

HEBRIDEAN

SERVO PENDULUM WIND VANE

Construction Manual

Part 2: Plans

NOT ALL PAGES ARE INCLUDED HERE

© John Fleming

Do-it-yourself yacht self-steering
for vessels with up to one metre of stern freeboard

Name of purchaser

DIY. SAILOR

License number


GOING PLACES ?

This manual is for the construction of one Hebridean wind vane.
For further licenses please contact John Fleming.
john.fleming173@gmail.com

www.windvaneselfsteering.co.uk

1. PREFABRICATED S/S PARTS

DRILL OUT ALL HOLES MARKED (6) WITH A 6mm BIT.

PART 1. 

x1.

PART 2.



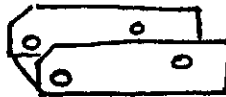
x1.

PART 3.



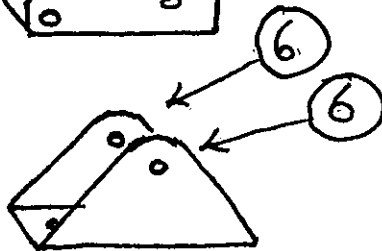
x1.

PART 4.



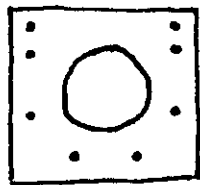
x2.

PART 5.



x2.

PART 6.



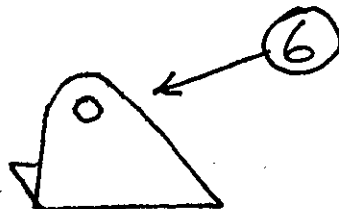
x3.

PART 7.



x1.

PART 8.



x2.

PART 9.




x2

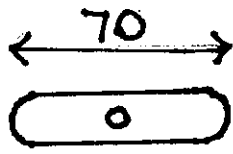
Copyright protected.

2.


PART 10.  x2

PART 21.  x1.

PART 11.  x1


PART 22.  x1.

PART 12.  x1.

PART 23  x4

PART 13.  x1

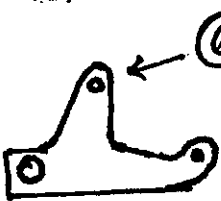
PART 24

PART 14.  x1


HOLES
1 @ 20mm
1 @ 22mm
diameter
x2.

PART 15.  x1 5mm NEOPRENE RUBBER.

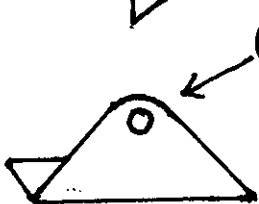
PART 25.

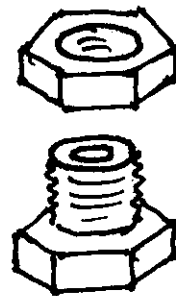
PART 16.  x1.

HOLES
Both @ 22mm
x1

PART 17.  x1

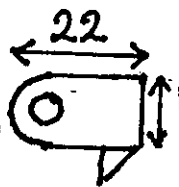
PART 26 x1.

PART 18.  x2.



PART 19.  x1

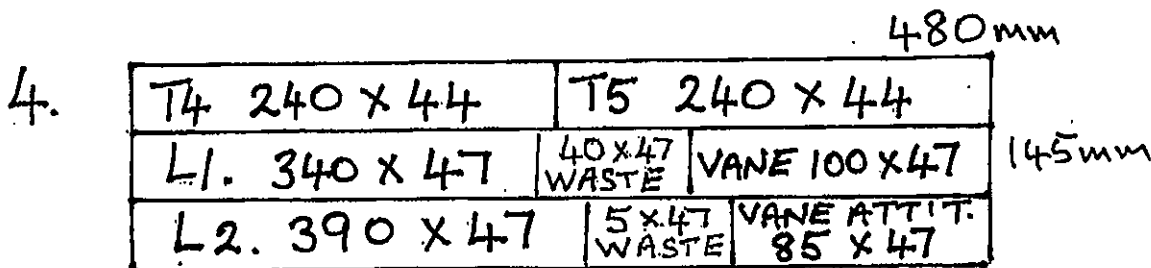
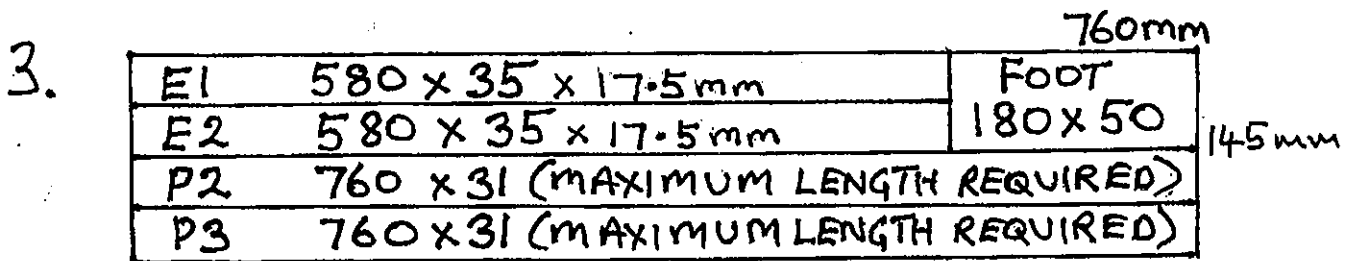
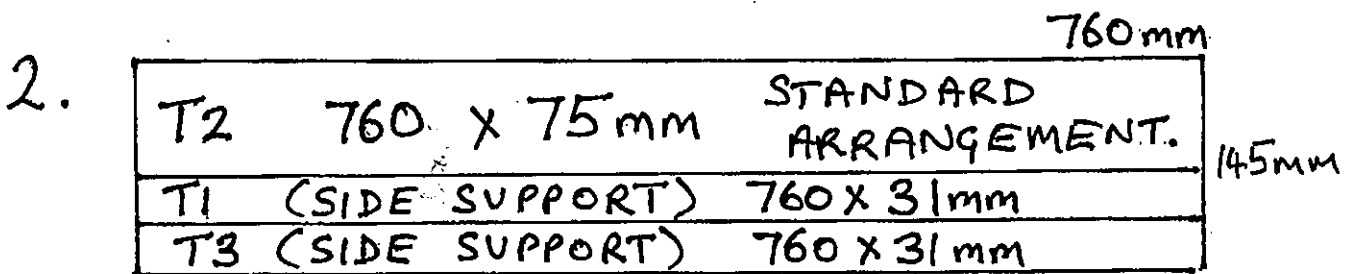
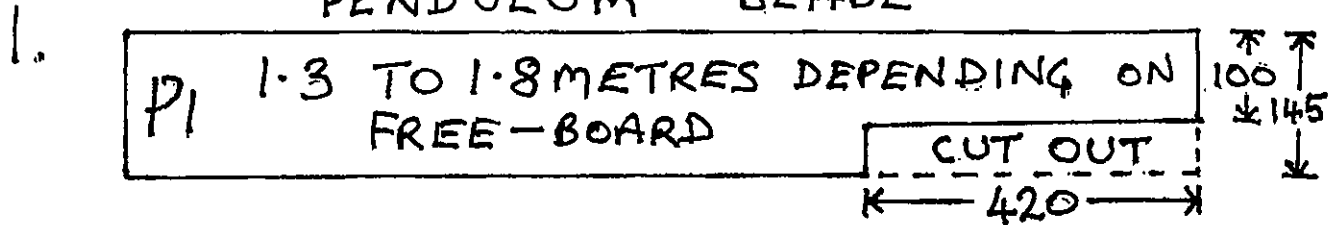
PART 27.  x6.

PART 20.  x1

Copyright protected.

3. TIMBER (HARD WOOD) PLANK 145 x 20 mm IN THE H1 KIT T₁, T₂ AND T₃ ARE SUPPLIED 960mm LONG AS FOR THE "ALTERNATIVE" ARRANGEMENT.

PENDULUM BLADE



FOR H2:- USE THE DIAGRAMS 1-4 TO SAW ALL THAT IS REQUIRED FOR THE FRAME AND THE PENDULUM. THE LENGTHS OF THE PENDULUM AND THE SIDE SUPPORTS (P₁, P₂ AND P₃) ARE THE MAXIMUM LENGTHS FOR A HIGH FREE-BOARD.
 CUT ACCURATELY WITH A CIRCULAR SAW.
 (3mm BLADE) Copyright protected.

4.

X

FRAME 1.

SCALE 1:4

(TEMPLATE)

D

B

35

SEE
FRAME 2'

SEE
FRAME 2

31

75

F 90°

50

DRAW A-B-C-D-E-F
SCALE 1:1 ON A SHEET
OF HARDBOARD.

E

70°

C

A

copyright protected

5.

THE TURRET.

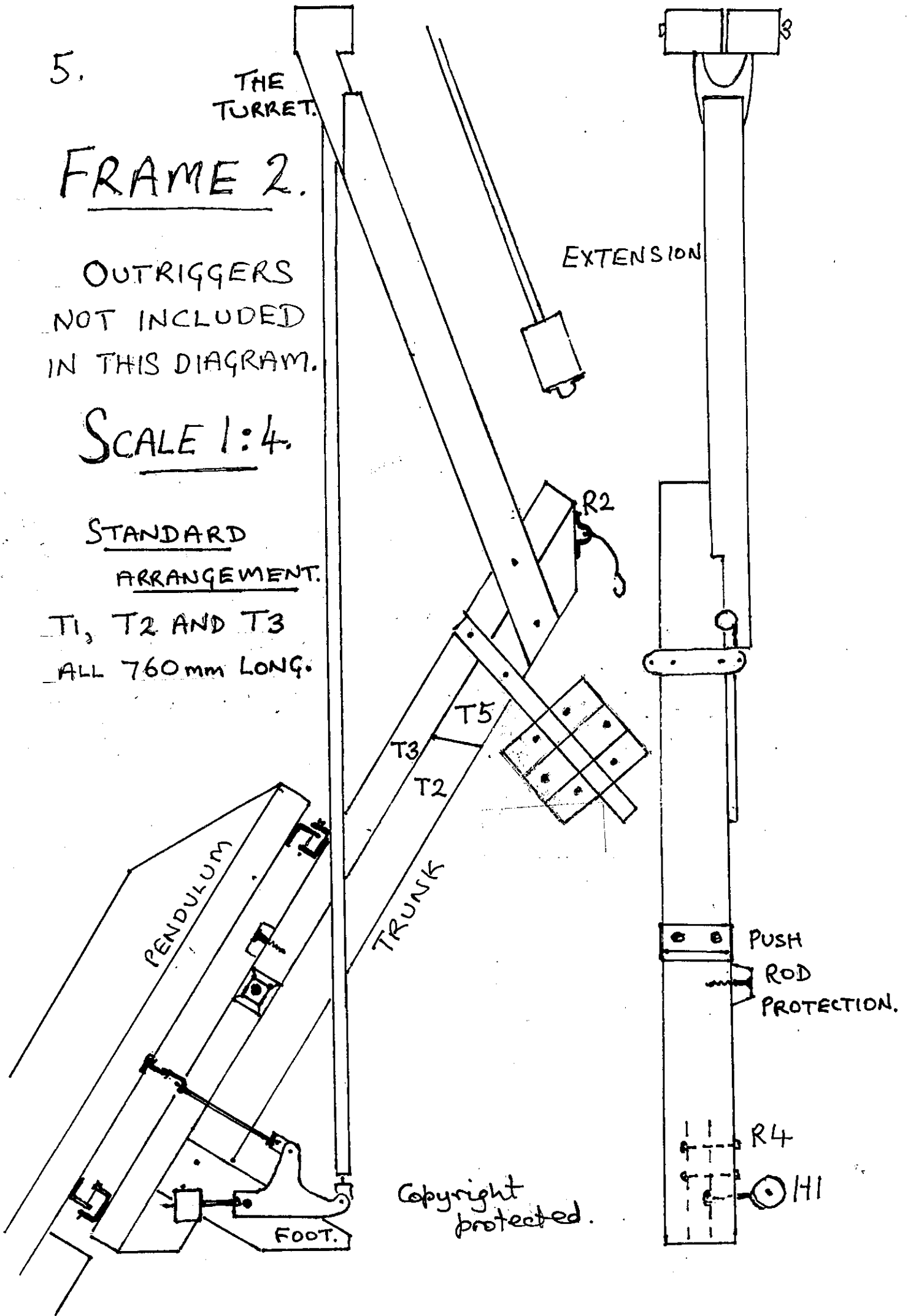
FRAME 2.

OUTRIGGERS NOT INCLUDED IN THIS DIAGRAM.

SCALE 1:4.

STANDARD ARRANGEMENT.

T1, T2 AND T3 ALL 760 mm LONG.



6.

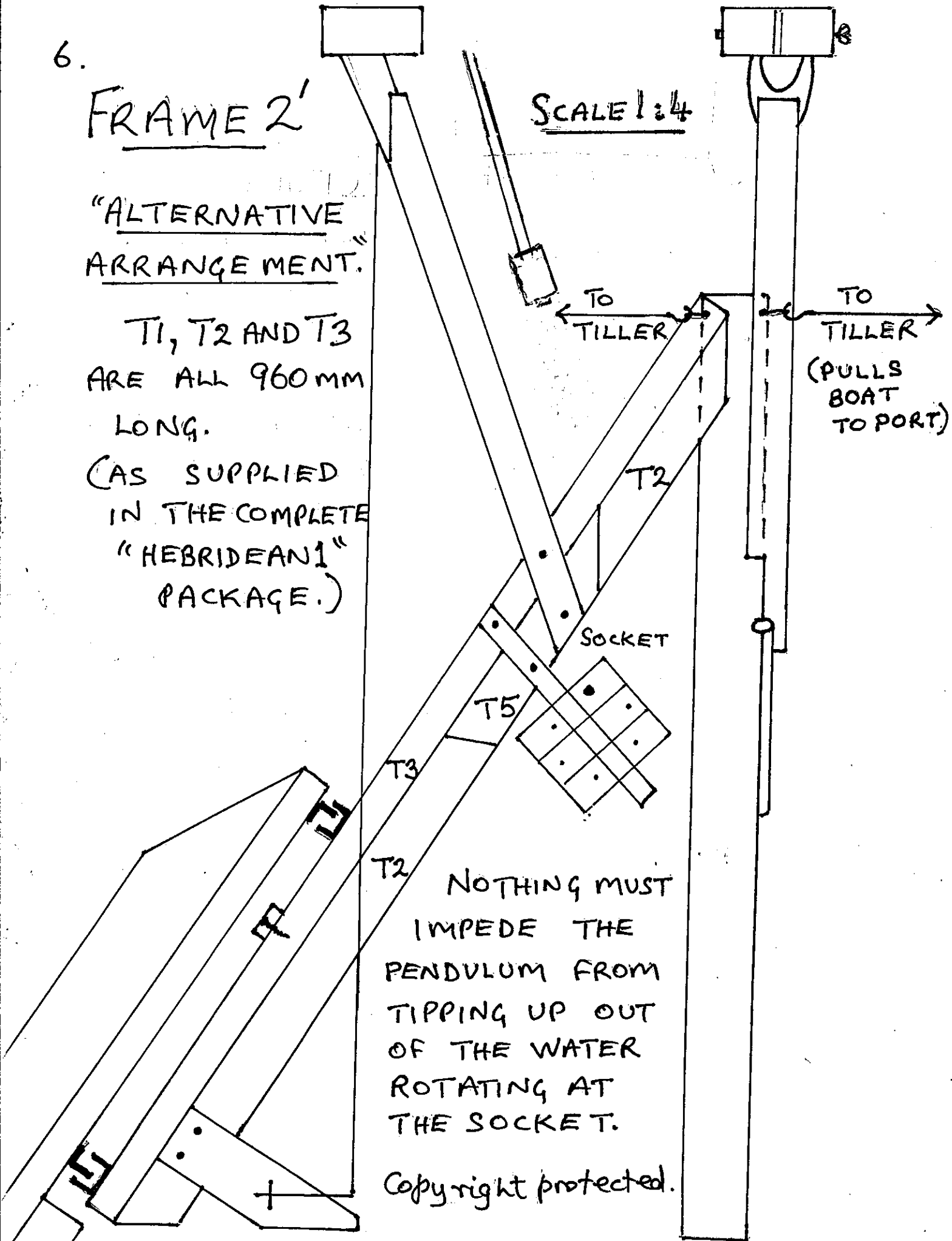
FRAME 2'

"ALTERNATIVE ARRANGEMENT."

T1, T2 AND T3 ARE ALL 960MM LONG.

(AS SUPPLIED IN THE COMPLETE "HEBRIDEAN1" PACKAGE.)

SCALE 1:4



NOTHING MUST IMPEDE THE PENDULUM FROM TIPPING UP OUT OF THE WATER ROTATING AT THE SOCKET.

Copyright protected.

9.

FRAME 5

SCALE 1:4

OUTRIGGERS
L1 AND L2.

L1
FOLDED
BACK
FOR
STORAGE.

L2
FOLDED
BACK
FOR
STORAGE

SPLICED
LOOP 6-8mm
NON-STRETCH

LINE TO TILLER
OR WHEEL.
PULLS BOAT
TO PORT.

R2 (SCREWED
IN AT 45°)

ELASTIC
BUNGEE.
400mm
(8mm).

400mm
(MAX)

180mm.

TRUNK.

PART 5

PART 3

L2

ELASTIC
BUNGEE

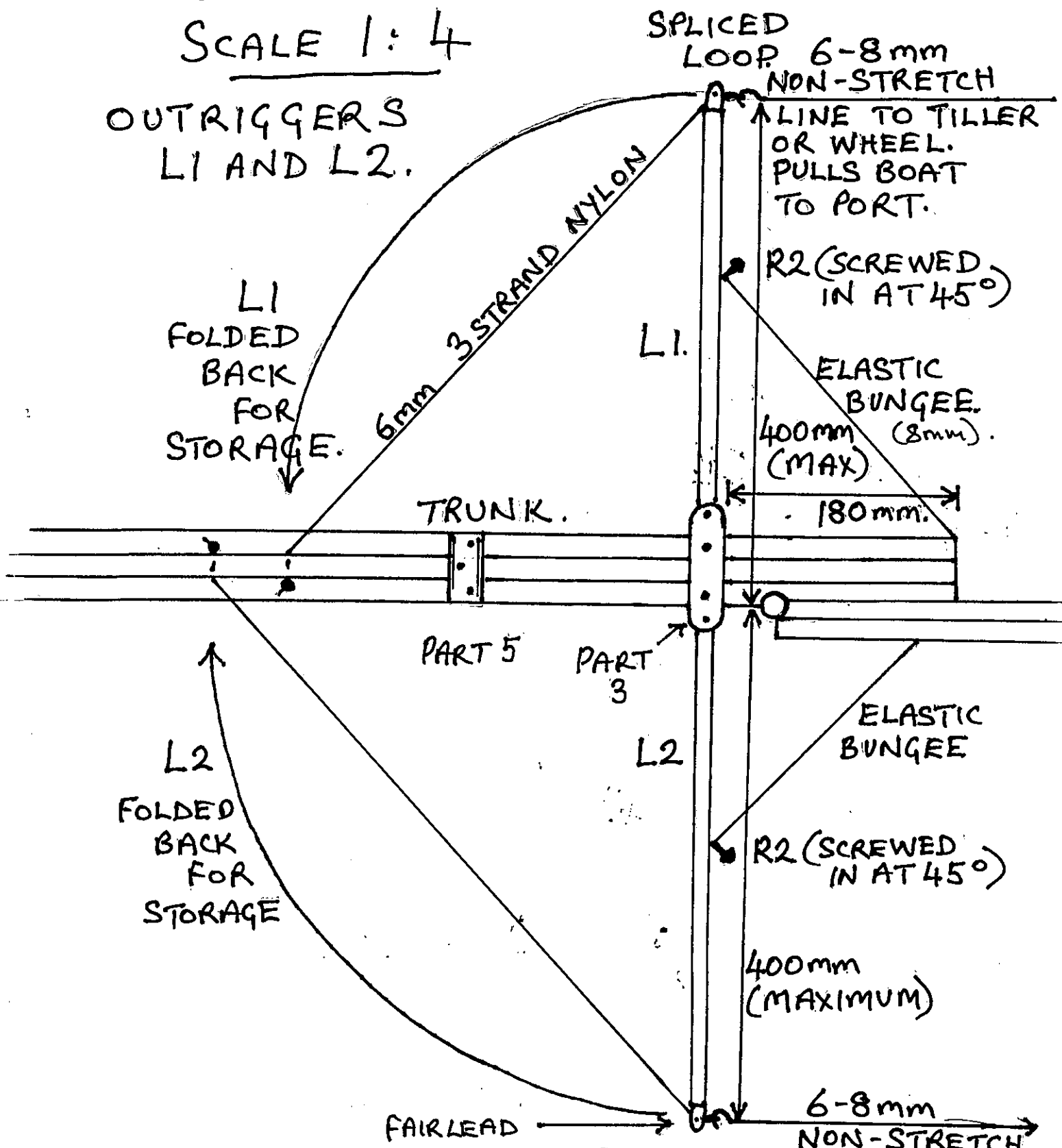
R2 (SCREWED
IN AT 45°)

400mm
(MAXIMUM)

FAIRLEAD

SPLICED LOOP.
(SPRING SNAP HOOK) 6-8mm
NON-STRETCH
TO TILLER
OR WHEEL.

Copyright protected.

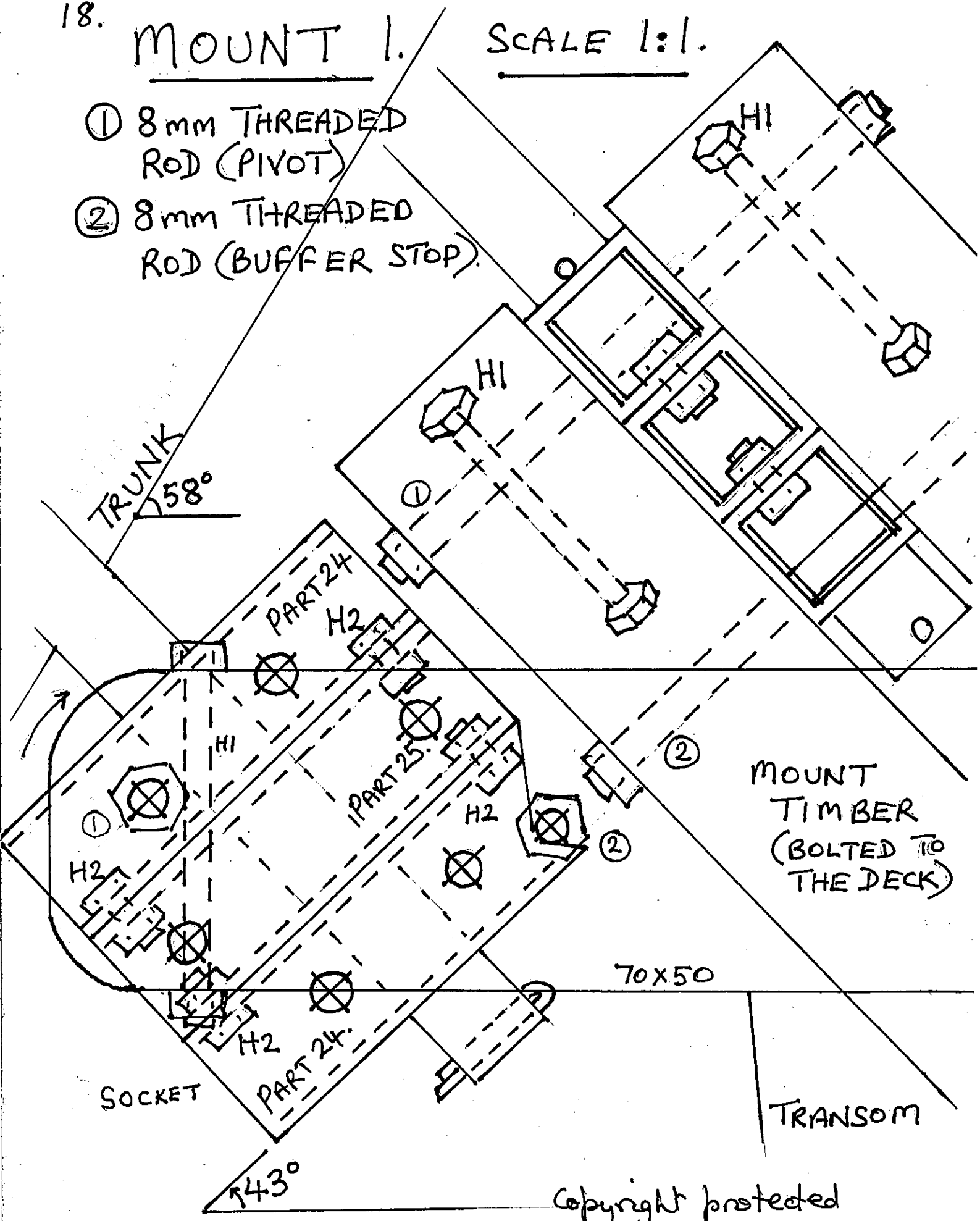


18.

MOUNT 1.

SCALE 1:1.

- ① 8mm THREADED ROD (PIVOT)
- ② 8mm THREADED ROD (BUFFER STOP)

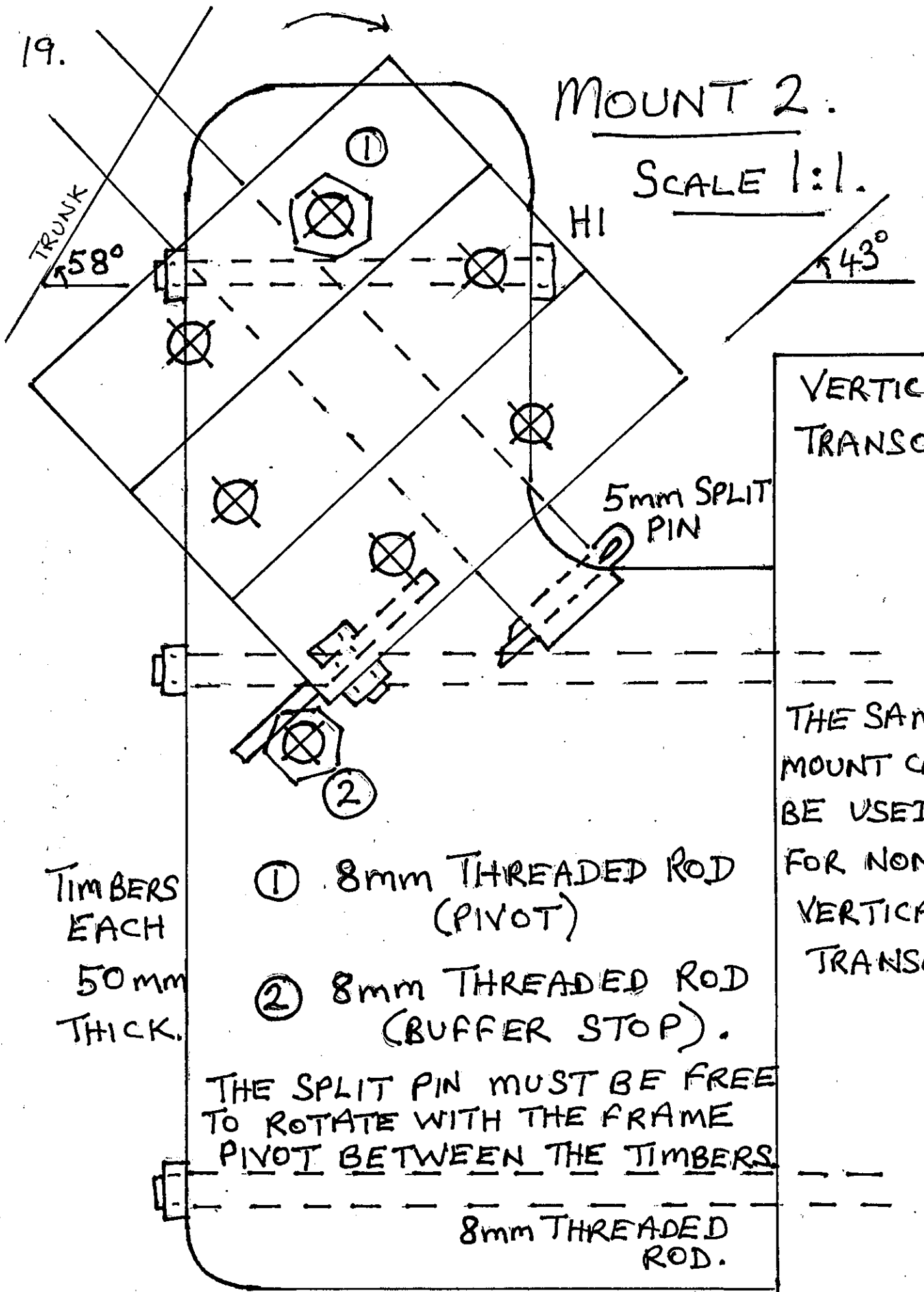


Copyright protected

19.

MOUNT 2.

SCALE 1:1.



VERTICAL
TRANSOM

5mm SPLIT
PIN

THE SAME
MOUNT CAN
BE USED
FOR NON-
VERTICAL
TRANSOMS

TIMBERS
EACH
50mm
THICK.

① 8mm THREADED ROD
(PIVOT)

② 8mm THREADED ROD
(BUFFER STOP).

THE SPLIT PIN MUST BE FREE
TO ROTATE WITH THE FRAME
PIVOT BETWEEN THE TIMBERS.

8mm THREADED
ROD.

21

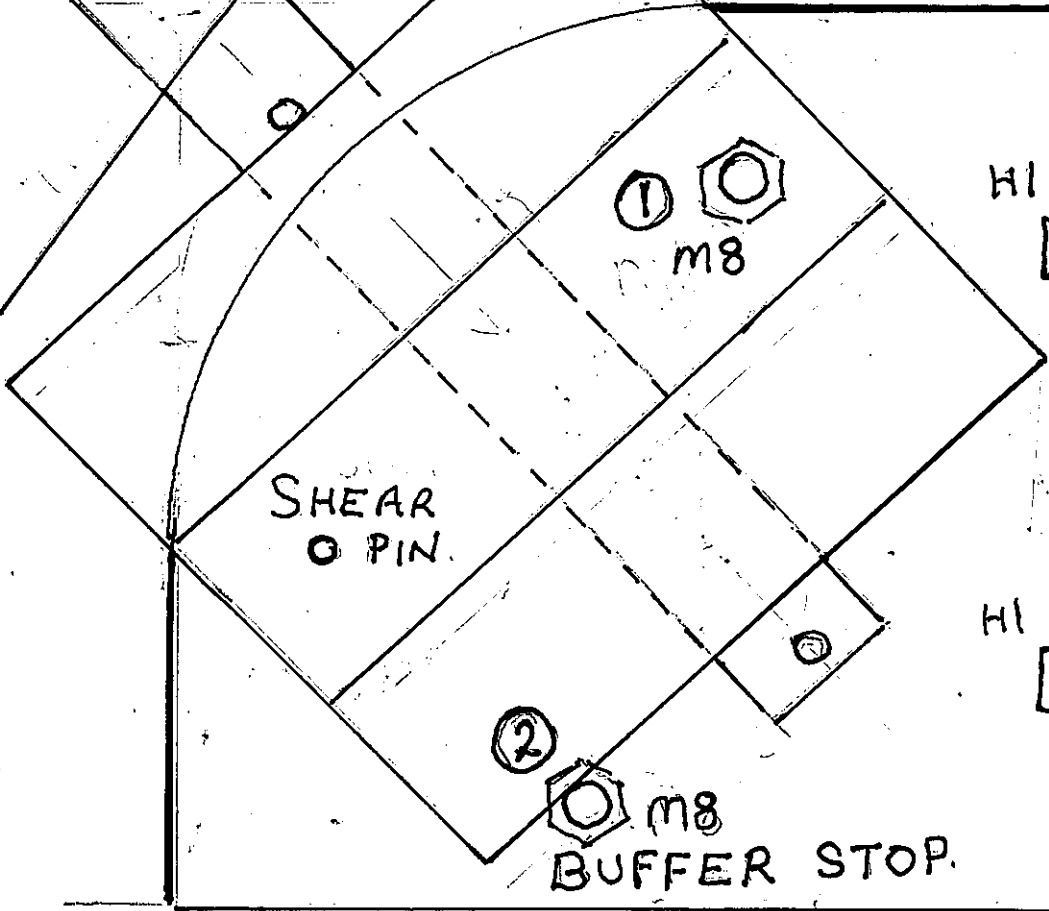
TRUNK

58°

MOUNT 4.

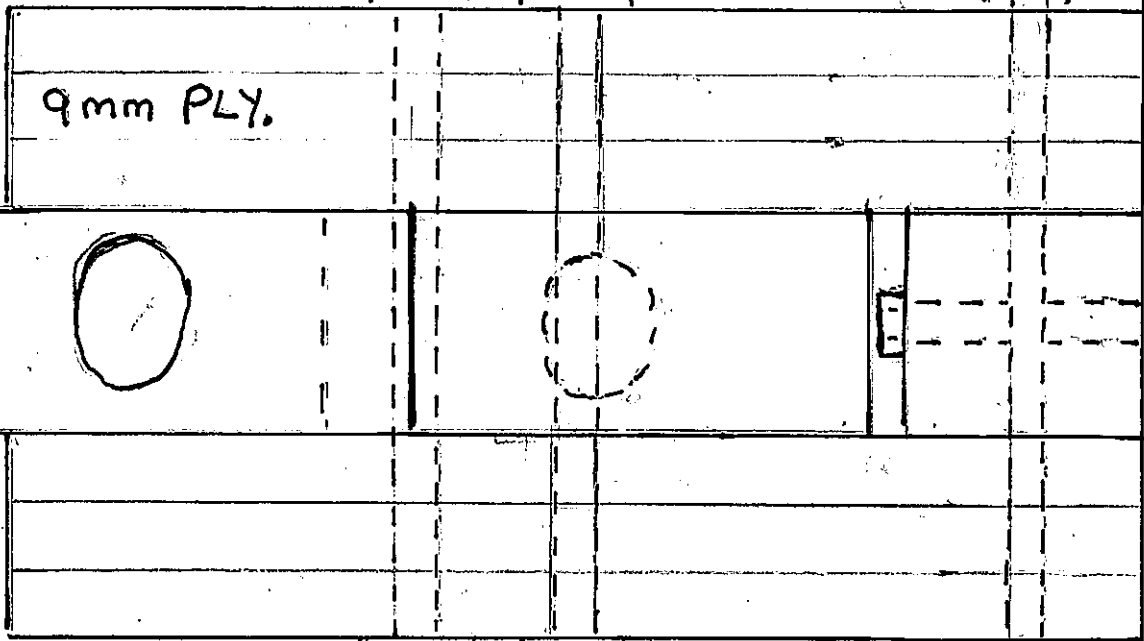
SCALE 1:1.

TRANSOM



← INCREASE IF NECESSARY (UP TO 5cm) →

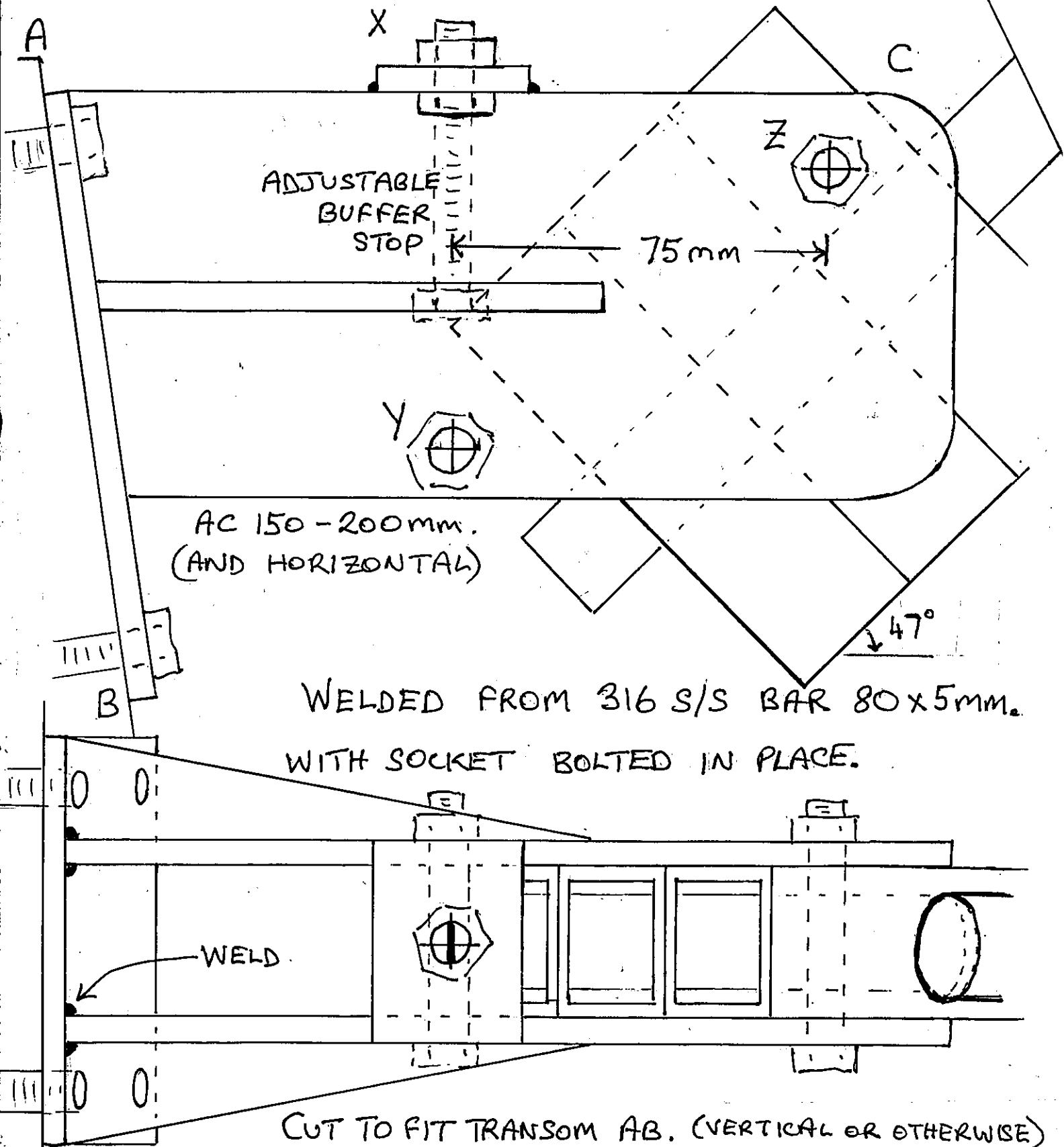
BLOCK 1.



BLOCK 2.



22 MOUNT IN 316 S/S WELDED. SCALE 1:1.



AC 150 - 200mm.
(AND HORIZONTAL)

WELDED FROM 316 S/S BAR 80x5mm.
WITH SOCKET BOLTED IN PLACE.

CUT TO FIT TRANSOM AB. (VERTICAL OR OTHERWISE)

8mm X BOLT ADJUSTS WIND VANE PUSH ROD VERTICAL.

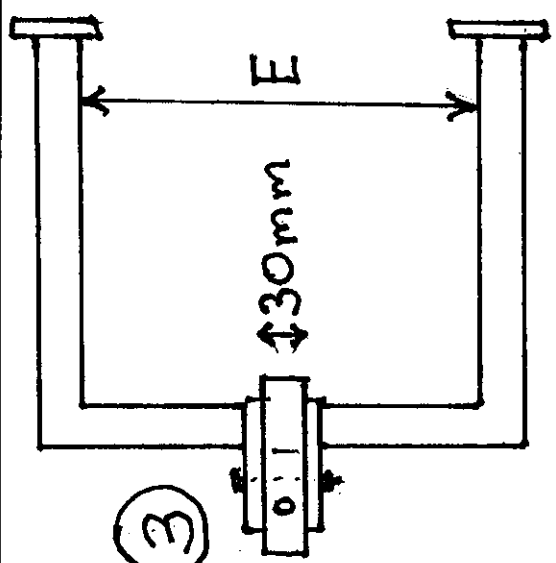
8mm Z AND Y BOLTS MAINTAIN FRICTION OF SOCKET
BETWEEN PLATES.

Copyright protected.

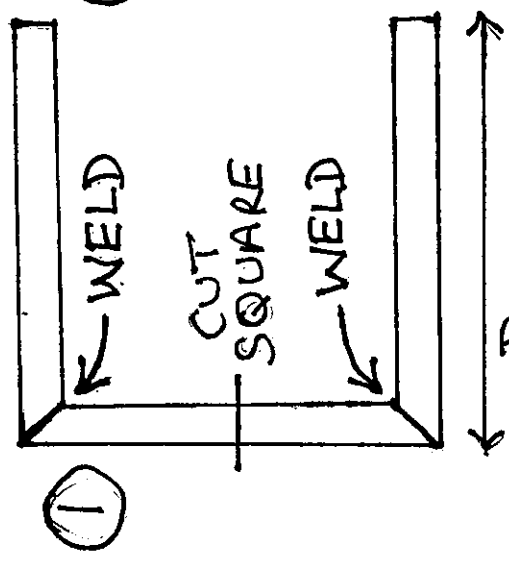
TRANSOM MOUNTED RUDDERS REQUIRE A FRAME (NOT SUPPLIED)

① BOX SECTION 30x30mm
2mm THICK (MIN) 316 S/S.

"D" AND "E" MUST BE
LARGE ENOUGH TO
ACCOMMODATE YOUR
TRANSOM MOUNTED
RUDDER AS IT SWINGS.



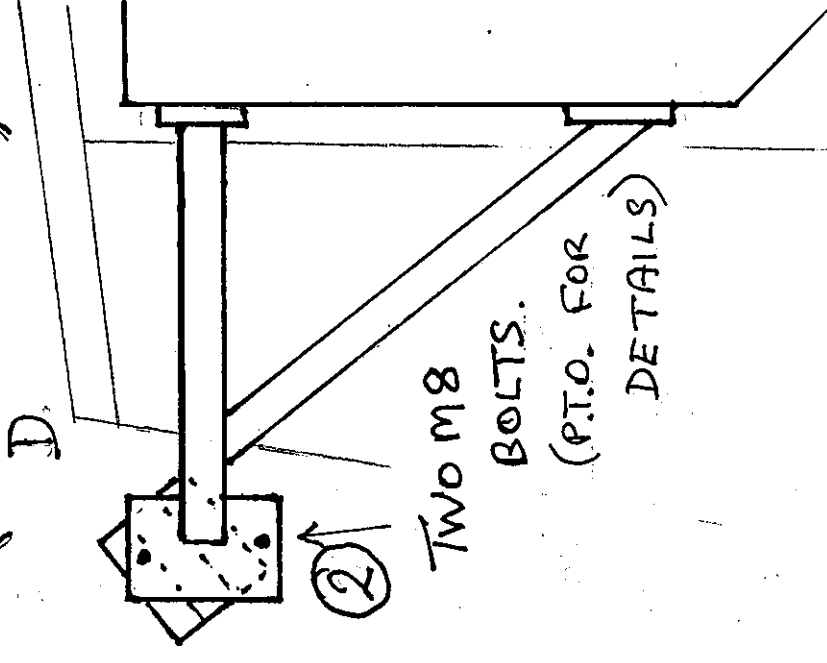
③



②

TWO DIAGONAL SUPPORTS WELDED AND
FOUR "FEET" ON THE ENDS OF THE BOX
SECTION WHICH LIE FLAT FOR BOLTING.

③ "CUT SQUARE" CENTRALLY AND WELD TWO
RECTANGULAR PLATES 125x80mm (5mm THICK).
BETWEEN THE PLATES THE SOCKET 100x90mm
30mm THICK AS SUPPLIED (IN WHICH THE WIND
VANE PIVOTS) IS BOLTED. THIS ARRANGEMENT
ALSO ACCOMMODATES TRANSOMS NOT VERTICAL.
"D" MORE THAN 300mm IS NOT RECOMMENDED.



MOUNTING SOCKET AFT OF RUDDER STOCK IN WOOD.

25

NOT TO SCALE

PINDTS UP.

WIND VANE

SOCKET.
(90 x 100 x 30 mm)

45mm
(5 x 9mm
PLY
EPOXY
GLUED)

TRANSOM

RUDDER

30mm

