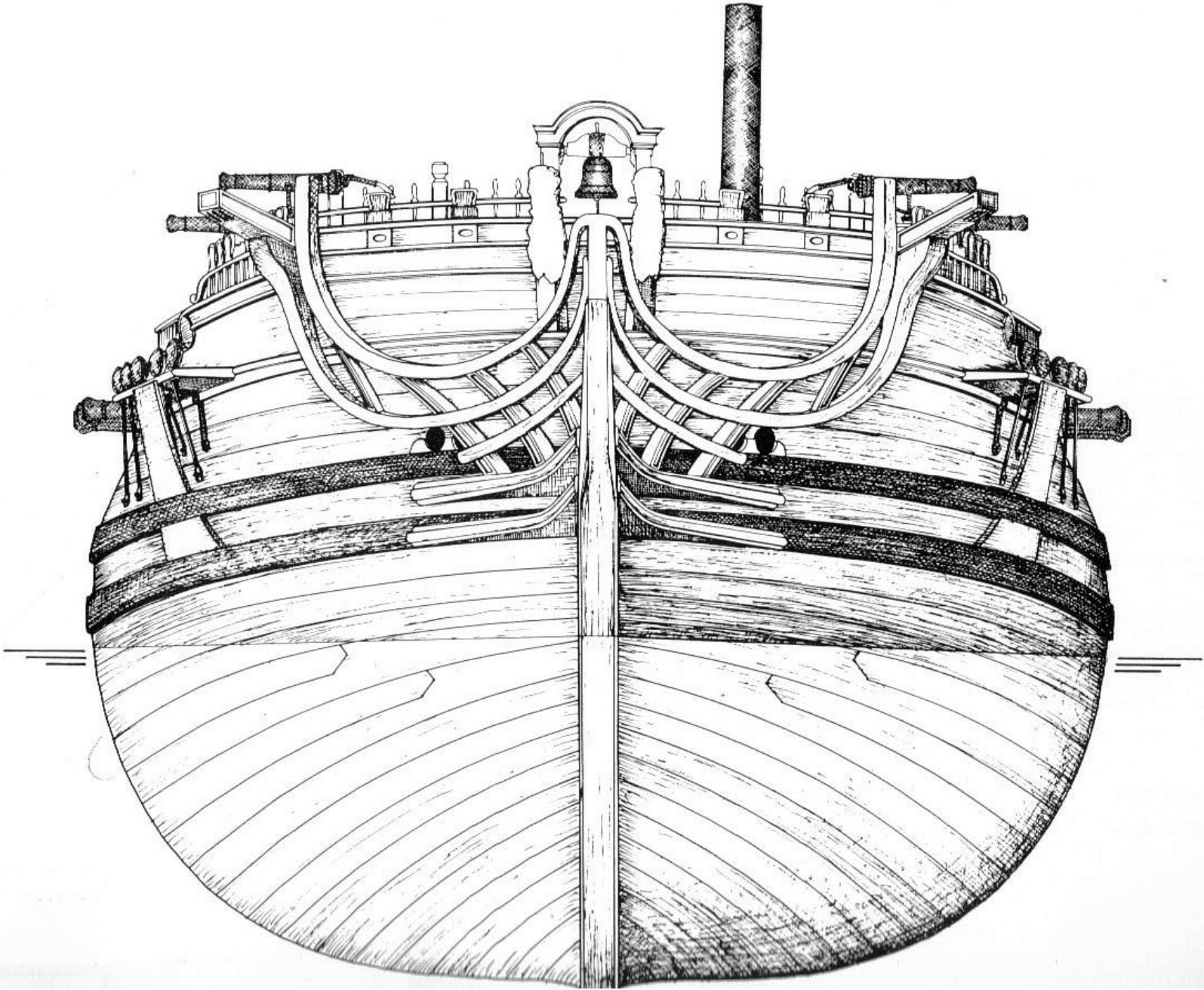


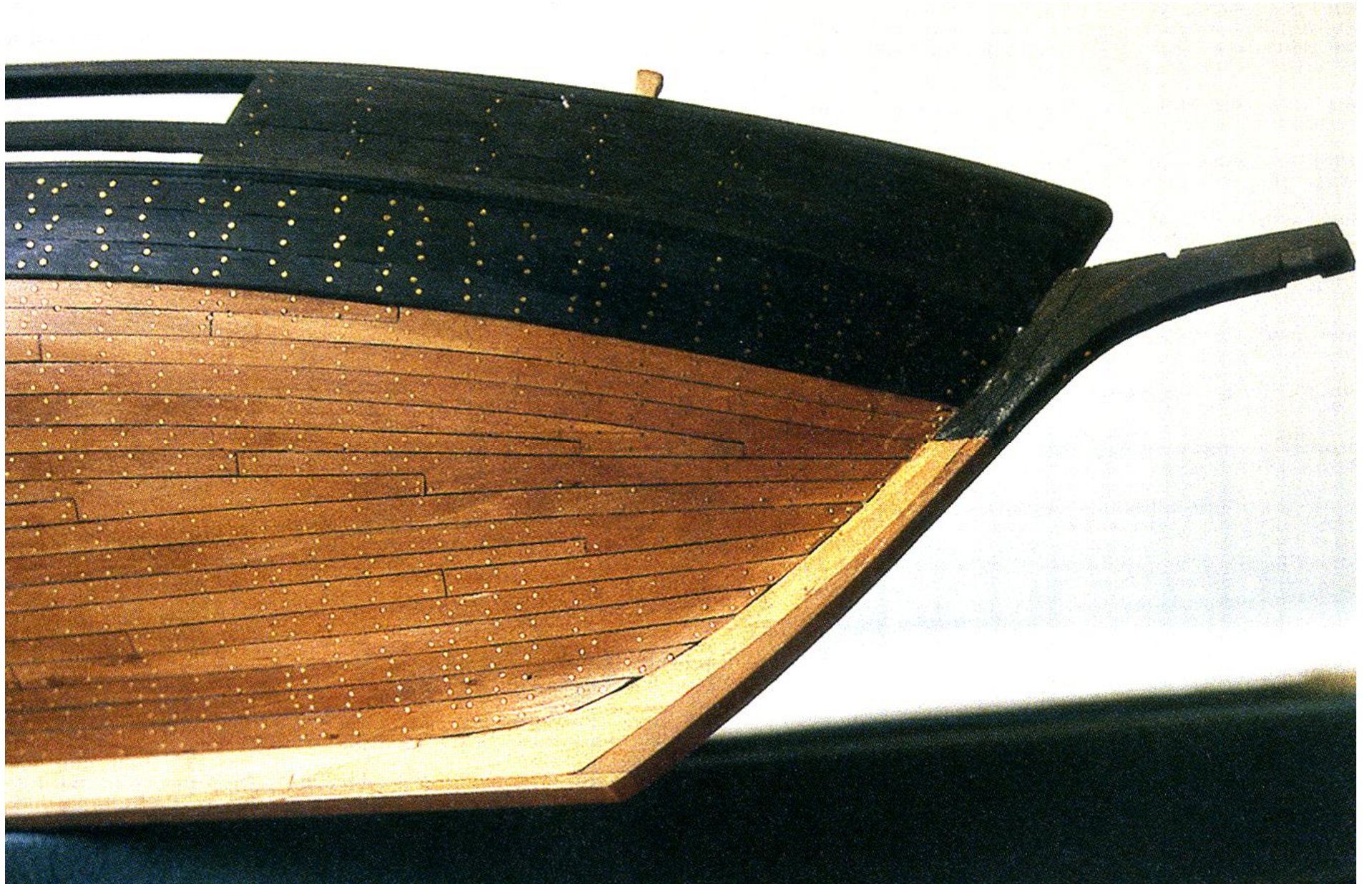
Steelers

- When the planking strakes required are not enough for the larger space.









Deck Planking

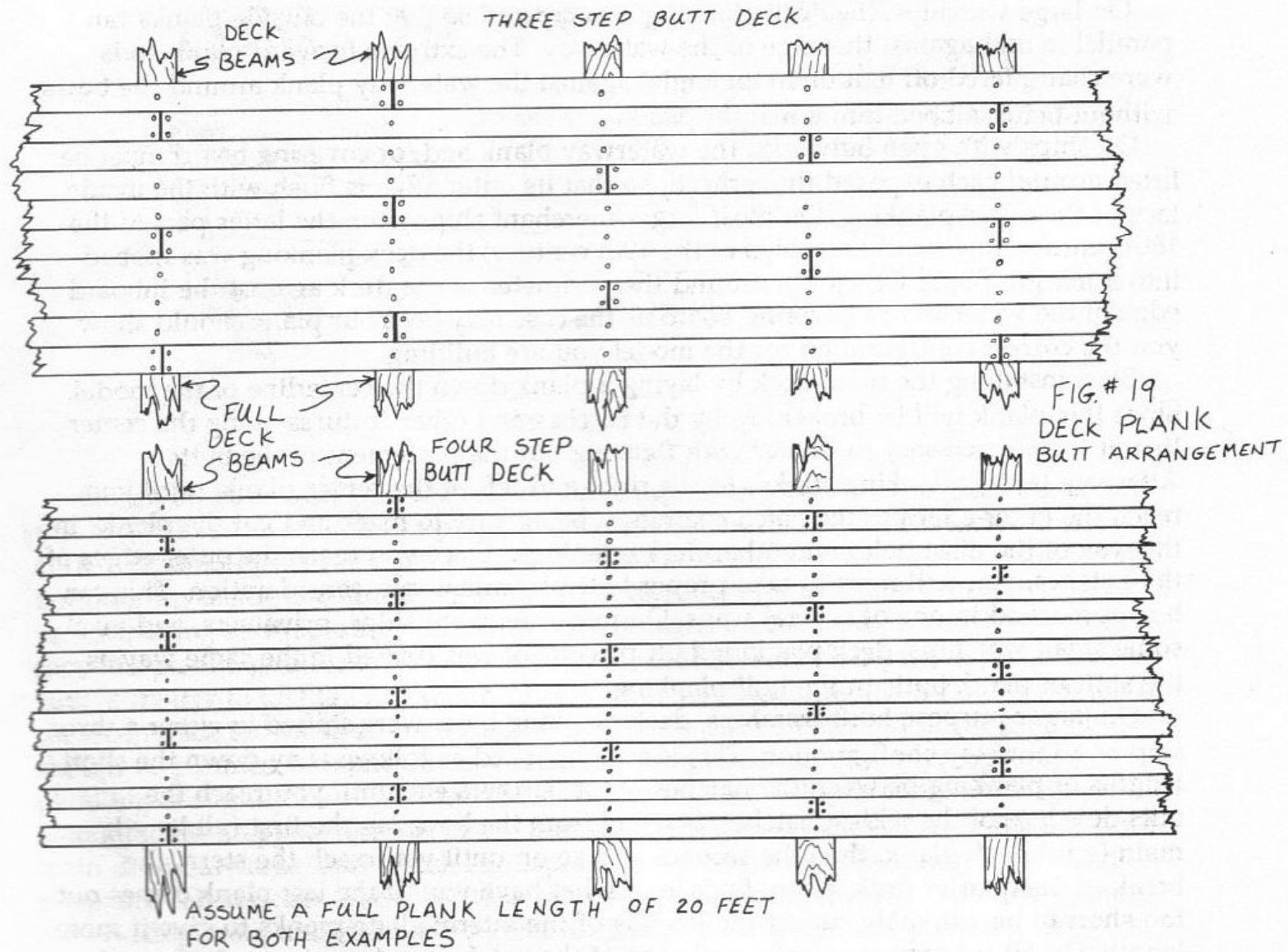
- The deck planking is relatively simple compared to the hull planking. The center of the deck is where you begin, working your way to the port and starboard bulkheads as you go.

Preliminary Steps

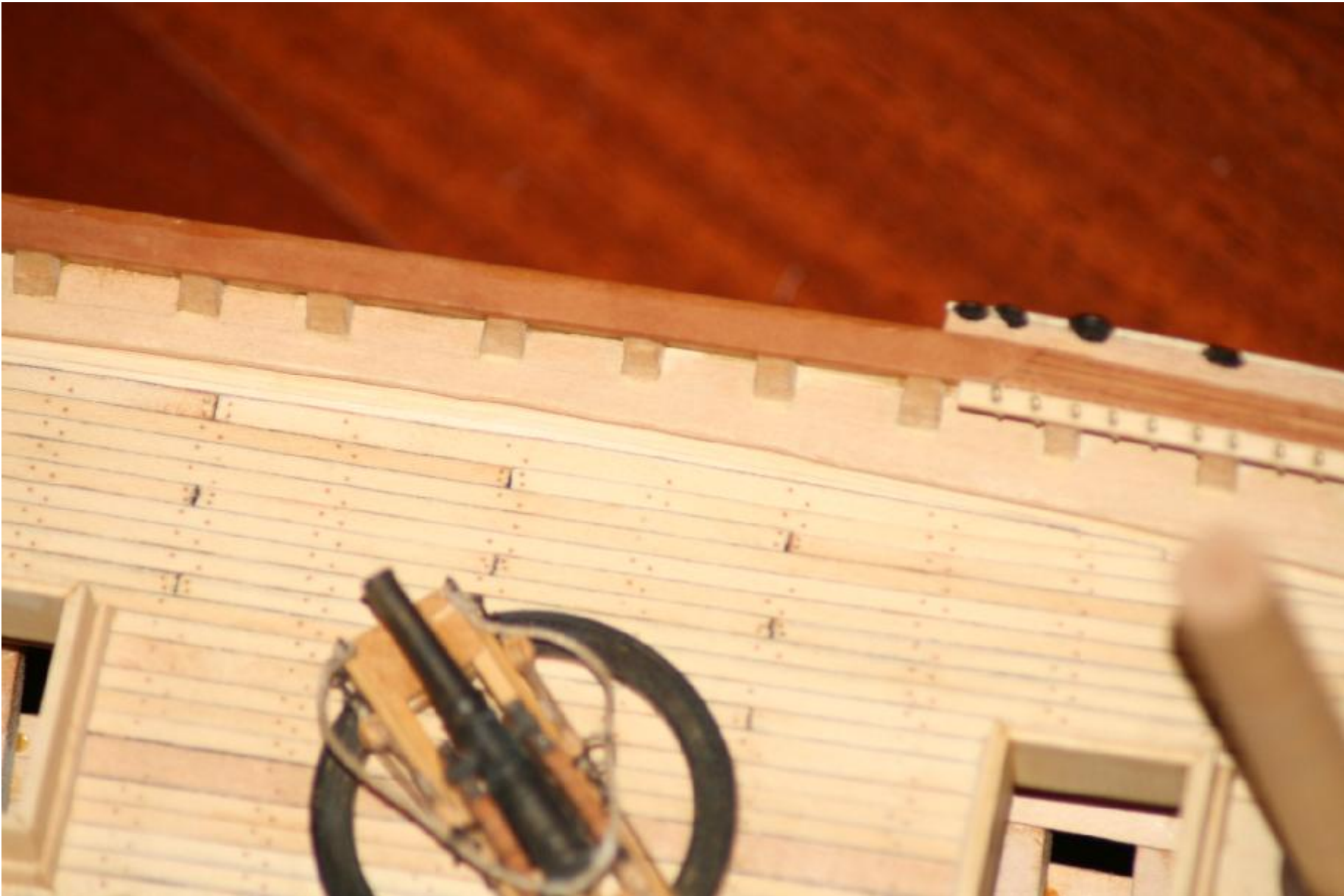
- One edge of your deck plank can be treated to simulate caulking – I use a waterproof felt tip pen and run it along the side of the plank. There are other methods.

Deck to Bulkhead

- The covering boards, waterways and margin planks must be installed prior to installing the deck planks. This varies by type of ship.









Additional Models

- The rest of the slides show fine examples of planking. Many of these models can be seen here at the Newport Harbor Nautical Museum.





















