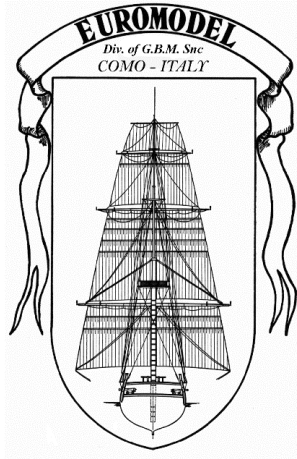


## TRANSLATION LINKS

1. type into your browser ... **english+italian+glossary+nautical terms**
2. utilise the translation dictionary 'Nautical Terms & Expressions' from Euromodel website



# An *interpretive* build of the **Cocca Anseatica**

15<sup>th</sup>. Century German  
Armed Mercantile Ship  
Scale 1:48

Checked the  
*Essential Resource  
Information File ?*

Sit Back & Read  
Background Information  
'Advanced Resources for  
Shipbuilding'

## SHIP'S BOATS – 02, v.3

My *interpretive* build is based on the supplied drawings, the kit material – and an amount of extra material.

*This work only illustrates how this ship **might** be built. The level of complexity chosen is up to the individual*

This resource information was based on the original text supplied by Euromodel and then expanded in detail as the actual ship was constructed by the author, Peter Coward. Neither the author or Euromodel have any commercial interest in this information and it is published on the Euromodel web site in good faith for other persons who may wish to build this ship. Euromodel does not accept any responsibility for the contents that follow.

## **This is NOT an instructional manual**

**It shows how I interpreted the build** utilizing the provided kit ... **and supplementing with additional material** which was dictated by my own personal choices. Many steps could have been simplified by only using the material as it was supplied. This invariably is indicated by the heading ‘**Alternative 1**’. However, where I did feel that I needed to challenge myself with a higher degree of accuracy, this will be denoted by ‘**Alternative 2**’.

## **Reference Text**

*Historic Ship Models* by Wolfram zu Mondfeld (1989)

*Seventeenth Century Rigging* by R.C. Anderson (1955) [almost a complete copy of his earlier book *The Rigging of Ships in the Days of the Spritsail Topmast, 1600 – 1720* (1927) ]

*The Construction and Fitting of the English Man of War 1650-1850* by Peter Goodwin (1984)

*The Masting and Rigging of English Ships of War 1625 – 1860* by James Lee (1984).



**Growing Specific Shapes**

*[To navigate through the contents – use ‘control + click’]*

# Contents

<b>This Interpretive Manual Variation</b> .....	5
CHAPTER 1: SHIP’S BOATS .....	6
Construction Choices .....	7
Plastic Resin vs Timber .....	7
Weathering .....	8
<i>Possible</i> Hull Modifications .....	8
Terminology .....	11
Interior Fitting .....	12

## Illustrations

[The figures below are not hyperlinked]

Figure 1: Hiding the Boats .....	6
Figure 2: Boat Placement on Deck .....	6
Figure 3: Simplified Boat Construction .....	6
Figure 4: Another Boat Variation .....	6
Figure 5: Cutting & Sanding Tools.....	7
Figure 6: Paint Selection for Dry Brushing.....	8
Figure 7: Concave Inner Surface.....	8
Figure 8: Drawing Dimensions: ‘Salvage’ Boat .....	9
Figure 9: Block to Raise Bow Profile .....	9
Figure 10: Tapered Block .....	9
Figure 11: Adding the Stem Post .....	10
Figure 12: Painted Bow of Larger Boat .....	10
Figure 13: Extended Stem Post on Smaller Boat.....	10
Figure 14: Drawing Dimensions: ‘Service’ Boat.....	11
Figure 15: Longitudinal Profile of Service Boat.....	11
Figure 16: Boat Structural Detail .....	11
Figure 17: Rib Spacing in Salvage Boat .....	12
Figure 18: Immersion in Ammonia Soln. ....	13
Figure 19: Rib Shaping .....	13
Figure 20: Ribs and Risers on Salvage Boat.....	13
Figure 21: Ribs, Keel & Risers in the Service Boat.....	14
Figure 22: Bottom Boards, Thwarts and Ring .....	14
<b>Figure 23: Drawing of Boat Head Sheets.....</b>	<b>14</b>
Figure 24: Construction of Boat Head Sheets.....	14
Figure 25: Oar Lashed to a Tholepin .....	15
Figure 26: Tholepins .....	15

# **This Interpretive Manual Variation**

## **Version.01**

- Construction of ship's boats

## CHAPTER 1: SHIP’S BOATS

Fig. 1 shows a simple solution to the outward appearance and configuration – cover with a tarpaulin and do little or no work on the supplied boats.



Figure 1: Hiding the Boats

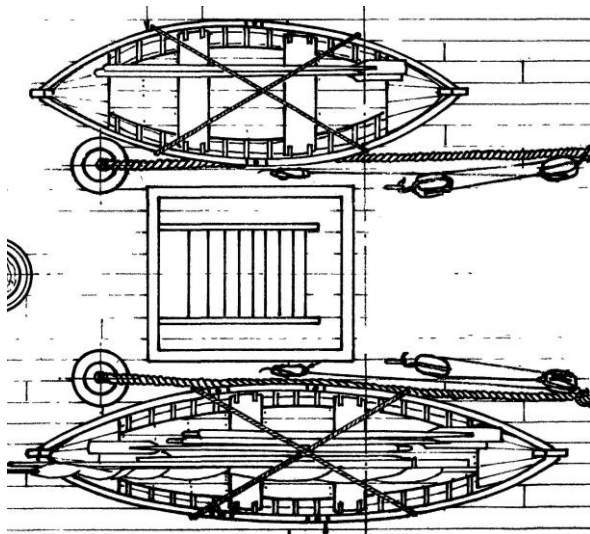


Figure 2: Boat Placement on Deck

Fig. 3 shows a boat secured inside the larger boat which is itself seated on a supporting boat crutch. The photo is not sharp but obviously the two supplied boats have had the thwarts (seats) added and then completely coated with white paint. Another basic approach but only marginally better ! Note that *this builder has introduced four thwarts instead of the two shown in the drawings* (refer to Fig. 4).



Figure 3: Simplified Boat Construction



Figure 4: Another Boat Variation

Interestingly, there are some significant differences between Figs. 1 and 3. This shows how one builder can simplify the approach used by ignoring much of the detail. Note especially the rigging and lashing clearly visible in Fig. 2 but not in Figs. 1, 3 and 4.

Fig. 4 also show significant variations – no curvature in longitudinal profile; four thwarts instead of two; different arrangement of tholepins (used to support the oars) along the gunwale; appearance of a mystery hatchway ?

## Construction Choices

*There are a number of rational approaches that can be adopted in dealing with the ship’s boats and I considered a few of them.*

Alternative 1:

If the boats supplied in the kit are to be included, then they can be suitably *Painted as they are and eventually installed* (as per Fig. 3). Euromodel supplies simple plastic resin hulls which will save much time and far less patience !

Alternative 2: Modify the longitudinal profile and *install most of the interior wood fittings in the supplied boat.*

Alternative 3: The supplied boat discarded and then *built from scratch.*



*After some deliberation, I decided to adopt the second option (i.e. build most of the interior fittings but modifying the hull).*

## Plastic Resin vs Timber

The plastic resin was incredibly easy to work with and equipped with a Dremel and a number of differently-shaped cutting and sanding tools, I was able to alter the shape to conform quite closely to the drawings supplied.



Figure 5: Cutting & Sanding Tools



Figure 6: Paint Selection for Dry Brushing

## Weathering

Constructing a boat out of timber seemed to be the ideal but after settling on using the supplied white plastic pieces, they needed to be painted.

Dry brushing was used to create a weathered appearance.

[The paints used were a brand called 'Citadel' from Games Workshop that seem to have outlets in many countries. Model Ship World Forum contains a number of very excellent & specific references.]

### Step 1: Wet Brushing Base – Dryad Bark

This is just a normal painting of the white plastic resin and was done at various stages of construction as evident in the following photos.

### Step 2: Dry Brushing Layers (in sequence):

1. *75% Dryad Bark & 25% Skrag Brown*
2. *50% Dryad Bark & 50% Skrag Brown*
3. *Dawnstone*

Dry brushing involves a specific brush being lightly filled with the paint applied and then stroking that brush over paper until all the paint appears to be used. The brush is then lightly applied to the base coat until an amount of colouration can just be perceived. That is the point when the brushing on of that new 'layer' is stopped. If multiple brush coat 'layers' are used, then it becomes a mixture of colours rather than just a multi-layered application of paint.

## Possible Hull Modifications

### Interior Profile

- The flat inside bottom of both boats was changed into a *concave surface matching the outside*. A Dremel cutting bit with a rounded shape made this task simple and approx. 5 mm. was cut out from the bottom (refer back to Fig. 5). The guide to cutting down to a suitable depth involved holding the boat up to a strong light and observing a uniform translucent colour (to begin with, thick bottom was totally opaque to light). The concave inner surface is evident in Fig. 7 below and this was carried out before any further modifications took place.

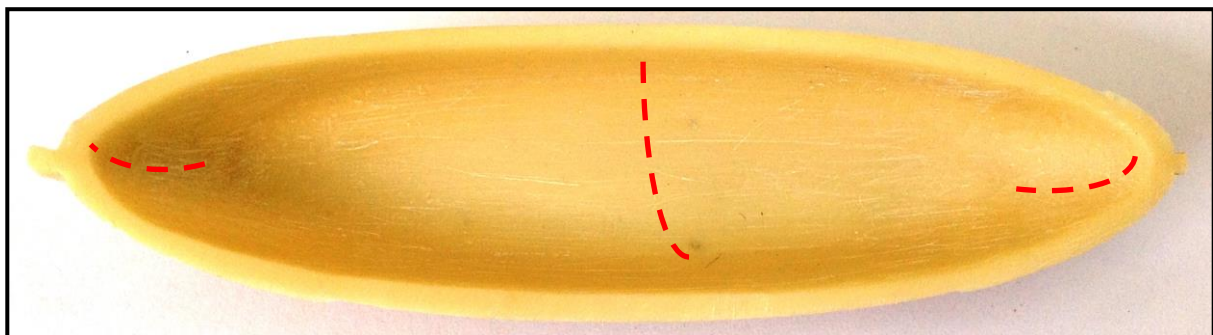


Figure 7: Concave Inner Surface

## Longitudinal Profile

The drawings show the stern in both boats as being significantly lower than the stem (broken blue line) as well as the hull having a curved profile (Figs. 8 & 14). My immediate reaction was to leave the boats as they were but ..... !

- The curved keel under the supplied barca di salvataggio/ ‘salvage’ boat was flattened producing an overall height of **17.7 mm.**
- The area of planking towards the bow was significantly higher than that possible from the provided hull (broken red line). An extension piece (shaded faint red lines) was very carefully cut out of a walnut block **5.5 mm.** in thickness and glued in place (Figs. 8, 9 & 10) using instant glue. The curved profile (shaded blue) was then formed. The only slight problem with this approach was the discontinuity of the overlapping clinker planking.
- The stern post projected slightly above the gunwale but was ignored.

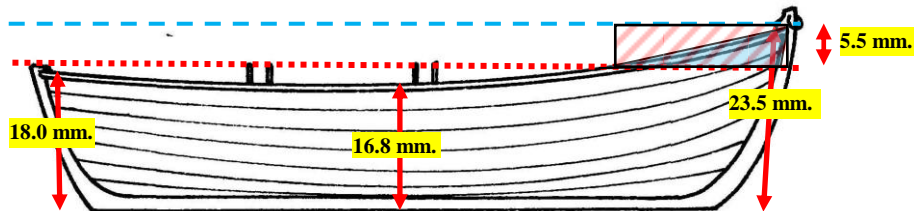


Figure 8: Drawing Dimensions: ‘Salvage’ Boat

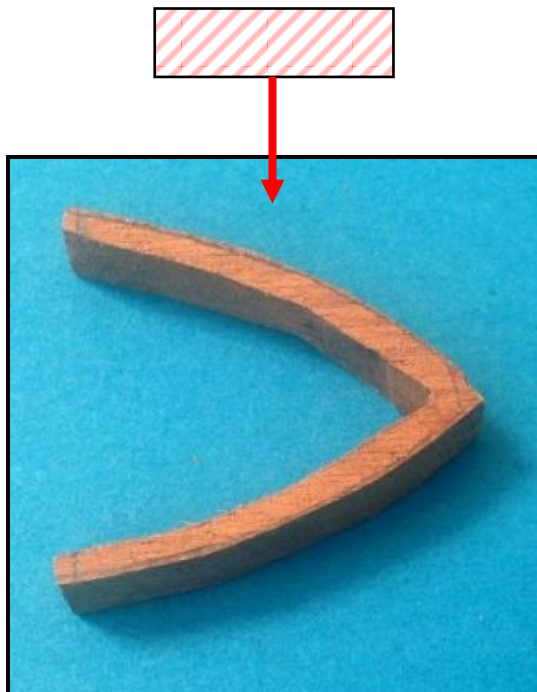


Figure 9: Block to Raise Bow Profile

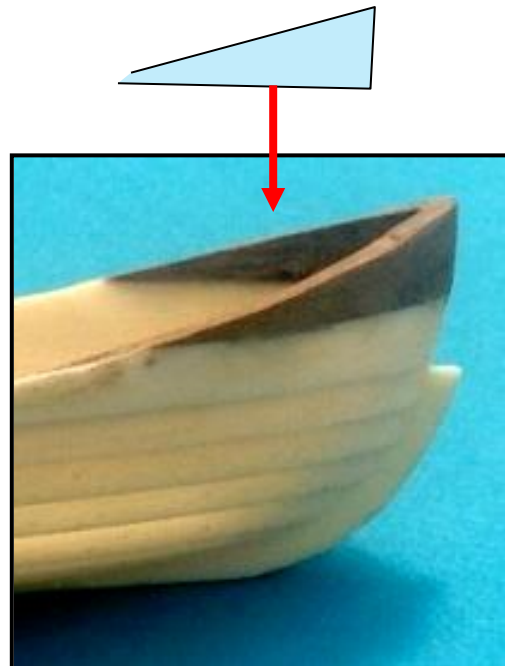


Figure 10: Tapered Block

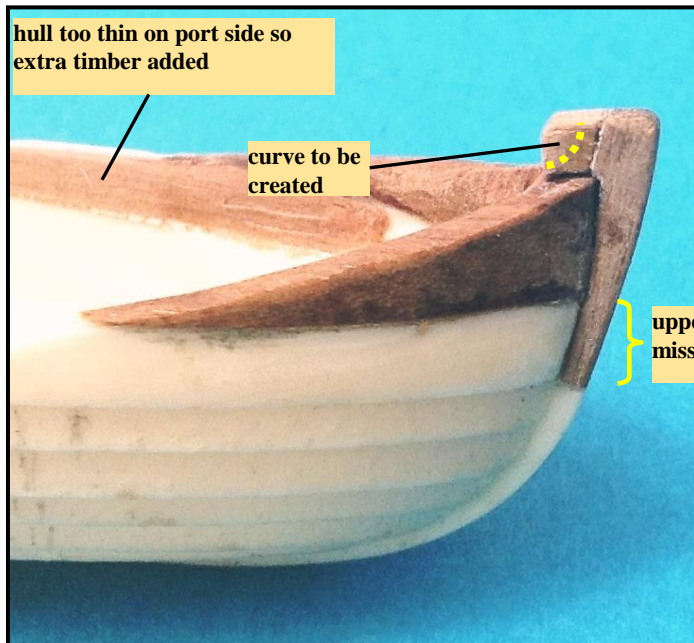


Figure 11: Adding the Stem Post

- the larger boat had a damaged area of plastic with the upper part of the stem post missing (Fig. 11). Two small pieces of timber were shaped to fill this area as well as allowing the stem post to project above the gunwale.
- a small section of 2 x 2 mm. timber was used to simulate the interior view of the both the *stern and stem posts*. In both cases, they were strongly tapered towards the gunwale.



Figure 12: Painted Bow of Larger Boat

- after suitably shaping the upper part of the stem post, a hole was drilled to allow a ring to be passed through (Fig. 12).
- the stem post thickness was reduced so creating less extending out past the planking [original thickness evident in Fig. 10].



Figure 13: Extended Stem Post on Smaller Boat

- The curved keel under the smaller batellino di servizio/ 'service' boat was also flattened producing an overall height of **16.3 mm.** (broken blue line).
- The drawing dimensions in Fig. 14 show that this boat can be readily modified in its longitudinal profile without having to add any extra material.

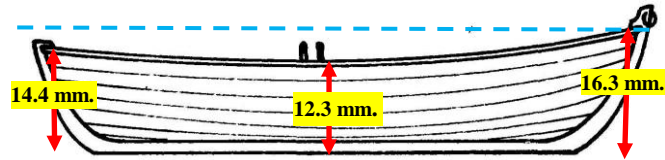


Figure 14: Drawing Dimensions: 'Service' Boat



Figure 15: Longitudinal Profile of Service Boat

## Terminology

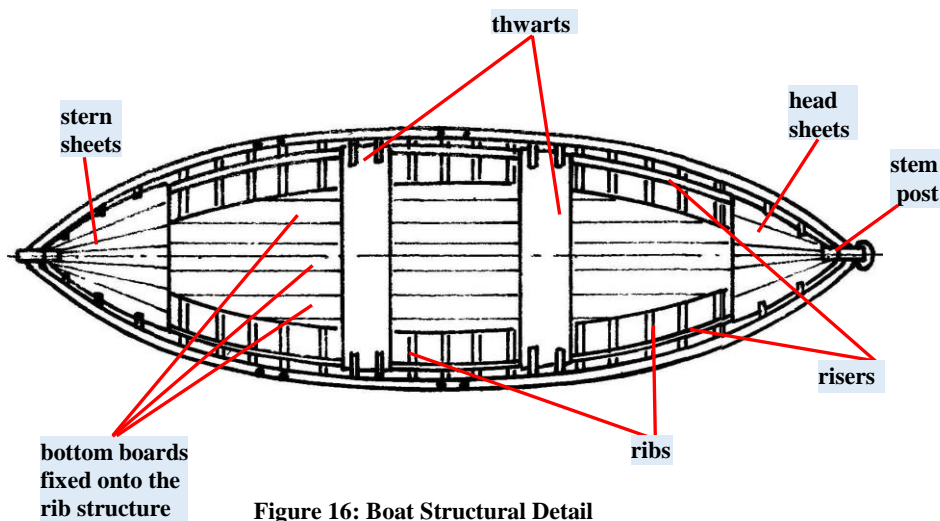


Figure 16: Boat Structural Detail

## Interior Fitting

### Ribs, Risers and Keel

Fig. 17 shows the larger 'service' boat with *approx. 15 ribs* but even in the quality build shown below, only seven ribs were added. The number added may well be subjective, depending on the width of the rib material as much as anything else !



Figure 17: Rib Spacing in Salvage Boat

*Salvage Boat:* Eleven (11) frames/ ribs were spaced along the keel. In this build, they were cut (from 0.5 x 4.0 mm. planks) to a length of approx. **55 mm** and a width of **1.5 mm**. allowing spacing along the keel of approx. **5.5 mm**. apart.

*Service Boat:* Eleven (11) frames/ ribs were spaced along the keel. In this build, they were cut (from 0.5 x 4.0 mm. planks) to a length of approx. **55 mm** and a width of **1.0 mm**. allowing spacing along the keel of approx. **4.5 mm**. apart.

One difficulty in relating the drawings to the two supplied hulls was the difference in width:

**Salvage Boat:** **4 mm.** narrower

**Service Boat:** **6 mm.** narrower

This did not change the approach made but the outcome was just a little different (e.g. arranging the bottom boards – refer to Fig. 22)

To fit ribs against the curved boat interior without breaking, the strips were soaked in dilute ammonia solution [from supermarkets as a cleaning agent called 'cloudy ammonia'] for approx. 4 hours.



Figure 18: Immersion in Ammonia Soln.

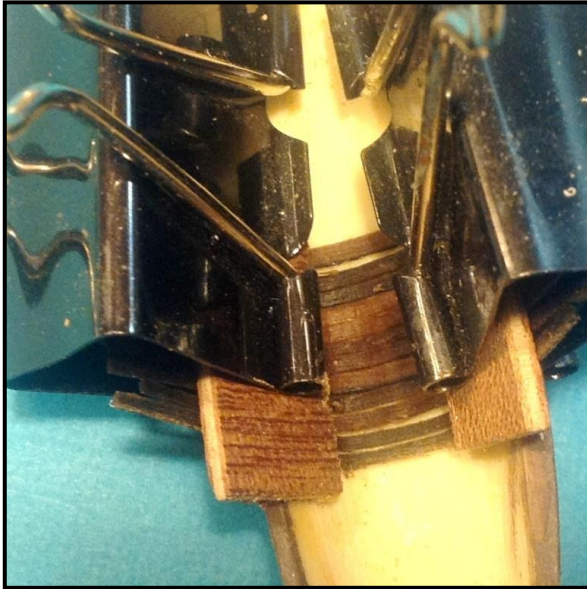


Figure 19: Rib Shaping

After soaking, they were wiped with a dry cloth and held in groups as shown in Fig. 19 allowing at least twelve hours to dry. The small variations in width when placed in their *exact* positions were easily accommodated by the curved strips.

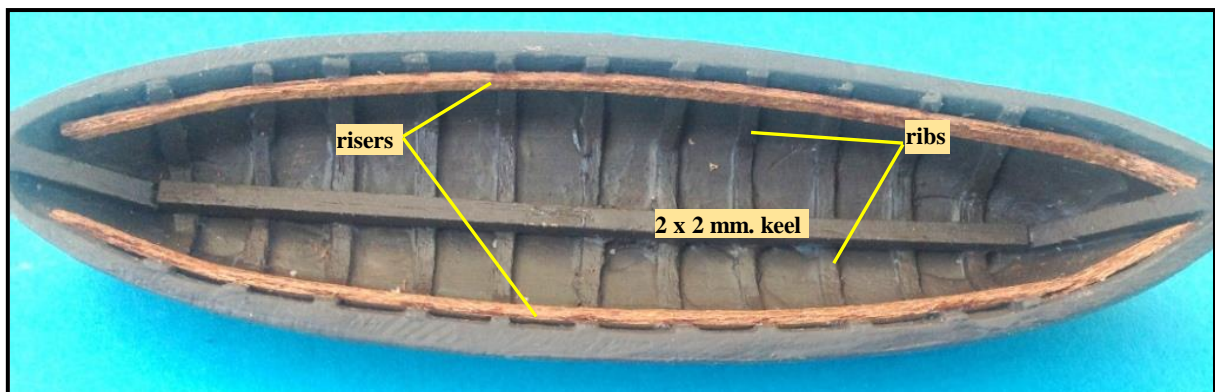


Figure 20: Ribs and Risers on Salvage Boat

In retrospect, the keel addition would have been better sized at *1.5 mm*.

Risers were *1.6 mm*. wide (dictated by scrap material available)

Eleven ribs, each *1.0 mm.* wide were fitted into the hull.



Figure 21: Ribs, Keel & Risers in the Service Boat

### Bottom Boards and Thwarts

Two thwarts per boat were constructed from *6.0 mm.* planking.



Figure 22: Bottom Boards, Thwarts and Ring

### Sheets

Both the head and stern sheets are shown as a *composite set of tapered timbers* (Fig. 23) which were assumed to have a *curved profile athwartships*. Looked like a great exercise but this approach was avoided due to a mixture of both limited time and patience. Instead, a set of flat timbers (Fig.24) were added athwartships supported by the risers.



Figure 24: Construction of Boat Head Sheets

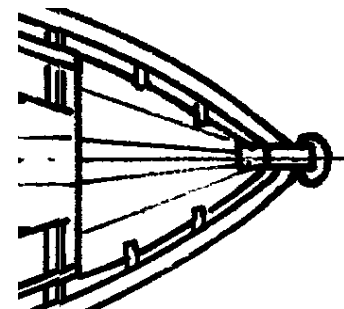


Figure 23: Drawing of Boat Head Sheets



Figure 25: Oar Lashed to a Tholepin

### Tholepin/ Thole

These pins, either singly or in pairs were embedded into the gunwale to act as a fulcrum for the oar. Fig. 25 is from an actual boat.

Fig. 26 shows the four tholepins along a gunwale of the salvage boat. A 0.65 mm. drill bit was used. When the boat is finally painted, the pins will be painted black.

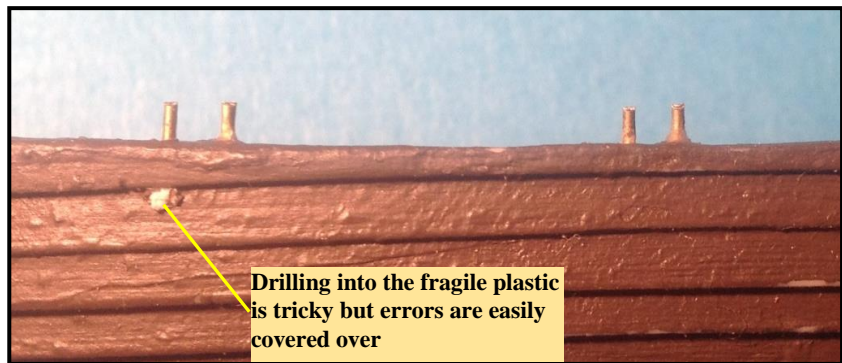


Figure 26: Tholepins

### Dry Brushing

As described earlier, it was now time to create a weathered look using the following sequence.

1. *75% Dryad Bark & 25% Skrag Brown*
2. *50% Dryad Bark & 50% Skrag Brown*
3. *Dawnstone*

A dry-brushing brush is lightly filled with the paint and then stroked over paper until all the paint appears to be used. The brush is lightly applied to the base coat until an amount of colouration can just be perceived. That is the point when the brushing on of that new 'layer' is stopped. The application will be deliberately 'patchy'.

**75% Dryad Bark:25% Skrag Brown**