18th-Century Merchantman Half-Hull Planking Kit

Based on a True Story

By Tim Huggins

Kit Contents

- Plan sheet
- Laser cut ¼” Plywood
  - Frames, keel, stem, stern, etc
- 4 Sheet of 1/32” basswood
  - Planking

- No Printed Manual - PDF file

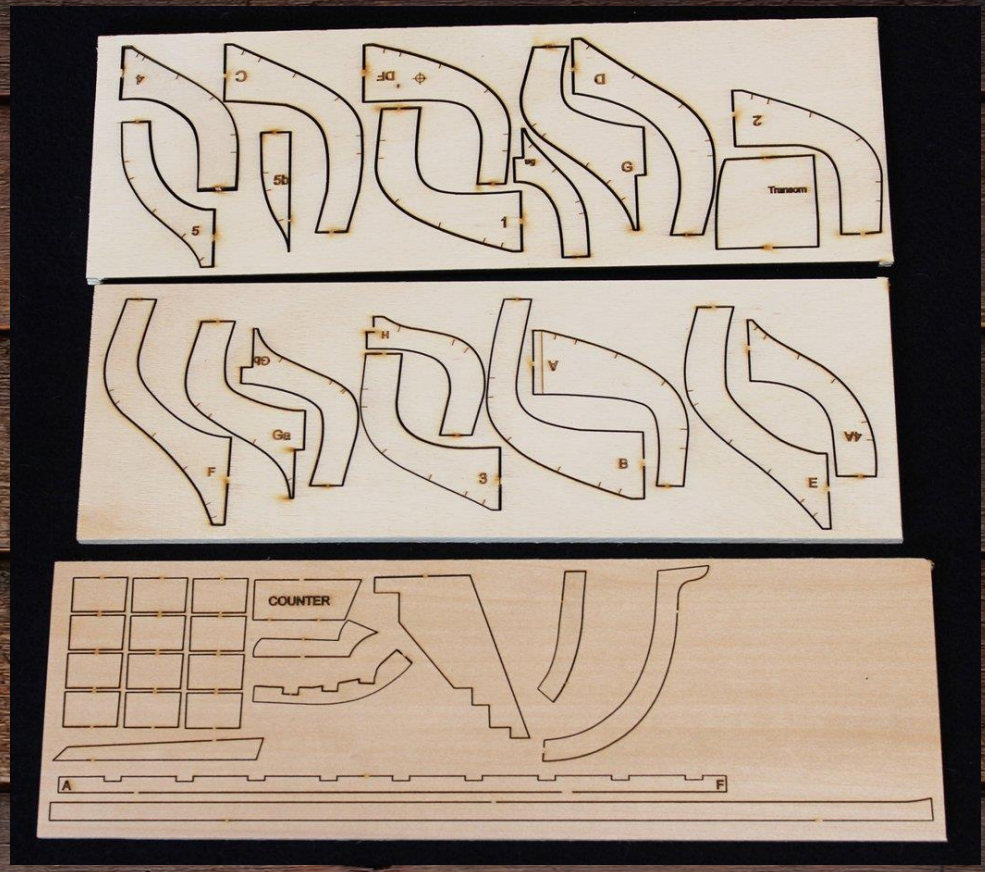


Image from build log by tlevine
https://modelshipworld.com/topic/21980-half-hull-planking-project/

Currently $65 + shipping before NRG discount

Goal: Learn Spiling

- “The purpose of the kit is to teach the novice model builder how to plank a hull the way it was actually done in the shipyard. This process is known as spiling[1]”.

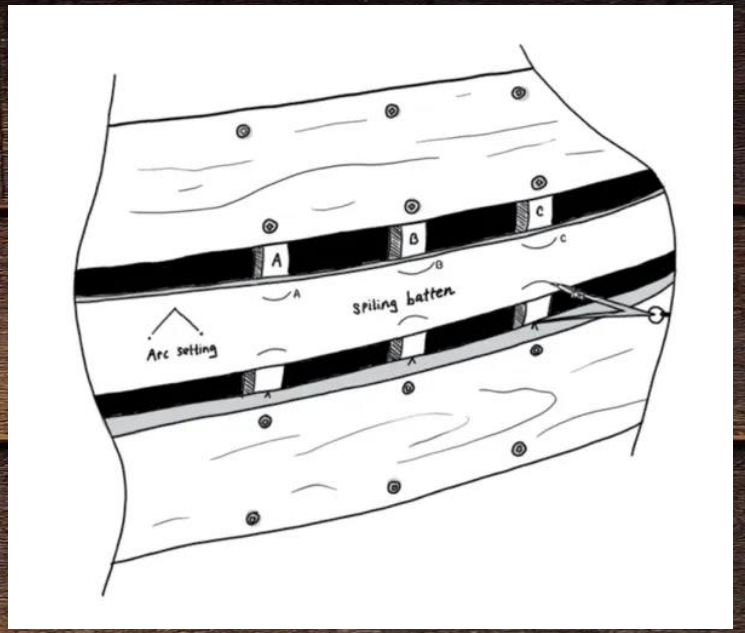
- Note: This process is also outlined in Vol. I of The Fully Framed Model by David Antschel

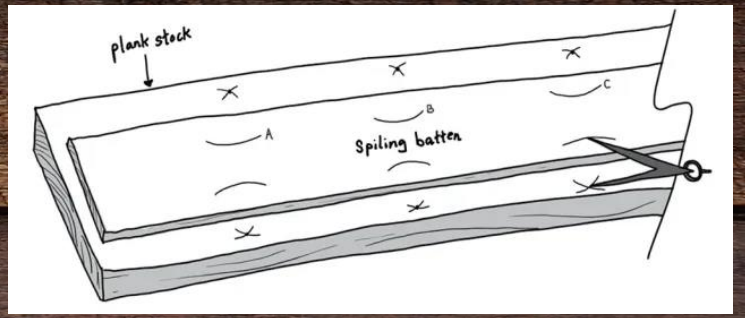
- My interpretation of spiling from the kit is transferring plank shapes to a medium, then to a wood sheet to be cut out
  - Avoids significant edge bending

1. https://thenrgstore.org/products/half-hull-planking-project

Spiling

- A common application of spiling is in the fitting of a boat plank perfectly between two other previously installed planks.
  - Tack a thin piece of wood (the spiling batten) in the opening between the planks.
  - From station points on the upper and lower planks swing an arc onto the batten.
  - Remove the batten and lay it on the stock to be cut to shape.
  - Swing two arcs from each arc drawn on the batten.
  - The intersection of these arcs will be the location of the original station point.
  - Use a bendable length of wood to connect the transferred station points onto the stock.
  - Cut to the line for a ready-to-plane-to-perfect fit.

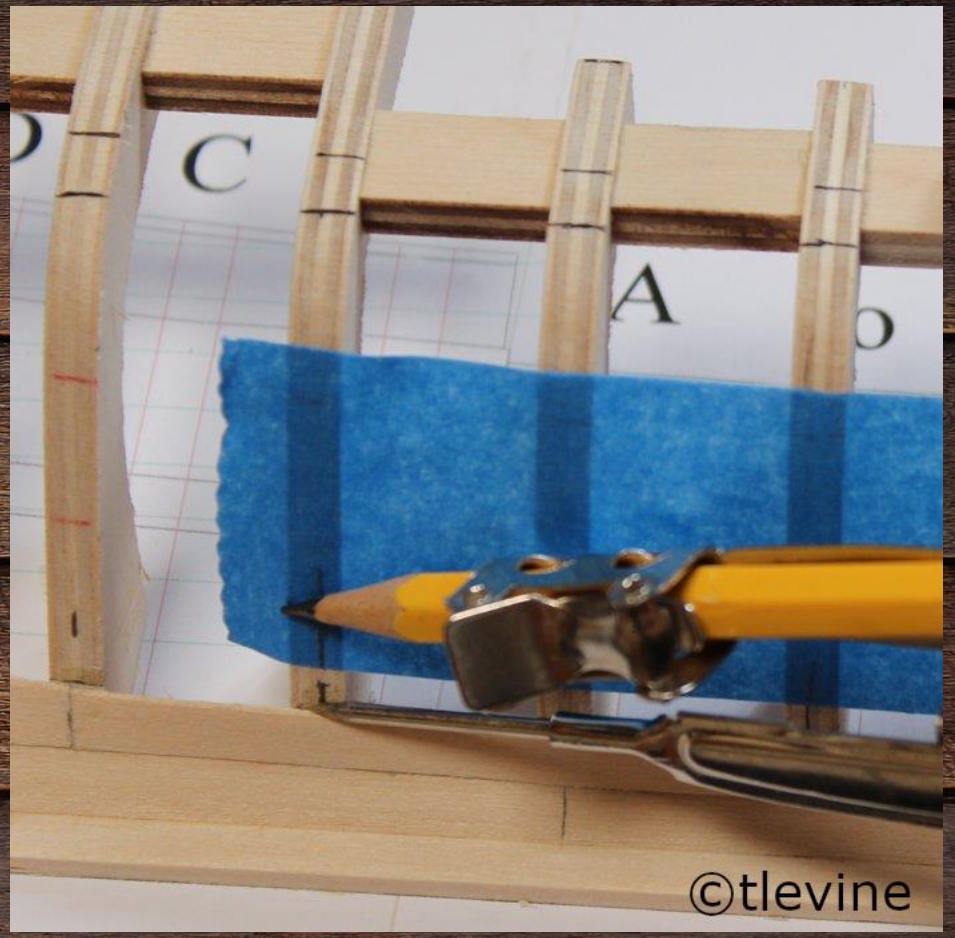




https://blog.lostartpress.com/2017/12/29/spiling-batten/

Compass Transfer

- Lay a piece of masking tape a little longer than the plank being constructed away from the adjacent plank edge.
- Mark the location of each frame onto the tape.
- Using a compass, mark the top of the adjacent plank at the frames onto the tape.
- Using ships curves or a ruler, connect the marks and cut along the line to make the bottom of the plank
- Use tic strips and mark the width of the plank at each frame.
- Connect these marks to determine the upper edge of the plank.
- Place the tape on your planking material and cut out the plank.



Tape Transfer

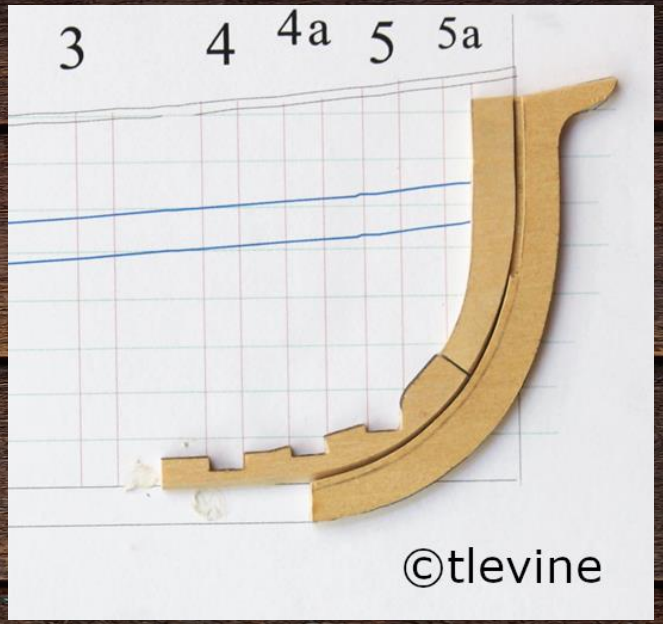
- Similar to the compass transfer, but use a pencil to trace the bottom of the plank

Other Topics and Techniques

- Cutting the rabbet
- Drawing the bearding line
- Thinning the deadwood
- Fairing the frame
- Lining off the hull
- Installing the garboard plank
- Stealers and drop planks
- Transition of the wale into the rabbet

Cutting the Rabbet

- Keel made from multiple pieces to simply cutting Rabbet
- Transitions from 45° along the keelson to 90° at the stem
- Mark off the width of planking on two edges and sand away
- Chiseled out at Stem



Drawing the Bearding Line

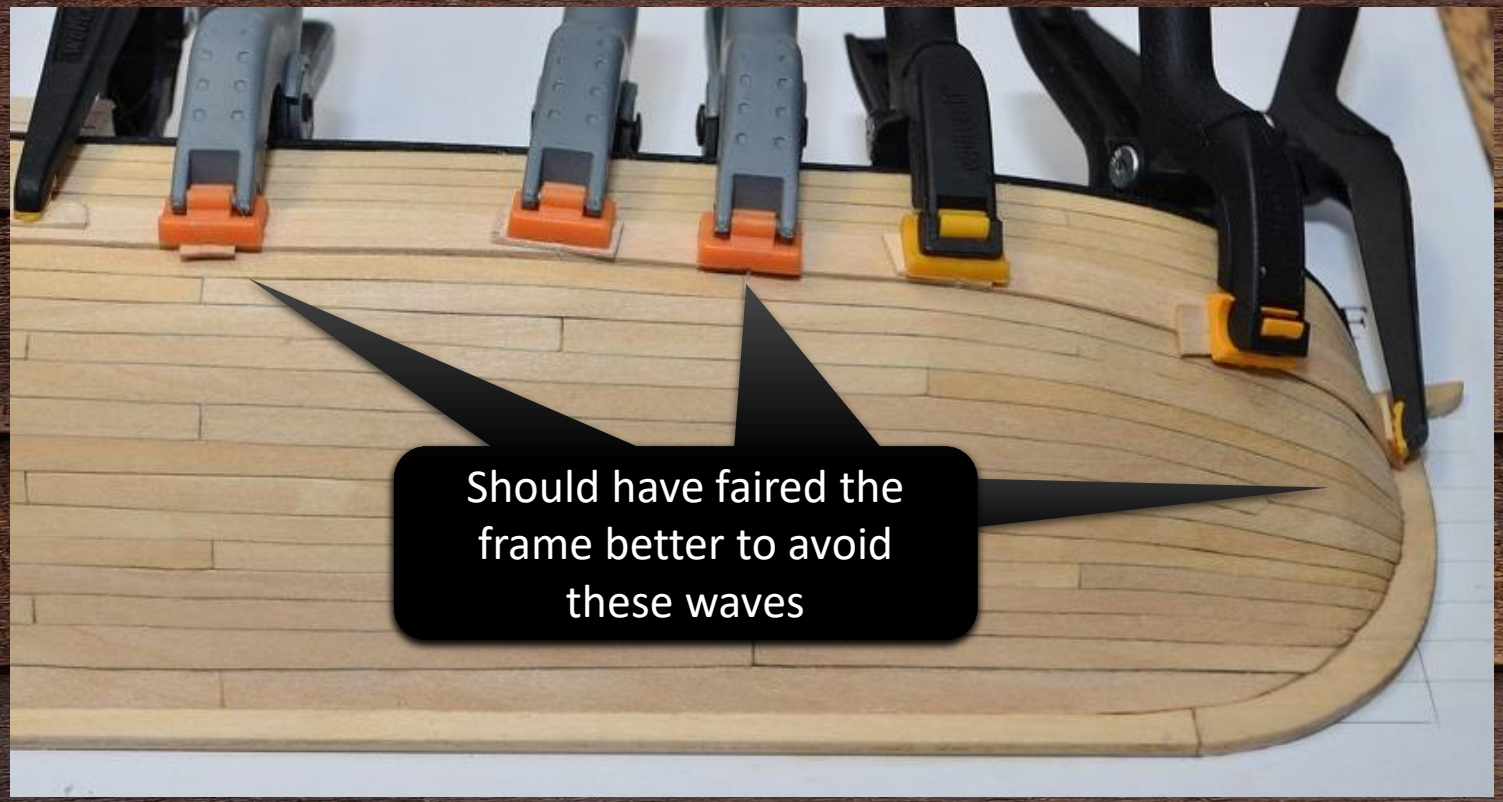
- Temporarily install the deadwood and associated frames
- Mark, on the deadwood, the bottom of the fore face of frames
- Remove the frames and draw a curve connecting the marks.
  - Drafting curves are useful here

Thinning the Deadwood

- Draw a line on the outer edges of the deadwood the thickness of the planking (1/32”)
- Sand down to this depth between the bearding line and the edge of the deadwood.
  - Creates the stern rabbet

Fairing the Frame

- Sanding sticks (emery boards worked well for me)



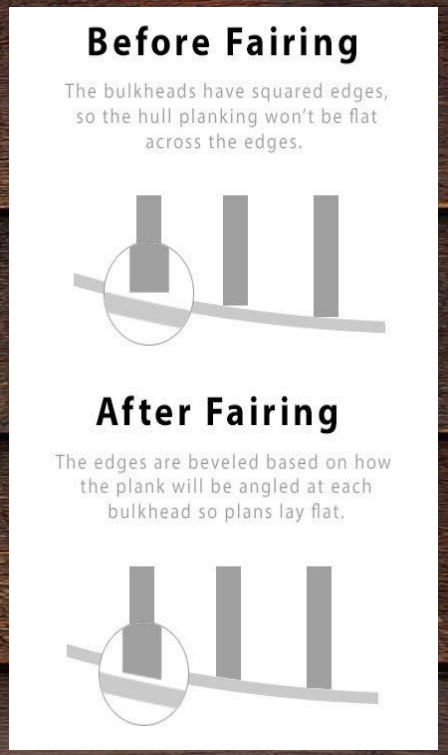
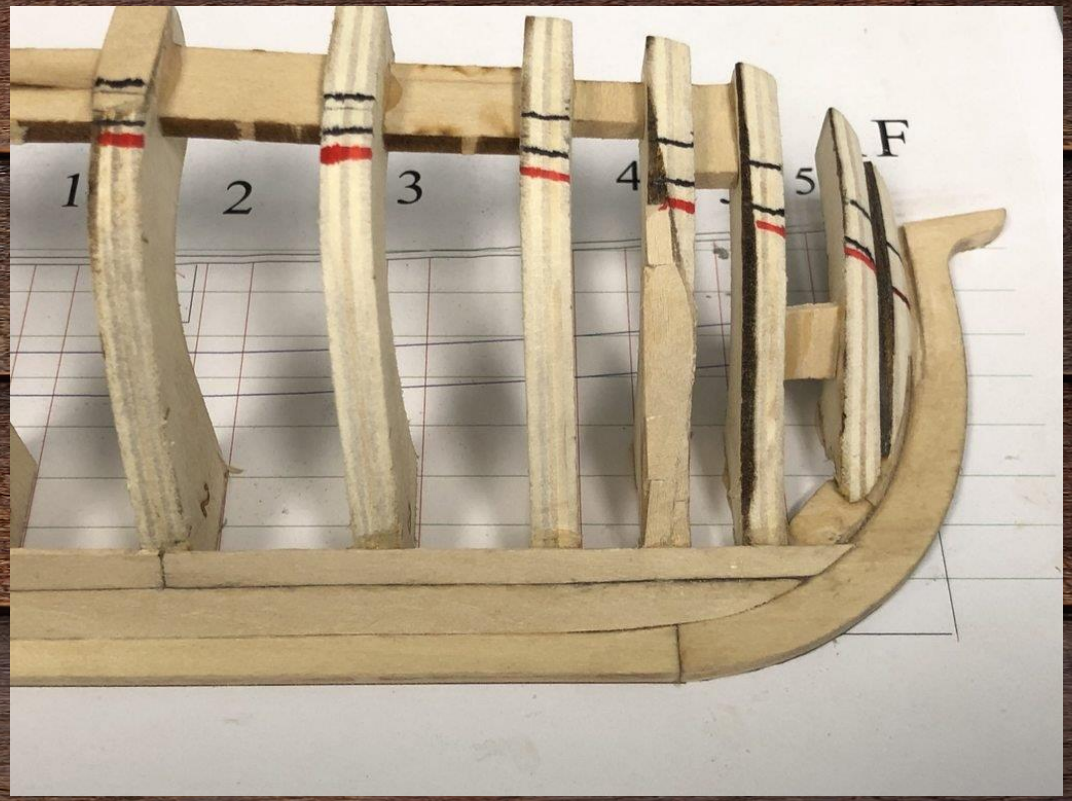


Image source: https://maritimehistorypodcast.com/bulkheads-false-deck-fairing-americas-cup-1934-j-class-endeavour/

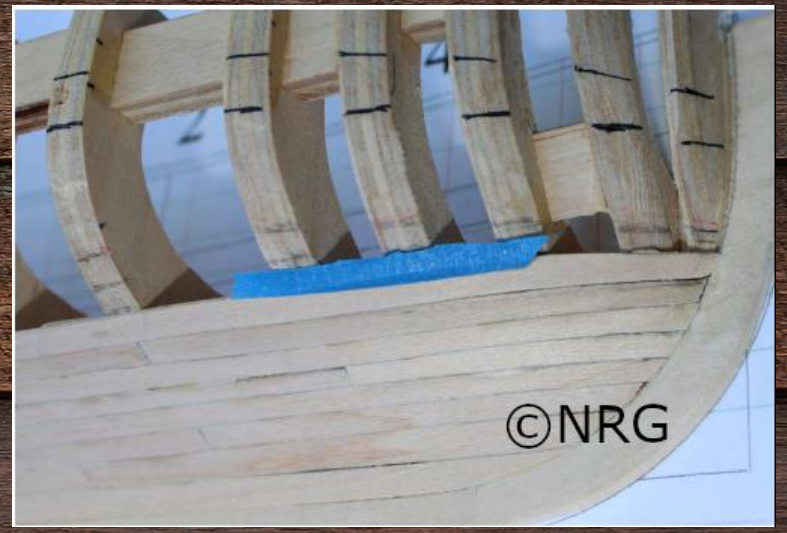
Garboard Plank

- The garboard and first broad strakes have a median plank width 1/3 greater than the other planks
- Don’t creep up the stem!



Stealers and Drop Planks

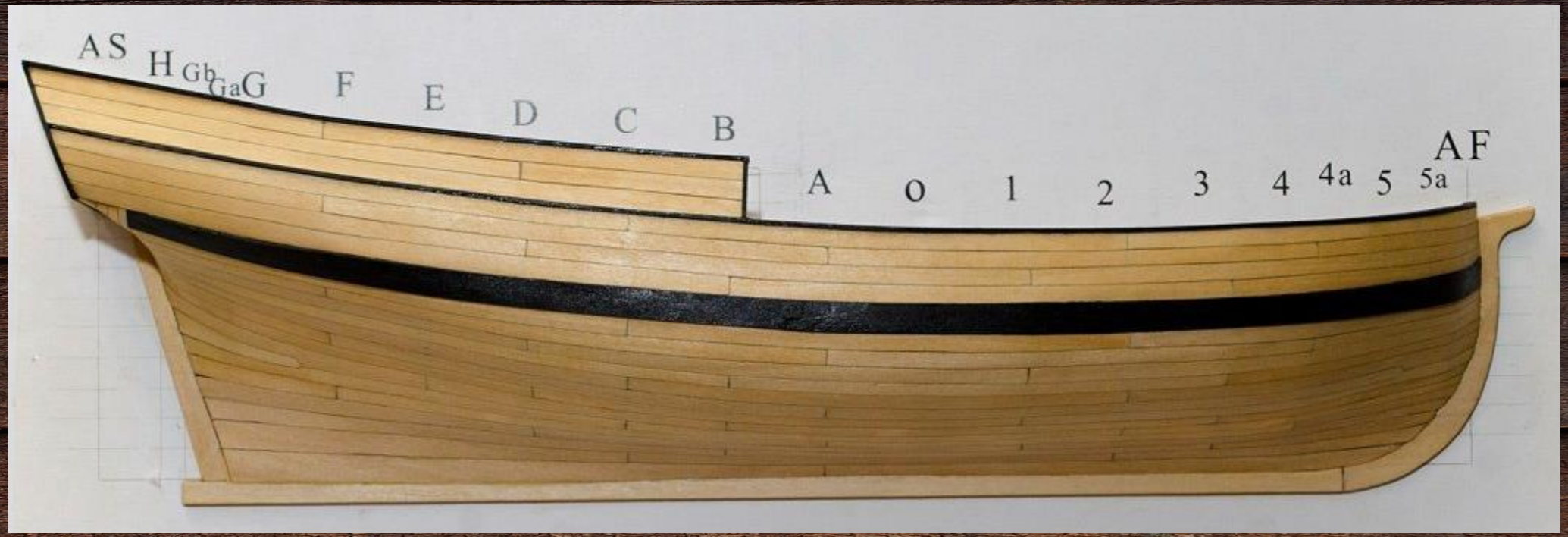
- Avoids oversized planks
- Unsound practice to have the forward end of the stealer located too close to the surrounding plank butts.
- When not landing on a frame insert a spacer between the frames for support.



Transition of the Wale

- The wale fays into the rabbet at the bow and into the counter at the stern
  - Detailed in Syren's Cheerful Monograph (Ch. 3), but not described in Vanguard's Alert manual
- Simulated by gradually sanding the wale flush to the rest of the hull planking
  - I did this prior to installation to protect the rail and stem from myself

“Finished” Product



Full log available at https://modelshipworld.com/topic/22768-18th-century-merchantman-half-hull-planking-kit-by-vthokiee-finished-nrg-148/

Parting Shots

- Great kit for a beginner - Recommended
  - Introduced me to many different topics and techniques
    - Corrected assumed knowledge in many kit instructions
    - Still some mystery remains – placing the counter
  - Basswood
    - Came out nice and was easy to cut,
    - clamping frequently dented the wood (most repairable)
    - Overall glad they kept the price down
  - Fairing was tricky
    - The frames had low spots that immediately required adding wood
    - No kit is perfect and may as well learn how to handle this