

FREE

1:144 scale WWII Royal Navy
destroyer plan worth £17



model **Boats**

BUILDING BLAKENEY

Why this UK designed & manufactured
budget-buy kit is well worth netting

www.modelboats.com
March 2024
Vol.74 No.880



VIBs
(Very Impressive
Builds)
More of your
magnificent models
showcased



◀ **RMS TITANIC LIFEBOAT**

How to pack even more detail
into Artesania Latina's 1:35 kit

AMPHIBIOUS VEHICLES ▶

The challenges to consider
before taking the plunge



LAND YACHT – constructing a model that can be 'sailed' with no water required!

Since 1958 - 66 Modelkits



TAKE A LOOK AT OUR 66 KITS AT BILLINGBOATS.COM



No retail sale

[facebook.com/groups/billingboats](https://www.facebook.com/groups/billingboats)

Join our facebook group with 6500 modelbuilders

Contact us at service@BillingBoats.com



Dealer list here:

BillingBoats.com/distributors

www.mobilemarinemodels.com

'ere's another bit of info...

" In addition to their Full range of Winches
..And, their Full range of Fittings..
.. Mobile Marine Models have introduced.....
.. their **NEW** Range of **CRANES** "

Phone - Visit the Website

for more details of the Full Range..

Tugging Ahead..... with

MOBILE MARINE MODELS

Model Tugology..... the driving force

The Boat Shed, Highcliffe Park, Ingham Cliff, Lincoln LN1 2YQ tel: 01522 730731 / 689209

Full Colour Catalogue £7-50

Factory Visitors Welcome



DEANS MARINE

CONQUEST DROVE, FARCET.
PETERBOROUGH, PE7 3DH
01733 244166
www.deansmarine.co.uk

2024 colour catalogues
Deans Marine £6.75
Raboesch £4.00
RB Fittings £2.00
Albion alloys £1.50
£4.00 postage each
Or all 4 for £13.50 incl p&p u k

Visit the **NEW OUTLET CENTRE** and
SHOWROOM or our **ONLINE SHOP FOR
KITS & ACCESSORIES**
The only model boat shop, showroom,
and a test pond.



COUPLINGS



BRASS PROPELLORS



OUTLET CENTRE NOW OPEN Mon—Sat 10am—4pm



PROPSHAFTS



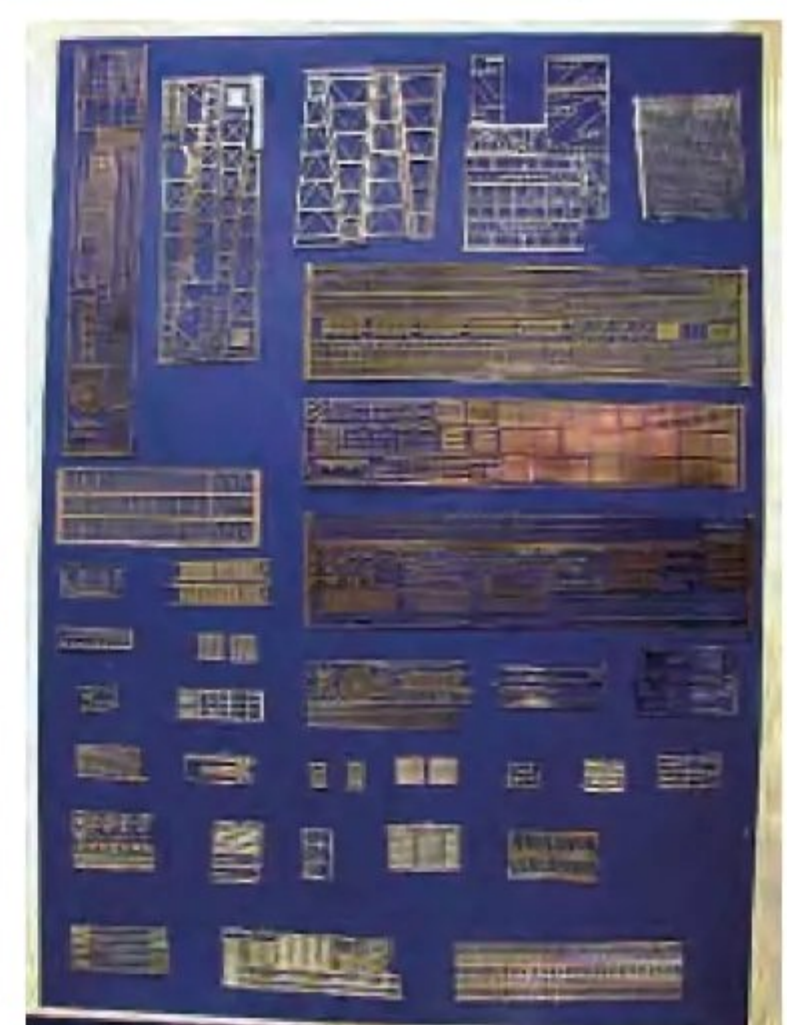
RUDDERS



1/96—1/100—1/50
—1/24 FIGURES



BATTERIES



BRASS ETCHINGS

EDITORIAL

Editor: Lindsey Amrani

Designer: Fran Lovely

Illustrator: Grahame Chambers

Publisher: Steve O'Hara

By post: Model Boats, Mortons Media Group,
Media Centre, Morton Way, Horncastle,
Lincs LN9 6JR
Tel: 01507 529529 Fax: 01507 371066
Email: editor@modelboats.co.uk

CUSTOMER SERVICES

General Queries & Back Issues
01507 529529 – Monday-Friday: 8.30am-5pm
Answerphone 24hr
help@classicmagazines.co.uk
www.classicmagazines.co.uk

Archive enquiries: Jane Skayman
01507 529423
jskayman@mortons.co.uk

ADVERTISING

Advertising Sales Executive: Steve O'Hara
sohara@mortons.co.uk
Tel: 01507 529535

By post: Model Boats Advertising,
Mortons Media Group, Media Centre, Morton Way,
Horncastle, Lincs LN9 6JR

PUBLISHING

Sales and Distribution Manager: Carl Smith

Marketing Manager: Charlotte Park

Commercial Director: Nigel Hole

Publishing Director: Dan Savage

Published by: Mortons Media Group Ltd,
Media Centre, Morton Way, Horncastle,
Lincs LN9 6JR

SUBSCRIPTIONS

Tel: 01507 529529 – Mon-Fri: 8.30am-5pm
Enquiries: subscriptions@mortons.co.uk

PRINT AND DISTRIBUTIONS

Printed by: Acorn Web Offset Ltd,
Normanton, West Yorkshire.
Distribution by: Seymour Distribution Ltd,
2 East Poultry Avenue, London, EC1A 9PT.

© Mortons Media Group 2022
All rights reserved ISSN 0140-2910

The Publisher's written consent must be obtained before any part of this publication may be reproduced in any form whatsoever, including photocopies, and information retrieval systems. All reasonable care is taken in the preparation of the magazine contents, but the publishers cannot be held legally responsible for errors in the contents of this magazine or for any loss however arising from such errors, including loss resulting from negligence of our staff. Reliance placed upon the contents of this magazine is at reader's own risk.

Model Boats, ISSN 0140 - 2910, is published monthly by Mortons Media Group, Media Centre, Morton Way, Horncastle, Lincs LN9 6JR UK. The US annual subscription price is \$89USD. Airfreight and mailing in the USA by agent named WN Shipping USA, 156-15, 146th Avenue, 2nd Floor, Jamaica, NY 11434, USA. Periodicals postage paid at Brooklyn, NY 11256. US Postmaster: Send address changes to Model Boats, WN Shipping USA, 156-15, 146th Avenue, 2nd Floor, Jamaica, NY 11434, USA. Subscription records are maintained at DSB.net Ltd, 3 Queensbridge, The Lakes, Northampton, NN4 5DT. Air Business Ltd is acting as our mailing agent.



17

contents

10 Compass 360

A round up of the latest hobby/
industry news

14 SLEC's KD Perkasa

Ahead of a full build review in
next month's issue, Nick Brown
provides a preliminary inspection
of this 1:40 scale kit

17 Building Blakeney

John Miles on explains why this
budget-buy UK designed and
manufactured kit is well worth
netting

22 Amphibious vehicles

John Parkers points out the
challenges to consider before
taking the plunge

26 RMS Titanic Lifeboat

Noel Smith tackles Artesania
Latina's 1:35 scale kit, making
some modifications/improvements
along the way

34 Land Yacht

John Miles on breaks new ground with
a model that can be 'sailed' with no
water required

38 FREE PLAN for HMS Wakeful

Glynn Guest explains how to build your
very own 1:144 scale World War II Royal
Navy destroyer from this month's free
pull-out plan



14



22

60



34



50 USS Keats Sound

Construction of Glynn Guest's 'stand-off scale' World War II US Navy seaplane tender continues

56 Targets, Comets and Stars

In another trip down Memory Lane, Dave Wiggins whisks us back to the 1950s' British electric model boating scene

60 Boiler Room

Richard Simpson on why valve-operated engines are more efficient than oscillating engines

66 Your Models

More VIBs (Very Impressive Builds) showcased



56

65



69 Your Letters

Views aired and info shared

74 Next Month...

Just three of the reasons why you won't want to miss the April 2024 issue of *Model Boats*

26



50



WELCOME TO THE MARCH 2024 ISSUE OF MODEL BOATS...

Apparently, the MacDonald (from which my maiden name, Donaldson, derives) clan's motto was "*Per Mare Per Terras*" in Latin or "*Air Muir s'Air Tir*" in Gaelic (translating to "By Sea, By Land") – an ideal I can vicariously live up to in the pages of this month's issue thanks to John Parker's Amphibious Vehicles and John Mileson's Land Yacht articles! If these features steer a little off course for you, though, don't worry as there are plenty more apt to our title topics covered as well, such as the World War II Royal Navy destroyer (including free pull-out plan), US Navy seaplane tender and RMS Titanic lifeboat builds. We're also bringing you a preliminary look at SLEC's most ambitious kit to date, the KD Perkasa Fast Patrol Boat, and a post-construction opinion on why HA Kits' budget-friendly UK designed and manufactured Blakeney fishing boat really is well worth netting. Adding yet further to this mix is an impressive array of scaled-down vessels submitted by your fellow readers and showcased within the Your Models section. Plenty, hopefully, to entertain and inspire you to perhaps contribute to the Your Models/Your Letters section yourself, or even to have a go at writing a full-length feature. On the subject of which, if you're currently documenting a project you're working on, please do consider holding back from posting details as a series of forum updates in favour of working with us on telling the story in print first. I completely appreciate this takes away from the instant gratification element, but it will help support the magazine that keeps the Model Boats' website and forum up and running, and you'll also get paid for your efforts – OK, admittedly not a lot, as we only have a very modest budget, but enough to give you some funds to put towards future kits/materials/running gear, etc. And this won't preclude you from sharing your images, methodology, tips and tricks, *etc*, on the internet later – *i.e.*, after the issue featuring your article has gone on sale and been digitally promoted. Interested? Then please drop me a line as I'd love to hear from you.

In the meantime, enjoy your read!

Lindsey

HI-ENERGY **NEW RANGE!**

LIPO BATTERIES:
 7.4v 650mah - £7.50
 7.4v 850mah - £9.50
 7.4v 1300mah - £12.99
 7.4v 1800mah - £14.99
 7.4v 3200mah - £24.99
 11.1v 1300mah - £15.99
 11.1v 1800mah - £16.99
 11.1v 2200mah - £16.99
 11.1v 2800mah £29.99



HOWES MODELS

01865 848000

Unit 16B Cherwell Business Centre
 (Part of Station Field Industrial Estate)
 Rowles Way, Kidlington, OX5 1JD
www.howesmodels.co.uk
 Fast mail order - Overseas postage at cost

MICROZONE SUPER SPECIAL OFFER!

6 CHANNEL RADIO
RADIO INCLUDES RECEIVER
 RRP £59.99
OUR PRICE £39.99!



Additional Receivers Available!

8 CHANNEL RADIO
WITH LCD SCREEN.
RADIO INCLUDES RECEIVER
OUR PRICE £59.99!



LARGE RANGE OFF HIGH QUALITY

7.2 VOLT BATTERY PACKS

2000MAH - £11.99
 3000MAH - £15.50
 3300MAH - £15.99
 3800MAH - £19.99
 4000MAH - £24.99
 5000MAH - £26.99

Lead Acid Batteries

6 VOLT 1.0 AMP - £4.99
 6 VOLT 1.3AMP - £4.99
 6 VOLT 3.4 AMP - £6.50
 6 VOLT 4.5 AMP - £5.99
 6 VOLT 7 AMP - £7.99
 6 VOLT 12 AMP - £11.99
 12 VOLT 2.3 AMP - £8.99
 12 VOLT 3.2 AMP - £9.99
 12 VOLT 4.5 AMP - £9.99
 12 VOLT 7 AMP - £12.99
 6V JELLY CHARGER - £9.99
 12V JELLY CHARGER - £9.99

NEW 2 CHANNEL RADIO!

ABSIMA 2 Channel 2.4GHz Combo
 Transmitter & Receiver!
 Adjustable Travel Volume
 On Rudder Servo
OUR PRICE ONLY
£39.99!



Additional Receivers £25.95!

NEW! Kingmax Sail Winch Servo's

Dimensions 40x19x38mm

1.5 Turn Standard Size Servo Speed:
 0.9/360 Torque: 6.1kg - Only £9.99
2.0 Turn Standard Size Servo Speed:
 0.9/360 Torque: 6.1kg - Only £9.99
4.0 Turn Standard Size Servo Speed:
 0.9/360 Torque: 6.1kg - Only £9.99
4.0 Turn Standard Size Metal Gears
 Speed: 0.9/360 Torque: 12kg - Only £14.99
6.0 Turn Standard Size Servo Speed:
 0.9/360 Torque: 6.1kg - Only £9.99
6.0 Turn Standard Size Metal Gears
 Speed: 0.9/360 Torque: 12kg - Only £14.99



Standard Size

KING MAX
 MAX KINGMAX HOBBY CO. LTD



NEW HORIZON 30 INCH
HARBOUR TUG BOAT RTR
COMES READY TO RUN WITH
ELECTRONICS AND RADIO GEAR
HAS A OPERATIONAL WATER PUMP!
REQUIRES 11.1V BATTERY & CHARGER
 RRP £489.99
OUR PRICE £449.99

Futaba



FUTABA T6L
2.4GHz 6 CHANNEL
RADIO INCLUDES
R3106GF RECEIVER
OUR PRICE
£99.99!



FLYSKY FS-I6

6 Channel Computer
 radio with a ton of
 features and setting
 adjustments!
 Includes receiver
Only £54.99!
 Additional RX £16.99

NEW DUAL CHARGER FOR LIPO'S & MORE



Charges most batteries
 including LI-PO, NiMH,
 Lead Acids & More!
 1-6s LIPO's, 1.2v - 18v NiMH
 2-20v Lead Acid's

Our Price Only £92.99!



SHARK BRUSHLESS ESC'S

NEW RANGE OF BRUSHLESS ESC'S. DIFFERENT
 AMPS AVAILABLE FOR MOST MOTORS

20AMP - £19.99 30AMP - £21.99
 40AMP - £24.99 50AMP - £56.99
 60AMP - £43.99 80AMP - £55.99

SUPER STRENGTH METAL GEARED WATERPROOF SERVOS! INCLUDE FITTINGS & METAL ARM!

20KG - £13.99
 25KG - £14.99
 30KG - £17.99
 35KG - £24.99
 60KG - £29.99



Waterproof

Marine Speed Controllers

NEW RANGE WITH LOW PRICES!

10A 4.8-12v ONLY £30.99
 15A 6-12 V ONLY £30.99
 15A PLUG N PLAY 6 - 12v - £30.99
 15A 12-24 V ONLY £31.99
 25A 6-12 V ONLY £41.99
 25A PLUG N PLAY - 12v - £41.99
 40A 6-12 V ONLY £52.99
 J PERKINS 50AH ESC - £37.99
 RADIO LINK 90A ESC
 (ALSO LIPO SAFE!) ONLY £29.99!



BRUSHLESS SPEED CONTROLS

MTRONIKS G2 HYDRA 15A BRUSHLESS
 RRP £49.99 - NOW £44.99
 MTRONIKS G2 HYDRA 30A BRUSHLESS
 RRP £59.99 - NOW £53.99
 MTRONIKS G2 HYDRA 50A BRUSHLESS
 RRP £84.99 - NOW £72.99
 MTRONIKS MICRO SWITCHER - £19.99

NEW DE-108 8 CHANNEL RADIO IDEAL FOR MODEL BOATS!

Proportional channels, 4 on the sticks with 2
 on dials and 2 switches. Battery indicator for
 handset and boat batteries!



SPECIAL OFFER - £19.99!



Li-Po Batteries at Great Prices

7.4v 1000mah - £11.60
 7.4v 1300mah - £12.99
 7.4v 1600mah - £14.99
 7.4v 2200mah - £15.50
 7.4v 3900mah - £29.99
 11.1v 1000mah - £15.50
 11.1v 1300mah - £18.50
 11.1v 1600mah - £19.99
 11.1v 2200mah - £19.50
 11.1v 3900mah £43.99
 11.1v 5000mah - £48.99

SERVOS

POWER 3KG STANDARD - £4.99
 OR SPECIAL OFFER 2 for £8.00!
 NEW! FUTABA SU300 DIGITAL - £18.50
 RADIANT 3.5KG BB WATER RES - £10.99
 FUTABA 3010 6.5 TORQUE - £23.99
 FUT 3014 WATERPROOF - £24.99
 HITEC 325 BALLRACE - £19.99
 POWER HD 9g Micro £3.50
 OR 4 For £13.50
 HOWES MIDI MG Servo £6.50
 MICRO METAL GEARED £4.99
 MINI SERVO ONLY £4.00 (4 for £15.00)
 HIGH POWERED BALLRACED £7.99
SAIL ARM, WINCH & SPECIALIST SERVOS
 HITEC 785 HB SAIL WINCH
 WITH FULL ROTATION DRUM
 OUR SPECIAL PRICE £36.99
 HITEC 765BB SAIL ARM
 WITH 12 CM LONG ARM
 OUR SPECIAL PRICE £36.99
 FUTABA HIGH VOLTAGE DIGITAL
 S-BUS SERVO SU400 - £34.99
 HITEC HS 805BB SAIL ARM HUGE
 WITH 20KG TRQ £37.99



GT POWER A3
Mains LIPO Charger
Low Cost UK Mains Charger
 Max Charge Output: 4A
 LI-PO 1-3S 3.7v - 11.1v
Superb Charger
For Only £14.99!



SUPER SERVO SPECIAL!
METAL GEARED
15KG HI-TORQUE SERVO
 Standard Size
 Fits All Brands
ONLY £9.99!
OR 2 FOR £14.00!



NEW HENG LONG 686 RTR TUG BOAT

MODEL COMES WITH 2.4GHz
HANDSET, BATTERY AND
CHARGER! LENGTH - 28CM
AVAILABLE IN GREEN OR
BLACK! RRP £39.99

OUR PRICE - £35.99!



NEW DEALS ADDED DAILY ON WEBSITE!

01865 848000 WWW.HOWESMODELS.CO.UK

PLEASE NOTE: PRICES IN OUR ADVERT ARE LIABLE TO CHANGE WITHOUT NOTICE

NEW RADIO LINK ESC!

90A WATERPROOF ESC!
WORKS WITH NI-MH AND
LI-PO BATTERIES!



OUR SPECIAL
INTRODUCTIONARY PRICE
ONLY £29.99!

MTRONIKS Hydra 15A, 30A, 50A Brushless Motor and Speed Controller Combo

Auto set up - Forwards and reverse - 6.0 to 12.0V Operation
Motor Speciation

KV (rpm/v) - 1100 - Power - 120W

Diameter: 28mm - Length: 38mm

Hydra 15A Combo - Only £61.99

Hydra 30A Combo - Only £71.99

Ideal Replacement for 380 - 400 Motors

Hydra 50A Combo - Only £128.99

MTRONIKS TIO LI-PO SAFE ESCS

For use in RC boats that allows for the use of Lipo battery packs
as well as the usual NICAD/NIMH/Lead Acid batteries

15A - RRP £39.99 OUR PRICE **£36.99**

30A - RRP £52.99 OUR PRICE **£47.99**

50A - RRP £68.99 OUR PRICE **£61.99**

SUPER SERVO SPECIAL!
HOWES STANDARD SERVO
4KG TORQUE - INCLUDES FITTINGS
SIZE - 40.3 X 19.8 X 38.6MM

ONLY £4.99 EACH!
OR 2 FOR
£8.00!



Receiver & Transmitter Batteries

4.8 VOLT PACKS

1200MAH FLAT OR SQUARE - £6.99

2400MAH FLAT OR SQUARE £9.99

6 VOLT PACKS

1200MAH FLAT OR TRIANGLE - £8.99

1600MAH FLAT OR TRIANGLE CELLS - £11.99

£2400MAH FLAT OR TRI - £11.99

9.6 VOLT TRANSMITTER PACKS

1200 MAH FLAT - £15.00

2000 MAH SQUARE - £19.99

2400MAH FLAT £22.99

AAA RECEIVER PACKS!

4.8V 800MAH FLAT OR SQUARE - £14.99

6V 800MAH FLAT OR TRIANGLE - £17.50

2/3RDS AA BATTERIES, FLAT OR SQUARE

4.8V 600MAH - £6.50

HENG LONG SALINA



FINALLY BACK IN STOCK!
READY TO RACE. INCLUDES POWER
8.4V BATTERY WITH CHARGER.
LENGTH OVER 70CM!

ONLY £89.99!

WANTED

**WE BUY SECOND HAND
RADIO CONTROL
MODELS**

**FROM SMALL ITEMS TO
COMPLETE
COLLECTIONS**

CAN BE COLLECTED

**PLEASE CALL US
ON 01865 848000
AND ASK FOR NICK**



FANTASTIC NEW RANGE OF BRUSHLESS MOTORS!

IDEAL UPGRADES FOR 385 AND
540 SIZED BRUSHED MOTORS!

FROM 2300KV TO 6100KV!

PRICES FROM £13.99!

ALSO AVAILABLE WITH ESC'S AS
COMBOS! CHECK WEBSITE FOR BEST
DEALS AND PRICES!

JOYSWAY DRAGON FORCE THE NEW VERSION 7!

Length 650mm Height 1338mm
The very popular DF65 yacht now updated
to the V7!

Available Ready to Run with
2.4GHz radio or ARTR (no radio)
ARTR RRP £234.99

Our Price £209.99

RTR RRP £284.99

Our Price £249.99

FINALLY BACK IN STOCK!

SEAPORT WORK BOAT TUG WITH
WORKING WATER CANNON!
READY TO RUN BOAT NOW WITH
2.4GHz RADIO GEAR
& LITHIUM BATTERY
LENGTH - 60CM

RRP £99.99

OUR PRICE

£89.99!



Electric Motors

385 5-POLE £3.99 each

400 3-POLE £6.99

540 3-POLE £3.99

545 5-POLE £3.99

683 5-POLE £4.00

MFA RE 140 (3-6v) £2.75

MFA RE 170 (1.5-3v) £3.75

MFA RE 360 (6-15v) £4.99

MFA 380 (3-7.2v) £5.75

MFA 385 (4.5-15v) £5.75

MFA RE 540 (4.5-15v) 3 POLE £7.50

MFA TORPEDO 800 £25.99

MFA TORPEDO 850 £25.99



FTX MORAY SPEED BOAT

SELF RIGHTING SPEED BOAT! READY TO
RUN FROM THE BOX AND YOU CAN RACE
MORE THAN ONE TOGETHER! CAPPABLE
OF SPEEDS OF 30KM/H!

ONLY 35CM LENGTH - GRAT FUN!

ONLY £39.99 EACH!



PROPS, SHAFTS ETC

LARGE RANGE OF THE
FOLLOWING

BRASS PROPS M4 2/3 BLADE
M4 NYLON PROPS 2/3 BLADE
STAINLESS STEEL SHAFTS M4
BRASS RUDDERS 6 SIZES IN STOCK
NEW LOWER PRICES!



Extension Leads

FOR ALL SERVOS!

SERVO LEAD 200mm £0.85

EXTN LEAD 300mm £0.85 each

EXTN LEAD 500mm £0.99 each

EXTN LEAD 1000mm £1.60 each

Y LEAD £1.75 each

BEC/JST RED BOTH ENDS £0.90

SWITCH HARNESS £3.99



UDI SUPER SPORT SPEED BOAT

FAST READY TO RUN SPEED BOAT WITH FLASHING
LED LIGHTS! FANTASTIC FUN! SELF RIGHTING!

LENGTH - 42CM - WIDTH - 12CM

RRP £79.99 - OUR PRICE ONLY £69.99!

UDI ARROW BRUSHLESS SPEED BOAT

READY TO RACE! SPEEDS OF 40MPH!

LENGTH: 63CM!

EVERYTHING INCLUDED
IN THE BOX!

RRP OF THIS BOAT
IS £259.99!

OUR SUPER PRICE
ONLY £179.99!



Also available in RED!



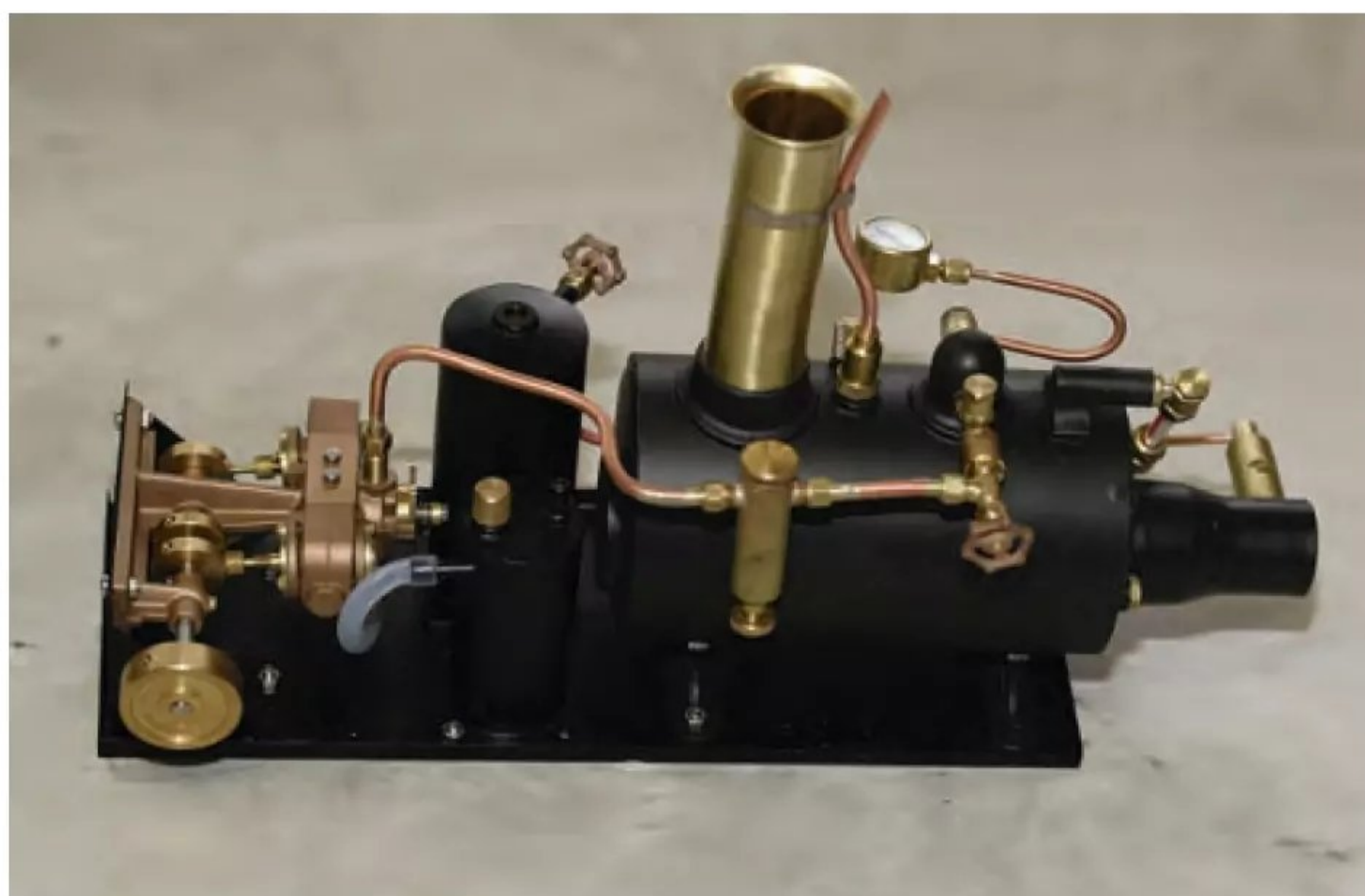
Miniature Steam Pty Ltd

Specialist Producer of Model Marine Steam Plants
FREE Postage for Orders AU\$500 and over During 2024



*Miniature Steam has just added a horizontal Clyde steam plant P/N 4087
to our range suitable for paddle boats. See Web for details*

*Suitable for
"Glasgow" or
similar
paddle boats*



Comes With:

Refillable Gas Tan

Exhaust Trap

Ceramic Burner

Pressure Gauge

Safety Valve

Mounted on a Brass Tray

**Our 3" Horizontal Clyde Steam Plant is a powerful steam plant capable of
powering boats up to 1.2 Metres**

Our website: www.miniaturesteammodels.com

Our email: info@miniaturesteammodels.com

MODELLING MAGAZINES YOU'LL LOVE

model Boats
PRINCESS VICTORIA
An elegant 1:18 scale 1907 passenger steamer build

MODEL ENGINEERS' WORKSHOP
No. 336
DIVIDING PLATES
How to use them and make plates for unusual numbers.
THE MAGAZINE FOR HOBBY ENGINEERS
MAY 2024 ISSUE 316 WWW.MODEL-ENGINEERS.CO.UK

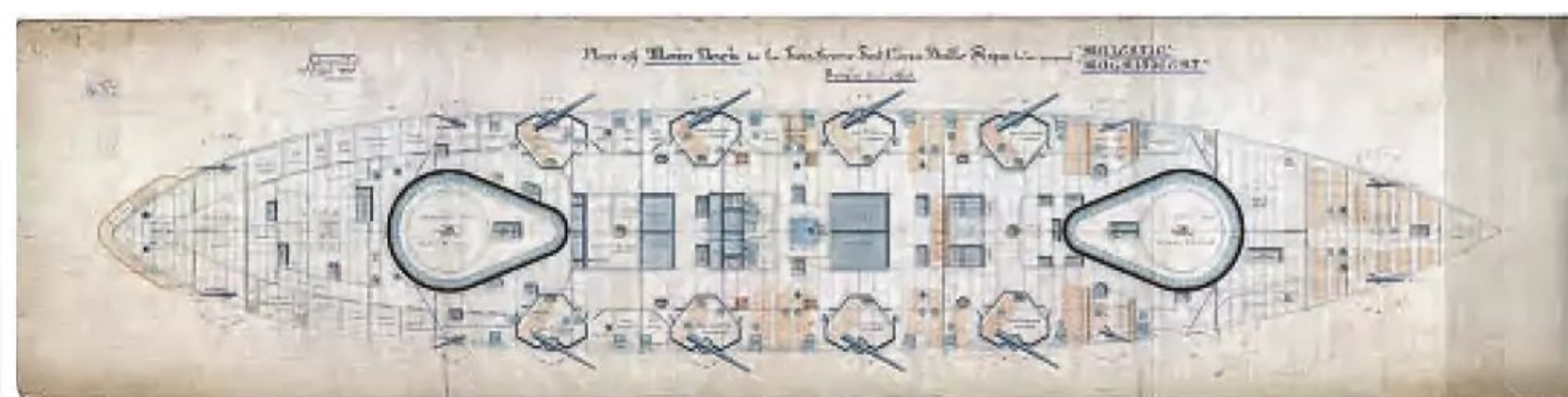
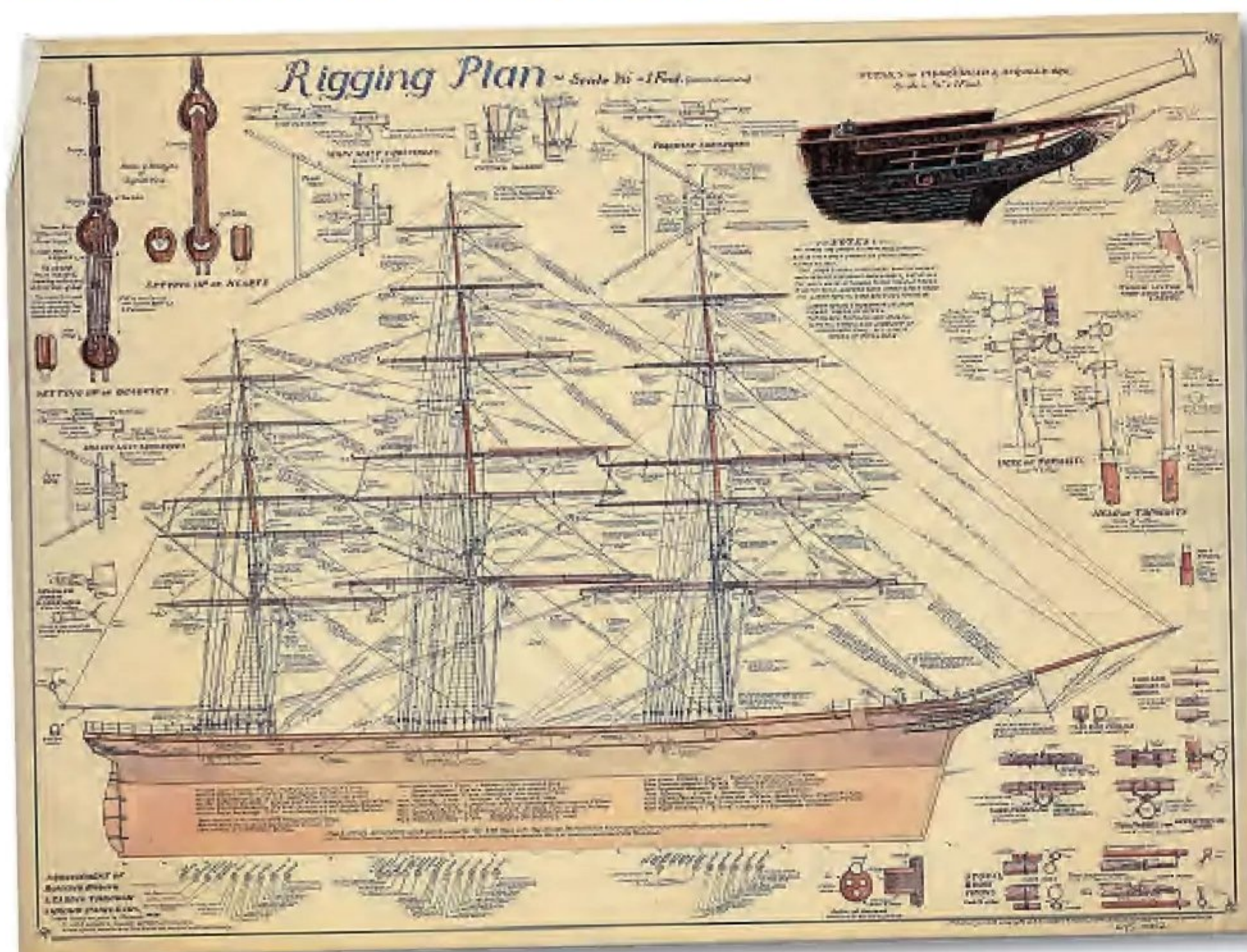
MODEL ENGINEER
Vol. 232 No. 4734 12 - 25 January 2024
Join our online community www.model-engineer.co.uk
Flying Scotsman
Construction of a fine model resumes

RCME & Foka
FREE PRO-PLAN!
S2D FOKA PART ONE
WORTH £17.00
VOL. 47 NO. 3 FEBRUARY 2024
www.modelflying.co.uk
BUILD THIS 3.35M SCALE SAILPLANE
Foka 4

GREAT OFFERS AVAILABLE ACROSS THE RANGE

SUBSCRIBE TODAY AND SAVE UP TO 49%
VISIT: WWW.CLASSICMAGAZINES.CO.UK/MODELLING24
CALL: 01507 529529 QUOTE: MODELLING24 EXPIRES 31/12/24

From historic to modern, plan a trip to the National Maritime Museum



The National Maritime Museum holds one of the world's largest collections of ship plans, which span from the late 17th century to the present day.

The museum holds about a million plans and is divided into two collections: Admiralty and Merchant.

The Admiralty collection

comprises a near unbroken record of the technical and historical

development of warships from the late 17th century to circa the 1970s. It has three main periods:

- Sailing Navy: circa. 1700 to 1834
- Victorian Navy: circa. 1835 to 1905 – the transition from sail to steam
- Modern Navy: 1906 to the late 20th century – development from Dreadnought through two world wars to the modern day.

The collection includes plans for warships from countries

including France, Spain, the US, the Netherlands, Argentina, Germany, Russia, Denmark and Portugal.

Merchant ships are represented in the Admiralty collection and reflect the Admiralty's desire to utilise vessel from the merchant marine in times of war as troop ships, Q-ships and hospital ships, or to have them adapted and converted into aircraft carriers, minesweepers and minelayers.

Technical records consist of statistical and design data generated by the Department of Naval Constructors, correspondence regarding technical design information for warships (Ship's Covers), machinery information books, ships books, contracts and specifications.

The Merchant collection

holds plans for an extraordinary range of vessels. It covers warships

built in private yards (British and foreign), lifeboats, liners, coastal craft, landing craft, yachts, cargo ships and other merchant types.

The collection can be divided into three areas:

- 1) Shipbuilder collections:** These are the archives of main shipbuilding companies.
- 2) Ship owner collections:** These archives, though generally small and incomplete, include plans for ship owners such as Shell, Ellerman, Andrew Weir & Co (Bank Line) and P&O.
- 3) Designers:** The plans in this small part of the collection represent the design processes of certain draughtsmen.

Visit our Prints website at www.prints.rmg.co.uk and use code **MODELBOAT10** to get a 10% discount off the entire order. For any further assistance, please contact us at Images@rmg.co.uk

Manvers Waterfront Boat Club MODEL BOAT BRING AND BUY SALE Sunday 21st April: 10am - 4pm

Admission
£2
Under 16s
Free

Come on down to the Boat Club and join us for our 'Bring and Buy Sale'. We have disabled access, a takeaway cafe serving hot food & drinks and toilets on site.

TRADERS ATTENDING

PRE-OWNED MODELS FOR SALE

PARTS AND FITTINGS

SELLERS £10 PER TABLE (6FT)

PAY ON THE DAY - NO CARD FACILITY

FREE PARKING ON THE BEACH



For more details or to provisionally book a table contact: Stephen Perkins on stephen.perkins@mwbc.org.uk or call the office on 01709 878984.

Manvers Waterfront Boat Club
The Boathouse, Station Road,
Wath-upon-Deerne, Rotherham,
South Yorkshire S63 7DG
www.mwbc.org.uk



Working Plans for Model Construction

The Entire Sailing Ship & Power Craft Series of
Authoritative Drawings By Harold A Underhill, AMIES

PUBLICATIONS FOR MAKING MODELS

- Plank -on-Frame , Vol I
- Plank -on-Frame , Vol II
- Mast and Rigging
- Deep Water Sail
- Sailing Ships Rigs and Rigging
- Sail Training and Cadet Ships

Illustrated list of 70 Sailing Ship Designs £4.00
Illustrated list of 35 Power Craft £4.00



Please write for further information and catalogue to:

Brown, Son & Ferguson, Ltd

Unit 1A, 426 Drumoyne Road, Glasgow, G51 4DA

Tel: +44 (0) 141 883 0141

Email: info@skipper.co.uk Website: www.skipper.co.uk

Compass 360

If you have a news story for these pages, please contact the Editor, Lindsey Amrani, via e-mail at editor@modelboats.co.uk

EXCLUSIVE PRIZE DRAW

WIN! AN AIRFIX 1:700 SCALE RMS TITANIC GIFT SET

WORTH £35.99



This month, courtesy of the kind folks at Airfix and Richard Leon FR, we're able to offer you the chance to win a fabulous Gift Set (Ref. AS0164A) from the Airfix RMS Titanic range.

As well as the 1:700 scale plastic kit (consisting of 141 parts), also included within the box will be a tube of poly cement, acrylic paints, two brushes and easy-to-apply decals.

Carrying an RRP (Recommended Retail Price) of £35.99, this kit is designated a Level 2 build and is therefore suitable for both intermediate modelers and confident/assisted beginners.

EXCLUSIVE PRIZE DRAW COURTESY OF BILLING BOATS

WIN! ONE OF THREE GREAT PRIZE PACKAGES!

This month, courtesy of the always generous crew at Billing Boats, we're offering you the chance to win one of three great prize packages. Each of our lucky winners will receive:

***An Excel Deluxe Ship Modellers Set, including:**

- K1 Light duty knife
- K2 Medium duty knife
- K5 Heavy duty knife
- An awl
- Pliers
- A mitre box
- Tweezers
- A sanding block & wedge
- A B490 saw blade
- 4 x assorted gouges
- 3 x assorted drills
- 15 x assorted blades



www.modelboats.co.uk December 2023 • Model Boats

Prize Draw results

We are now delighted to announce the lucky winners in our December 2023 and January 2024 issue prize draws:

■ **The RMS 1:700 scale Titanic kit** (courtesy of Airfix)
Mr Nick Dale of Cannock, Staffordshire

■ **The Modellers' toolkit & Mercantile beanie hat prize packages** (courtesy of Billing Boats)
Mr S. Frusher, Wisbech, Cambridgeshire
Mr Andrew Way, Guernsey
Mr C.E. Dennis, Isle of Man

■ **The Luxury Leather Workshop Apron** (courtesy of Stalwart Crafts)
Morwenna Theaker, Conwy, Wales

■ **The Sparmax ARISM Mini Kit** (courtesy of The Airbrush Company)
Mr B. Staines, Folkestone, Kent

Congratulations to you all, and profuse thanks to Airfix, Billing Boats, Stalwart Crafts and The Airbrush Company for donating these fantastic prizes!

EXCLUSIVE PRIZE DRAW COURTESY OF THE AIRBRUSH COMPANY

WIN! A SPARMAX ARISM MINI KIT

WORTH £225!



In last month's news section, we flagged up a specially packaged Christmas Edition of the Sparmax ARISM Mini Kit (Ref. CARB MiniKITXMAS). We're now offering a gift many of you are hoping to unwrap come this month, courtesy of the Airbrush Company.

The compressor is a powerful but space saving and easily portable unit. In keeping with its compact nature, it has a built-in airbrush holder on its handle, while the Airbrush itself has a 0.3mm tip and a 1.5mm nozzle.

EXCLUSIVE PRIZE DRAW COURTESY OF STALWART CRAFTS

WIN! A LUXURY LEATHER APRON



All the leather aprons in Stalwart Crafts range are hand made from sustainably and ethically sourced raw materials.

This month, courtesy of award-winning artisan leather goods specialist Stalwart Crafts, we're delighted to be able to offer you the chance to win a truly superb prize: the 'one size fits all' Cross Strap Apron in Deluxe Leather, which usually retails at £205.

Whether you're a kit modeller, a scratch builder or a model engineer, the Cross Strap Deluxe will prove an invaluable addition to your workshop. Not only will it prevent products such as paints, solvents, etc., causing damage to your clothes, it will protect against any flying debris when chipping, chiselling, drilling, grinding, sanding and sawing wood, and, indeed, serve to shield you from heat and sparks while engaging in hot work.

We absolutely love this apron because:

- It's fabulously stylish, yet at the same time extremely practical
- It's been lovingly hand crafted from sustainably sourced leather
- To ensure complete comfort during long periods of wear, as well as the leather being lightweight and flexible, the apron is of easily adjustable bib and looee (rather than neck strap) design, distributing the weight across the shoulders and back as opposed to around the neck.
- The premium quality leather has been specially cured and treated, so it's highly stain and scratch resistant, and, however dirty you get, you can clean it down with a soft cloth and some lukewarm water
- It sports a large front pocket with two openings. There is also a handy towel strap (to which, should you wish, you can attach a Stalwart Crafts leather pouch for even more storage capacity; please note, this is not included in the prize but available to order separately)
- To top it all off, Stalwart Crafts believes in its products so much, it offers a lifetime warranty on all its leather goods!

www.modelboats.co.uk January 2024 • Model Boats

RNLI bicentennial souvenirs

January 4, 2024, saw a set of six stamps released to celebrate the 200th anniversary of the RNLI in its Isle of Man birthplace – this date selected as the organisation was founded by IOM resident Sir William Hillary, born on January 4, 1824. Five of the stamps depict the island's lifeboats and their stations (Port St Mary, Douglas, Peel, Ramsey and Port Erin) while one honours the founder himself along with Douglas Bay's Tower of Refuge (Sir William had the building constructed on Conister Rock in 1832 to offer shelter to shipwrecked mariners). These can be ordered via <https://www.iompost.com/stamps-coins/collection/rnli-200/>

Similar stamp collections are to be launched in Jersey and Guernsey on 4 March. While the Royal Mint is to issue a commemorative 50p piece.

The RNLI's own extensive range of 200th anniversary souvenirs can be viewed and purchased online at <https://shoprnli.org/collections/rnli-200-range>.



Just a few of the souvenirs/collectables designed to honour the 200th anniversary of the RNLI.

OUT AND ABOUT

Manvers MBC Bring & Buy Sale

The Manvers Model Boat Club will be hosting an open to the public Bring and Buy sale at The Manvers Waterfront Boat Club, The Boathouse, Station Road, Wath-upon-Dearne, Rotherham, South Yorkshire (program your SatNav to 663 7BU) on Sunday, April 21, between 10am and 4pm. Admission will be charged at £2 on the gate. Both individual enthusiasts and groups representing other model boat clubs will be more than welcome to display

and/or sail their own boats (with the exception of I.C. or Fast Electric models) at the event. There will also be numerous trade stands to browse, with Mountfleet Models, the PropShop, J Class Yachts from Alan Horne, and many others having already confirmed their attendance.

The venue boasts free

'on the beach' parking, disabled access, a take-away cafe serving hot food and drinks and onsite toilets.

Anyone wishing to provisionally book a table should contact Stephen Perkins via email at stephen.perkins@mwbc.org.uk or call 01709 878984.



Medway Queen centenary celebrations

The Medway Queen Preservation Society has announced a series of events to mark the historic paddle steamer's 2024 centenary.

For those of you not familiar with this vessel, during World War II, HMS Medway Queen served as a commissioned minesweeper and took part in the evacuation of the British Expeditionary Forces from Dunkirk, making several trips across the Channel and rescuing thousands.

Later employed in various commercial roles, all aspects of the ship's career

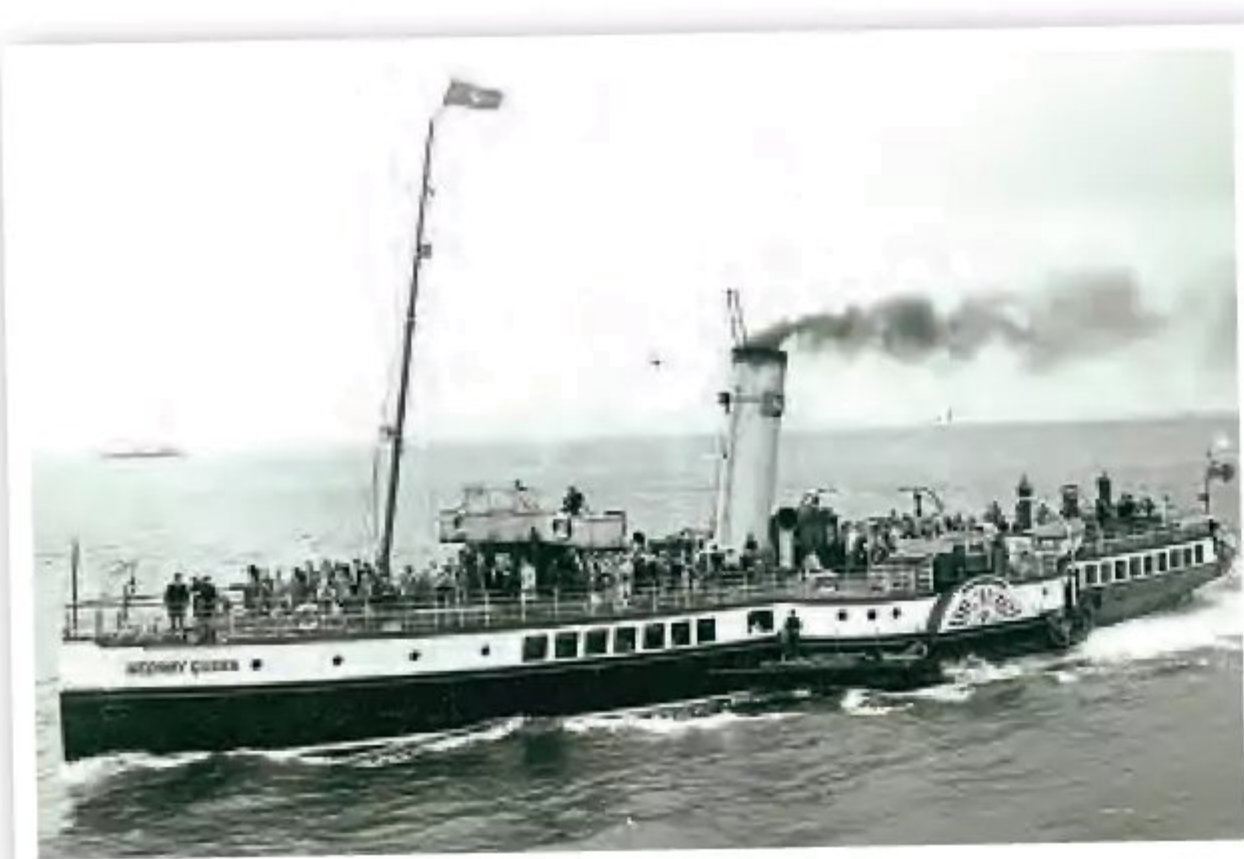


are extensively covered in books published by the Medway Queen Preservation Society, available to buy online at www.medwayqueen.co.uk or from the Medway Queen Visitor Centre on Gillingham Pier (ME7 1RX).

Centenary celebrations will begin on Sunday, April 21 with a (strictly by invitation) memorial service in Rochester Cathedral for those with family connections to the ship, while Tuesday, April 23 (the actual launch anniversary) will see a reception, once again, for invited guests only, on board the Medway Queen herself.

The ship will, however, be open to the public as usual from 11am to 4pm (last admission 3pm) on Saturday, April 20 and Monday, April 22, while a particularly exciting day to visit will be Saturday, April 27, when there will be a visit from some Dunkirk Little Ships and the Chatham Cruising Society.

Fund-raising activities planned throughout the year will include a summer prize (ticket sales from the beginning of April until the end of June) and the launch of a new range of merchandise, which will be exclusively available at the Medway Queen Visitor Centre on Gillingham Pier and via the Society's website www.medwayqueen.co.uk.



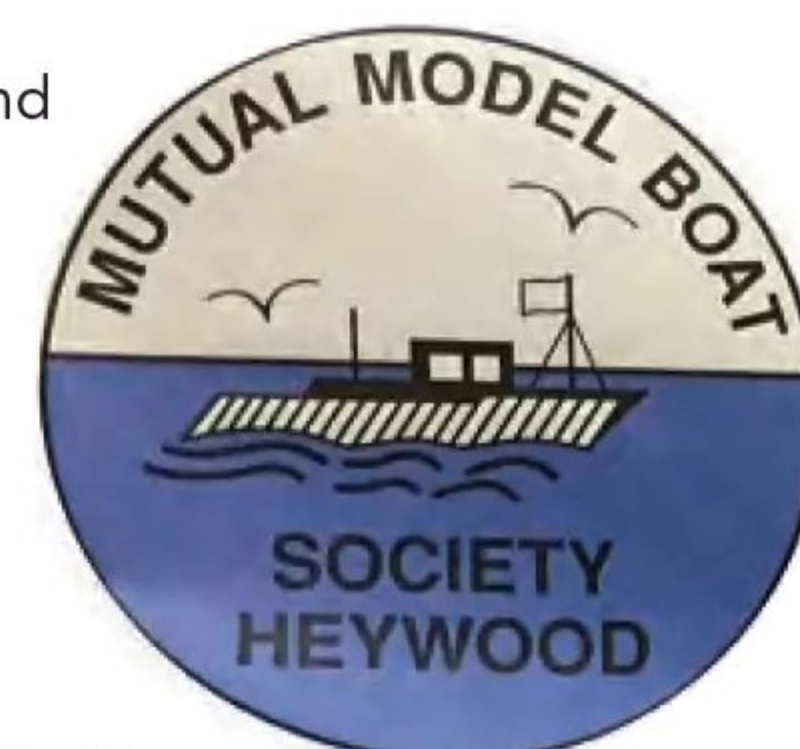
The Medway Queen approaching Southend while serving as an excursion paddle steamer back in September 1963. Image courtesy of the PSPS Collection.

The Mutual Model Boat Society Bring & Buy sale

The Mutual Model Boat Society will be holding its Grand Modellers Bring and Buy sale at the Crimble Croft Community Centre (wheelchair friendly), Aspinall Street, Heywood, Manchester OL10 4HL on March 15, 2024.

Doors will open to the public from 9.30am to 1pm and admission will be charged at £1.50.

Those wishing to reserve a table at this event should contact Colin Travis on 07905 028298.

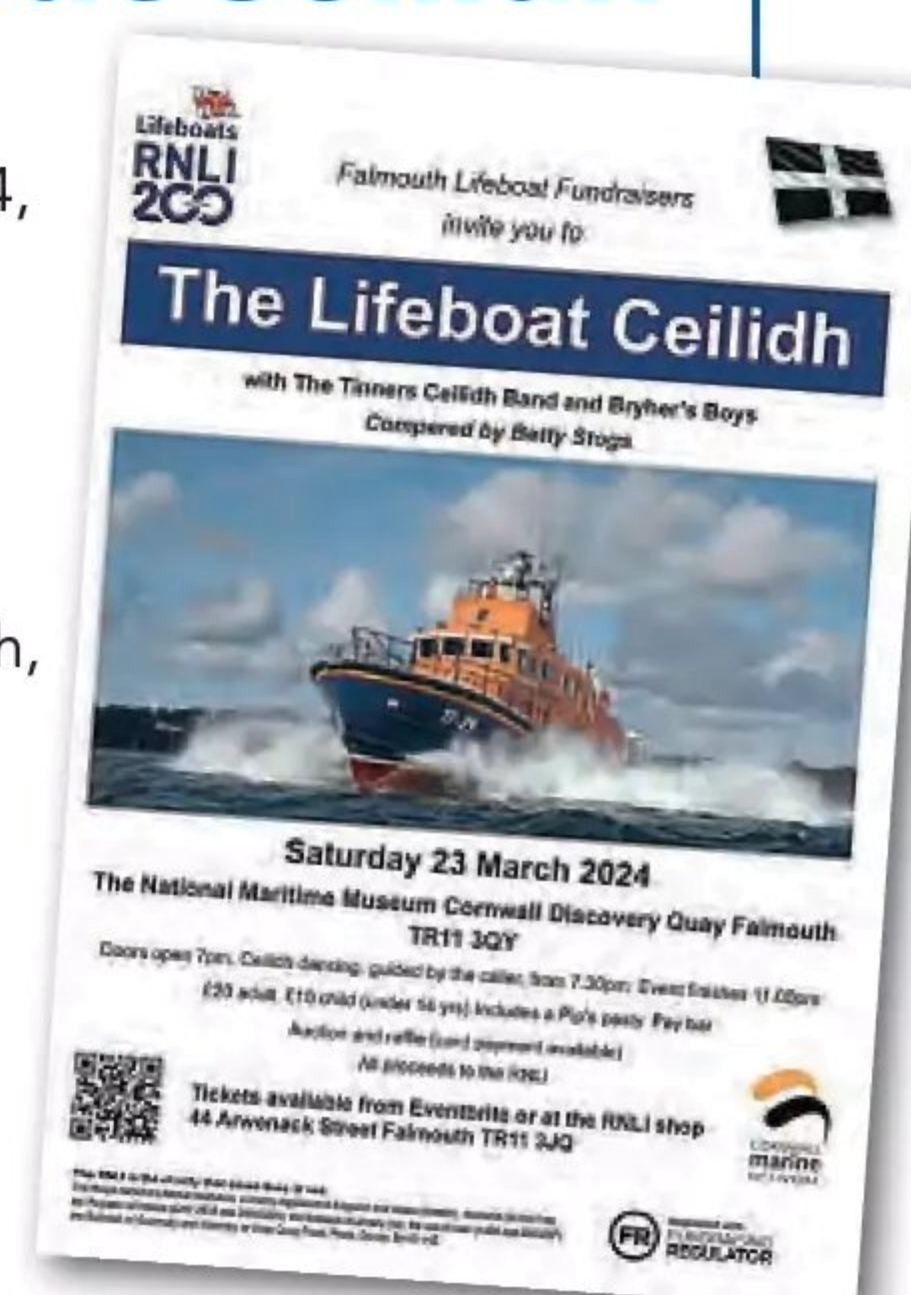


Falmouth Lifeboat Ceilidh

On Saturday, March 23, 2024, the National Maritime Museum Cornwall (Discovery Quay, Falmouth, Cornwall TR11 3QY) will be hosting an evening of music and dancing in celebration of the RNLI's 200th anniversary.

Starting at 7pm and ending at 11pm, the ticket price will include a local Cornish pasty and drinks will be available from a pay bar. There will also be a charity auction and raffle. All the proceeds from this event, which is being sponsored by the Cornwall Marine Network, will go to the Falmouth Lifeboat and supporting the next 200 years of saving lives at sea in Cornwall.

Tickets, priced at £20 (plus a £2.38 booking fee) for adults and £10 (plus a £1.55 booking fee) for children are available online at <https://www.eventbrite.co.uk> or can be purchased directly from the RNLI Shop in Falmouth at 44 Arwenack Street.



model Boats

SUBSCRIBE

Enjoy 12 months for just £52



THREE GREAT OPTIONS TO CHOOSE FROM...

Print only

- Quarterly direct debit for £15
- 1 year direct debit for £52
- 1 year credit/debit card for £57

Print + Digital

- Quarterly direct debit for £18*
- 1 year credit/debit card for £65*

Digital Only

- 1 year direct debit for £36*
- 1 year credit/debit card for £39*

**Any digital subscription package includes access to the online archive.*

Great reasons to subscribe

- Free UK delivery to your door or instant download to your digital device
- Save money on shop prices
- Never miss an issue
- Receive your issue before it goes on sale in the shops

AND SAVE



www.classicmagazines.co.uk/mbodps



01507 529529 and quote MBODPS

Call 01507 529529, lines open Mon – Fri 8.30am – 5.00pm

TERMS & CONDITIONS: Offer ends 31 December 2024. Subscriptions will start with the next available issue. Direct debit payments will continue on the agreed plan unless you tell us otherwise. To view the privacy policy for MMG Ltd (publisher of Model Boats), please visit www.mortons.co.uk/privacy. Please visit www.classicmagazines.co.uk/terms for full terms and conditions.



SLEC's KD Perkasa

Ahead of a full build review in next month's issue, Nick Brown provides a preliminary inspection of this 1:40 scale kit

The 96ft Malaysian Fast Patrol Boat *KD Perkasa* was designed and launched by Vosper in April 1966 as a class of four vessels based on the Royal Navy's Brave class but using enhancements from Vosper's private venture 'Ferocity', which closely resembled the Danish Søløven class. All these vessels were similar in appearance and general characteristics although differed in detail to suit the various navies for which they were built. They all boasted hard chine planning wooden hulls powered by three Rolls-Royce Marine Proteus gas turbines, giving them an impressive speed of 50 to 60 knots. The original armament was four torpedoes, a single bow mounted 40mm Bofors gun, and a twin 20mm Oerlikon cannon on the stern. They were re-armed in 1971 with eight SS-12 missiles before being retired from Malaysian Navy service in 1977.

SLEC's Perkasa kit was the last model boat to be designed by the late Dave Milbourn. An excellent modeller himself, Dave's aim here was to produce a relatively easy to construct kit, although he did suggest it



The kit comes in flat-pack style box, with all content neatly arranged to avoid any crushing issues.



Instruction booklets provide both written and pictorial guides to the build.

“SLEC’s Perkasa kit was the last model boat to be designed by the late Dave Milbourn”

would be advantageous for the end user to have some prior familiarity with building models from wooden parts. With the kit produced at 1:40 scale, the resulting model has a length of 774mm (30.5in) and a beam of 190mm (7.5in).

What’s in the box?

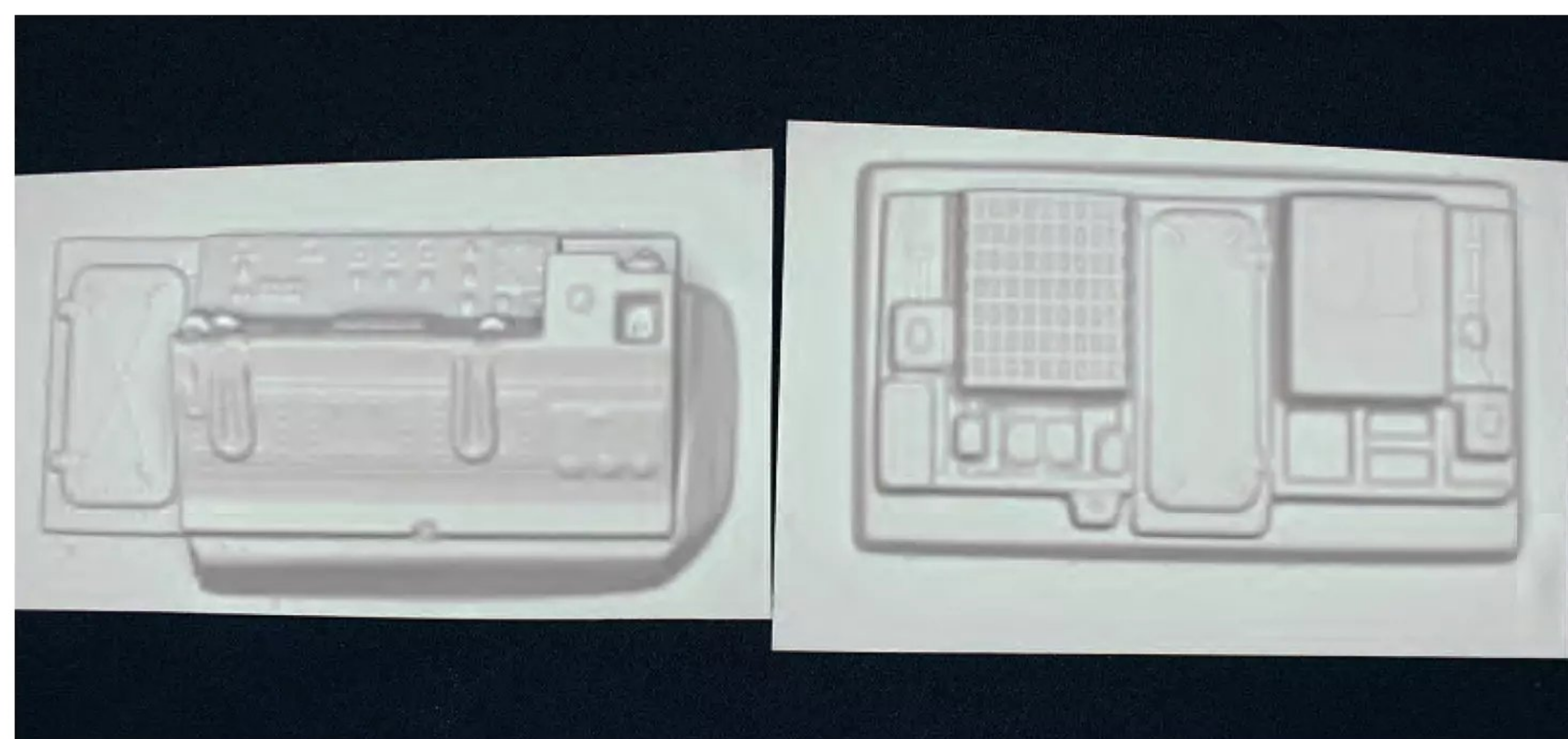
My kit arrived in a flat-pack style box, inside which all the CNC cut plywood and fitting packs were neatly arranged to avoid any crushing issues.

The entire hull and superstructure sections are constructed from a mixture of CNC cut plywood sheets, balsa blocks and hardwood strips. The plywood sheets are of particularly excellent quality, with minimal clean up required to remove the parts. Likewise, some of the detail incorporated into these sections is very impressive, as can be evidenced in my photo of the stern platform.



The entire hull and superstructure sections are constructed from a mixture of CNC cut plywood sheets, balsa blocks and hardwood strips.

“The kit comes complete with 35 individual fittings packs, produced from a mixture of materials, ranging from vac-formed hatches and 3D-printed bollards to searchlight and brass handrails”



The kit comes completed with 35 individual fittings packs, produced from a mixture of materials, ranging from vac-formed hatches and 3D-printed bollards to searchlight and brass handrails.



Also, worth pointing out is that the plywood parts for the stand included as part of this kit are of a much sturdier thickness when compared to those supplied in some earlier SLEC kits I have built, although that's not to say the older style was flimsy in the slightest!

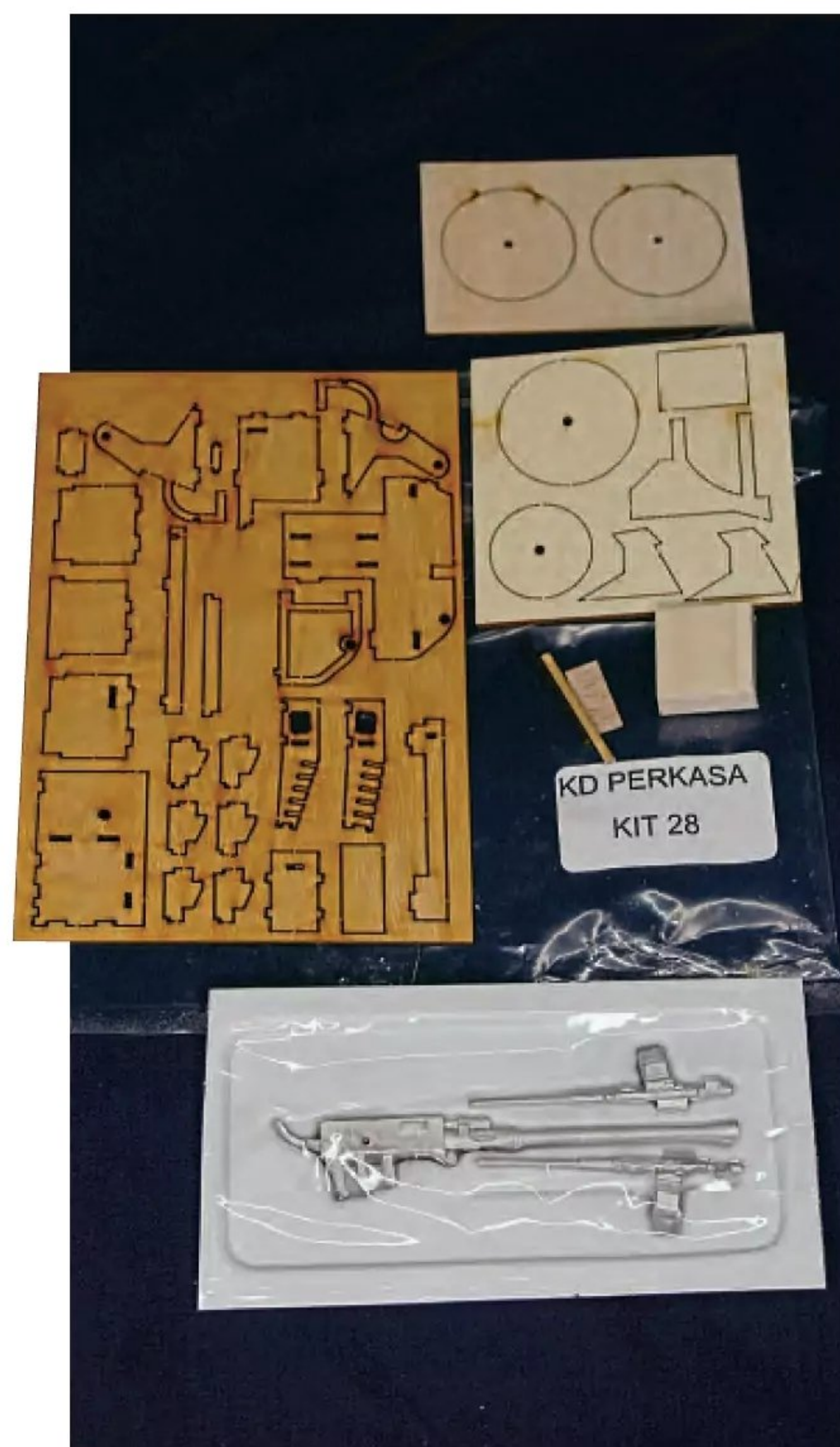
The kit comes complete with 35 individual fittings packs, produced from a mixture of materials, ranging from vac-formed hatches and 3D-printed bollards to searchlight and brass handrails. I would say that Fittings Kit No. 28 is one of the most comprehensive kits for a Bofors AA gun I have ever encountered in these materials and includes a white-metal cast gun barrel. The vac-form bridge parts feature some outstanding detail; the consoles for the boat controls and gauges are especially well rendered using this method of moulding. The 3D-printed parts are not the finest items I have seen, but then I would expect to pay a lot more for more refined items from better known 3D-printing companies. SLEC does suggest that if you want to upgrade the weapons and other fittings you can, and it has even provided a link in the instructions to say where to find these on the Shapeways' website.

Also supplied is a scale plan and three instruction booklets. One of the booklets is dedicated to the fittings packs, while

“Also supplied is a scale plan and three instruction booklets. One of the booklets is dedicated to the fittings packs, while the other two cover the main hull and superstructure construction – the first being a set of instructions and the second featuring a pictorial build sequence”

the other two cover the main hull and superstructure construction – the first being a set of instructions and the second featuring a pictorial build sequence. This is an excellent idea, but you will need to refer to both, as the written instructions explain how to 'wire-up' your model and provide a suggested extras listing, while the picture booklet includes a useful CNC cut plywood parts layout diagram.

For the purposes of this review, SLEC also provided me with suggested running gear for the KD Perkasa – a brushless motor, a 60-amp ESC, propeller, prop shaft, and a drive coupling, all of which will all be evaluated in my full build review next month.



The fittings Kit No. 28 for the Bofors AA gun.



Ruth preparing to leave the harbour on her maiden voyage.

BUILDING *BLAKENEY*

John Miles explains why this budget-buy UK designed and manufactured kit is well worth netting

It was about two years ago, while browsing the internet looking for a model boat kit, I first came across HA Kits (<https://hakits.co.uk>). Some 14 kits are offered, all of which are really inexpensive, with prices ranging from about £40 to £60. While reflecting on these prices, to give an analogy, my wife spends more at her backstreet hairdresser in Market Harborough – I must remember this when trying to justify future expenditure on model boats!

Now, I have a suspicious nature when it comes to pricing, bearing in mind that old adage “You only get what you pay for”, so it was toe in the water time.

What had also caught my attention were the adjustable model boat stands offered on HA Kit’s website. Fully adjustable, these appealed as they would fit the model and save all the trouble of mackling up a stand. I had no idea of what to expect, but at £12 for a set of four, I figured I wouldn’t be

risking too much of my old age pension. To my joy, I discovered these stands take about 10 minutes to assemble, come with foam rubber pads to protect the hull, and simply require mounting on a suitable piece of board.

The first HA kit I worked on, the ‘Flying Christine’ cabin cruiser, went together beautifully. So, reassured by its quality, I decide to splash out and order another – this time the *Blakeney* 27-inch-long fishing boat (the same boat is available as a 20-inch model). Construction of this kit turned out, once again, to be deliciously simple.

It’s clear that this company’s main objective is to produce inexpensive and easy to build kits aimed at encouraging younger enthusiasts into the hobby. But, if you are an experienced modeller, don’t be put off. Yes, they are simple to build and certainly won’t take months to complete, but the finished boats are surprisingly good.

At this stage I should probably point out these kits don’t include a propellor, shaft, motor, electronics, etc, but, in all fairness, there aren’t many kits that do, and, anyway, these components are, of course, easily sourced.

Back to the *Blakeney*!

This kit was delivered (I use that term loosely, as to be honest it was simply hurled over the gate) just a couple of days after I’d placed my order, and, despite the courier’s less than careful handling, in perfect condition, thanks to HA Kits’ excellent packaging.

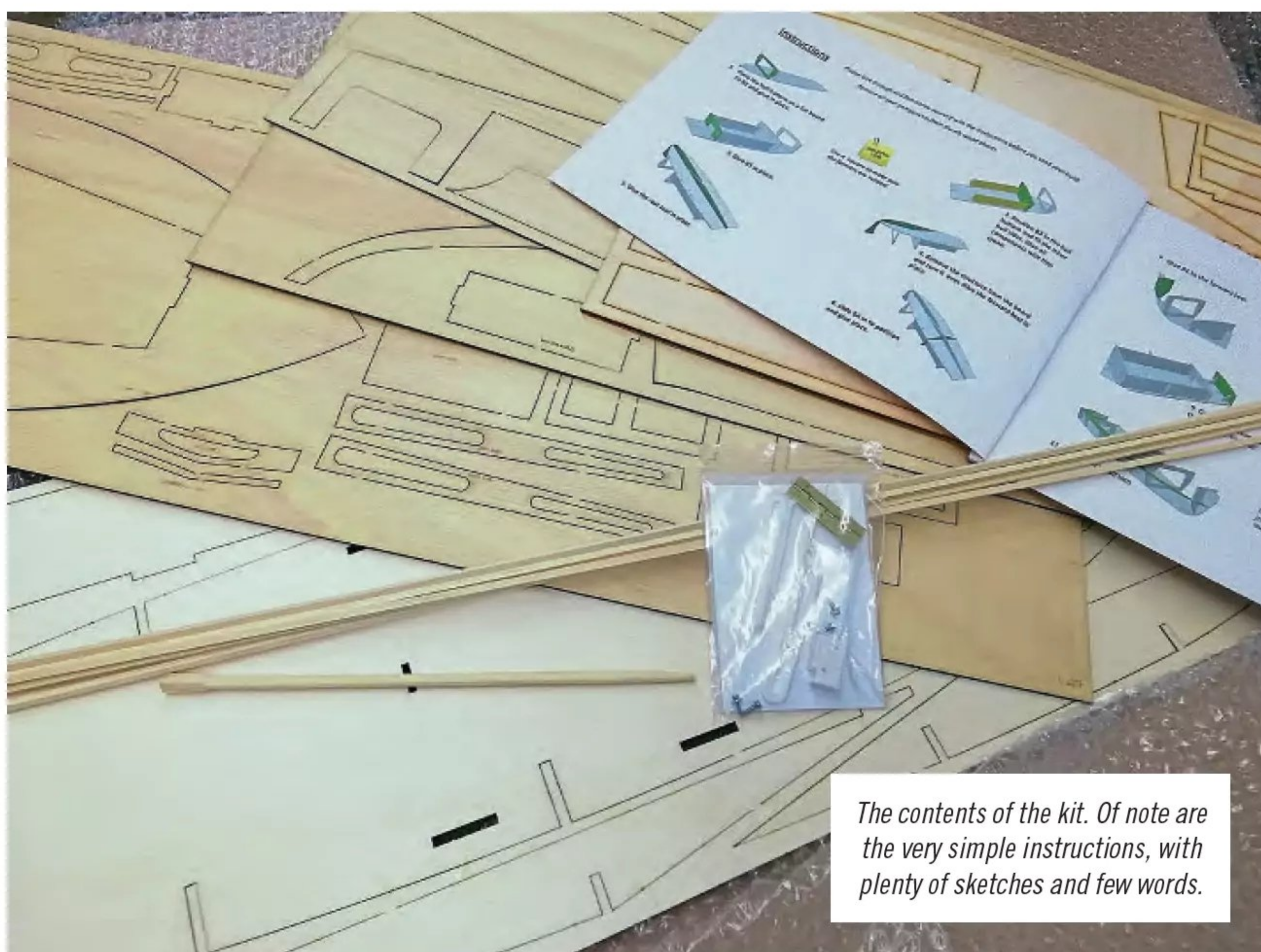
On opening the box, the contents immediately reveal that while these kits are inexpensive, this is certainly not something reflected in poor wooden components. The plywood is of good, robust quality; 3.75 mm thick for the major parts, and 2.25 mm for the less load bearing parts.

“It’s clear that this company’s main objective is to produce inexpensive and easy to build kits aimed at encouraging younger enthusiasts into the hobby. But, if you are an experienced modeller, don’t be put off... The finished boats are surprisingly good”

Following the provided instructions, the main hull structure can be made in an afternoon. It really is that simple! The most difficult part is twisting the outer hull panels to suit the contours of the ribs. They can be soaked to aid assembly, although I coped easily using a huge number of drawing pins (thumb tacks) to hold everything together while the adhesive dried. HA Kits suggest using superglue, which I can see would speed up the construction. I, however, opted for Super Aliphatic resin; as this takes about 10 minutes to dry, you, too, may appreciate the extra time this buys you for careful fitting of the parts and any necessary rectifications before the adhesive cures. If you’re feeling super confident and speed is of little consequence, however, then by all means go for ordinary Aliphatic resin.

Be mindful of the fact that the lower deck does not allow for access to the ‘compartments’ below the deck once the side panels are bonded on. As I like to pour resin into the compartments to help ensure all the joints below the water level are sealed from the inside, I cut large holes to allow for this. These would later be covered by a ‘decorative’ deck surface.

Likewise, a word of warning in regard to the fitting of the propellor shaft. According to the instructions, this should be installed at Stage 13. However, I, in my infinite wisdom, decided to wait until the keel side cheeks had been glued on. This was a big mistake! Consequently, as I didn’t have a 6mm diameter drill long enough to drill out the whole length of the keel slot, in the end it was brute force and bad language that won the day!



The contents of the kit. Of note are the very simple instructions, with plenty of sketches and few words.



These are the additional items you will need to purchase to complete the project.



The construction is very basic, following the usual sequence of deck and bulkheads.



“Following the provided instructions, the main hull structure can be made in an afternoon. It really is that simple!”

Left: By boring some large holes in the deck, resin can be poured into the hull’s interior compartments, thereby ensuring all the joints below the water level are sealed from the inside.



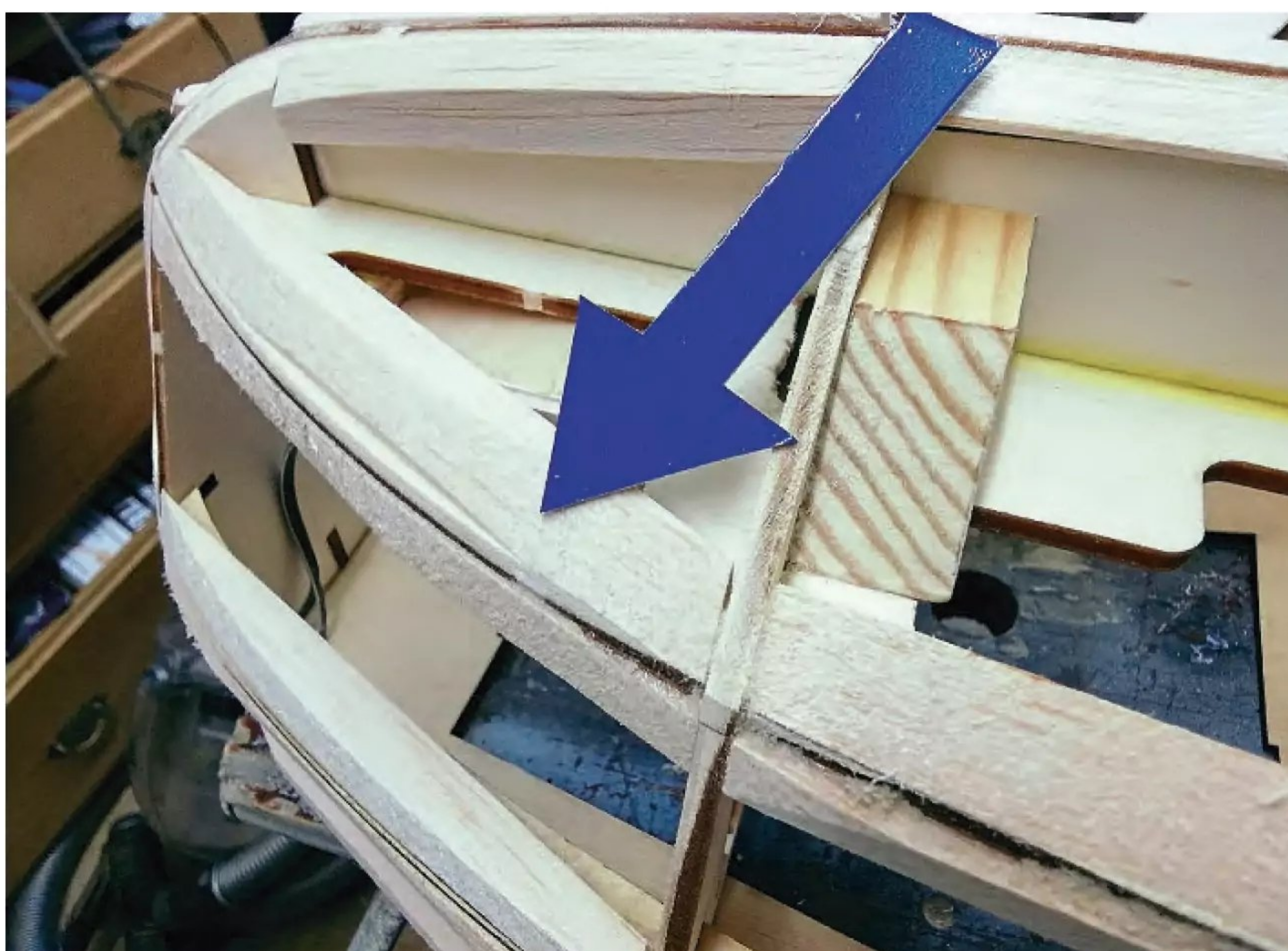
The keel fitted. John admits he made a big mistake not fitting the propellor shaft at this stage.



Where John's propellor shaft came through into the deck, a trough had to be gouged out to facilitate clearance for the universal joint.

Next, you'll need to think about where you are going to place your battery, speed controller and receiver. There is no real choice when it comes to the rudder servo, or indeed the motor, as these are sited in predetermined locations. The real decision concerns the battery pack, as this is likely to be the heaviest piece of equipment. Experience would suggest towards the stern. The pack I chose is rather large, and on reflection I should have purchased a smaller one.

Fitting the electric motor may presents a bit of a challenge. I opted for a 'medium' sized motor, but I suspect the problem I faced would apply, to some degree, whatever size is selected. I found that without some drastic cutting in the bow area it would have been impossible to line up motor and prop shaft. Fortunately, this was easily overcome, as my photos illustrate. In light of this, however, I strongly advise you fit your motor as soon as the propellor shaft is bonded in place.



The hole cut in the deck for the motor to be dropped into.



The motor dropped into the aperture and mounted on an angled block of plywood, allowing alignment with the prop shaft.

Apart from that minor hiccup, the build progressed smoothly, and I soon had all the wiring, speed controller, receiver, etc, installed and tested.

This done, it's time to smooth out the contours (ribs) of the hull in readiness for gluing on the outer panels. I chose to add additional 6x6mm balsa to the frames adjacent to where the panels were to be fitted to give a greater gluing contact surface, and to make the whole boat stronger.

Left: Strips of balsa wood glued onto the plywood frame and sanded down to the boat's contours. This gives a greater surface area on which to bond the outer skins.



This is probably the most difficult task of the entire build: the outer skin needs to be glued onto the bow and held securely with tape, clamps and map pins.



Once the outer skins have been fitted, any minor gaps and map pin holes can be filled with P 38 filler and sanded down.

Fitting the outer skins of the hull is (relatively) simple. The plywood is accurately laser cut and fits well. Bending the plywood around the bow formers, however, can be tricky. I soaked the bow section of the skins prior to attempting to fit them. It is important not to use superglue when fitting the outer skins. You will find that using Aliphatic resin adhesive instead will give you time to manoeuvre the panels into place prior to them being held in place with map pins, clamps and tape. My panels went on one at a time, before leaving each to dry overnight.

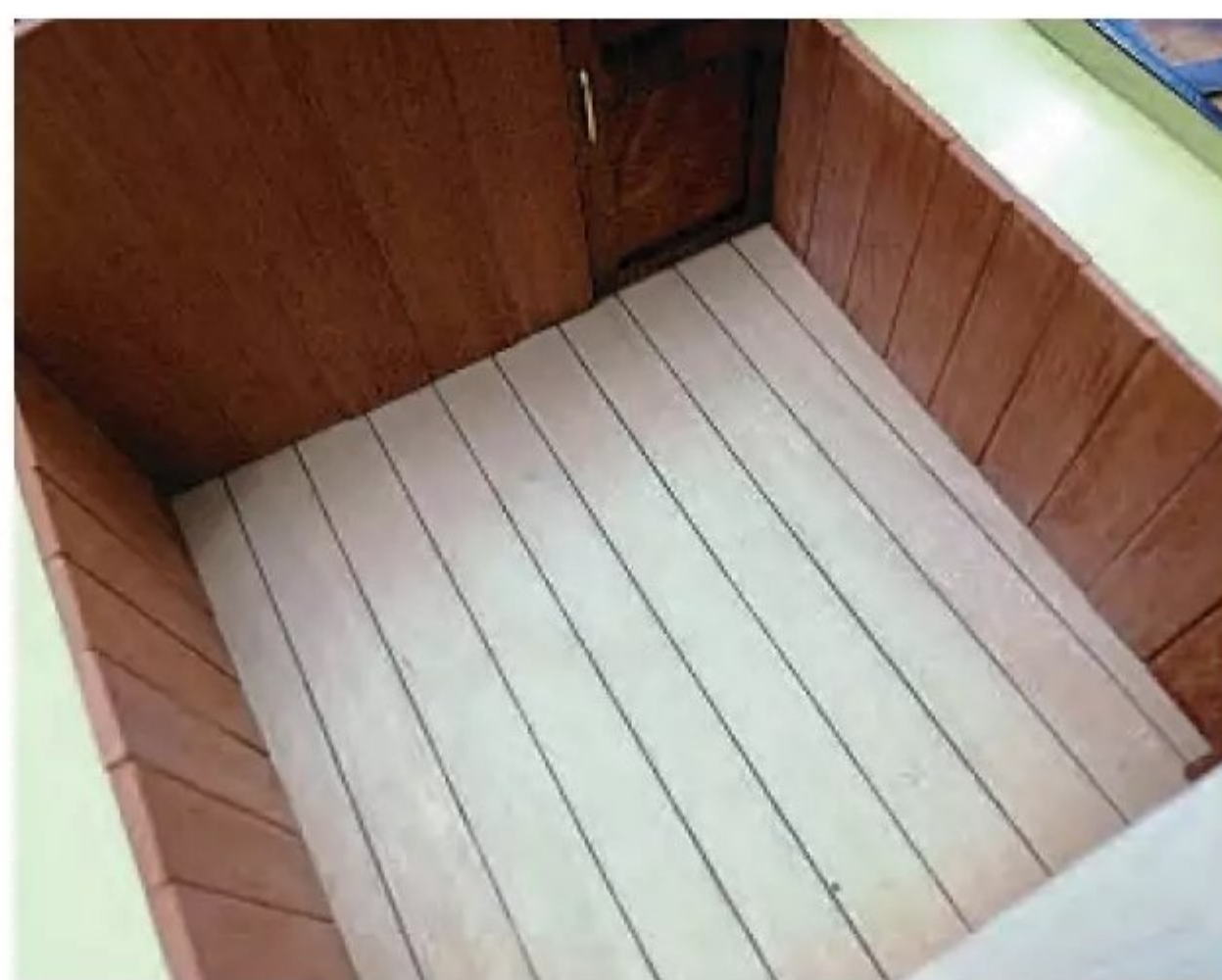
Any gaps can then, along with the pin holes, be filled with P38 filler. After sanding down and applying a coat of sanding sealer and two coats of primer (I used Phoenix Precision grey primer), your hull will, after a final sand, be ready to paint. The brush applied colour scheme I went for was, I'll admit, determined less by choice and more by having some left-over gloss enamel I wanted to use up.

Following this, once you've assembled the cabin roof and fitted some minor details, e.g., window frames, a mast, etc, you will have completed the *Blakeney*, as far as the basic kit is concerned. But you can, of course, personalise your boat, and this is probably the most fun part of the whole project!

The deck of my cockpit area was fitted with a piece of 1.5mm plywood, with the planking marked out using a pencil. The vertical planks were made from scraps of teak I had kicking about in the shed. I also tarted my boat up with the addition of various fishing tackle and related items. Just out of interest, the fish were made from DAS modelling clay. If you fancy giving this a go, simply roll a small sausage of the clay, cut to roughly the required length, then pinch one end for the head and taper the other end prior to squeezing the tail fin into shape.



With the hull complete, a set of adjustable supports need to be made up and glued in place on a piece of plywood. These supports, made by H.A. Kits, are particularly useful when constructing any vessel.

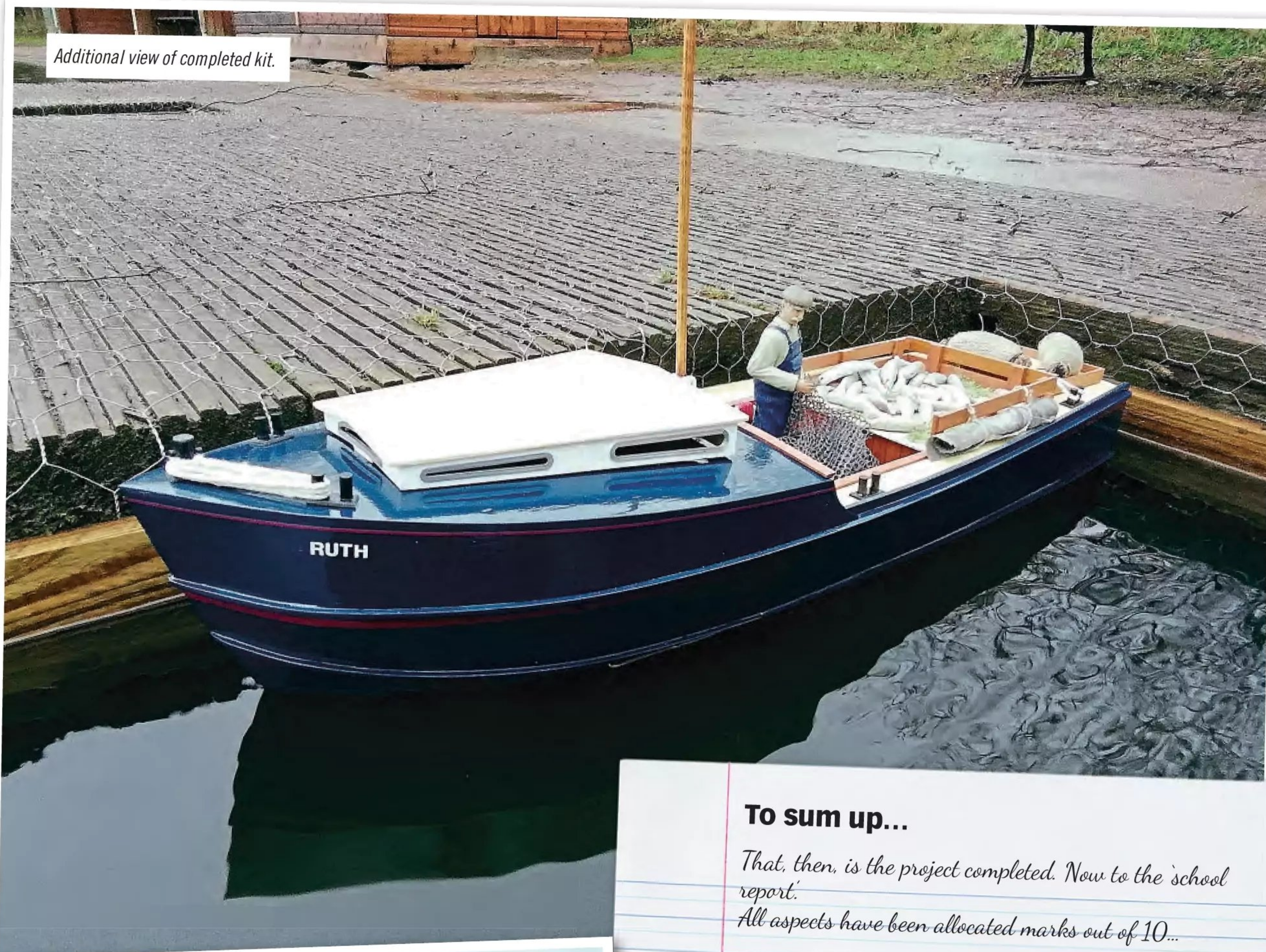


The cockpit area was clad on the side panels with strips of teak, and the deck with the planks marked on with pencil. These additional features are not included in the kit and are a part of my 'tarting' the boat up.



The hull exterior having received its final coat of enamel paint and with the name 'Ruth' added. The lining is Trimline self-adhesive tape, which has been applied and then given a coat of gloss varnish.

Additional view of completed kit.



Additional items on John's model include 1:12 scale fisherman (purchased from Mountfleet Models), DAS modelling clay fish and some coarse netting.

To sum up...

That, then, is the project completed. Now to the 'school report'.

All aspects have been allocated marks out of 10...

Delivery – 9/10

The kit arrived just 3 days after I'd placed my order.

Packaging – 9/10

The packaging survived the courier's less than careful handling.

Instructions – 8/10

Overall, the instructions were very easy to follow. There were some minor details missing that would have aided construction.

Quality – 9/10

The laser cut parts really are excellent.

Ease of build – 7/10

Generally everything is pretty straightforward, although a beginner may need to seek some assistance from a more experienced modeller.

Value for money – 9/10

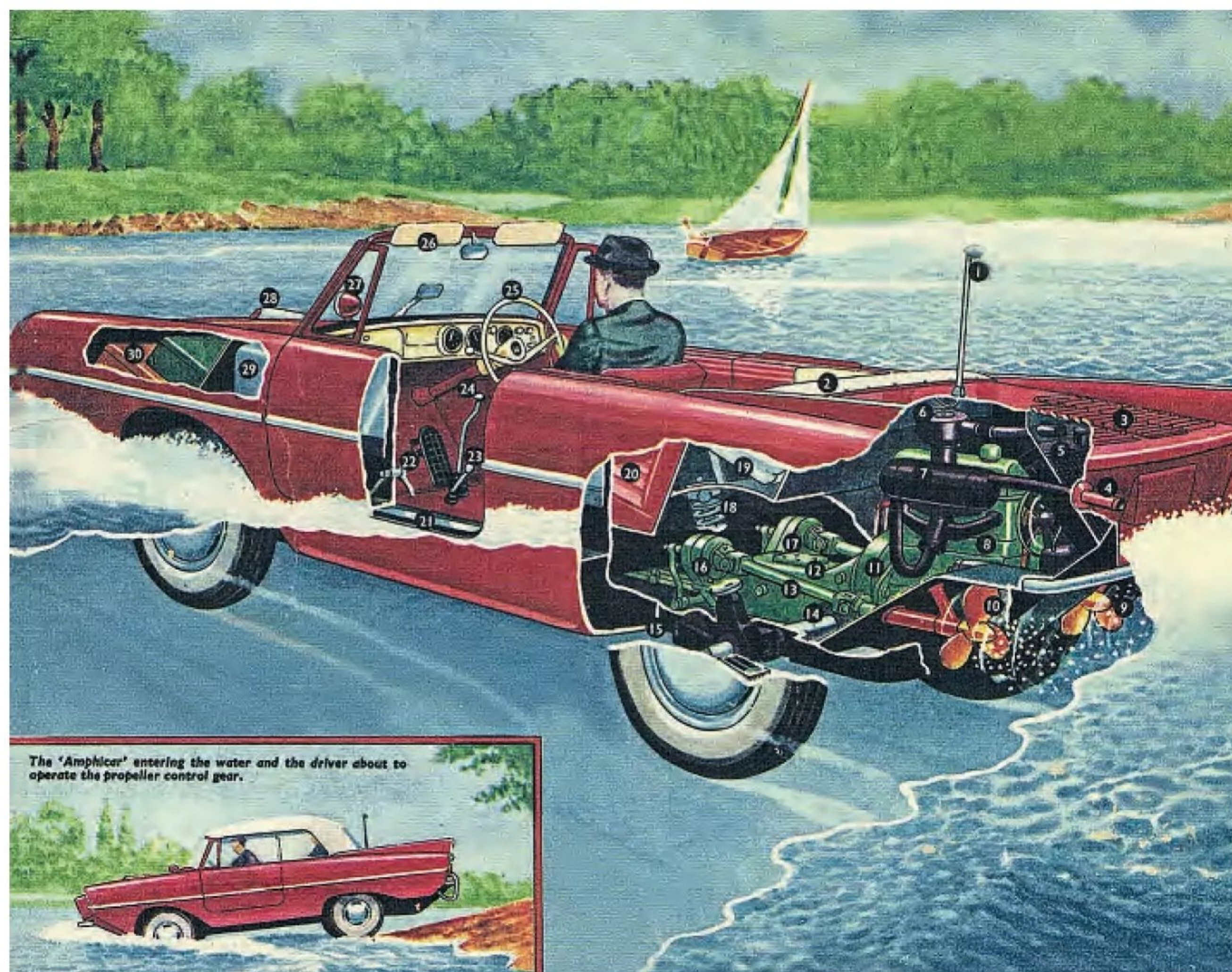
There can be few kits on the market that offer such good value for money, but it should be borne in mind that additional equipment will have to be purchased to complete the kit.

“There can be few kits on the market that offer such good value for money”



AMPHIBIOUS VEHICLES

Gordon Ray's DUKW model. Image courtesy of G. Ray.



A cut-away illustration of an Amphicar from the Eagle comic.

John Parker points out the modelling challenges to ponder before taking the plunge...

Have you ever considered making a model of an amphibious vehicle? They can certainly add another dimension to a sailing day at the local lake as you jockey your vehicle around rocks and other obstacles on the shoreline before making a surprise dash to the waterline and wading in, to cries of dismay from the uninitiated. This is all the more impressive if, after mixing it with the boats for a bit, you can manage to make your amphibious vehicle climb out onto dry land again, triumphant in your mastery of movement through two different media, before motoring off, leaving a trail of wet tyre prints behind it.

It can be like that, but it can also be a disappointing and expensive exercise if your project is not well-conceived, and you're not prepared for the amount of perseverance required to complete it.

Considerations

If it's not stating the obvious, an amphibious vehicle needs to have at least the basic qualities of a land vehicle and a boat. So, it needs wheels, and some means of steering and driving them. You might think the simplest way of doing this would be to have a four-wheel vehicle, with the front wheels steering and the rear wheels driving. But if you think about this a little more, you will realise that as you attempt to make your model climb out of the water onto the bank, the rear wheels will have little or no grip as the rear of the vehicle will still be floating – so in the water you will stay, unless your water propulsion can give the model a really hard shove (unlikely) or you're prepared to literally back out of your predicament.

To ensure your model floats, there will need to be adequate buoyant spaces within it, and all the mechanical parts will either need to be safe to work in water or the water kept away from them by means of shaft seals, rubber gaiters and the like. Complete isolation from the water will be difficult due to the many driveshafts, etc, needing movement, both rotational and translational, due to any suspension travel. The best choice may be to accept regular maintenance for stripping, cleaning and re-greasing and the use of corrosion-resistant parts, such as stainless-steel fasteners, throughout. Some modellers of submarines like to run their brushless motors completely immersed in water, and waterproof servos are readily available, but the electronics naturally need to be kept high and dry.



A full-size Amphicar in the water. Image courtesy of Wikipedia.

“Consideration will need to be given to achieving a smooth transition from water-borne to land-borne movement”

Propulsion in the water may be via one or more propellers or waterjet pumps or it may simply be via the wheels acting as paddles. In the latter case, naturally a portion of the wheels needs to remain clear of the water. Steering can be via the wheels, a rudder, swivelling waterjet nozzles or by differential control of two motors (tank steering). In each case, consideration will need to be given to achieving a smooth transition from water-borne to land-borne movement and this may

be best provided if the two systems can be run together during egress.

Easing the design burden these days is the large variety of mechanical parts – gearboxes, motors, suspension parts, drive shafts and so on – available for the R/C car market, often in the form of upgraded versions of the standard parts. Wheels can be a problem, though, as, although there is a vast choice available, most are not of scale proportions, generally being far too wide. In fact, finding suitable wheels can determine the viability and scale of the whole project, and is best done early. They will need to be driven through gears to provide the right balance of speed and torque for obstacle climbing, and determining the right ratio may require experimentation.

There are few modelling plans available for amphibious craft, so you are likely to be relying on your internet research skills and hunting down any monograph publications that may be available. A small-scale kit of your chosen subject, if available, can often provide the most information of all. Model Boats magazine has covered several amphibious model builds in the past, notably the work of Bob Hinton with his Amphicar (January 2005 issue), DUKW (January 2010 issue), Alvis Stalwart (July 2011 issue) and Gibbs Aquada (March 2014 issue). I found the description of these advanced models particularly helpful and inspirational.

“Make sure you fit a bilge pump! Preferably the type that switches on automatically when it senses water”



A variety of reference books.



A series of images showing Gordon Ray's LARC-V going for a swim.



None of the above is intended to deter you from tackling a scratch-built amphibian, just to make you more aware of the scope of such a project. Only you can decide what compromises to scale realism you will be prepared to make in order to simplify construction or reduce the cost. I have one tip to pass on from an avid modeller of amphibious craft: make sure you fit a bilge pump! Preferably the type that switches on automatically when it senses water. Following are some of the more common amphibious subjects.

DUKW

Perhaps the best-known amphibious truck, the American DUKW was based on a six-wheel GMC army truck and built in large numbers during World War II. They remained in service for long after the war and many are now in civilian hands running tourist river cruises. With a barge-like body and closed-in wheels with tandem rear axles, the basic shape will not be hard to duplicate; a single propeller in a tunnel on the underside provides water propulsion.

Amphicar

A more or less normal-looking small convertible, the German Amphicar was a car that you could take for a swim. Some 3,900 were sold in the period 1961-1968, mostly in the USA. One customer was US President Lyndon B. Johnson, who liked to frighten his unknowing passengers by plunging into a lake on his property, exclaiming that the brakes had failed! The Amphicar's simple layout, with the front wheels providing steering in the water and two propellers taking their drive from the rear-mounted Triumph Herald engine, make it an attractive choice of subject, but being an open car there is little room to hide the mechanical parts and not a lot of freeboard in the water. An Amphicar project by Peter Koch-Osborne featured recently in *Model Boats* (see the July 2023 issue).



LARC-V

The LARC (Lighter, Amphibious, Re-supply, Cargo) is an American 4X4 amphibious truck which was developed in the 1950s as a replacement for the DUKW. A total of 948 were built between 1962-1968 and many are still widely used today. A basic layout of four wheels (which appear to have little or no suspension travel) and single propeller beneath an aluminium boat-shaped hull with a lot of enclosed area make it a natural choice of subject. The load of five tons is carried on a low platform amidships and may be fitted with protective side curtains.

Schwimmwagen

The Volkswagen Type 166 *Schwimmwagen* was a development of the Kubelwagen and used by the German *Wehrmacht* in all its theatres of war during World War II. It lays claim to being produced in greater numbers – over 15,000 – than any other amphibious vehicle. Fitted with four-wheel drive (in first gear only) and steered in the water by its front wheels, the *Schwimmwagen* had a fold-down propeller mechanism mounted on the rear which engaged with the engine's



A *Schwimmwagen* entering the shallows with propeller drive lowered. Image courtesy of G. Ray.



A full-size LARC enters the water. Image courtesy of US Navy/Wikipedia.



US soldiers testing a captured German Schwimmwagen. Image courtesy of G. Ray.



The lower hull/chassis of John Parker's own in-progress Stalwart project.

crankshaft. Reverse required the manual engagement and operation of the wooden paddle clipped to the left-hand side of the vehicle! The retractable propeller mechanism probably presents the most difficult aspect to modelling a Schwimmwagen, but it can be done.

Alvis Stalwart

This iconic British amphibious truck has had an enthusiastic following ever since the first of over 1,000 built entered service with the British Army in 1963. Powered by a straight-eight Rolls-Royce engine and with six-wheel drive, four-wheel steering, all-independent suspension and twin water pump jets, the Stalwart has an impressive off-road capability and a cargo capacity of five tons. But the mechanical complexity, which gave it a reputation for requiring a lot of maintenance in service, likewise makes it a challenging model to make and maintain if it is to be scale-like and fully-functioning. A very much simpler approach is represented by Sarik Hobbies plan number RM264 Stalwart, a semi-scale model with simplified two-wheel drive and a propeller and rudder for the water. ●



An Alvis Stalwart amphibious truck. Image courtesy of Wikipedia.



Model Boats issues featuring amphibious models.



RMS Titanic's lifeboat



The sinking of the RMS Titanic, a British ship owned by the White Star Line in April 1912, on her maiden voyage to New York was tremendously worse for the shortage of lifeboats. Originally designed to carry 32 (locally RMS Titanic sailed to it's fate with only 20, enough for only half of the passengers. When launched upon the sinking ship into the freezing seas the lifeboats were not full, worsening the tragedy still further.

El RMS Titanic, propiedad de la compañía White Star Line, era el más grande y lujoso transatlántico de su época. Durante su viaje inaugural entre Southampton y Nueva York, chocó contra un iceberg y se hundió en la noche del 15 de abril de 1912. El Titanic, estaba diseñado para transportar 32 botes salvavidas pero en el momento del naufragio solamente llevaba a bordo 20 botes, un número claramente insuficiente para todos los pasajeros y miembros del экипаж. Para agravar las circunstancias de la tragedia, muchos de estos botes fueron botados medio vacíos.

Este producto es un kit de construcción de un modelo de 1:35 de un bote salvavidas de la RMS Titanic. El modelo está diseñado para ser construido por personas de 14 años o más. El modelo está diseñado para ser construido por personas de 14 años o más. El modelo está diseñado para ser construido por personas de 14 años o más.

TECHNICAL DATA:
Length: 285 mm •
Height: 55 mm •
Beam: 95 mm
SCALE: 1:35
(12,35"=1Ft)

© 2008 by ARTESANIA LATINA S.A.
Distribuidor exclusivo en España: Artesania Latina S.A. - Calle de la Industria, 10 - 46100 Sagunto (Valencia) - España - Tel: 96 300 00 00 - Fax: 96 300 00 01 - Email: info@artesanialatina.net - Web: www.artesanialatina.net



Left: The kit box lid illustration.

RMS *TITANIC* LIFEBOAT

Noel Smith tackles Artesania Latina's 1:35 scale kit, making some modifications/improvements along the way...



The loss of the *Titanic*, sinking due to it striking an iceberg back in 1912, is well documented, and that the ship did not have enough lifeboats only exacerbated the terrible loss of life.

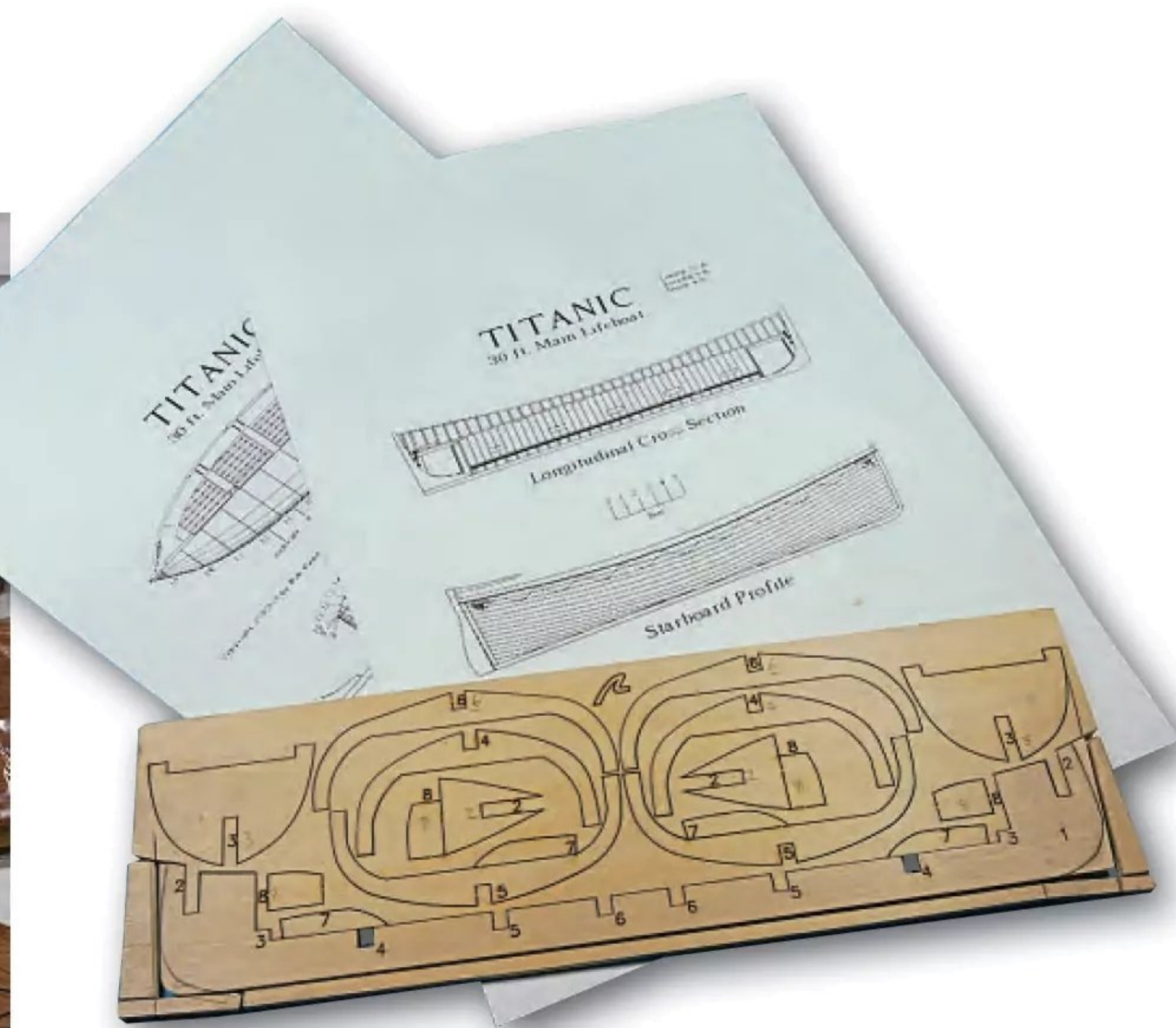
She was launched at the Harland and Wolfe Shipyard, Belfast on May 31, 1911, and was fitted out at the yard before starting service on April 10, 1912.

There are many model kits of the ship itself, in plastic, wood and card, that can be built, and one can be excused for saying that the subject has been done to death over the years. Besides April 2012 being the 100th Anniversary of the tragedy, James Cameron's film *Titanic* seemed to me to be a bit of a catalyst for many of the kits appearing on the shelves. Before that, there was a black and white film about the *Titanic* disaster named *A Night to Remember*. About 30 years ago I did a crossing on the *QE2*, and that old film was shown on the cabin TV; not exactly relaxing viewing while halfway across the Atlantic! As for subject matter, just about everyone has heard about the *Titanic*, whether interested in ships or not, and so from a kit manufacturer's point of view it's a 'banker' (i.e., a kit that will always sell well). If it hadn't been for such tragic circumstances and the *Titanic* had lived on to the end of her commercial life, she would likely be just another liner that very few people would have even heard of.

The subject of this article, however, is Artesania Latina's 1:35 scale kit for one of the main 14 lifeboats that were aboard, with a capacity for 65 people. *Titanic* also had two cutters of 40 persons capacity and four Englehardt collapsible lifeboats of 47 persons capacity. The total lifeboat capacity on *Titanic* was therefore just 1,084 for a ship carrying 2,200 people. As it happens, tragically only 705 people made it onto the lifeboats on that fateful night. The sad travesty is that even if all the lifeboats had been filled to capacity before the ship went down, 1,116 people would have still been doomed.



The box contents.



Correcting the keel using Bob Read's accurate plans.

I was drawn to this kit as not only did it offer something a bit different to building a model of the ship itself, but it would be a departure from my usual plastic, metal and resin modelling projects. As such, I appreciated it would take me out of my comfort zone. However, as a first foray into wooden kit building, this turned out to be much more challenging than I'd envisaged.

Upon opening the box, one is presented with some bundles of various wood planks and sections in different sizes, some frets of laser cut parts, a display base cut from MDF, a layout sheet to identify the laser cut parts, an instruction book, and a clear plastic segmented box with some small metal and wooden parts, threads, and a small set of photo etched parts.

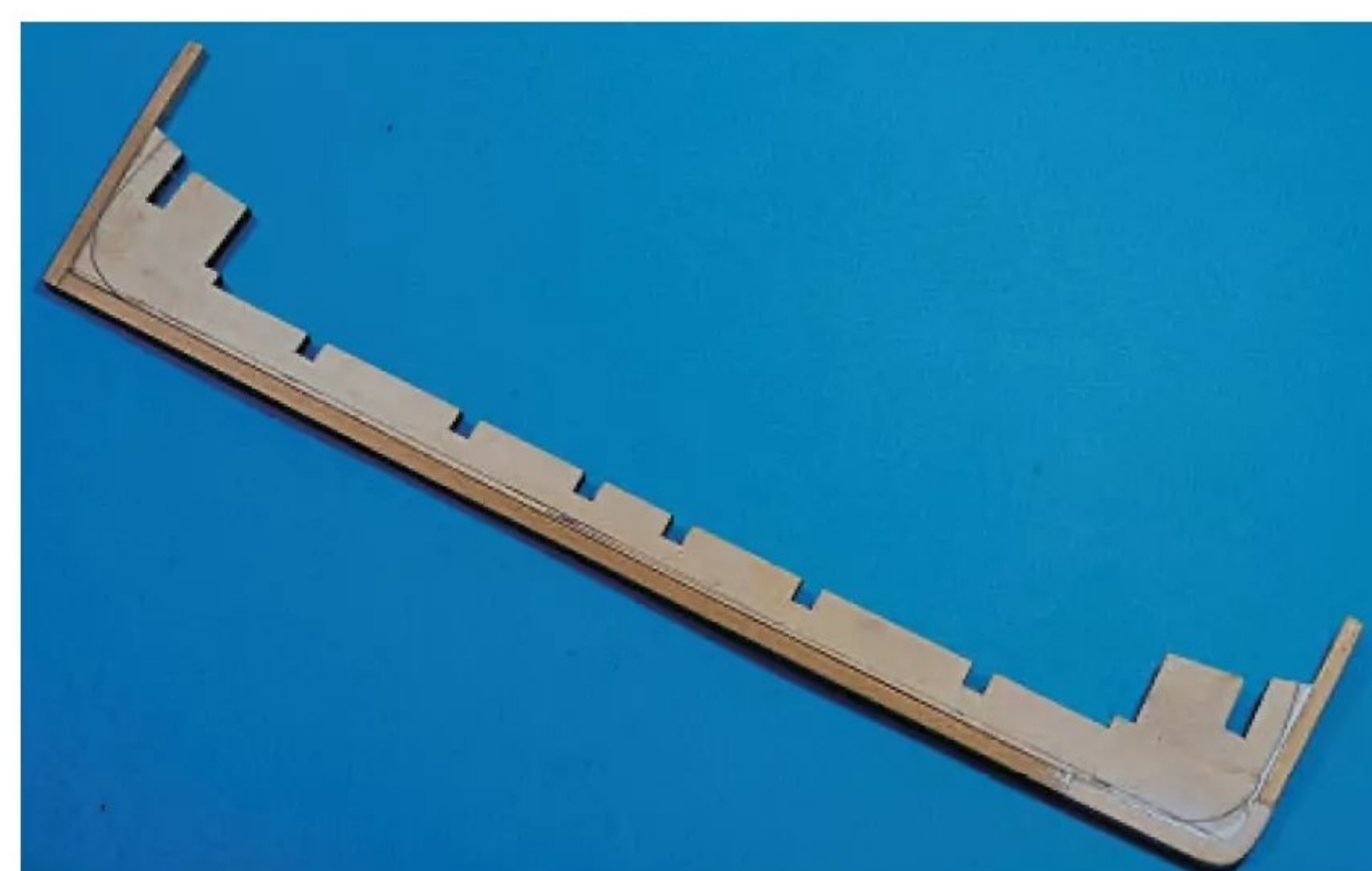
Shape shifting

After checking the contents, I started to peruse the instruction book. There were some side views of the finished model built as per the kit that somehow just didn't look right. The bow and stern of the model appeared much too rounded and reminded me of many pictures drawn of Noah's Ark! Fortunately, I managed to find some plans by Bob Read on the internet so that I could correct the keel of the boat. This was easy enough to sort out as I could simply cut the extra correctional pieces from the excess on the laser cut ply featuring the kit's keel and carefully marry them up with the other parts. Given the amount of reference material available, though, I have to say I simply cannot understand how Artesania Latina got such a basic thing as the keel shape so wrong.

A start was made by laying down the corrected keel piece and fitting the shaped frame cross members to give a skeletal hull shape ready to take the clinker-built planking. These were glued during the assembly using PVA adhesive. It is imperative that each of the hull frame cross members is mated fully into the slots in the keel and to ensure that each is absolutely fitted square to it. A small engineer's square was used to align them square to the keel. Spring binder clips were

"As a first foray into wooden kit building, this turned out to be much more challenging than I'd envisaged..."

Right: Extra square strip added to correct the bow, stern and bottom keel profile.



The hull frame built and the start of the clinker planking.

fitted to the keel behind each frame cross member once positioned, and the assembly was then allowed to set.

Clinker-built planking

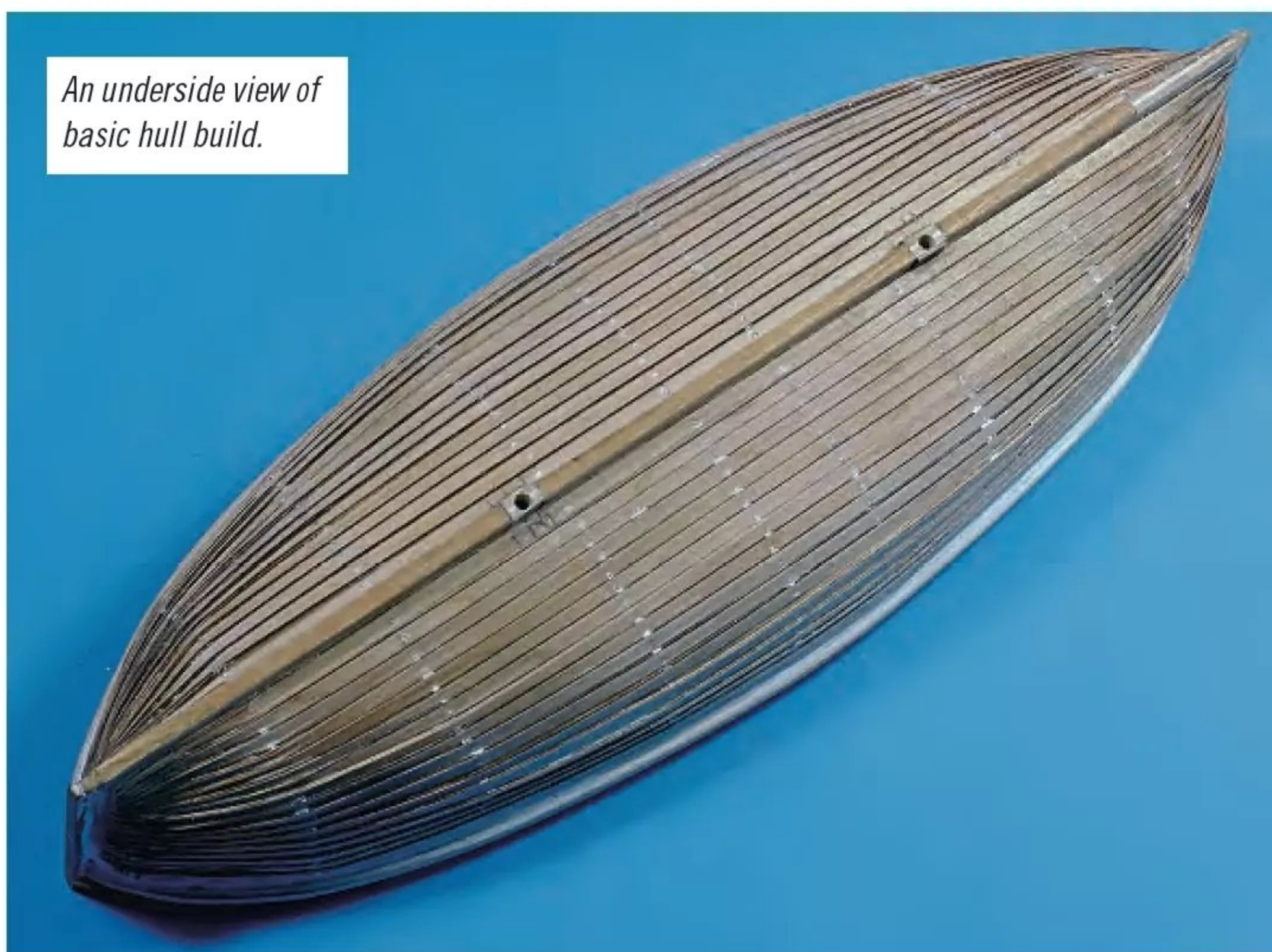
Once the skeletal frame of the boat had set, the job of preparing and laying on the clinker-built planking could begin. Clinker-built boats have part of each of the hull planks overlapping one another, working from the keel upwards. It became obvious from the start that the supplied 7mm x 1.5 thick basswood strips were going to be very

difficult to shape around the boat due to their thickness. Having tried to hold the supplied strips against the skeletal boat frame while I attempted to twist them, with great difficulty, to shape at the bow and stern, I decided that there had to be an easier way. The kit strips would have needed to be immersed in very hot water and jigged to put in the necessary twist at each end to align them with the stem and stern posts. Getting these twists correct would, I felt, be bit hit and miss, so I decided another method was called for. I therefore obtained a sheet of very thin (0.75mm)



The clinker-plank fitting progressing and showing the pedestal screw fixing holes.

Right: The basic build of the hull complete, with the model now ready for finishing and fitting out.



An underside view of basic hull build.

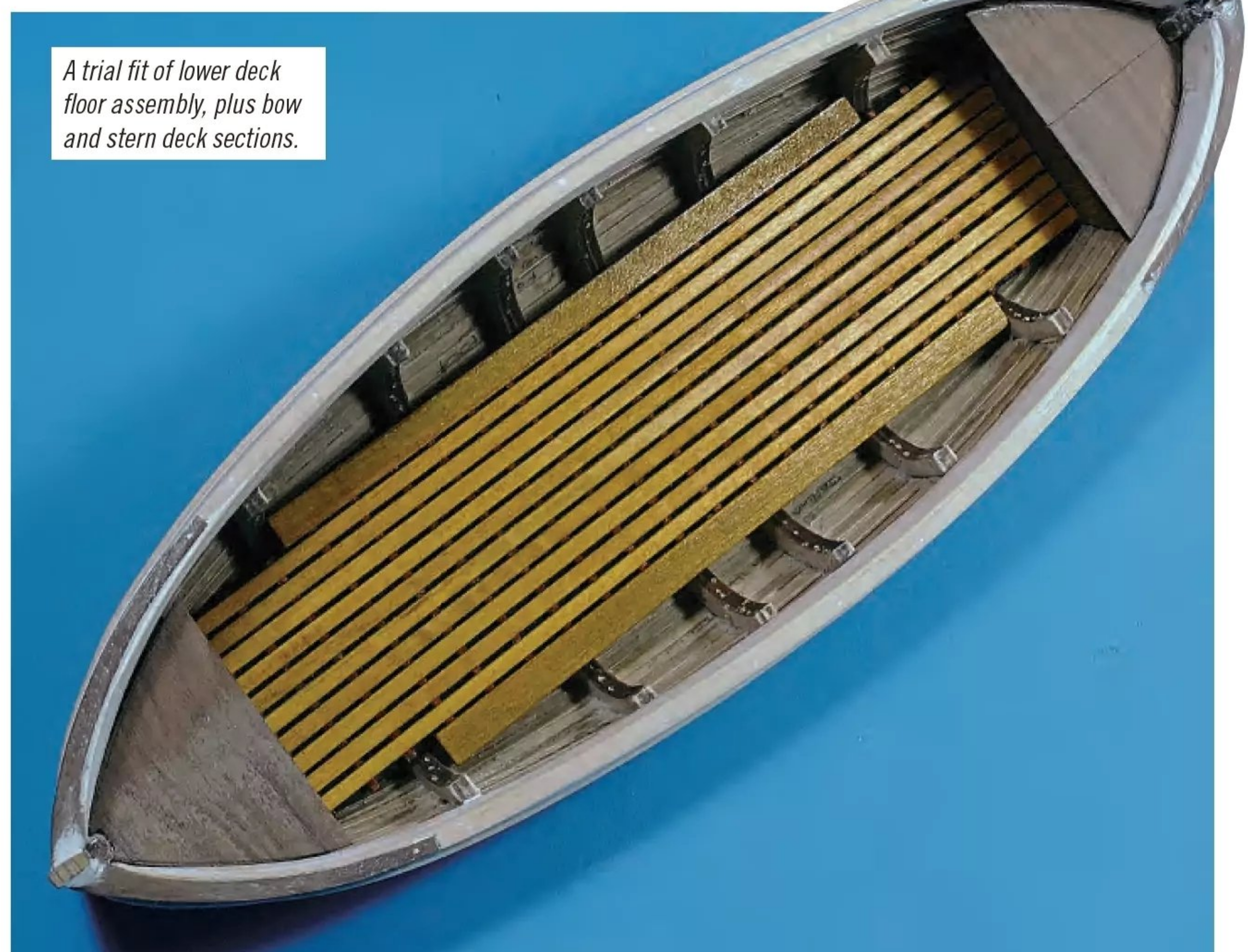
“The bow and stern of the model appeared much too rounded and reminded me of many pictures drawn of Noah’s Ark! Fortunately, I managed to find some plans by Bob Read on the internet so that I could correct the keel of the boat”



Right: Parts of decking and stowage compartments ready to fit.

plywood which I cut into 6mm wide strips to replace the much wider and thicker strips supplied with the kit. Enough strips were cut to clad both sides of the hull from keel to top. A small spring bow compass was used to mark a parallel line 1.5mm inboard on each of these replacement strips; this served as guideline for the amount of overlap required during fitting. This ply proved to be much easier to try up against the hull and to twist where needed before then trimming to shape at stem and stern. Consequently, fitting of the planks could commence.

This was all done one plank at a time, working evenly up each side so that constant checking could be carried out. The first plank was fitted on both sides of the keel, ensuring that the 1.5 mm overlap line was at the top of each strip when fitted. So, basically, all the planking strips would be fitted in the same manner to clad the hull. My particular approach was to resign myself to a bit of a drawn-out job fitting the planks. The method I employed was to fit two strips per day (one per side), gradually building up the boat sides. As I wanted a good fix, I didn’t rely on adhesive alone when fitting each strip. I had some 0.5mm brass wire and drilled a 0.6mm hole through the strip into each hull



A trial fit of lower deck floor assembly, plus bow and stern deck sections.

“Doing all this necessitated a considerable deviation from the kit’s instructions...”

frame member along the length of the hull. This enabled good flush fitting along the hull sides once the PVA adhesive was applied. At the stem and stern, I used 4-minute epoxy instead of PVA on the last 10mm of each plank to get a fast and good fix at each end. Each plank fitted and glued was then held in position using a small Rolson plastic spring clamp until set. After the first two planks adjacent to the keel were fixed, each subsequent plank would have a little material behind each overlap to take adhesive during the assembly. Once the planks were all in place, the top gunwales could then be fitted from thicker strips taken from the kit.

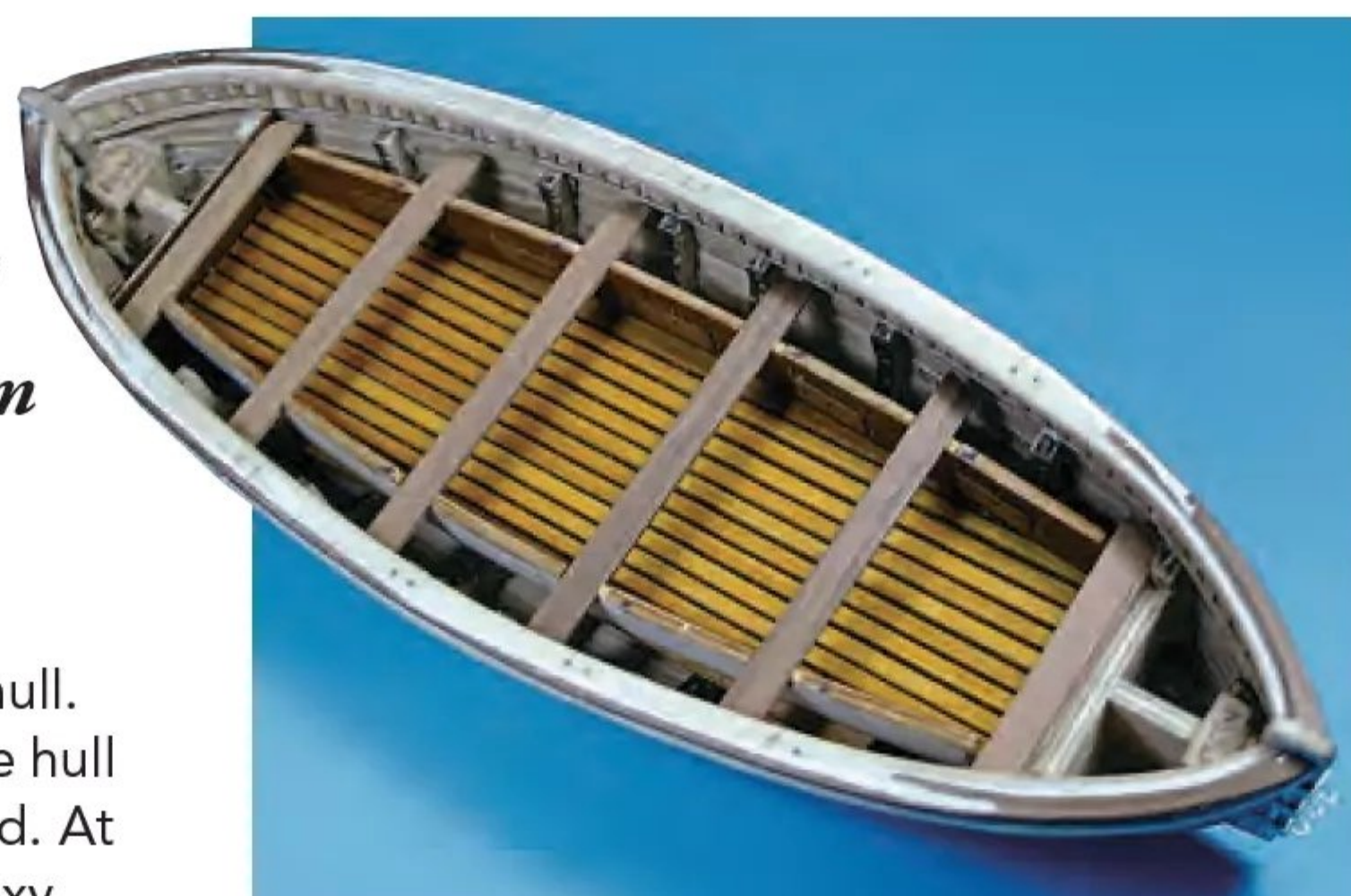
With the hull built up, it was then a matter of using filler to take up any gaps and scratches in the wood, and also to fill the 0.6 mm locating holes from where the brass wire was removed. This was followed by gently rubbing down with 100 grit sandpaper.

Optional deviations

Rather than use the kit’s turned wooden pedestals, I opted to turn a pair from brass instead and made them a bit higher in the process. Two vertical holes were drilled and counterbored through the middle of the keel to take the fixing screws that would go through both the turned brass pedestals and the base supplied with the kit. The holes under the base were countersunk for the screw heads to fit flush with the bottom of the base.

After drilling and counterboring the base, the base itself remained to be finished. Unfortunately, the base wasn’t made from solid wood but from MDF, with a wood veneer on the top. So, the routed edges were stained dark brown and given a few coats of clear varnish to seal and level the surface. It was now time to attend to the veneered top; this was done using Rustins Button polish, buffed to a nice shine once dry.

Doing all this necessitated a considerable deviation from the kit’s instructions, as the inner bottom of the boat would normally be made up and glued into place at this stage. Instead, I made the boat floor up as a separate sub-assembly for test fitting, which could then be fitted permanently into place later on during the build. This was to allow the brass pedestals to be fitted early on in the process, i.e., before the floor. The floor consisted of a flat piece of ply, shaped to drop onto the flat area on each of the hull cross members and keel inside. This was painted flat black and then fitted with light brown painted small square strips equally spaced across and all along it. The floor was then planked length wise with equally spaced wooden strips and coated with Rustins Button Polish.



A trial fit of cross bench seats into location slots above stowage compartments.



Making a start on painting the boat.



The painted boat with main decking parts prepared and ready to fit.



The ancillary parts and fittings made up, painted and varnished.

The kit supplied two strips of ply that were laser cut with rectangular holes to simulate storage lockers, to be located beneath a wide bench seat, lengthwise, inside the lifeboat. Unfortunately, these were inaccurate, so two more strips of ply were cut to match the length and width of the

originals and the lockers marked out on them after referencing the Bob Read drawings. Rather than cut out rectangular holes on the replacement strips, I opted to instead fit rectangular locker fronts, made from veneer, and glue them into place. Slots were marked out and cut on the top of each of these strips



The screws fitted through the keel, brass pedestals and into the base.

Left: Grab ropes and emblems fitted to hull, now mounted on the prepared base.



The main structural parts of the interior fitted.



The completed model, with rudder fitted and smaller ancillary parts added.

to accommodate some flat walnut strips that would be the bench seats located across the boat interior. When the hull frame was built there were two pieces that were solid going across it that these locker strips had to be sprung against to fit during assembly. These locker strips needed to be carefully lined up by eye beneath the laser cut walnut port and starboard ledges during assembly and kept vertical to appear even on each side. At this point, the rowers' seats were cut to appropriate lengths from some walnut strip and test fitted in the slots, with adjustments made wherever needed.

The laser cut walnut port and starboard ledges were held in position to enable a pencil mark to be made along the inner hull on each side, using the edge of the shelf as a template. A number of very short vertical stiffeners were cut to length and fitted just above the pencil mark and tightly against the bottom edge of the top gunwale along each side. Their spacings were marked and the pieces glued into place with PVA adhesive.

There were two other pieces of laser cut walnut decking that needed to be cut to fit at the bow and stern on the same level as the side ledges.

All the walnut parts look quite nice, but the grain was too large to be anywhere near in scale and ran in the wrong direction on some pieces, so I opted to prime and paint them with Revell Aqua Colour Wood Brown. The ledges were marked out where a pair of small, shaped braces in line with the rowers' seat edges beneath would be fitted.

Painting

With much of the boat now built and a number of main parts test fitted, things were starting to look pleasingly busy. I was, therefore, ready to start painting. Research I'd made suggested that the gunwales on Titanic's lifeboats were painted dark brown and not black as per the kit instructions. The main hull would, naturally, be white, so I'd chosen Halfords' white acrylic primer to use as the overall base coat for the hull. Artists and modellers acrylics lent themselves best to the topcoats for this project. So, once the basic hull was complete and primed, the keel up to the gunwales was painted in Liquitex Acrylic Titanium White, the gunwales in Liquitex Acrylic Burnt Umber, and Revell's Aquacolour Wood Brown was used inboard just below the gunwales. The loose fore and aft bits of decking and shelving to go over the locker strips were also painted in Revell's Wood Brown.

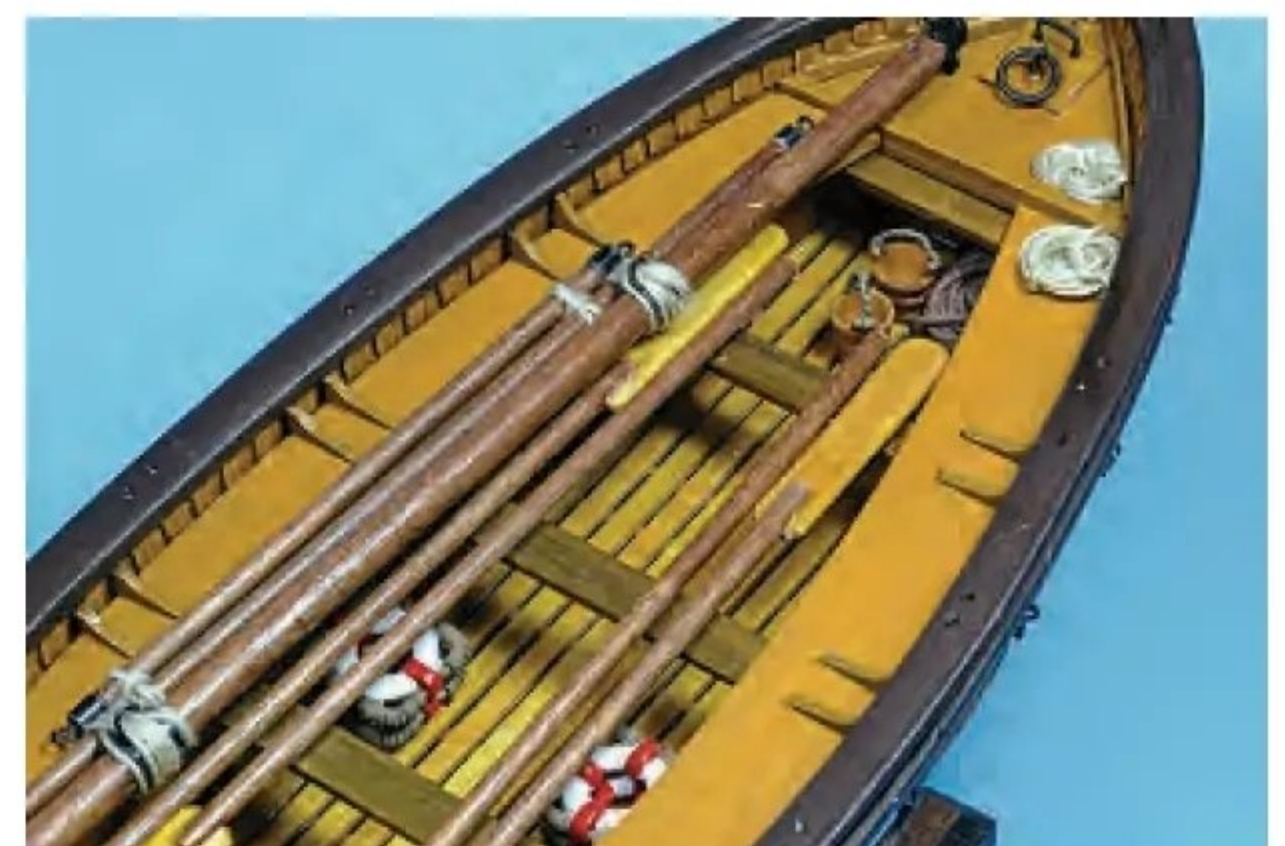
Having concluded the painting of hull and the making up and finishing of the smaller loose components, I then painted and added all the extra fitted details.

Detailing

Next came the ancillary pieces to detail the boat's interior. The four oars were made up as per the kit instructions and varnished. There were some round pieces of hardwood that needed to be cut to length to represent a mast and upper and lower spars for a gaff rigged sail that would have been carried on the lifeboat.



A view from above, with all the fittings now in place.



Close-ups of the fitted-out lifeboat.





Paints & adhesives used

PVA Adhesive: Evo Stick

Epoxy Adhesives: Araldite 1-hour setting

De Luxe Materials 4-minute setting

Primer Paint: Halfords Acrylic Flat White Primer

Artists Paints: Liquitex Acrylic Titanium White

Liquitex Acrylic Burnt Sienna

Model Paints: Revell Aqua Colour Acrylic Wood Brown

Tinted Varnish: Rustins Button Polish

Abrasives: Various grades of sandpaper

NB. While I have listed the products I used by brand name, other manufacturers make similar adhesives, varnishes, modellers and artists paints that can also be easily sourced.

As there were no fittings supplied for the mast and spars, I made these up myself from plastic tubing and brass wire, before painting and fitting them. A piece that would allow bottom of the mast to be fitted into the boat floor was supplied with the kit, but a support bracket to fit to one of the benches to keep the mast upright had been omitted. This item was also, therefore, scratch built and fitted to the relevant bench seat.

Once the grappling hook was assembled, a scale rope was attached to it by the thread supplied and the four wooden buckets that came with the kit had their handles fitted. The four diecast lifebelts provided needed some flash removed, before they could be primed and painted. Also, there were some grab handles and tie down rings to be made up as per the kit instructions. The photo-etched nameplates and emblems were affixed to thin individual pieces of ply with very fine copper wire and pre-painted with a view to easier placement on the boat's sides. At this stage a paper jig was made up to mark out and drill the holes under the outside of the gunwale edges for the little brass eye fittings that would be epoxied into place to fit the lifebelt grab ropes along each side. A piece of black thread was tied to each of the eyes so that when the rope was fed through it could be adjusted for an even hang between each eye before being tied and spliced permanently into position with a needle and thread.

Just before the dark brown 'rope' supplied was threaded, tied and spliced through all the eyes, the Titanic and Liverpool photo-etched logos were glued to the hull sides, along with the house flags and the circular capacity plate, using epoxy adhesive. The photo-etched logos did look a bit over scale compared to photos but didn't detract from the overall final appearance of the model once fitted.

Now that a pivotal stage had been reached, it was time to screw the brass pedestals to the model and base as a prelude to fitting out the boat's interior. This began by dropping the prefabricated floor decking

into situ and positioning the two strips representing the stowage lockers by gently springing them into place. Besides getting the positioning right, it was also necessary these lockers would be vertical to the floor decking, which I managed by using a small engineer's square. My next task was to fit the rowers' bench seats into the slots I'd made in the tops of the stowage locker strips. The bench sporting the mast support bracket needed to be installed so that the bracket aligned with the location piece on the flooring, ensuring both sat on the centre line of the boat. Once these seats were in place, the shaped pieces of bow and stern decking could then be fitted using PVA adhesive. The port and starboard ledges were then added level to the tops of the stowage locker strips and hull framing and affixed with PVA adhesive.

Two grab handles needed to be affixed centrally just below the edges of the bow and stern decking with contact adhesive. On top of these pieces of decking a further two grab handles and tie down rings were fitted. Following which, all that remained to

be done was to locate and glue into position the life rings, buckets and grappling iron with its rope attached. Then it was just a matter of locating the oars, mast and spar pieces to tie them down within the boat interior.

Ready for display

This project proved a lot of fun, although it did present a few challenges along the way, particularly when it came to the clinker-built hull. I erroneously thought this kit would a suitable introduction to working with wood. However, having quite a bit of experience as a modeller in other mediums, it wasn't too taxing to overcome the hurdles encountered and I learnt quite a lot during the process. While it took some perseverance, I now have a very nice model. The intention is that this will eventually be mounted inside a suitable clear plastic case, with a polished wooden base and an engraved nameplate fitted as a finishing touch. When viewed, it will no doubt prove an interesting conversation piece. ●



Dutch Courage



Dutch Courage is a representation of Dutch Pride and Dutch Power, two of a series of tugs built in the Netherlands in 2003/4.

These vessels are suitable for a variety of applications.

The kit is to the usual high standards and includes building manual, GRP hull, other materials. CNC cut styrene decks and superstructure, full size plan, resin and white metal fittings.



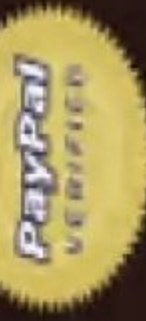
MOUNTFLEET MODELS



Buy on-line or
phone/post
your order

Adam Slater • Rock House • Bankwood Road • Womersley • Doncaster • DN6 9AX

www.mountfleetmodels.co.uk
Tel: 01977 620386 • E-Mail: sales@mountfleetmodels.co.uk



LAND YACHT

John Mileson puts together a model that can be 'sailed' with no water required!

I don't remember ever seeing an actual 'land yacht'. When, however, quite by chance I recently saw a reference to an article in a model boats magazine on how to build one, a bit of further research revealed plenty of photographs on the internet of full-size land yachts skimming along beaches. This led me to investigate this rather unusual sport, and in particular models of these 'yachts'. As it turned out, Sarik was able to supply a plan, and a copy of the article that originally appeared in *Marine Modelling International* magazine.

Most of these models appear to have been designed for racing, and are really a series of sticks held together, with a sail and three wheels. As I had no intention of racing, why then did I opt to go ahead and build one? To be honest, I'm not quite sure, but what I decided to 'design' and make, as inexpensively as possible (I had a figure of £50 in total cost in mind), was a model that would be robust enough to move over fairly rough terrain. The Sarik plan was simply used as a guide to overall dimensions, etc. I say 'design' but that's not quite true, as things kind of developed as I went along. Obviously, the model had to have three wheels, two at the back (stern?) and one at the front to steer it. These wheels were obtained from SLEC.



A front view of the completed yacht.



The components making up the rear axle. The brass angle gave additional rigidity to the brass axle shaft.

"What I decided to 'design' and make, as inexpensively as possible (I had a figure of £50 in total cost in mind), was a model that would be robust enough to move over fairly rough terrain. The Sarik plan was simply used as a guide to overall dimensions, etc"



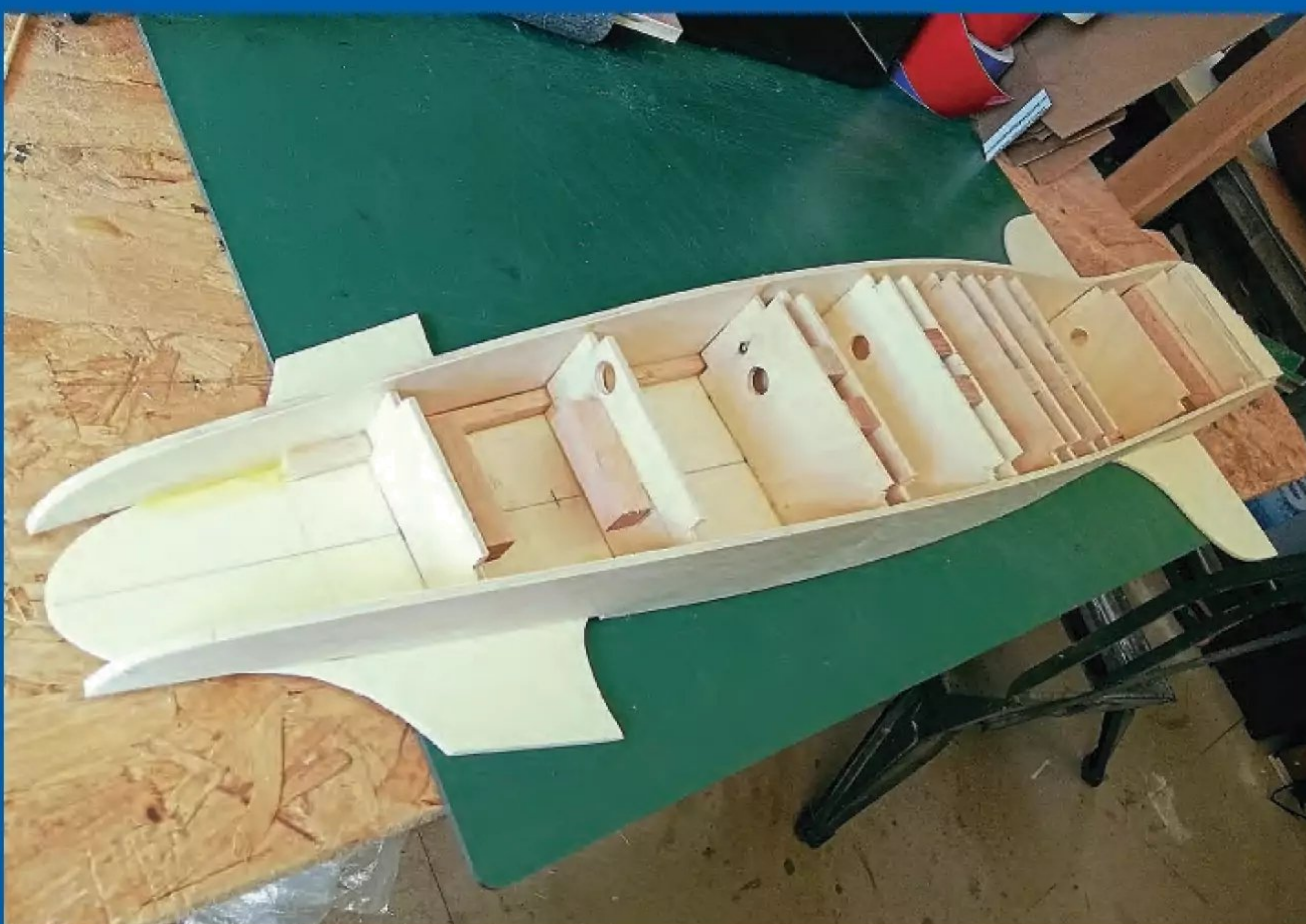
An end view of the axle showing the 'sandwich' design.



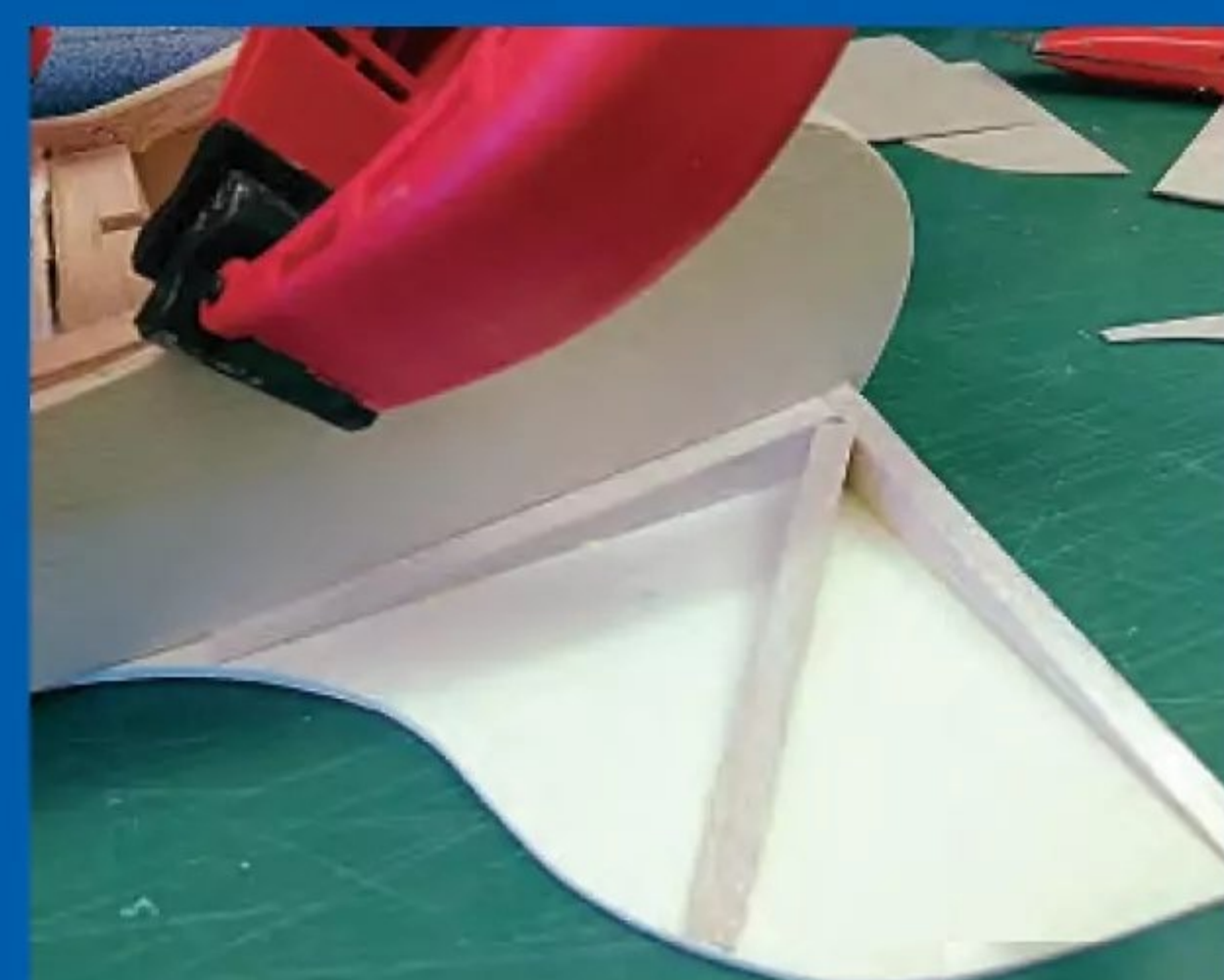
Left: The starting point for the body. The chassis was cut from 3mm plywood. Here we see the right-hand side panel, cut from 2mm plywood attached to the chassis. While John was loosely following a prescribed design, much as made up as he went along.



A chunk of balsa wood was glued in between the side panels at the rear of the yacht. This would be carved to shape in due course. The rule shows the length of the body.



Bulkheads were added prior to the left-hand side panel being glued in place. The front and rear 'aerodynamic' fins can be seen here.



The rear fin was to be fitted with an outer contoured plywood skin, which would be glued to the 6mm balsa strips. The contoured shape would hopefully help to hold the yacht down on the track.

Hitting the ground running

The first job was the rear axle. This I decided was to be about 20 inches wide. The wheels were fitted to a brass rod, which in turn was bonded to a piece of brass angle to give it some rigidity. This was then sheathed with plywood. I hadn't thought through how to attach it to the main body of the yacht yet, I would come up with a solution to this later.

The body was to be made from plywood and balsa. In my mind I envisaged it to be based on racing car design, and so to this end sketched the platform on which the whole body would be fixed onto a sheet of 3mm ply. It looked a bit like a shark, with stabilising fins at the front and back.

On the platform, a series of bulkheads were attached. These would determine the overall shape of the yacht and provide the location steps for the mast. At this stage I had no idea what sort of sail I would use, so made a series of sail stepping points along the

body. These were adjacent to the bulkheads for strength and were capable of accepting a mast of up to a 10 mm in diameter.

Between the bulkheads, access was required for a steering servo at the front, one at the back for sail control, plus the battery and receiver. Fortunately, I had remembered to drill a hole in all the bulkheads for any future cabling to be threaded through the length of the yacht.

A block of balsa was glued between the outer rear panels. This was shaped to form the tail end of the yacht.

Next, came the outer skin of the body. I wasn't too concerned about weight but used 1.5 mm plywood for this purpose since it would easily follow the contours of the body.

The 'aerodynamic' (I kid myself!) stabilisers were also clad in ply. The wing shaped contours of these fins would, I hoped, help to keep the yacht on the ground.

The rather odd-looking front steering wheel was next. Grubbing around in the

shed, I found some bits of brass and spent some time wondering how these could be 'knocked up' into something resembling a steered third wheel support. From the photos on the internet, the third wheel stuck out a long way forward of the body. Why these should be so far forward I didn't bother to enquire. After all, mine would be determined more by the bits of brass available to me and less to any design acumen!

At this point I decided to use an existing mast, boom and sail from my Laser sailing boat. This could be borrowed from the Laser on the occasions when the land yacht was used.

The boom was controlled by a long swing arm attached to a servo at the back of the yacht. Steering was controlled by a servo at the front. These servos did spoil the 'line' of the yacht, but were, of course, necessary.

The cockpit, into which a bodyless 'pilot' would sit housed the receiver, on /off switch and the battery pack.



The 1mm thick outer skin being attached to the rear wing.



The 1.5 mm plywood top is glued on. This photo also shows the contoured rear fin.

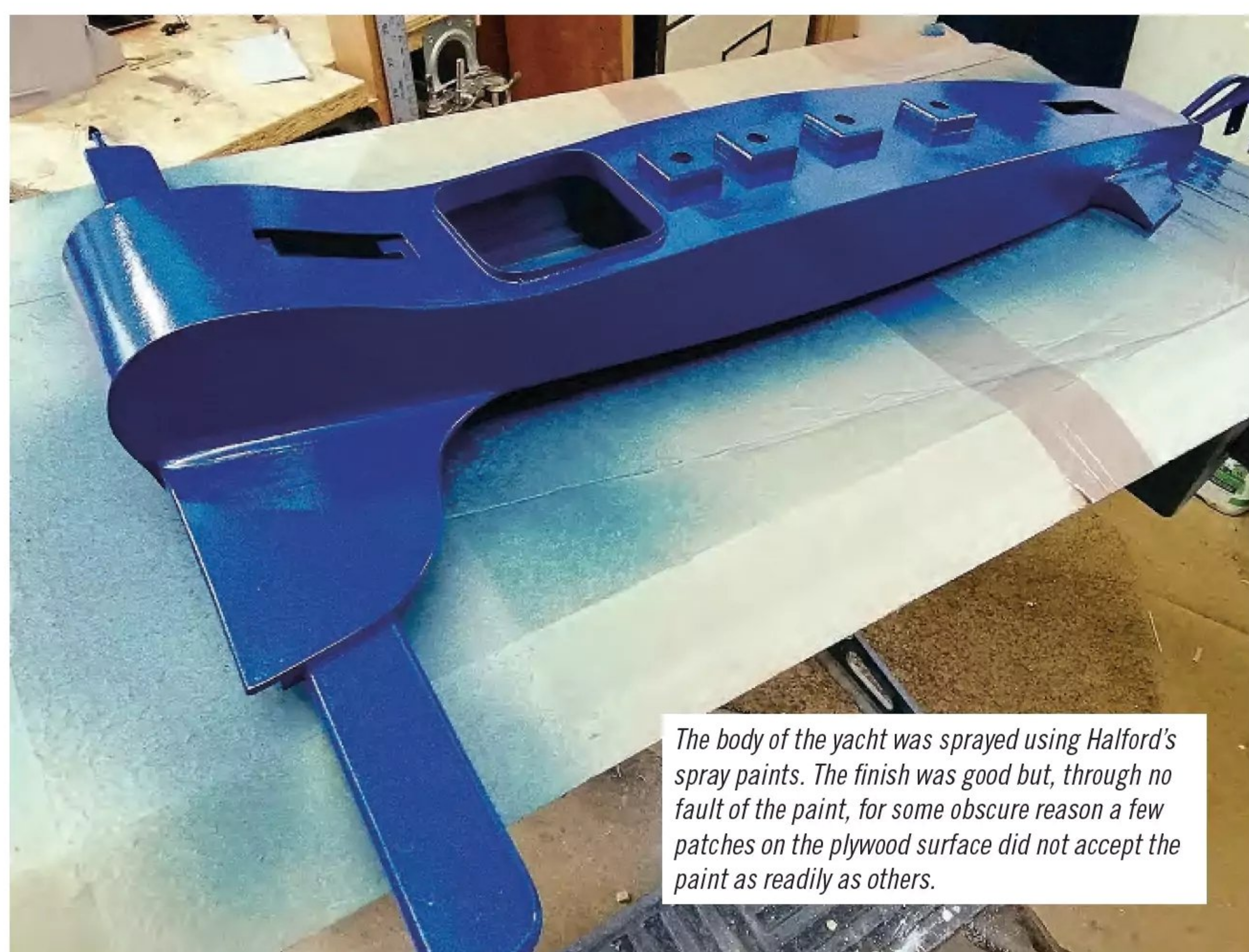
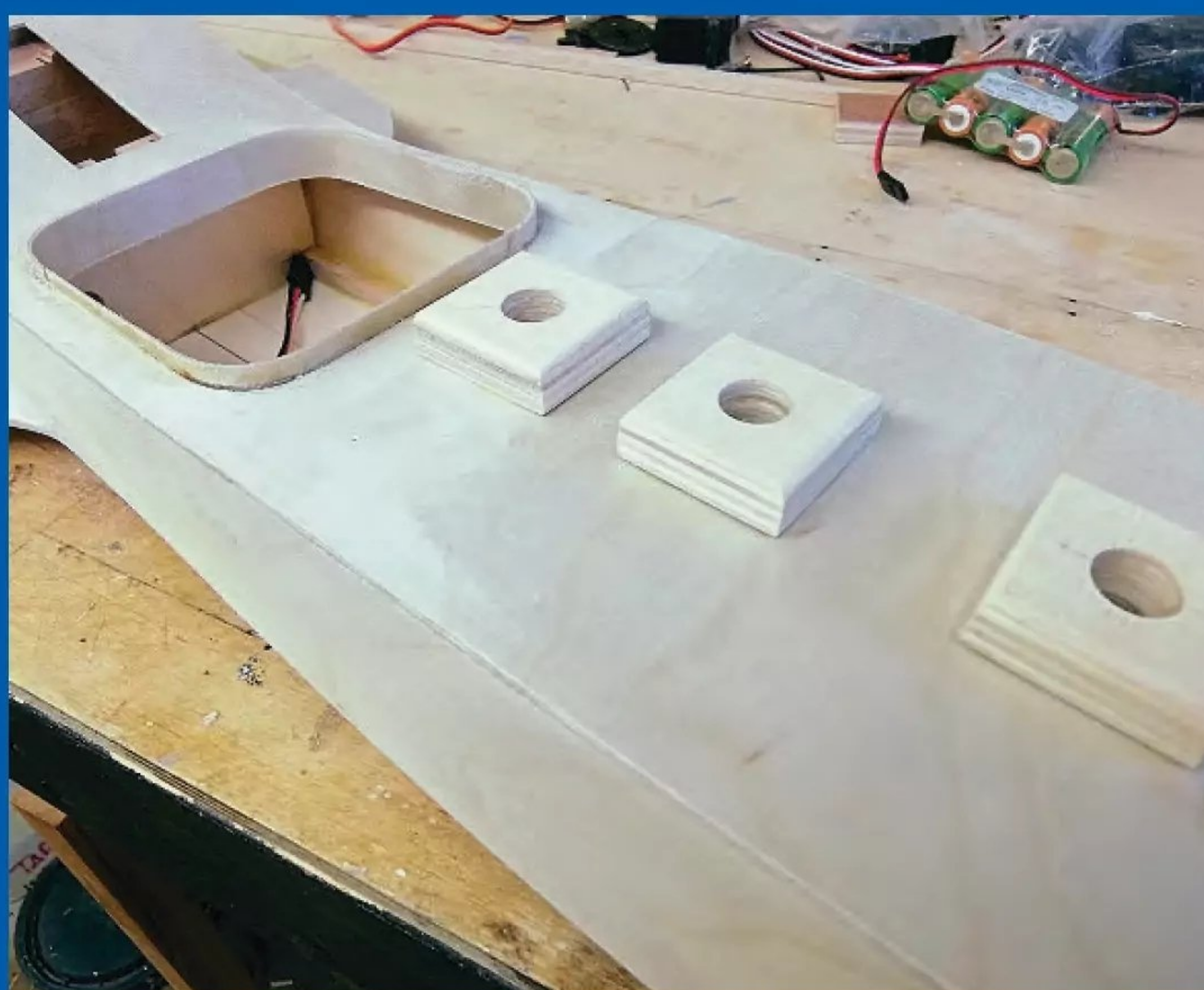


The front steering wheel was fabricated from scrap brass. After fitting, it was found to be too 'springy', and had to have an additional support added.



The rear wheels axle was required to be removable for ease of carriage and was held in position by two studs and wing nuts.

Right: A series of mast 'steps' were added to the top face of the body. This was necessary so a variety of mast/boom and sail combinations could be used in the future. The cockpit surround is visible here.



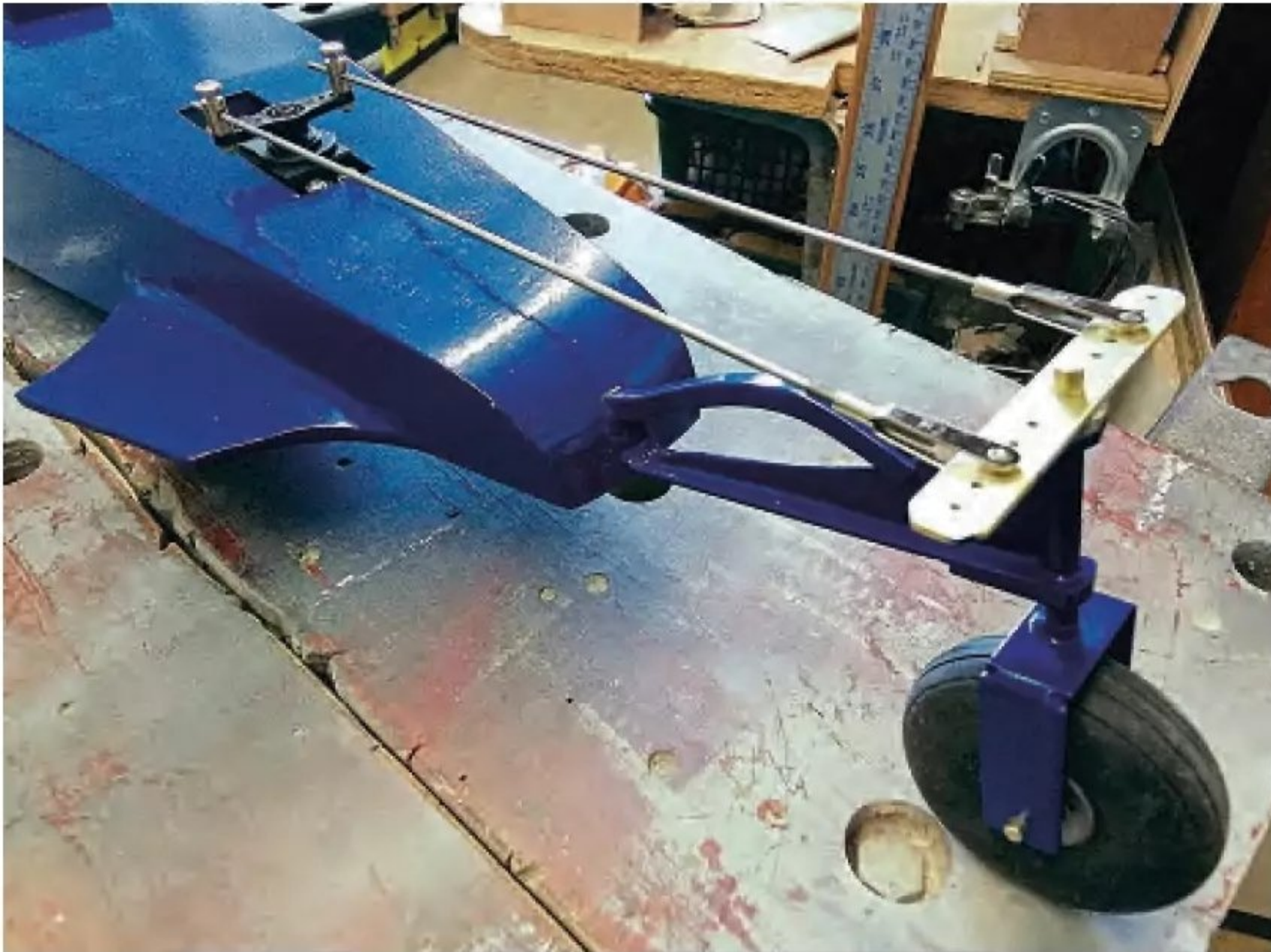
The body of the yacht was sprayed using Halford's spray paints. The finish was good but, through no fault of the paint, for some obscure reason a few patches on the plywood surface did not accept the paint as readily as others.

Paint and ply

The yacht was soon complete and ready for a coat of sanding sealer to be applied, followed by a coat of grey primer and four coats of Halford's Vauxhall Regatta Blue. The finish, through no fault of the paint, was not quite as good as I'd hoped. I have found in the past that some plywood accepts paint better than others. In this case, despite of numerous coats, and plenty of rubbing down in between coats, the resulting finish was, let's just say, average.

Dry run

Once final assembly had taken place, the yacht was ready for testing. I chose to conduct the initial test in an empty car park, before the shops opened. Surprisingly, the performance in a moderate wind was good. While the basic operation is similar to a conventional model yacht, going about cannot be performed in the same manner. It takes a wider arc to bring the yacht round without it toppling over. After all, there's not the 'give' in tarmac that there is when



The front wheel in place, showing the additional reinforcement to give greater rigidity to the assembly.



A view from the rear showing the long arm attached to the servo for the sail control. Control is somewhat limited and will probably require the attached nylon cord to be adjusted after testing.



A view from above. The sail used was 'borrowed' from John's Laser yacht. This is the smallest of the three Laser sails and appears to be more than adequate.

sailing on water. Great fun, but it's clear new techniques will have to be learnt to get the best performance out of this yacht.

Is it worth building a land yacht?

I think so! Firstly, the cost compared to a conventional yacht is very low. My total expenditure, excluding a transmitter and, of course, the borrowed sails, came in at under £50. Secondly, it's an opportunity to design your own yacht. Hull design and all its complexity does not come into the equation here. You can just design the model to suit yourself. And, thirdly, 'sailing' a land yacht is a whole new experience!

Admittedly, a lack of clubs devoted to model land yachts means the opportunity for competition is restricted. There are, however, a huge number of accessible spaces that boast large expanses of flat surface, such as you get in car parks, on which you'll potentially be able to 'sail' your 'yacht'. Obviously, it's advisable to seek the permission of the property owner/local authority/shop manager prior to setting sail, but few have any objections before or after closing time.

This is an unusual, inexpensive project, which not only draws on your own skills and talents but results in a model you can have a whole lot of fun learning to operate and control! ●

"Sailing a land yacht is a whole new experience!"



An additional photo from above.

Free Plan

H.M.S. *Wakeful*

Glynn Guest provides a step-by-step guide to building your very own World War II Royal Navy destroyer from this month's free pull-out plan...





Based on the Emergency class destroyers built for the Royal Navy during World War II, I and with the basic hull construction being mainly from balsa sheet and strip, this model is designed to a scale of 1:144, which gives an overall length of 76 cm (30 inches) and a weight of 1.1 kg (39 oz.).

It's not a model for the inexperienced, but those of you familiar with the materials and techniques used should find the build fairly straightforward. Like most things in life, though, deviating from the plan and instructions may cause problems.

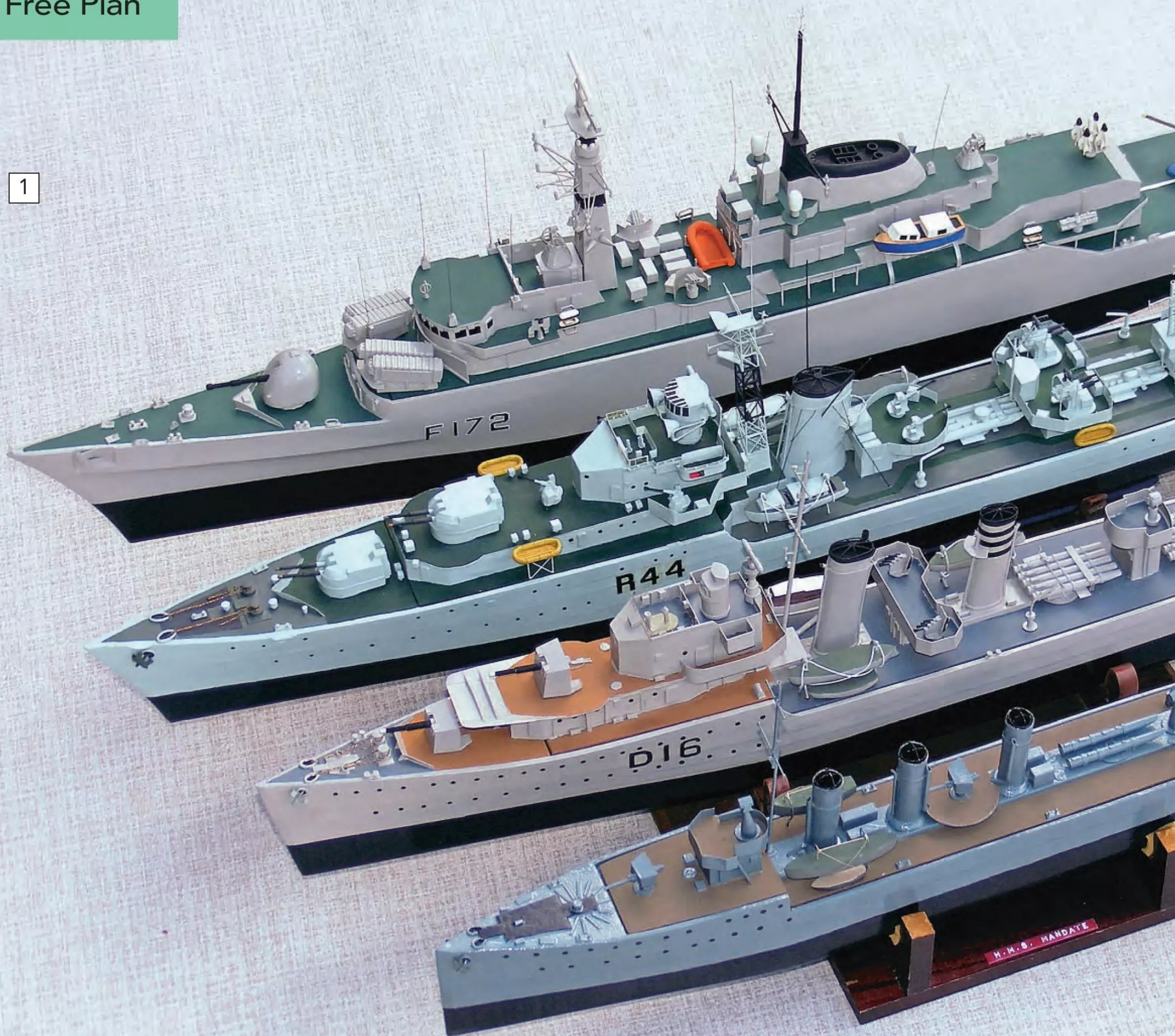
Origins

Longer ago than I care to remember, I discovered that radio-controlled destroyer-based models could be successfully built and operated at 1:144

scale (1 inch = 12 feet in Imperial units). This led to the idea of designing and building a series of models based on how the Royal Navy had developed destroyer designs in the 20th Century. It proved a rewarding if somewhat protracted challenge, as after five decades, the series still included only four models!

Looking at these models in 2020 showed that there was a large gap covering the vessels designed and built prior to and during World War II. Like the proverbial 'mental itch' that would not go away, this gap had to be filled by my next model. These destroyers were quite different from the preceding 'A' to 'I' and Tribal classes, which had twin funnels. The requirement was for smaller destroyers than the Tribal class and, to save weight and space, this led to using only two boilers, thus they had only single funnels.

1



Too much choice?

While the same basic layout was used for the subsequent 'J' to 'CR' classes, there was one major change. The early classes had three twin gun mountings, save for four of the 'L' class, which carried four smaller twin mounts. A shortage of the twin mounts resulted in subsequent destroyers carrying single gun mountings. After pouring through my books, Norman Friedman's *British Destroyers & Frigates* proved invaluable, although the problem of which class to base my model on remained. I also had to take into consideration wartime changes, which due to equipment availability and different operational demands meant that even vessels within the same class could have markedly different appearances. For example, early classes started out with tripod masts, but the need to carry radar as high as possible led to the use of lattice masts. Even then, a short or taller lattice mast could be fitted. As for weapons, in many instances it was a case of installing whatever was available.

In the end, I plumped for basing this model on HMS *Wakeful*. This particular ship did feature one of my least favourite items, the lattice mast, but was otherwise a good example of an Emergency class destroyer, so would neatly slot into the gap in my model series (see **Photo 1**).

Now for an admission on my part: the most modern vessel in this series was not actually a destroyer. The growth in the sizes of warships in the 1950s and 60s led, at least in my eyes, to vessels classed as destroyers becoming rather large and losing that 'general purpose' (sort of naval 'Jack of all trades'?) character that destroyers previously had. This role seemed to have been taken over by frigates, hence the inclusion of a Type 21 in my series.

Construction

The new model's construction followed the same path as my other destroyer models: a basic open topped box made from balsa sheets, with the sides pulled inwards to create the bow and stern shapes. Put this way, it may

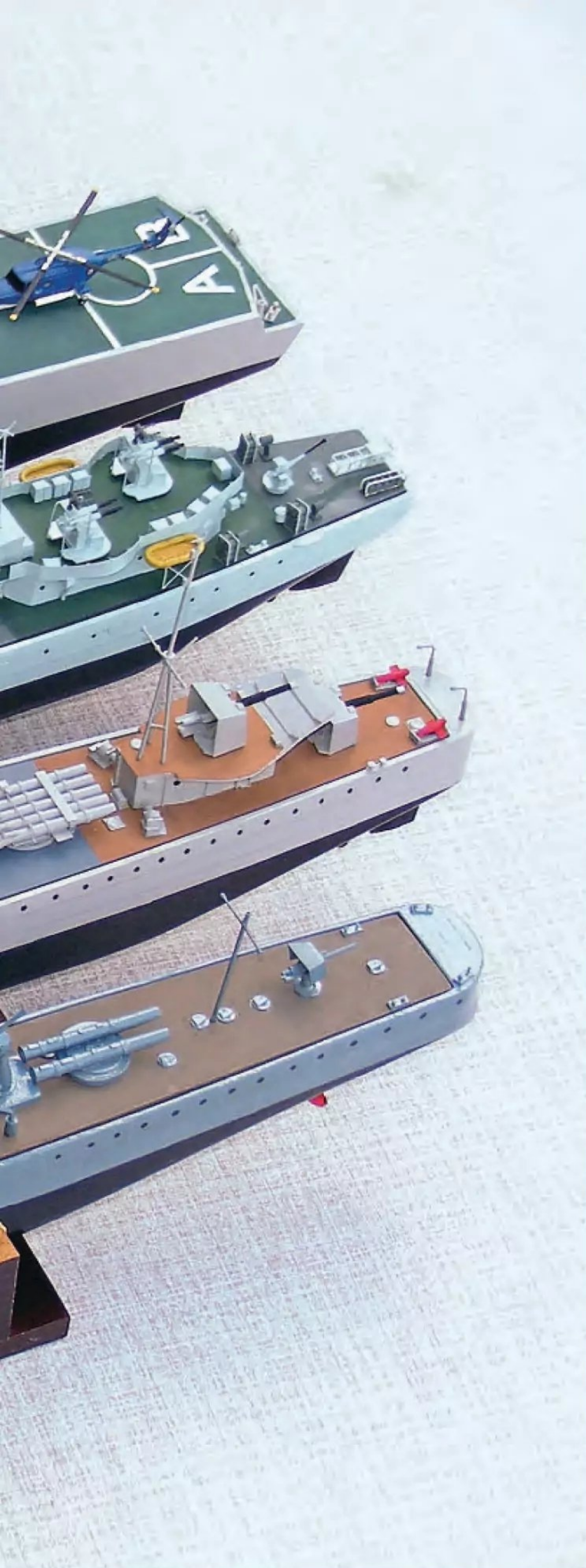
not sound a particularly attractive proposition but, with a little cunning, the end result can look very realistic, and the finished model should certainly perform well in the water.

Before cutting anything, I usually indulge in a few simple calculations just to ensure the build I have planned is viable rather than impossible. A simple calculation based upon multiplying the proposed hull length, beam and draught is used. If using inches, I've found multiplying this volume by 0.375 will give me a good approximation of the likely model's weight in ounces. If using centimetres, then 0.65 gives an approximate weight in grams.

With this model design, the estimate came out to around 40 ounces or 1.1 kg, comfortable values.

Materials

The prototype was built using the following balsa sheets and strip for the hull:
One sheet of 6 x 75 mm ($\frac{1}{4}$ x 3 inches)
Two sheets of 2.5 x 75 mm ($\frac{3}{32}$ x 3 inches)

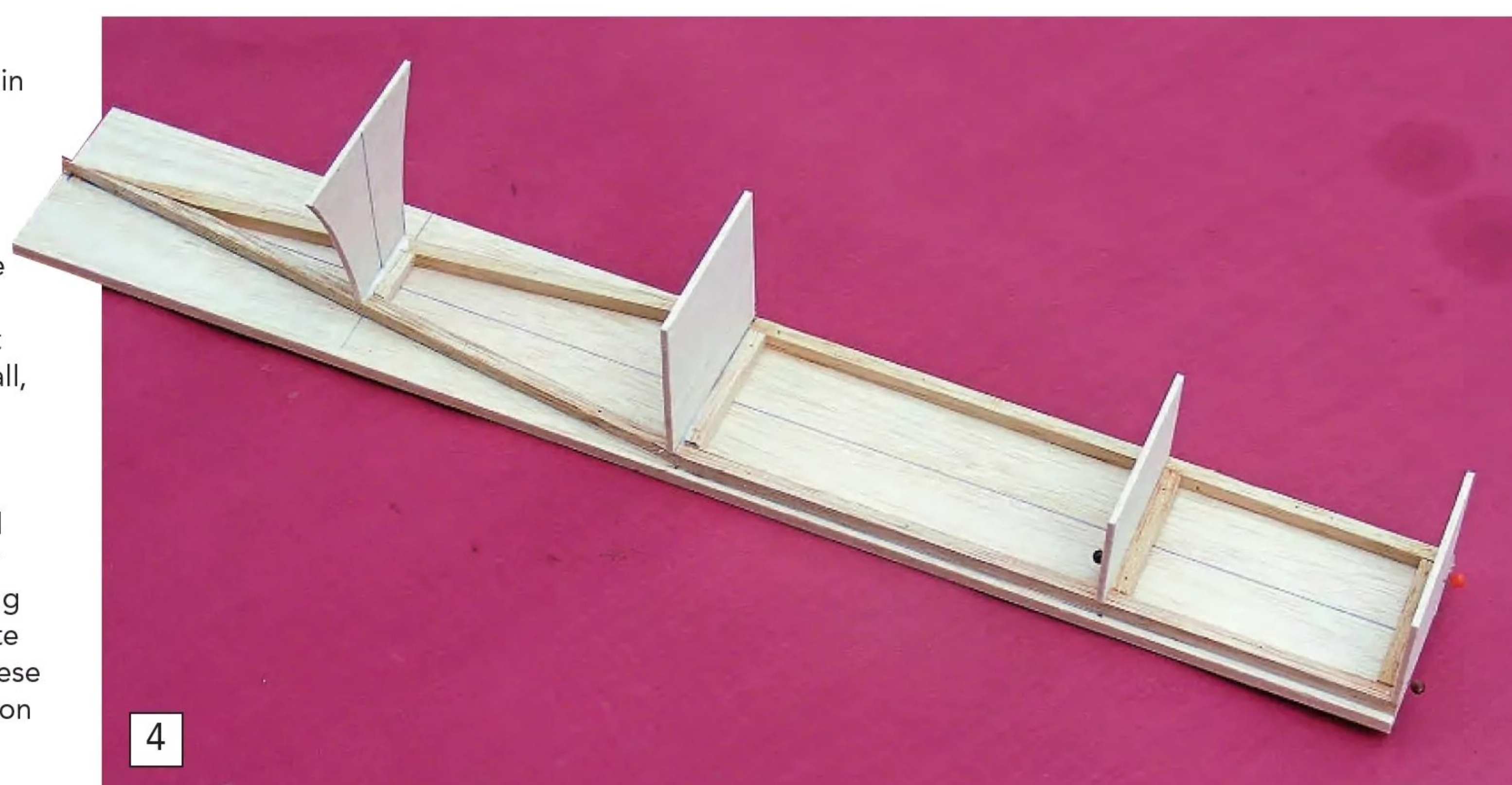
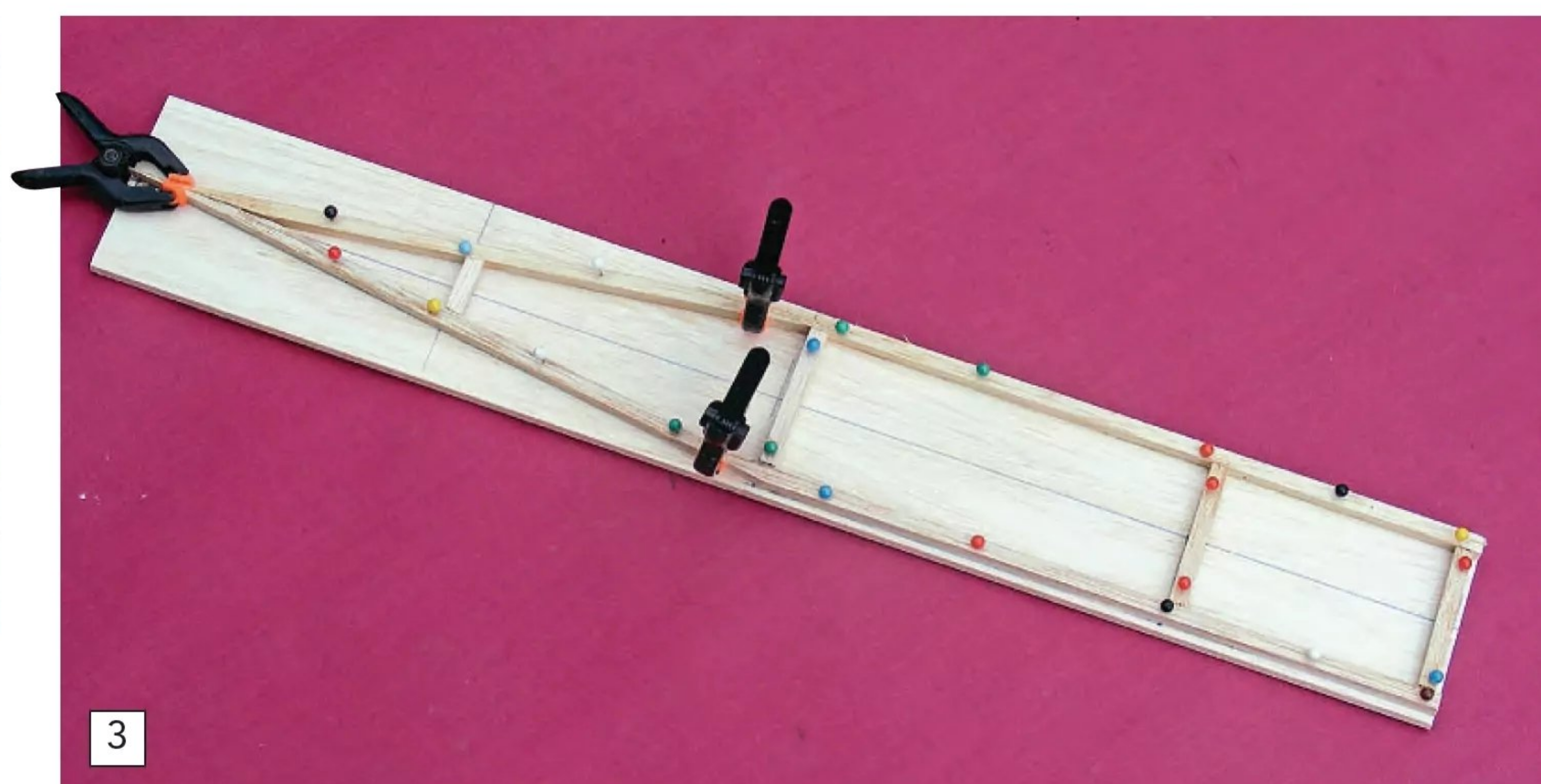
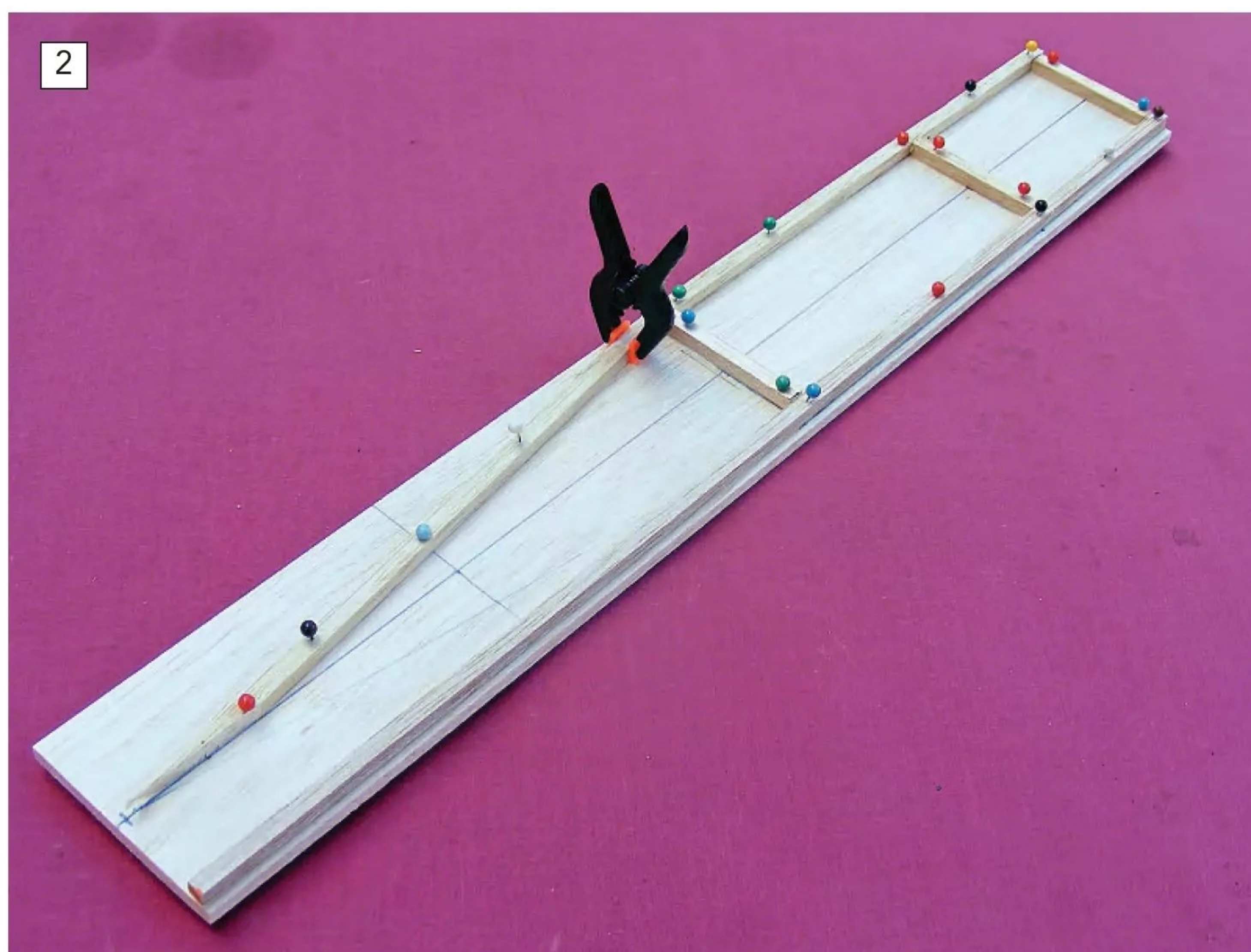


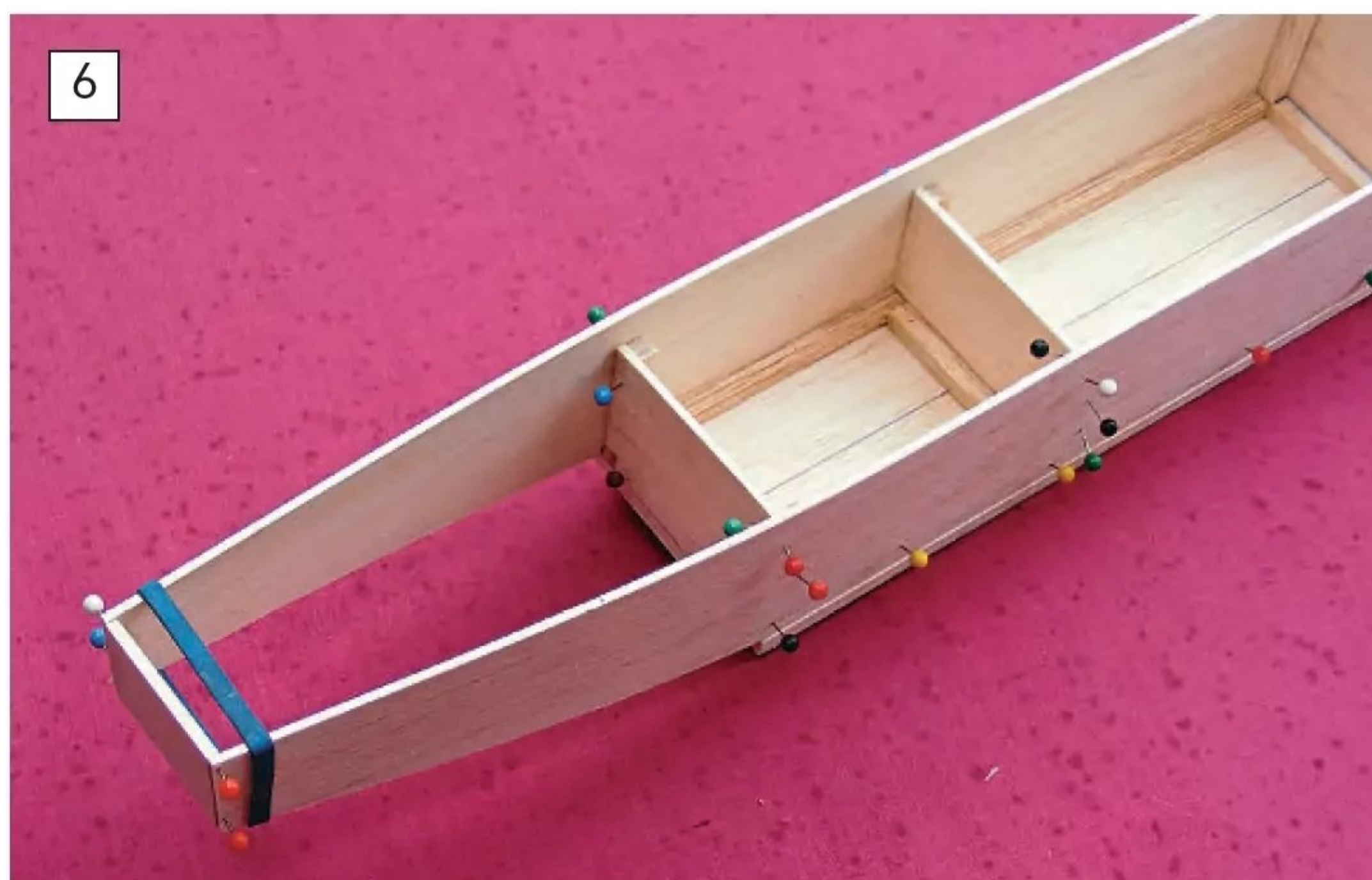
Two sheets of 3 x 75 mm ($\frac{1}{8}$ x 3 inches)
Six strips of 6 mm ($\frac{1}{4}$ inch) square.

A medium density of balsa ought to be adequately strong for this model. The hull sides must also have a straight uniform grain pattern to accommodate the bending needed to create the desired hull shape. As for glue, by all means use what you have found to be successful in the past. I stuck with a 'weatherproof' wood glue, the type that might not be totally waterproof but can be used outdoors provided it's not left in a permanently wet condition. After all, neither should our models be!

The hull

The suggested method of building the hull is shown on the plans, but some subsidiary notes might be useful. Work starts by gluing the balsa strips onto the hull base. To create the 'flare' in the bow section of the hull, these strips need scarf joints cutting at the position of the second bulkhead and bows (see **Photos 2 and 3**).





Bulkheads 1 to 4 are then glued to their positions on the hull bottom. The bulkhead notches should fit snugly inside the strips, checking that they are square and vertical (see **Photo 4**). After the glue has fully set, a good check is to try the hull sides against the bottom and bulkheads. They should fit against the bottom, strips, bulkheads and, when the sides are pulled inwards, meet at the bows.

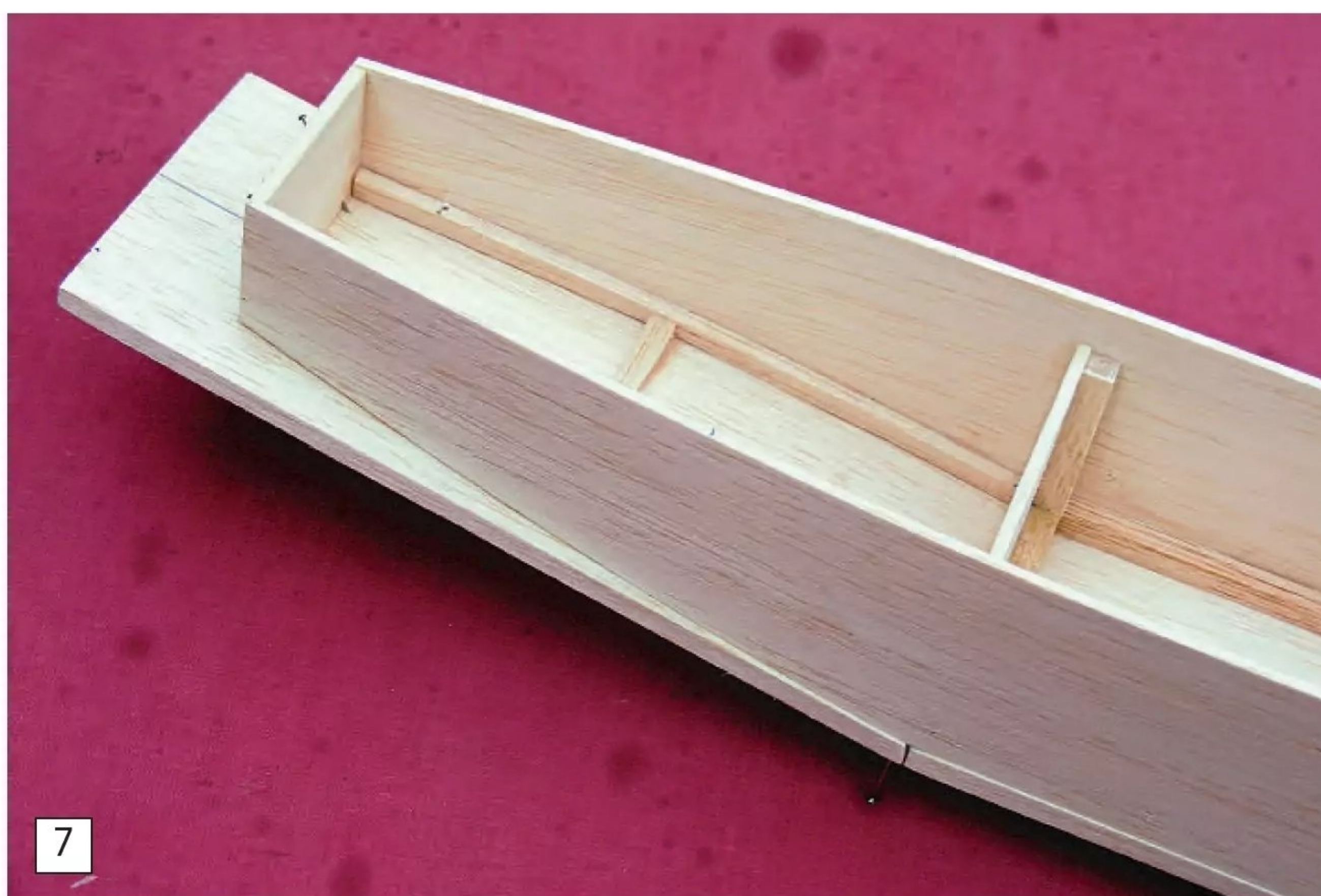
The sides are probably best first glued and pinned to Bulkheads 2 to 5 and the hull bottom and strips between them. Only when the glue has fully set can the next stages be safely carried out. This involves creating the bow shape by pulling the sides in and gluing them together and to the bottom and strips.

The angle at the two scarf joints in the strips mean that the sides must bend sharply to maintain contact with the strips. A light vertical external scoring of the outsides of the balsa sides at the bottom where B2 is positioned can ease this. I emphasise light once again and scoring no more than 1 mm in depth and 20 mm high should be needed to allow the sides to 'give' locally and adopt the desired angle without failing.

Before forming the bows, a trial run without any glue is highly recommended. Keeping the sides in place against the bottom and strips while the glue dries needs some correctly applied force. I, therefore, used two lengths of hardwood to push on this joint using a 'G' clamp (see **Photo 5**). This may seem a little excessive, but it will supply just the right amount of force in the correct place. The sides were held together at the bows using suitable clamps, with care being taken not to push the sides inwards; this will avoid a quite odd-looking concave shape to the top edge of the sides.

My trial run showed that the sides also need to be firmly pressed against the edges of Bulkhead 1. If they fail to do this, then some pins might be needed to keep them together. Once you're happy with the clamping arrangement, it can be removed, and glue applied to all the joints before reassembly. The bows of any model boat can be the first part to hit anything. For this reason, I always reinforce the joint between the two hull sides with a strip of fabric or

"This may seem a little excessive, but it will supply just the right amount of force in the correct place"



gauze liberally coated with glue and pressed across it. Years of accidentally testing these reinforced bows has yet to see one fail.

The rear of the hull is finished by gluing Bulkhead 5 in place. The sides have to bend inwards, but a light elastic band is enough, along with a few pins, to prevent any movement while the glue sets (see **Photo 6**). The stern bottom sheet then needs to be glued in place; slightly chamfering where it butts against the hull bottom can make a neater glued joint (see **Photo 7**). The stern bottom/side joints also need strengthening with balsa strips; these can be cut to fit then held in place with a balsa strip wedged between them at the mid position.

The upper edge the hull sides is strengthened by gluing balsa strips around the inside of the opening between B1 to B2 and B2 to B5. This strip has to sit 3 mm below the top edge of the hull sides. This is so the removable deck section can fit within the hull sides (see plan). Balsa strips also has to be glued across B1, B2 (both sides) and B5.

"Leaving just balsa wood at the bows is asking for damage..."

Some extra internal reinforcing strips should be glued vertically to the hull sides (see plan).

Shaping the hull

The bulk of the excess balsa is easily cut away from the hull bottom, although be sure not to get too close or you will risk damaging your hull sides. Shaping can be done with a knife, but a small razor plane is a more controlled method. The cross-section on the plan gives you an idea of what to aim for.

Leaving just balsa wood at the bows is asking for damage. A strip of hardwood glued into this position and blended smoothly into the hull shape will add a surprising amount of impact resistance. It doesn't have to be anything special, just something tougher than balsa; I have even used laminated lollypop sticks!

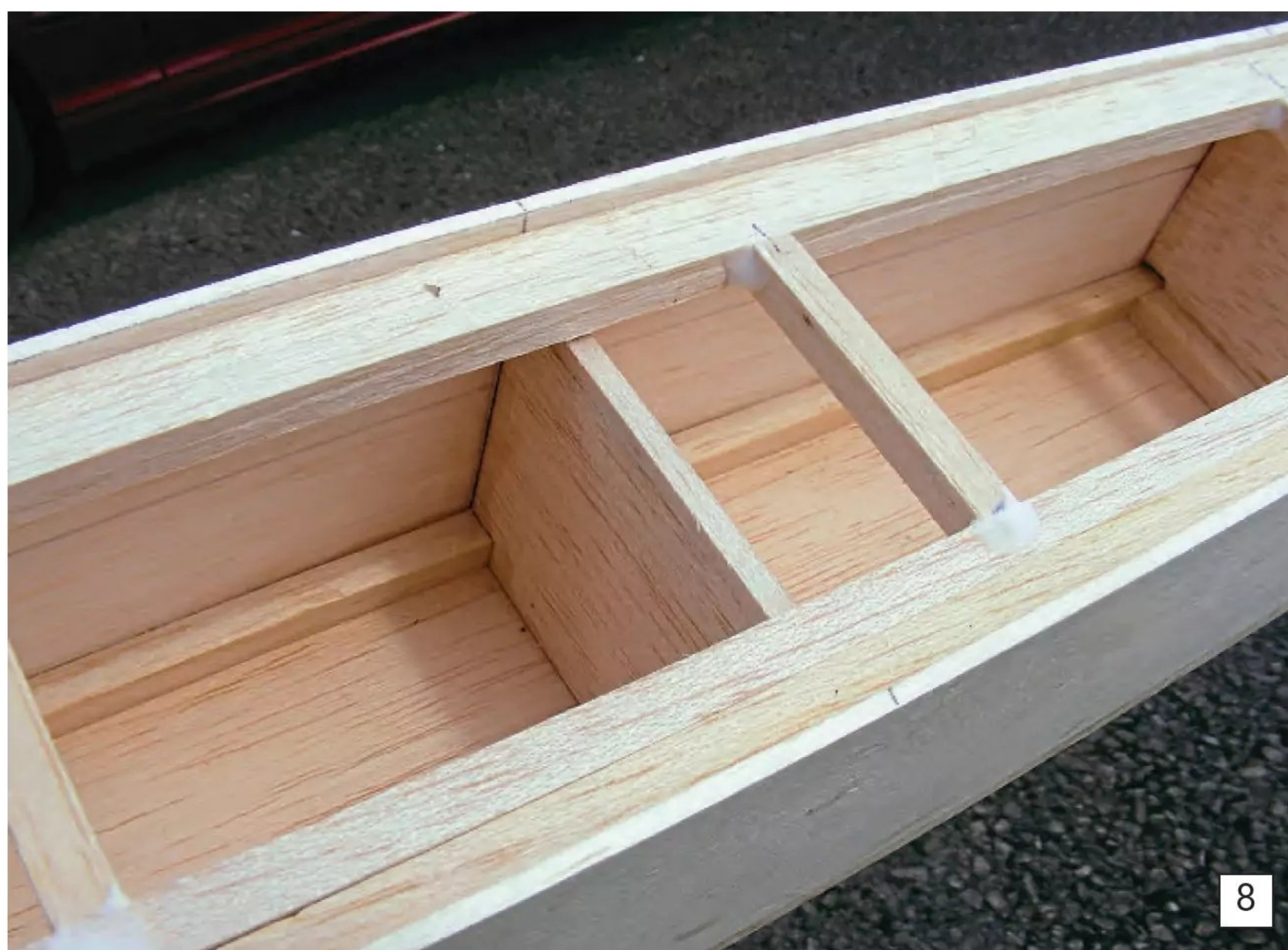
These vessels did not feature a simple square cut transom type stern. So, on this model you will need to laminate some balsa (off-cuts from the bottom sheet?), stick it to B5 and then sand it into the shape shown on the plans.

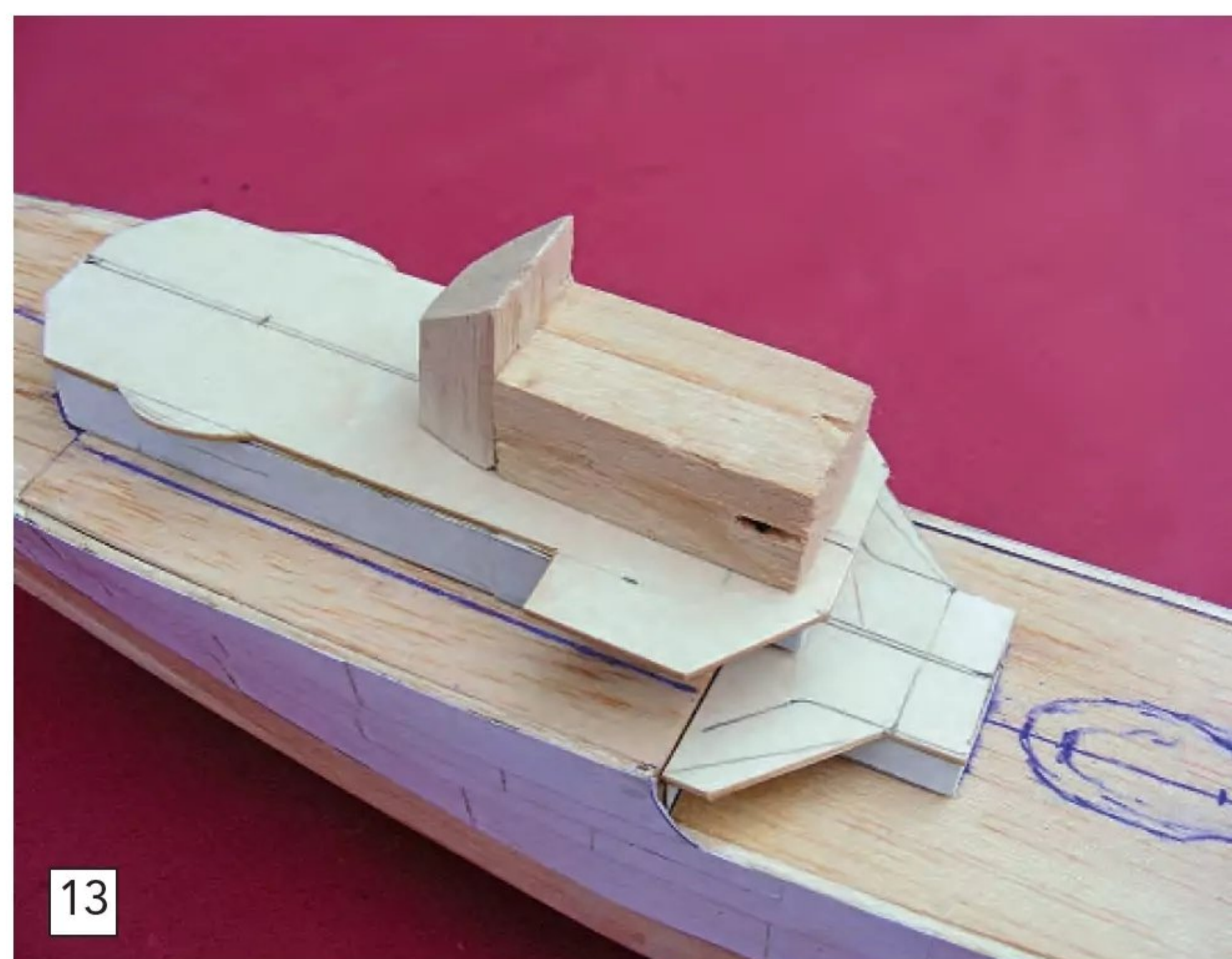
At this point, the hull should be inspected for any external surface defects, such as cracks or gaps at glued joints. Small hairline cracks can be filled by forcing some glue into them, larger gaps would be better dealt with by the insertion of a glue coated sliver of balsa.

Balsa sheets should be supplied with a good even and smooth surface, thus minimising the need to sand the external surfaces of the hull. Attacking it with coarse grades of sandpaper should not be necessary; in fact, you could easily cause damage and weaken the hull. You may perhaps find the initial shaping of the bow reinforcement and stern block warrants a course grade, but if so, this should be used with restraint. The only way to be truly in control of sandpaper is if it's wrapped around a sanding block; this should guarantee a smooth flat surface, something that sandpaper held in the hands can never do.

Decks

The model's deck is designed as three separate parts: a fixed section from the bows to B1 and two removable sections from B1-B2 and B2-B5. So that these are secure but easily removable and yet still reasonably water resistant, frames must be created inside the edging strips around the hull openings (see **Photo 8**). These are made from 6 mm ($\frac{1}{4}$ inch) square balsa and must fit against the edging strips, with transverse strips at every 50-75 mm (2-3 inches). Care must be taken to avoid getting any glue between these removable frames and the hull.





Only when the glue has fully set can they be eased out of the hull. They need to slide into the hull openings smoothly, with no suggestion of sticking. Very light sanding may be needed on the frame edges to achieve this. In addition, it's worth marking the top of these frames, as they may not fit easily if pressed in the other way.

Your frames should be glued, the right way, to 3 mm ($\frac{1}{8}$ inch) balsa sheets (see **Photo 9**). After ensuring these sheets have remained flat as the glue has set, they can then be offered to their hull openings. The edges of the deck sheets will need some trimming until they can slide inside the hull sides; a good gap is something like 1 mm. The plan shows the necessary sequence for shaping and fitting the removable decks.

The deck from the bows to B1 has to be shaped to fit snugly inside the hull sides. The best way to do this is to take a piece of 3 mm ($\frac{1}{8}$ inch) balsa sheet and place it on the hull, ensuring that it covers the top edge of B1. Then, run a pencil or ballpoint pen

“Getting a realistic and safe performance from this model demands the right combination of motor, battery and propeller”

around the outside edge of the hull sides on the underside of the deck piece. This will give you a starting point for removing excess balsa, with the aim of making a shape that fits the hull opening. As this is a fixed deck, the edge joint doesn't need to be perfect; any gaps can be filled after it has been glued in place. But the removable deck from B1-B2 must still fit into the hull (see **Photo 10**).

Making holes

There is some choice in when to make holes in the hull for the propeller and rudder tubes, but, to me, it has always seemed best to do this before starting the surface sealing of a wooden hull.

The plans show the layout used in the prototype, a single propeller and rudder.

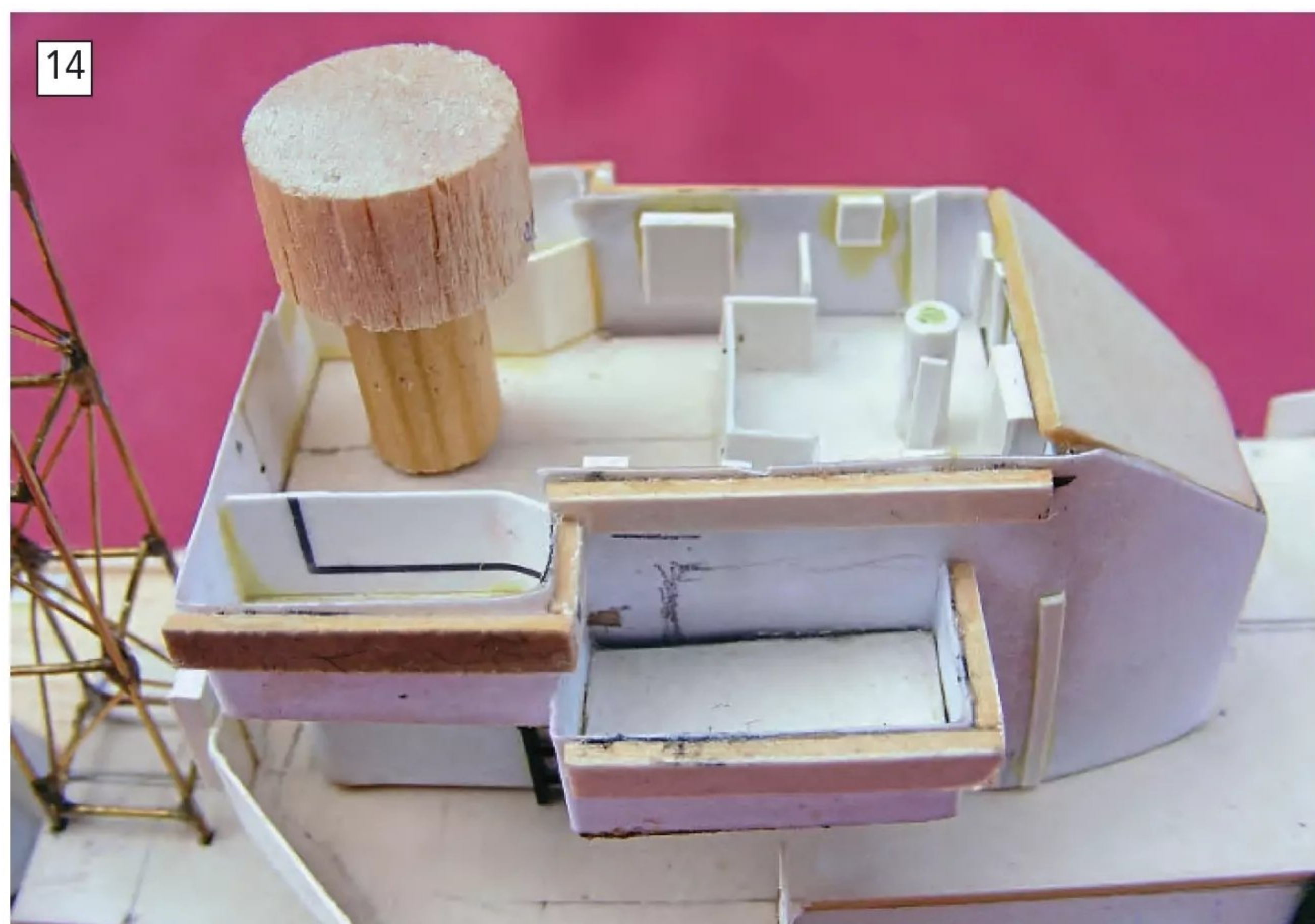
This has always given good performance in many similar models but if a twin screw set up is needed then the Spookoinky model (see the July 2023 issue of *Model Boats*) could be referred to.

Getting a realistic and safe performance from this model demands the right combination of motor, battery and propeller. I used what I had to hand, which was a 50-year-old Monoperm motor, together with a Ripmax propeller, shaft and tube assembly of the same vintage. Well, I knew they would be an excellent match for this model, but obviously they are no longer available. With similar models, I have found that the RE 385 motor and a RadioActive brand propeller and shaft assemblies is a good combination.

The key to getting good performance is to ensure that the propeller and rudder tubes are on the centreline of the hull and cannot foul anything. The holes in the hull bottom sheet and B4 can be made a little larger than needed, thereby allowing for some packing to achieve the correct positions. A slow setting epoxy is a good way to secure the tubes into the hull and make a watertight seal.

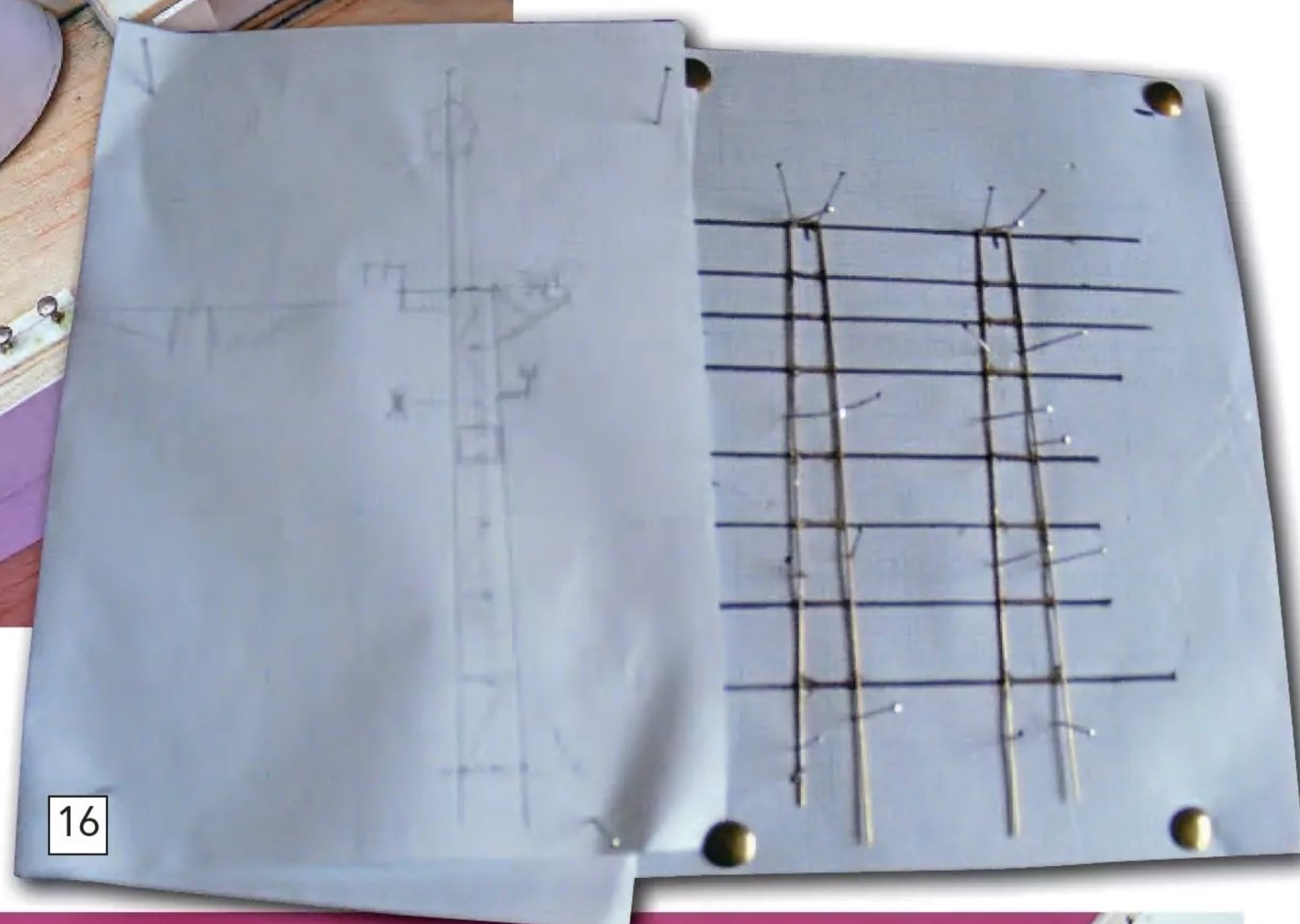
Precautionary float?

While I always make an approximate calculation for a model's likely weight before starting to build, it is comforting to undertake a trial float in order to confirm this figure as soon as possible. However, before any wooden hull can approach water it needs to be made waterproof. Here you can use whatever method has worked for you before. Personally, I favour either cellulose dope or clear acrylic varnish. The number of coats needed to penetrate into the wood, seal it and produce a smooth surface depends on your technique, but it is important to sand between each coat to remove any surface 'fuzz' and visible grain texture.





“We now come to the one part of the project I was really dreading...”



With the hull's external surfaces sealed, the motor, coupling, battery and R/C gear can be installed as shown on the plan. The desired waterline, also shown on the plan, can be marked on the hull.

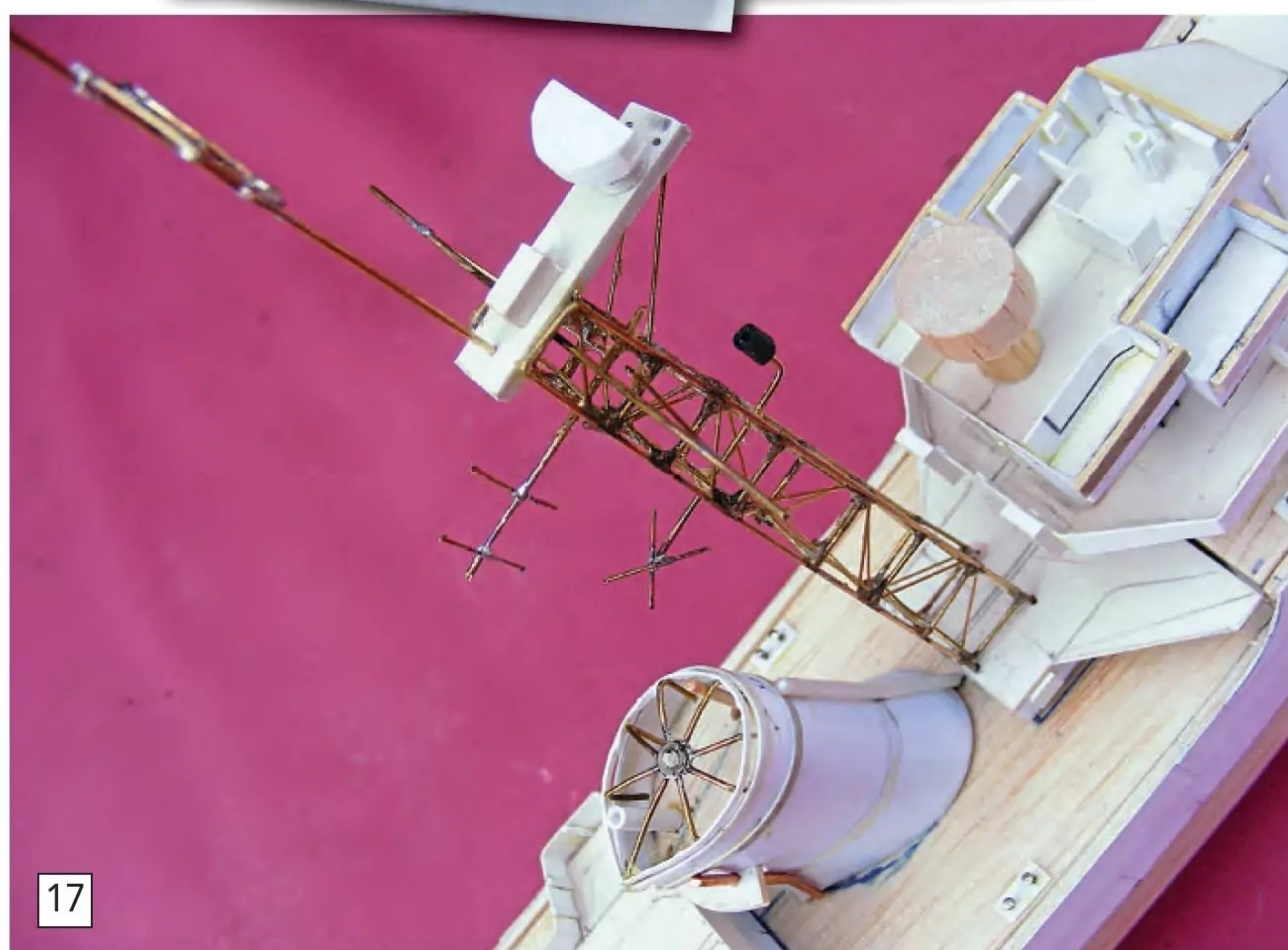
After a round of adding, removing and moving things around, my model was found to float on the waterline at almost exactly the weight I'd predicted. In addition, there was no evidence of any leaks, which would have needed correcting before moving on.

Superstructures

The loose items (ballast, battery and some of the R/C gear) inside the hull need to be removed before starting the next stage. This makes it easier to handle the model, and, anyway, the ballast will need adjusting to accommodate the extra weights being added.

The positions of the superstructure blocks can now be drawn onto the decks (see **Photo 11**). These blocks are made from scrap pieces of balsa sheets, laminated together to make the desired thickness. Card about 1 mm ($\frac{1}{16}$ inch) thick is used for the decks, while the vertical surfaces are covered with thinner card (see **Photo 12**). It is worth thinking about sealing your card before fitting an item to the model, as access might otherwise prove difficult later. Once sealed and painted, you will find the card hides the wood grain and looks like metal.

The bridge is made in the same fashion, using a block of balsa (see **Photo 13**). After this has been cut, sanded to the correct shape, and covered with card, the various card constructed platforms can be added. A few details on the open bridge will avoid that empty look you sometime see on models (see **Photo 14**). Thin card strips need to be cut and bent to fit around various platforms and gun positions, as shown on the plans.



Funnel

These vessels had a funnel with a teardrop section, again, as shown on the plans. To keep the top weight down, a simple card tube was used on the prototype. You could try squeezing a thin card tube into this shape, but I've never managed to make a neat job this way. A sheet of thin card was, therefore, wrapped and glued around two balsa formers cut to this teardrop shape, and the upper former was recessed to create a more realistic hollow appearance. You will find that by angling the bottom former, the

funnel adopts the rearward rake required.

I detailed my funnel by adding a couple of card bands and the framework over the open top. The latter was made from thin wires glued to the inner edges of the funnel and soldered together where they met in the middle (see **Photo 15**).

You will see I've also incorporated some suggestions of pipes, lockers, ladders, etc. While admittedly some of these are not exactly to scale, in terms of adding interest and enhancing the overall look of the model they fulfil their intended purpose.

“The objective here was to produce the right outlines, proportions and shapes, without adding too much top weight”

Lattice mast

We now come to the one part of the project I was really dreading. This lattice mast is such an obvious feature that it simply has to look right, in both shape and proportion. The danger is constructing something that looks far too ‘heavy’ and unrealistic, yet the damn thing has to be robust enough to survive on a working model. If this aspect of the build worries you, then consider substituting a simpler tripod mast made from metal tubes; many of the preceding classes of destroyers were fitted with this much easier to make mast.

The mast on the prototype, however, was made from brass wire of about 1 mm in diameter, which proved to be strong enough without adding too much top weight. My original plan had been to solder the parts together. With such close joints, however, I could see that when soldering a new joint, I was likely to start melting nearby ones. Despite being slower, therefore, the joints were instead made with epoxy adhesive.

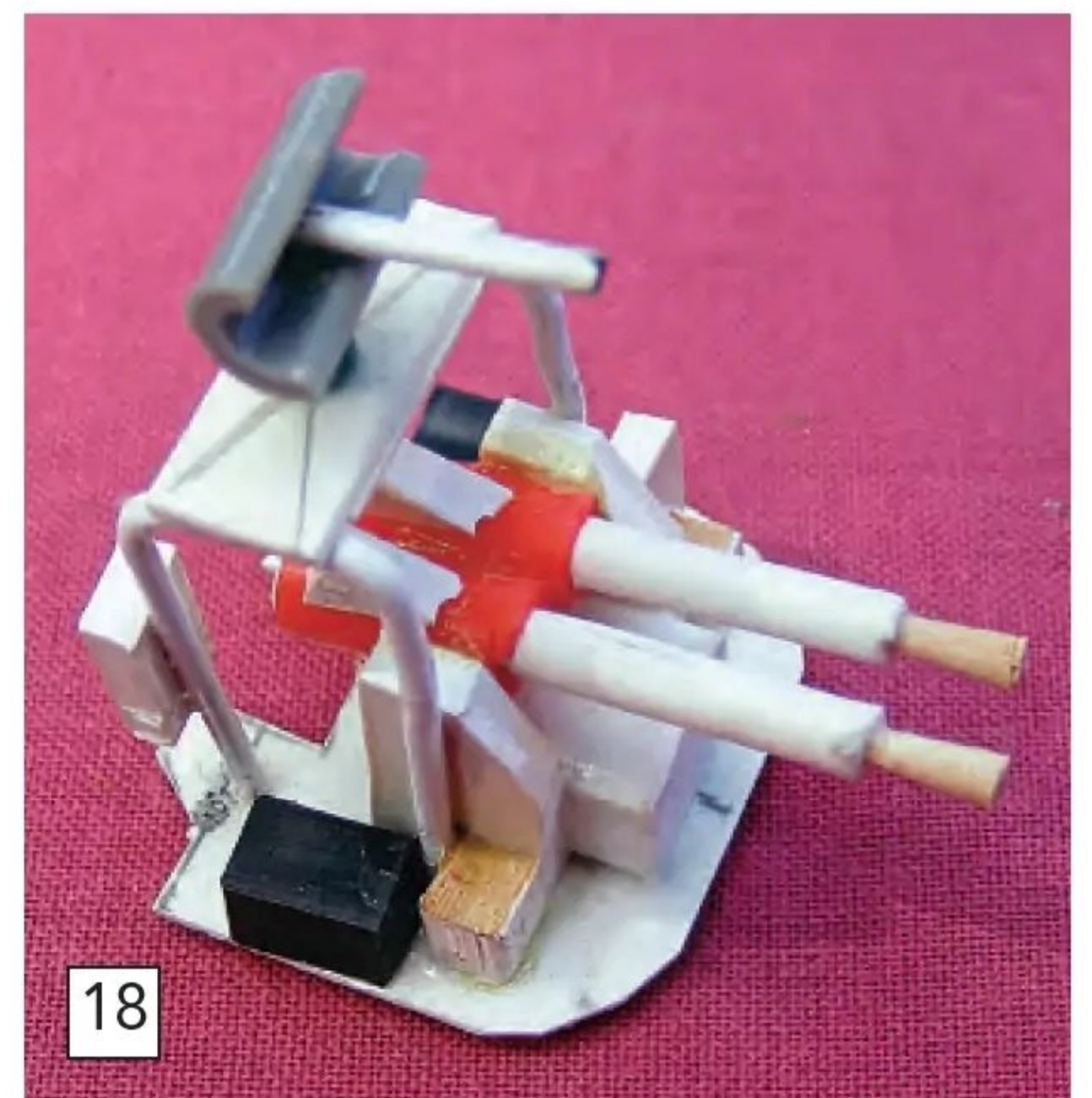
Anyone who has built a model aircraft fuselage of the ‘stick and tissue’ type will recognise the method employed for this mast. The side outlines and spacing for the crosspieces are drawn onto a sheet, which is then covered with clear plastic and pinned to a soft board (see **Photo 16**). Two lengths of wire need to be bent into ‘U’ shapes to match the mast outline but extended some

10 mm (½ inch) below the bottom of the mast so it can be stepped into four holes in the deck. Done carefully this is secure enough for sailing yet allows the mast to be safely removed when needs be.

The ‘U’ side pieces are pinned over the drawing and wire, cut to fit where shown, before being epoxied into place with a few extra pins to hold them. This can be a tedious task and it’s particularly frustrating when a piece of wire flies off during cutting never to be found! Only when the epoxy has fully hardened can the two sides be lifted up off the plastic sheet.

The two sides then need to be positioned on their edges over the plastic sheet and drawing and held at correct separation with pins. This allows the crosspieces to be added to the third face of the mast. This process must be repeated for the final fourth face.

The mast is completed by adding the diagonal pieces between the horizontal crosspieces. I used a slightly thinner wire for these items. The mast aerials carried by destroyers did vary throughout the war, so I settled for what looked typical. The top of the mast carried a small platform for a radar scanner, which can be made from plastic sheet (see **Photo 17**). These destroyers also featured a second mast, thankfully much smaller and simpler, so easily made from tube and wire.

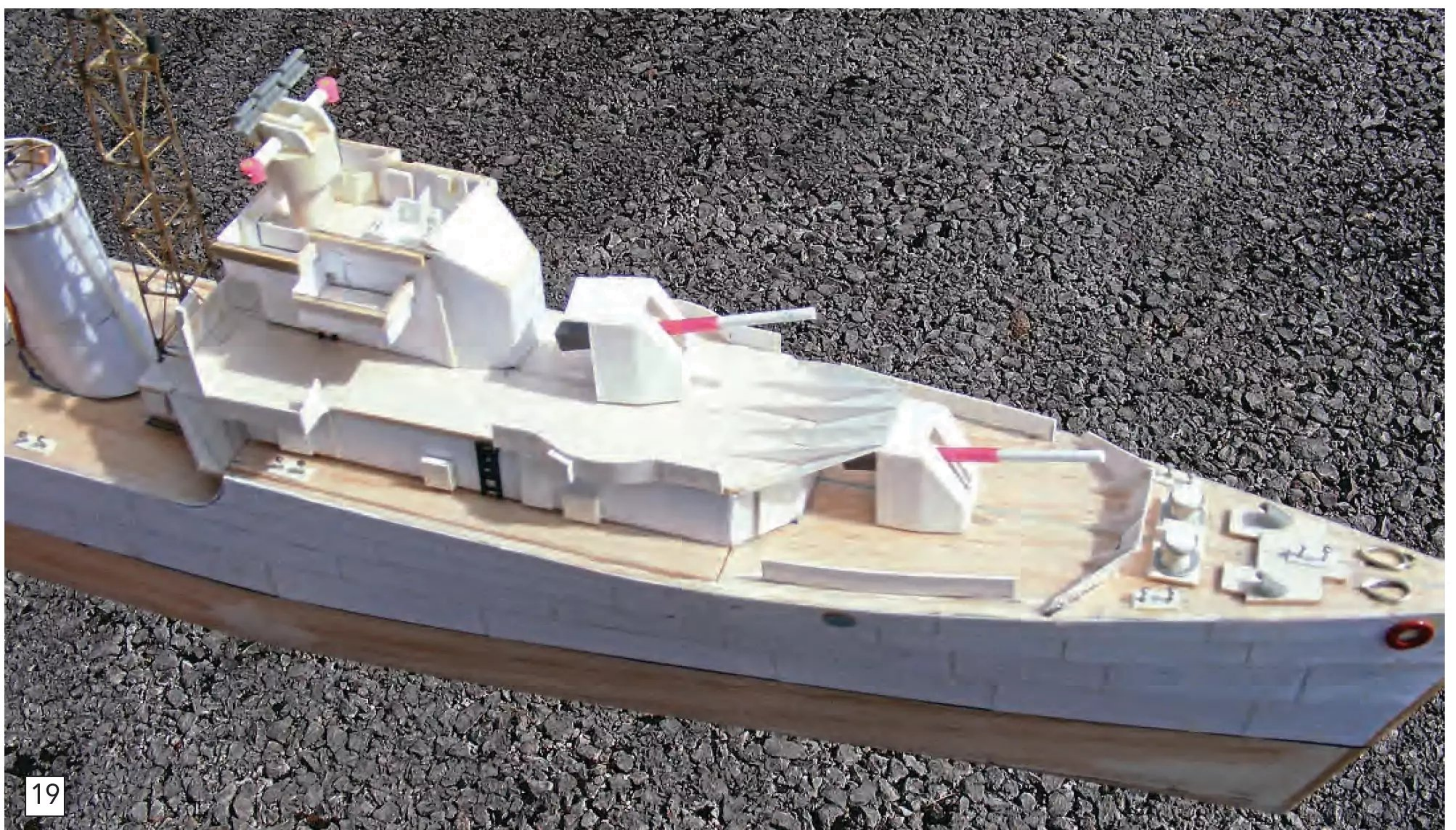


18

Remaining parts

The plans show all the smaller items that create some semblance of completion. One of the benefits of the ‘stand-off scale’ approach is that you don’t have to achieve totally accurate and minute levels of detail in order for your model to convincingly portray a full-size vessel out on the water. I suggest those who have issues with this approach should visit an art gallery; many highly regarded artists accomplish incredible effects without feeling the need to strive for microscopic perfection.

The objective here was to produce the right outlines, proportions and shapes, without adding too much top weight. This meant much use being made of plastic sheet, rods and tubes. Plastics allow for speedy construction with quick setting glues and can be painted directly with no porous surfaces to seal.



19



It's an interesting exercise to see how things that appear to be complex at first can be broken down to an assembly of simple shapes. The twin 40 mm mount is a good example; my representation lacks the all the details of the real thing (see **Photo 18**) but once finished and in situ looks OK on the model.

A good result to aim for with most models is an appearance that looks appropriately 'busy' and matches what you would expect to see. In this case, there's enough equipment on the hull, with all the armament ready for immediate use, yet without being cluttered and untidy looking. One feature I did add was a suggestion of the steel plates used to build the hull. These were no more than thin card plates stuck to the hull above the waterline with a slight overlap (see **Photo 19**). I rarely 'plate'

my wooden hulls below the waterline on the grounds that you wouldn't be able to see this part of a ship when it's sailing, and to be honest it can be a bit of a pain gluing card onto highly curved sections. If you decide to do this yourself, do remember that the card plates will require adequate sealing before painting!

Painting

In wartime some destroyers featured elaborate camouflage schemes. This could be copied onto your model, but with the warning that by its very nature camouflage can make a model difficult to see out on the water and therefore increases the chance of accidents. It's not unknown for some people to ram brightly coloured models, so why give them an excuse with a camouflaged one?

I settled for a grey hull above the waterline, using a spray can of grey primer from my local DIY shop. A couple of coats is usually enough produce a good even colour. Studying various wartime photographs revealed that some destroyers had their superstructures and details painted a slightly lighter shade of grey. On my model this was achieved by using a different brand of spray primer on these parts. The decks were brush painted with matt grey, green and brown. Most vessels are painted with anti-fouling paints (often a shade of red) but many years ago I found that painting a model's hull below the waterline black could improve its realism when sailing. As this area is most likely to receive bumps and scratches, opting for gloss, which is tougher than matt, is a good idea.

“Very quickly, sailing becomes a relaxed, instinctive action; you think about what you want this model to do and, without much conscious effort on your part, she simply does it”



To tie the different paints together and offer some resistance against things like oily fingerprints, a light spray with a clear varnish is often applied to the completed model. I suggest using a satin varnish, as this protects the paints but avoids that glossy finish that can appear too ‘toy-like’ on some models. Also, an important thing to check is that your varnish is not going to react with any of the paints you’ve used!

Sailing

A test float on the garden pond allowed the model to be ballasted down to the desired waterline. I know some people are frightened away from building slim models such as those based on warships, but, provided you keep everything as light as possible above the decks and all internal items as low as

possible, you should have little to fear. Out of curiosity, the weight of the removable deck sections was measured. Complete with all the details, mast, guns and all, they came in at 170g (6 oz.). If, however, you think you know better than the designer and cannot resist using unnecessarily heavy construction materials and/or buying heavy fittings to adorn your creations, you would be wiser sticking to beamy models.

The final weight of my prototype came in at just over one kilogram (39 oz). Ballast, in the form of thin lead sheet (‘flashing’ from building suppliers), was sat on the hull bottom sheet. To prevent my ballast moving while sailing, it was tacked in place using some domestic sealant. This keeps it secure but allows for removal without wrecking the model if needs be later. The

other internal items were secured with foam plastic for the same reasons.

A stability test (which involves pushing the model down on one side until the deck edge is at water level and then releasing) was carried out. The model sprang back upright, overshoot a little but then settled down after a couple of rapidly diminishing oscillations. In all my previous models, this behaviour has always indicated more than adequate stability for any sensible sailing conditions.

The model’s power was tested by operating the motor with an ammeter between it and the battery. Full throttle on the transmitter, holding on to the model of course, showed that the motor would draw 1.6 amps with a maximum power input of 11.5 watts. This was all very encouraging as it



suggested that I would have a model capable of lively performance for a couple of hours at least.

Being on a small pond meant that only limited manoeuvring could be tested, but some slow speed sailing was possible. With a maximum rudder throw of 40 degrees either way, steering looked to be good, even when moving astern. So, no reason not to head off for sailing trials proper on a larger water.

Handing was checked out starting at low speeds and working up to full power. This confirmed the pond test results, in that she's capable of holding a straight course and smoothly entering and leaving turns. It was easy to make turns with diameters down to about 2 metres (7 feet). Some rolling to the outside of the turn was noticed as speeds

and tightness of turns increased. Some people confuse this with instability, but it's just what the full-size vessels do and is only a problem if the model doesn't return upright when coming out of a turn. Astern steering proved to be controllable, but the speed needed to be limited to avoid swamping her stern.

The straight-line full speed was measured to be 1.5 m/sec (4.8 ft/sec). This looked just right for a destroyer in a hurry. It was later found that this created the wave pattern that the real thing would make at 36 knots.

Conclusion

Having sailed this model quite a bit since those first sailing trials, and in some rougher conditions – although not with waves breaking over her, she has never let me

down. One thing that did initially surprise me was how much pleasure she gave me, far more than I usually expect from a new model. Then I realised the reason for this: HMS *Wakeful* is very similar to the first model I built in this series of Royal Navy destroyers, HMS *Lagos*. She handles just the same. Very quickly, sailing becomes a relaxed, instinctive action; you think about what you want this model to do and, without much conscious effort on your part, she simply does it.

Of course, I now want to fit another model into this series. But should it be one to squeeze in between the existing models or be based on one of the Royal Navy's latest vessels? Something to ponder over while I get HMS *Wakeful* ready for another sailing session. ●

USS *Keats* Sound

Work on Glynn Guest 'stand-off scale' World War II
US Navy seaplane tender continues...

**PART
TWO**

Having last month covered the hull construction and motor and shaft installation, we continue this month with the sanding of the hull structure. The vertical edges of the hull require a good surface for the side sheets to be securely glued to, and sanding blocks that can span the distance between the deck and hull bottom edges are the only way to achieve this. I decided the parallel sides between Bulkheads 3 and 4 were where I should begin. Working towards the bows, the flare in the hull increases, therefore necessitating the removal of more balsa from the edges. My aim was to allow sheets of balsa to sit firmly on the edges of the main deck, Bulkhead 1 and the bow deck (see **Photo 1**).

Working rearwards from Bulkhead 4

to the transom is similar. The edges of the main deck and stern bottom adopt an increasing angle (see **Photo 2**). There was, I found, though, a difference when sanding the edges of the hull bottom aft of Bulkhead 4. This, and the edges of the stern bottom doublers, had to be kept vertical. The concave shape here renders a flat sanding board useless, so I resorted to wrapping my sandpaper around a cylinder about 4 inches (100 mm) in diameter.

Side sheeting

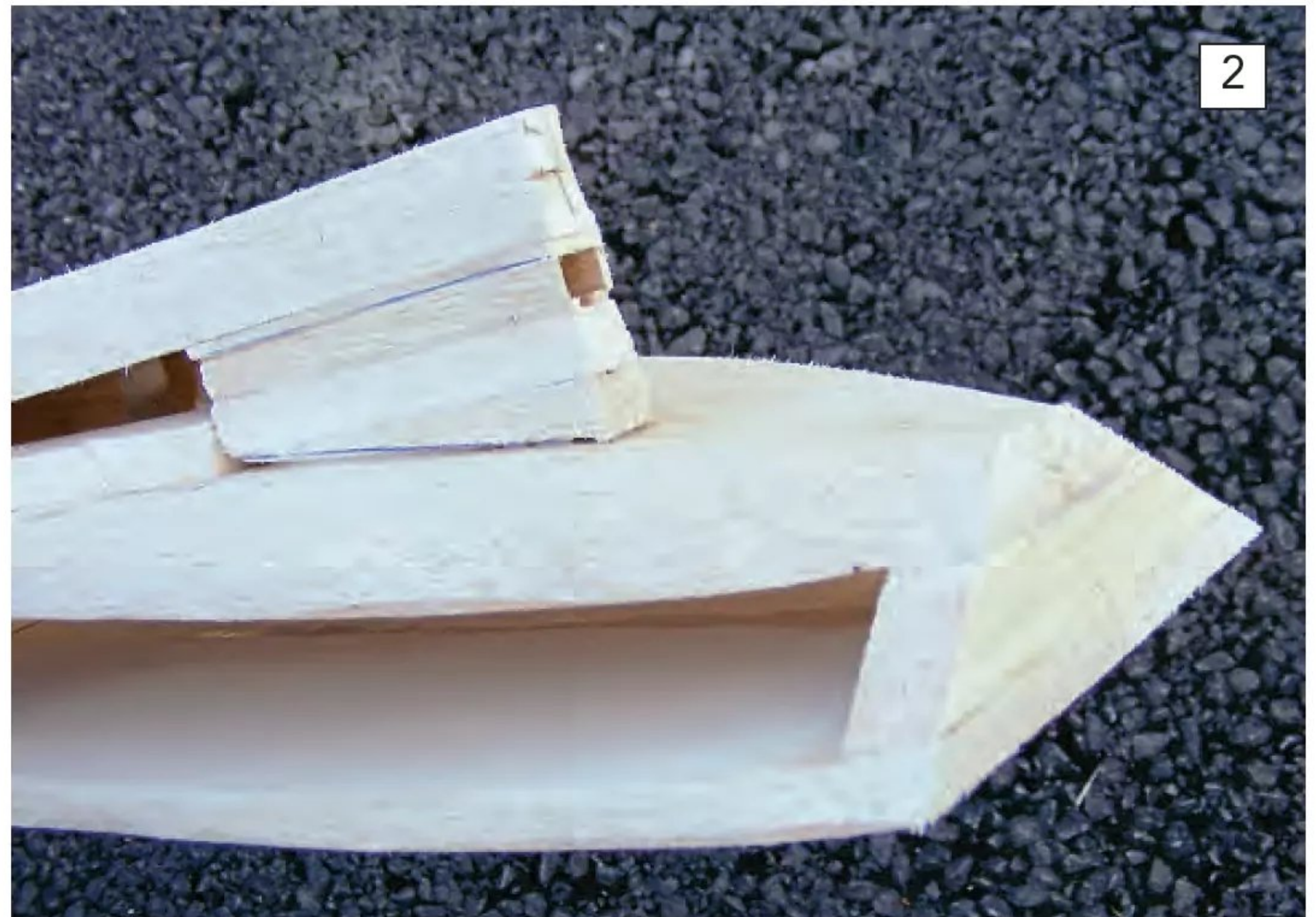
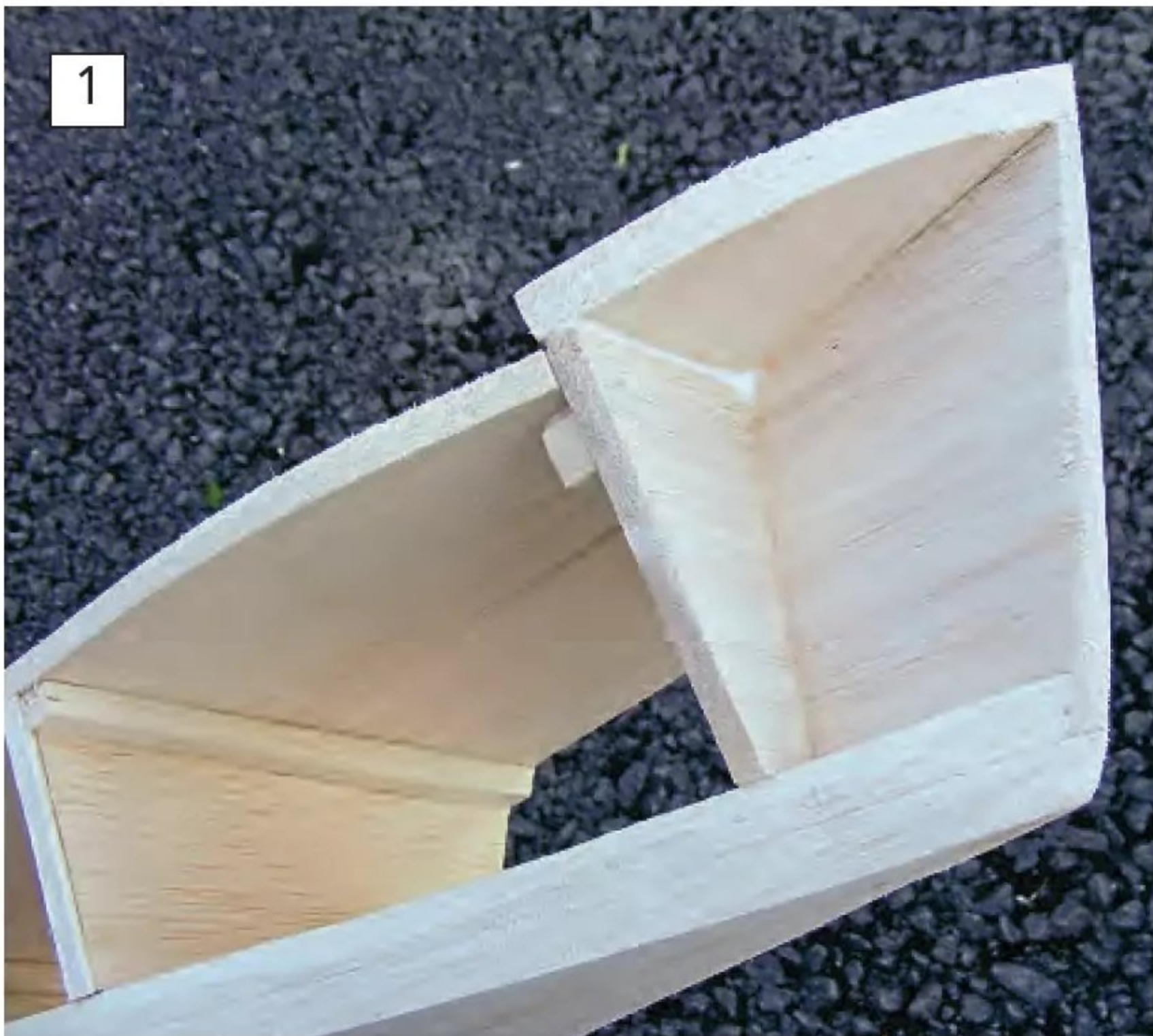
Balsa sheets with a thickness of 1/8 inch (3 mm) were used to cover the sides of the hull structure, with their grain running vertical. Because of the way the upper and lower parts of the sides separate

aft of Bulkhead 4, I usually start the sheeting process here.

A slightly over long sheet was glued to this area, with a horizontal cut halfway across it matching where the lower part of the hull begins to sweep inwards (see **Photo 3**). This seemed to make for a neater job but is probably not essential.

Further pieces of balsa sheet were then added working forwards. Care had to be taken that the edges of adjacent sheets were glued and firmly pressed together, holding them with pins. It's not a bad idea to add sheets to alternate sides as you work forwards and so avoid, unlikely as it might seem, building any twists into the hull (see **Photo 4**).





“This allowed the subsequent balsa sheets to accommodate the flare in the bow sections more readily”

Around the position of Bulkhead 1, a triangular sheet was glued onto the hull with its leading edge matching the slope of the stempiece. This allowed the subsequent balsa sheets to accommodate the flare in the bow sections more readily. The final sheets had to be attached one at a time to cope with the overlap at the stempiece; some clamps had to be used as well to ensure a good-glued joint (see **Photo 5**). Only when this sheet was firmly secured could the excess be cut away and the other side covered.

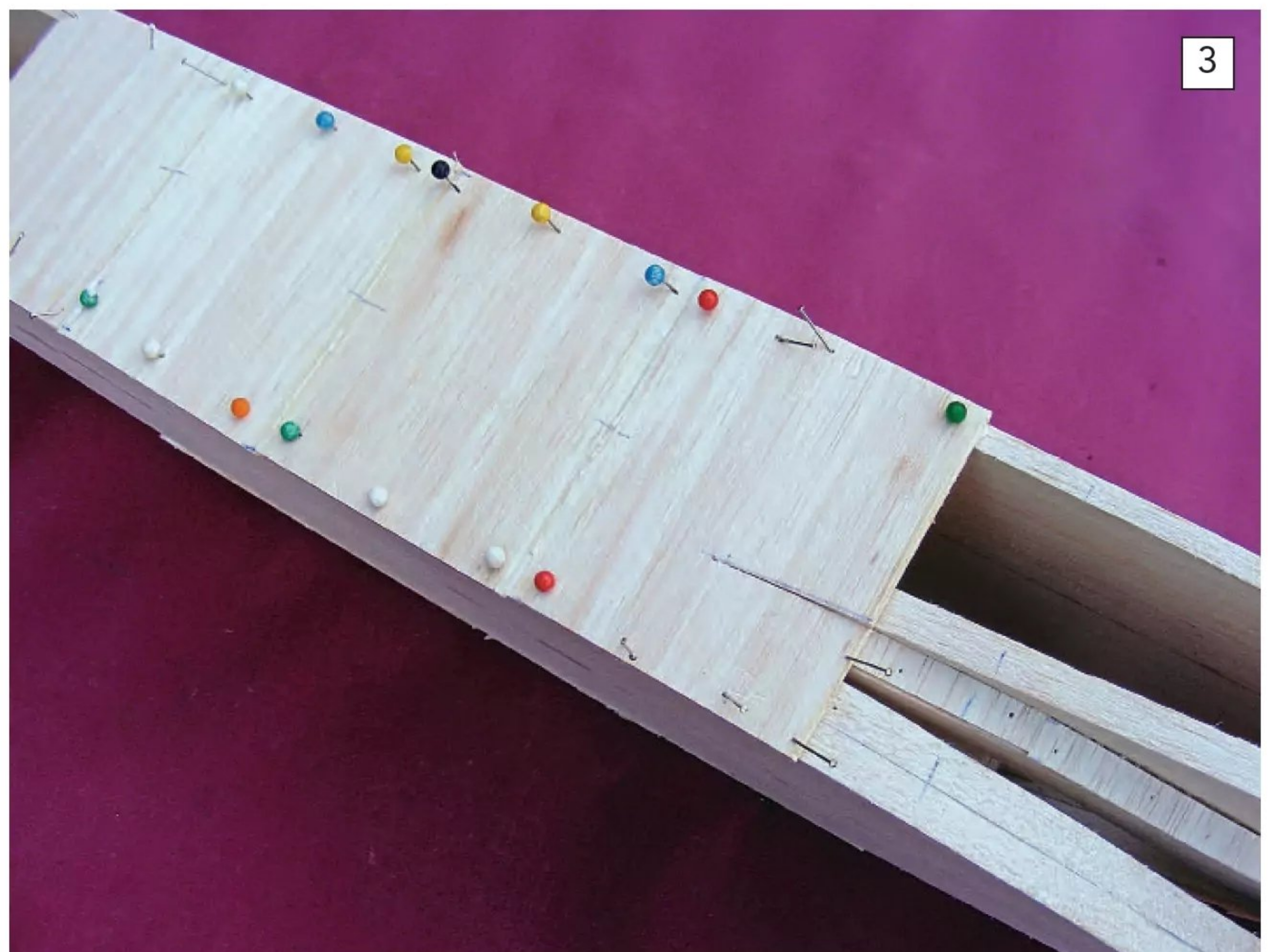
Sheeting the hull sides towards the stern involved much the same process, although I now had two separate areas to cover (see **Photo 6**). The angles that the sheets have to twist through at the transom might seem rather large, but the balsa sheet should cope, provided you don't use weak and brittle or very stiff grades.

Only once I was totally convinced that the glue had hardened could the excess balsa sheet be trimmed and sanded flush with the level of the decks and hull bottom pieces. Likewise, the excess was removed from the bows and transom (both of which need a flat surface for gluing).

Adding some shape

The highly curved stern was made by carving and sanding balsa to shape. Scrap pieces of balsa were cut and stuck to the transom (see **Photo 7**). These were then carved to approximately match the desired final shape (see **Photo 8**) before blending into the hull with careful sanding.

The bows were given some reinforcement by gluing a strip of hardwood in place (see **Photo 9**). As a bulwark was to be fitted around the bow area, this strip was extended above the deck level. After the glue had set, the strip could be carved and sanded to match the hull shape.



Next, the hull side sheeting was sanded to remove the inevitable 'steps' that occur between adjacent pieces of sheet. A sanding block was again used to avoid reducing the sheet thickness too much and creating weak spots. Sanding the edges of the hull bottom sheet allowed the bilge curve to be reproduced. The doublers glued to the bottom sheets allowed a fair amount to be removed to achieve the desired shape.

I now had only the rear of the hull left to shape. I could have just rounded the corners off and made a reasonable looking hull – however, something more realistic was desired. I therefore glued strips of balsa along the junction between the stern bottom pieces and the side sheeting (see **Photo 10**). These were then shaped into a

curved section. A sanding block would not work in this area, so I instead used sandpaper wrapped around a short length of cardboard tube.

Any hopes of creating the smooth shape I desired began to be dashed by numerous small gaps and steps. A tube of ready mixed domestic filler of the quick drying variety and more sanding, however, came to my rescue.

Access openings

The hull appeared to be adequately strong at this stage, so the four deck openings into the hull could be cut out. This required careful work with a sharp blade to make straight and vertical cuts through the deck sheet. My preference has always been to start with the transverse cuts, which is across the grain, first.

“I could have just rounded the corners off and made a reasonable looking hull – however, something more realistic was desired...”



4



5

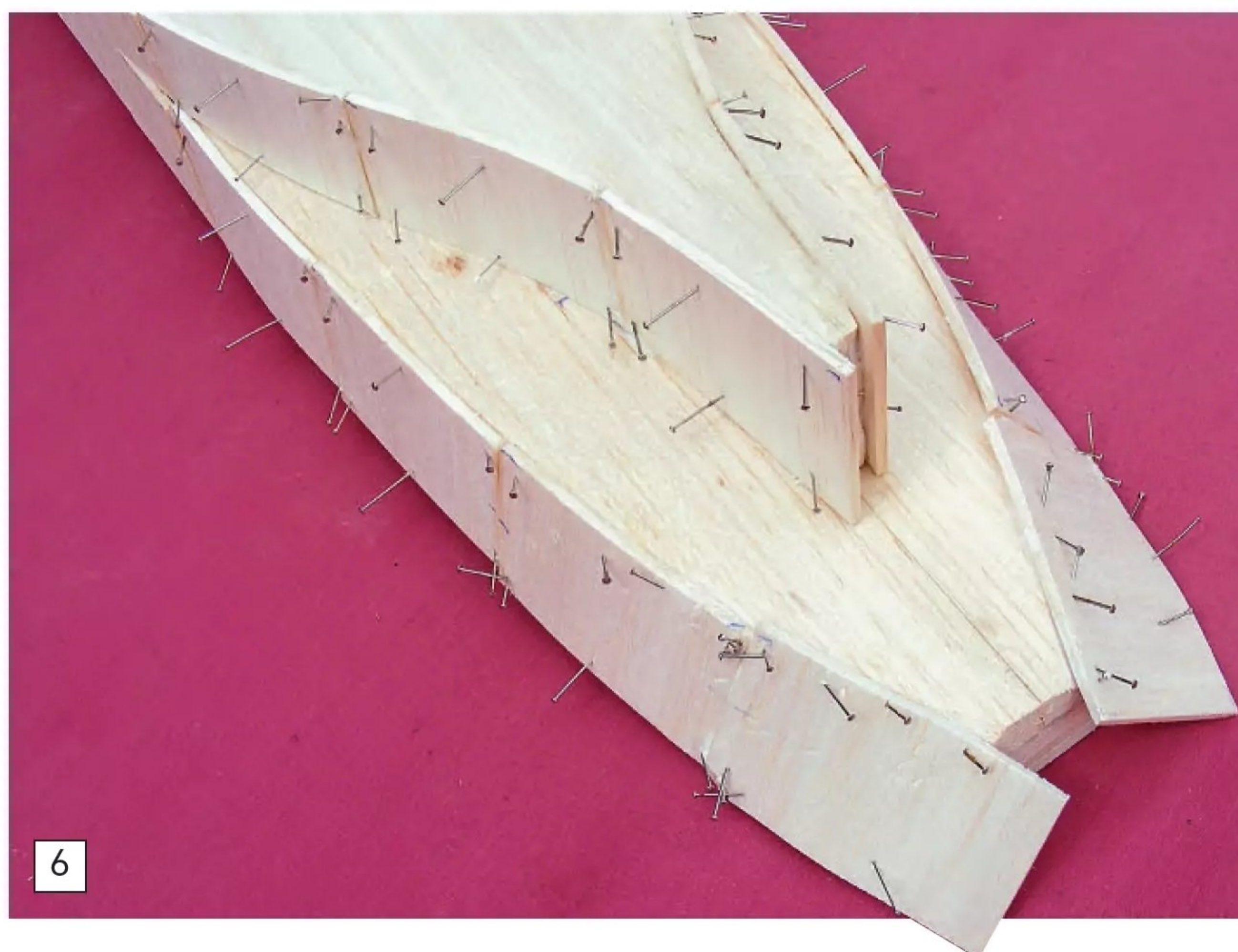
“As the cut-out pieces were to be used later to make hatches over these openings, each one was identified and marked with a small arrow indicating its forward direction”

As the cut-out pieces were to be used later to make hatches over these openings, each one was identified and marked with a small arrow indicating its forward direction. Since I had avoided getting any glue between the top of Bulkhead 4 and the underside of the opening in the rear deck, it lifted out cleanly. This piece was also to be used later and so was placed safely out of the way along with the hatch cut-outs.

Surface sealing

At this point the whole exterior of the hull was inspected for defects, such as cracks, gaps, dints and dings. Any found were corrected with glue or that tube of ready mixed filler I find oh so handy. I will confess that the bow area needed a fair amount of filler and sanding until it looked OK (see **Photo 11**).

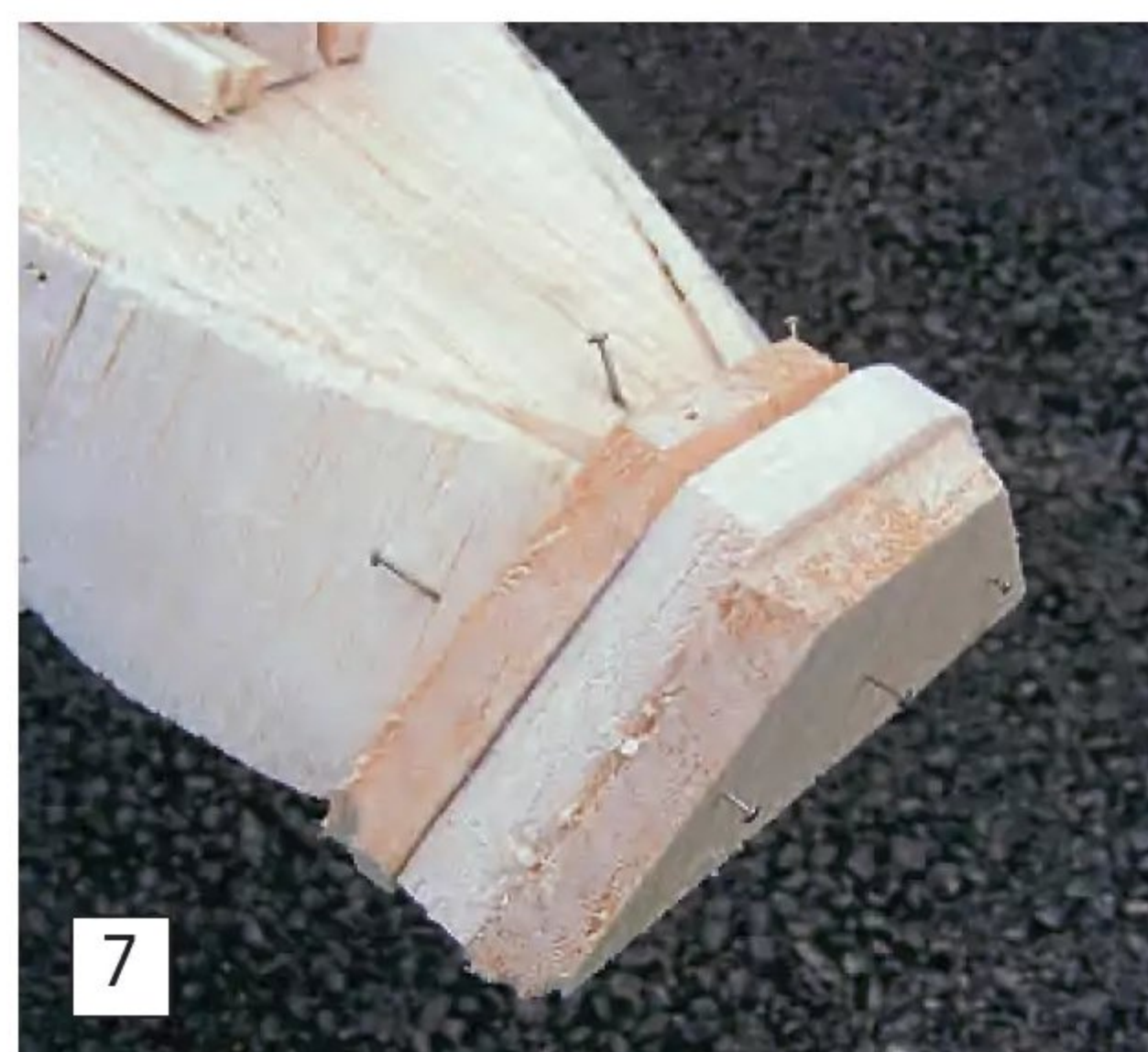
There is no one right way to seal and prepare a wooden hull for painting. If you have a method that has worked well for you in the past and is appropriate for task to hand, then why not use it?



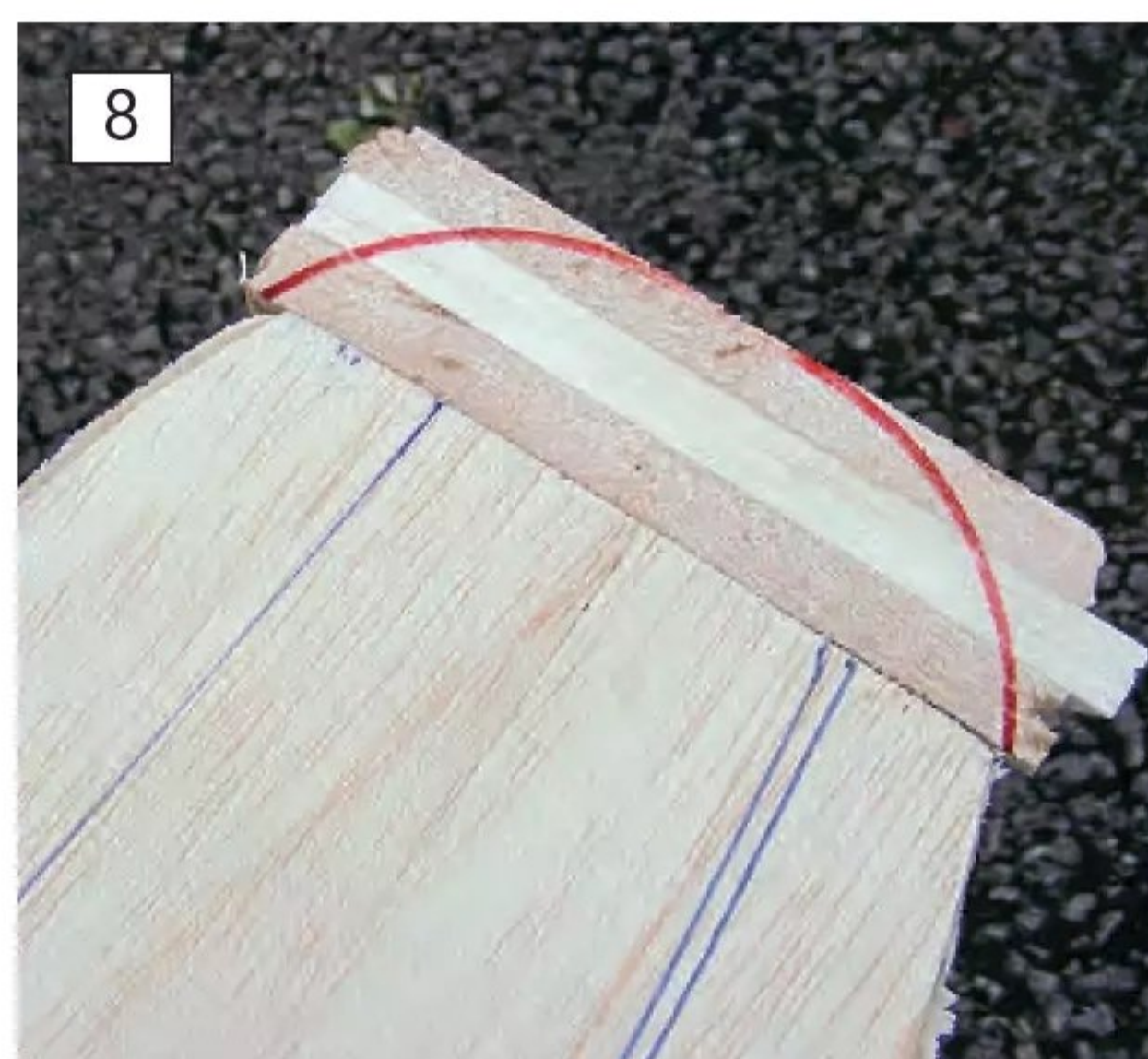
6

I stuck with cellulose dope. This may be a hangover from my early aeromodelling days, but it has never let me down. It's quick and easy to use, penetrates into wood and each layer applied bonds well the previous one. Light sanding between each coat removes any 'fuzz' and can alone produce a good, smooth surface for painting. I, however, tend

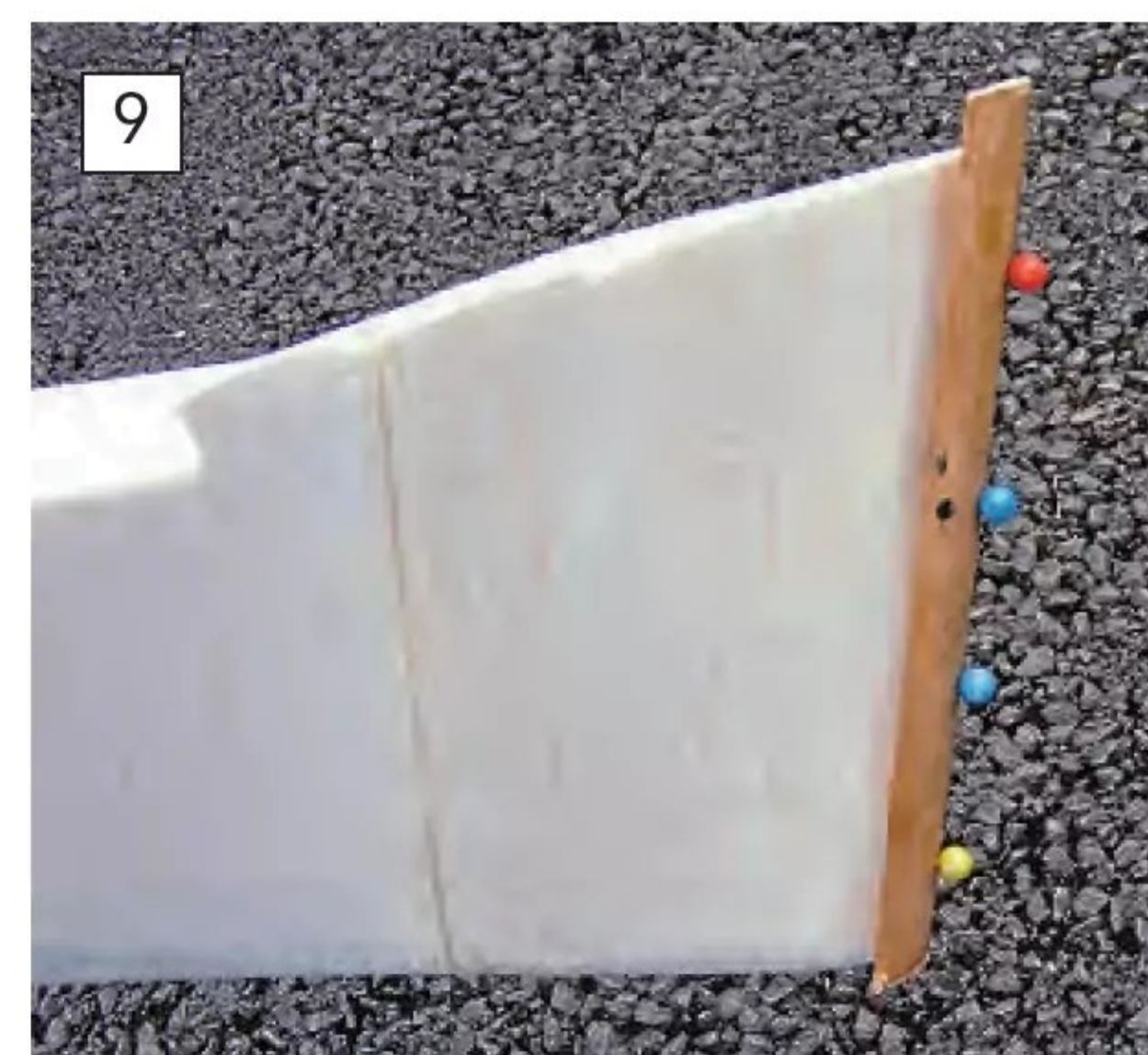
to go one stage further by applying a layer of tissue paper to bare balsa surfaces. Not only does this further improve surface smoothness but, despite tissue appearing to be weak, it strengthens and toughens the hull. True, a balsa hull can still be damaged, but tissue will localise and limit damage, something I have proven far too many times!



7



8



9



“Not only does this further improve surface smoothness but it strengthens and toughens the hull”

As for the tissue, I bought a couple of rolls of model aircraft tissue some years ago and there is still quite a bit left on them. Domestic types of tissue might not work as well, as this often lacks flexibility and a willingness to stick to curved surfaces. If unsure, a small trial on some scrap wood might be best.

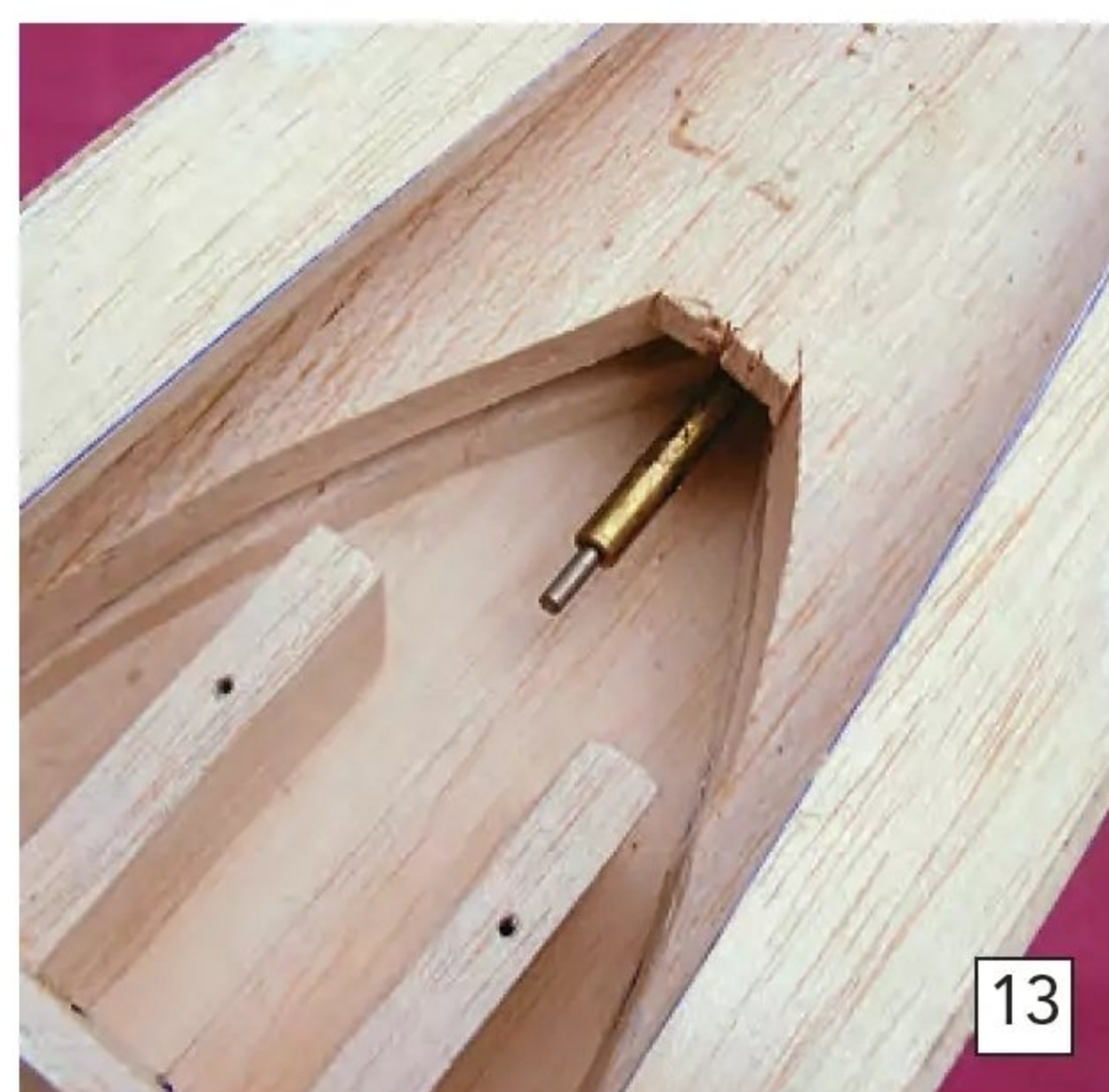
The outer surfaces of my hull were given a couple of coats of thinned dope (50:50 dope and cellulose thinners), sanding after each. This thinned dope does seem to penetrate more readily into the wood grain to create a stronger bond. I followed this with a couple of coats of neat dope. By the way, the solvent used in dope makes this a job best for outdoors, or at least in a very well-ventilated space – definitely not the dining room!

After sanding again, the tissue was applied, first to the flat decks. Slightly oversize pieces of tissue were cut then laid on the decks (see **Photo 12**). Starting from a central point on the tissue, neat dope was applied with a well-loaded brush. This should immediately soak through the tissue and hold it in place. The dope was then brushed outwards, refilling the brush as needed. This method should avoid creases forming, but if they do, just peel away the tissue and relay it.

Joints between adjacent pieces of tissue are inevitable. Rather than attempting to make a perfect butt joint, a small overlap is usually better. Any slight step will disappear with further application of dope and sanding. Once dry, the excess can be trimmed away from the edges.

My hull bottom was next covered with about one inch (25 mm) or so extra at the edges so it would go around the bilge curve. Dope was applied in the same fashion, starting in the centre and working outwards. Because of the compound bilge curves, the tissue is best cut into slits along the edges, otherwise the tissue will badly crease and may even lift off.

As the hull sides were relatively flat, covering them with panels of tissue was



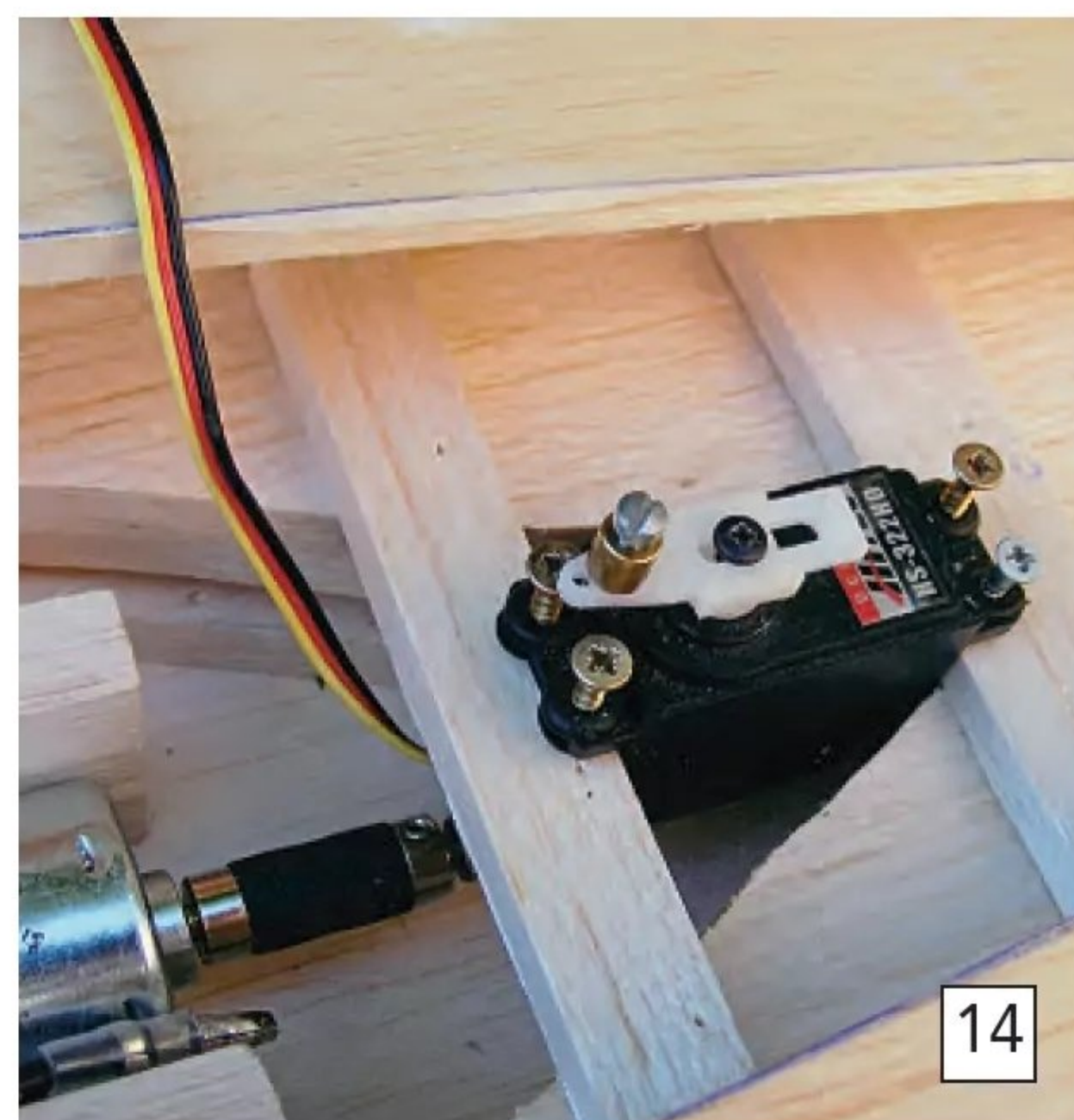
easy. I planned to simulate the steel hull by 'plating' it with thin card and so only applied dope and tissue to an inch (25 mm) or so above the waterline. In fact, the waterline had been drawn around the hull prior to starting with the tissue. The concave sections at the stern proved to be the most challenging area to cover with tissue, but using smaller pieces and overlapping them did the job. A final light sanding followed by two further coats of dope finished this job.

Propulsion and steering

The hole for the prop tube covered over with balsa sheet now needed opening up. After making sure the tube was grease free, it was epoxied in place (see **Photo 13**). The motor, coupling and shaft being used were refitted and adjusted to the correct positions.

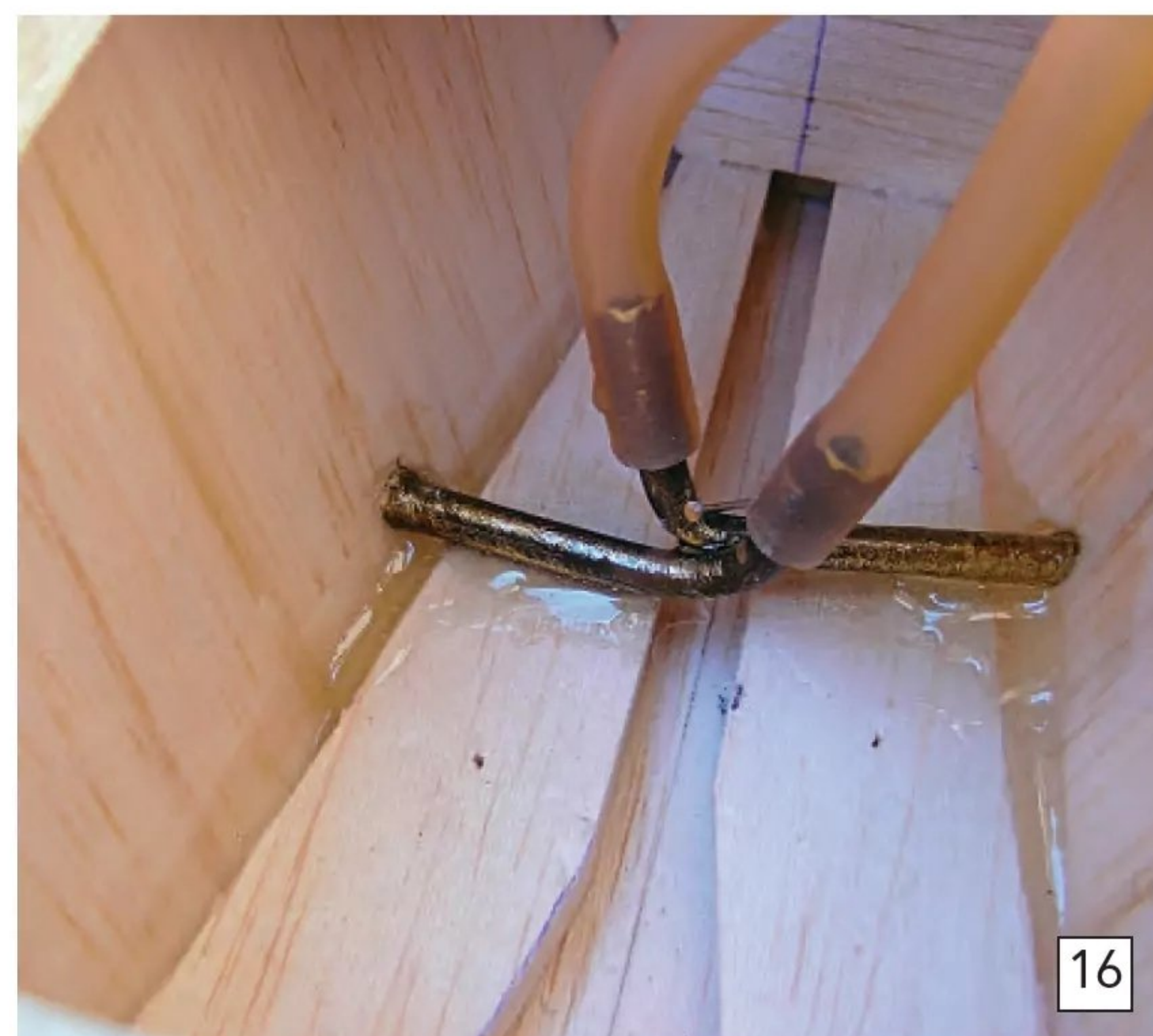
The most convenient place for the steering servo looked to be immediately aft of the motor. To allow easy access to the coupling, the stern bottom sheet and its doubler had to be cut away a little to accept the servo. A couple of transverse strips of balsa were then glued into the hull to make bearers for the servo (see **Photo 14**).

A simple commercial 'Spade Rudder' assembly was installed in this model. Care was taken to make the hole for its tube directly behind the propeller and the blade unable to foul it. Both the tube and rudder shaft had to be shortened to fit into the model. To provide a little extra support, just



in case of running aground, a metal washer was slipped over the tube before fitting the nut on it. A liberal application of epoxy was also made to the tube and washer before tightening the nut down (see **Photo 15**).

The tiller arm on the rudder shaft also had to be cut down so that it would not foul when moved to the maximum angle of about 45 degrees either way. A 'closed loop' linkage was used to connect the servo and tiller arms, which consisted of just two wire linking pieces on either side of the arms to give a push-pull action. Done correctly, this can be both smooth and slop free, and if one side fails then the model ought to retain some control of steering.



Secret weapon?

A conventional single screw and rudder R/C model can be made to perform some quite neat manoeuvres, but there are often occasions when you wish the bows were pointing in some other direction. In the optimistic hope that my local club would run a few scale steering events, I decided to install a small and discrete bow thruster.

This was no more than a gear type auto windscreen washer pump (Halfords item HWP1) installed in a bow compartment. Being a reversible gear type, this can suck water in through a hole in either side of the bows and pump it out through the other side. The turning effect is, compared with the massive items fitted on some models, modest, but it's good enough for this model. The two holes in the hull sides are small, about 1/8 inch (3 mm) in diameter, so few people even spot them.

The pump was to fit into the compartment bounded by Bulkheads 1 and 2. The first thing to do was to install the brass tubes into the hull and through holes made just above the top of the doubler. To aid the fitting of the rubber tubing that connected them to the pump, these tubes had their ends bent upwards prior being epoxied into place (see **Photo 16**).

Before installing the pump, a couple of flying leads, long enough to pass through a hole in Bulkhead 2 and into the next compartment, had to be fitted to its terminals. The pump, having two mounting lugs, was then secured with screws in the hull doublers (see **Photo 17**).

'Steel work'

As stated previously, the steel hull of the original vessels was simulated with thin card strips glued to the hull sides above the waterline. This is something I have done to many models as it not only improves their appearance but also adds toughness to them – a quality verified by a few distracted fellow modellers over the years!

The card I selected was the thin white type often sold in stationery stores, thicker than writing paper but still easy to cut and

bend. A contact adhesive was used to fix the card strips to the hull. If you ignore the instructions to let this dry before pressing in place to create an instant bond, you'll have a little shuffling time to make any necessary positional adjustments.

No attempt was made to apply card around the curved stern; thin card can accommodate modest compound curves, but this was beyond its abilities.

I cut my card into strips of 10 inch (250 mm) in length and 5/8 inch (15 mm) in width. These strips were then stuck to the hull, starting at the waterline and working forwards from the position of the transom. This allowed the small overlap between adjacent strips to produce a 'step' that faced rearwards, the idea being that the model ought to spend most of its time moving ahead and thus the water would have little chance to peel the strips away from the hull.

The next layer was applied in the same manner but effecting a slight overlap with



the lower layer of strips. I also staggered the vertical overlaps. This continued until both hull sides were 'plated' above the waterline. You could of course apply card plates to the hull below the waterline, but you would soon encounter some very tricky curves. My logic was that this is a model for sailing, and you shouldn't see this part of the hull unless something terribly wrong happens.



The bows had to have a bulwark around them. This was made from slightly thicker card to give it a fighting chance of surviving my handling while launching and recovering the model – experience again! These bulwarks were cut to shape with some overlap onto the hull sides before being glued in place (see **Photo 18**). A couple of coats of dope sealed the card surfaces, taking care no gaps were left for water to seep into.

Part 3

Next month I will be covering the completion of the build, along with the painting and all the little finishes touches that will really bring this model to life. ●



TARGETS, COMETS and STARS

Dave Wiggins whisks us back to the 1950s' British electric model boating scene

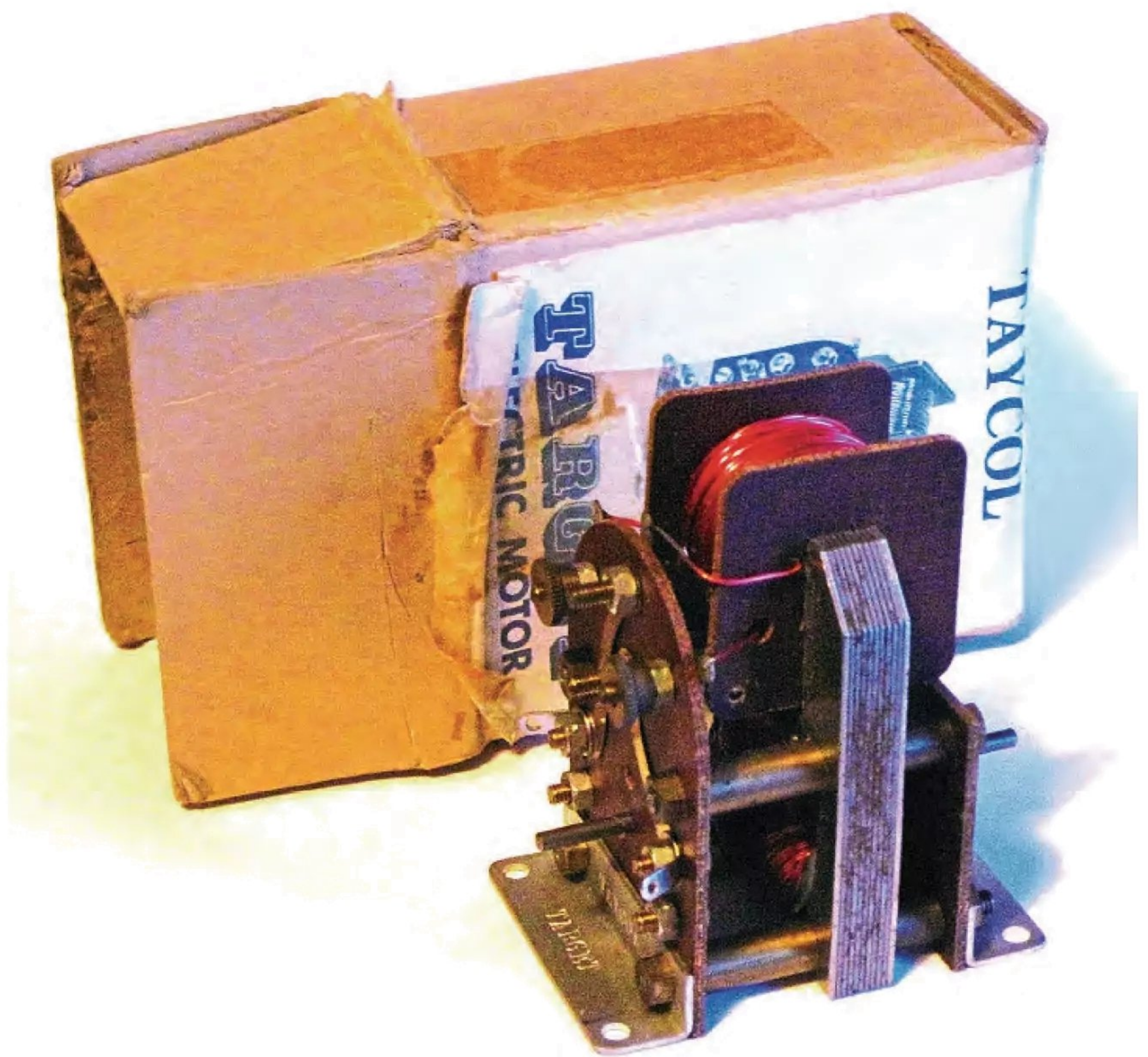
Hello there, vintage fans! Let's go electric boating again, shall we? This month I'm starting with a brace of really very early 1950s' British motors. These are identical, being two examples of Taycol's popular, and highly successful in terms of sales, little 'Target' wound-field boat motors – but in very different conditions. The nicer one is mint and boxed and was purchased, while the other was tossed at me free of charge at a club meeting many years ago as unwanted rubbish.

A bit of background

Taycol Ltd was an electrical outfit based in Bournemouth, the founders being two chaps called Taylor and Collis, hence Tay-Col, and its earliest motors were the 'Star' and the 'Comet', both of which are typical of the very earliest electrical power practice. The firm's equally small 'Target' design came just a little bit later (around the mid-1950s) and is one of the smallest of what was to eventually become a very decent range of marine electric motors – the biggest and most capable of which were the twin coil 'Supermarine' and 'Double Special', both of which were suited to large displacement hulls up to about 40-inches in length. Our little 'Target' on the other hand, sold at just over £1, is happiest in a kit model of 'Sea Urchin' or 'Sea Nymph' size (both of which are pictured and from the Aerokits range), or in one of Yeoman's or Veron's smallest boat kits.

The 'Target' and other wound field motors

The 'Target', like the similar 'Torpedo' and indeed almost all Taycols, is, of course, a 'wound field' motor. I say 'of course' but such motors will be all but unknown to a modern scale boat fan as they have no magnets, relying instead on a coil wound onto a laminated steel core to generate a magnetic field electrically (i.e., as an electro-magnet) when current of a few amperes is flowing. To a modern vintage R/C boater this has a disadvantage, in that such motors



The 1950s' Taycol 'Target' electric motor in its original box.

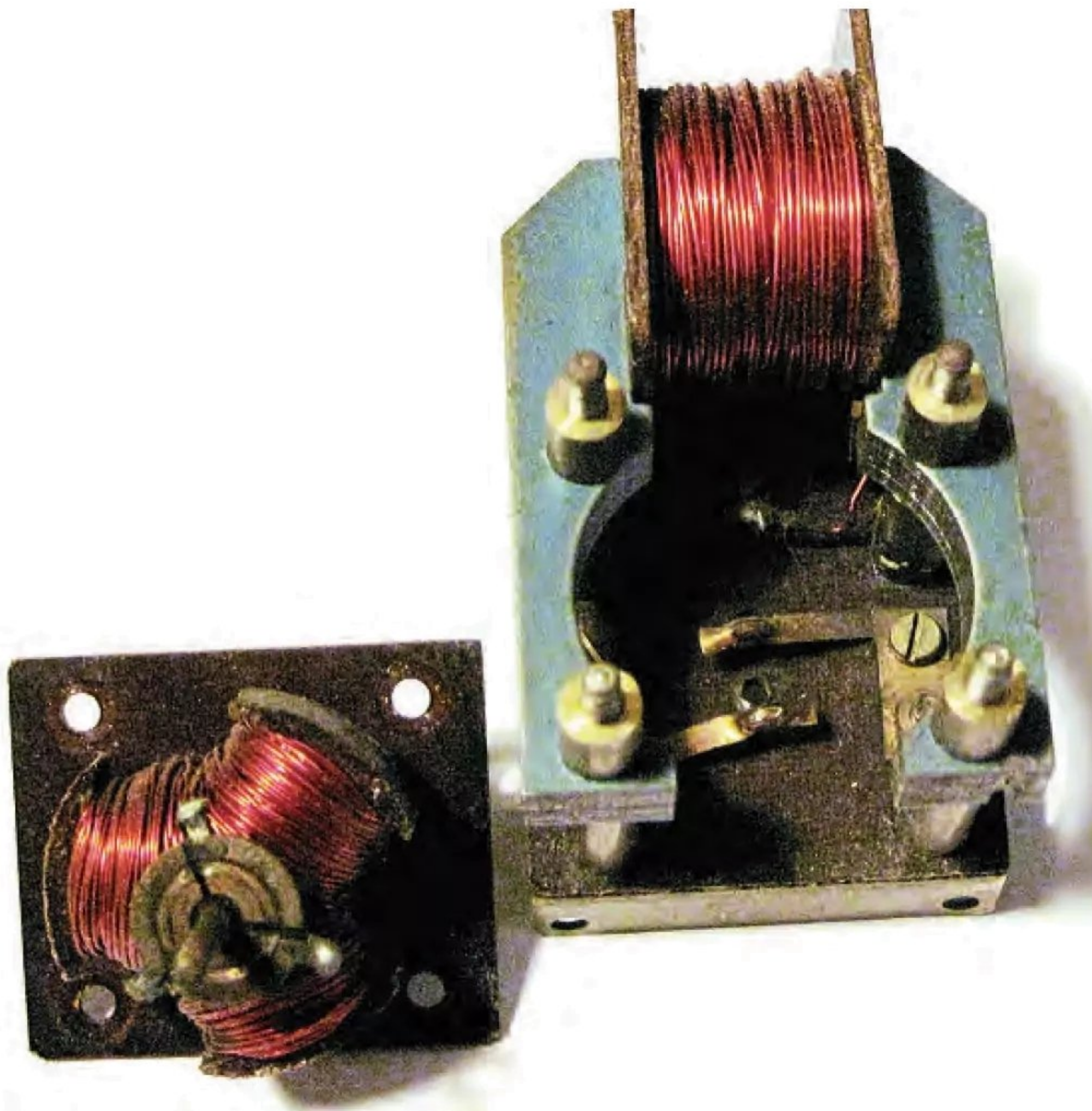
require separate electrical switch gear to engage forward and reverse, but this isn't insurmountable.

'Back then' we all used simple bulb or resistance droppers to reduce speed and a separate change-over switch to get reverse, and all Taycol motors sold included the wiring diagram. Some medium-sized Taycol motors had a built-in mechanical reversing lever mounted on the back frame, and this was intended to be pushrod-operated by a clockwork escapement. The bigger motors required heavy duty micro switches, or a high

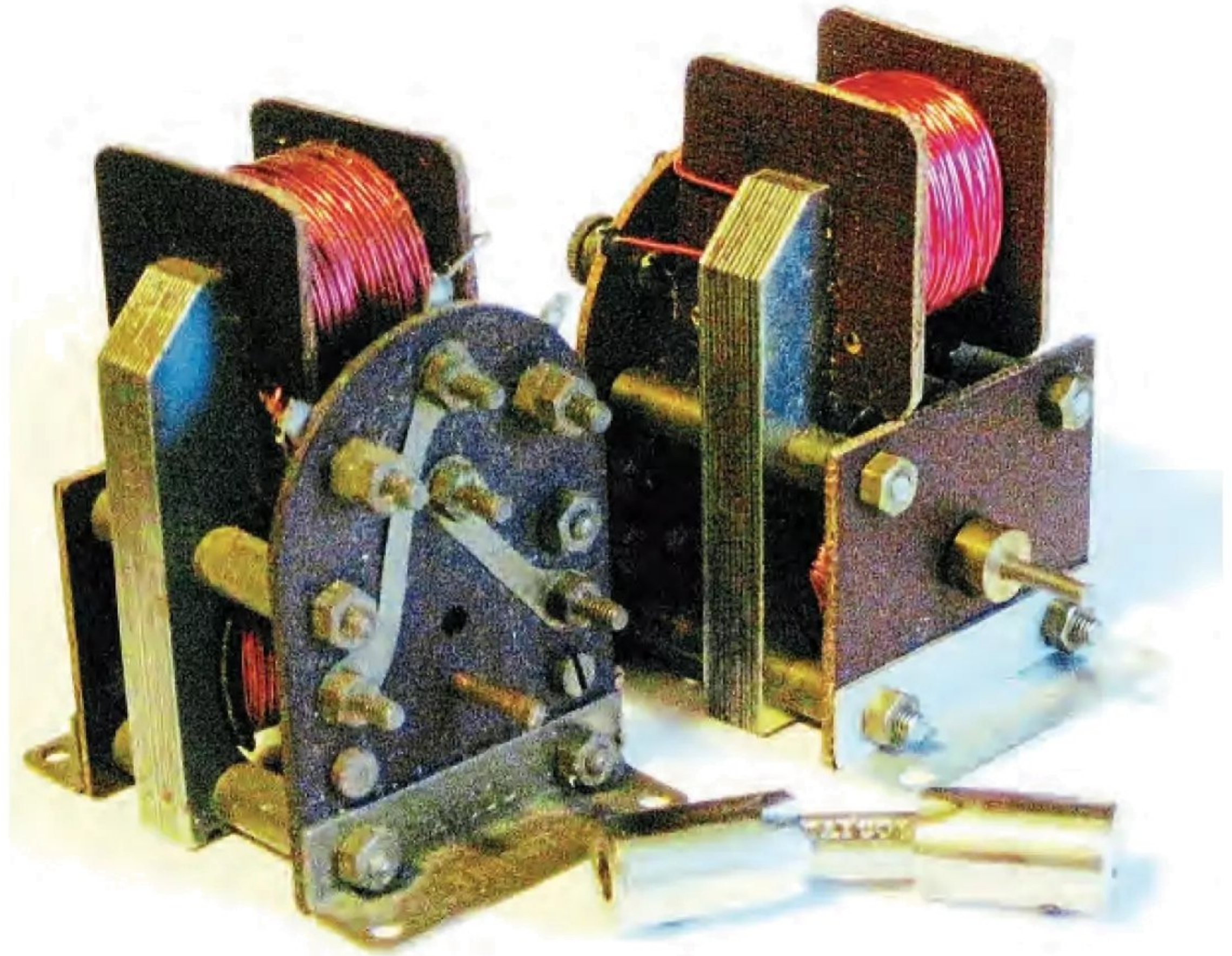
current relay operated by an electric actuator.

Once you'd got your brand-new Target home you needed, of course, to fit it in a boat, and Taycol sold its own little universal coupling to join the motor drive to your propeller shaft (I display one of these nickel-plated items in one of my pictures). A small Taycol is a simple enough installation job in all honesty and, like any model motor – ancient or modern, the biggest error made by almost all first timers is in alignment (or the lack of it), to the prop. It really is essential for everything to be 'true' and universal couplings will only compensate for so much misalignment. That's likewise the case for small diesels too, of course, but a weedy little motor like a 'Target' will struggle much more in the face of such a loading.

"The biggest error made by almost all first timers is in alignment (or the lack of it) to the prop"



Taycol wound field electric motors were all of very similar construction.



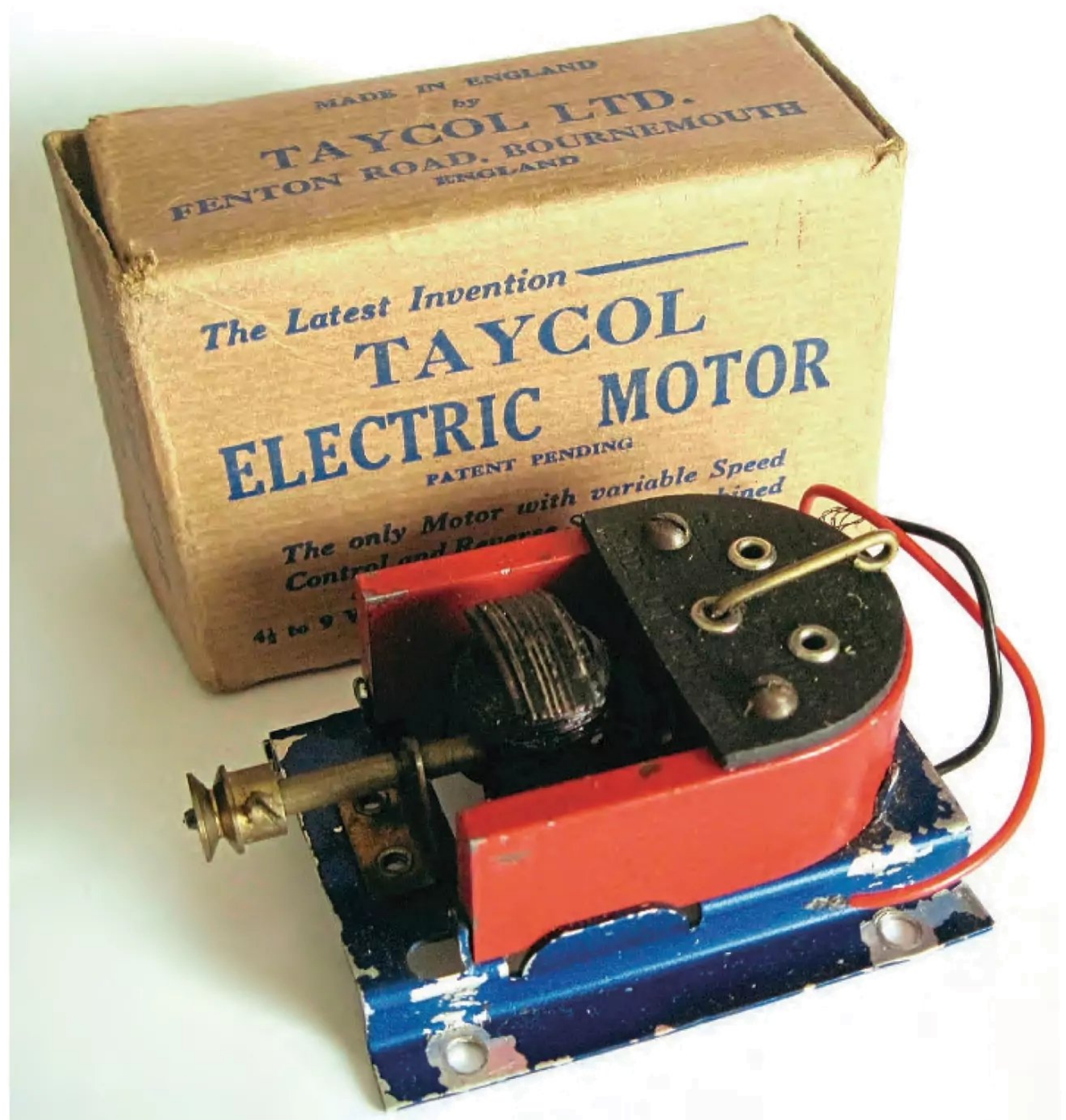
A pair of 'Target' motors showing all of the principal parts.

The Star

The 'Star' is a much more interesting (and very hard to find nowadays) item in my view, as this and the 'Comet' (also featured) were the only permanent magnet designs that Taylor and Collis ever manufactured. Why this was so and why the company decided to quickly embrace wound field motor design instead isn't clear. One can only but guess that cost may have been a factor (was wire cheaper than a magnet just after World War II, one wonders). As regards sales appeal there's no obvious logic in the decision to change tack, as the magnet approach that every other 1950'/60s' manufacturer employed was so much better suited to model boat use, but, as I say, what prompted Taycol to take a different road remains a mystery. What is known is that the company stuck to this decision right through to its demise.

All of this month's little motors reveal much about the beginners' model boat world as it was c.1950. Even a decade later, when I started out myself, small-scale (more truthfully semi-scale) boats were still powered by electric motors like these, as virtually all of them were non-radio controlled (free running). As the ability to reverse a motor easily (just by swapping the two wires on a PM motor) was obviously not required in a free runner, perhaps this factored into Taylor and Collis's moving away from permanent magnet motor design. By the mid-1950s, though, the first few radio-controls were appearing, and quick and easy reverse was certainly a boon if speed control was anticipated with multi-channel R/C.

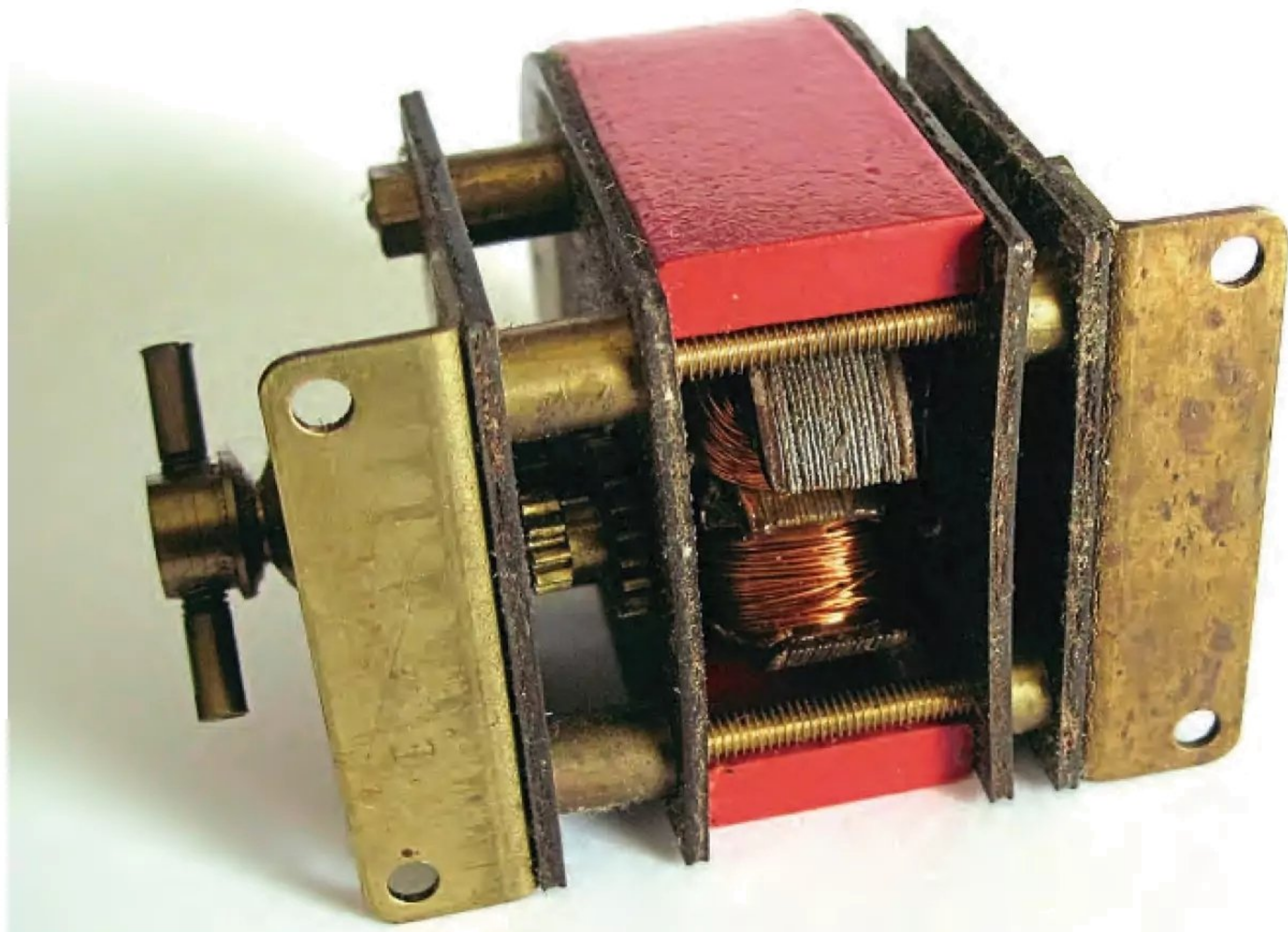
"What prompted Taycol to take a different road remains a mystery"



A boxed 1950s' Taycol 'Star': this British firm's very first product, c.1950.



A Taycol 'Geared Comet' new in box.



A detail look at the 'Geared Comet's gearbox.

The 'Star' is, as far as I know, the only specifically model marine motor ever to appear with not only speed but a reversing control built in, and as such is interesting to a collector for that reason alone. Construction of this little 3-pole motor is not only simple but crude, as you can see from my photos, and its red 'U' magnet is very reminiscent of boyhood classroom science lectures! The bearings are positively woeful in their crudity and the whole thing is 'toy-like', being comparable to some of the even older boat motors built by Bassett Lowke or Meccano as early as the 1930s. The box ("The Latest Invention", Taycol proudly claimed!) is still marked with the original price, this being 18 shillings and sixpence, i.e., under a £1 note. It would have been nice if I'd paid the same two years ago but, sadly, I did not!

The Comet duo

The company's 'Comet' motor (27 shillings in its top-of-the-line geared version) was just that bit nicer all round. Still a 3-pole motor, the horseshoe magnet is realigned vertically and the whole thing looks much more like a 'Taycol' as most of us older modellers will remember them. With Paxolin 'bearings' front and back, BA threaded brass bolt construction and engraved brass bedplates, it's quite a workmanlike bit of kit.

The 'Comet' was sold in two versions. Mine is the nicer of these, having the built in 4:1

"The box is still marked with the original price, this being 18 shillings and sixpence, i.e., under a £1 note. It would have been nice if I'd paid the same two years ago but, sadly, I did not!"



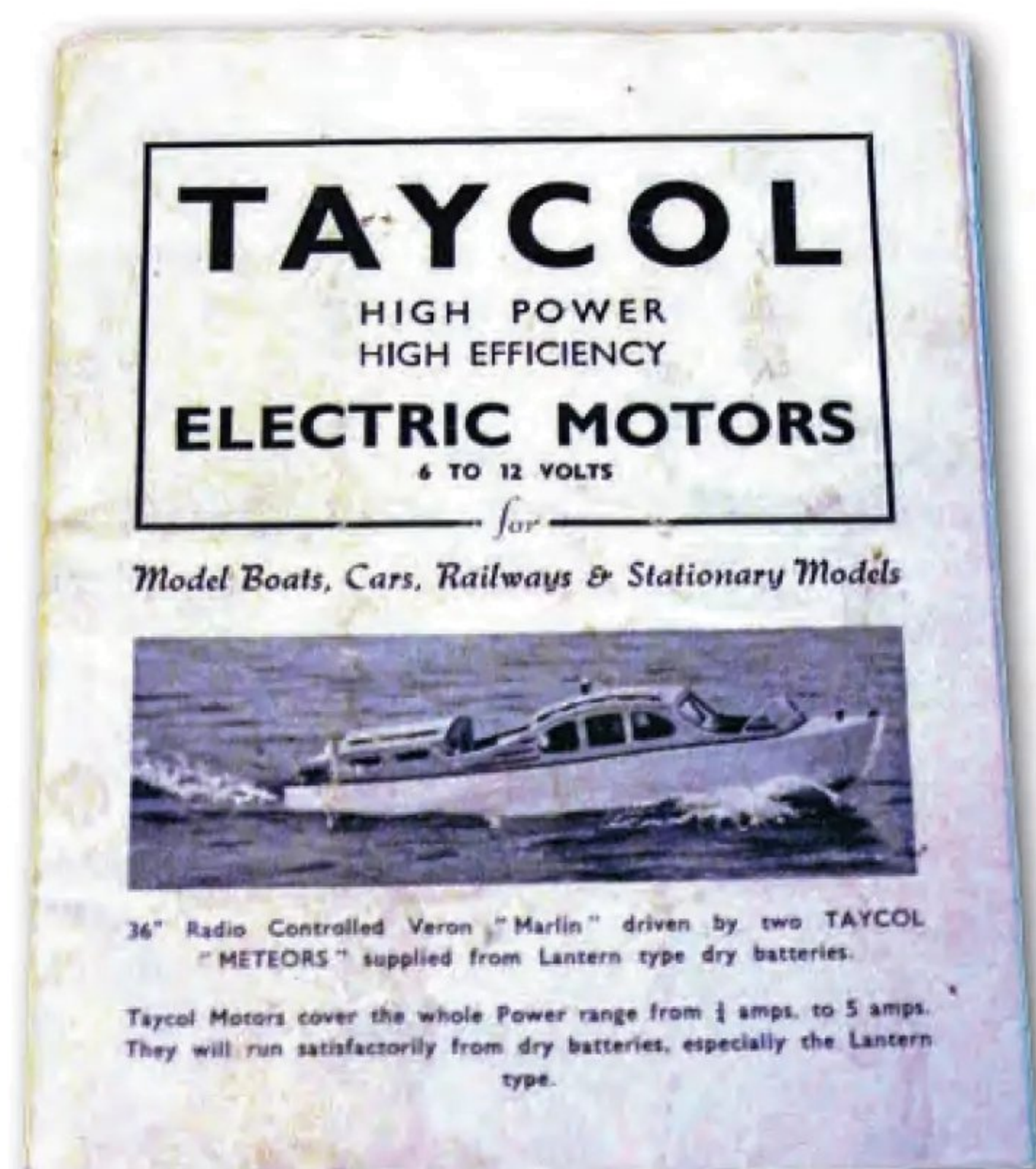
The Taycol reduction gear unit (for use on ungeared motors), which was originally priced 9 shillings and nine pence.

gear reduction for tug or scale merchant ship use. Regular readers will know that I'm no fan of Taycol motors, but I find this one just that bit different, to the point where I'd consider renovating and using one in something like a small tugboat. I'm fortunate in having a pair of these 'Geared Comet' motors, so twin screw would be possible too. Renovation would be a simple matter of polishing the brush-gear and oiling the bearings.

These old motors were rated for 4- to 6-volt DC operation at 4-amps (about 20 watts), and, like the simpler 'Star', a rather nice brass bar coupling was provided as well. All in all, I'm inclined to say, "Well done!" to the crew at Fenton Road.

But suppose you only had an ungeared 'Comet'... What to do then? Well, Taycol had thought of everything, and you could buy a 4:1 reduction gearbox as a separate item, provided you had 9 shillings and 9 nine pence

"Regular readers will know that I'm no fan of Taycol motors, but I find this one just that bit different..."



A late 1950s' Taycol flyer featuring Veron's big Marlin cruiser kit.

in your piggy! Built just like a little Taycol motor, it was a quite a neat object in its own right, and was provided with both male and female couplings, with no engineering being required of the buyer.

American buy

In the next instalment of Memory Lane, I'll be taking a fleeting look at an attractive mid-1971 American radio outfit that was ideal for model boat use. I know this as I used one of these very sets a lot myself 'back then'! ●

www.maritime-models.co.uk

SECURE ON-LINE SHOPPING – MAIL ORDER ONLY

We stock a range of fittings from Aeronaut, Caldercraft, Krick and Robbe also tools, paints, props, propshafts, couplings and much more check out the web-site for our full range.

Official stockists of BECC accessories and kits from Caldercraft, Krick & Aerokits.

Commissions & restorations also undertaken!

Maritime Models

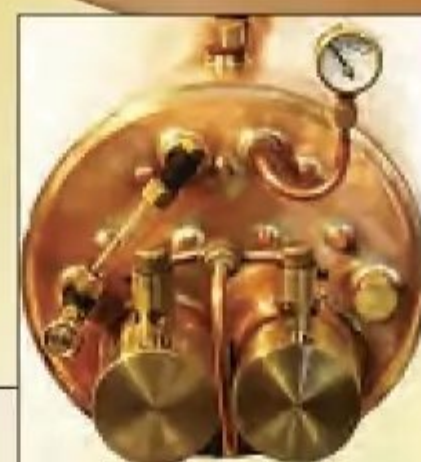
E-mail: info@maritime-models.co.uk

Telephone: 01432 263 917 or 07786 781 421



Pendle Steam Boilers

Makers of High Quality Affordable Steam Boilers for Marine and Stationary Enthusiasts



t: (07452) 875912 • e: sales@pendlesteamboilers.com

www.pendlesteamboilers.com

www.mantuaamodel.co.uk

UK Distributor for Mantua Model of Italy

179 Dedworth Road Windsor Berks SL4 4JN

Tel: 01753 856321 info@mantuaamodel.co.uk



Amerigo Vespucci
art 799 £399.00
art 741 £825.00



Dreki
art 772
£199.99



Armed Pinnacle
art 748 £175.00



Mississippi
art 734 £475.00



Sovereign of the Seas
art 787
£825.00



Victory bow section
art 746
£219.95



Police Launch
art 700
£49.95



Bruma
art 736
£239.00



Mayflower
art 752 £179.00



Aiace
art 731 £435.00



Roman Bireme
art 770 £119.95



H.M.S Victory
art 720 £139.95
art 776 £359.00
art 782 £449.00
art 738 £529.00

Range of over 90 wooden model kits and accessories available direct or from your local stockist



Richard Simpson explains why valve-operated engines are more efficient than oscillating engines...

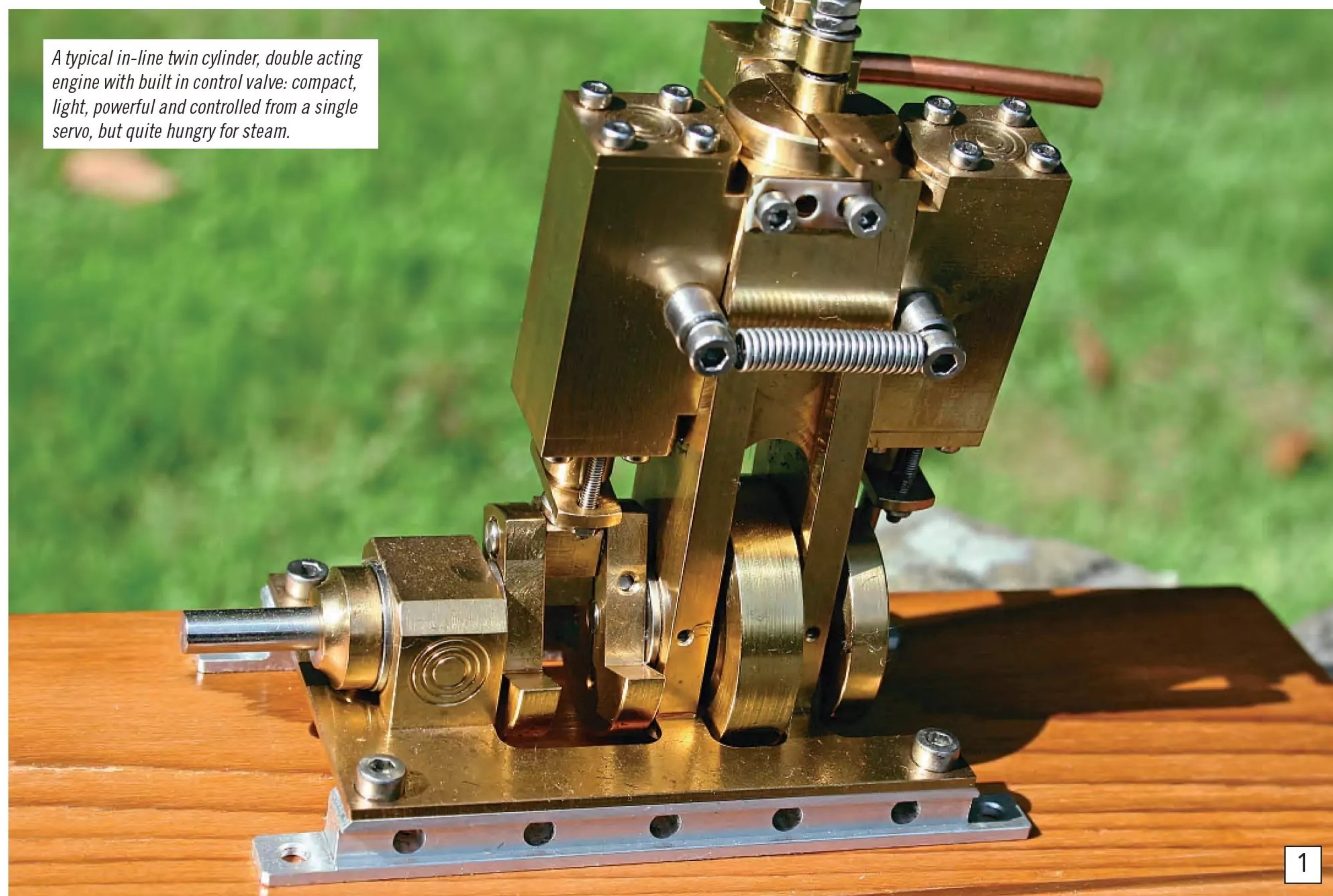
This is a topic that crops up frequently, with good reason, and while we have compared valve-operated engines and oscillators in the past, we haven't really looked at why there is such a difference in the amount of steam they use. When looking at putting the big bits together for our next steam-powered project one of the main considerations is how much steam the engine is going to use to push the proposed model boat around the pond. This can then have a knock-on effect on how big a boiler we want to use, whether a feed system might be necessary, etc. Our engine choice will boil (pardon the pun) down to one of two main categories, either an oscillator (be it an in-line configuration – see **Photo 1**, or a

'V' configuration – see **Photo 2**), or a valve-operated engine (be it a piston valve type – see **Photo 3**, or a slide valve engine – see **Photo 4**).

The oscillator does have some significant advantages over its rivals, so shouldn't be dismissed too quickly. These engines are relatively cheap to manufacture and therefore buy, as they have far fewer moving parts, so that's a big plus. They're powerful for their physical size, too, meaning they can be very useful when space is a challenge, particularly at the narrow back end of a model, so they win favour there as well. They can also easily be controlled from a single servo, frequently with the control valve built into the engine, so you need only a single servo to fully control

the engine forwards, backwards and through a full range of speeds in between. Again, this can save a significant amount of weight. The main downside is that they need quite a bit more steam for a given power output than a valve-operated engine does. This then either tempts the modeller to go for a larger boiler, a feed system, or the acceptance of a shorter duration on the water.

So, not surprisingly, the question arises: "Why does the valve-operated engine need less steam?". Again, we come back to the old chestnut, efficiency. Efficiency here basically meaning the valve-operated engine gets more of the energy out of the steam and converts it into useful power than the oscillator does. Let's have a look at why...



A typical in-line twin cylinder, double acting engine with built in control valve: compact, light, powerful and controlled from a single servo, but quite hungry for steam.

A 'V' twin configuration oscillator can be particularly handy when there is very little longitudinal space in a model. This Hemmens Richmond also has a boiler feed pump attached to the crankshaft, as well as a built-in control valve.

“The oscillator does have some significant advantages over its rivals, so shouldn’t be dismissed too quickly”

Back to basics

There is actually some fairly common ground in the theory of all reciprocating engines, be they steam, diesel, petrol or even hot gas engines. We administer a pressurised gas, that contains energy, and then allow the gas to expand in the cylinder, which pushes on the piston crown. This is either by spark ignition (in the case of the petrol engine), compression ignition (in the case of the diesel engine) or simply allowing steam to expand naturally. This then, via the connecting rod, pushes on the throw of the crankshaft to change the linear motion of the piston into a rotating motion of the crankshaft. What we sometimes forget though, is that the engine is spinning around at quite a speed, and it actually takes an amount of time to get the fresh charge of new compressed gas into the cylinder each time. If we started to administer the fresh charge of gas when the piston is at the top of its stroke, what we call ‘Top Dead Centre’, or TDC, or even later, we would find that all of the new charge would be entering the cylinder as the piston is already moving away. The expanding charge would end up chasing the moving piston down the cylinder and not be as effective. What we do, then, is administer the fresh charge of either diesel fuel, petrol, hot gas or steam just before the piston is at the top of its stroke, to give it that fraction of time to get it all into the cylinder, so that as the charge expands it is pushing the piston for the entire length of its stroke, thereby getting far more push on the piston crown out of the expanding gas and using up more of the gas’s energy.

So, how does this relate to our steam engines?

If we now just consider our steam engine, what we are saying is that, ideally, we want to admit the steam just before the piston gets to the top of its stroke, or TDC. We also want to exhaust the spent steam as the piston is pushing it in the opposite direction but not necessarily at exactly the same point in the cycle as the steam is admitted. This means that for the engine to be reversible and the ports to be useable as either

inlet ports or exhaust ports, the position of them is a compromise and not exactly perfect. Consequently, for the best use of the expanding steam we need to admit the steam at the most perfect point and exhaust the spent steam at the most perfect point. It is this basic requirement that separates our two main types of model steam engine.

The valve-operated engine admits steam into the cylinder at the most efficient point in both directions, which is why valve-operated engines, if they are reversible, have a reversing mechanism, which is used to change this steam admission point, depending on which direction the engine is spinning.

The oscillator on the other hand opts for a much simpler approach and is restricted by the fact that the steam has to be admitted and exhausted through two small ports drilled into the engine frame. The position of these two ports determines the time at which the steam is administered into the cylinder, as well as when it is exhausted. As these two ports need a degree of separation to avoid leakage across them and as both ports serve as inlet and exhaust ports depending on which way the engine is turning, they end up being in nothing like the most efficient position. This does mean that the engine is reversible by simply admitting steam to which ever ports you wish to give you the direction you need, but it also means that, in either direction, the engine is not running particularly efficiently. Consequently, because we are not extracting as much energy from the steam, we need a little more steam to give us the same shaft output, so the bottom line is the oscillator needs a little bit more steam for the same ‘push’.

“It is this basic requirement that separates our two main types of model steam engine”

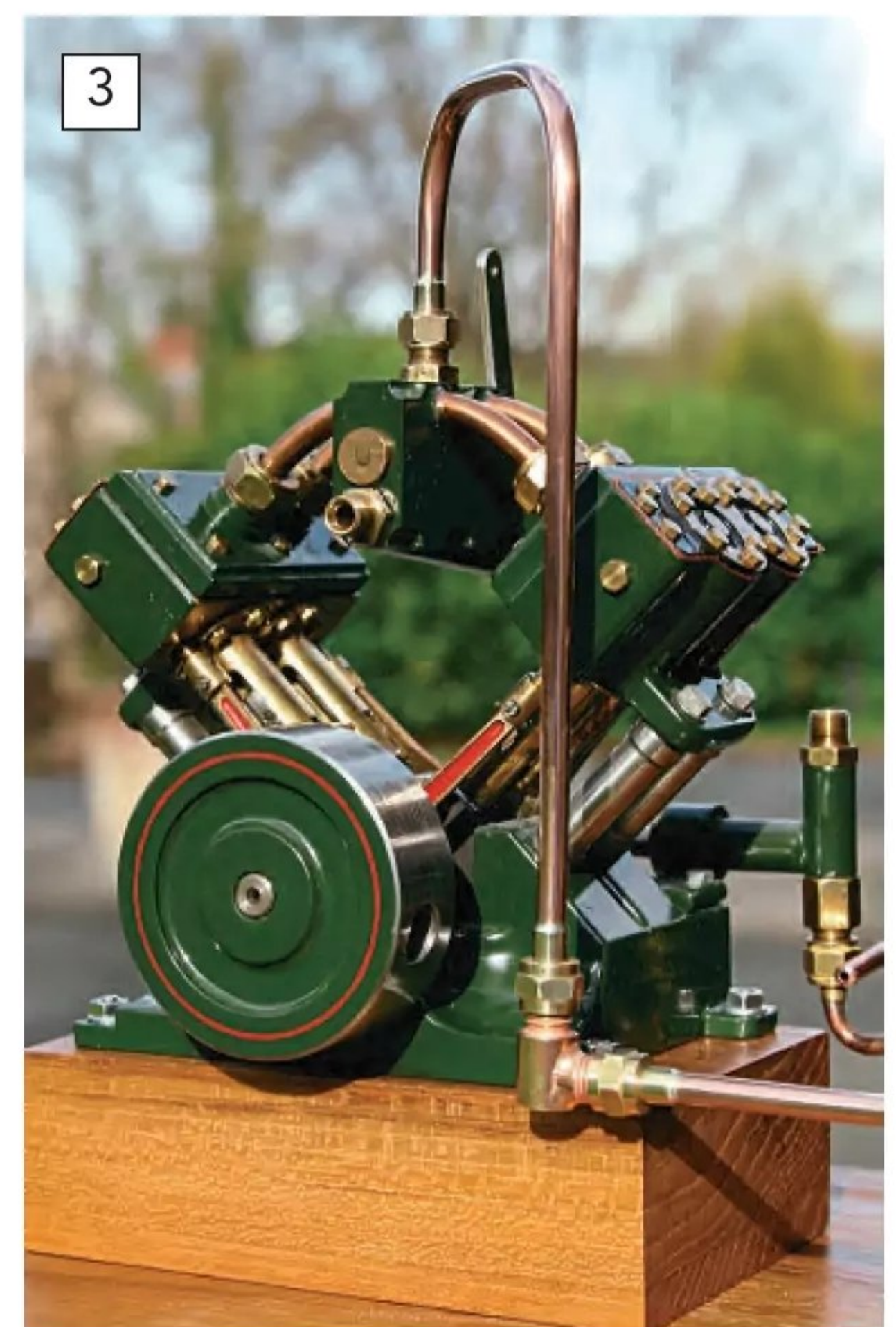


A little more detail

Having got the general idea, let’s have a look at how this translates into reality to see how the two basic engine types work.

Oscillators

As we know, these engines do not have a valve to control steam flow; they rely on a port on the external cylinder face opening and closing a matching port in the engine frame as the cylinder oscillates between the two.



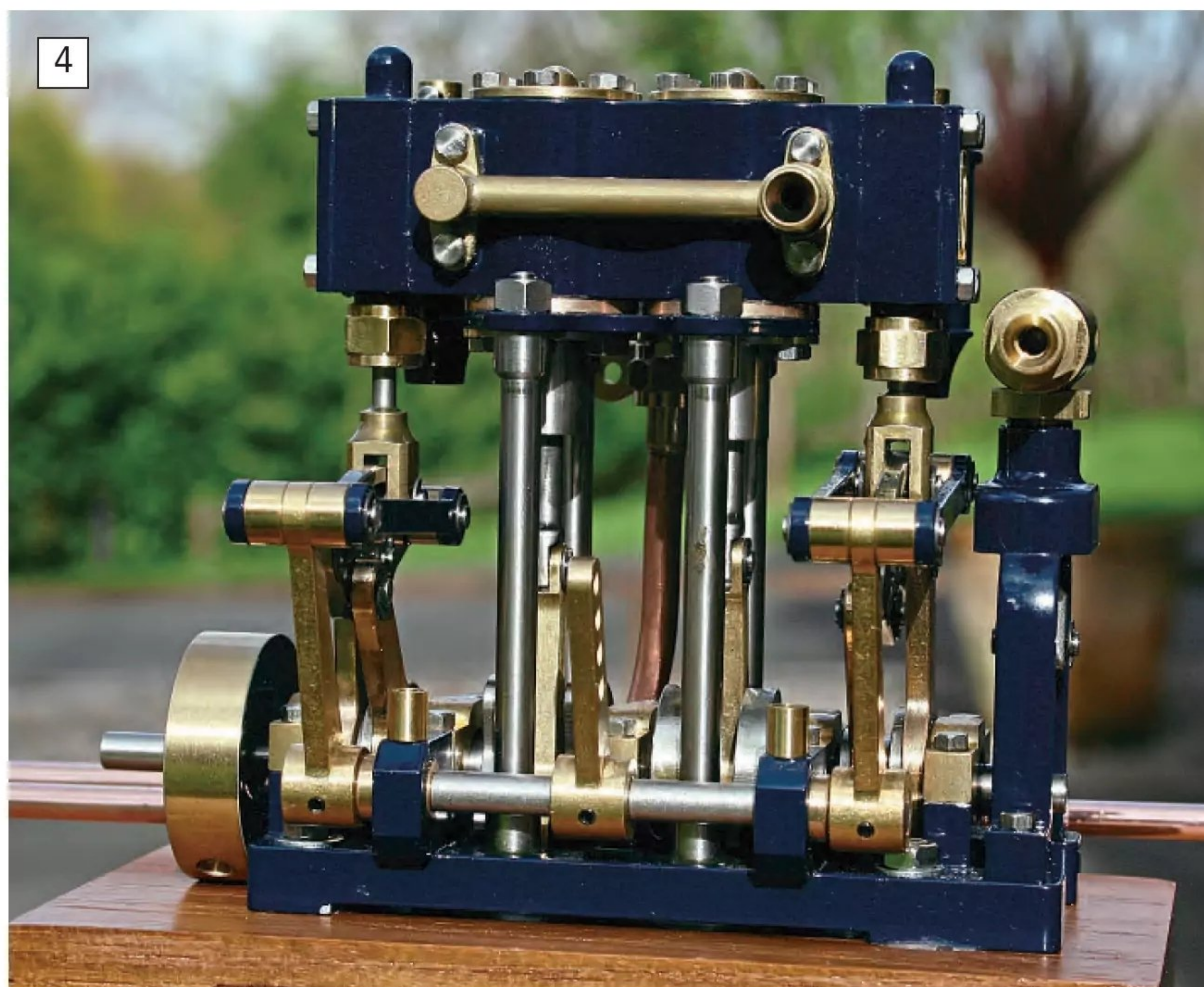
This old Hemmens Caton 'V' four engine is a piston valve operated engine. This means there are eight bottom end bearings on the crankshaft, making the construction very complex and expensive to produce. Each piston valve can be individually adjusted though.

Steam is available at this port from the boiler, so when the cylinder is aligned with the port steam enters the cylinder and pushes the piston away. Many oscillators have similar ports in the lower cylinder as well, so steam is basically acting underneath the piston to push it up and above the piston to push it down. At the same time, the other side of the piston is exhausting the spent steam at the appropriate time, so we have a 'double acting' engine. The above piston ports and the below piston ports can be seen in this engine with one cylinder removed (see **Photo 5**). Evident in that picture is that the cylinder oscillates backwards and forwards as the crankshaft rotates, thereby aligning the two ports in the engine frame. One will take in steam and the other will emit exhaust, depending on the direction of rotation. The ports below the piston make it a double acting engine. As we have seen, the positioning of these ports is critical and a significant compromise. Ideally, we want them to be as small and as close together as possible, but practical considerations determine we need a bore suitable to get the steam in as quickly as we can, and they need to be separated by enough to ensure there is no leakage across them.

This brings us to another interesting compromise with the oscillator. The inlet steam is at a higher pressure and a much higher quality than the exhaust steam. As the steam does work and expands it takes up a greater volume, which is precisely why the intermediate and low-pressure cylinders in a triple expansion engine are larger than the high-pressure cylinder. It is also why steam inlet piping is of a smaller diameter than the exhaust piping. In the oscillator, though, the bores are all the same size because they serve the purposes of inlet and exhaust, depending on direction of rotation.



You can see from the port positionings here that there has to be a space between them, so timing is far from efficient, and both inlet and exhaust ports are of the same size. Everything about the oscillator is a compromise.



This Monahan twin cylinder engine is a slide valve engine, with the valve chests on the outside faces of the cylinders. The additional complexity over an oscillator is obvious, but you also need two servos to operate it, which will then require two channels on your radio or the use of a mixer unit.

Having said all this, we mustn't forget that while the oscillator is far less efficient, and uses more steam, it remains a very simple, compact and powerful little engine. It therefore lends itself perfectly to less-sizeable model boat applications, where we may be happy to accept the shorter duration in return for easy and reliable operation completely controlled by a single servo in a boat that is small and convenient to handle. This is perfectly demonstrated by the Krick Borkum installation in my photo (see **Photo 6**).

Valve engines

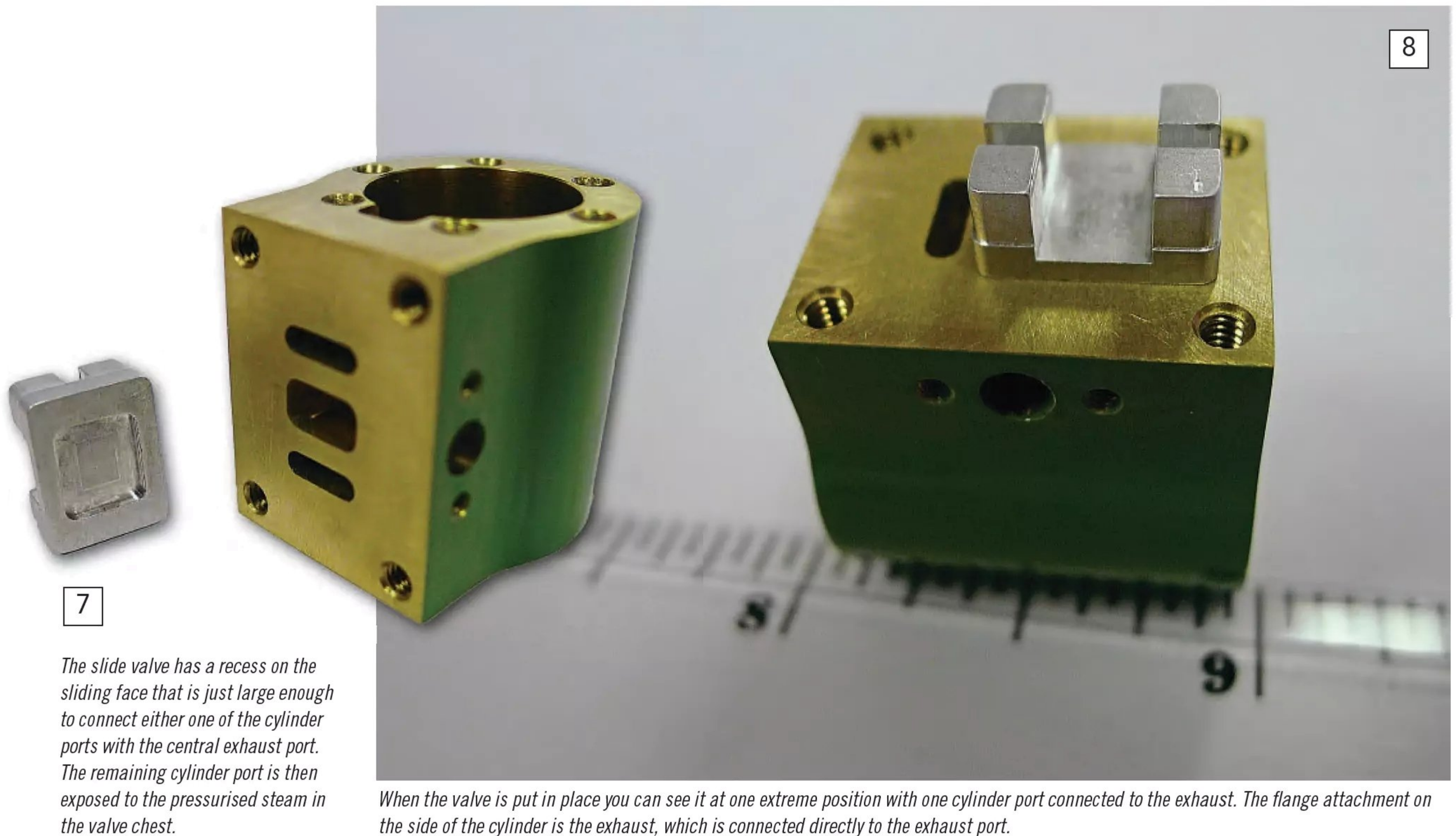
Valve engines can take the form of either a slide valve contained in a chest on the side of the cylinder or a piston valve (which could also be on the side of the cylinder) that runs in a smaller cylinder. Both valve types will be driven from an eccentric on the crankshaft and so timing (i.e., when the steam is admitted to the cylinder) needs to be adjusted by the operator.

To demonstrate the process, let's have a look at a TVR1A engine, which is a slide valve

"This brings us to another interesting compromise with the oscillator..."



Where oscillators win out, though, is their simplicity and compactness of design and operation, which makes them ideal for small models that are convenient to carry around. Getting a valve operated engine into this same space would be a lot more challenging.



7

The slide valve has a recess on the sliding face that is just large enough to connect either one of the cylinder ports with the central exhaust port. The remaining cylinder port is then exposed to the pressurised steam in the valve chest.

8

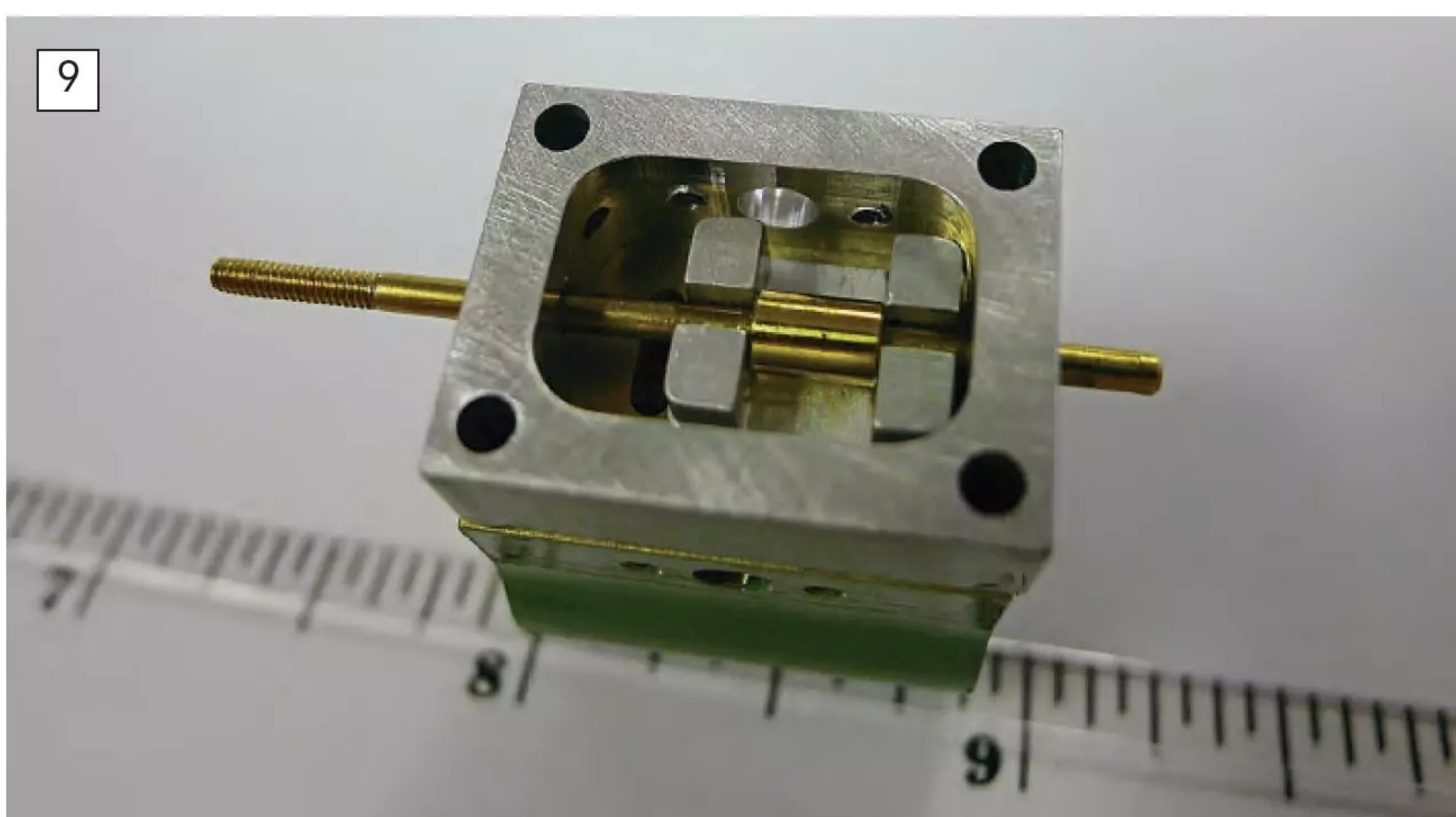
When the valve is put in place you can see it at one extreme position with one cylinder port connected to the exhaust. The flange attachment on the side of the cylinder is the exhaust, which is connected directly to the exhaust port.

engine. The slide valve is just the right size to cover the exhaust port, in the middle, and either one of the cylinder ports (see **Photo 7**). When it connects one cylinder port with the exhaust, the other port is open to the steam in the valve chest, so steam enters one side of the piston when the other side is 'exhausting' (see **Photo 8**). If we then add the steam chest and the valve operating rod, we can see how the valve is slid backwards and forwards, alternating connecting the cylinder ports to the exhaust while exposing the other cylinder port to the steam (see **Photo 9**). When the cylinder is mounted on the engine, we can see the port face is vertical and in line

with the valve operating gear driven by the crankshaft (see **Photo 10**). Consequently, when the slide valve is inserted, the valve chest fitted, and the operating rod connected up we can see how the slide valve is moved and how adjusting the position of the eccentric on the crankshaft will adjust the timing (see **Photo 11**).

While the valve engine admits the steam at the perfect time within the cycle in either direction so as to get as much as possible from the expansion in the cylinder, the timing must be changed when reversing direction, so we need reversing gear to facilitate this. This requires an additional servo to drive the

reversing gear, which then leads to a more complex operation from the transmitter, i.e., the engine has to be 'reversed' before starting again when changing direction, which is not as intuitive nor as quick as reversing an oscillator. Greater care, therefore, needs to be exercised when on the pond, as crash stops will always take that bit longer to achieve – pretty much in the same way as maneuvering a real steam ship takes that little bit more forward thinking and time to operate.



9

With the valve chest added it is becoming easier to see what is happening. The slide valve is pushed backwards and forwards by the rod while remaining 'floating' to sit against the cylinder ports. The steam inlet is now also visible in the side of the valve chest.



10

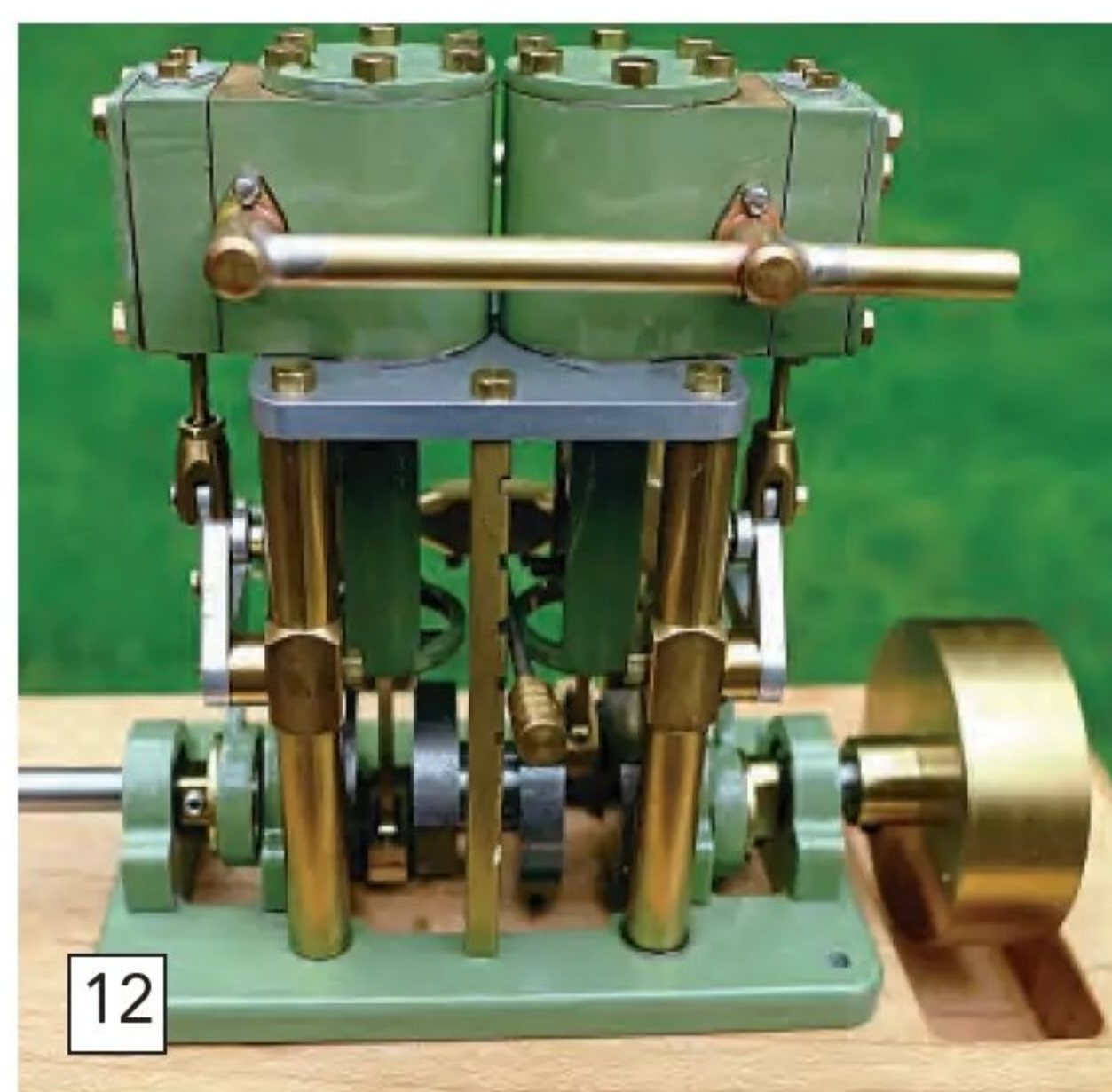
In place on the engine, the cylinder ports are now seen to be in line with the valve operating linkages below it. The slide valve rod actually connects to the short link hanging down from the 'V' shaped linkage.

“Far more moving parts make for a more expensive production and so valve engines are always a good bit more expensive. There are, of course, also more moving parts to fail, so there is a tendency for them to be less reliable overall or require more attention and maintenance to try to avoid failures”

All of the additional gear to drive the valves and the reversing gear make a valve-operated engine significantly more complex than an equivalent output oscillator (see **Photo 12**). Far more moving parts make for a more expensive production and so valve engines are always a good bit more expensive. There are, of course, also more moving parts to fail, so there is a tendency for them to be less reliable overall or require more attention and maintenance to try to avoid failures. There can certainly be a lot of external moving parts that need frequent oiling, and that spent oil then needing cleaning up afterwards.

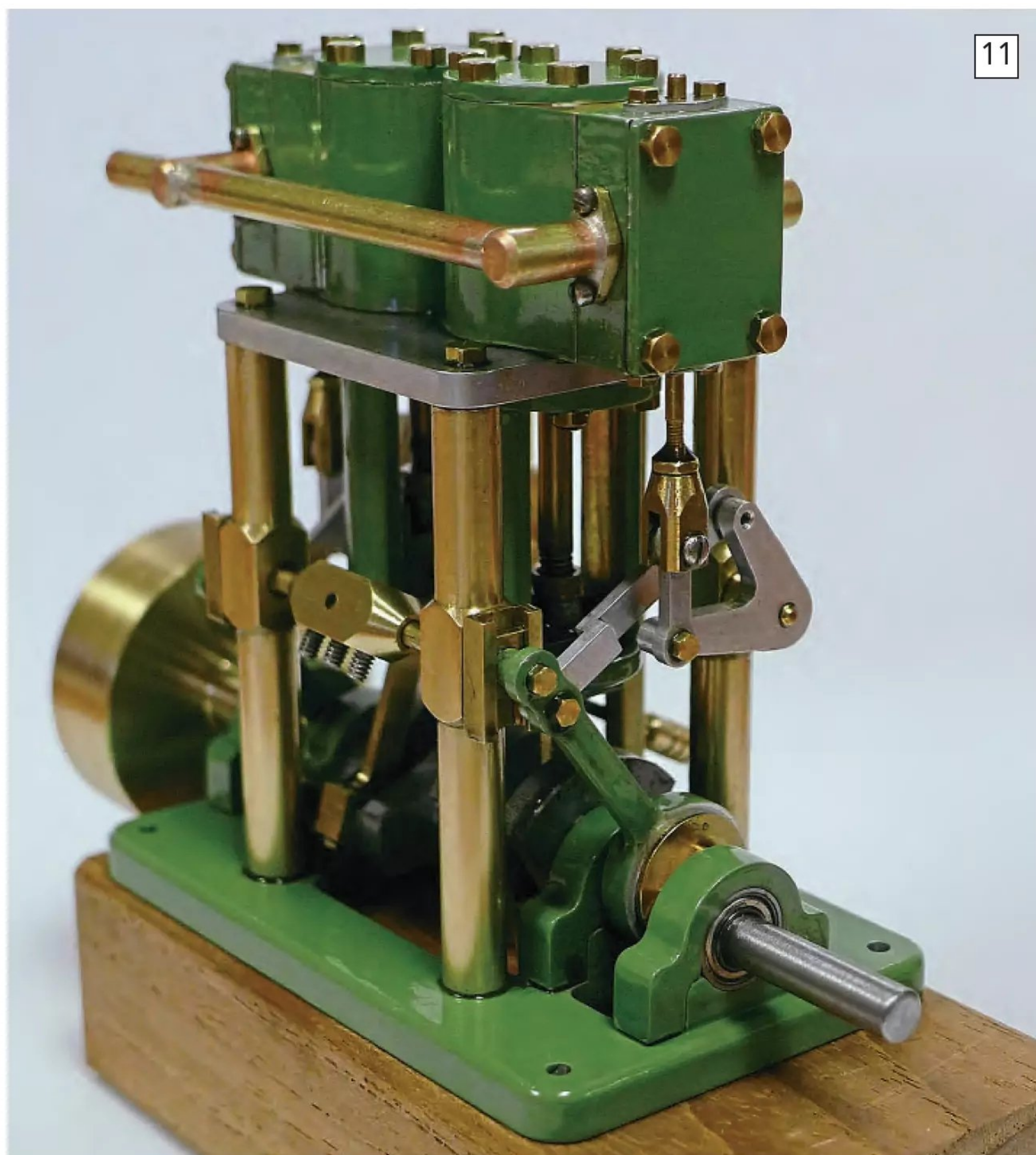
In conclusion

I hope just a brief look at the two main categories of engine has helped a little to clarify just why the oscillating engine is less efficient than its valve-operated counterparts and so why it needs more steam. As a perfect compression I have a Krick Borkum fitted with an old Cheddar Puffin plant. Another club member has a Krick Borkum fitted with a TVR1A engine, so the two engine types could be tried out side by side. Both were fitted with a 3½-inch vertical boiler. Not only was the TVR1A quite a bit faster but it also stayed on the pond for quite a bit longer than my Borkum, thereby clearly demonstrating the better efficiency of the TVR1A.



12

Again, looking at the rods and linkages it is easy to see just how much more complex to manufacture a valve-operated engine is. They do, however, look very attractive.



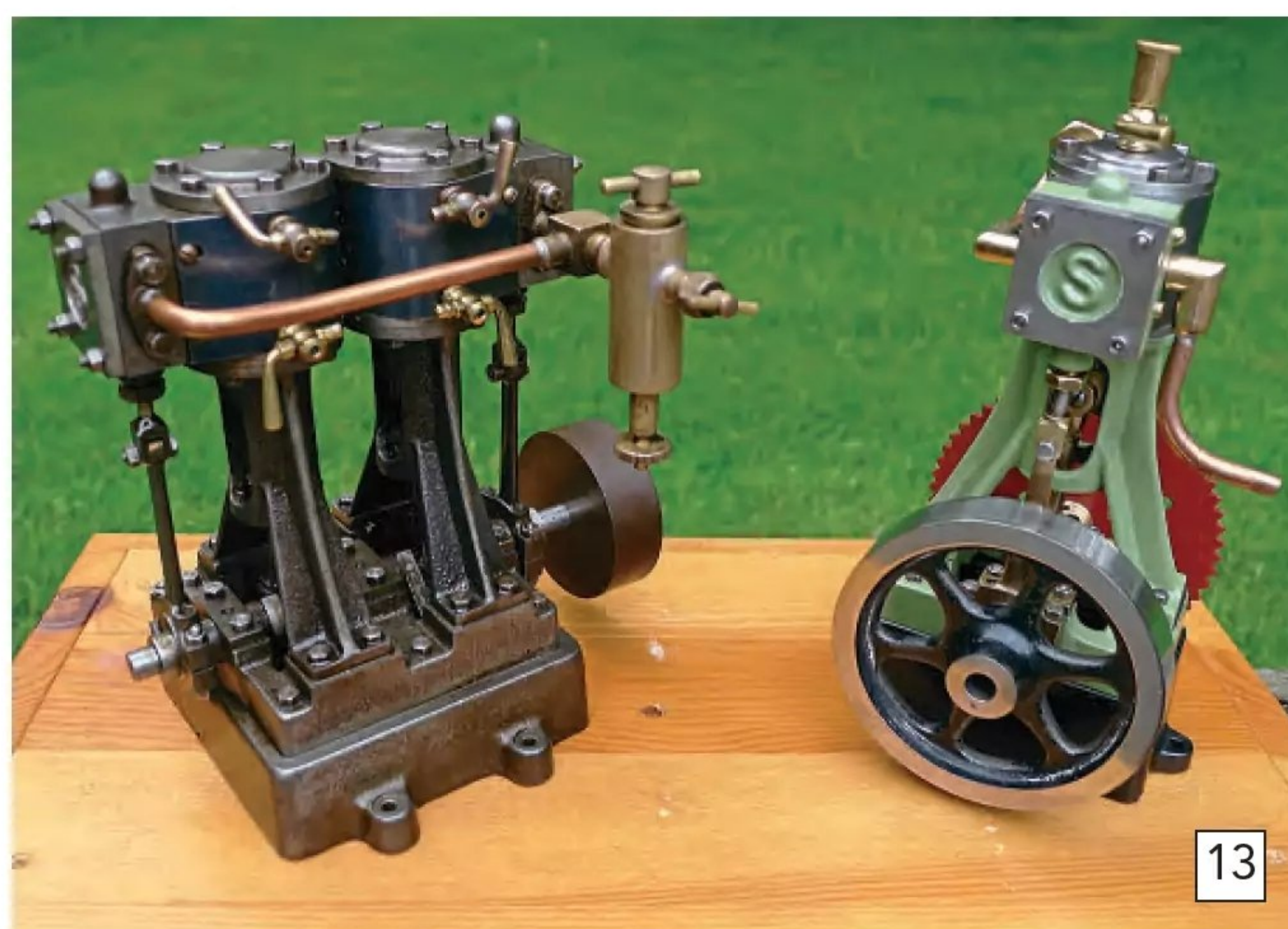
11

All the bits and pieces in place and the slide valve linkages connected. This is the 'inlet' side of this engine; the steam inlet can be seen connected to the side of the valve chest. The steam pressure in the chest helps to push the slide valve against the ports and seal it.

The bottom line, though, is that the TVR1A started to become unreliable over time, as slack in some of the valve operating pins and linkages became worn with age, yet the Cheddar engine continues to run as smoothly and reliably as it always has.

I think valve-operated engines really come into their own when they can be of a size able

to make the operating linkages more robust, in such engines as Stuart Turner types (see **Photo 13**), and where the steam demands of a larger oscillator start to become a bit of a challenge (the restriction being that these engines are considerably more bulky, so need a much bigger hull in which to accommodate them). Either way, the choice is yours. ●



13

Left: To regain some of the reliability, one way forward is to go bigger. Not surprisingly, Stuart Models engines have an enviable reputation for reliability. A much larger hull to accommodate the weight, however, is required, especially with a self-starting twin cylinder configuration.

Your Models

Whether you're highly skilled and experienced or completely new to the hobby, you're definitely invited to this launch party! So please keep the contributions coming by emailing your stories and photos to editor@modelboats.co.uk

Blasts from the past

I built my first radio-controlled boat in 1968 while still at school. I worked a summer holiday job and bought a second-hand REP 4-channel multi set. The transmitter was all valve, but the receiver was transistorised and used four relays to control the two Climax servomites.

I've been getting Model Boats since 1968 and I always enjoy reading the historical articles. I have several items which have featured in Dave Wiggins' columns. John Parker's article 'Plans for Christmas' caught my eye as I have built several models from the 'free' plan.

Photo 1 is Vic Smeed's Castle class corvette, with an Ariel 6 radio, Climax relay-less servomite for the rudder control and a DIY solid state motor speed controller. I deliberately used high speed film when shooting this model to get a grainy effect, which I hoped would make it look like an old black and white photo of a real ship. After World War II, four of the Castle class corvettes were converted into weather ships and based in Greenock during my time at Kincaids (see MB September); I got a tour of one of them.

The 'E-Boat' on the cover of December 1961 issue of *Model Maker* (as illustrated in John article) was built in 1933-34 with MAN engines;

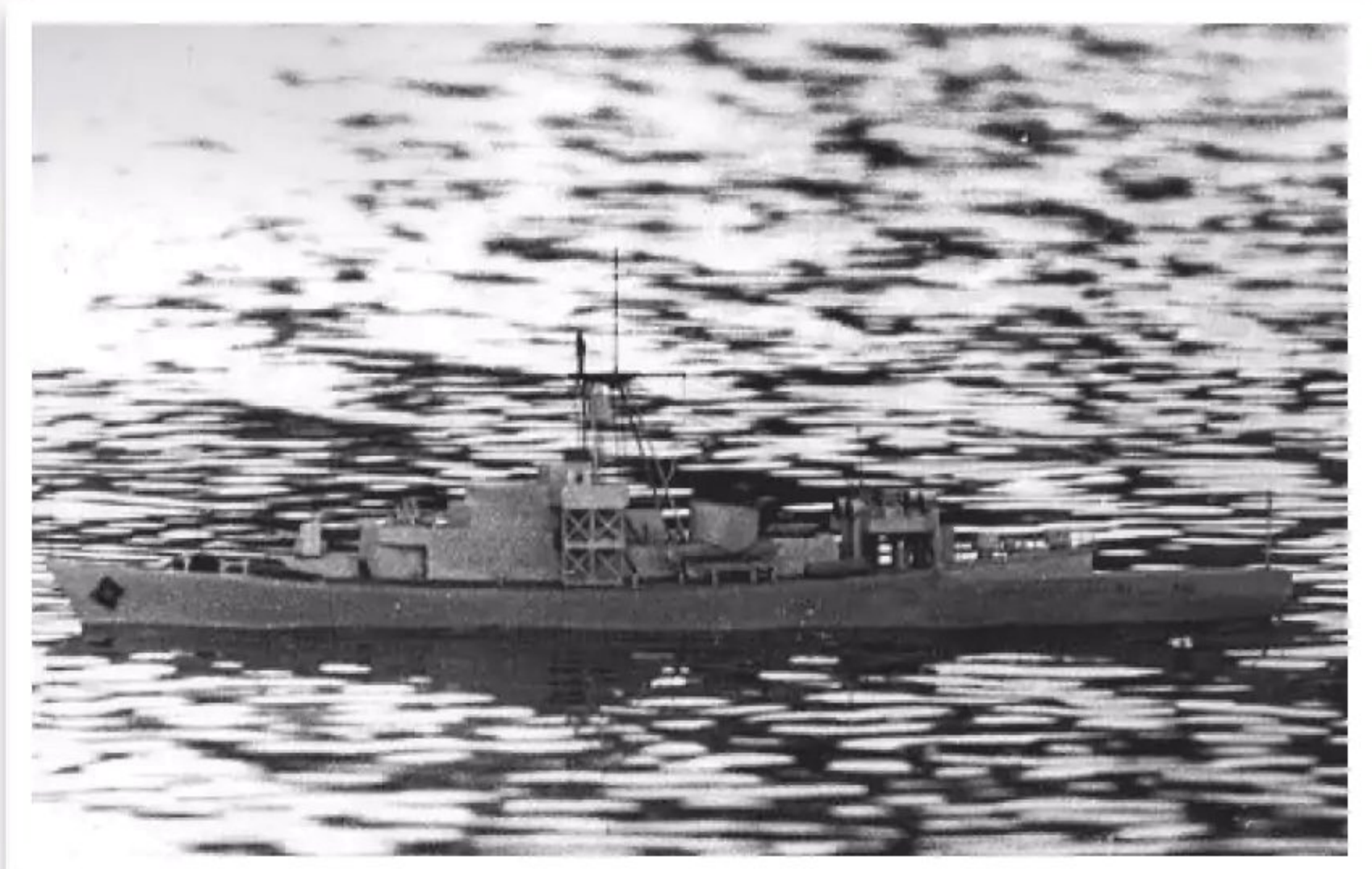


later ones had Daimler-Benz Diesels which were said to be more reliable. By the start of World War II all of that class were used for crew training in the Baltic, making that cover art a bit fanciful! After the war, number 8 was handed over to the Royal Navy for trials and scrapped sometime after 1947.

Photos 2-4 show the 1:72 scale Airfix kit I built, to which I added metal handrails, metal gun barrels and some other improvements. The base on which it is mounted is wild cherry from a tree my father-in-law cut down around 1960.

VICTOR CROASDALE
ILLINOIS, USA

Fantastic builds, Victor, and the effect you were going for with the Castle class corvette shot has worked like a charm. Great stuff! Ed.



Above: Cleverly shot to look like a World War II military archive image: Victor's Castle class corvette.

Above left: Victor explains why the cover artwork featured on this December 1961 issue of Model Maker was somewhat fanciful!



Built from the 1:72 Airfix kit but with some modifications to improve realism, Victor's E-Boat on its gorgeous cherry wood plinth.



SS Minnow

This is *Minnow*, a build recently completed and now ready, once weather conditions are suitable, for her maiden sail. She's based on a kit I purchased online but then slightly modified/improved. I've depicted her as a game fishing boat returning after a successful day on the water, adding my own suitably relaxed crew figures for to really set the scene.

JOHN GRABYN
VICTORIA, AUSTRALIA

The boat is fab, and perfectly complemented by those casually posed and attired figures. Cheers, John! Ed,



Crane Barge

In 1981, while working for Alfred McAlpine, I decided to build an 8ft 4in (100 inches model of the company's 100ft crane barge) to pair with my Collingwood tug in the Ellesmere Port Boat Museum Championships. I completed it in time and with Dave Morris as my number two we won the gold medal.

While I'd been building the model in McAlpine's cargo shed, though, the Managing Director had come down and asked what I was doing. On being told, he said "That's no use – I want one for the boardroom!". So, later that year I completed another model, at 20 inches, and presented it to him.

Ten years later there was a knock at my front door and Doug Hendry, the Deputy MD, was there with *Jimmie Mac* (the name given to the crane barge I'd built for the boardroom), although now plinth mounted and encased in glass.

ALAN G. DEAN
THE WIRRAL, CHESHIRE

A well-deserved double accolade, Alan. I now have Martha Reed & The Vandellas playing on loop in my head – a great tune I can now justify adding to my MB playlist! Thank you. Ed.



Alan Dean's award-winning crane barge.



Minnow, the delightfully modified/improved kit build recently completed by John Graybn.



HM Bark Endeavour

I have been a very satisfied subscriber to Model Boats for many years and always enjoy the great variety of models and skills on display within the magazine. We now live in a retirement village in Doncaster, Victoria, Australia. One of our fellow residents, Ivan Horacek, a retired doctor, has produced this superb model of HM Bark Endeavour as she was used by Captain James Cook when he set out on his voyage to the Pacific and up the East coast of Australia in 1768. The incredible number and unbelievably small size of knots in the rigging are enough to make your eyes water!

So, while the model in the attached photo is not mine, I do feel it is very worthy of inclusion in the Your Models section of the magazine simply due to the sheer quality of its build.

I have just renewed my subscription for another 12 months. Keep up the good work!

GRAHAM DAVIES
VICTORIA, AUSTRALIA

Thanks, Graham. What an exquisite model! Please pass on my congratulations to the very talented Dr Horacek. Ed.



Ivan Horacek's intricately detailed build of HM Bark Endeavour.



The Solomon Browne looking superb on the water following additional detailing by Mike Payne.

Solomon Browne update

With the RNLI's 200th birthday rapidly approaching I have been busy adding cosmetic detail to RNLB *Solomon Browne*, as featured in the January edition. Those of you who scratch build will know it is the minor bits which take up the most construction time.

A few examples just to emphasise the joys of scratch building... A fellow club-member kindly printed off the nameplates for me, and the Corporate flags came courtesy of BECC model accessories. The other most obvious additions are the safety rails and grab ropes. The stanchions I made from 3mm brass tube deeply embedded into the hull, pierced by 2mm brass tubes for the lower rail (drilling the holes was bad for my nerves) and topped by purchased handrail ball-ends. Not scale of course but OK from the proverbial three metres viewpoint, and robust enough for fundraising display purposes. For the same reason the rails are shirring elastic under slight tension, which of course stretches if pushed/pulled; it never ceases to amaze me how many of the public need to touch, despite polite notices asking them not to. The white elastic I coloured

with dilute acrylic paint and finished with dummy turnbuckles/end fittings made from brass tube.

The grab ropes are three strand nylon/polyester cord looped through white metal hoops, with the whippings represented by heat shrink sleeve. Because these ropes will routinely get wet, I always smear them generously with a good quality waterproof/ exterior grade PVA glue. This partly stiffens them so that they hold their shape, and it also seems to resist staining from waterborne algae, etc. The hold-down (presumably frangible) straps for the one-shot self-righting inflatable bladder container are cut from a 'T' shirt elasticated neck closure and the centres of the 'clear-view' windscreen panels are the end of rockets from a plastic aircraft kit.

The anchor chain came from a youngsters' jewellery shop, the anchor itself and associated handling/stowing equipment are laminated polystyrene sheet and sprue rod emulating the white metal parts which came with the hull; plastic sheet was also used to create the bow roller fitting. The elevated radar assembly and cabin roof aerals are fabricated from various pre-formed

plastic box and rod sections (typically from Evergreen) still thankfully available from my local model shop, the aerals plugging into close fitting brass tube so they are removable for stowage/transit.

Without question, as I continue to survey pictures I will spot items which could/should be added. The transit box is still not made, nor are a few more crew members, plus it needs a better display stand (complete with rude dolphins?), but I'm getting there. She has already successfully completed her first fundraising duty and sails very nicely, what more can I ask?

MIKE PAYNE
WARMINSTER MODEL BOAT CLUB

Thanks so much for updating us as promised, Mike.

It was such a pleasure working with you on the Solomon Browne feature, an experience I hope we will repeat in the near future, and, after you so generously donated the fee for the article we published in our January edition to the RNLI, I received a lovely letter of acknowledgement from the RNLI West Wilts Fundraising Group. Ed.

Two in a canoe

The Jan 2024 issue arrived in my mailbox today and immediately had my attention. I really enjoyed Mike Payne's article on the RNLI Solomon Browne. I knew nothing about the December 1981 tragedy, so it was good to have that background as well as his description of ingenious solutions to problems encountered along the way, resulting in a superb model.

Mr. Payne mentions the initially erratic behaviour of the model's two motors and tells how an independent battery/ESC/ motor combination per propeller shaft rectified the situation. I wondered whether in the initial set up of one battery feeding two ESCs if the +5 volt line from one of the ESCs had not been disconnected, as Dave Milbourn suggested in his article on ESCs in MB Aug 2014.

That recommendation saved me a lot of grief when I built a canoe according to Glynn Guest's article in MB Oct 2016. The canoe had two paddlers with independently controlled motors; see the attached photo.

I hope that the video at <https://www.youtube.com/watch?v=Uec6gWrfOf0> might amuse you.

Happy New Year!
ADRIAN CAMFIELD
OTTOWA, CANADA

Happy New Year to you, too, Adrian! Mike and I both love your little canoe and the humorous YouTube footage (recommended viewing, as bound to raise a smile), and although I have already shared his response with you via email, I am publishing it here as I am sure it will also be of interest to other readers: "Lindsey was kind enough to forward your generous comments on my Watson build and I thank you for them. Your advice about having only one ESC +5V supply when two or more ESCs are in use is indeed crucial and had been followed in this instance. I did contact the manufacturer who suggested fitting opto-isolators in the signal lines as a possible (not certain) solution but as a disciple of the Keep It Simple Stupid (KISS) principle, having two batteries available and being a bit frugal, I chose the simpler option.

"In truth, during my professional life I had encountered electromagnetic compatibility anomalies before on full size platforms and still have nightmares about chasing them down many years on, so I took the easy way out.

"Thank you also for the canoe path; when things on the workbench are a bit stressful, I will break that one out".

As always, it's lovely to see the mag serving as a go-between for the exchange of observations and ideas.
Ed.



Adrian Camfield's charming little canoe, also the subject of a humorous YouTube video (<https://www.youtube.com/watch?v=Uec6gWrfOf0>) guaranteed to raise a smile!

Your Letters

**Got views to air or information to share?
Then we want to hear from you!**

Letters can either be forwarded via email to editor@modelboats.co.uk or via post to **Readers' Letters, Mortons Media Group, Media Centre, Morton Way, Horncastle, Lincs LN9 6JR**

Inspired by Sheila

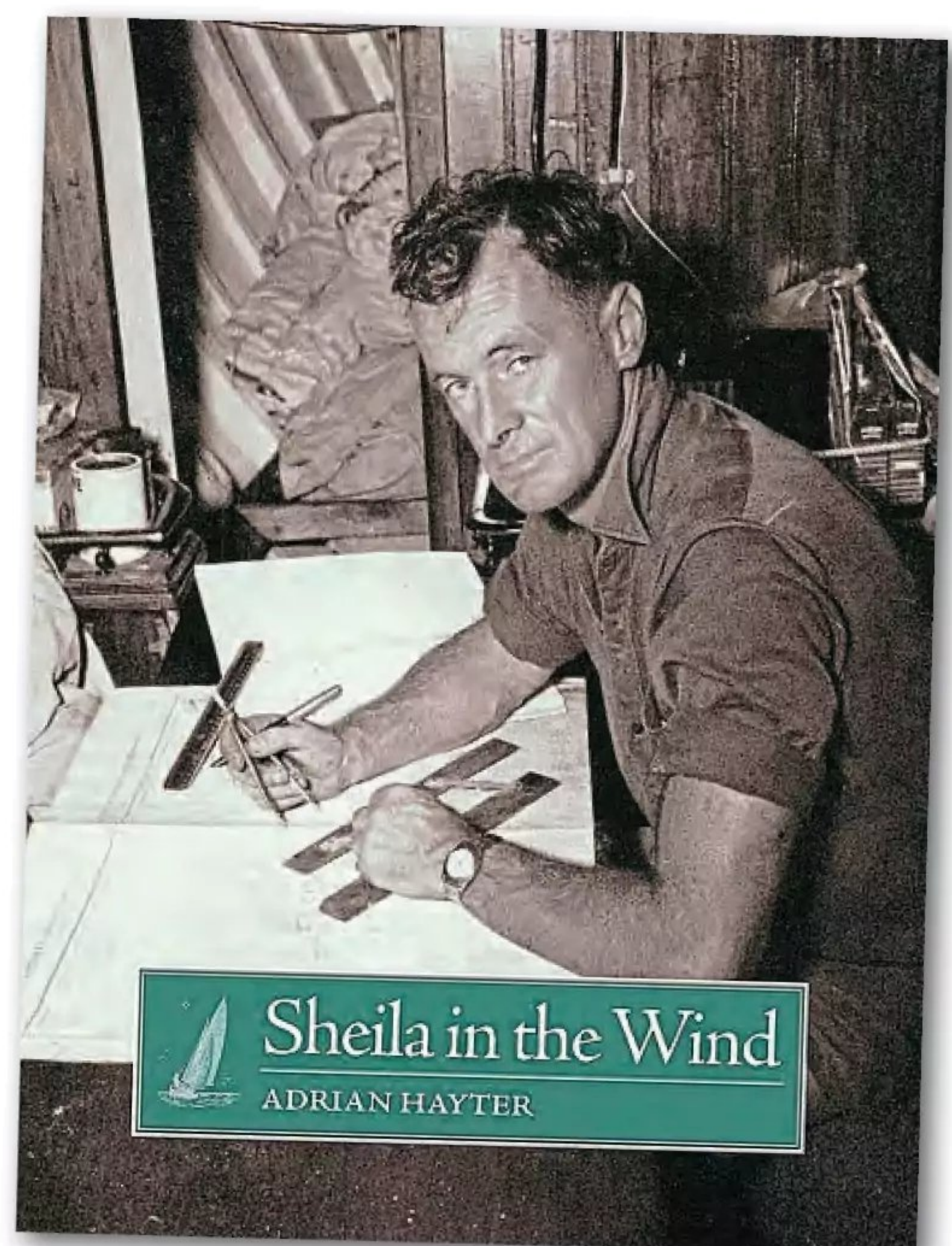
I found Nev Wade's 'With a little help from my friends' feature in the January 2024 issue particularly interesting, especially as Nev's first model boat builds were based upon Adrian Hayter's full-size vessel *Sheila*. I have the book *Sheila In The Wind*, which describes Hayter's voyage, sailing single handed, from the UK to New Zealand – a story of true courage and determination and a really marvellous read.

Thanks for a great magazine. Keep up the good work!

ALAN MARK
EMAIL

Glad you enjoyed Nev's feature, Alan, and thanks for seconding his *Sheila in the Wind* recommendation, now added to my 'to read' list. Ed.

Right: Adrian Hayter's book *Sheila in the Wind* recounts his epic solo sail from the UK to NZ in the yacht on which Nev Wade based his first model boats (see last month's feature 'With a little help from my friends').



Help at hand

I am a newcomer to the model boating world although I have read your magazine for some time now. My modelling experience goes back to my youth, when boats were powered small diesel engines or Taycol electric motors. I now have an RTR ProBoat with twin brushed motors and a LiPo battery. I am looking to perhaps build a boat from a kit, but I find the area of electric power and batteries somewhat confusing.

Electric motors can be brushed or brushless, with two types of the latter. Brushless motors require an ESC controller which I understand replaces the commutator. Batteries can be lead acid, NiMH, or LiPo. The latter have to be stored and charged carefully to avoid damage or fire risk.

I am not sure if you have other readers in my situation, but an article covering some explanation of motors, batteries and the advantages and disadvantages of each would be very welcome for me. I have googled LiPo batteries and their risks but am still a little confused.

I have joined Kingsbury Water Park Model Boat Club, but a lot of members are older and only use brushed motors and there is a love/hate relationship with LiPo batteries, so opinions are divided. Fast electric boaters swear by them and scale modellers are more reluctant!

It would be good if you could help.

MIKE THOMAS
TAMWORTH, STAFFS

Welcome, Mike, and don't worry, I bet there are lots of other readers in similar situations. I am not sure how long you have been reading the mag, but everything you are asking about was covered fairly recently in Colin Bishop's two-part article on Choosing Motors and Props (see the March/April 2021 issues of Model Boats). If you have a digital subscription then you will have access to both parts of this article in the digital archives, plus lots of other very useful material going back to 2007. If not, you could instead order the March and April 2021 issues as individual purchases from

PocketMags (see links below). There are also two earlier articles on motors and batteries available on our website's forum, which can be viewed for free – again, see the links below. If you register with the forum, you can also post queries there.

Model Boats March & April issues available via Pocketmags

<https://pocketmags.com/model-boats-magazine/march-2021#5217f908039c3>

<https://pocketmags.com/model-boats-magazine/april-2021#5217f908039c3>

Earlier articles in the magazine available to read on Model Boats Website Forum

<https://www.modelboats.co.uk/1112/but-i-dont-understand-electronics/>

<https://www.modelboats.co.uk/935/going-brushless/>

Hope this is of some help. Ed.



of getting impressive sheets of spray at full speed. The model dispenses dollops of water instead. Ideally, you need to slow down time too, but this introduces aspects of quantum mechanics which are beyond the scope of this article.

This is not a bad basis for assessing performance, but in practice people like their boats to have more 'welly'. Firstly, many people think this actually looks more realistic and secondly, it gives you a reserve of power if the weather kicks up, producing rather unkind conditions on the pond. I am all in favour of extra power. If it's there you may well regret it if the model can't cope. Most model boats can comfortably accommodate a power plant with which gives that conflicting extra bit in hand. So, the next step is to consider how you can get the performance you want.

Motor types

There are a bewildering number of motors out there and choosing the right one isn't always easy. One indication of what is inside that black-looking casing is the number of poles. A standard 540/545 type motor has a standard outside diameter of 54.5mm and a standard length of 54.5mm. This gives a standard volume of 1.5 litres. The standard outside diameter of a 360/400 type motor is 36mm and its standard length is 40mm. This gives a standard volume of 0.5 litres. The standard outside diameter of a 500/545 type motor is 50mm and its standard length is 54.5mm. This gives a standard volume of 1.5 litres.



Left: A bit of extra power is always useful, as this bit of Model Shipways' Cutaway demonstrates.

Traditional 360/400 or 500/545 type of brushed motor.

Insurers produce much higher rpm and are really only suitable for fast electric racing craft. An Out-runner brushless motor will have to be installed either bolted to a bulkhead or, more practically, within a traditional aluminium plastic motor mount. This is because the casing rotates and therefore you cannot simply hold the motor in place in the hull with a bit of silicone or an elastic band fitted over it on a shaped balsa-wood base. A brushless motor can only be used with a suitable compatible speed controller with a three wire output and you need to ensure that it has a full reverse function, something which doesn't feature on units intended for model aircraft use for obvious reasons.

Motor specifications

Published motor information for brushed motors will normally include things like voltage range, maximum RPM, possibly typical current draw and stall current (stall current being the current drawn by the motor if it is stalled at full throttle, for example, by weed round the prop). In the absence of specific usage recommendations, this will give some idea of the motor characteristics. A relatively low stall current and stall current indicates that the motor is likely to be low drain and suitable for more delicate models. A high RPM and high stall current indicate a more powerful motor. The motor is more performance orientated.

Brushless motors are often differently described as 2822 or 1100KV. To confuse things, some manufacturers may add on a code after those first four digits (as do Turnigy), followed by another number, such as 8, 12, 14 or 17. Here we are only concerned with the first four digits.

The first two digits (28) refer to the case diameter in mm and, rather handily, this means it will bolt into a standard traditional 360/380 brushed motor mount. Likewise, if the last two digits are '35', this means it will bolt into a 540/550 brushed motor mount but, of course, be of a larger diameter.

The next two digits (22) refer to the case length, however, what we are really interested in is the KV rating and somewhere within the specification will be listed the motor's maximum voltage, which is 102 for this particular motor. In this motor series Turnigy offer an officially sized motor: Ref: 2822/8-280KV, but of 280 Watts, a truly remarkable performance from something just over an inch in diameter and barely an inch long.

Physically size for size, a brushless motor will be much more powerful than a brushed one. 1100KV means that the motor will produce 1100 revs per volt with no load. So, on a 7.4V LiPo battery this means it will be running at maximum speed produce 7.4 x 1100 rpm = 8140 rpm or, on an 11.1V battery 12210 rpm. Unlike a brushed motor, you can use any battery to power a brushless motor.



Selecting motors and propellers - Part 1

Colin Bishop puts together some practical advice...

Having looked in the headline for this article heading I am very much aware that I'm deliberately venturing into a minefield. I can clearly picture hardened modelers flinching in horror at the prospect of coming up with a formula for selecting motor/prop combinations, fast cries of 'Can't be done, can't be done' floating in their wake...

Well, it can, to some extent – although admittedly only in specific areas, such as racing, or perhaps by diving into the kind of obsessive mathematical equations and calculations that the average modeller would require a brain transplant to be able to get to grips with. The reality is that when it comes to boats, or scale-like type boats, there are just too many variables involved to come up with any 'one size fits all' formula.

This article, therefore, offers an empirical practical approach and aims to identify the pertinent issues scale modellers need to factor in when selecting motors and propellers for their own specific builds. It's not a different matter entirely and will not be considered here, as it's a specialist area of modelling where the applicable rules to a very large degree, nor will I consider powered models. For the sake of simplicity and recognising the needs of the average electrically driven scale model, which is quite enough to be going on with.

Of course, those of you who've subscribed to, or regularly bought, the magazine for many years now may remember the subject previously being addressed in the 2013 Model Boats March 2021

Help at hand...
"Essentially, we want a model boat that looks 'right' on the water, operates at a 'realistic' (another minefield!) speed and has a power plant that gives us reasonable sailing duration. But, as with all things, there are inherent trade-offs..."

Performance

We all strive for good performance from our models, what does that actually mean? Well, essentially, we want a model boat that looks 'right' on the water, operates at a 'realistic' (another minefield!) speed and has a power plant that gives us reasonable sailing duration. But, as with all things, there are inherent trade-offs. Your tug with a nice round hull and a nice hull will happily trundle around the pond for a couple of fast boats then the exciting performance you expect will come with a short duration so you will be looking at being able to swap in a second set of batteries, NiMH or LiPo, during your sailing session. This is only to be expected. What you don't want is for your fast launch to limp around the pond in a case you want to bring your boat to the bank after half an hour, only to find that the motor is too hot to touch, and the sort of practical problems that modellers the optimum setup through not knowing factors that determine it. The introduction of new commercial use of brushless motors and high performance LiPo cells offer exciting options which bring complications of their own for those not familiar with them.

What could be said about speed? It's always acknowledged formula is based on Froude's Law and states that scale speed equals the square root of S, a full size speed, where S is the scale of the model. So, for a 1:100 scale 30 x 30 x 3 knots, or around 100 knots, speed, a 1:100 scale model would need to produce a wave pattern similar to the original vessel at its corresponding full size speed. It doesn't move as fast but because the viscosity of water doesn't scale down and hull

Help at hand...
Left: A selection of brushed motors and propellers from a typical modeller's 'bits' box.

Propellers

Scale model propellers come in three main types: plastic or nylon, white metal (as commonly supplied with kits) and brass metal (normally brass or bronze).

Plastic props, usually in black or red nylon, are the cheapest type and are extremely easy to use. In my experience, they tend to be designed for maximum forward thrust and can often be cuttable when a stern power is applied. I've found that with the red Gossamer variety this can be overcome by covering the prop with a piece of clear tape. This will increase the pitch, immediately then plunging into cold water sets the changed configuration, although you have to judge each blade angle by eye. Neither red nor black plastic propellers will benefit from painting with bronze or brass coloured paint, although this does tend to take off after a while.

White metal propellers are favoured by kit manufacturers as they are cheap to cut, but they do require quite a bit of work to clean up and balance. The soft material also renders them vulnerable to damage if a rotating prop hits something hard, such as a stone near the edge of the pond, which is not uncommon. They are quite heavy as well. Personally, I discard these in favour of alternative offerings, preferably in brass or bronze.

Brass propellers offer the widest range of options and are available from a variety of sources, from the standard offerings sold by the likes of Hobbies to the more specialist and specialised offerings, e.g. from Raboosh and Prop Shop, which offer a wide range of specific types of prop – these include the complex patterns fitted to modern warships, with their multi-blade scanner shapes that look as if they've escaped from a liquidiser.

Electric motors are most efficient when running at high rpm. These speeds are not optimal for the propellers we use, which are much happier at considerably lower revolutions. This discrepancy is bridged by the loss incurred by the propeller reducing the motor revs by the introducing gearing.



Lots of helpful advice and information can be found in Colin Bishop's two-part article on choosing motors and props run in the March and April 2021 editions of Model Boats, copies of which can still be obtained from our Back Issues Dept.

Joysway FOCUS yacht information sought

I live in Bundaberg Queensland Australia, I am 81 years old, and my hobby is restoring old model yachts. I am writing to all available sources in the hope that I can find some instructions to help me restore a 1-metre fibreglass Joysway FOCUS yacht. I thought you or one of your staff or readers may have some information/article about this boat as I have searched the web and can only find information on the later V2 and 3.

I know this is clutching at straws, but there are

minute bits of info I need to manufacture some parts. Any help would be gratefully appreciated.
TONY HARTSHORNE
BUNDABERG RADIO YACHT CLUB
QUEENSLAND,
AUSTRALIA

Here's hoping someone reading has some information they can share, Tony. If so, I will be delighted to pass this on to you. Ed.



River Police boat model investigation

I've just bought this 'River Police' boat from Howes Models. It isn't a model sold by Howes as a kit; it was apparently sourced from a gentleman who was disposing of his recently deceased father's collection, and who himself knew nothing about this particular model's provenance. I would very much like to learn more about it, but so far my research has drawn a blank. So I am hoping

someone can identify the vessel the model has been based on, the force served, etc,

**PHIL GODDARD
EMAIL**

I've not managed an ID from a trawl of Google images either, Phil, but I'm sure someone out there will be able to help with enquiries!
Ed.



Can anyone reading please tell us more about the River Police boat this model was based on?

Model boat boiler concerns

Richard Simpson's article (February 2024) on John Cox's rather unique steam plant made really interesting reading but reminded me of something that has often concerned me about model boat boilers. That is that sometimes and, in some designs all the time, some of the fire tubes are not covered in water or, in the case of water tube boilers, the water tubes are not full of water.

In 'real life' boilers that's a huge no-no and is never allowed to happen, as the tubes and/or the furnace crown would overheat and fail in a very short time, sometimes with catastrophic results – emptying the contents of the boiler into the furnace and subsequently into the machinery space! About 50 years ago I saw this on one of my company's ships that had recently been sold; three engineers were killed, and the boiler room wrecked.

I can only assume that the designed firing rate of these model boilers is such that the tubes in question are subjected to only relatively modest heat, allowing them to resist failure. However, I would be really interested in hearing any comments from those with more experience than I have on this subject.

**TIM GIBBS
KENWITH CASTLE MBC
BIDEFORD,
N. DEVON**

I thought it best to let Richard Simpson answer this one, Tim – so here's his reply:

"Many thanks for your interest and feedback in the recent Boiler Room article. As I mentioned in the article, running dry tubes was initially one of my own concerns and hence one of the specific

topics that I discussed with the Federation of Model Engineer Societies. My own concerns, as yours, come from a life as a Marine Engineer in the Merchant Navy, where, as you quite rightly state, dry tubes simply do not occur in life size boilers. I was assured that it's normal practise for the model locomotive modellers to run their boilers in a similar manner, so there were no concerns raised as regards this aspect of John Cox's boiler. It did generate a bit of interest for me though and, after a little research, it would appear that, in full sized locomotives also, dry tubes are not included in a normal arrangement.

I can therefore only conclude from this that such a design is acceptable in model boilers, purely as a result of the effects of scale on the tubes. Obviously, proportionally, model tubes are significantly thicker than the tubes in full-sized boilers and so are capable of withstanding the temperature generated across a dry tube. I also think that as steel is used in real life boilers, its lower heat transfer properties heat means heat travels comparatively more slowly through it, leading to a greater build-up of heat in the material. As we use copper in model boilers, the heat transfers along the tube length significantly faster and has a lot less distance to travel, hence preventing a build-up of heat.

Please don't take this as a definitive answer but simply as my own musings on the subject."

If anyone reading has any further thoughts, please do share them.
Ed.

Mister P history

I like old models, so I wonder if you or maybe an older reader could identify this one? It came to me via the Gloucester & District Model Boat Club following the death of its owner, for whom it was built by his father, probably about 70 years ago.

It is all-wood and had a heavyweight electric motor, which I have since replaced. I have also retrofitted a rudder servo and R/C. Whether it was constructed from an early 1950s' kit or has or very skilfully scratch-built, I don't know; I suspect the former.

Anyway, 'Mister P' is now back on the water. I couldn't allow him to land in a skip! Any ideas?

GRAHAM CLARK
EMAIL

I am quietly confident that if the marvellous Mister P was built from a kit, albeit a long obsolete one, someone reading will be able to identify both the model and the manufacturer, Graham. Over to you, chaps! Ed.



Recognise this model? If so, we'd love to hear from you.

Next month in **model Boats**

In the April 2024 issue, on sale from Friday, March 15, 2024, be sure not to miss...



● Fletcher Class Destroyers

A salute to these highly successful vessels & the modelling opportunities they present



● Moana's canoe

Paddling Polynesian style!

● US Coast Guard MBL 44357: a courageous first build

R/C rookie Ted Correia shares some top tips



PLUS A thematically varied selection of feature-length articles, all your favourite regular pages – including Your Models, Your Letters, news, reviews – and lots more (Please note: content may be subject to change)

You will find more about the exciting content coming next, features of particular interest you may have missed in past editions and details of the very latest subscription offers on our website at

www.modelboats.co.uk

You can, of course, order your copy of the April 2024 issue, which goes on sale at all good newsagents from Friday, March 15, now, but why not treat yourself to an annual subscription, as monthly copies will then be delivered directly to your door.

What's more, the unique subscriber number allocated to you will provide website access to digital copies of the current issue and to our archive of back numbers. It will also unlock subscriber exclusive bonus material not featured in the magazine.

If you can't always find a copy of this magazine, help is at hand! Complete this form and hand in at your local store, they'll arrange for a copy of each issue to be reserved for you. Some stores may even be able to arrange for it to be delivered to your home. Just ask!



Please reserve/deliver my copy of on a regular basis, starting with issue.....

Title..... First name.....

Surname.....

Address.....

.....

.....

Postcode.....

Telephone number.....

If you don't want to miss an issue



Australia's Premier Maritime Hobby Shop

FLOAT a BOAT
Fine Models Since 1962

**48c Wantirna Road,
Ringwood Victoria 3134 Australia**

Tel. 61 3 9879 2227
www.floataboat.com.au Mail Order

RAF A.S.R.L Whaleback
1/24 scale, not a kit, crew
of 7 single motor, excellent
condition, performs well,
photos available
£230
Tel. 01934 413207
Somerset

**For Sale: Steam Boats,
River Queen Clinker style Hull
with Clevedon steam plant.
Also an Open Launch
51" long with Martin Baylis Triple
and Kingdon boiler fitted.
Contact me for details and photos.
Tel. 07534 690966. Liverpool
Email. alanluckett@live.co.uk**

**Joysway Force 2 Catamaran
Radio Control Boat Modeller
magazines, all 51 editions.
Taplin twin Marine 8cc Mark II.
Meteor 40 Marine Glow Engine,
unused.**

**Contact for more details.
Tel. 01633 894781. Newport.
Email. c.mackie119@gmail.com**

FLEETSCALE

WWW.FLEETSCALE.COM

**GLASSFIBRE BOAT &
WARSHIP HULLS,
FITTINGS AND SEMI KITS
IN MOST SCALES AND ERAS**

**EXTENSIVE
SECURE ONLINE STORE**

MILITARY & CIVILIAN RANGES

19TH, 20TH & 21ST CENTURY

**IN 1/24TH, 1/32ND, 1/48TH,
1/72ND, 1/96TH, 1/128TH**

**TEL: 01822 832120
FAX: 01822 833938**

WESTWARD MOULDINGS LTD

WANTED
Radio Transmitter
for Triang Model Cargo Ship
British Adventurer made
in 1950's.
Tel. 02891 878624
County Down Ireland
E: dgarrett80452@yahoo.co.uk

Thames Sailing Barge
Display model only, based on
the 'James Piper,' 49" long,
45" high, can email photos.
£375 buyer collects
Tel. Colin 07870 226849 Kent
Email.
moleandsliv@btinternet.com

**2 x Leopard LC3536-5T 1520KV
outrunner brushless motors**

**2 x marine V3 60A brushless water
cooled ESC.**

**2 x Lipo 11.1V 2200 MHA batteries,
charger and large Lipo charging bag.**

£90 the lot, all new unused.

Tel. 07870 226849

Email. moleandsliv@btinternet.com

Venetian Passenger Motorboat
1940-60 enlarged scale, double
planked removeable superstructure,
length 44", beam 11", sail, passengers
cabin light, double planked, fitted
motor, shaft prop rudder etc,
new 8CH radio (requires fitting)
£160 collected
Tel. 01845 501922 North Yorkshire

Marketplace

model Boats

Mr / Mrs / Miss / Ms (please delete)

First name(s) _____

Surname _____

Address _____

Postcode

Telephone _____

Mobile _____

Email

Are you a subscriber? Yes ☐ No ☐

TERMS OF ACCEPTANCE: All advertisements are subject to approval of the publisher, who reserves the right to amend, refuse, withdraw or otherwise deal with the copy submitted. Whilst every care is taken, the publisher will not be liable for any loss occasioned by the failure of any advertisement to appear, nor does it accept responsibility for printed errors. Advertisements once received and processed cannot be cancelled or money refunded. The publisher reserves the right to place this advert free of charge in other related publications. Please note that Mortons Media Group is unable to mediate in any disputes that may arise between vendor/buyer.

Any order placed with us will be deemed an acceptance of these conditions.

BUSINESS ADVERTISEMENT DISCLOSURE 1977: This order requires all advertisements by people who seek to sell goods in the course of business to make the fact clear. Therefore you either include the name of your company or the word TRADE or (T) in all advertisements.

IMPORTANT NOTICE: All private classified lineage advertisements published by MB received via the Order Form or the Internet are copyright of MB.

DATA: Protection of your personal data is important to us. Personal data will be stored securely and will only be used for the purpose of processing the advertisement. Data will be stored for a period of six months then destroyed.

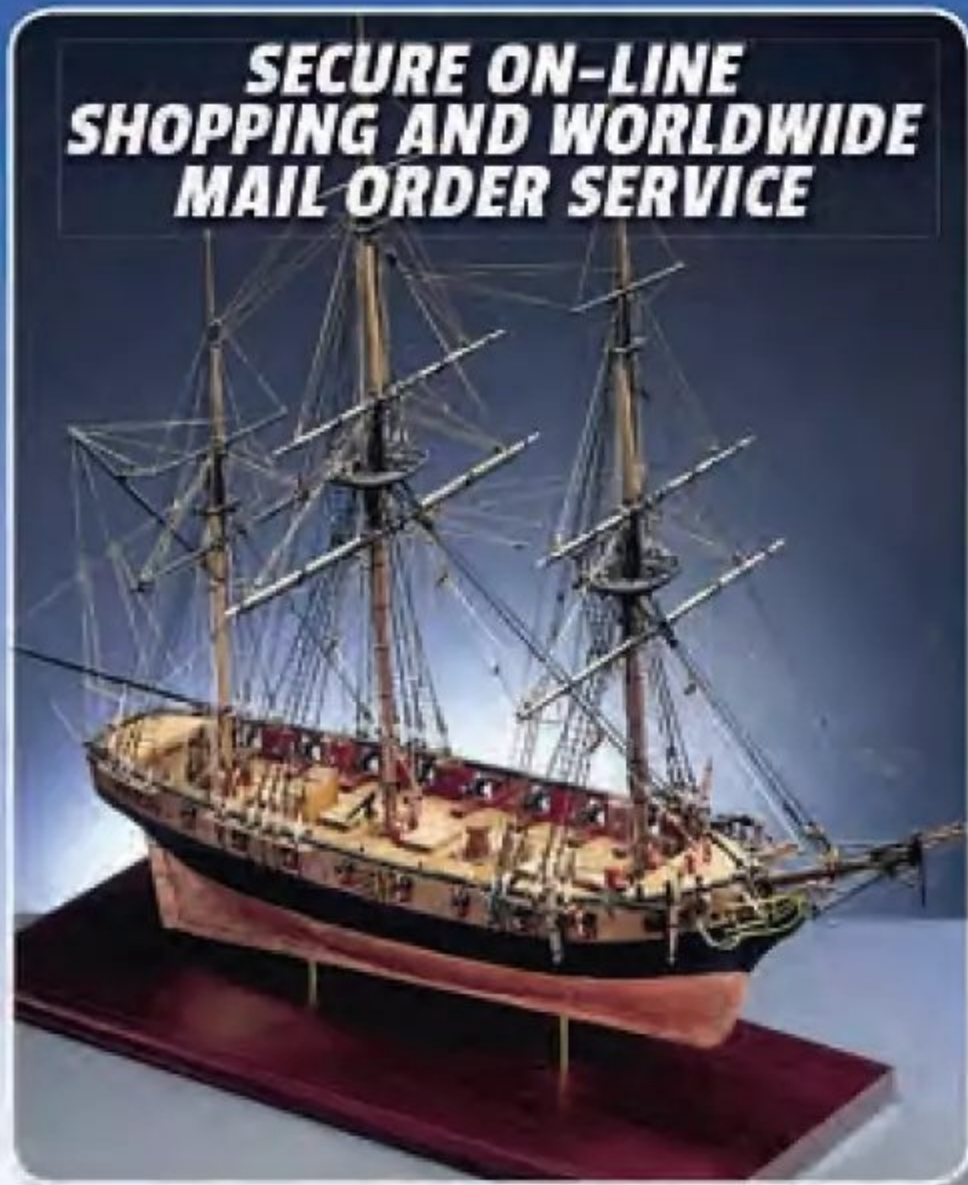
To take advantage of our **FREE PRIVATE** classified ad service, simply fill in the coupon provided below and return it to us at:

**Marketplace Model Boats, Mortons Media Group,
Media Centre, Morton Way, Horncastle, Lincolnshire LN9 6JR
Deadline 12 noon Friday, February 23rd, 2024.**

*NB Only one word should be entered into each of the individual boxes provided for the wording of your ad – please do not try and exceed the permitted word count as this will result us being unable to print your ad. In order to assist the member/s of staff tasked with keying information into our system, when filling in the coupon please use block capitals, rather than a combination of upper- and lower-case letters and ensure all numbers are clearly legible.
May we also respectfully point out this free service is offered for private transactions only; businesses wishing to advertise commercial goods/services should instead contact our Advertising Representative, Steve O'Hara Email: sohara@mortons.co.uk who will be only too happy to assist.

[illegible]

SECURE ON-LINE
SHOPPING AND WORLDWIDE
MAIL ORDER SERVICE



CORNWALL MODEL BOATS

www.cornwallmodelboats.co.uk

Highfield Road Industrial Estate, Camelford, Cornwall PL32 9RA

Telephone: **01840 211009**

**SECURE ONLINE SHOPPING
& MAIL ORDER SERVICE**

Free mainland UK delivery on orders over **£100**
(*excludes surcharge areas)

**WE STOCK A WIDE RANGE OF RADIO CONTROL AND
STATIC DISPLAY KITS, FITTINGS, TOOLS AND PLANS**

**SPECIALIST ADVICE
AVAILABLE!**



Shipyard Models, Turk Model,
Master Korabel,
Modellers Shipyard,
Great Union Starter Kits
all in Stock now!

Detail your model with CMK
Czech Figures, Eduard Photo
Etch Figures. Great Little
Ships, MK1 Design, Scale Link.

Arrival of New Stock to CMB

AERONAUT Lili Sail Boat AN3003/00	93.89
AERONAUT Sudersand Steam Tug AN3033/00	228.97
AERONAUT Tim Steam Tun AN3034/00	257.75
BILLINGS Mercantile Traditional Freighter B424	389.99
BILLINGS Emile Robin B430.	159.00

Preformed Hulls, a good starting point!

Baikal Model Boat ABS Hull HULMM1331	95.00
Bluebird of Chelsea ABS Hull 1:24 Scale	39.00
Brave Borderer Hull Fibreglass	93.00
Breeze Pilot Cutter Hull with Plan DSET006	150.00
Burutu & Bajima Model Boat ABS Hull 1:50 Scale	38.00
Celia may Steam launch ABS Hull	39.00
Cormorant 1:32 Scale ABS in two halves	35.00
Cormorant Model ABS Boat Hull	35.00
Egret PusherTug Model Boat Hull, ABS Sheets	39.00
Forceful Paddle Tug ABS Model Boat Hull	95.00
Galway Hooker Hull & Plan SETSH2022B	141.00
Grand Banks Schooner FG< HULMM962	96.00
Guardsman Model Boat ABS hull	32.00
Katie Gaff Rig Pilot Cutter 40.5" Fibreglass	95.00
Lady MA Small Katie Mavissey Luger	86.00
Liverpool Lifeboat 35" FG HULMM1448	95.00
Moorcock 56" Tug Boat with Plan	166.00
St Cervia Thames Tug Hull FG 1:48	89.00

Model Boat Plans Printed to order

Electra MMP MM269	12.50
Fairy Huntsman 31" MM2111	16.00
Holiday Lady 17 In long MM1380	12.50
Maggie 38"Long 11.5" Beam MM1028	12.50
Moonglow 35" L 9.75" B MM800	12.50
Moonmist 21" L 6" Beam	12.50
Silver mist 21" L Round Bilge Motor Vessel MM524	12.50
Sirocco 39" Cabin Cruiser MM704	13.50
Sweet Sixteen 16" L 5.75" B MM713	12.50
Swordsmen Plan 614mm long MM1058	14.50
Tarpon Cabin Cruiser 35" 9" MM494	18.00
Telectra 30" Police/ Customs Launch MM417	12.50
Tintagel Patrol Launch 15" MM556	12.50
TOD 16" MM561	12.50
Tornado 15" Patrol LaunchMM422	12.50
Vivacity 54 x 17" Cabin Cruiser MM652	18.00
Water Bug 13" MM357	12.50

Aeronaut Radio Controlled Boat Boat Kits

Bellissima Sailing Yacht	250.00
Bismark Battleship with Fittings set	455.00
Hansajolle Sailing Yacht	245.00
Jenny 1930s American Motor Boat	161.00
Jonny Harbour Tug 990mm	449.99
Kalle Harbour tug	234.00
Nurnberg battleship with Fittings 905mm	249.95
Pilot Boat	189.95
Princess Sports Boat	175.00
Rabourator Springer Tug	96.00
Ramboline: Push lighter	185.00
Spitfire Outboard racing boat	115.00
Tirpitz Battleship with Fittings 1255mm	487.00
Torben Modern Hamburg Harbour Tug with Fitting	259.00
Victoria Motor Yacht 700mm	178.00

Amati Static and Radio Controlled Model Boat Kit

Arno XI Ferrari Timossi 1953	381.00
Arrow Gunboat 1814 470mm	93.80
Bedford Whaling Boat 1:16 Scale	112.00
Coca Spanish Cargo Ship 41cm	102.00
Columbia Americas Cup Defender 1958	110.00
Endeavour Americas Cup Challenger 1:35	260.00
Fifie Scottish Fishing Vessel R/C 700mm	224.00
Grand Banks 46 Modern schooner	529.00
HMS Bounty 1787 Length 720mm	219.00
Mayflower English Galleon Length 650mm	159.95
New Bedford Whaleboat 1:16 Scale	112.00
Nina Caravel Of Columbus 1:65 Scale	89.95
Pinta Caravel Of Columbus 1:65 Scale	89.95
Sampang Chinese Fishing /Cargo Boat 340mm	43.94
Santa Maria 1492 1:65 Scale, Length 540mm	119.00
Swedish Gunboat 1775	58.94
Titanic 1912 1:250 Length 1070mm	374.00
Trabaccolo Merchant Ship Length 400mm	46.96
Venetian Gondola 1:22	114.00
Xebec 1753 1:60	144.00

Billing Boats Model Boat Kit

Absalon Navel Ship B500	600.00
African Queen/ Vessel used in African Queen Film	169.00
Andrea Gail - Perfect Storm B608 Static Kit	116.00
Banckert B516 also called "Maasbank" B516	239.00
Bluenose II B600 Schooner	85.00
Bluenose B576 Schooner	152.00
Calyso Research Vessel B560	405.00
Colin Archer B606 Static Kit	94.00
Cutty Sark B564 110cm long	355.00
Drazen Yacht B582	167.00
Elbjorn Ice Breaker B536	323.00
Fairmount Alpine Dutch Super Tug B506	349.00
HMS Endeavour B514	244.00
Hoga Pearl Harbor Tugboat R/C B708	137.00
Lilla Dan Training & Charter ship B578	158.00
Marie Jeanne B580 Fishing Boat	129.00
Nordkap Trawler B476	229.00
RMS Titanic B510	1050.00
Roar Ege Viking Ship B703	92.00
Sir Winston Churchill Schooner B706	159.00
St Canute Tug B700	165.00
USS Constitution B508 1:100 34inches	269.00
Viking Ship Oseberg B720	223.00

Caldercraft R/C and Nelsons Navy

Cumbræ 1:32 C7009	354.00
North Light 1:32 C7001	375.00
Joffre 1:48 C7000	379.00
Marie Felling C7003	625.00
Imara Steam Berthing Tug	725.00
Resolve Twin Screw Navel Tug C7024	779.00
HM Cutter Sherbourne C9010	99.00
HM Yacht Chatham C9011	119.00
HM Vessel Convulsion 1804 1:64 C9012	126.00
HM Schooner Pickle 1778 1:64 C9018	174.00
HM Brig Supply 1759 1:64 C9005	189.00
HM Brig Badger C9017	224.75
HMS Snake1797 C9002	260.00
HMS Mars 1794 C9007	264.00
HM Gunboat William 1798 1:32 Scale C9016	269.00
HMS Cruiser 1797 1:64Sc C9001	269.00
HMS Jalouse 1794 C9007	295.00
HM Bomb Vessel Granada 1756 C9015	298.00
HMS Diane 1794 1:64 C9000	599.00

Dumas Model Boat Kits

Vee Bottom SK Boat #1410	47.99
Swamp Buggy Airboat #1502	54.00
Windy Airboat Kit #1506	118.00
Carol Moran Tug 1:72 Scale #1250	127.00
River Barges #1219	178.00
Jolly Jay Coast Fishing Trawler #1231	206.00
Us Coastguard 41" Utility Boat #1214	208.67
Trojan f-31 Motor Yacht #1205	216.00
PT-109 US Navy Boat #1233	220.00
PT-212 Higgins 78" Patrol Boat #1257	230.00
USS Crockett #1218	248.15
SC-1 Class Sub Chaser #1259	257.56
harbour Lobster Boat #1274	320.00
US Coastguard Fast Reponse Cutter #1275	368.00
Myrtle Corey memphis River Tow Boat #1253	372.00
Victory Tug Boat #1225	373.00
Typhoon #1239	480.00
Chris-Craft Cockpit Barrel Back Mohogany #1241	515.00

Dusek Static Model Boat Kits

Viking Longship 1:72 D014	56.00
Viking Ship Gokstad 1:72 D002	56.00
Pinta 1:72 Scale D011	89.00
Nina 1:72 Scale D012	93.00
Golden Hind D017	126.00
Maria HF31 1:72 Scale D016	130.00
Santa maria 1:72 D008	130.00
Viking Longship 1:35 Scale D005	130.00
La Cerf French Cutter 1:72 Scale D009	179.00
Dutch Statenjacht 1:48 Scale D023	216.00
La Belle Poule 1:50 Scale D021	310.00
San Martin 1:72 Scale D018	310.00
La Real 1:72 Scale D015	345.00

Mamoli Model Boat Kits

Newport Baltimore Clipper 1:57 MV50	97.00
USS Constitution Cross Section 1:93 MV32	120.00
Hunter British Armed Cutter 1767 1:72 MV35	123.00
Lexington 1775 1:100 MV48	128.00
HMS Swift English Brig 1776 1:70 MV59	136.00
LLUEDO Merchant Vessel 1:32 MV29	139.00
Mayflower 1:70 MV49	150.00
Le Coureur French Lugger 1775 1:54 MV38	151.00
HMS Portsmouth English Merchant Brig 1:64 MV45	153.00
HMS Valiant British Brig 1:66 MV81	159.00
Puritan 1:50 MV43	177.00
Mary Royal Dutch Yacht 1646 MV28	179.00
Rattlesnake 20 Gun Privateer Ship 1781 MV36	208.00
Santa Maria Flagship of Columbus 1:50 MV42	249.00
LA Gloire 34 Gun French Grigate 1:90 MV34	270.00
Roter Lowe Dutch Galleon 1597 1:55 MV19	270.00

Mantua& Panart Model Boat Kits

Capri Motor Yacht 1:35	701 49.65
Arm 82 Dutch Fishing Boat	781 91.00
Caesar Roman Bireme 30BC	770 109.00
Black Falcon 18th Century Brig	768 113.00
Albatros US Coastguard Clipper	771 139.00
Armed Swedish Gunboat 1775	722 146.95
Brittania Royal Yacht of the Prince of Wales	733 165.00
Astrolabe French Sloop	773 246.00
Bruma Open Cruiser Yacht	736 227.00
Amerigo Vespucci Italian Sail Training Ship	799 379.00
Le Superbe 74 Gun 3rd Rate	798 359.00

Anteo Harbour Tug 1:30 Scale	743 413.00
Aiace Wooden Model Boat Kit Static or R/C	731 413.95
RMS Titanic 725-9 1:200 Scale	725-9950.00

Occre Static Model Boats

Hercules Tug 1:50 OC61002	247.00
N S Mercedes Spanish Frigate 1:85 Scale	278.00
Nuestra Senora del Pilar 1:46 Sc OC15001	392.00
Palamos Fishing boat 1:45 Scale	76.99
Polaris 1:50 Scale OC12007 580mm long	79.00
Prinz eugen German Heavy Cruiser 1:200	449.94
RMS Titanic 1:300 OC14009	224.00
San Ildefonso 1:70 Scale OC15004	479.95
San Juan Felucca 1:70 Scale	76.99
San Martin Galleon 1:90 scale	172.00
Sanitissima Trinidad 1st Rate Ship 1060mm long	449.94
Santisima Trinidad Cross Section 1:90	144.00

RO-Marin (Robbe) Model boat kits

Dolly Harbour Launch R1005C	107.00
Florida Motor Yacht 1:10 R1166	149.95
Paula III R1159	153.00
Antje Fishing Boat 1:25 R1110C	169.00
Fireboat FLB-1 with fittings R1091C	251.60
Najade Motor Yacht R1160	264.00
Happy Hunter Salvage Tug with Fittings R1106C	745.00

Sergal Model Boat Kits

Achille American Pilot Cutter (794)	95.00
Thermopylae Tea Clipper (791)	99.00
HMS Racehorse Bomb Vessel (793)	103.50
HMS Jamaica 14 Gun Sloop (784)	155.00
HMS Sharke Sloop 1711 (783)	155.00
HMS Bounty 1787 (785)	193.00
HMS Peregrine Galley Runner Class (786)	216.00
Dutch Whaler Baleniera Olandese (790)	284.00
HMS Victory Nelsons Flagship (782)	405.00
Mississippi River Steamboat 1:50 734	425.00
Cutty Sark Tea Clipper (789)	447.00
Vasa Swedish Man of War 1628 (737)	759.00

SLEC Radio Controlled Model Boat Kits

Sea Nymph 18in PR808C	52.88
Samurai Kit 622mm SLPR05	56.88
Wavemaster 635mm PR801C	87.50
Arrow PR804C 654mm Long	92.35
River Police Launch 660mm Long PR809C	93.71
Sea hornet 25.75ins PR813C	99.95
Wavemaster 864mm PR800C	107.50
Huntress 863mm long PR819C	183.25

Victory Models

HMS Fly 1776 1:64 Scale	259.00
HM Bomb Vessel Granada 1:64 Scale	269.00
HMS Pegasus 1776 1:64 Scale	340.00
Mercury 1820 Russian 20 Gun Brig 1:64	354.00
Revenge 1577 Navy Royal Warship 1:64 Scale	395.00

Guns Of History

Whitworth Cannon 12 Pounder 1:16 Scale MS4001	66.47
Civil War Limber Ammunition Chest 1:16 MS4002	55.99
Napoleon Cannon 12 LBR 1:16 MS4003	66.00
18C Deck Carronade 32 Pounder 1:24 MS4004	55.99
James Cannon 6 Pounder 1841 1:16 MS4007	66.00

ALSO:

ALL THE HARDWARE, BUILDING MATERIALS AND RC EQUIPMENT REQUIRED TO COMPLETE YOUR MODEL

Visit the website for our full range of kits:

www.cornwallmodelboats.co.uk

email: sales@cornwallmodelboats.co.uk

Prices are correct at the time of printing, but are subject to change without notice



Mtroniks

electronics innovation

Over 30 years of
know-how

24V VIPER Marine
Brushed speed controller
Available in 15A, 25A or 40A

FROM £41.99



No Relays or moving parts!

Ultra fine control for model boats running up to 24V.
Available in different power ratings to suit all sizes of motors.
100% waterproof for trouble free modelling!
See website or contact your local dealer for more information.



VIPER Marine
Brushed speed controller
15A, 25A, 40A or 75A

FROM £33.99

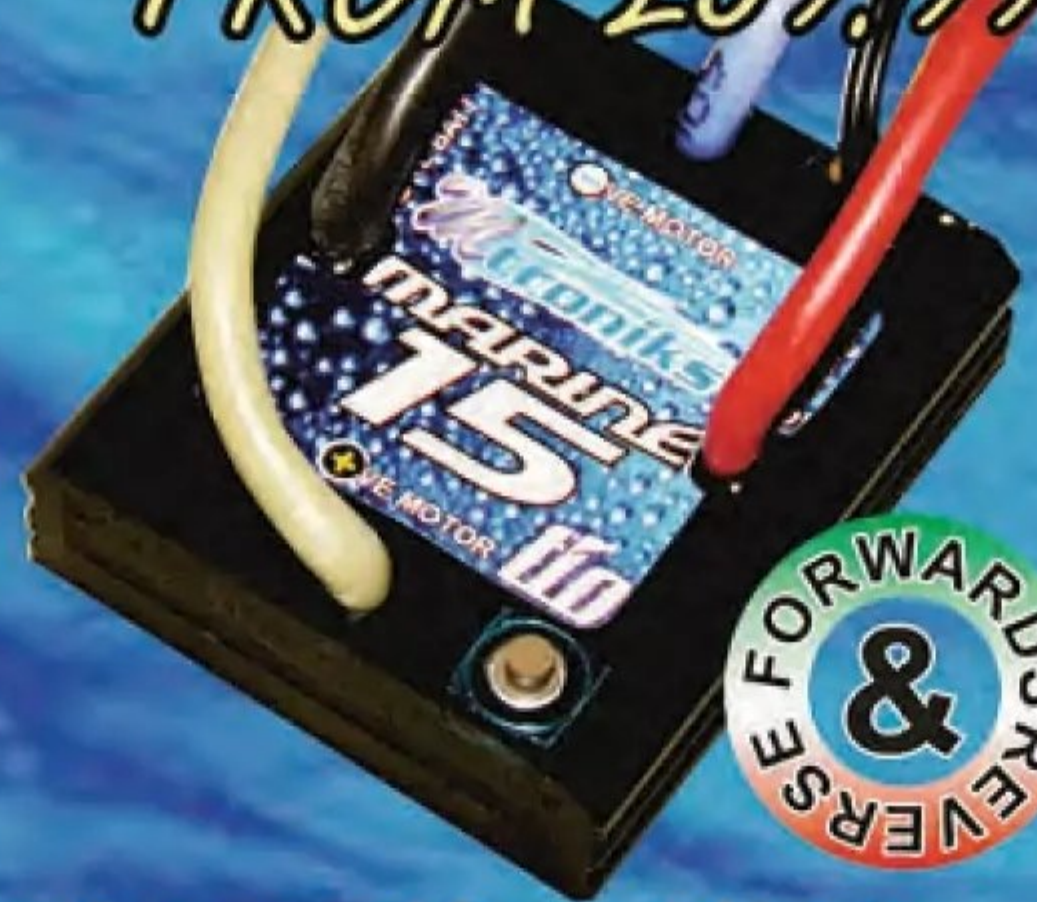


Ultra fine control for model boats running up to 12V.
Available in different power ratings to suit all sizes of motors.
100% waterproof for trouble free modelling!
See website or contact your local dealer for more information.



15A Marine
Brushed speed controller
Available in 15A, 30A or 50A

FROM £39.99



Ultra fine control for model boats running up to 12V, including Lipo cells!
Available in different power ratings to suit all sizes of motors.
100% waterproof for trouble free modelling!
See website or contact your local dealer for more information.



microVIPER
Brushed speed controller

£33.99



Ultra fine control for small model boats running up to 12V with a 10A motor limit.
100% waterproof for trouble free modelling!
See website or contact your local dealer for more information.



Marine motors
Brushed motors for model RC boats

M400



£7.99

M500



£9.99

M600



£19.99

DIGISOUND
Realistic engine sound system



£69.99

Waterproof, 12V, amplified sound module for model boats that require realistic sound with engine start/stop, horn and changing running sound. Speaker included!
See website for available sounds.

24 Month Warranty on all Mtroniks electronic products



Mtroniks marine products are available from all good model shops, we are always available for advice direct

High quality speed controls designed and manufactured since 1987 in the UK

Mtroniks
electronics innovation

41A Ilkley Road, Otley, LS21 3LP, UK
Tel: +44(0)1943 461482 Fax: +44(0)1943 468335

www.mtroniks.net
enquiries@mtroniks.net

28

24

500

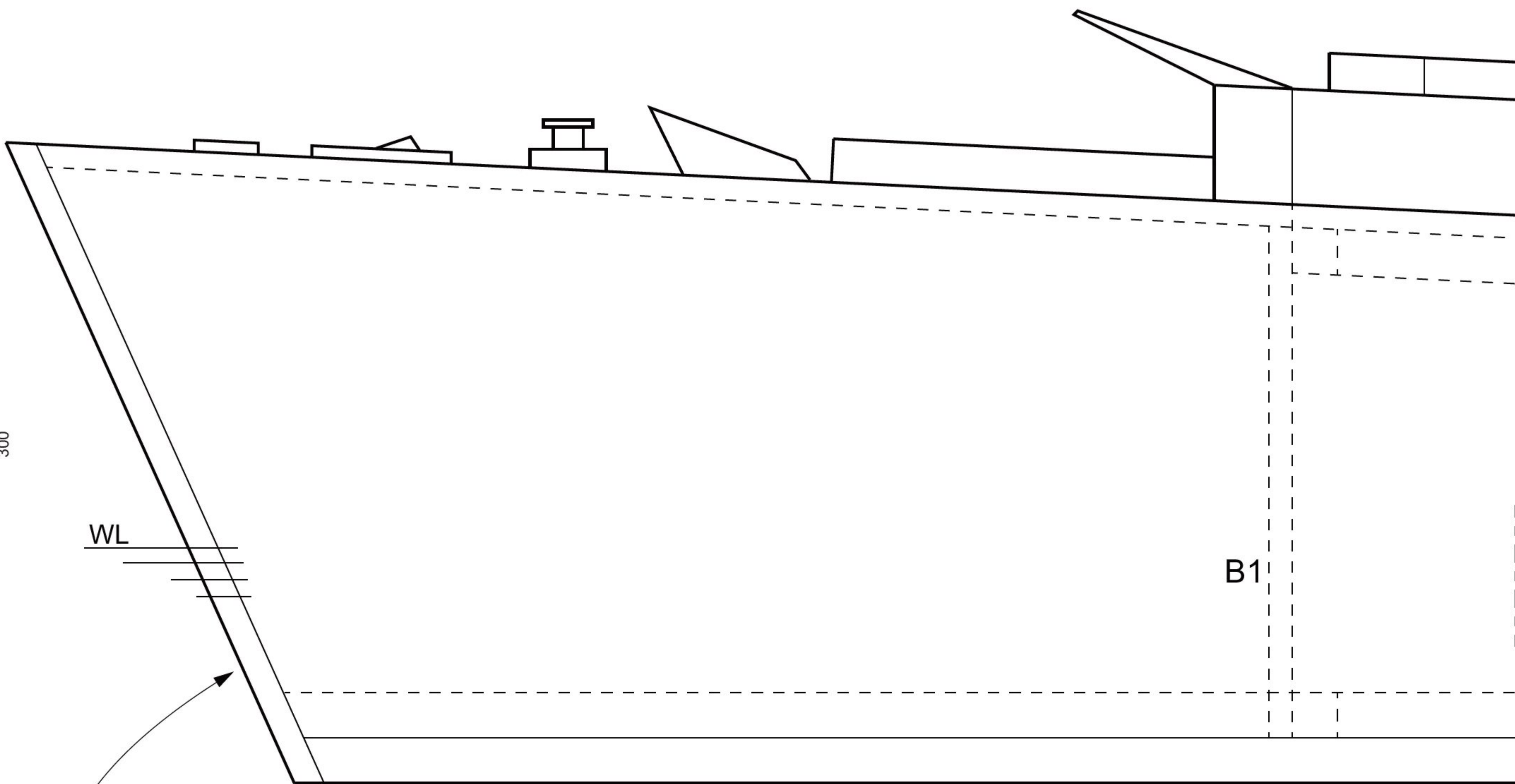
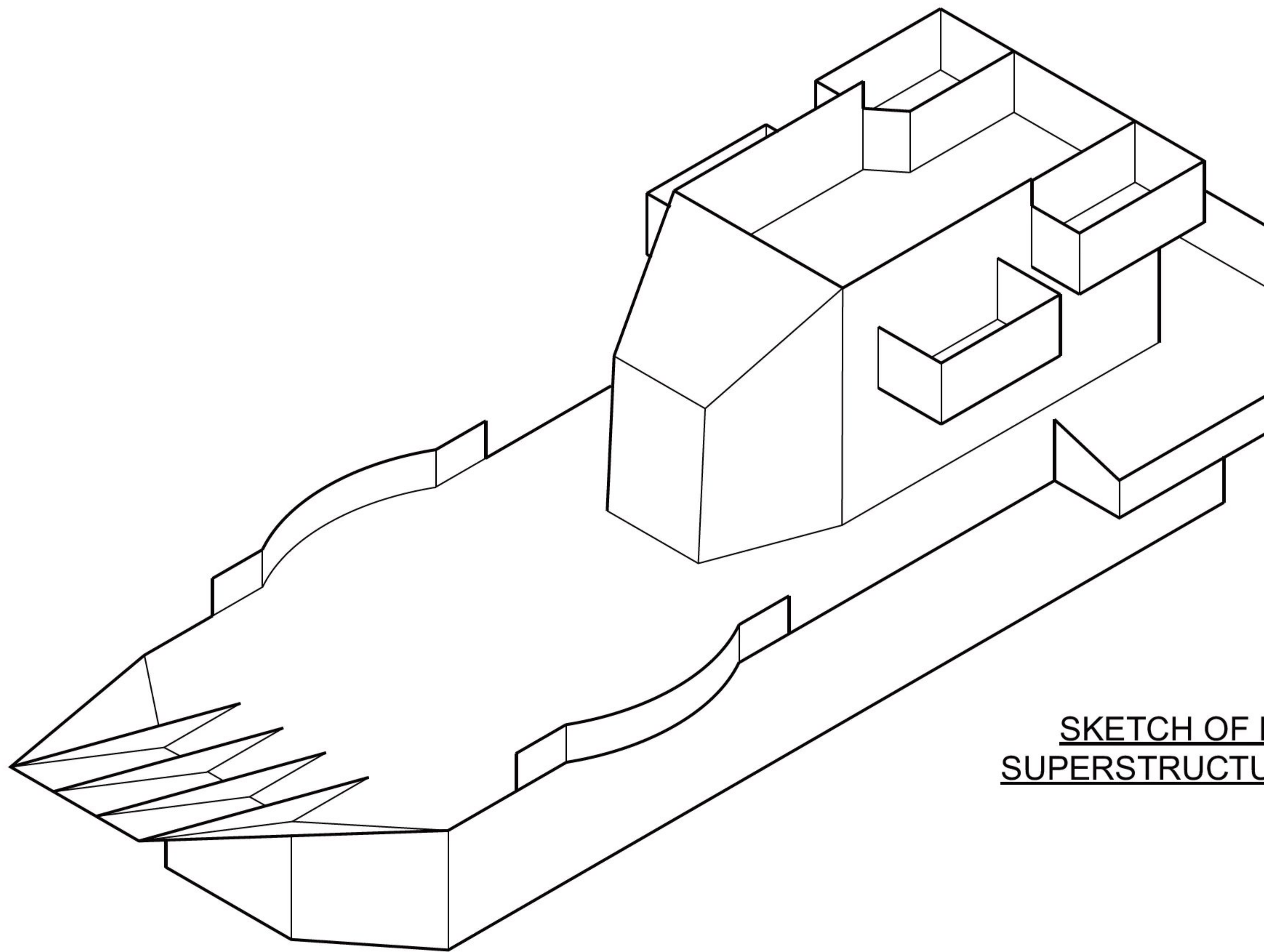
400

300

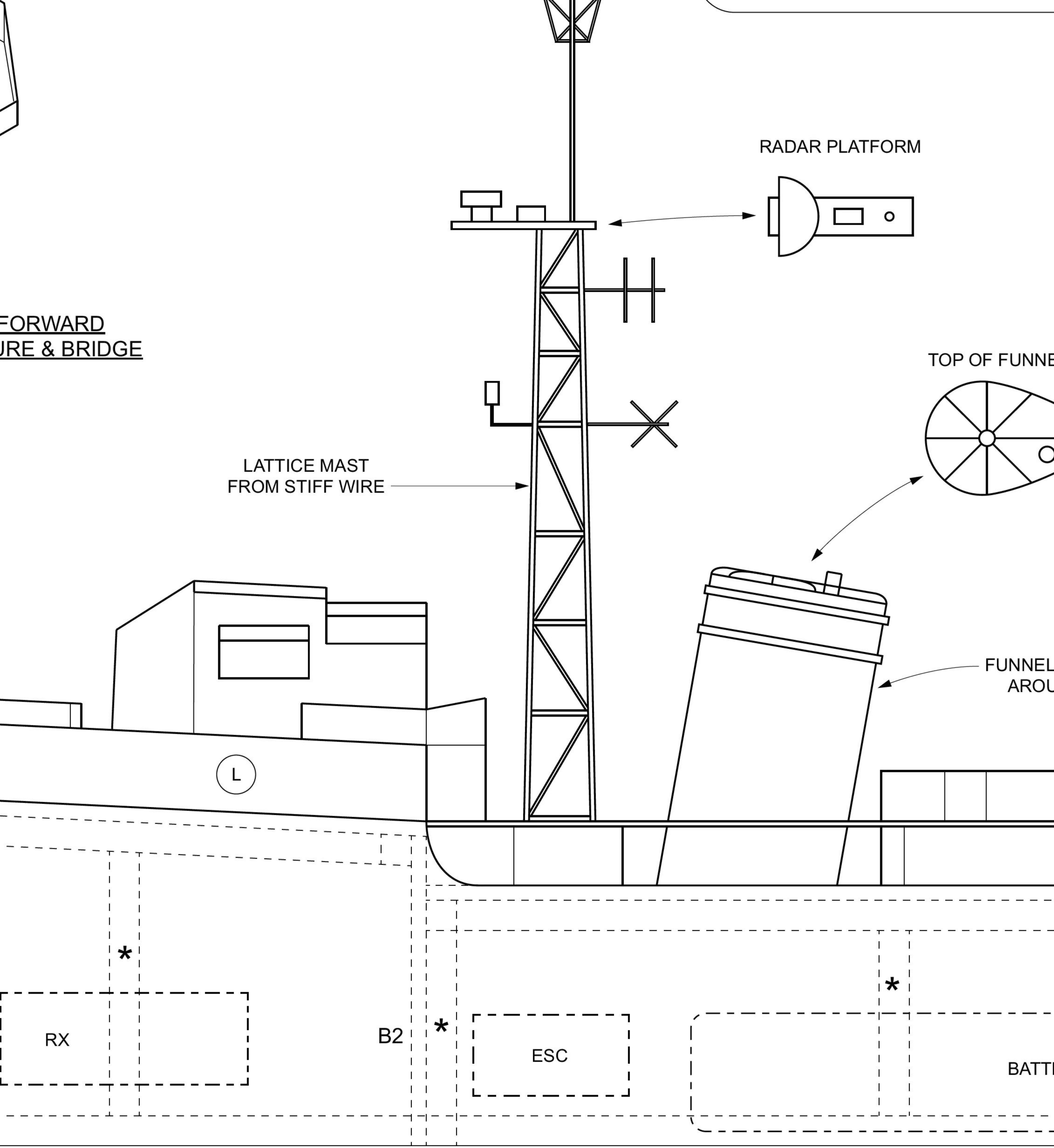
WL

B1

SKETCH OF
SUPERSTRUCTURE



A 'STAND OFF SCALE' MODEL OF THE ROYAL NAVY EMERGENCY OF DESTROYER IN SCALE 1/144

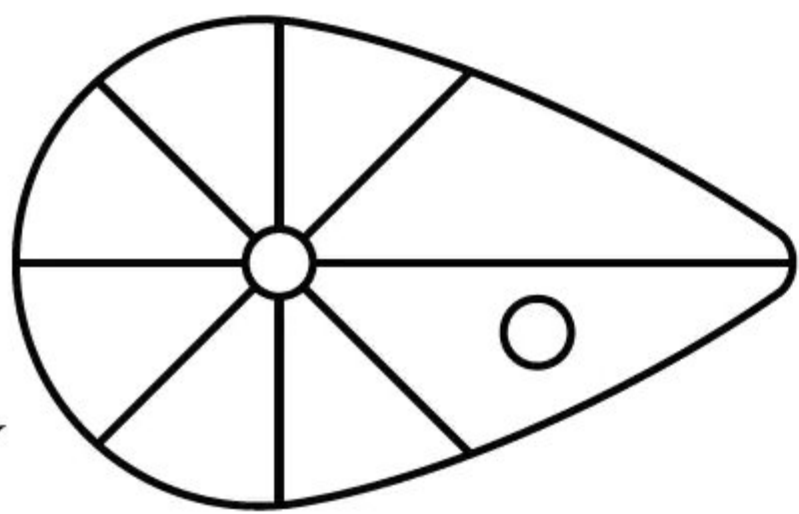


D OFF SCALE' MODEL BASED ON
YAL NAVY EMERGENCY CLASSES
OF DESTROYER IN WWII
SCALE 1/144

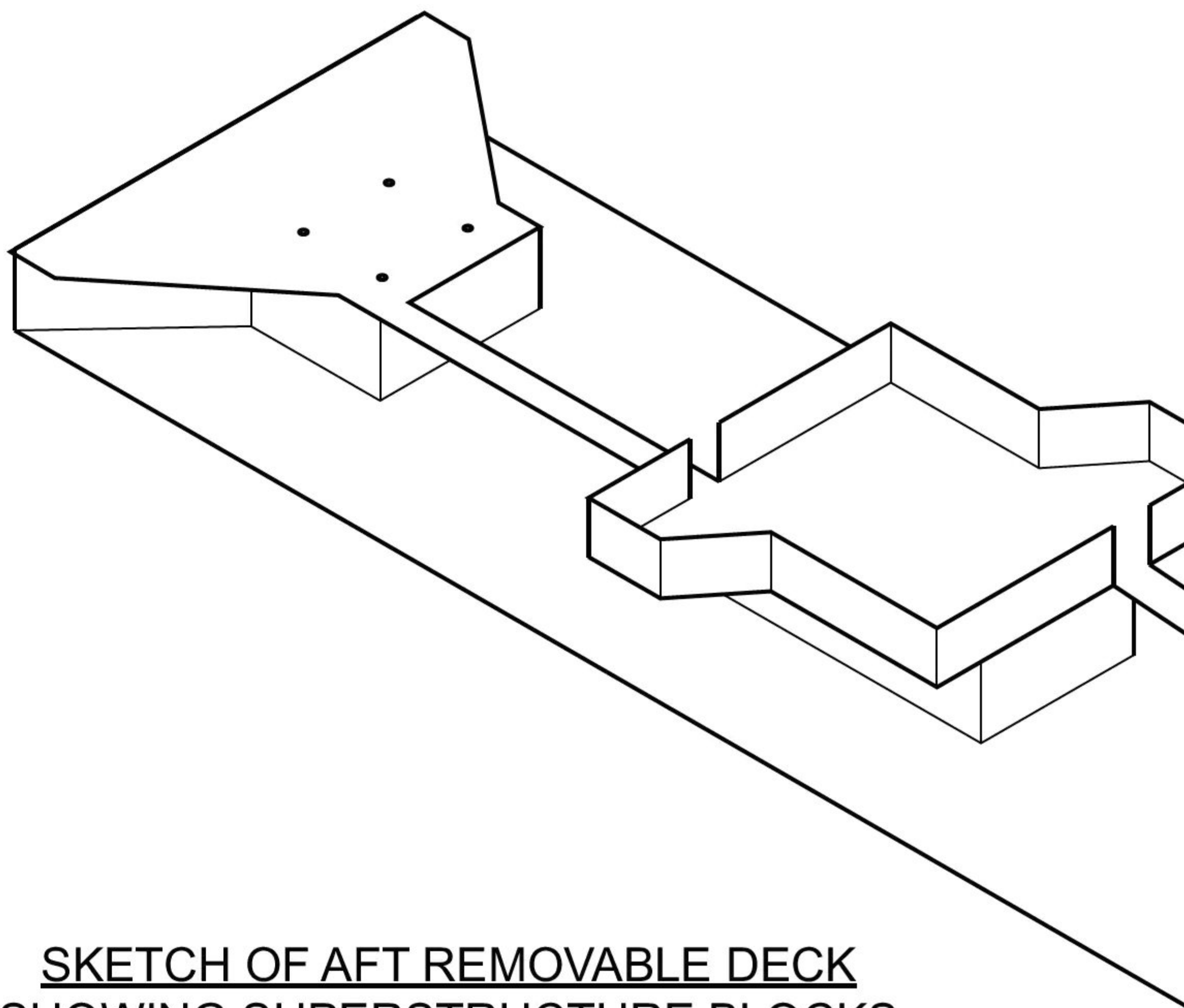
PLATFORM



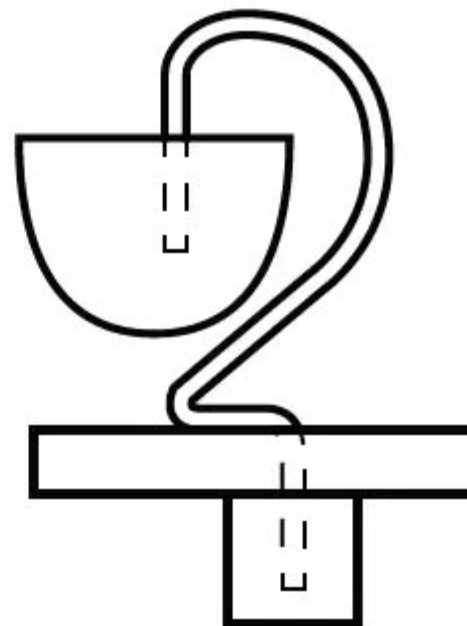
TOP OF FUNNEL



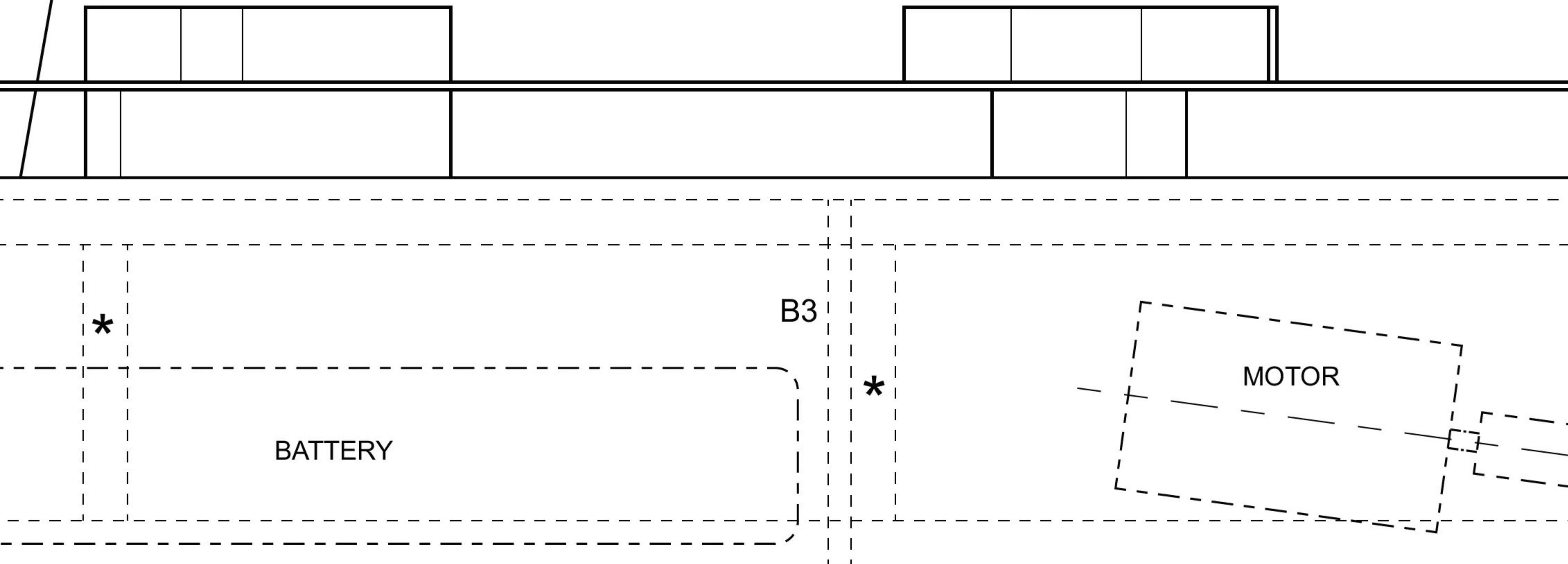
FUNNEL FROM CARD WRAPPED
AROUND BALSA FORMERS



SKETCH OF AFT REMOVABLE DECK
SHOWING SUPERSTRUCTURE BLOCKS



BOATS SUSPENDED
ON WIRE DAVITS

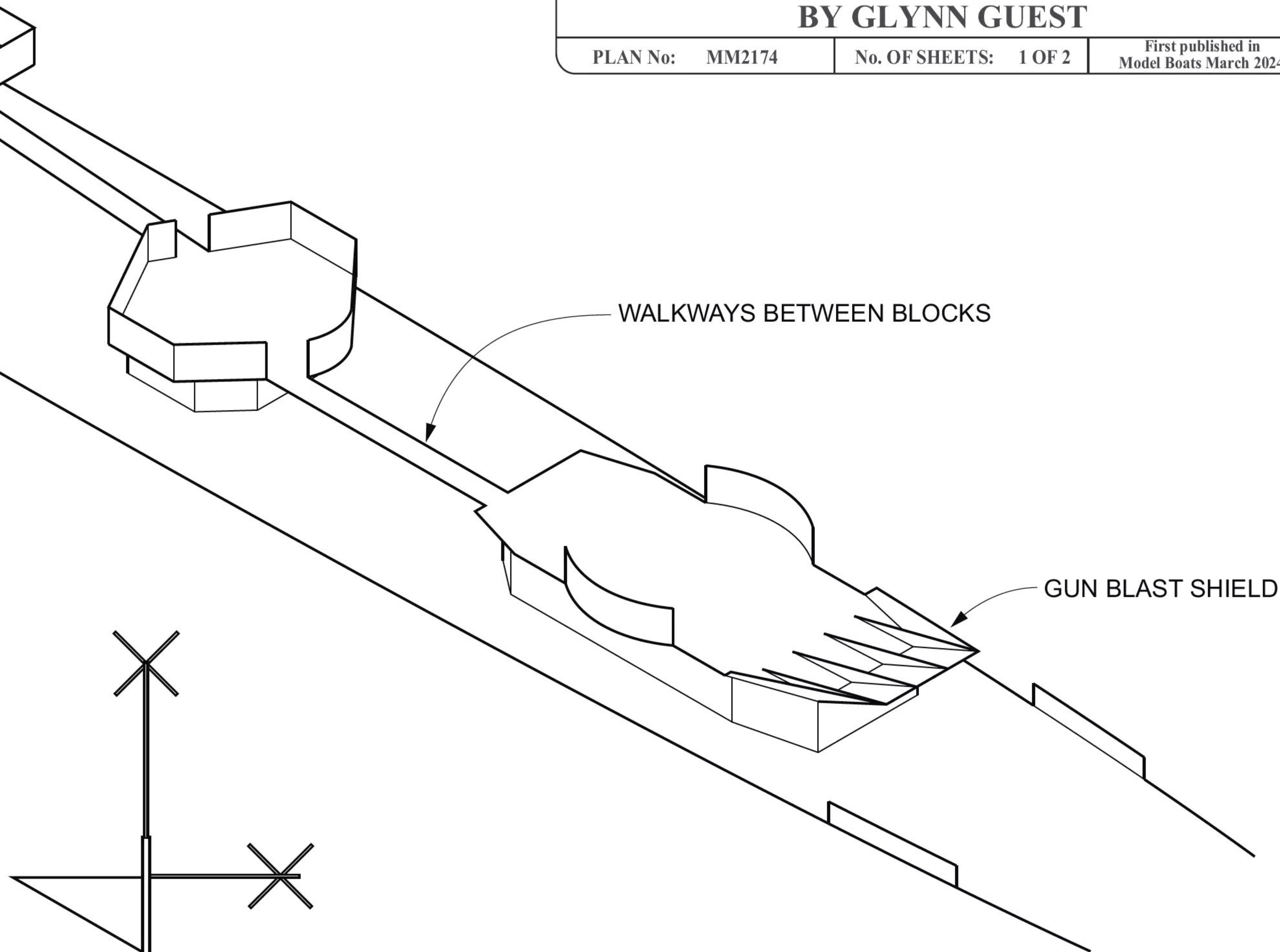


Model Boats

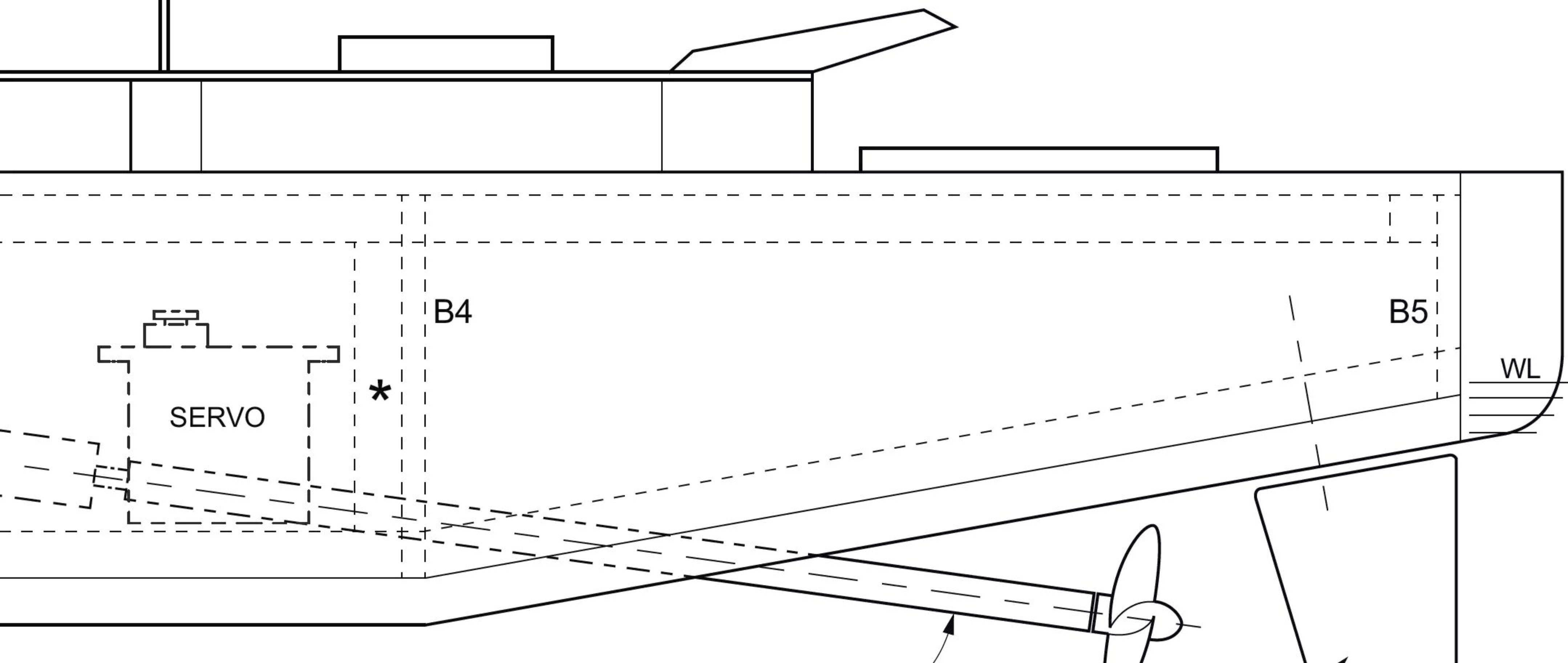
HMS WAKEFUL

BY GLYNN GUEST

PLAN No: MM2174	No. OF SHEETS: 1 OF 2	First published in Model Boats March 2024
-----------------	-----------------------	--



*REINFORCING STRIPS GLUED TO HULL SIDES
BETWEEN HULL BOTTOM & EDGING STRIPS



WL

B1

HARDWOOD BOW REINFORCEMENT

FIXED DECK BETWEEN BOW & B1

200

G

4.7" GUNS

4 REQ'D AT POSITIONS (G)

100

BRIDGE

D

G

DIRECTOR
AT POSITION (D)

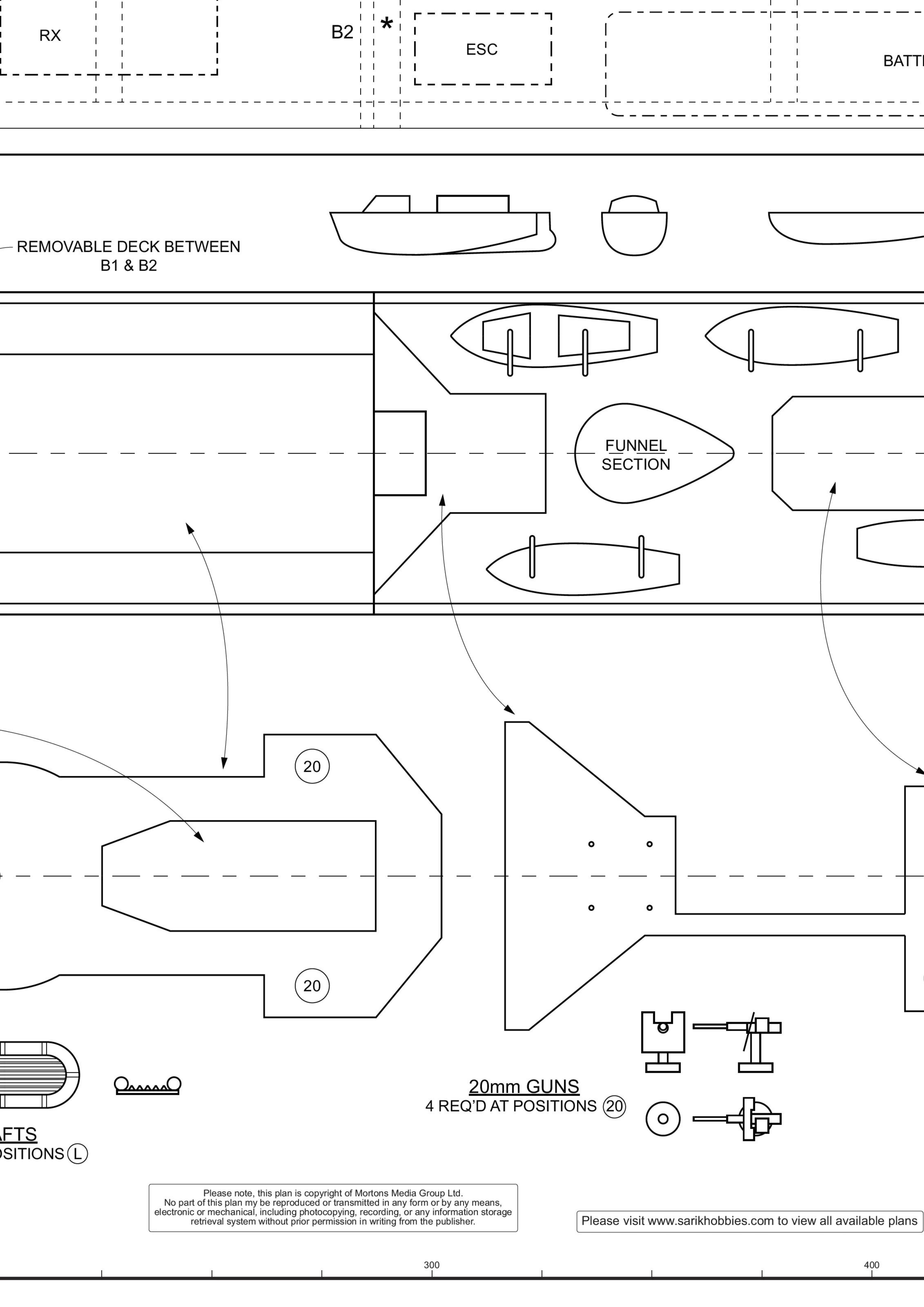
LIFERA

4 REQ'D AT PO

SCALE
MM

100

200



RX

B2

*

ESC

BATT

REMOVABLE DECK BETWEEN
B1 & B2

FUNNEL
SECTION

20

20

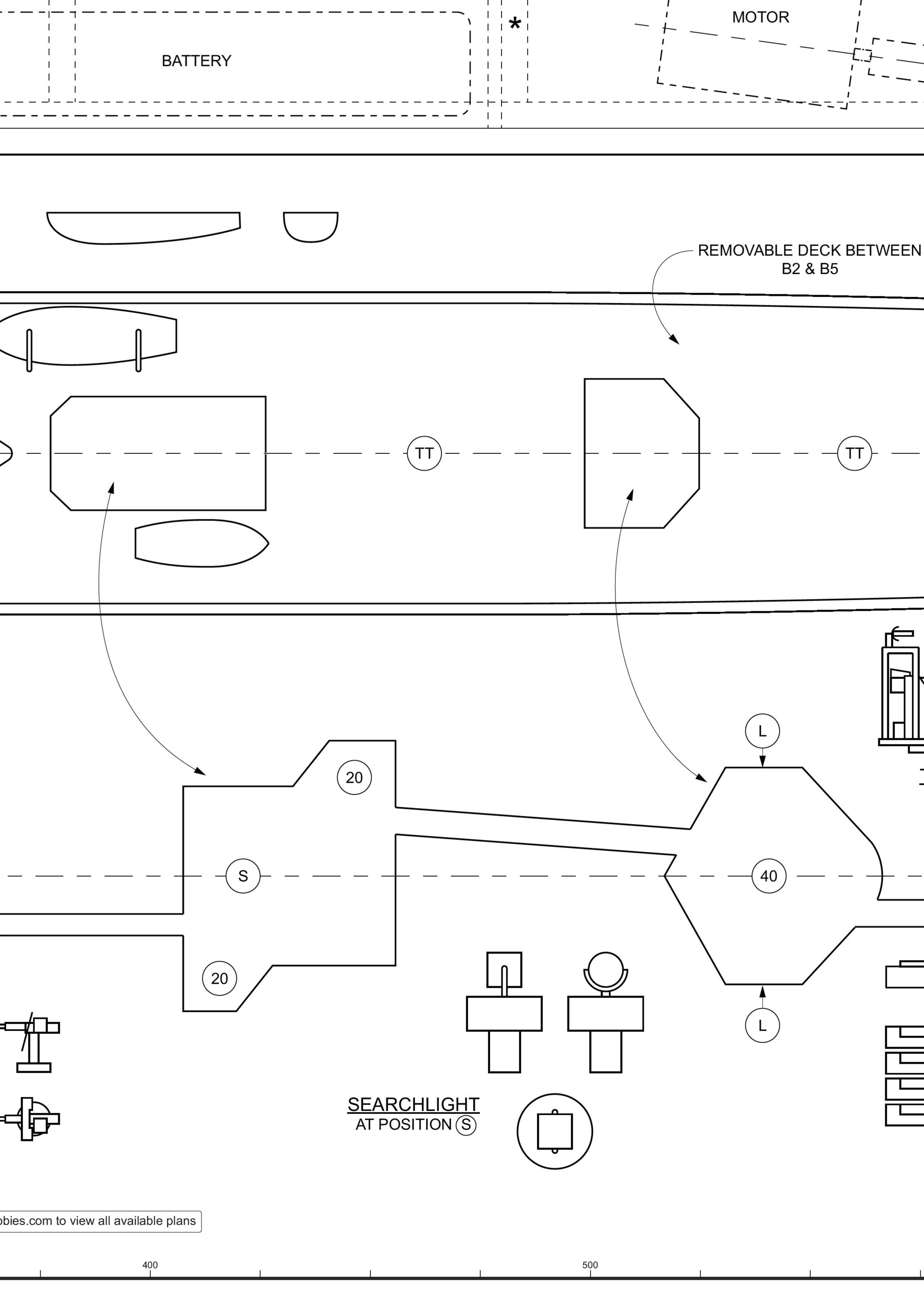
20mm GUNS

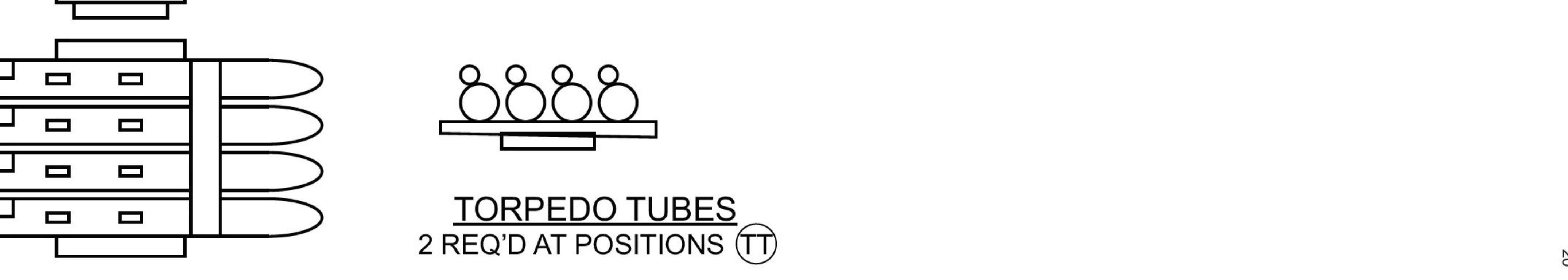
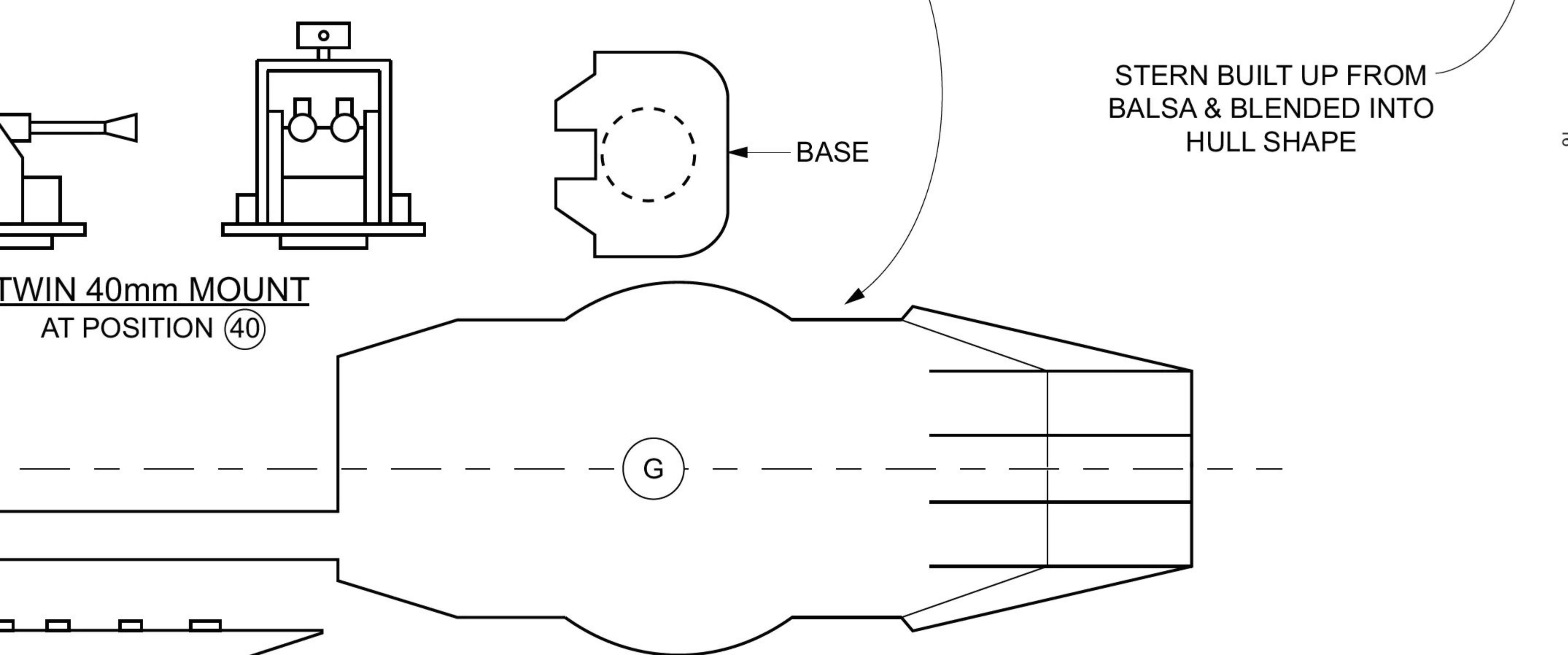
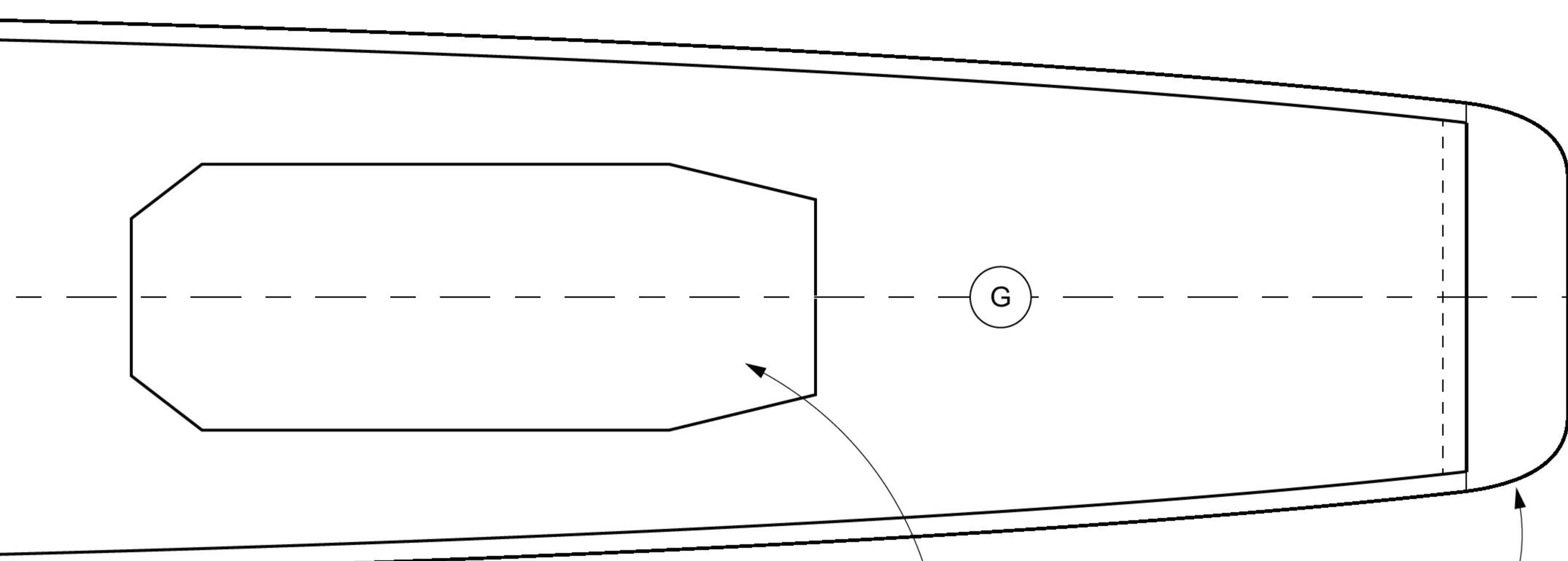
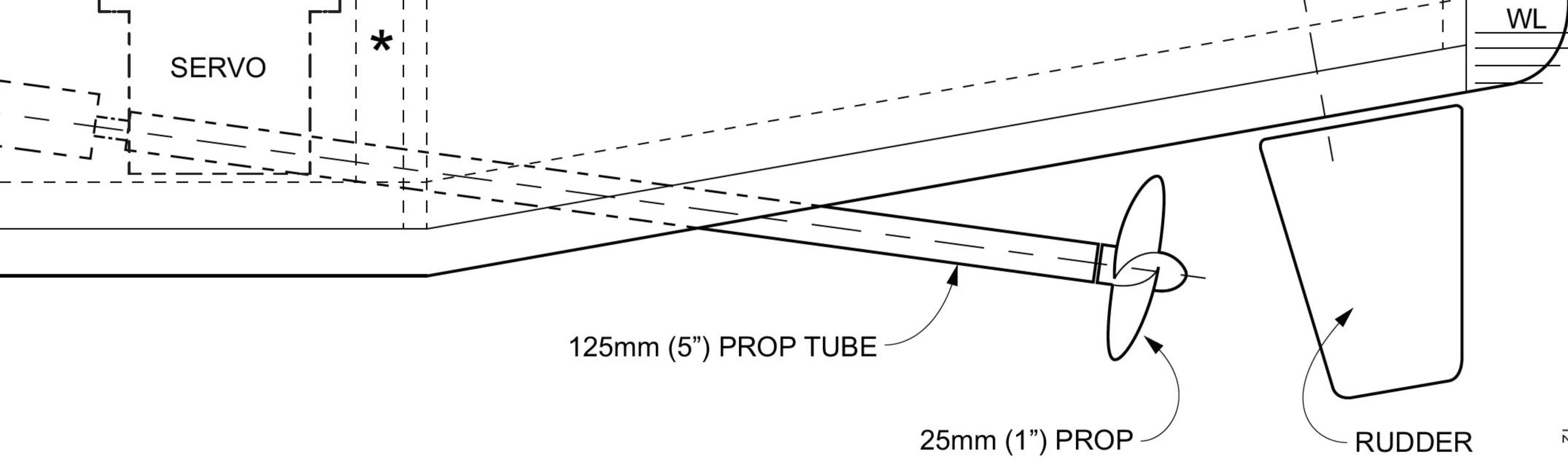
4 REQ'D AT POSITIONS (20)

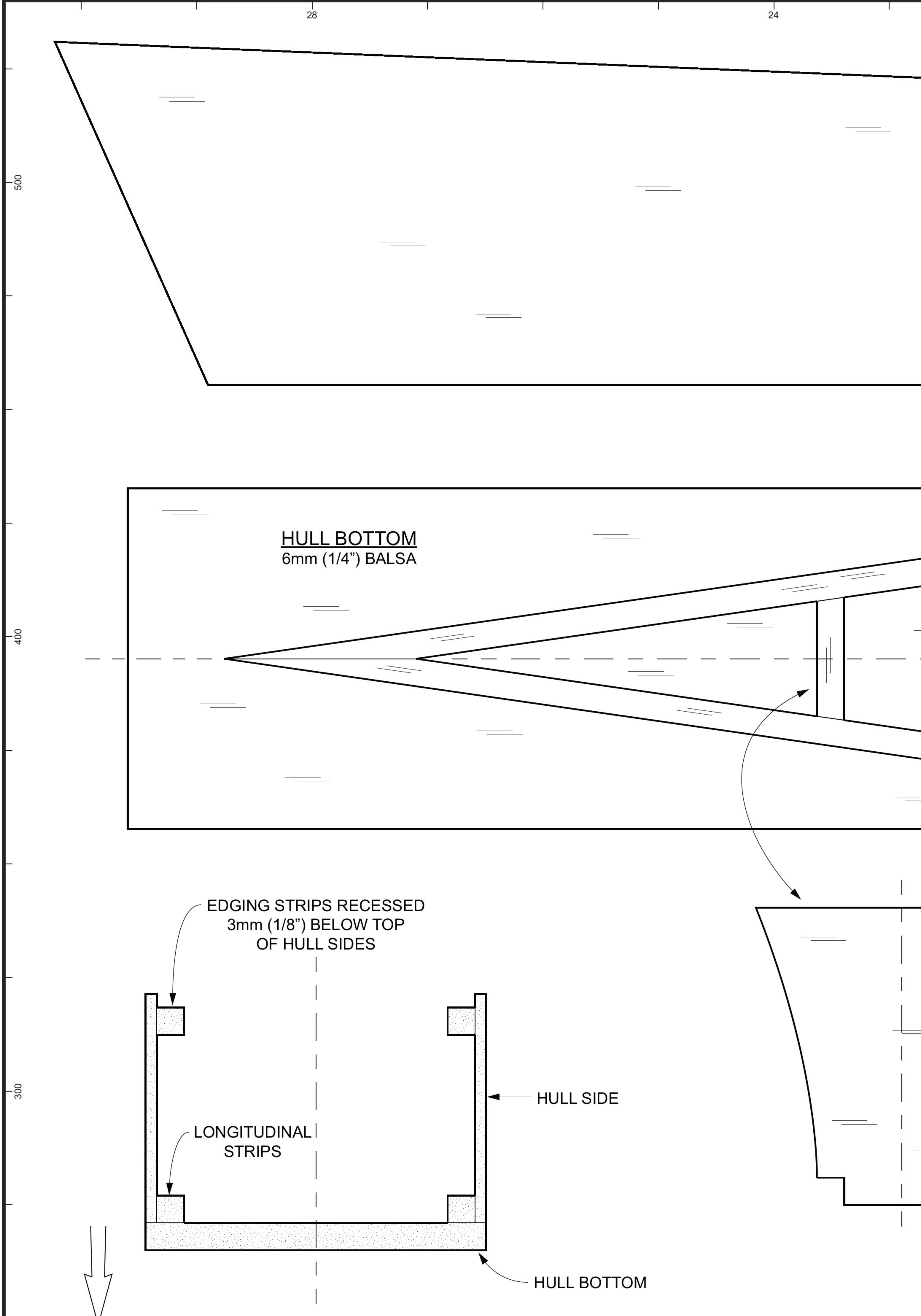
PORTS
POSITIONS (L)

Please note, this plan is copyright of Mortons Media Group Ltd.
No part of this plan may be reproduced or transmitted in any form or by any means,
electronic or mechanical, including photocopying, recording, or any information storage
retrieval system without prior permission in writing from the publisher.

Please visit www.sarikhobbies.com to view all available plans

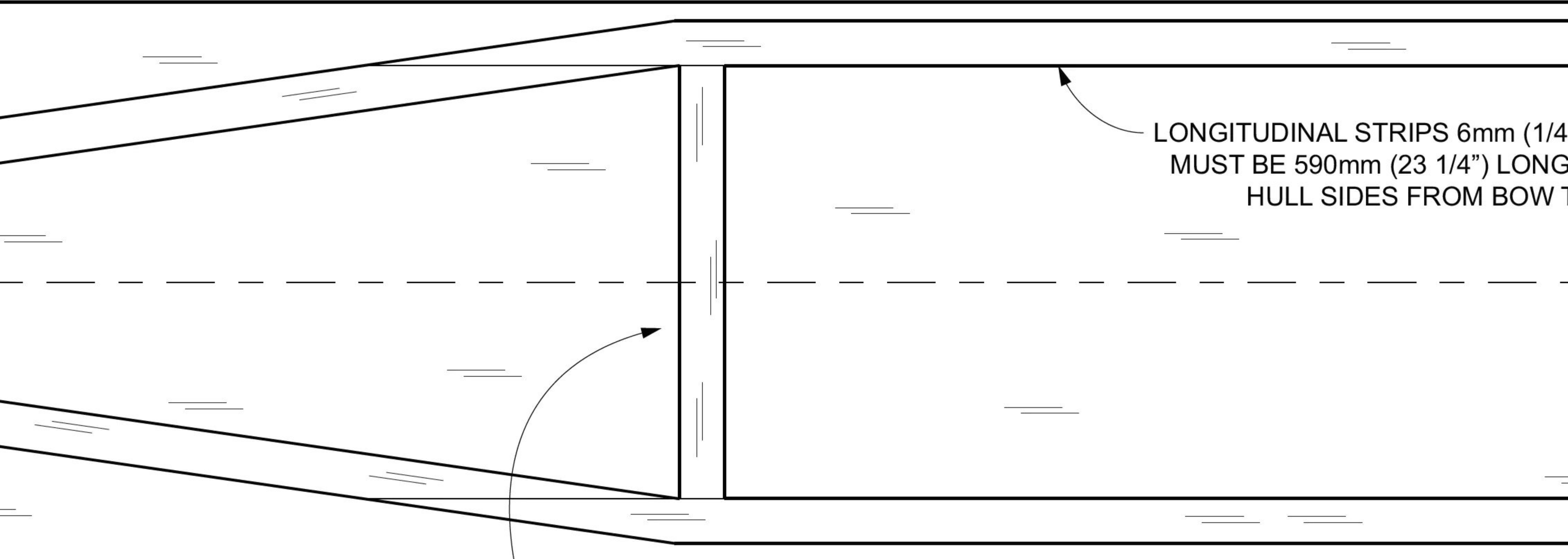








HULL SIDES
2.5mm (3/32") Balsa
2 REQ'D

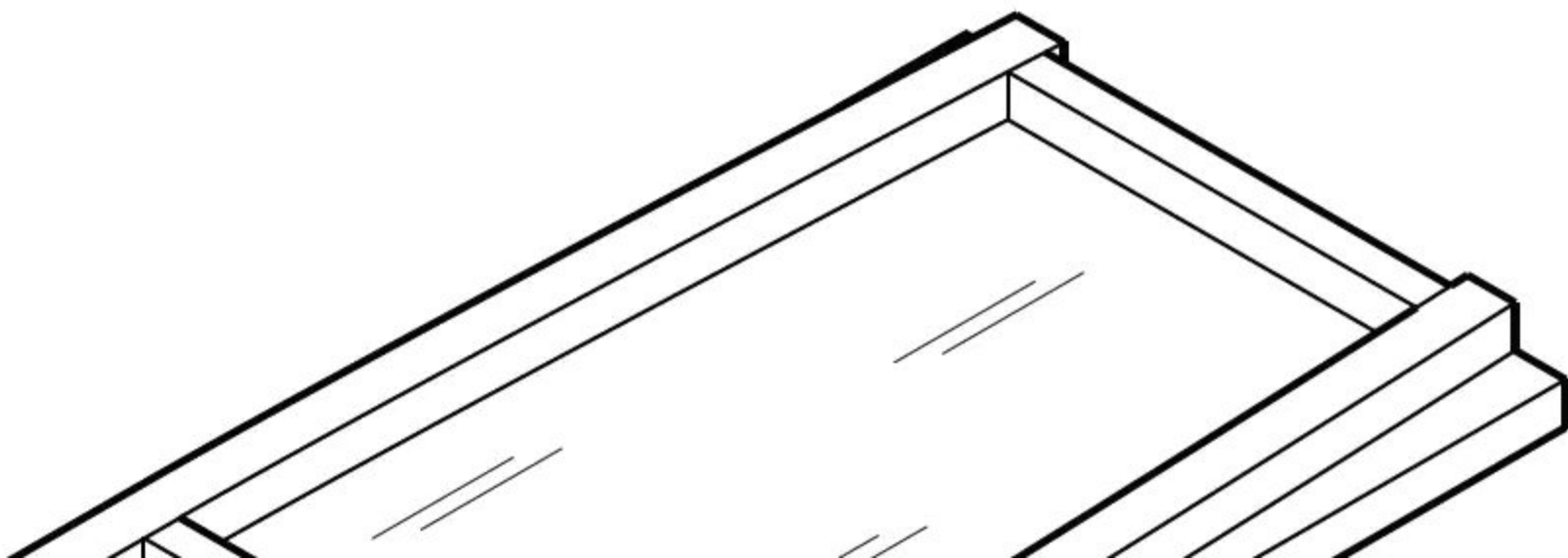
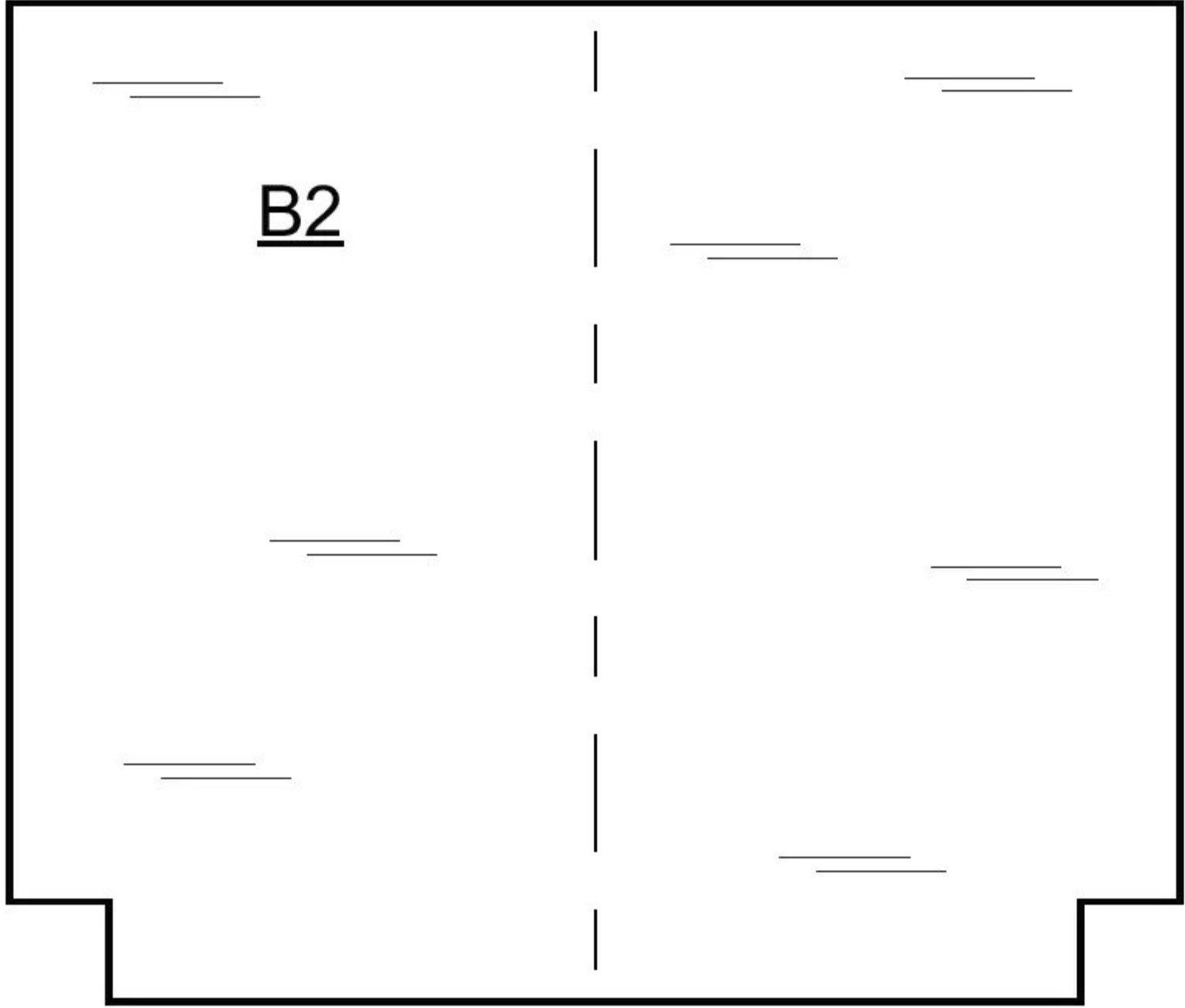
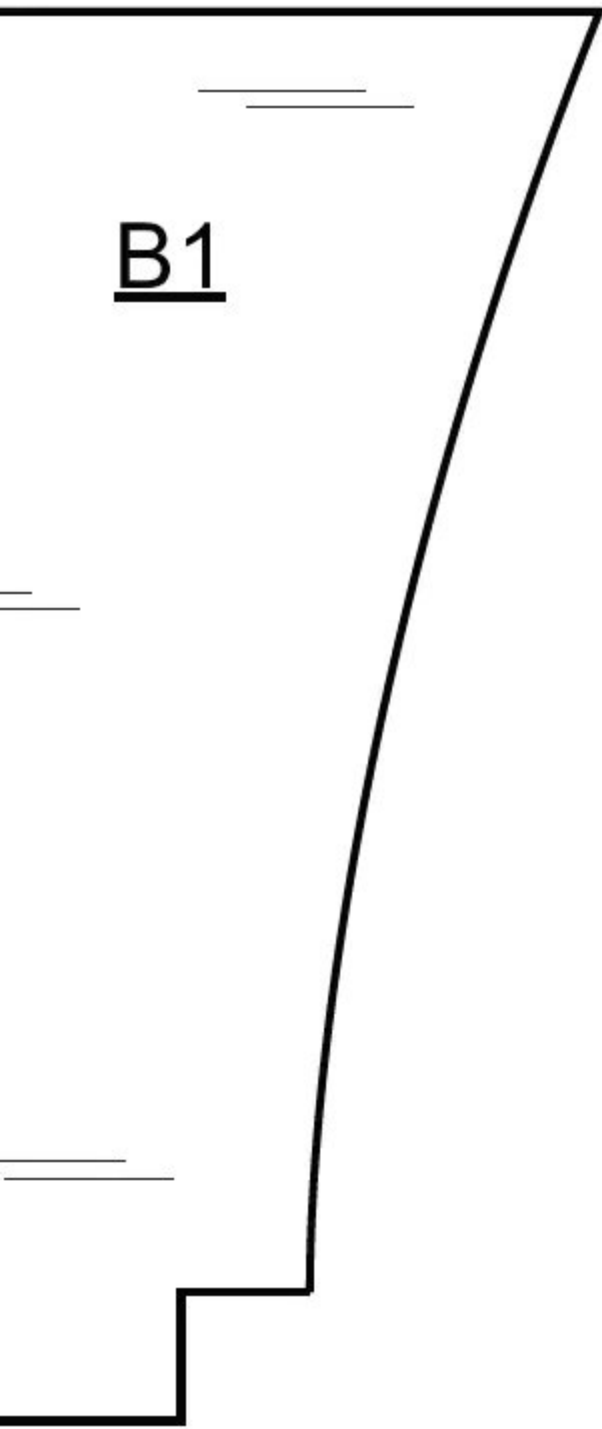


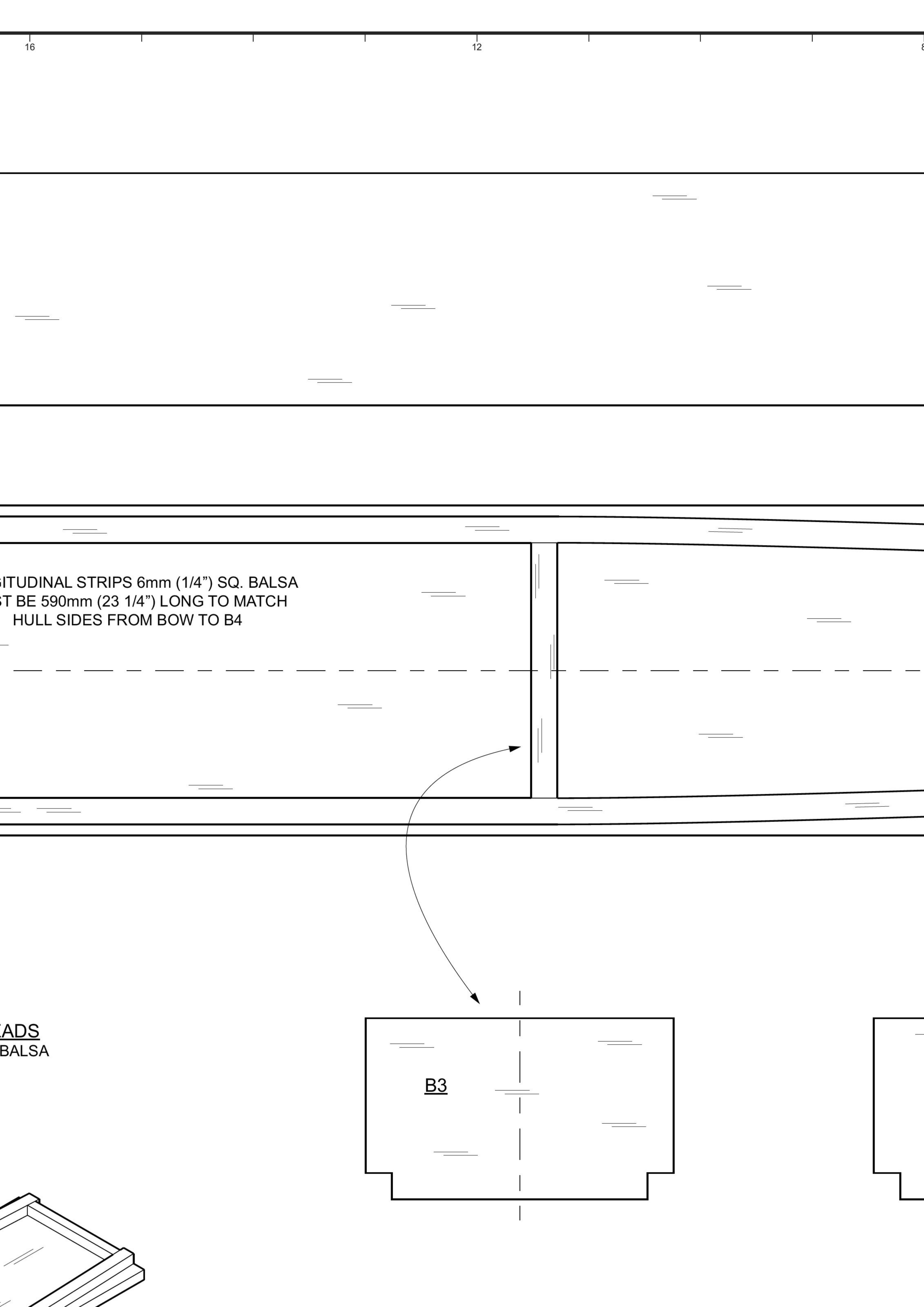
LONGITUDINAL STRIPS 6mm (1/4")
MUST BE 590mm (23 1/4") LONG
HULL SIDES FROM BOW TO

B1

B2

BULKHEADS
3mm (1/8") Balsa

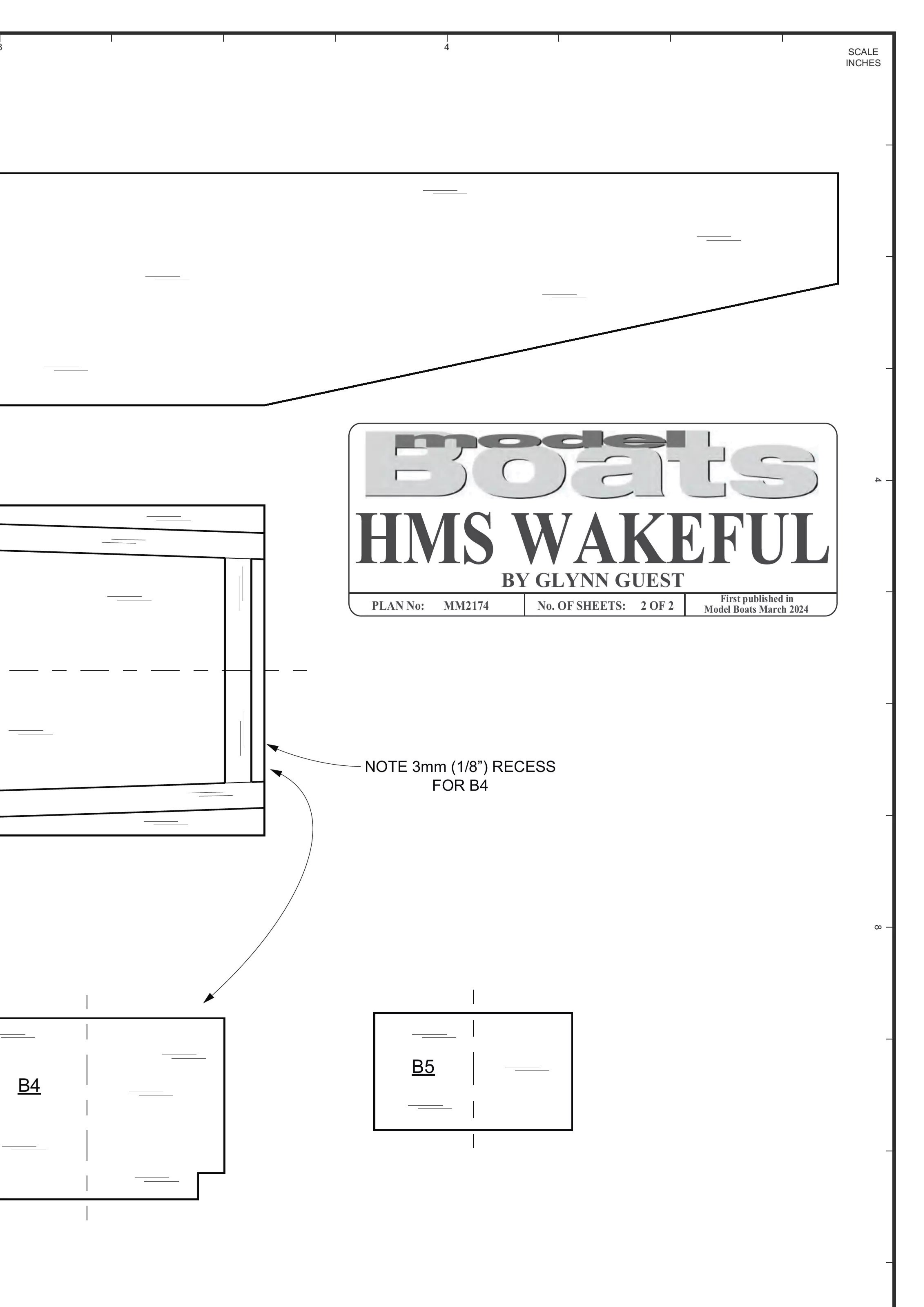




LONGITUDINAL STRIPS 6mm (1/4") SQ. BALSA
MUST BE 590mm (23 1/4") LONG TO MATCH
HULL SIDES FROM BOW TO B4

HEADS
BALSA

B3



SCALE
INCHES

model
Boats

HMS WAKEFUL

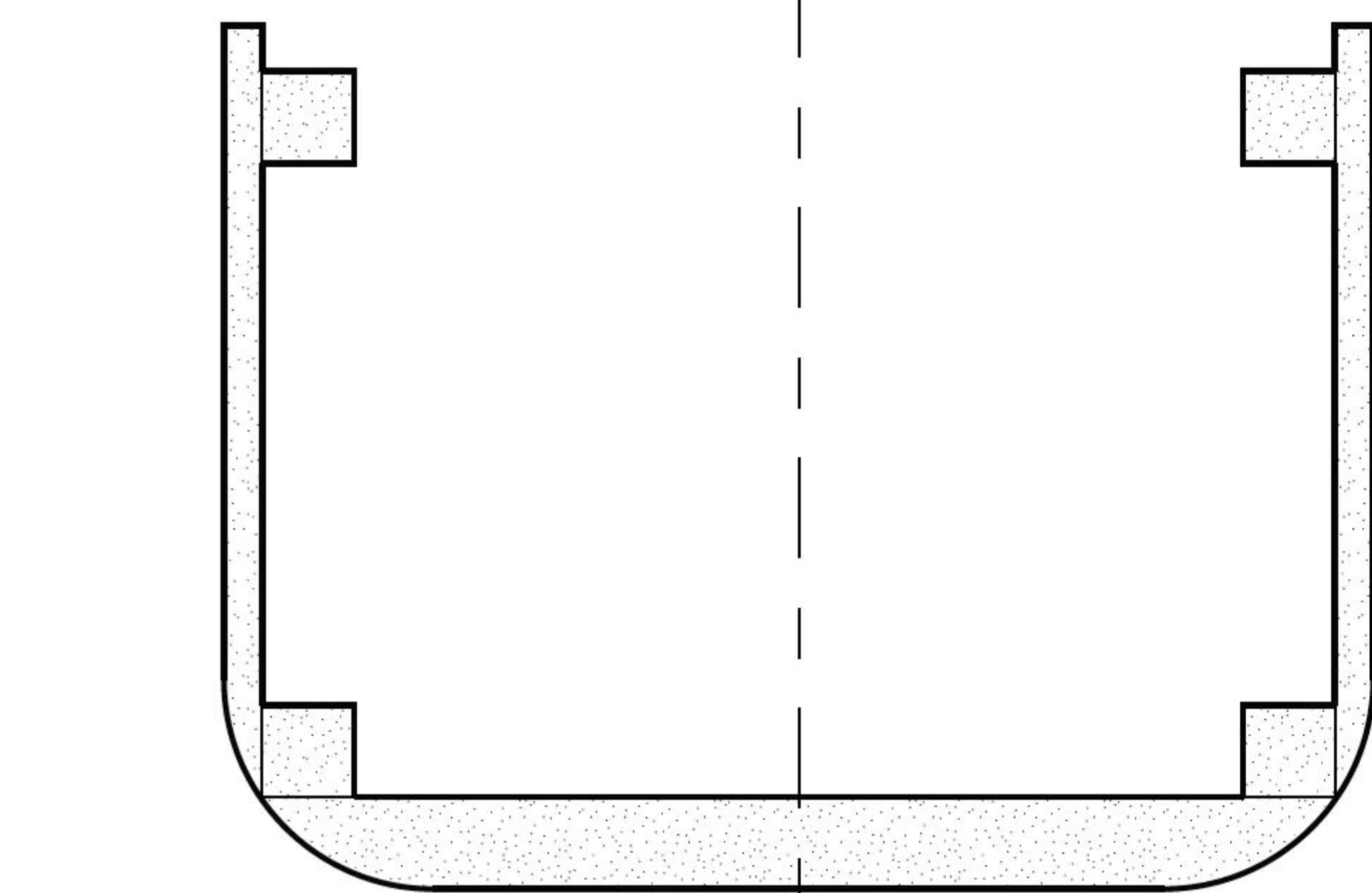
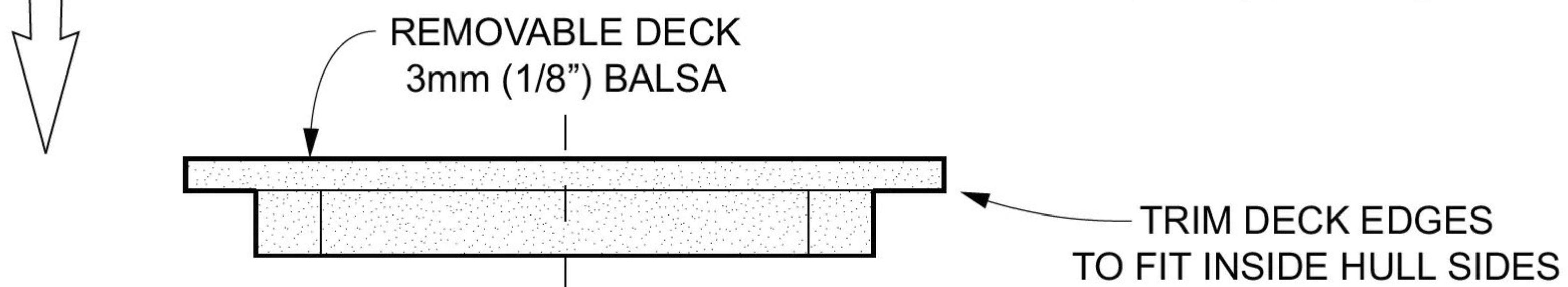
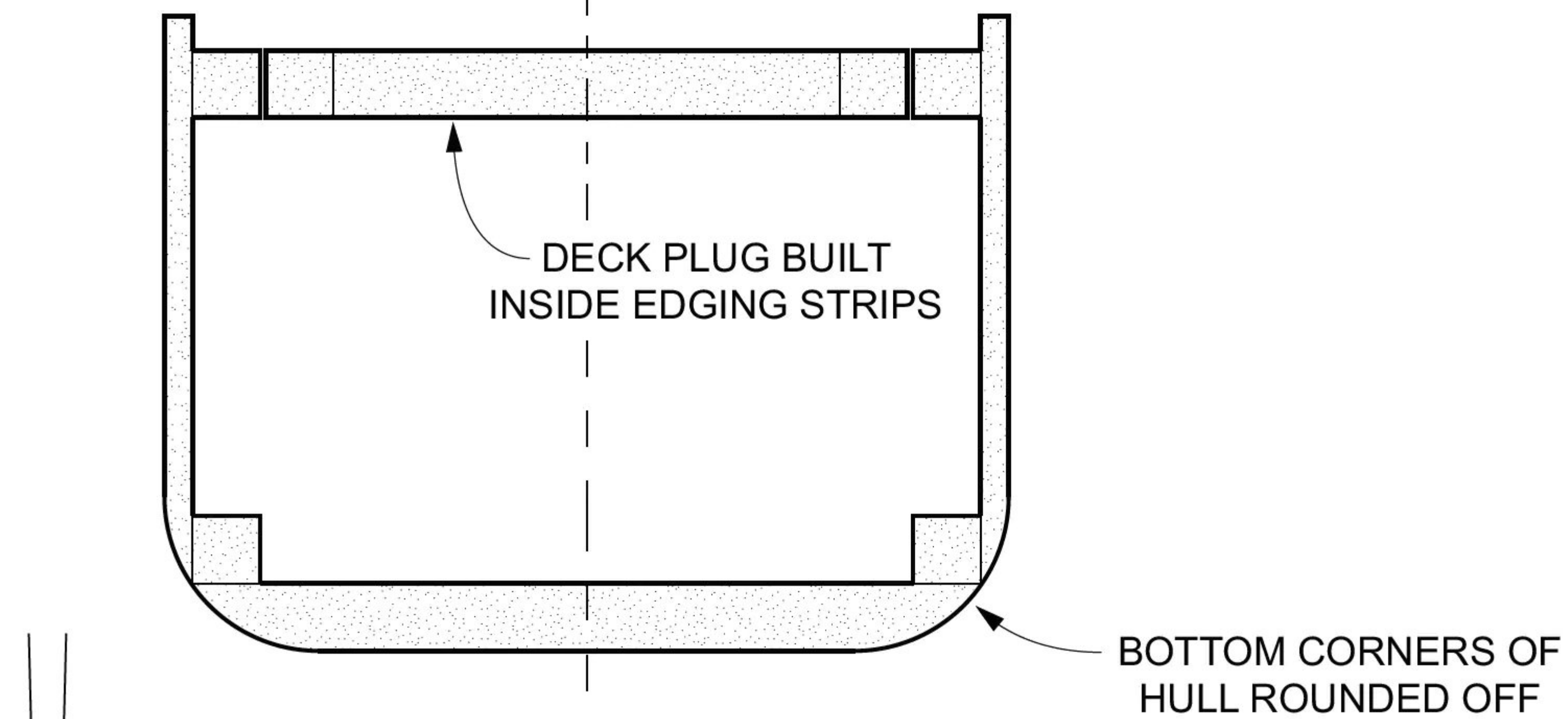
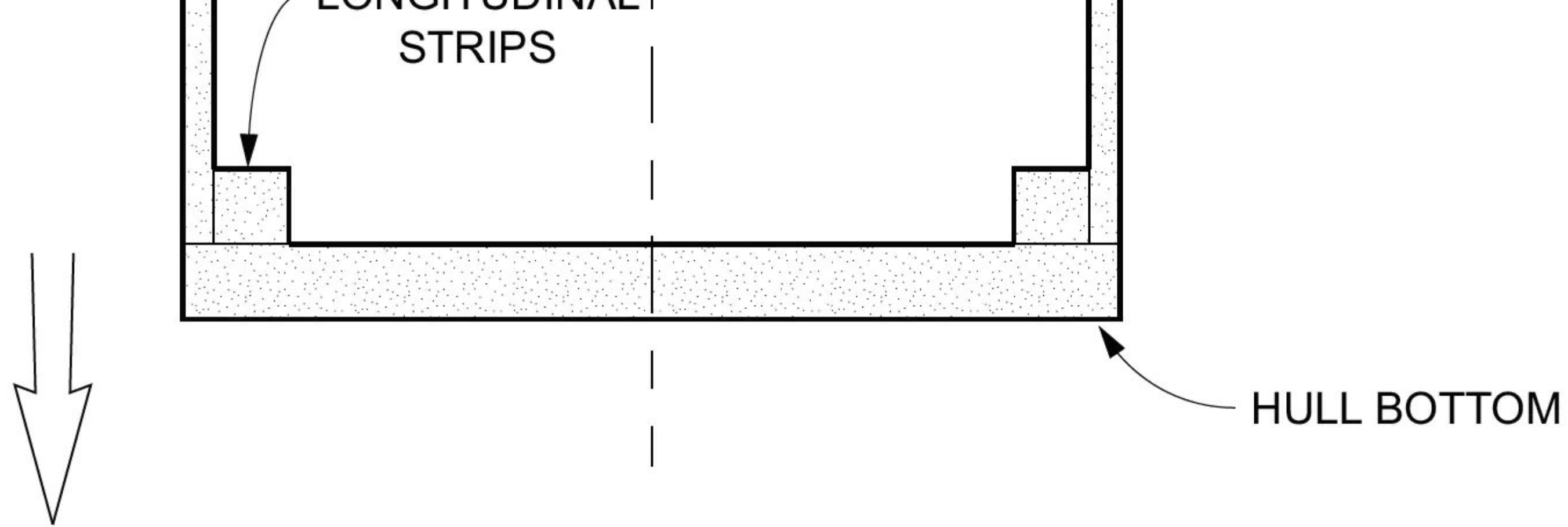
BY GLYNN GUEST

PLAN No: MM2174	No. OF SHEETS: 2 OF 2	First published in Model Boats March 2024
-----------------	-----------------------	--

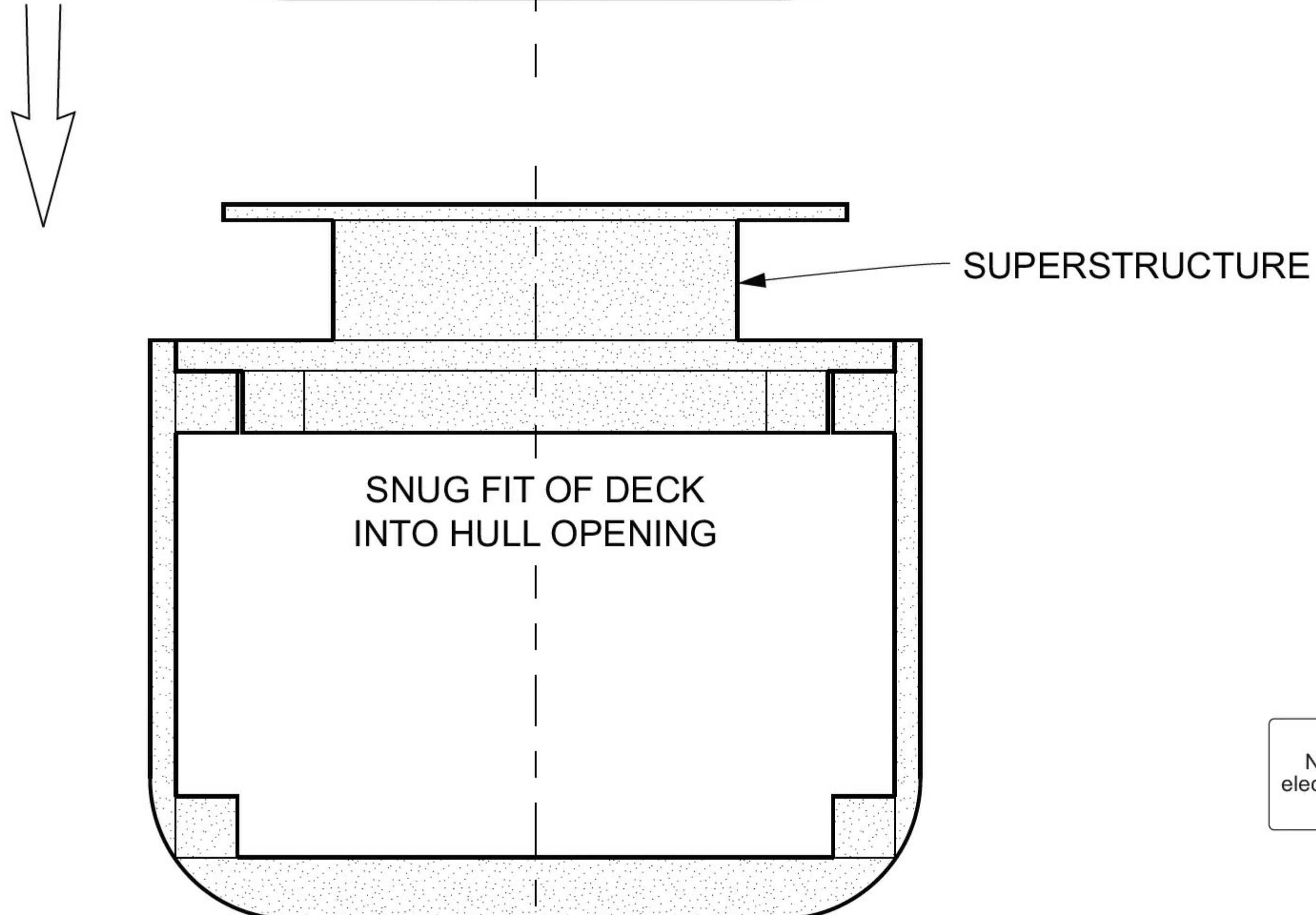
NOTE 3mm (1/8") RECESS
FOR B4

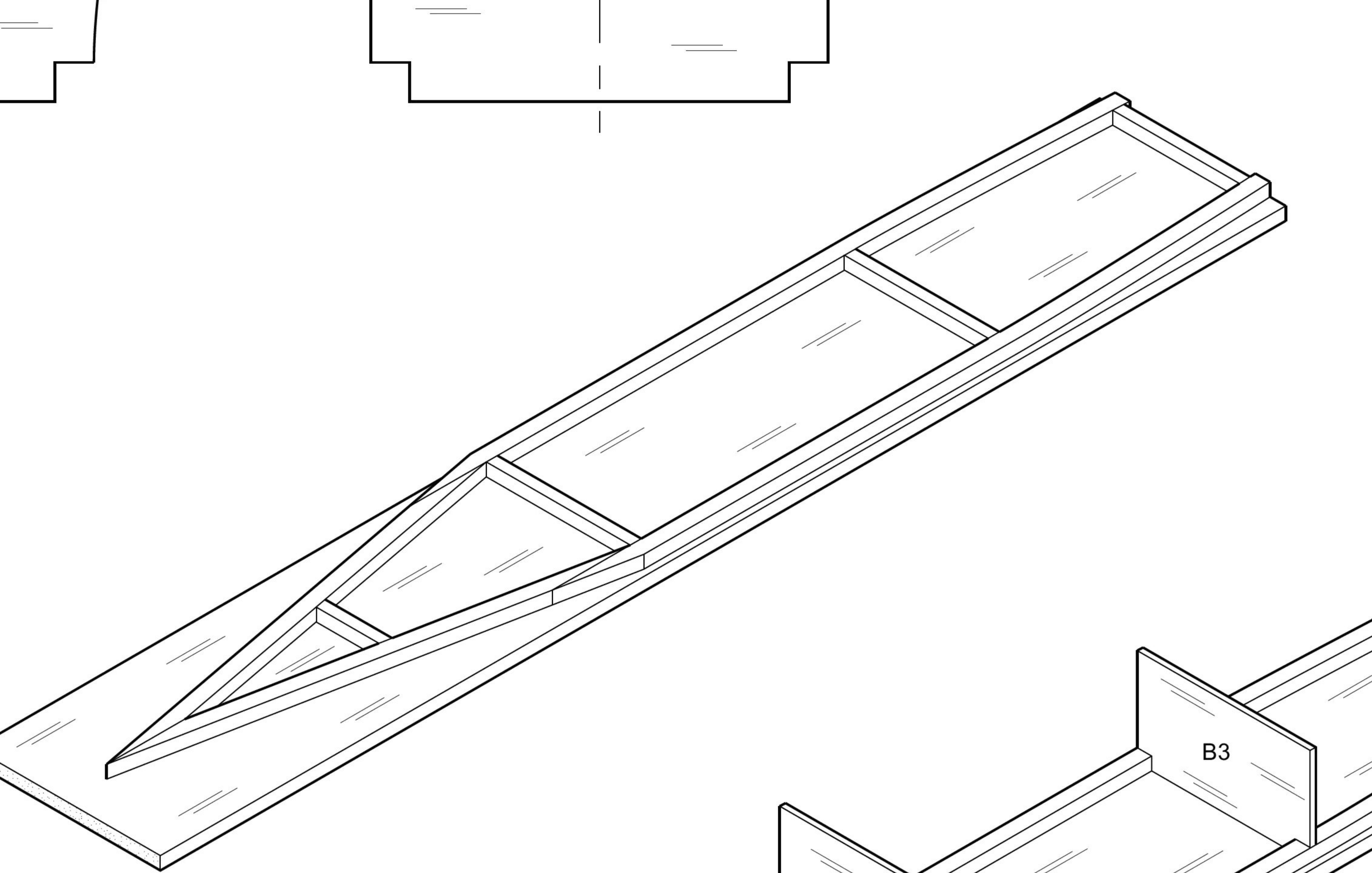
B4

B5

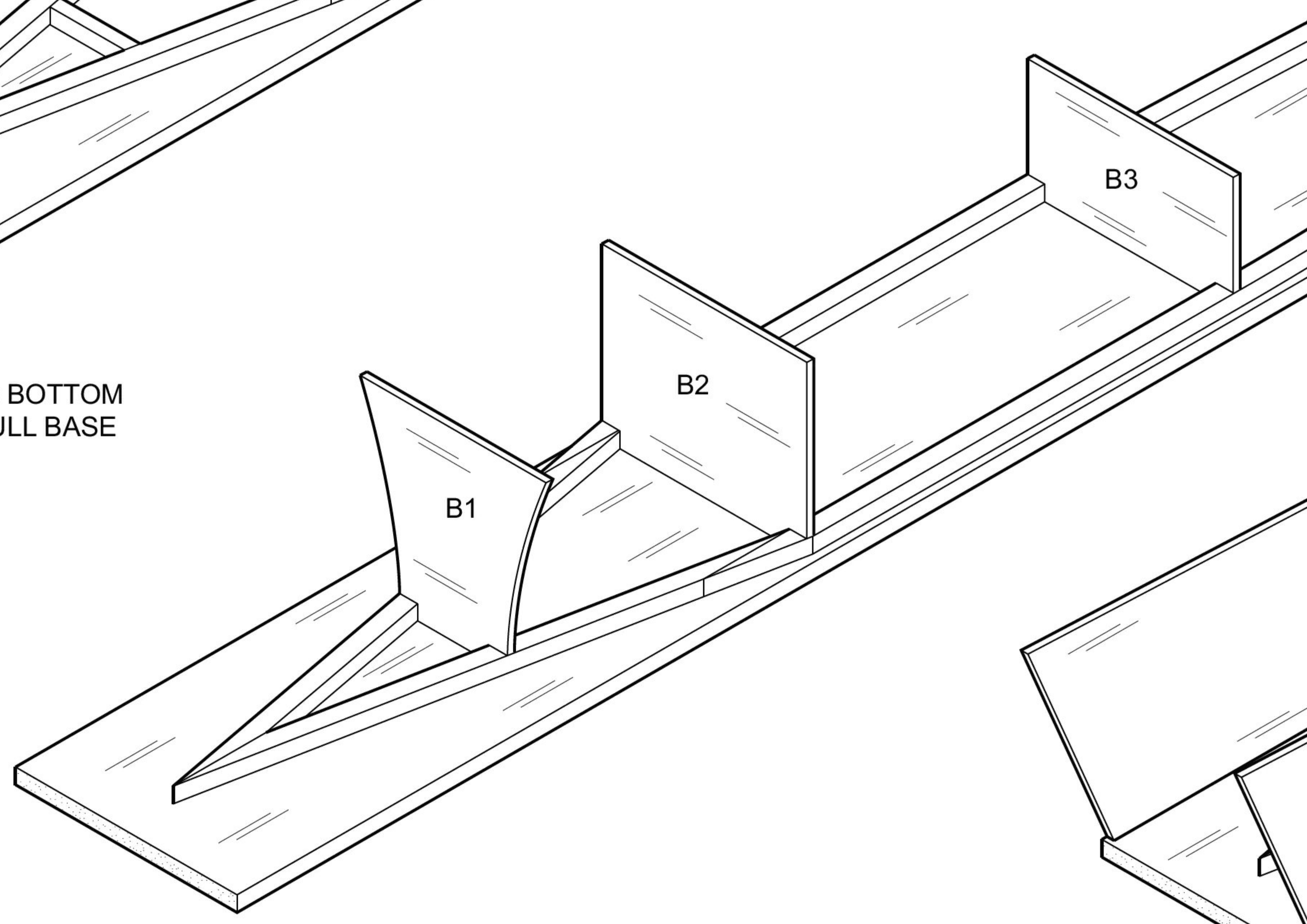


FINISHING OFF
HULL CONSTRUCTION

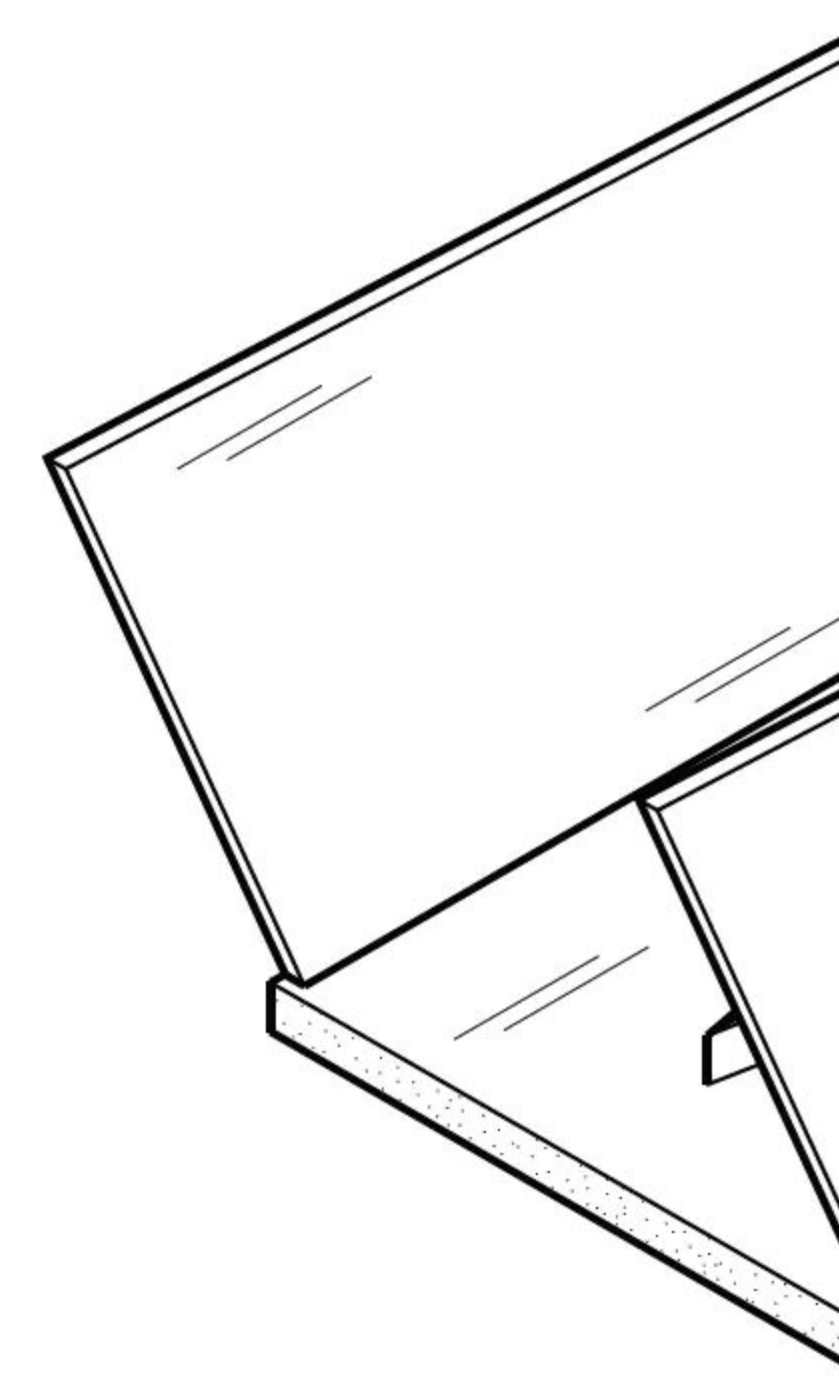




① GLUE STRIPS ONTO BOTTOM SHEET TO MAKE HULL BASE

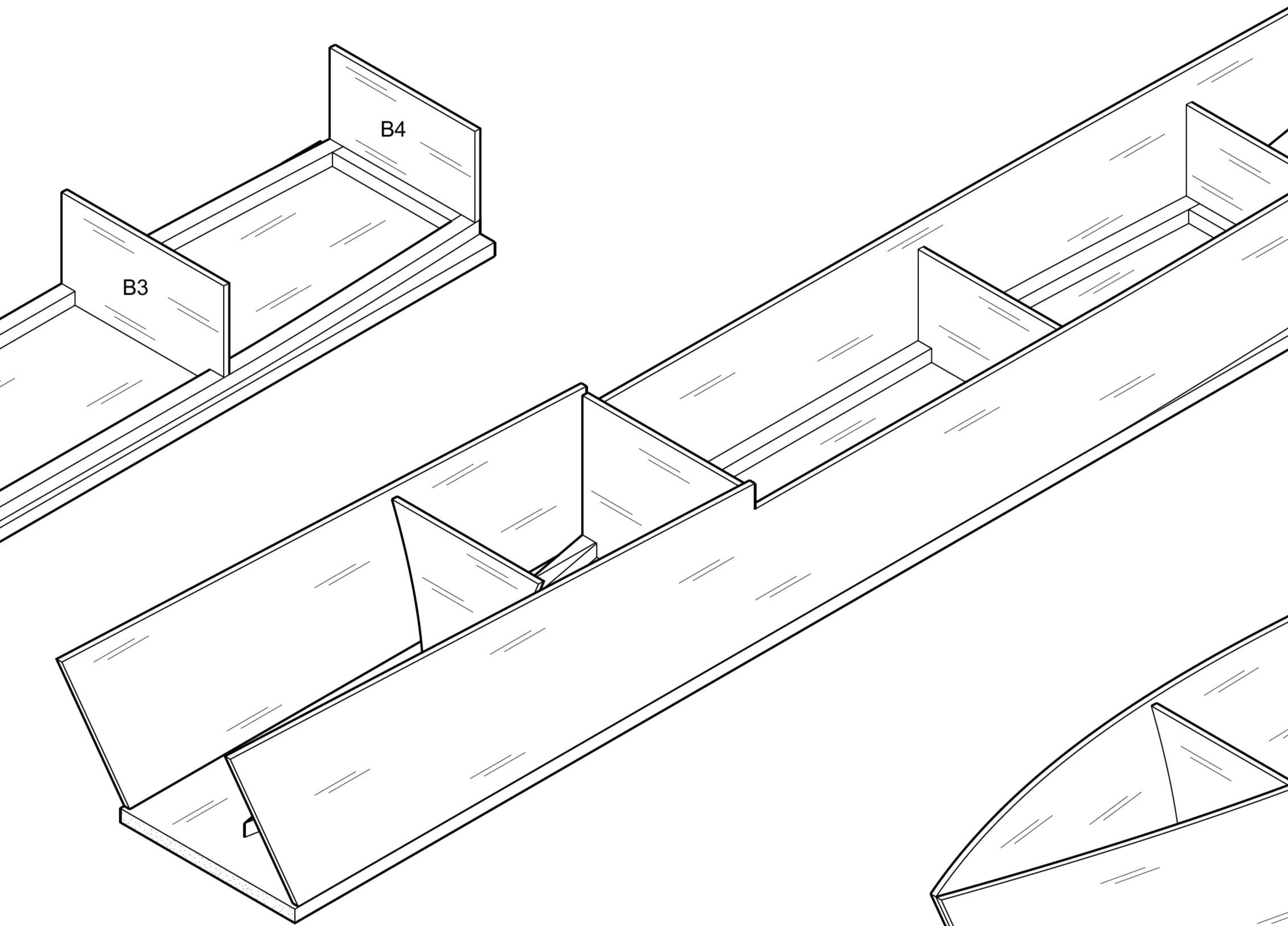


② GLUE BULKHEADS 1 TO 4 TO HULL BASE

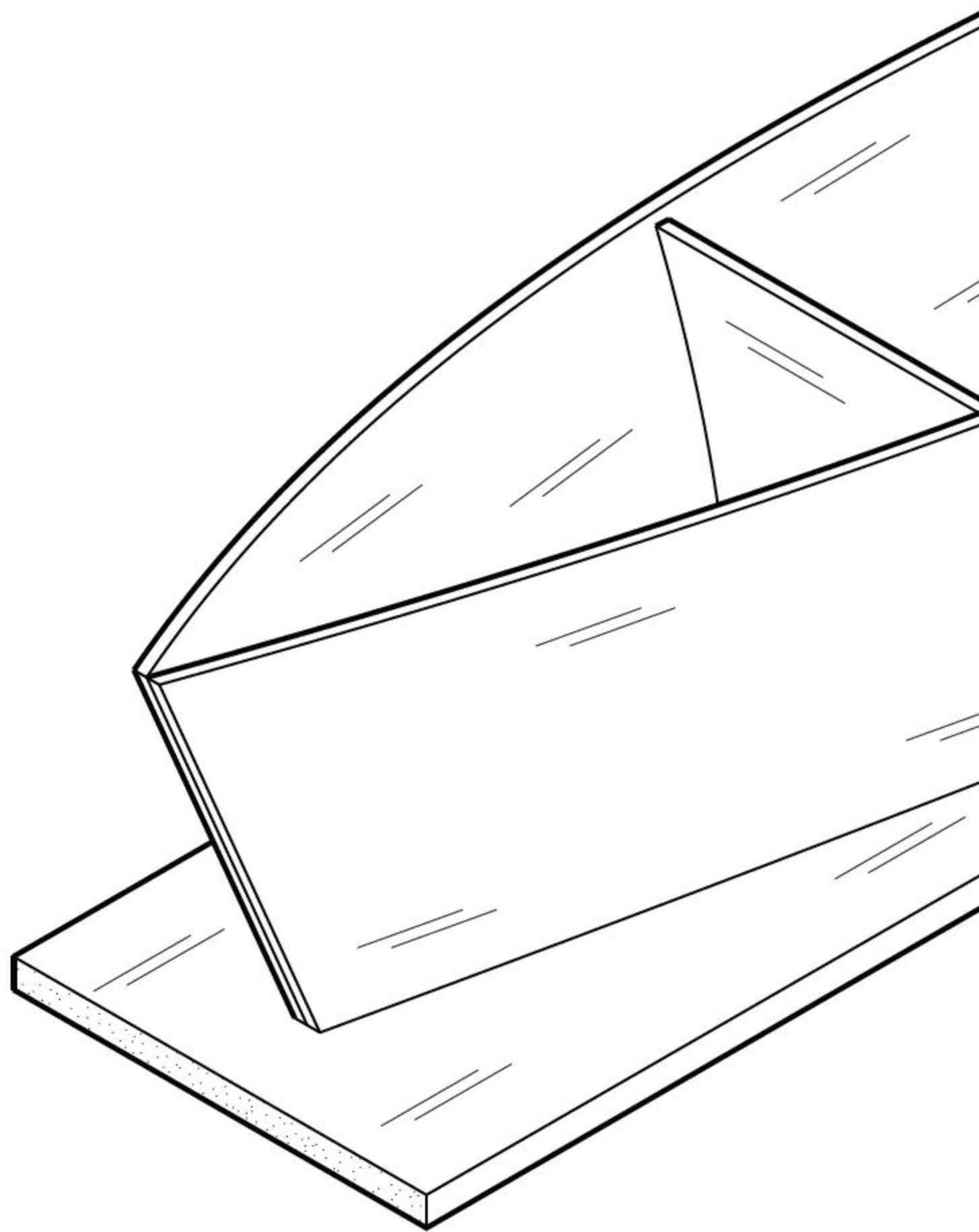


③ GLUE HULL SECTION TO HULL BASE

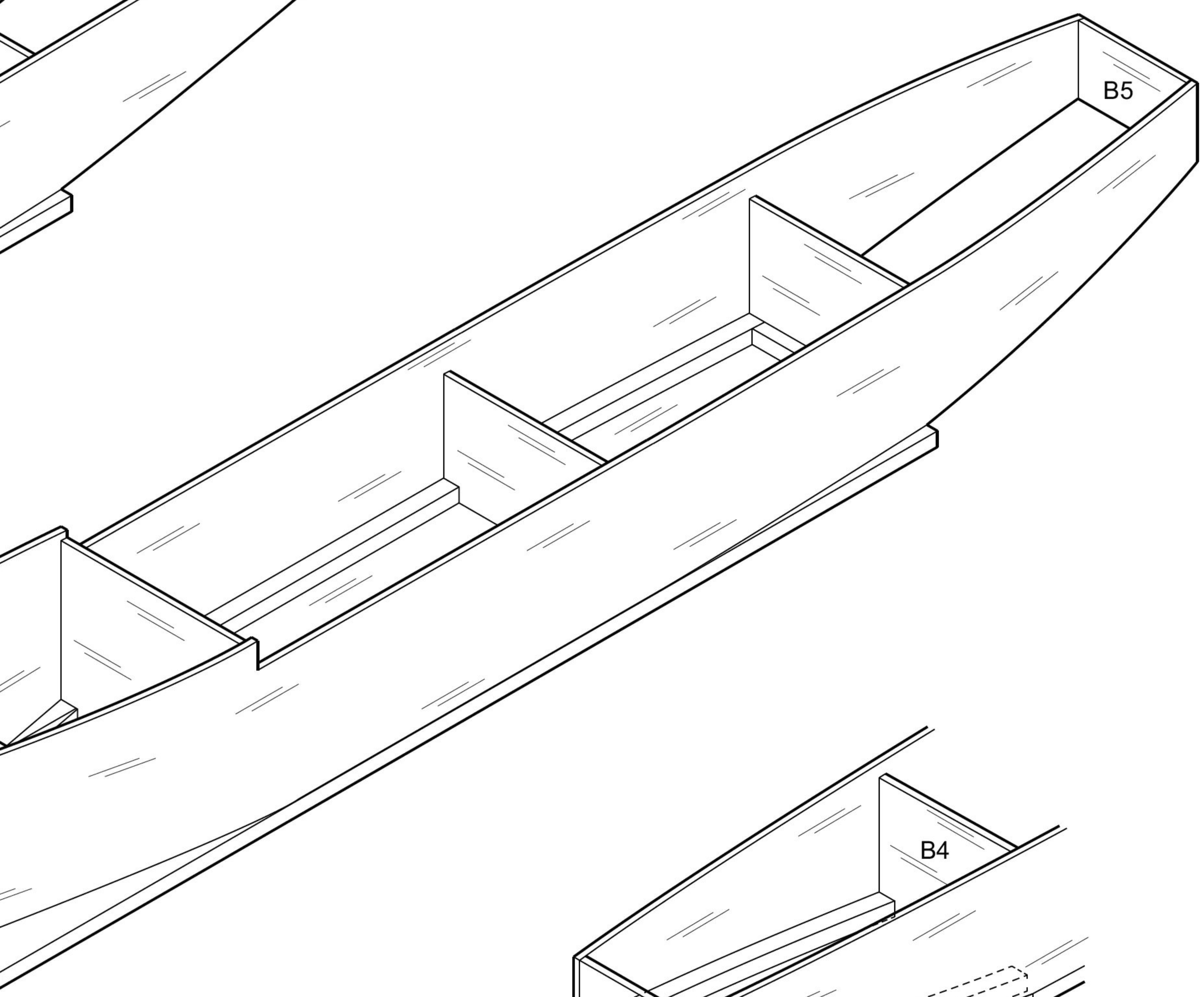
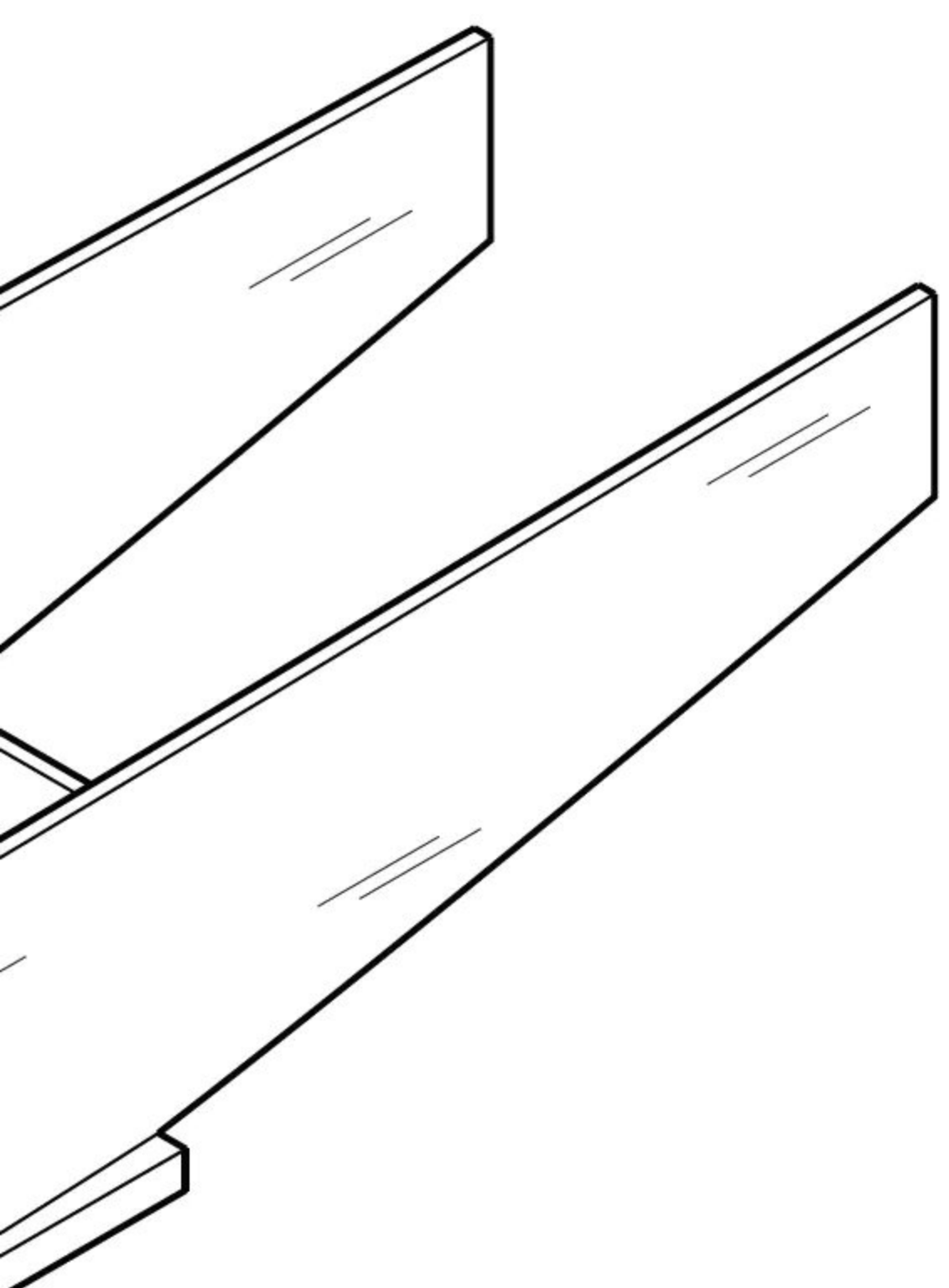
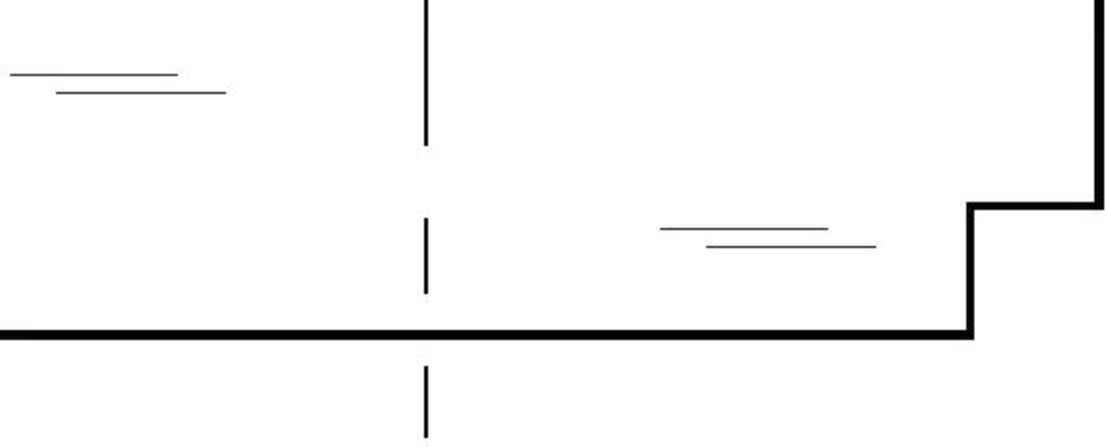
SUGGESTED HULL CONSTRUCTION SEQUENCE



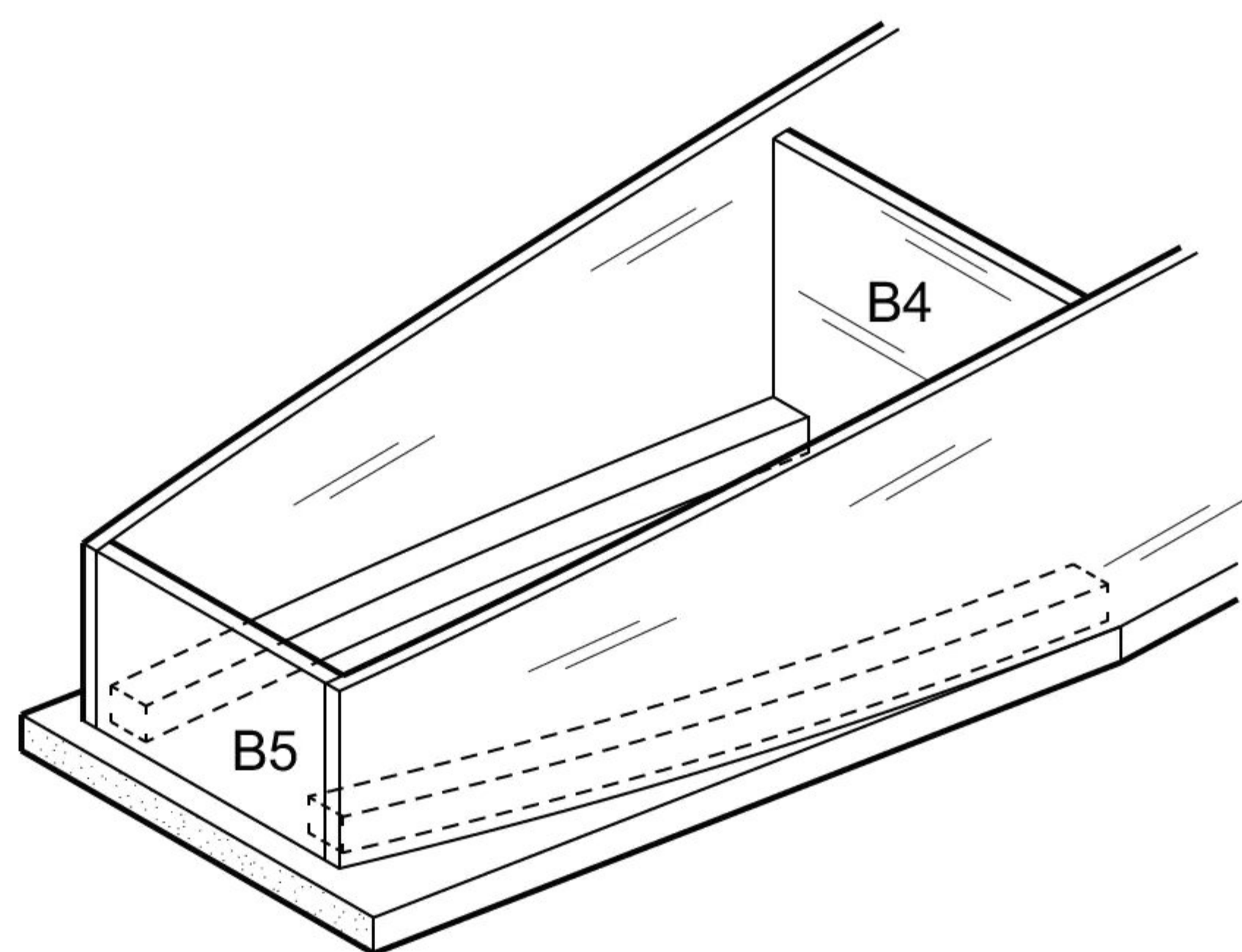
③ GLUE HULL SIDES TO B2, B3 & B4
& HULL BASE BETWEEN THEM



④ APPLY GLUE TO B1, BOW EDGES
& HULL BASE FROM BOWS TO B1
& PULL BOW TOGETHER



⑤ PULL SIDES TOGETHER &
GLUE B5 IN PLACE



⑥ GLUE STERN BOTTOM IN PLACE, GLUE
6mm SQ. STRIPS AT JUNCTION BETWEEN
SIDES & BOTTOM FROM B4 TO B5