

BUILDING PROCESS SHEET FOR YACHTING MONTHLY "3 TONNER."

OPERATION 1.

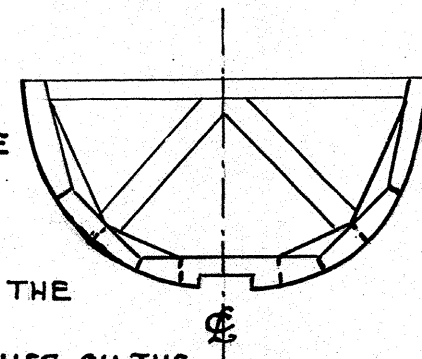
THE LINES DRAWING SHOULD BE LOFTED FULL SIZE & THE MAIN CONSTRUCTION DETAILS SUPERIMPOSED ON TOP. THIS WORK IS CARRIED OUT ON A CLEAN CLOSE BOARDED FLOOR, SHEETS OF COMMERCIAL PLY WOOD, OR GREY BUILDING PAPER.

ALL LINES ARE DRAWN FIRST IN CHALK OR SOAPSTONE, & AFTER CHECKING & FAIRING, SHOULD BE LINED IN WITH BLACK PENCIL. FOR CONSTRUCTIONAL DETAILS SUPERIMPOSED ON THE LINES, IT IS A GOOD PLAN TO LINE IN WITH DISTINCTIVELY COLOURED PENCILS, THIS WILL ENABLE THE FINISHED LOFTING TO BE WORKED TO WITH GREATER EASE.

NOTE! IT IS ESSENTIAL TO THE SUCCESS OF THE DESIGN TO LOFT & FAIR WITH EXTREME CARE. SEE DRG NO 109 SHT NO 1

OPERATION 2.

(a) MARK OUT & MAKE UP FROM LOFTING, 11 FORM TEMPLATES TO FIT INSIDE THE HULL. THESE SHOULD BE CONSTRUCTED OF 1/4" THICK TIMBER. IT IS NOT NECESSARY TO BEVEL THE FORMS TO FIT THE RIBBANDS, INSTEAD, THE FORWARD ONES ARE PLACED AFT OF THE STATION LINE & THE AFT ONES ON THE FORWARD SIDE. NOTE! THE CENTRE LINE (C) SHOULD BE CAREFULLY MARKED ON EACH FORM.



(b) AT THIS STAGE IT IS A GOOD PLAN TO CONSTRUCT THE PATTERN FOR CASTING THE BALAST KEEL, THIS IS IN THE FORM OF AN EXACT WOOD REPLICA OF THE LEAD OR IRON KEEL, BUT IS MADE LARGER IN ALL DIMENSIONS TO ALLOW FOR SHRINKAGE OF THE METAL. THE ALLOWANCES SHOULD BE 1/8" PER FOOT FOR IRON OR 3/16" PER FOOT FOR LEAD. WHEN SENDING THE PATTERN AWAY IT IS IMPORTANT TO LET THE FOUNDRY KNOW THAT THESE ALLOWANCES HAVE BEEN MADE.

OPERATION 3.

MARK OUT FROM LOFTING & SHAPE, KEEL, DEADWOODS, STEM & STERN POSTS. MARK OUT CAREFULLY & LINE IN THE RABBET & BEARDING LINES, THIS SHOULD BE DONE WITH A FLEXIBLE BATTEN. THE RABBET IS THEN CUT USING AS A TEMPLATE.

A SHORT PIECE OF THE SAME THICKNESS AS THE PLANKING. THE METHOD OF WORKING IS AS FOLLOWS:- TRIM OUT A SPOT EVERY 8" OR SO AND THEN TRIM OUT THE WOOD BETWEEN THESE SPOTS.

WHEN ALL THE RABBETS ARE CUT, THE PARTS SHOULD BE ASSEMBLED TO FORM THE BACKBONE. IF AVAILABLE, THE BALAST KEEL MAY BE BOLTED ON AT THIS STAGE.

SET THE BACKBONE UP ON THE STOCKS.

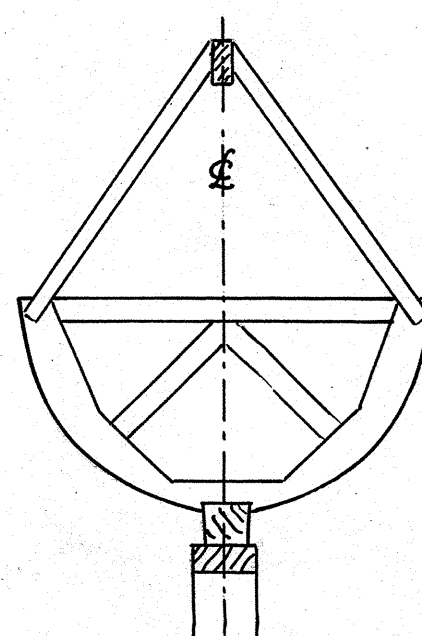
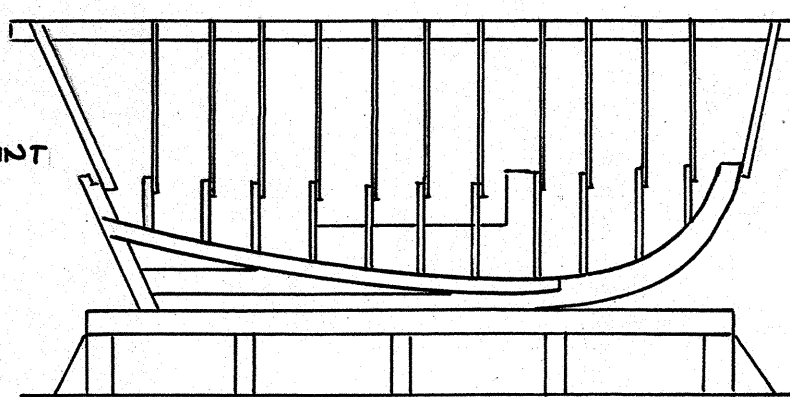
OPERATION 4.

SET UP THE FORM TEMPLATES ON THE BACKBONE. LINE UP & FIX TEMPORARY STRUTS. THE LOWEST POINT OF THE KEEL RABBET SHOULD BE AT LEAST 36" FROM THE FLOOR TO FACILITATE PLANKING.

A CHALK CENTRE LINE ON THE FLOOR AND A PLUMB BOB ARE USED WHEN LINING UP THE STEM & STERN POSTS.

THE TEMPORARY STRUTS MUST BE FIXED IN SUCH A WAY AS TO GIVE BOTH MAXIMUM ACCESSIBILITY TO THE JOB WITH MAXIMUM RIGIDITY.

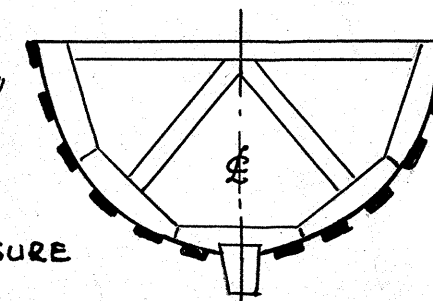
CONSTRUCT & FIT THE TRANSOM.



SEE DRG NO 109 SHT 2 OR 3

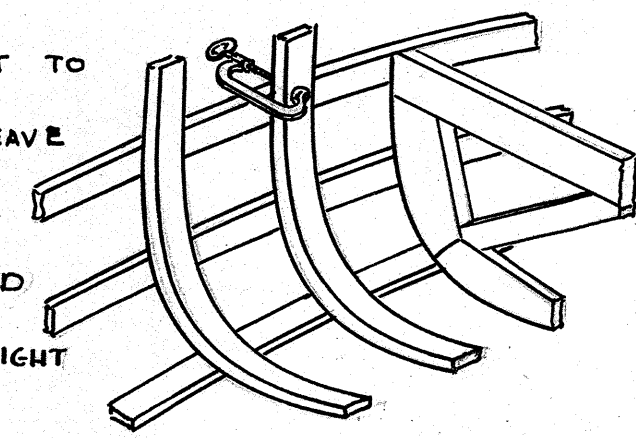
OPERATION 5.

LINE UP & FIT RIBBANDS. THE SIZE OF THESE SHOULD BE ABOUT 2 1/8" THE FORWARD ENDS SHOULD BE TAPERED FOR EASE IN BENDING. RIBBANDS SHOULD BE PLACED IN PAIRS TO EVEN UP THE PRESSURE AGAINST THE FORMS. FASTEN TO THE FORMS WITH LONG SCREWS SET UP ON WASHERS BUT WIRE NAILS MAY BE USED.



OPERATION 6.

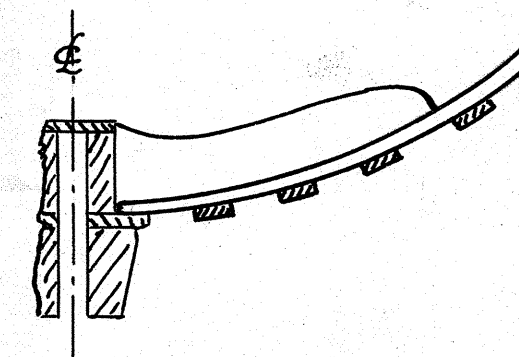
CUT OUT & SIZE ELM TIMBERS, THESE ARE THEN STEAMED & BENT TO THE INSIDE OF THE RIBBANDS, CAREFULLY FIT AT HEEL & LEAVE LONG AT GUNWALES. SPACE AT 7 1/2" TIMBERS ARE FITTED IN PAIRS. A GOOD NUMBER OF 'GEE' CLAMPS ARE REQUIRED (5 MINIMUM) CLAMP AT THE RIBBANDS & THEN FIX WITH BRIGHT WIRE NAILS DRIVEN THROUGH THE RIBBAND INTO THE TIMBER.



SHOULD THE TIMBER TEND TO LEAVE A RIBBAND AT ANY POINT, CLAMP UP UNTILL COLD & SET.

OPERATION 7.

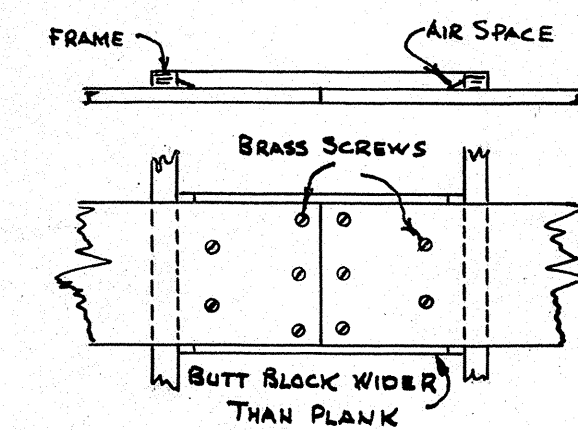
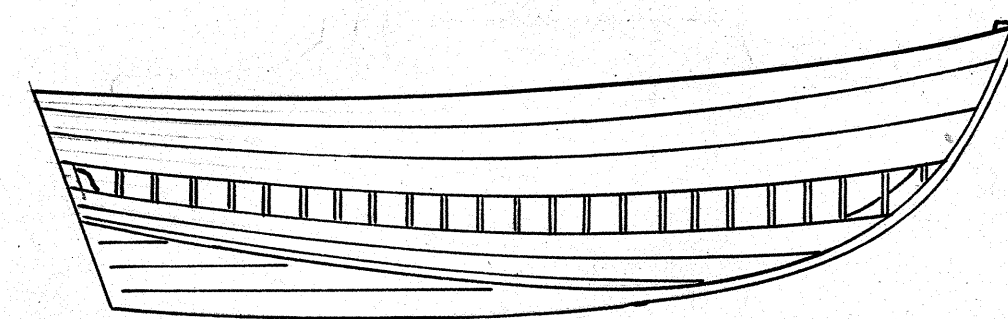
CONSTRUCT FLOOR TIMBERS AND TEMPORARILY SECURE THESE IN POSITION



OPERATION 8.

PLANKING SHOULD BE 3/4" THICK CLEAN STOCK. THE USUAL PROCEDURE IS TO START PLANKING FROM THE GARBOARD STRAKE UP TO THE TURN OF THE BILGE, & THEN FROM THE SHEER STRAKE DOWN. THE LAST PLANK TO BE FITTED IS CALLED THE SHUTTER. THE RIBBANDS ARE REMOVED AS THE PLANKING PROCEEDS. PLANK EDGES ARE BEVELED TO APPROX. 1 IN 16 TO ALLOW FOR SEAM CAULKING.

BUTTS IN PLANKING SHOULD BE MADE BETWEEN FRAMES ON HARDWOOD BUTT BLOCKS

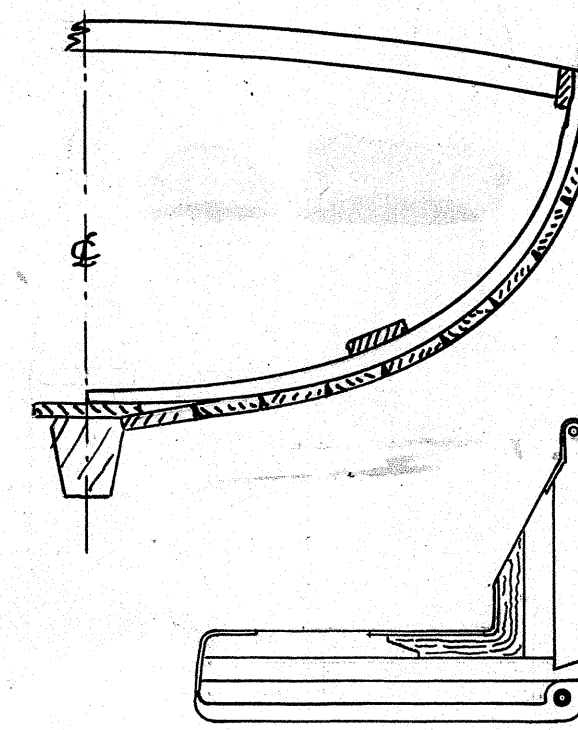


OPERATION 9.

SECURELY FIX FLOORS AND REMOVE FORMS. CARE SHOULD BE TAKEN TO TIE THE HULL ACROSS WITH TEMPORARY STRUTS TO PREVENT ANY DISTORTION. TEMPORARILY FIT ENGINE BEARERS.

OPERATION 10.

FIT STRINGERS, INWALES, MAIN BEAMS BREAST HOOKS & QUARTER KNEES

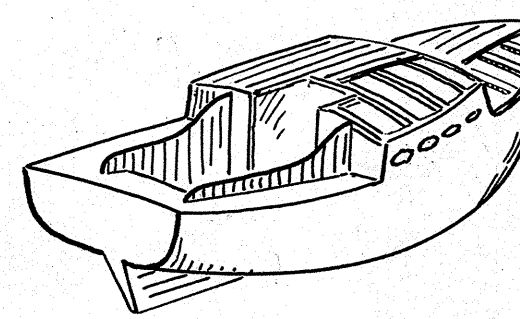


OPERATION 11.

(IF APPLICABLE) FINAL FITTING TO CENTRE-BOARD CASE CONSTRUCT & FIT CENTRE-BOARD.

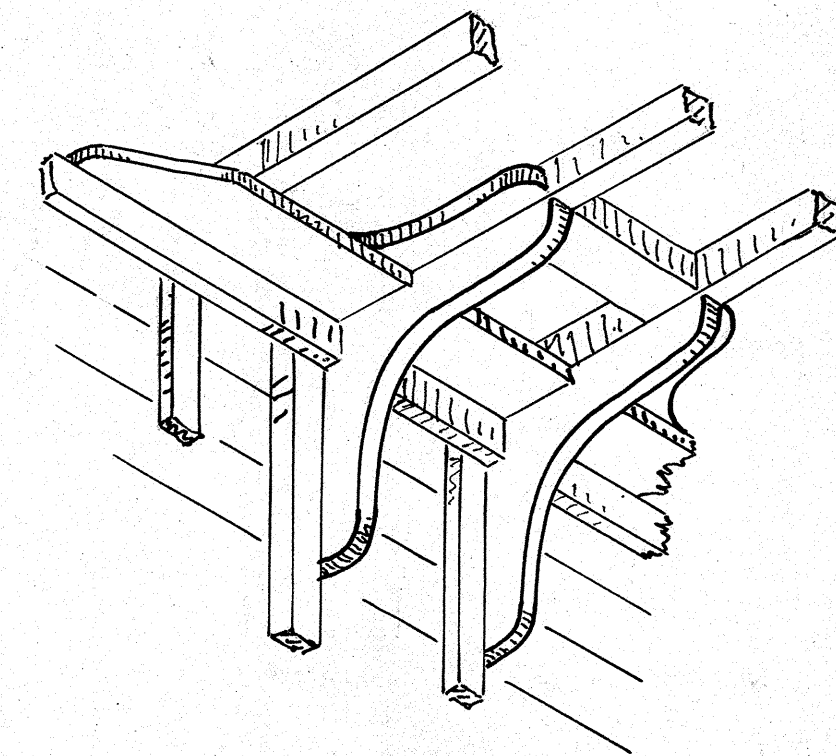
OPERATION 12.

FIT DECK BEAMS, PLANK DECK, & FIT COAMINGS.



OPERATION 13.

FIT MAST TABERNACLE (IF REQUIRED) FIT HANGING & LODGING KNEES SEE DRG NO 109, SHT NO 2 OR 3



OPERATION 14.

CONSTRUCT & FIT FORE HATCH, COMPANIONWAY, & COCKPIT FITTINGS.

OPERATION 15.

CONSTRUCT & FIT MAIN BULKHEAD, CABIN SOLE, DOORS, ETC.

OPERATION 16.

CONSTRUCT & HANG RUDDER.

OPERATION 17.

CLEAN UP OUTSIDE PLANKING & CAULK WITH COTTON. THE COTTON IS WORKED IN LIGHTLY FOR A FOOT OR TWO WITH THE CAULKING IRON, THEN GO BACK AND HARDEN UP, THAT IS, DRIVE THE COTTON RIGHT HOME, IT IS NOT NECESSARY TO POUND AT THE COTTON AS THIS CAUSES THE IRON TO BRUISE THE PLANKING. ONE THREAD OF COTTON LAYED IN ROWS OF TUCKS IS SUFFICIENT FOR THIS THICKNESS OF PLANKING. AFTER CAULKING, THE SEAMS ARE PAYED WITH WHITE LEAD & OIL, OR A PATENT SEAM COMPOSITION. CARE MUST BE TAKEN THAT THE COTTON IS WELL PAINTED, AS THIS LOCKS IT INTO THE SEAM & PREVENTS THE MOISTURE FROM PENETRATING & ROTTING THE COTTON.

OPERATION 18.

BALAST KEEL SHOULD NOW BE FITTED IF NOT ALREADY FITTED IN OPERATION 3.

OPERATION 19.

PAINT WITH PRIMING INSIDE & OUT. SEE DRG NO 109 SHT 4

OPERATION 20.

RUB DOWN & FINISH AS REQUIRED.

OPERATION 21.

MAKE UP SPARS. SEE DRG NO 109 SHT 3 OR 6

OPERATION 22.

FIT ENGINE IF REQUIRED. SEE DRG NO 109 SHT 3
NOTE! WHEN FITTING ENGINE IT IS ESSENTIAL TO FOLLOW THE MAKERS INSTALLATION INSTRUCTIONS TO ENSURE A SATISFACTORY JOB.

NOTE:- AMATEUR BUILDER? REQUIREING ADDITIONAL INFORMATION NOT COVERED ON PROCESS SHEET SHOULD CONSULT BOOK 'GUTCH AS, 'MODERN BOAT BUILDING', BY EDWIN MONK BOAT BUILDING BY HOWARD J. CHAPPELLE? ETC

PROCESS SHEET FOR DRG NO 109 SHEET NO 1, 2, 3, 4, 5 & 6

DESIGNED BY A. H. BUCHANAN			
FOR THE YACHTING MONTHLY LTD			
ISSUE	A	DATE	25.8.46
TITLE:-		DRAWN	F.H.T.
YACHTING MONTHLY 3TON SLOOP.		APPROVED FOR	Y.M. M.G.
BUILDING PROCESS SHEET		DRG NO	110
		NO OF SHEETS	1
		SHEET NO	7