



# BUILDING THE CRADLE BOAT

Though not to rockabye a baby to sleep; boatbuilder Geoff Bowker is asked for a clinker-built glass-topped coffee table

*With photographs by the author*

**A** most interesting commission came my way to make a wooden boat to be used as a coffee table. An internet search revealed a large number of small boats which might be used as coffee tables but the majority were simple, plywood designs and while probably quite functional, were nowhere near the classical clinker rowing boat look we sought.

We settled on plans for a cradle

boat from Jordan Wood Boats in the USA (*not to be confused with Jordan Boats, the kit builders in the UK – Ed*). The printed plans were drawn beautifully and despite the boat length of only 45" (1.143m), they were as one would expect for a full-size vessel with Table of Offsets, rotated sections on the stem and very comprehensive instructions. The plans are aimed at the amateur boatbuilder so full-size

templates for building moulds, stem section and planks are provided which saves time lofting and allows the build to get underway quickly.

## Hard as epoxy...

Following the instructions, a building baseboard was made from a half sheet of 18mm (¾") OSB, strengthened with 2" x 2" (50 x 50mm) framing beneath to keep the whole thing flat and true.



**Above:** Warren Jordan's plans for the Cradle Boat also include drawings for this stand with davits to rock its crew to sleep. Photograph: Jordan Wood Boats, USA.

**Below:** The plans package also has full-size patterns for all major components.



It's always easier to rivet planks single-handed if the boat is built right way up, so to allow working from below, the centre of the building board was removed in a boat shape. The whole baseboard structure was clamped to trestles so the boat could be built comfortably at waist-chest height to save sore knees.

The stem was made from two pieces

of oak, which were bandsawed to shape and cleaned up using a drum sander. The bevels were cut with a spokeshave so that when the outer stem and inner apron were brought together, the rabbet was mostly formed. Similarly the keel/hog assembly and stern post were cut from the full-size plans provided. The transom was made from 2" (50mm) wide lengths of oak planed square so

forming perfect edges, biscuit jointed and glued using polyurethane (PU) glue. The stem, keel and transom were put up on the moulds and adjustments made to ensure the moulds were vertical and square to the centreline

The stem/keel/apron join is a little unorthodox but since the boat would never be put in the water, the assembly would most probably be sufficiently strong. This stem/keel/apron area and where the transom deadwood were joined were the only places in the boat where I used epoxy.

Cue a digression: epoxy is marvellous stuff but I fear that when the beautiful wood in our boats has all rotted away naturally we will be left with skeletons of epoxy that will be around forever. Until we find an effective and environmentally acceptable way to deal with a problem we are passing on to our children, I contend we should use as little as possible. Thank you. Steps off soapbox.

The transom was fixed to the sternpost dry but secured with copper rivets; the plans said to use glue and plugged screws but I was most keen to keep the build as traditional as possible. And I think it looks better.

### Soft as cedar...

So to the planking. Templates for all the planks were provided with the proviso that the builder should add a generous margin around each shape to take into account any divergence from the perfect build. I have to admit I was sceptical that this would work and could prove very costly in wasted planks which didn't fit, so I chose to spile each plank. This was a very straightforward and accurate way to make the plank shape and avoid the dreaded 'edge set'. I reckon by the time you had transferred the plank templates to the wood you could have spiled just as quickly.

The planks were sawn from cedar and thickened down to the specified  $\frac{3}{16}$ " (5mm). I had never planked with cedar before which I found to be much

softer than I had thought. It dented very easily as can be seen, most annoyingly with marks left by the dolly on the inside of the planks. I will be much gentler with riveting next time.

The ends of the garboards and planks 2 and 3 were boiled up in a large old tin can on a one burner camping stove to get the shapes. The wood moulded well when hot and didn't need boiling/steaming by the time I got to plank 4 and above where the wood went into shape dry. However, I was utterly frustrated by the grain direction changing so radically in places, probably in the vicinity of old knots, which led to three planks just snapping and going straight into the recycling bin.

Planks were fixed in the traditional way with 14 gauge copper nails and  $\frac{5}{16}$ " (8mm) roves. A little PU glue was used at the extreme ends of the planks in the rabbet and at the transom just to hold them in place and then fixed with ragged nails. The owner wanted a mahogany sheer plank which was spiled and fitted in the usual way.

#### Supple as steamed oak...

With the planking complete I could release the hull from the building moulds. I made a temporary boat cradle from some  $\frac{3}{8}$ " (9mm) chipboard which I padded with old carpet to support the hull while the interior was being fitted out. Clearly a chipboard cradle would not be appropriate in one's living room, so I made another more suitable cradle using an old mahogany thwart rescued from a redundant dinghy beyond fixing. The recovered mahogany was beautiful, the richest, darkest red I have ever come across in such timber.

The next stage was 'timbering out'; fitting steamed farnes. I have a supply of green oak which I store outside in a trough with an old duvet on top to keep it damp. The oak was bandsawed into the appropriate size strips and sanded, steamed and pushed into the hull and clamped at the sheer until cold and dry. Seven pairs of timbers



**Above:** *Clinker boats are traditionally built right way up to make riveting the planks and frames easier. Building upside down necessitated a boat-shaped cutout for access..*

**Below:** *The planks are so slender that conventional clamps will secure them for riveting.*



were needed and my experience is that a number always break when being fitted. So I prepared 20. But when the job was done not one timber had broken; if I had only made 14, I would have broken the lot no doubt.

The timbers were riveted into place followed by a riser – a stringer to support a single midships thwart. This was followed by the inwales and the

timbers were sawn off at the sheer level and tidied up with a sharp plane, taking great care not to break out any end grain.

The breasthook was made by joining two pieces of oak into a slight dome and also copper riveted into place. Then the quarter knees. My preference is to make knees in two pieces with a halving joint to provide strength but I



**Above:** *The fully planked hull is lifted off the moulds and turned right way up for...*

**Left:** *... the steam-bent green oak timbers – frames – to be fitted. Weights and clamps hold them for riveting the traditional way with copper boat nails and roves. A two-person job!*

thought this would be unnecessary for a boat that should not experience any great forces in its life, hopefully.

The thwart was made from some more of the recovered mahogany and edged with cedar to match the planking. It was decided to not fit any thwart knees as they would get in the way of the table's glass top.

The commissioner was keen to have the internal planking, both sides of the transom and the outside of the sheer plank with a bright gloss finish which I achieved using Dek's Olje D1 and D2. The timbers were left uncoated and the contrast with the shiny planking looks very effective.

### Clear as glass...

Since the dinghy was destined to become a coffee table with a glass top despite having the planking, timbering, inwales and risers clearly visible, the boat still looked empty. While tidying up the workshop one evening I dropped some Hempex rope from another project into the the boat and suddenly I saw it. So some smaller and more to scale Hempex was found in a drawer and eye spliced to a couple of brass screw eyes. These are now nonchalantly dropped into the bottom of the boat fore and aft and the picture is much more complete.

For painting the hull was turned

**Right:** Conversation piece: with the addition of a carefully-fitted toughened glass top, the cradle boat becomes a distinctive coffee table or...

**Below:** ... bed for a pampered pooch.

upside down on the bench on an old blanket to prevent damage to the gunwales. The copper rivet heads were flattened off and tidied up using a dolly inside – definitely a 2 person job – and then the filling and fairing commenced. Steaming and boiling the lower cedar planks had opened up the grain quite significantly so a lot of filling was necessary. An admission follows; as the boat was never intended to touch water at any stage, we chose not to use proprietary marine paints. We had instead found some lovely primer, undercoat and gloss cream paint in Wilco DIY supplies which we have to say was excellent.

The choice of rubbing strip came quite by accident. Some 1" (25mm) Hempex from yet another project was kicking around the workshop and a visitor casually mentioned that it would look good as a rubber around the sheer plank and the piece of rope was exactly the right length; destiny. The rope was wired into the gap between gunwale and inwale and secured to the transom with a couple of copper nails through a whipping at the ends of the rope.

Working out how the table's glass top would be fitted and supported was more of a challenge. I experimented with templates and jury rig supports and finally determined that the glass should fit immediately under the inwale at midships and so appear a little lower at the bow and stern. More of that rescued mahogany was used to make some vertical knee supports joggled to the planks near the bow and stern and at midships. Making the final glass template from plywood was necessary to ensure everything



lined up and was level. Also the glass company, quite understandably, wanted a rigid template. Their advice was for 1/4" (6mm) toughened glass for the table top and it was a very nervous moment when putting the glass into the boat for the first time as making adjustments with a plane of sandpaper was going to be hugely difficult.

The boat was a joy to make and it would, as Jordan Wood Boats' advertising states, make a lovely baby

cradle especially if one went the whole hog and made the davits with the boat held in rope falls. But as a coffee table it works well; it is a real, traditional clinker boat made in the traditional way, just much smaller.

#### CONTACTS

[www.bowkermarineservices.co.uk](http://www.bowkermarineservices.co.uk)

*Babytender plans:*

[www.jordanwoodboats.com](http://www.jordanwoodboats.com)

*Glass:* [www.weymouthglass.com](http://www.weymouthglass.com)

