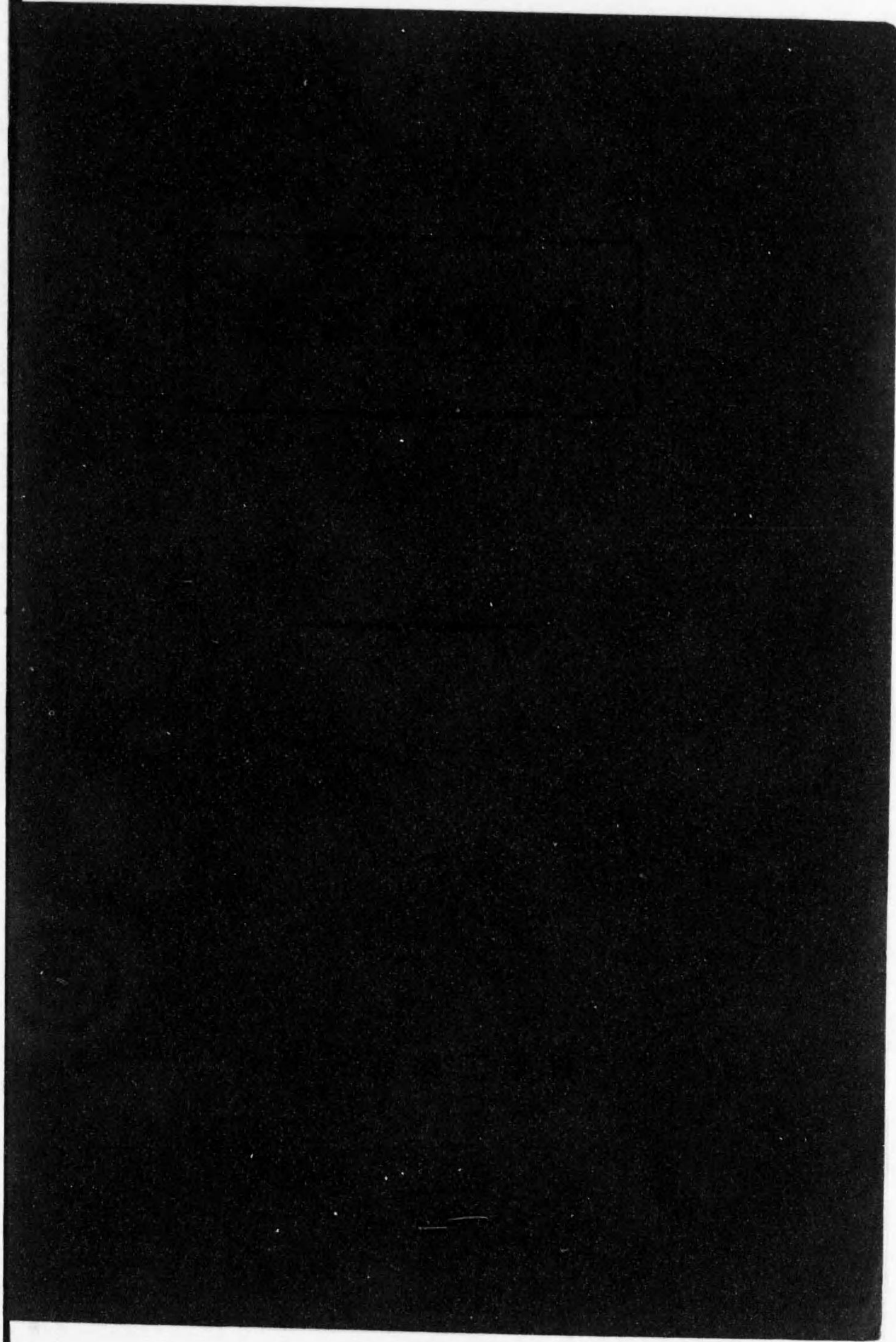




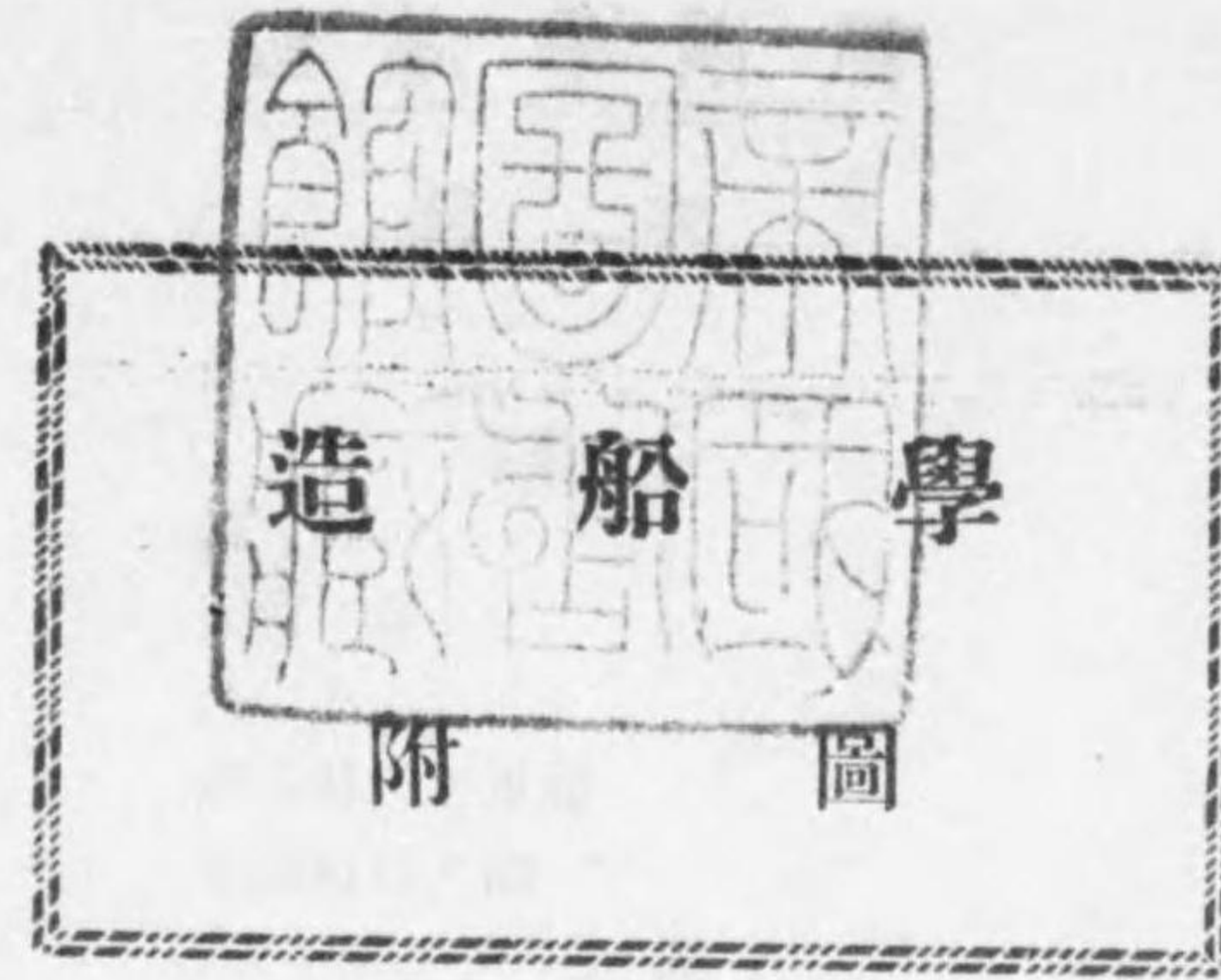
始



造船學附圖

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對學工維達三備具

造船學附屬

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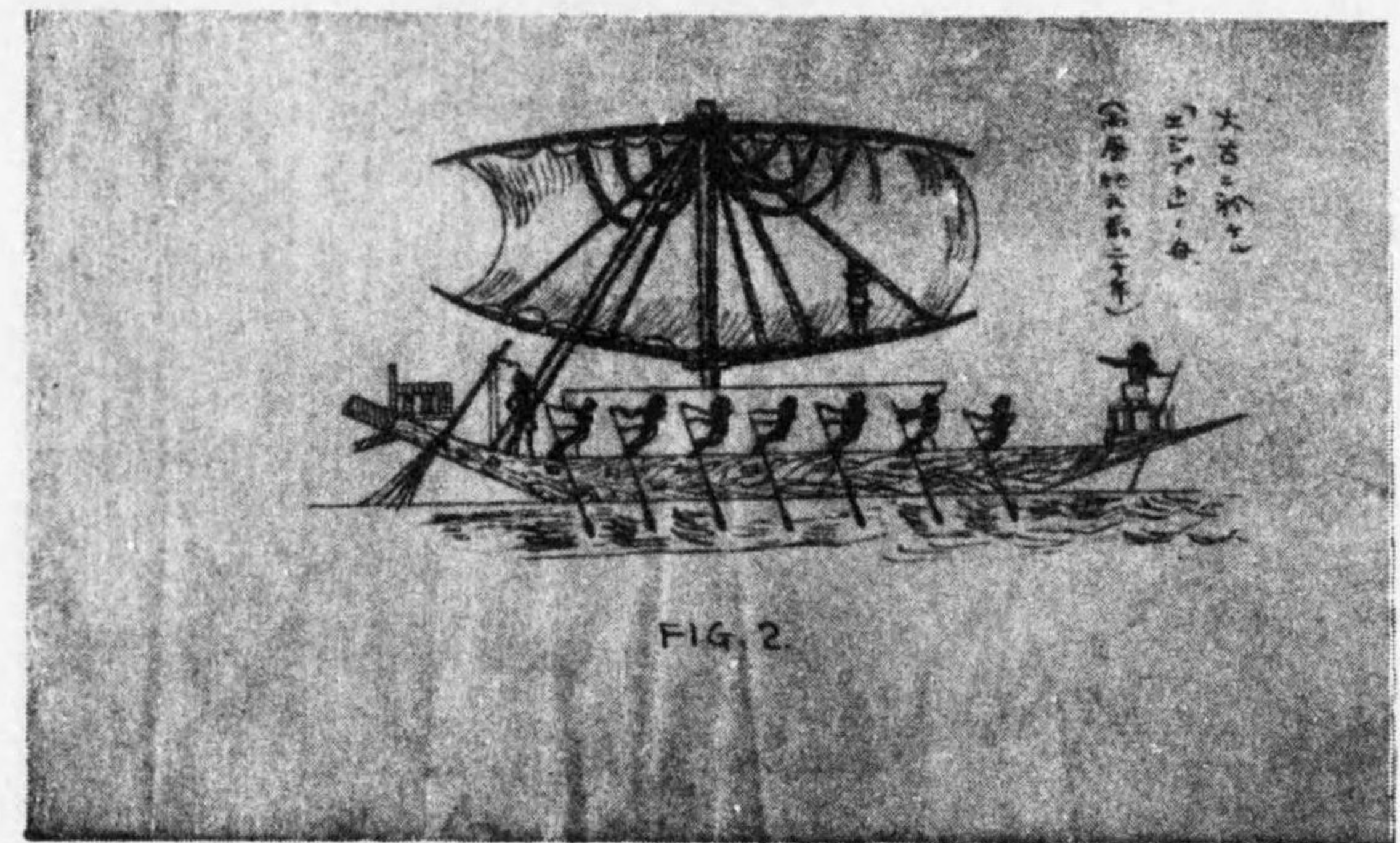
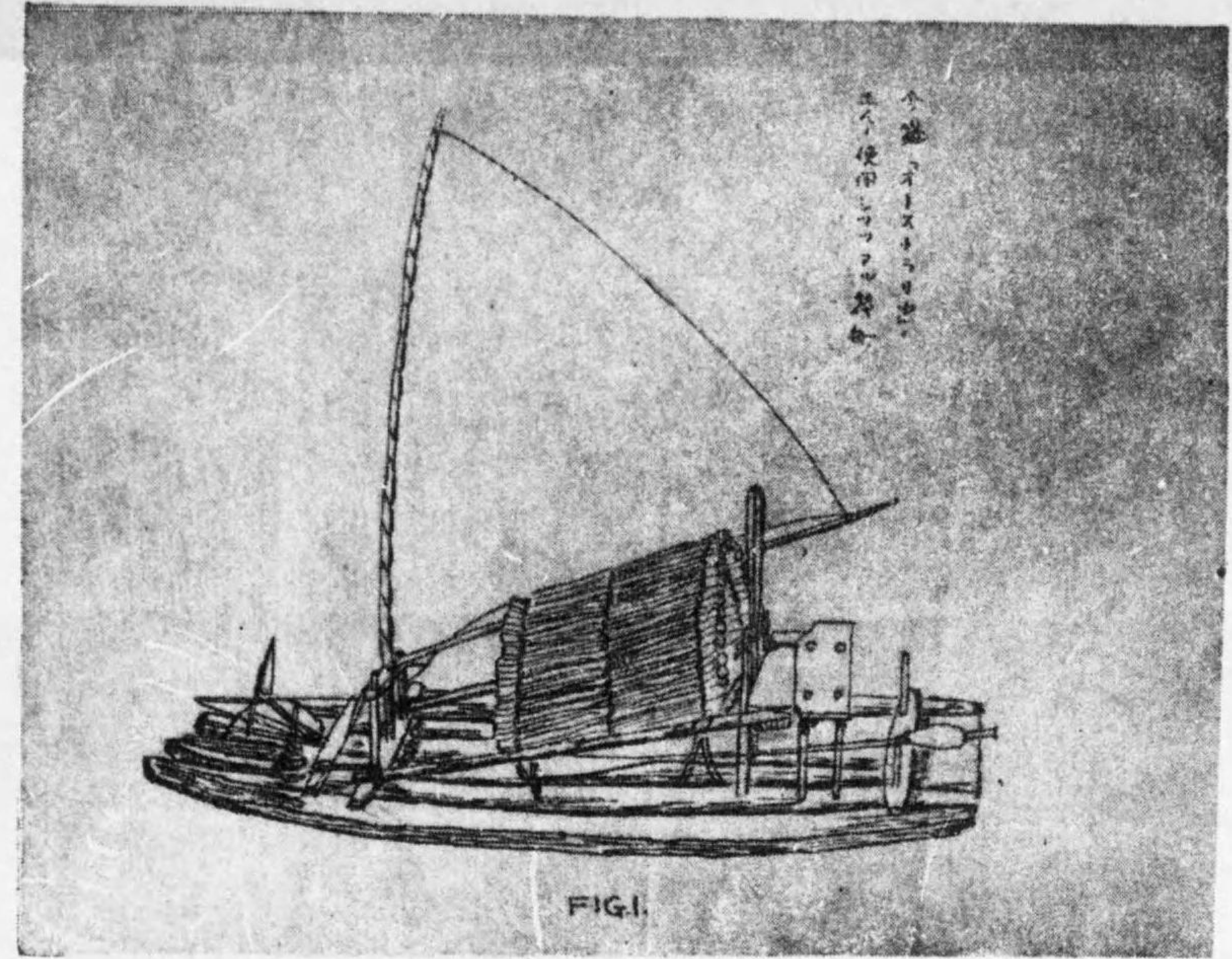
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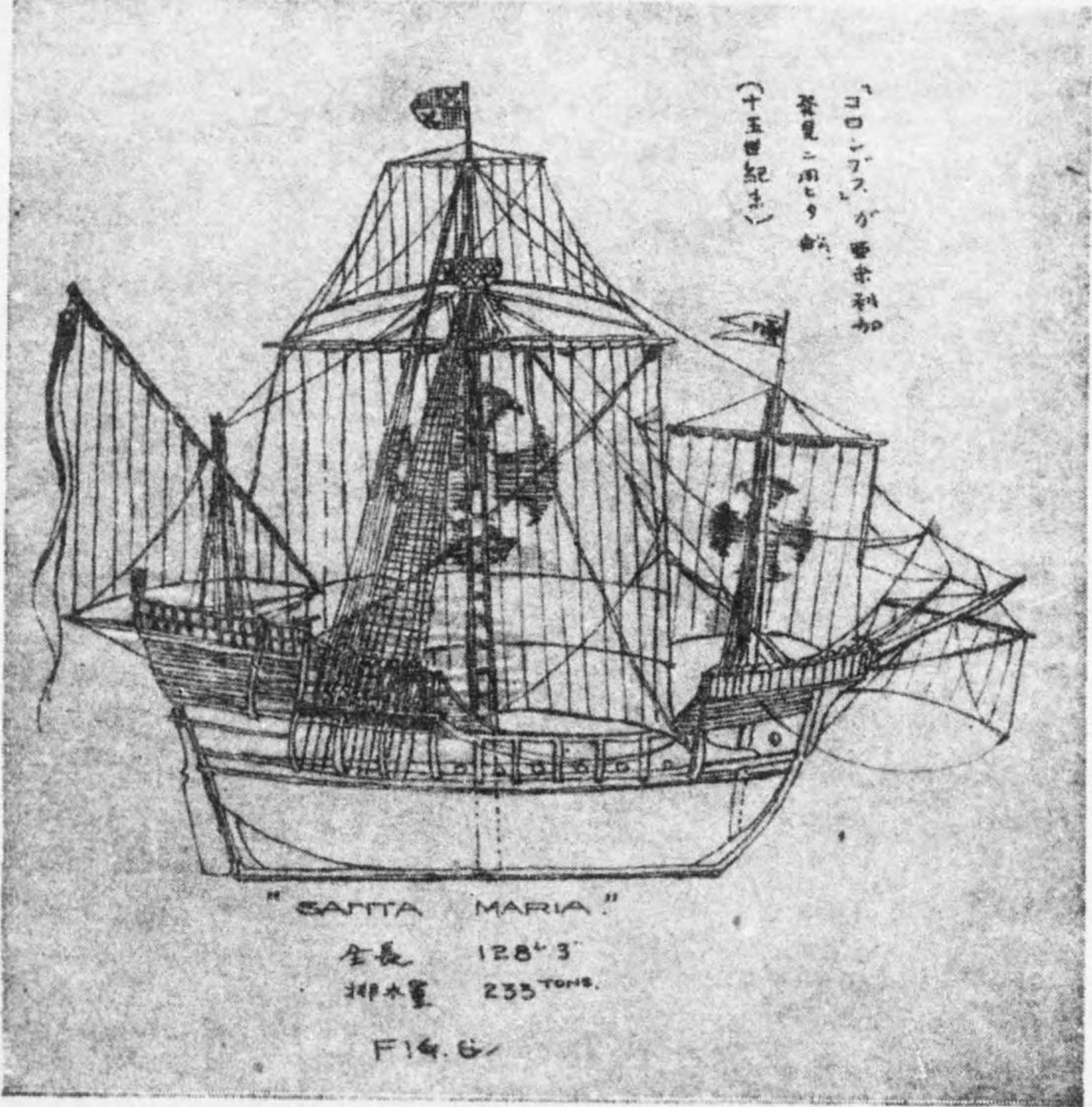
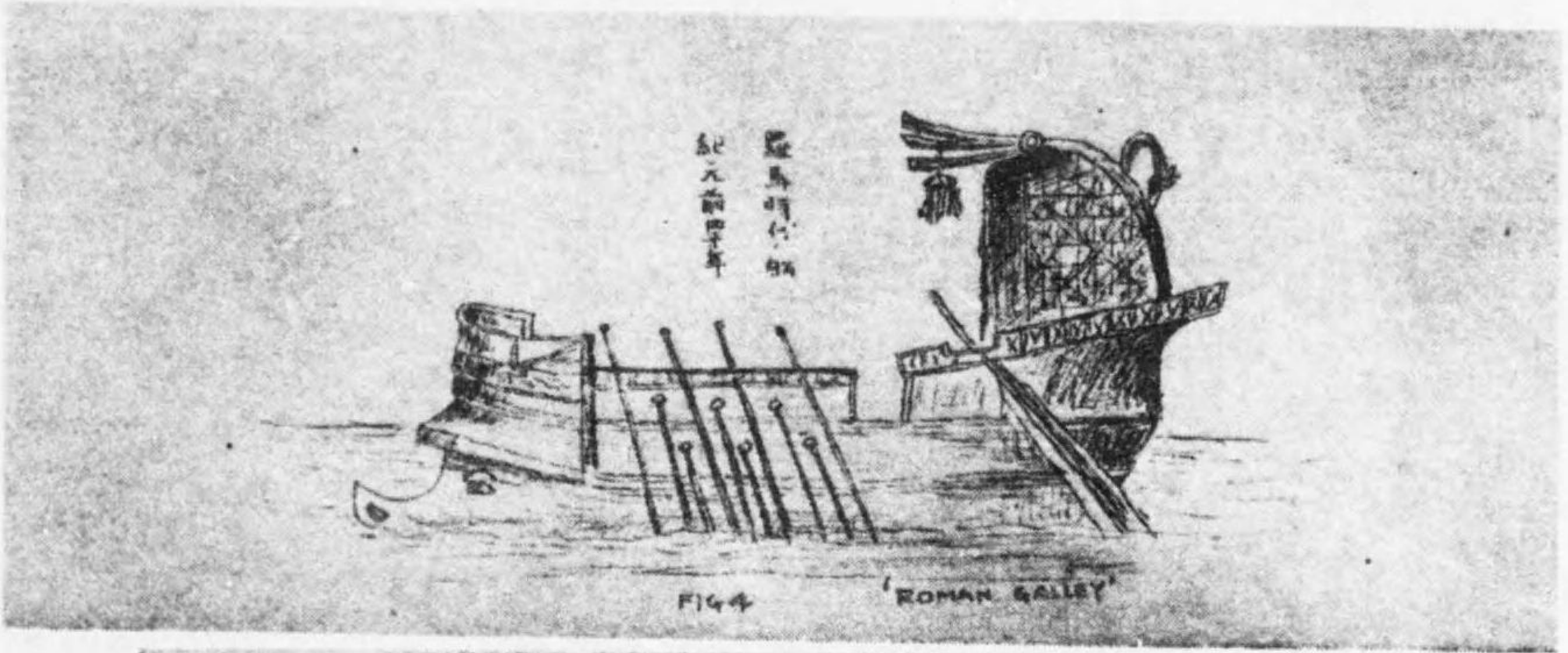
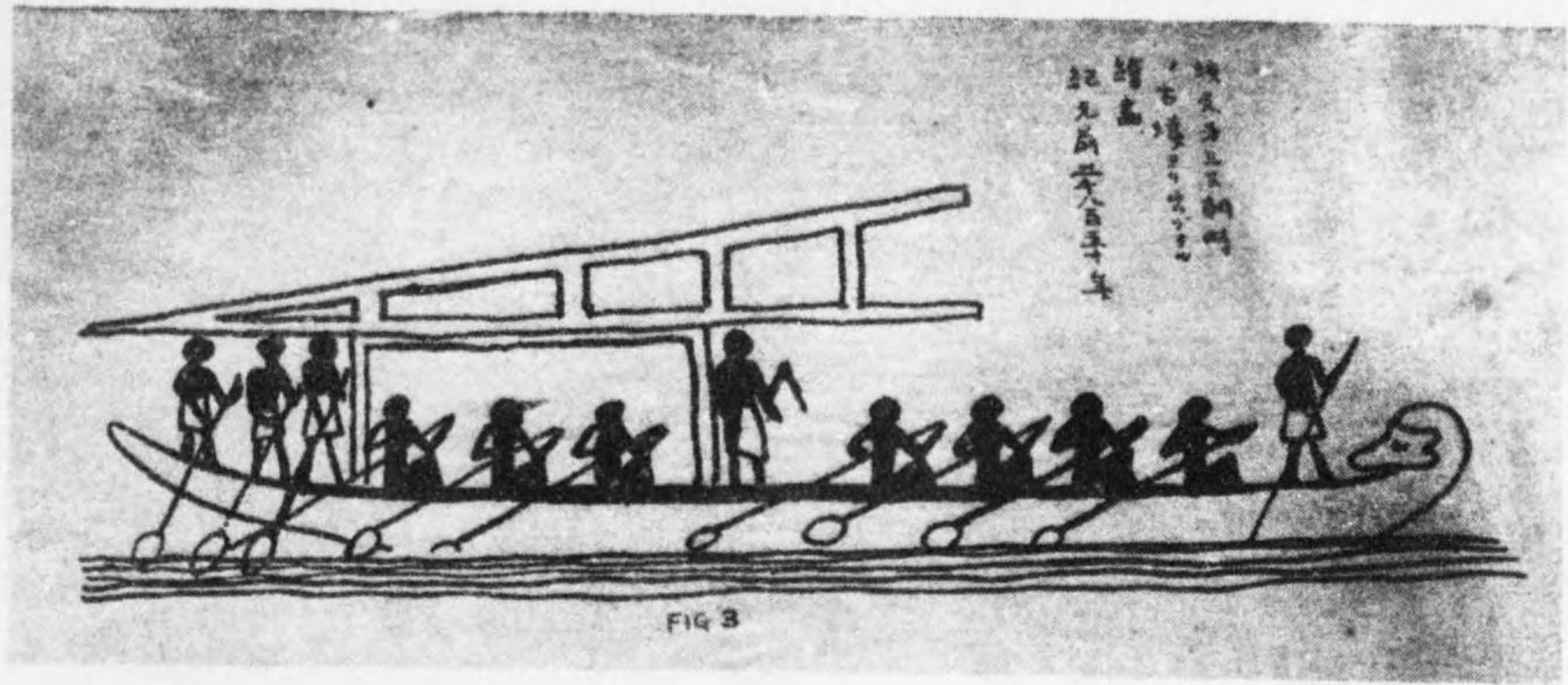
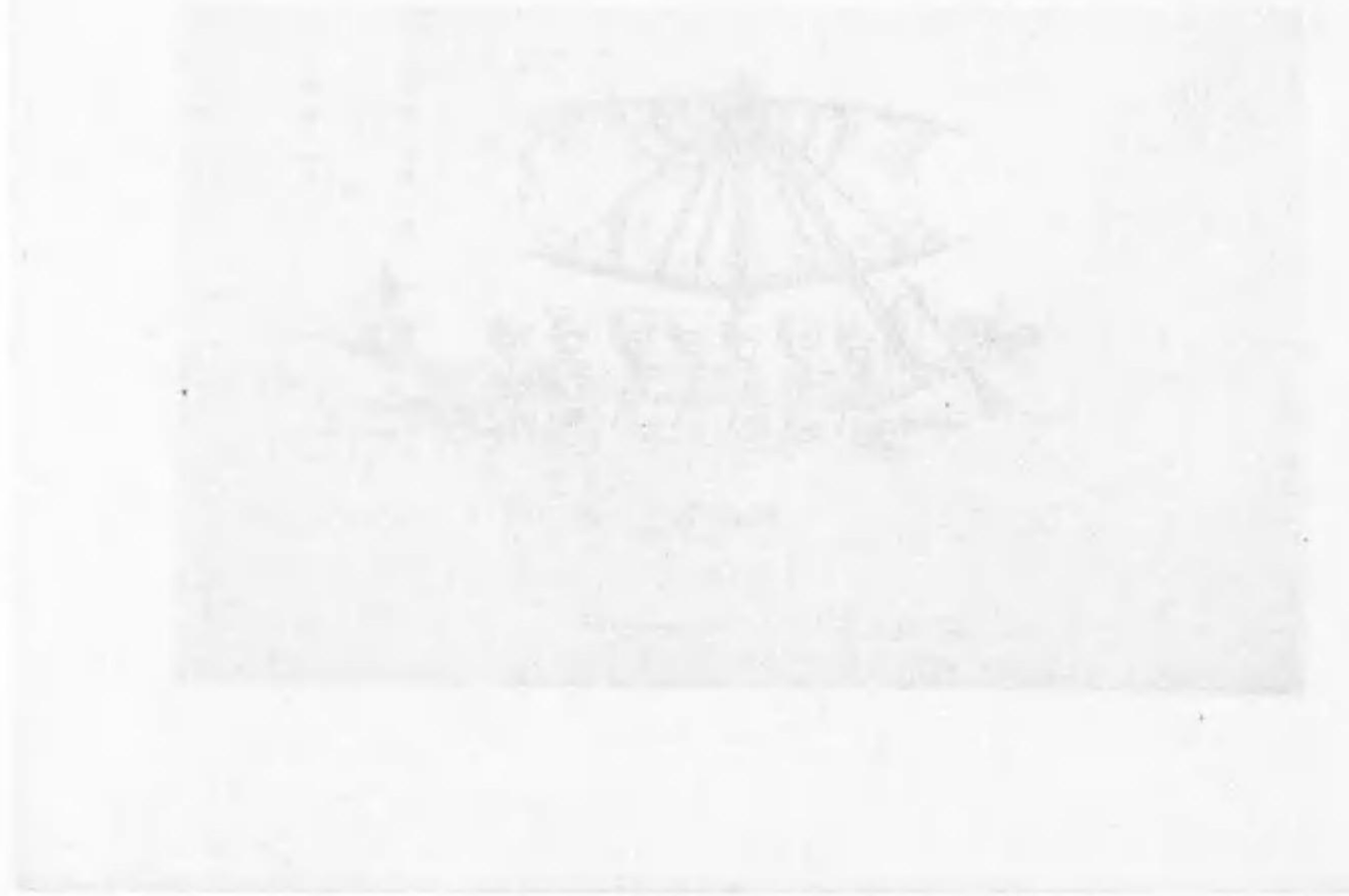
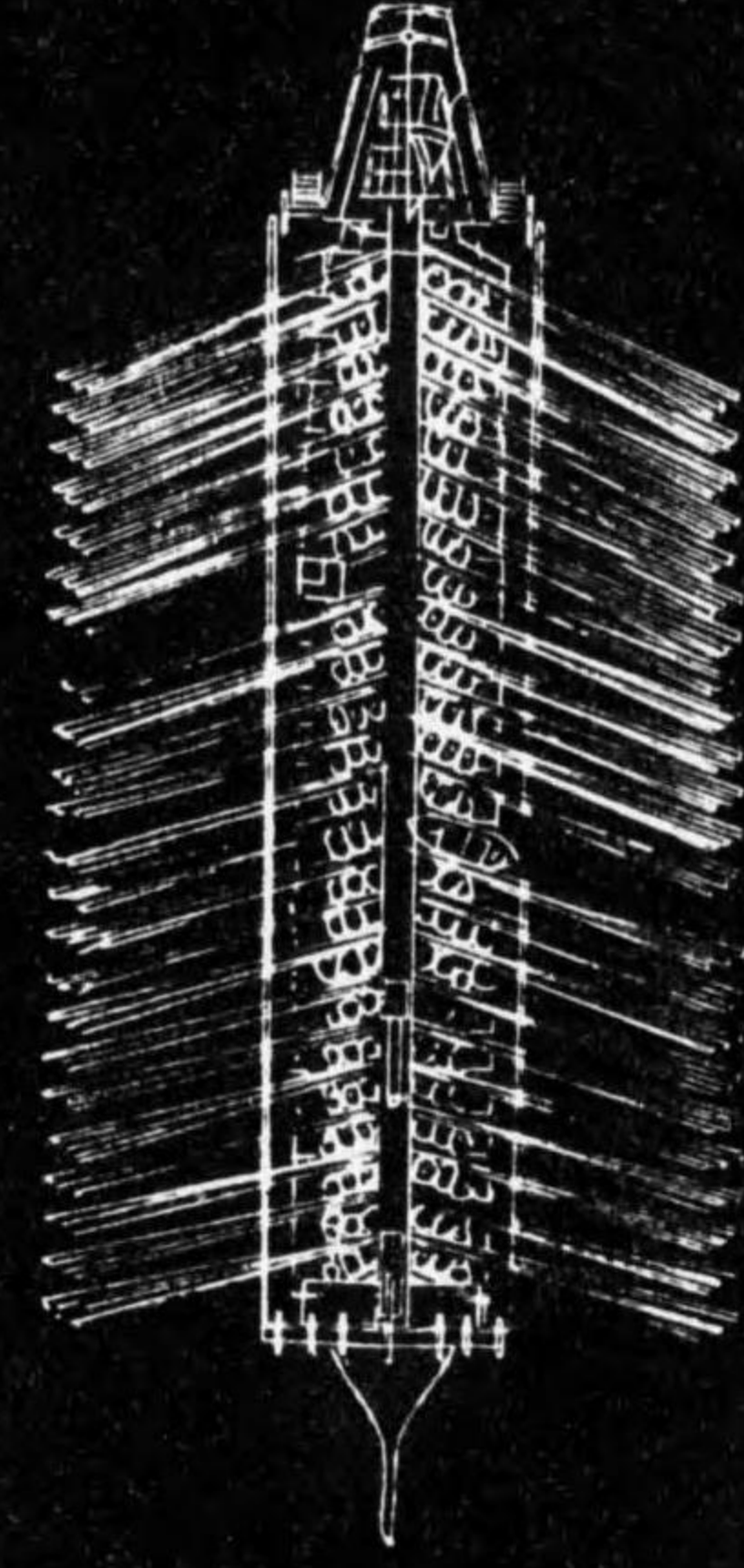
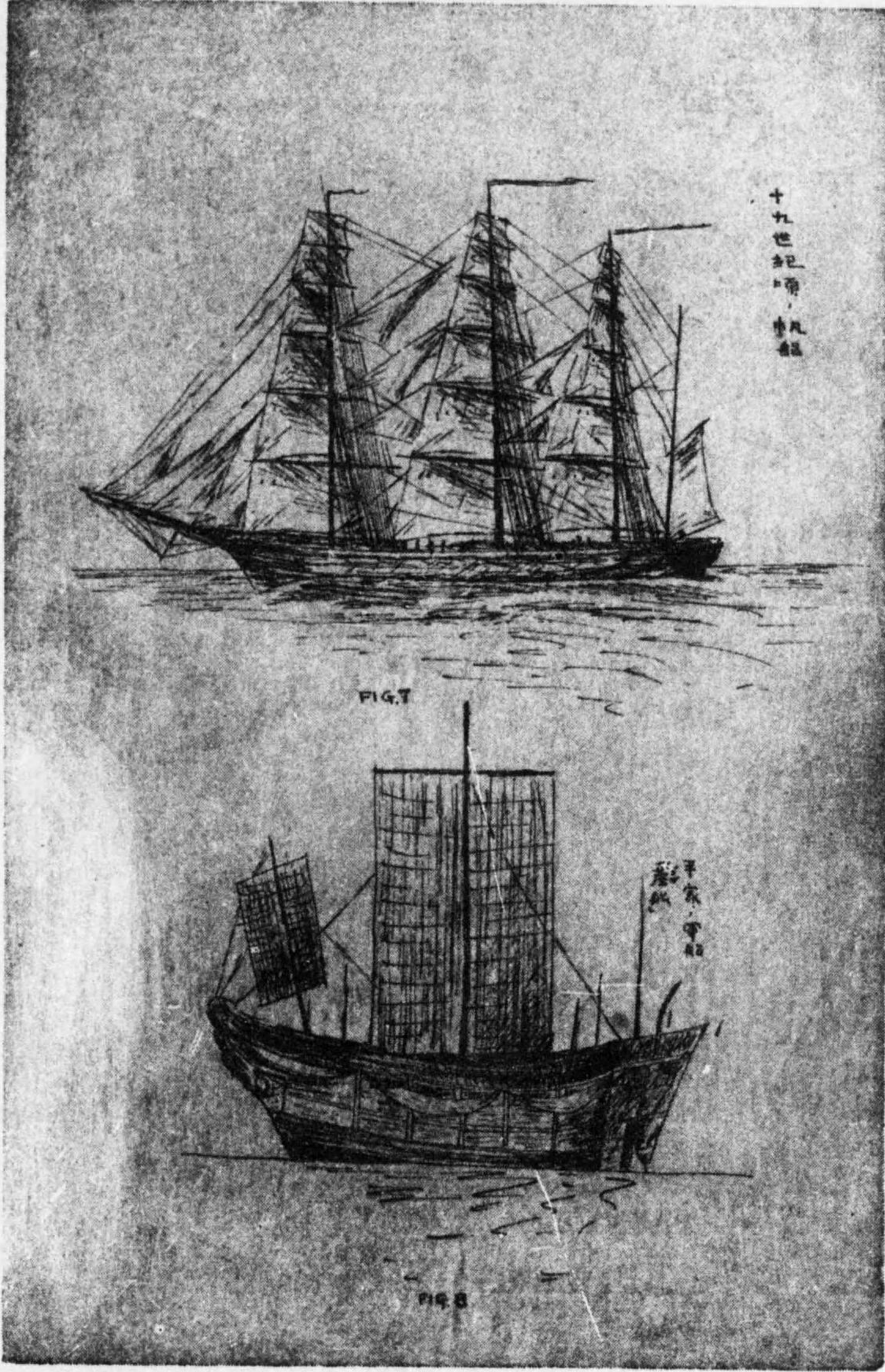


FIG 5

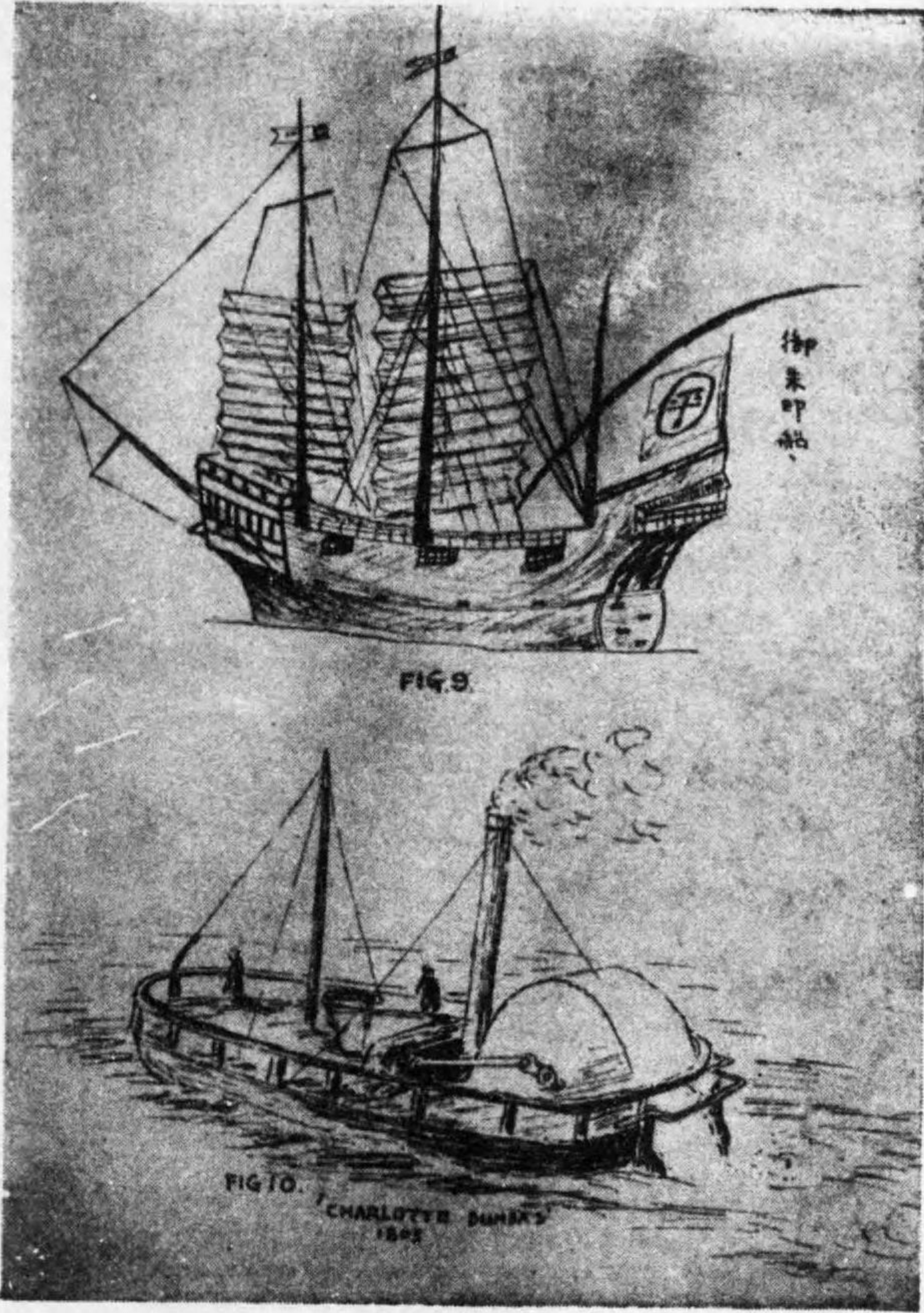
希臘時代，船





十九世紀
帆船

中國
帆船





SHIPS OF HIS MAJESTY'S NAVY ORDERED PRIOR TO THE WAR

(FOR DESCRIPTION SEE PAGE 681)

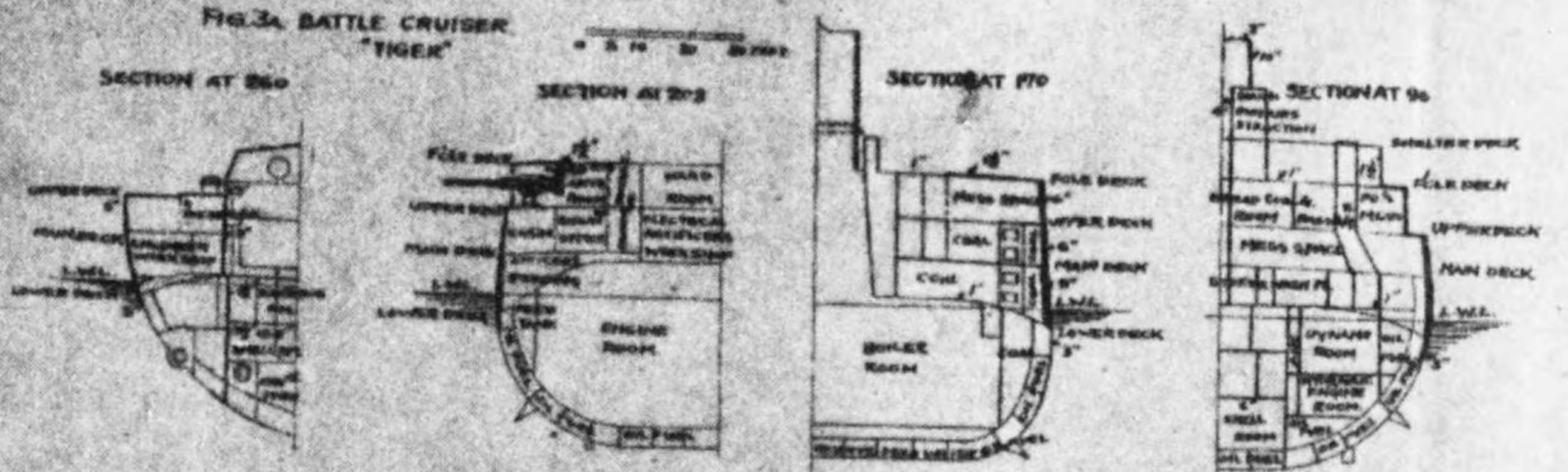


FIG. 3. BATTLE CRUISER 'TIGER'
LENGTH 500 FT.
BREADTH 70 FT.
DISPLACEMENT 13,700 TONS
DISPLACEMENT (BURIED) 15,000 TONS
SPEED 27.5 KNOTS
ARMAMENT TWO 12-IN. GUNS, ONE 6-IN. GUN, ONE 3-IN. GUN, ONE 2-IN. T. T.

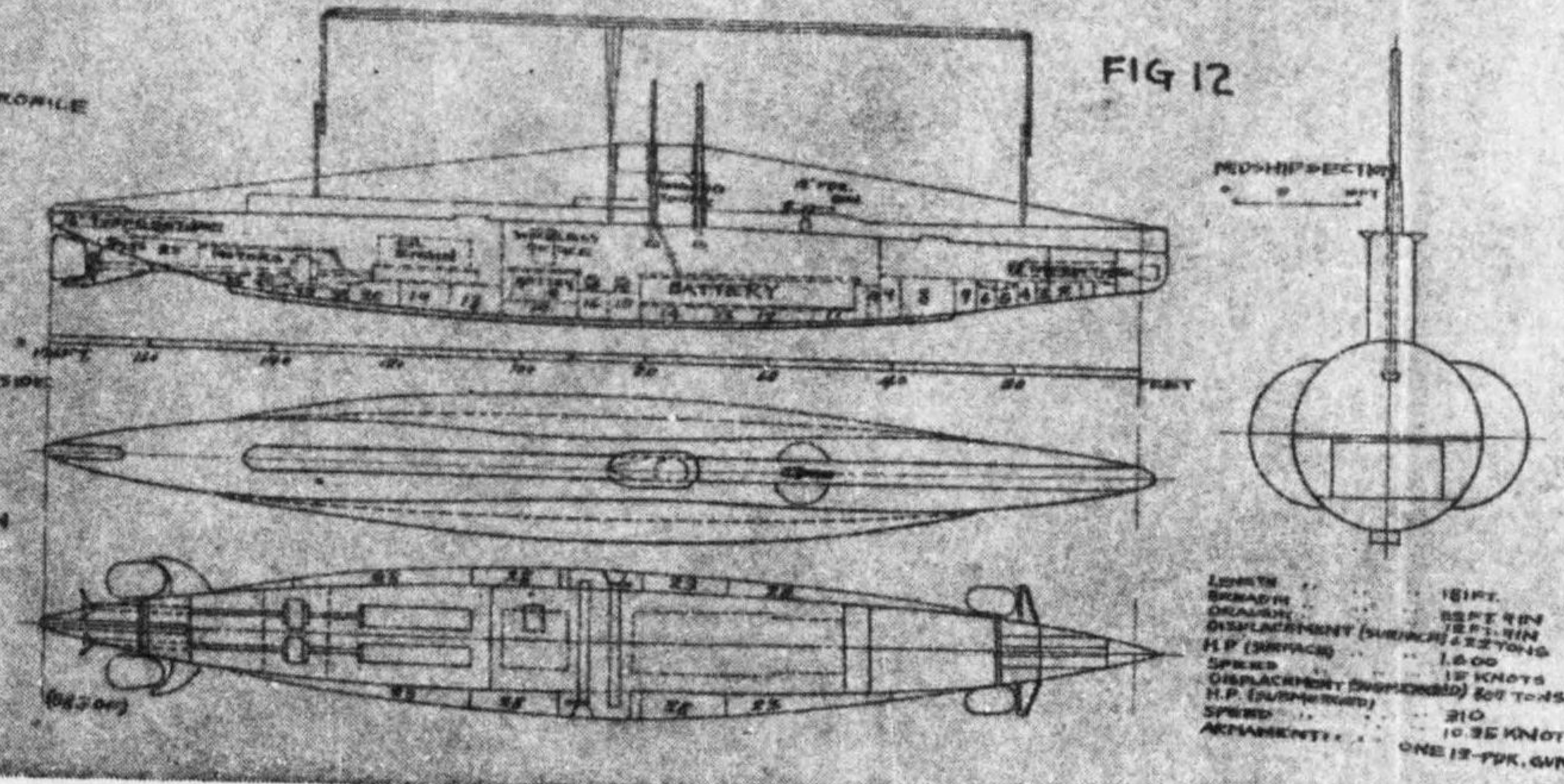
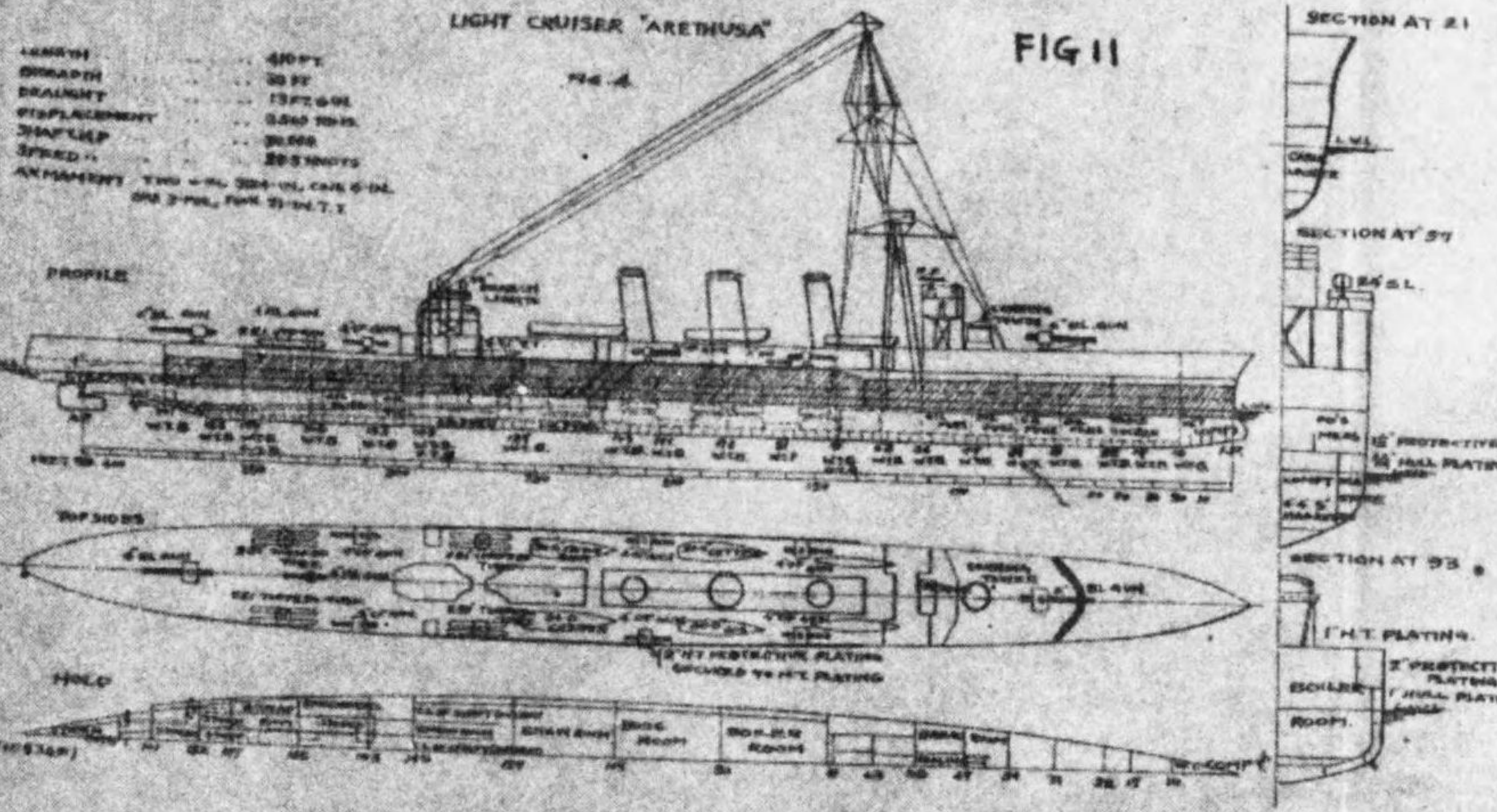


FIG. 12
LENGTH 181 FT.
BREADTH 28 FT. 6 IN.
DISPLACEMENT (BURIED) 15,000 TONS
DISPLACEMENT (SURFACE) 13,000 TONS
SPEED 17 KNOTS
DISPLACEMENT (SURFACE) 500 TONS
H.P. (SURFACE) 210
SPEED 10.5 KNOTS
ARMAMENT ONE 12-IN. GUN, ONE 6-IN. GUN, ONE 3-IN. GUN, ONE 2-IN. T. T.

NAME OF THE MASTERS NAVY ORDERED PRIOR TO THE

FIG. 13.

H.M.S. BATTLE CRUISER "HOOD."

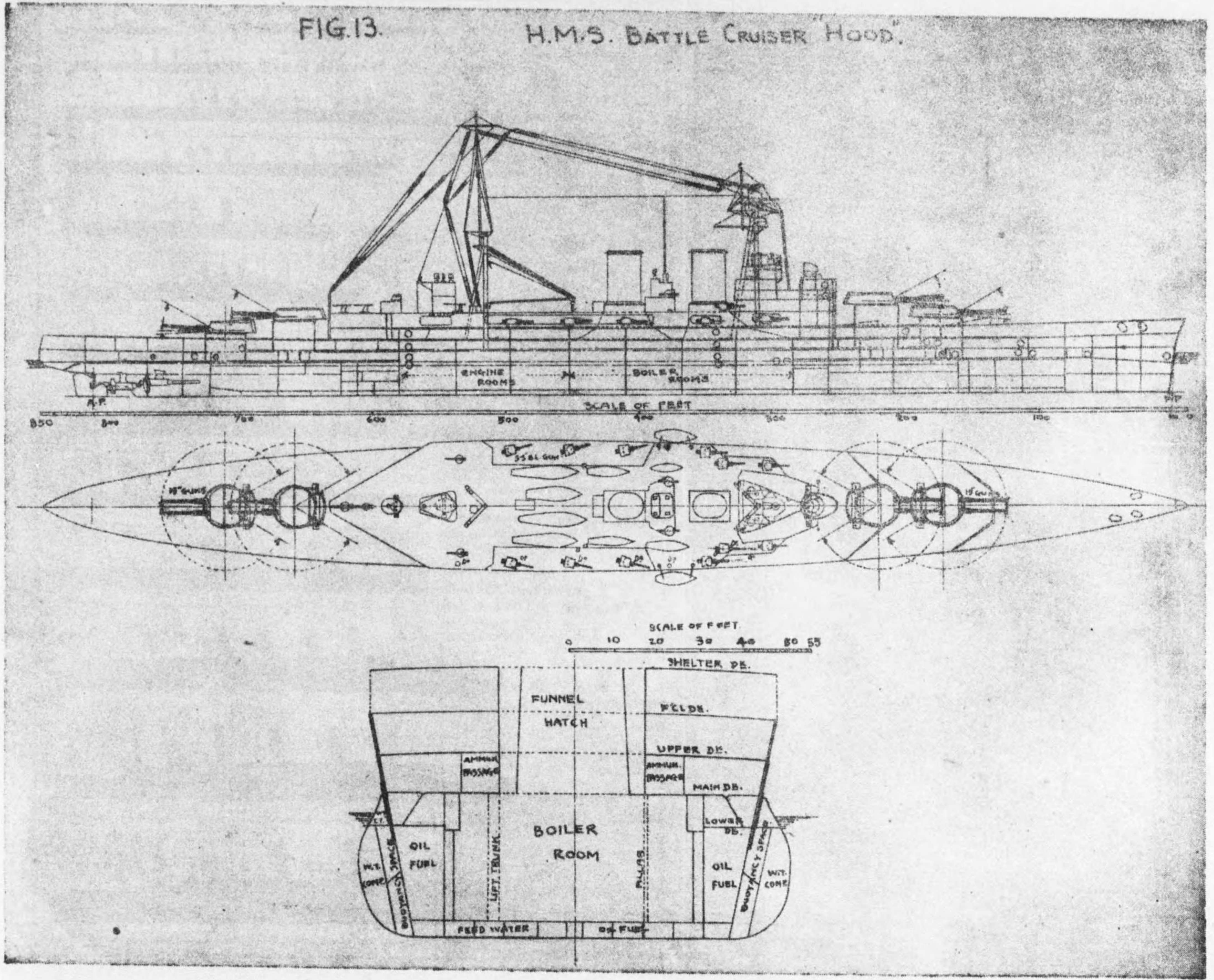
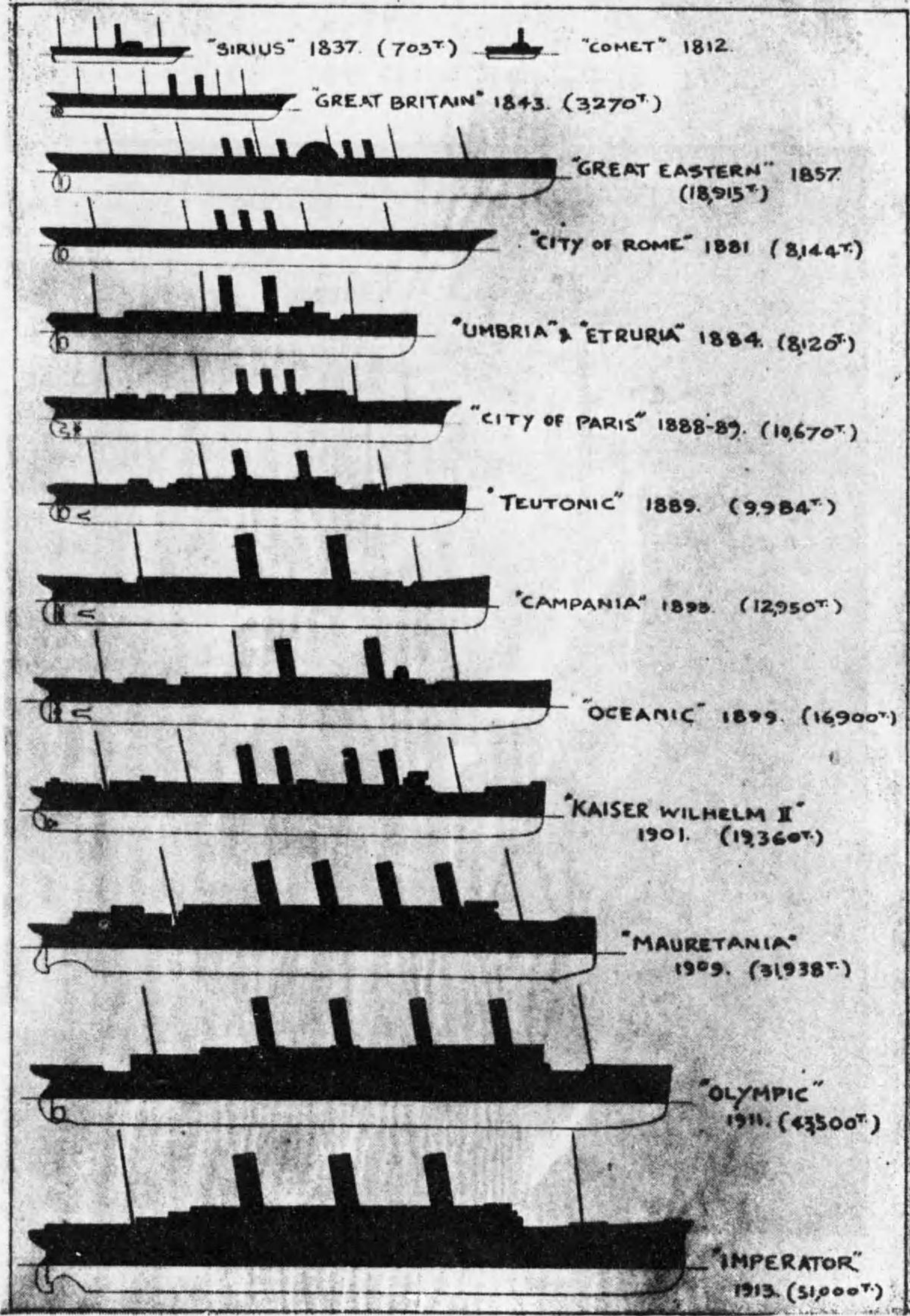
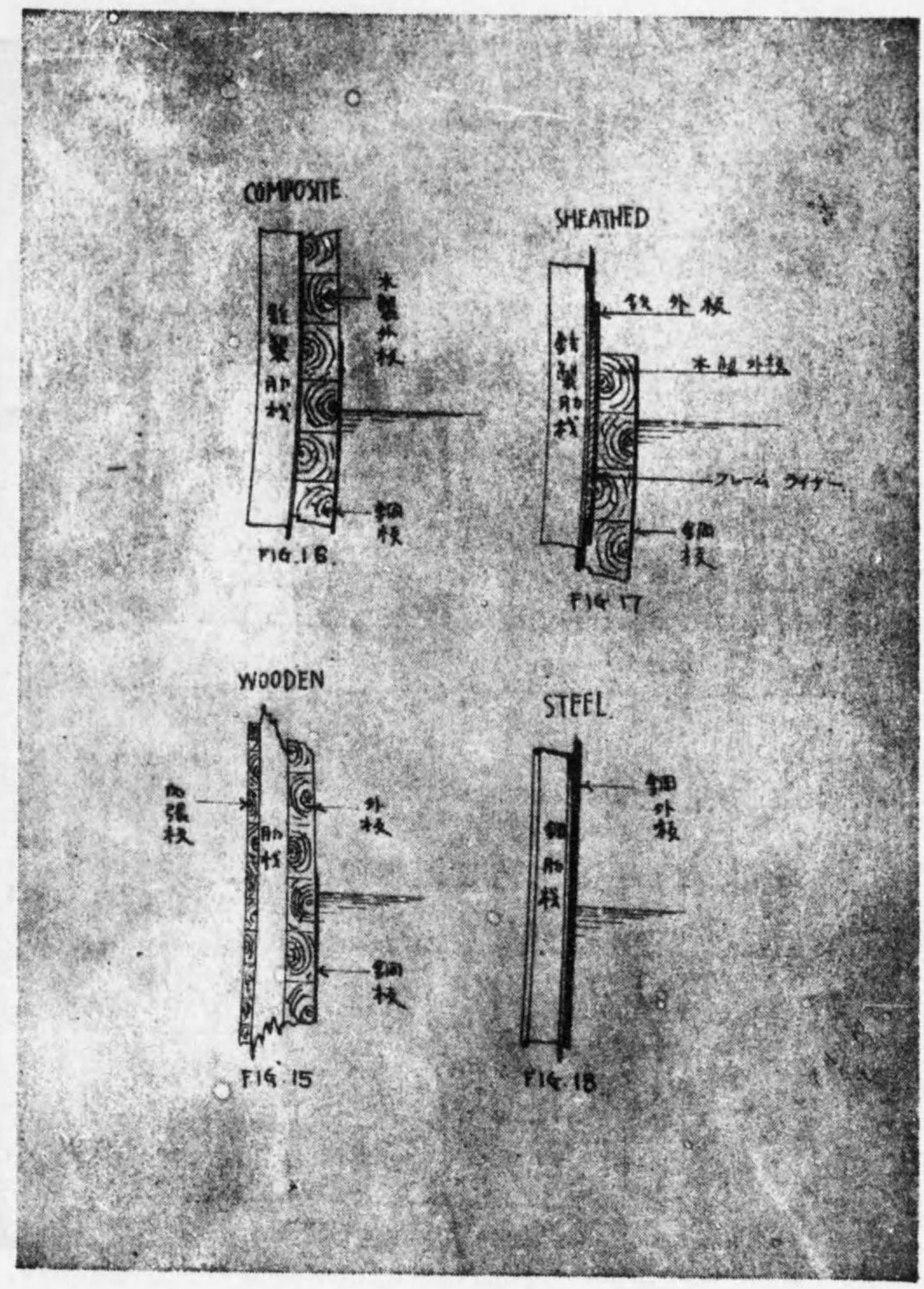


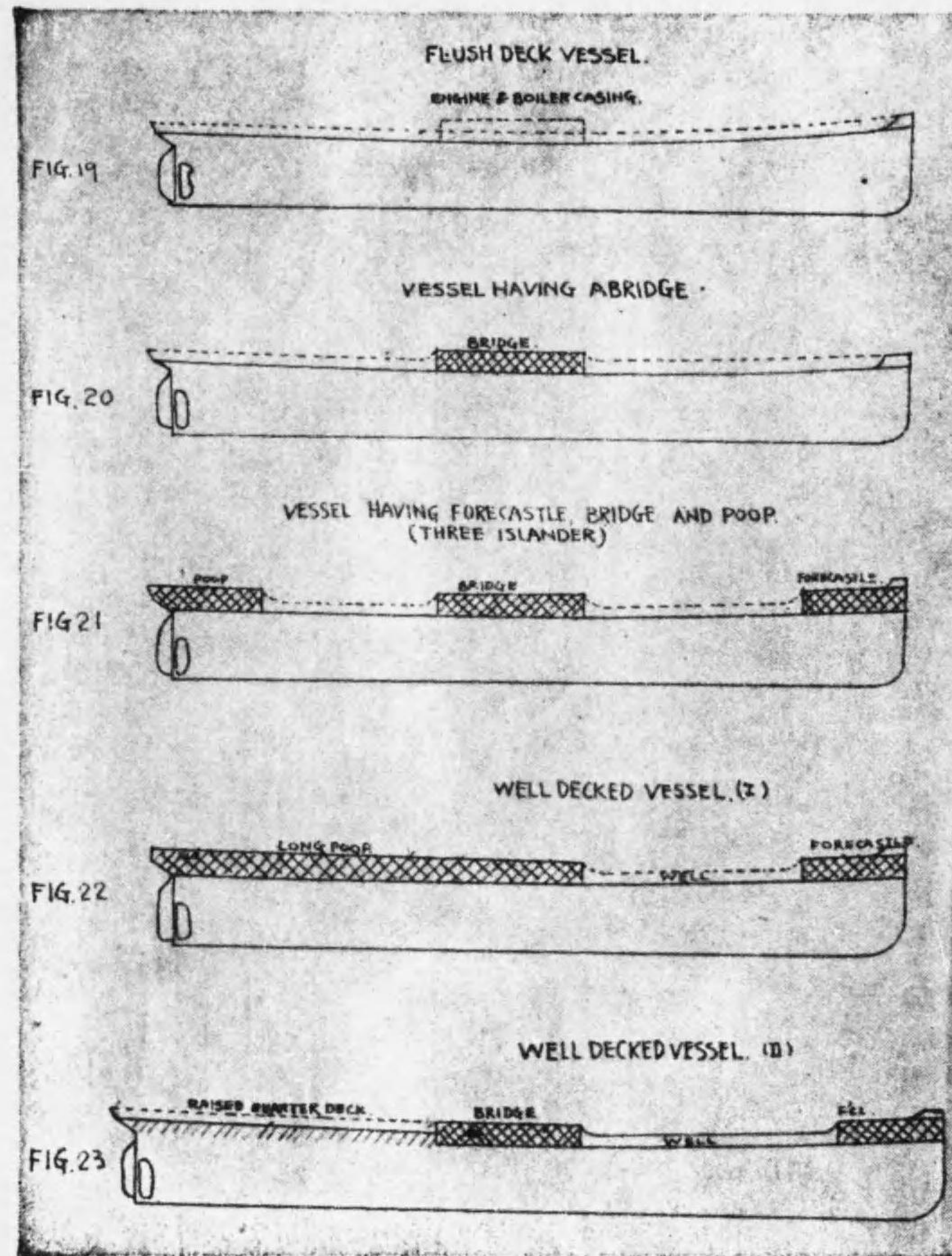
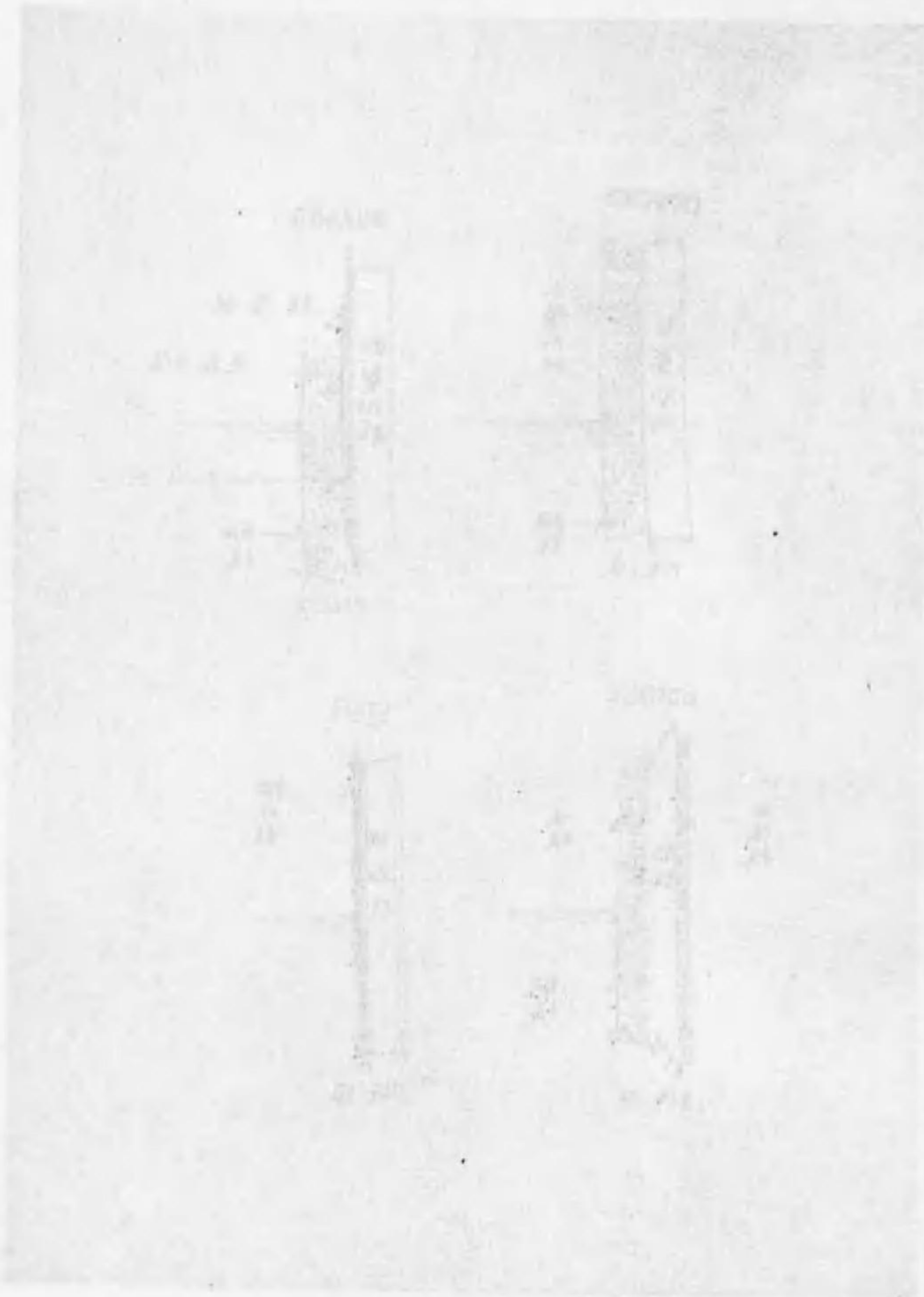
FIG. 14.



No. 212

1. 鋼筋混凝土 (Steel Reinforced Concrete)
 2. 鋼筋水泥 (Steel Reinforced Cement)
 3. 鋼筋磚 (Steel Reinforced Brick)
 4. 鋼筋木 (Steel Reinforced Wood)
 5. 鋼筋土 (Steel Reinforced Earth)
 6. 鋼筋石 (Steel Reinforced Stone)
 7. 鋼筋砂 (Steel Reinforced Sand)
 8. 鋼筋灰 (Steel Reinforced Ash)
 9. 鋼筋渣 (Steel Reinforced Slag)
 10. 鋼筋粉 (Steel Reinforced Powder)
 11. 鋼筋泥 (Steel Reinforced Mud)
 12. 鋼筋油 (Steel Reinforced Oil)
 13. 鋼筋水 (Steel Reinforced Water)
 14. 鋼筋氣 (Steel Reinforced Gas)
 15. 鋼筋電 (Steel Reinforced Electricity)
 16. 鋼筋磁 (Steel Reinforced Magnetism)
 17. 鋼筋熱 (Steel Reinforced Heat)
 18. 鋼筋光 (Steel Reinforced Light)
 19. 鋼筋力 (Steel Reinforced Force)
 20. 鋼筋能 (Steel Reinforced Energy)







WELL DECKED VESSEL. (III)

FIG. 24



PART AWNING DECK VESSEL. (I)

FIG. 25



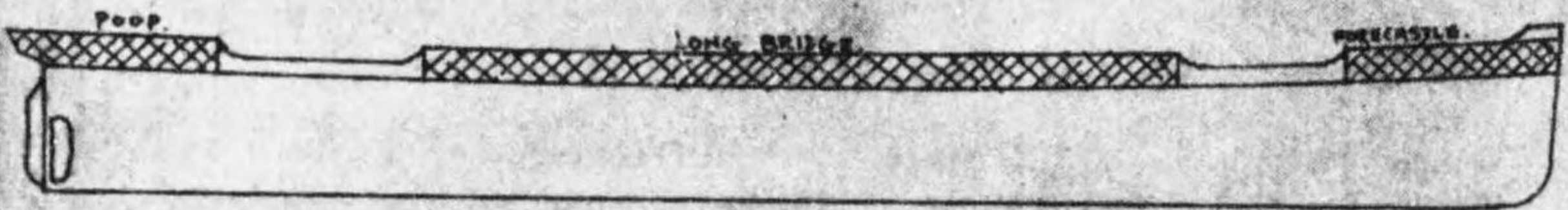
PART AWNING DECK VESSEL. (II)

FIG. 26



VESSEL HAVING FORECASTLE, LONG BRIDGE, AND POOP

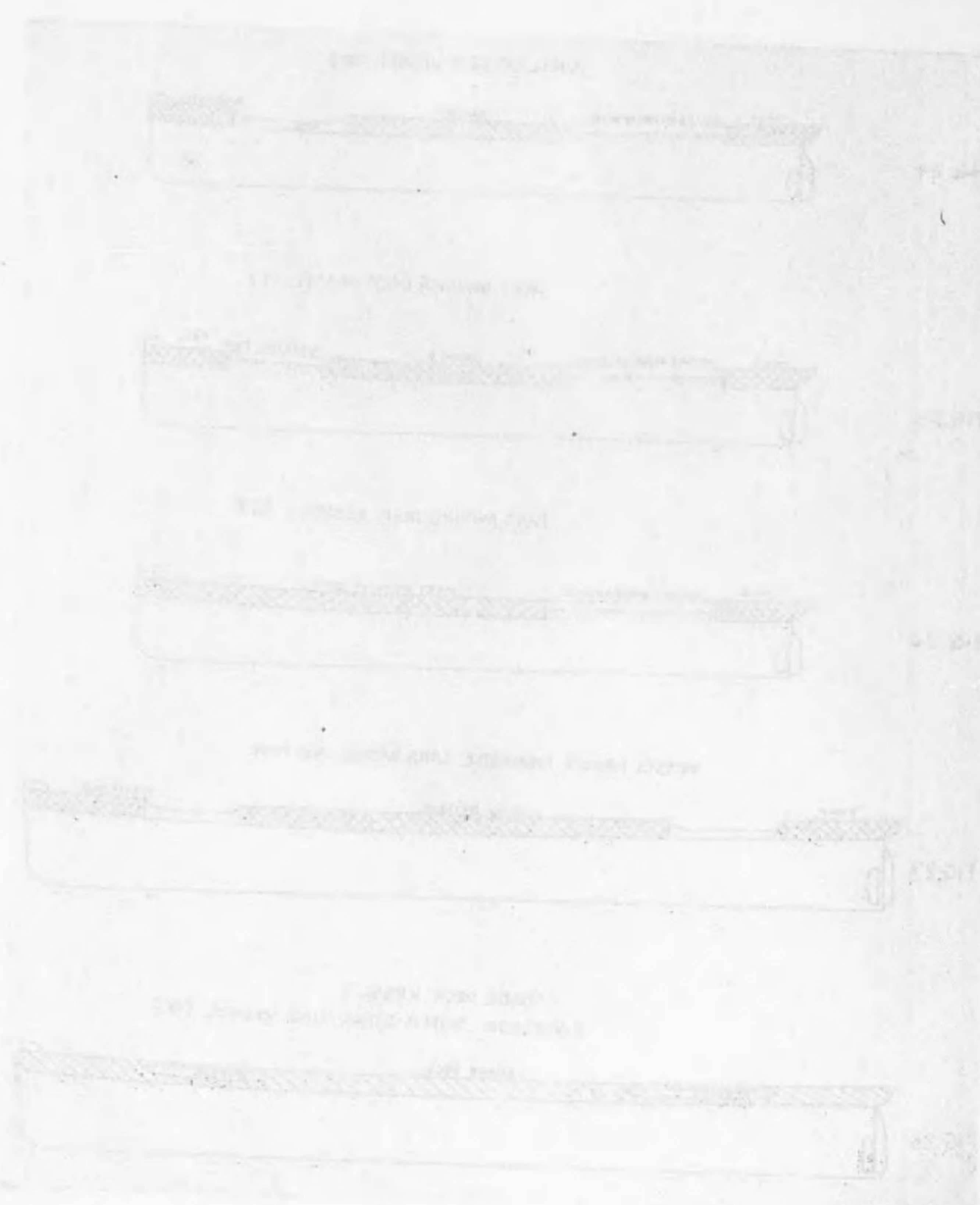
FIG. 27



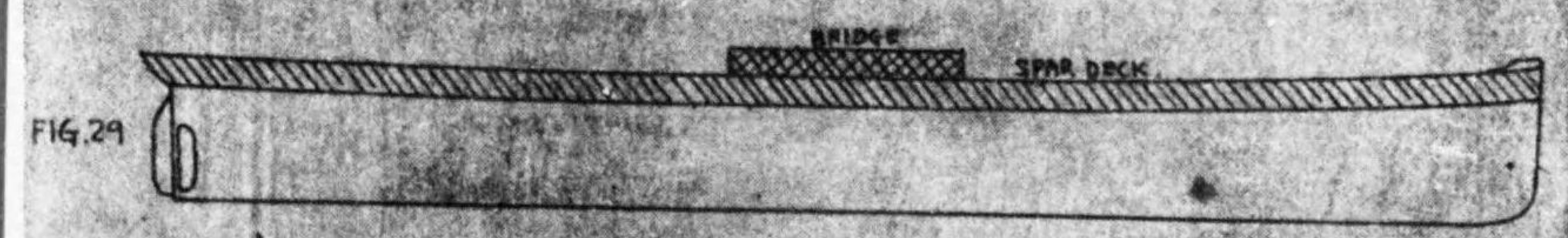
(SHADE DECK VESSEL.)
COMPLETE SUPER-STRUCTURE VESSEL. (IX)

FIG. 28

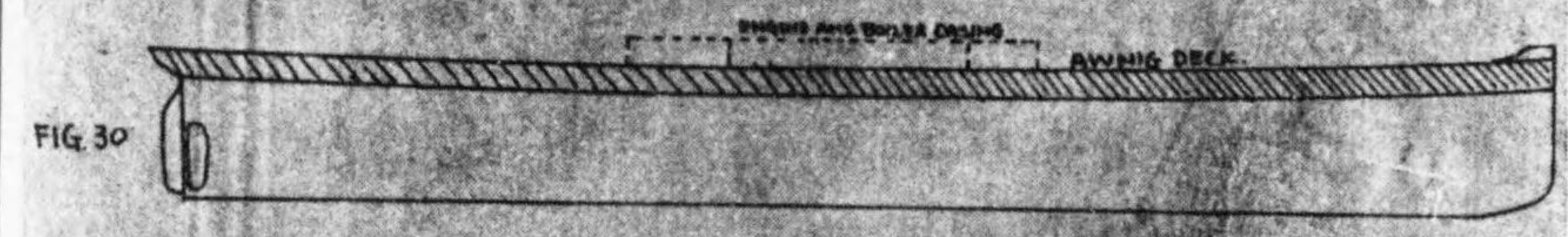




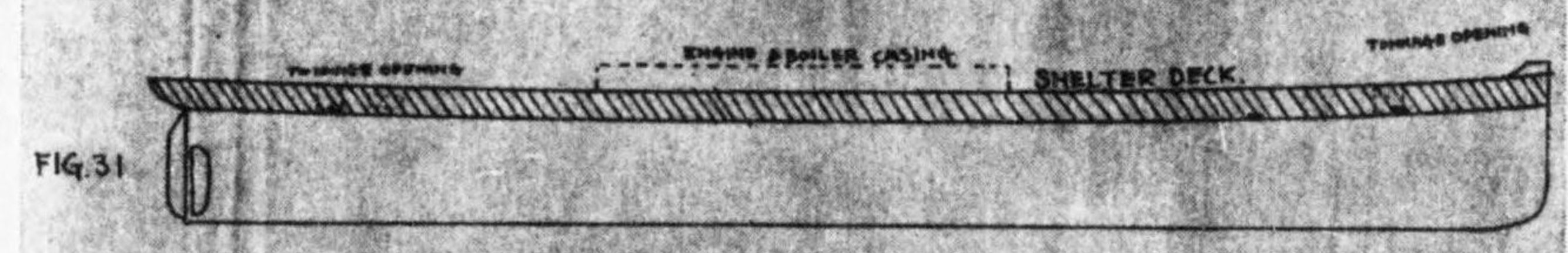
COMPLETE SUPER-STRUCTURE VESSEL (X)



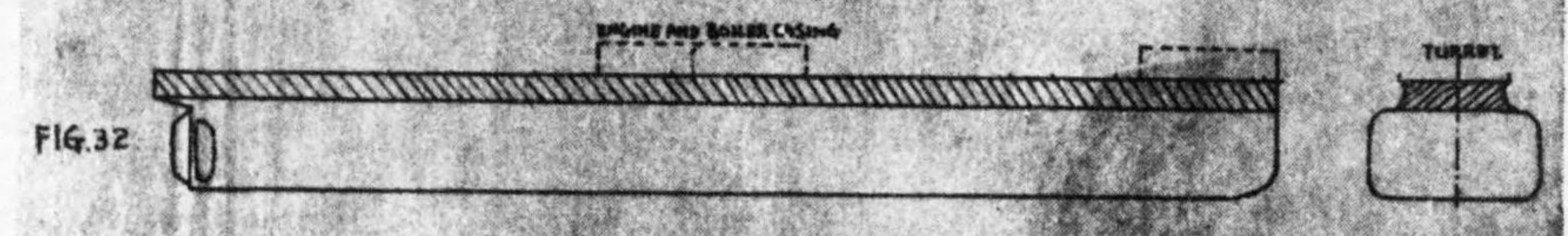
COMPLETE SUPER-STRUCTURE VESSEL (X)



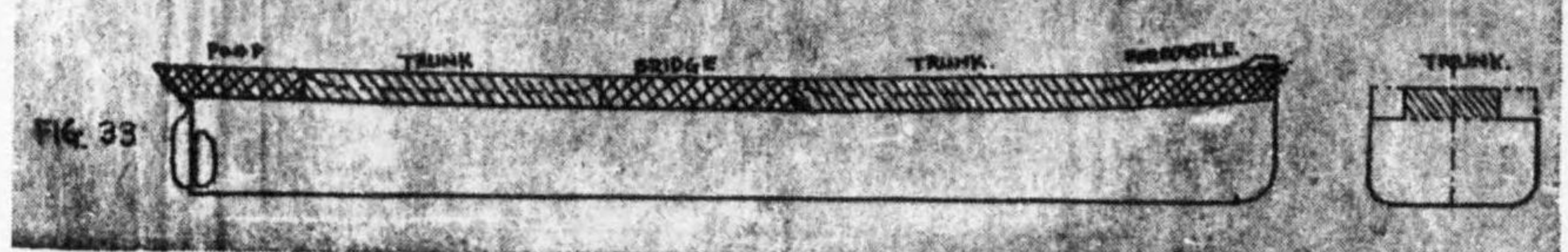
COMPLETE SUPER-STRUCTURE VESSEL (B)

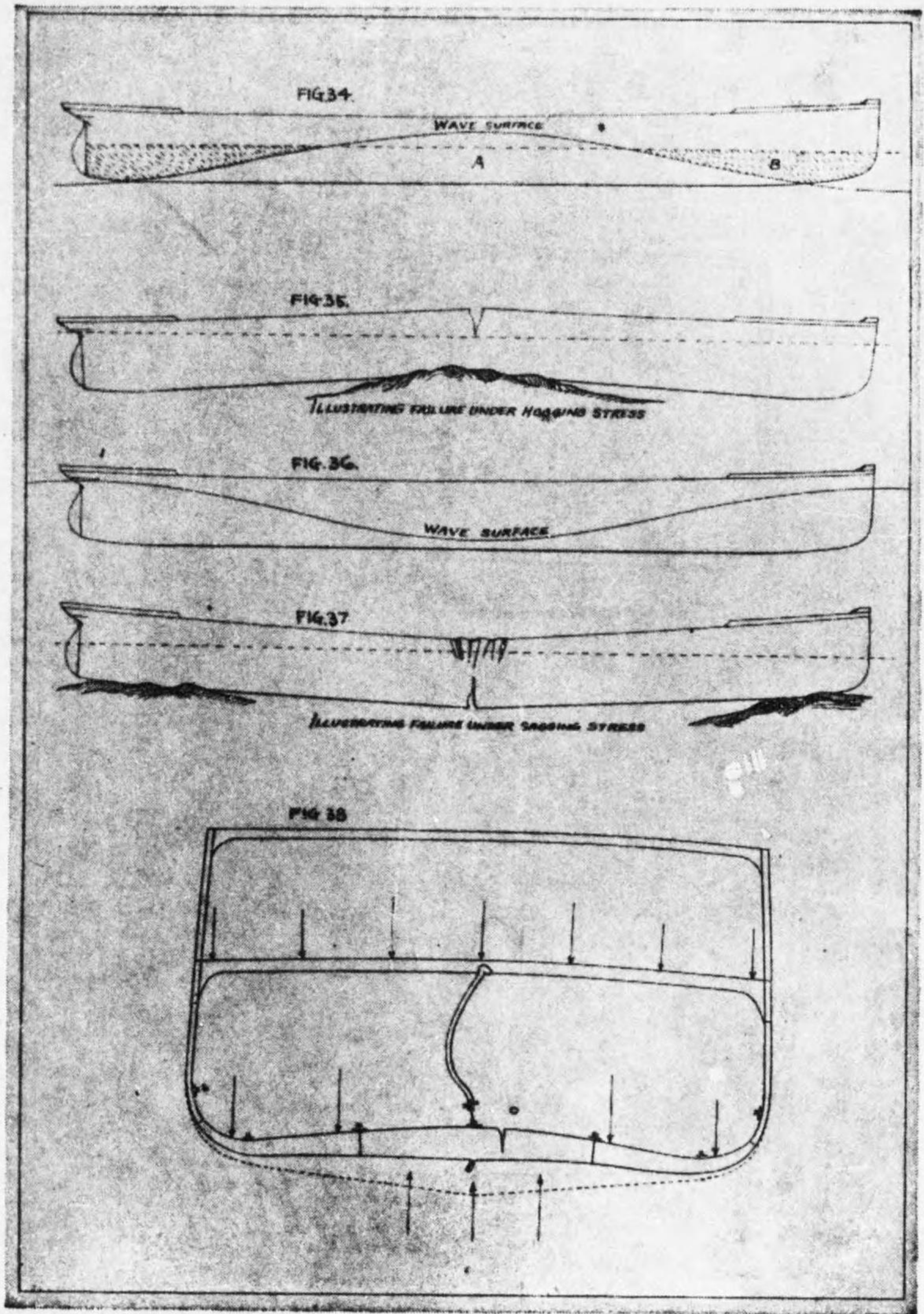
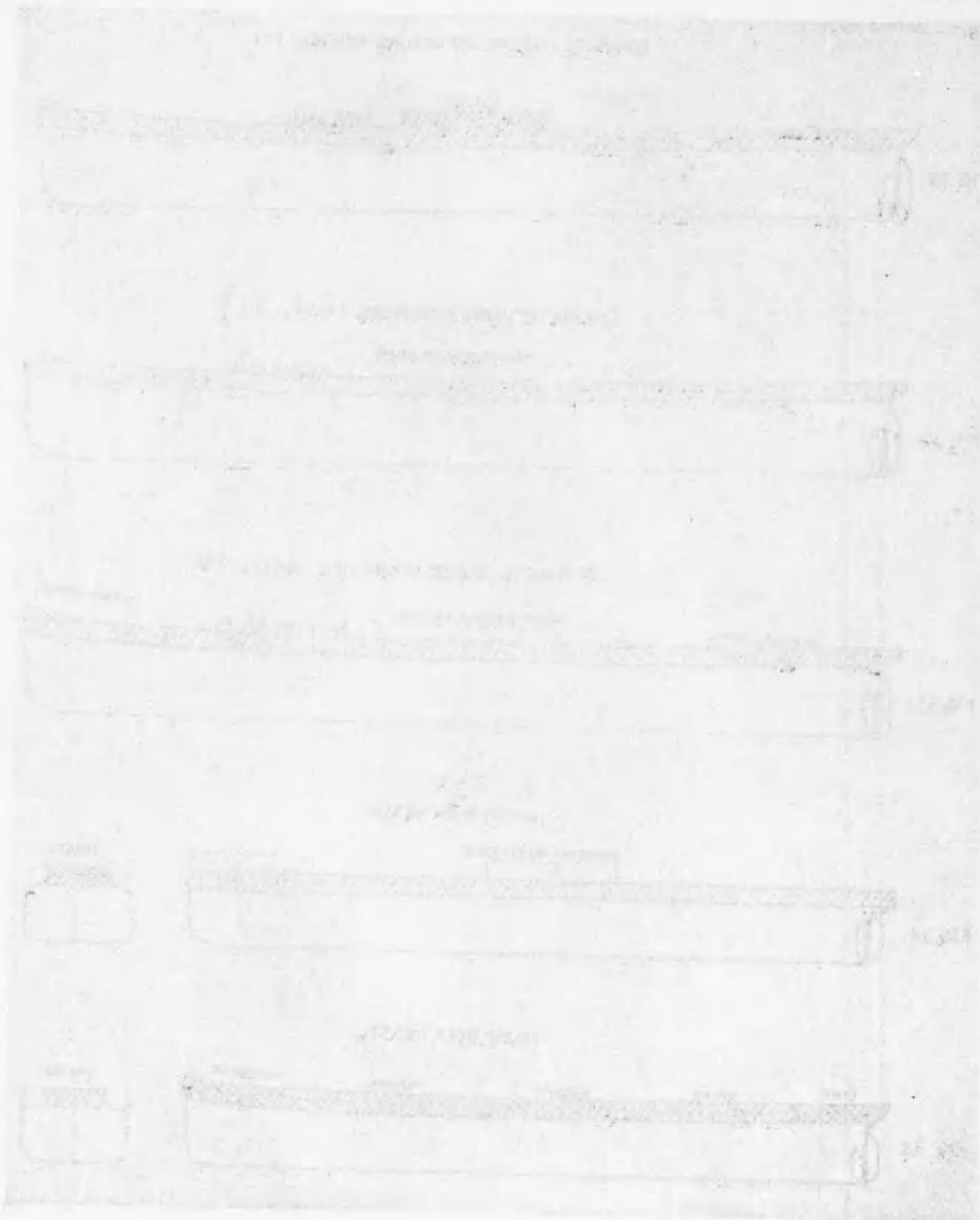


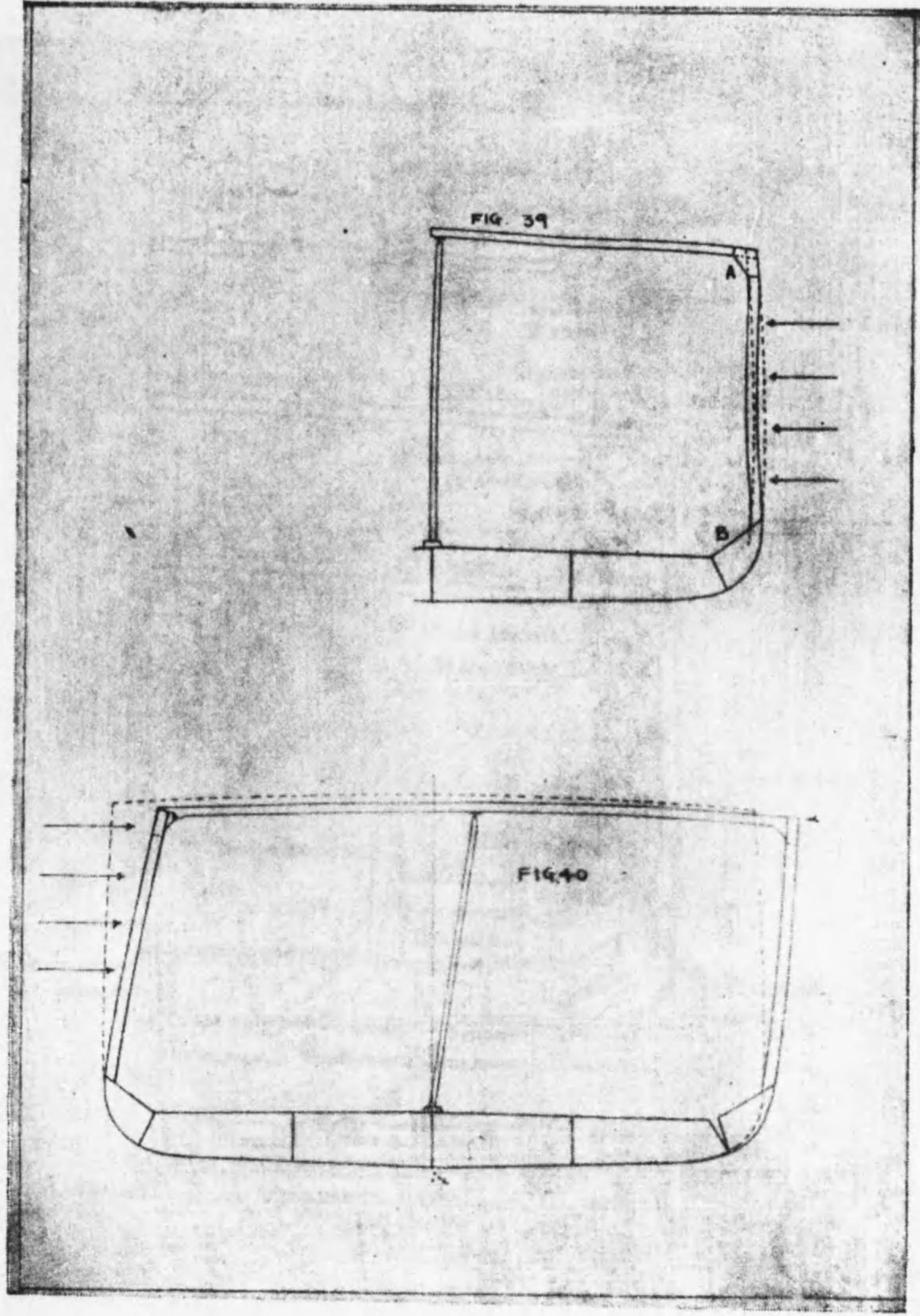
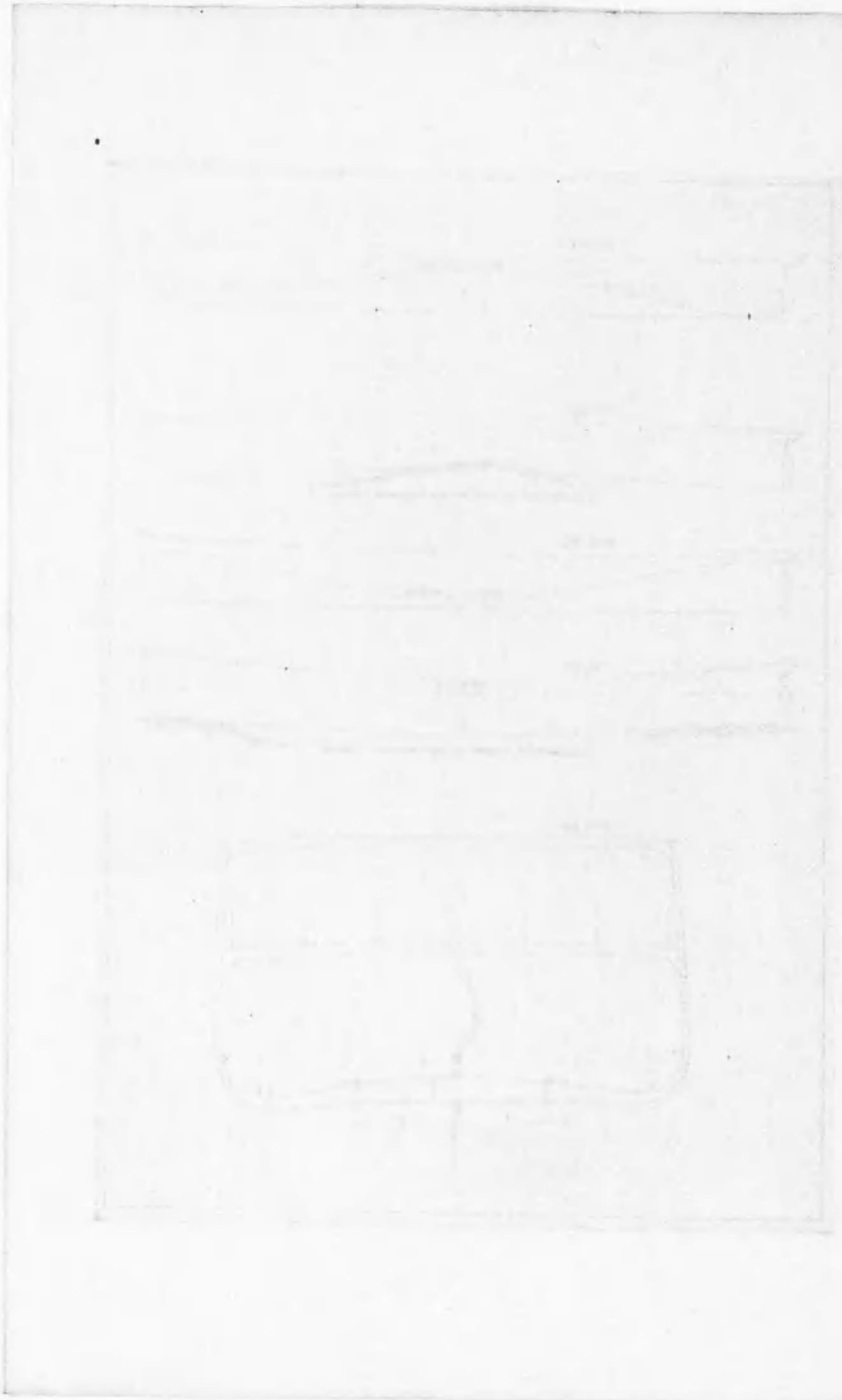
TURRET DECK VESSEL

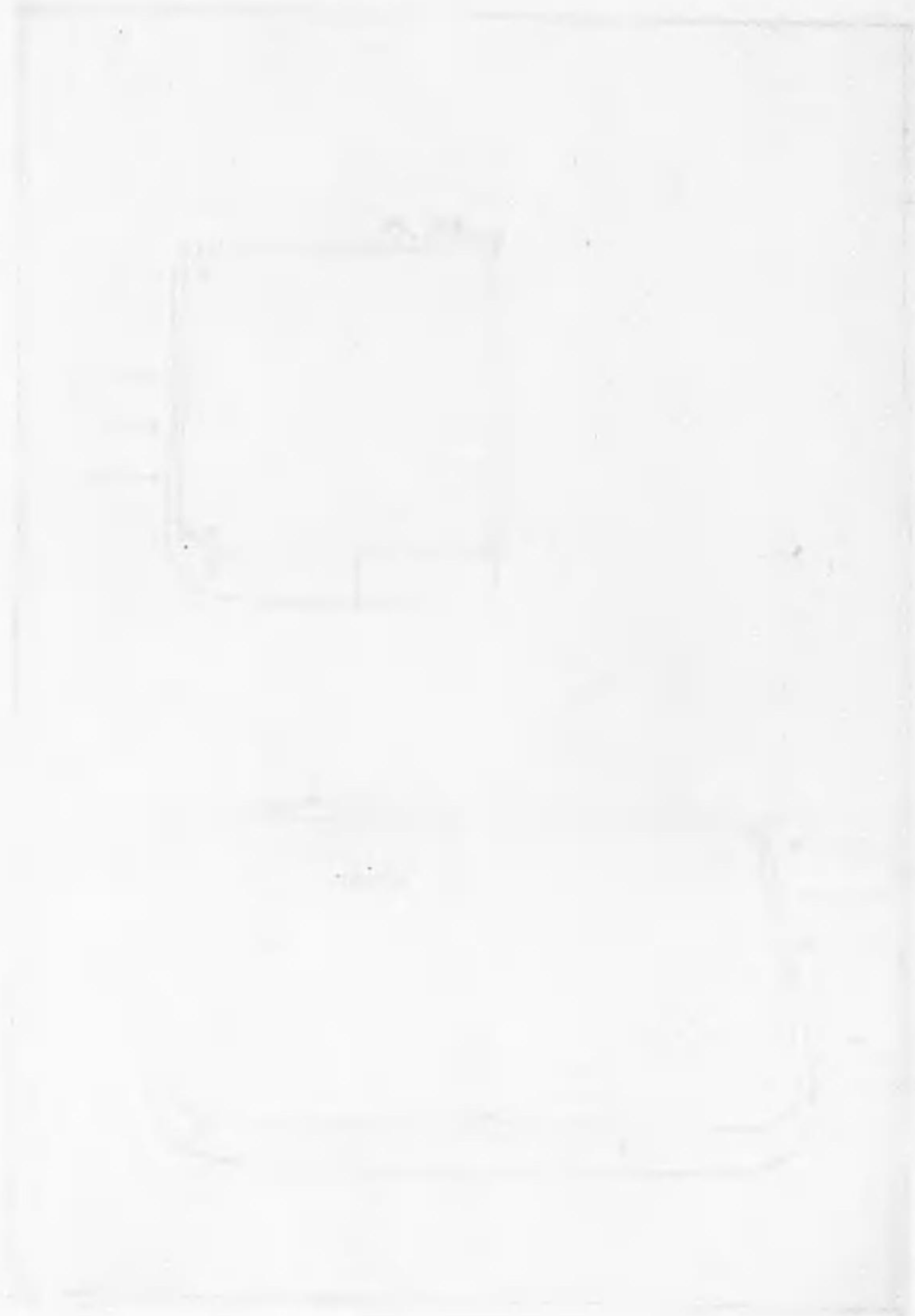


TRUNK DECK VESSEL









MIDSHIP SECTION OF A CARGO SHIP

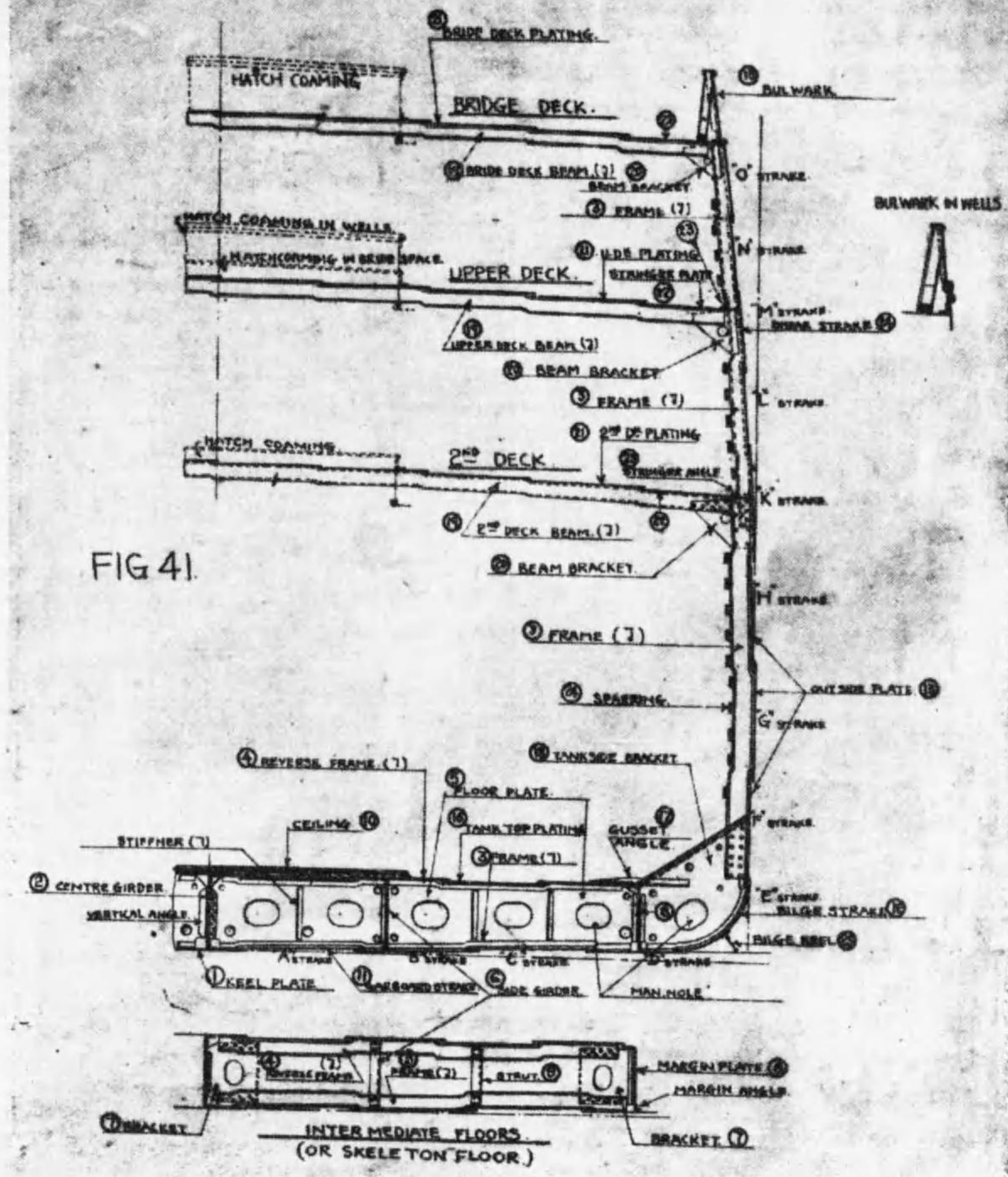


FIG 41

MIDSHIP-SECTION OF A WARSHIP.

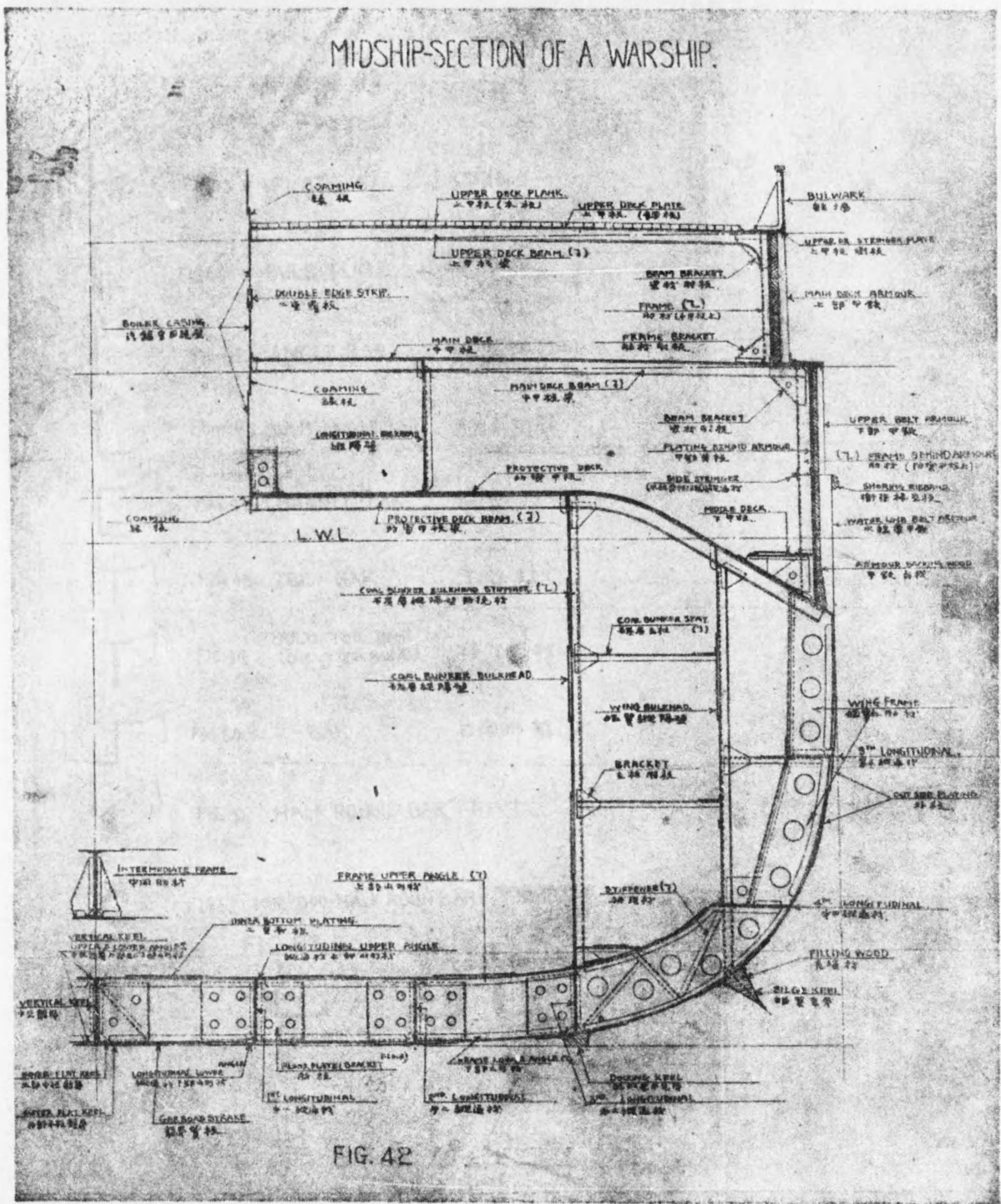


FIG. 42



FIG. 43. PLATE.

鋼板



FIG. 44. BULB PLATE.

球鋼板



FIG. 45. ANGLE BAR.

山形棧(鋼)



FIG. 46. BULB ANGLE BAR.

球山形棧



FIG. 47. CHANNEL BAR.

溝形棧



FIG. 48. TEE BAR.

丁形棧



FIG. 49. BULB TEE BAR (OR TEE BULB).

球丁形棧



FIG. 50. Z-BAR

乙字形棧



FIG. 51. HALF ROUND BAR

半圓棧



FIG. 52. HOLLOW HALF ROUND BAR

中空半圓棧

HATCH REST BAR (OR HATCH BAR).



1.

FIG. 53. TYZACK.

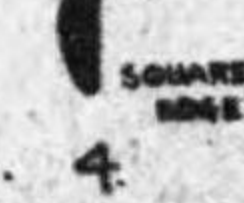


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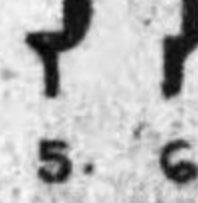
CONVEX (OR COPE) PATENT MOULDING.



3.

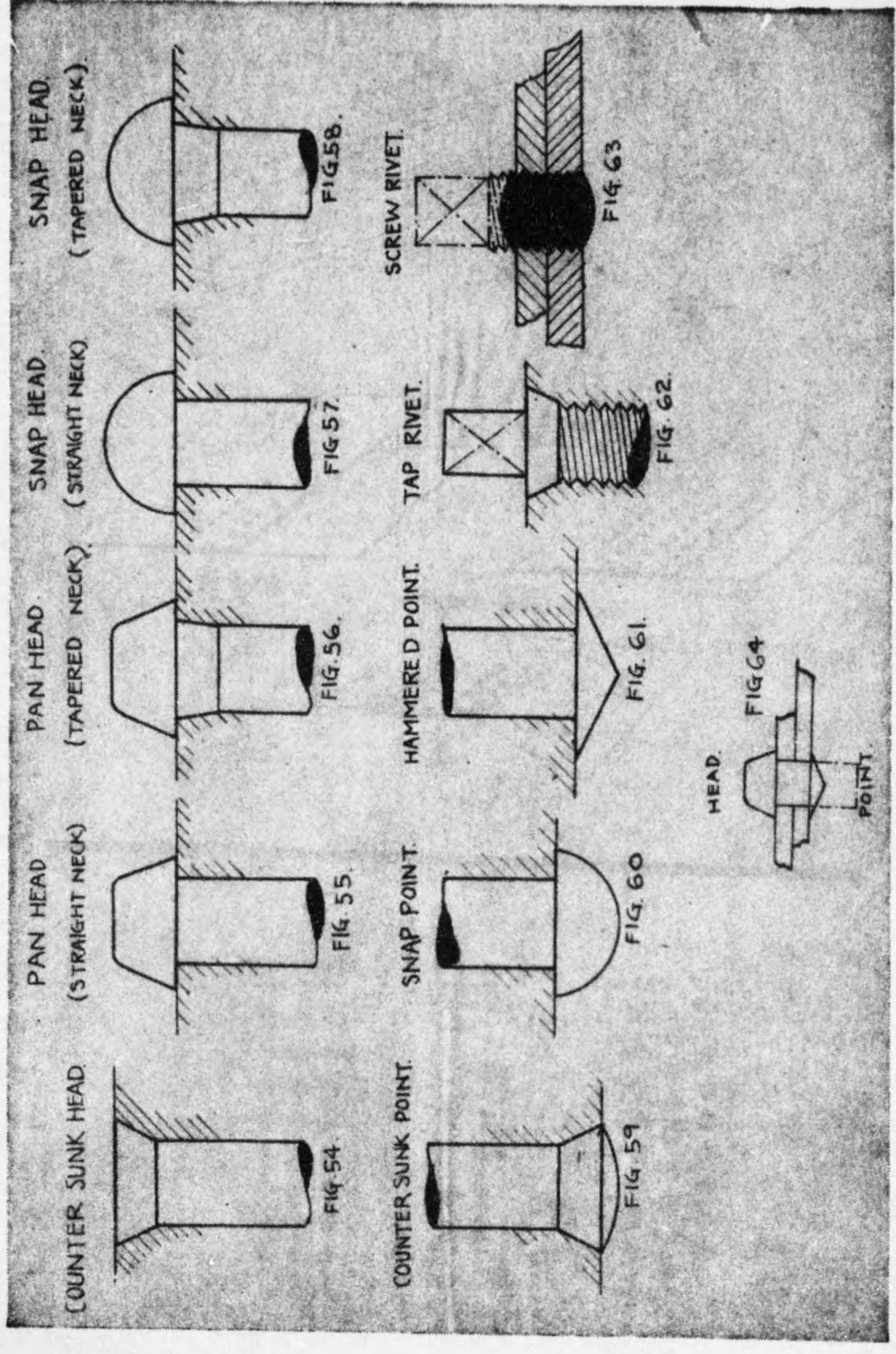
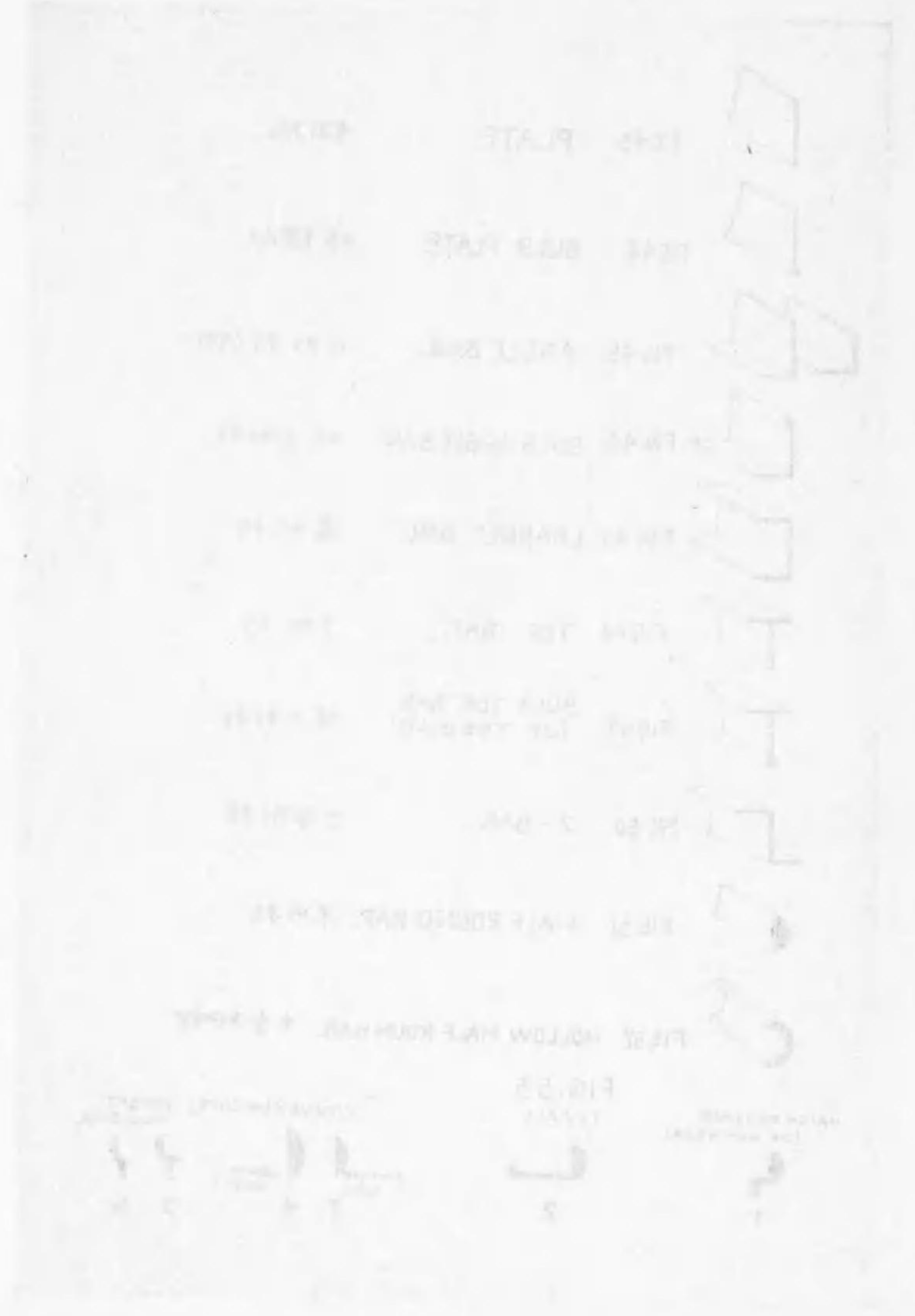


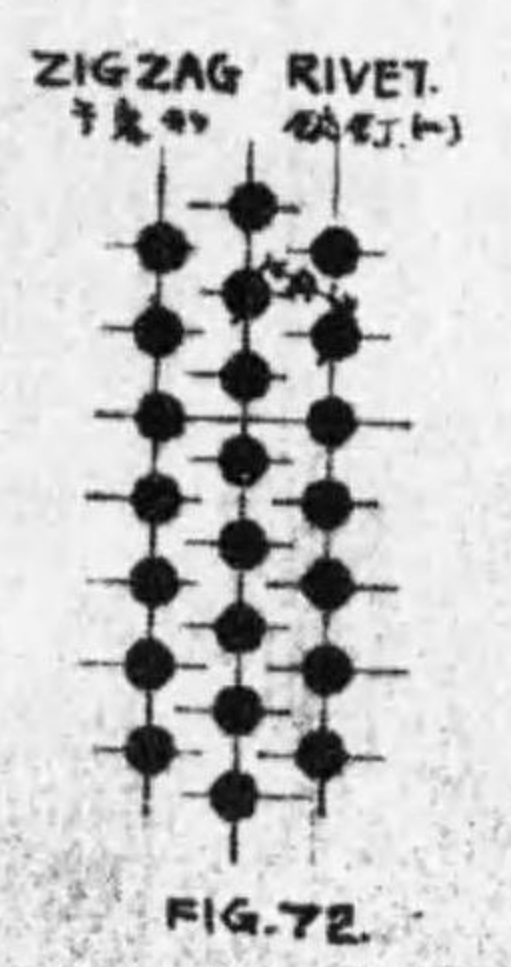
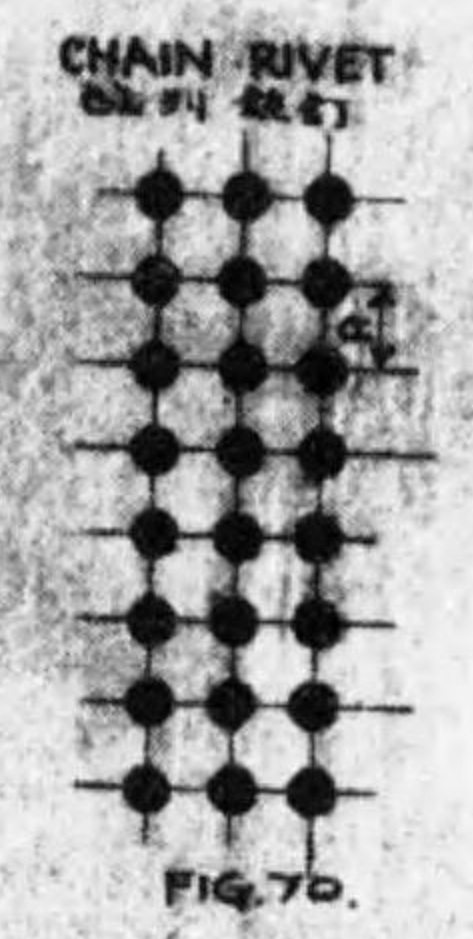
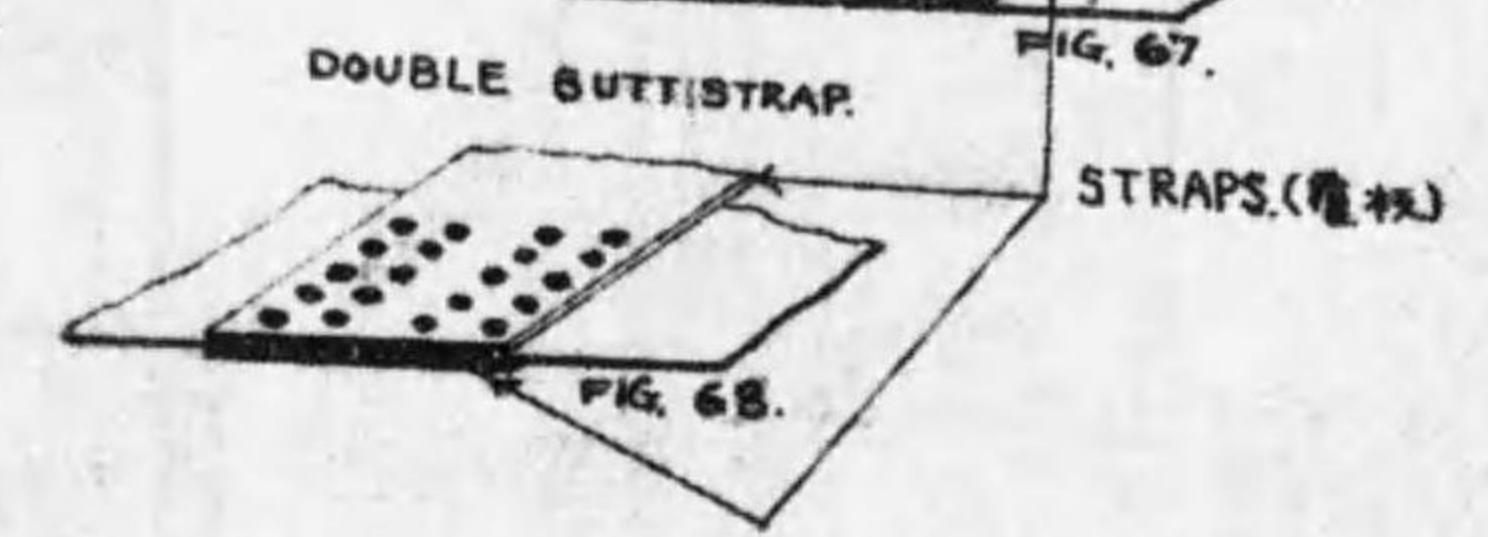
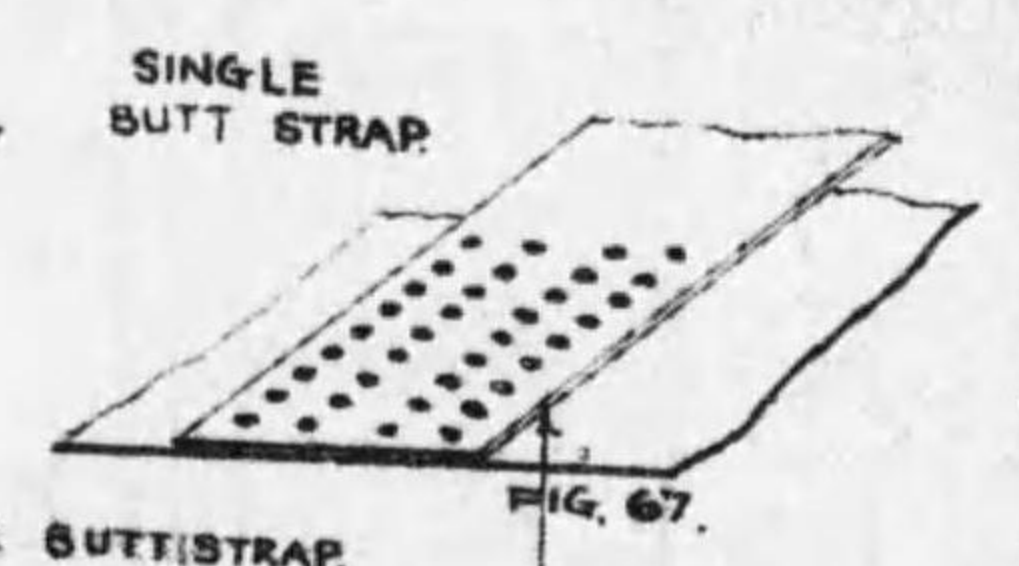
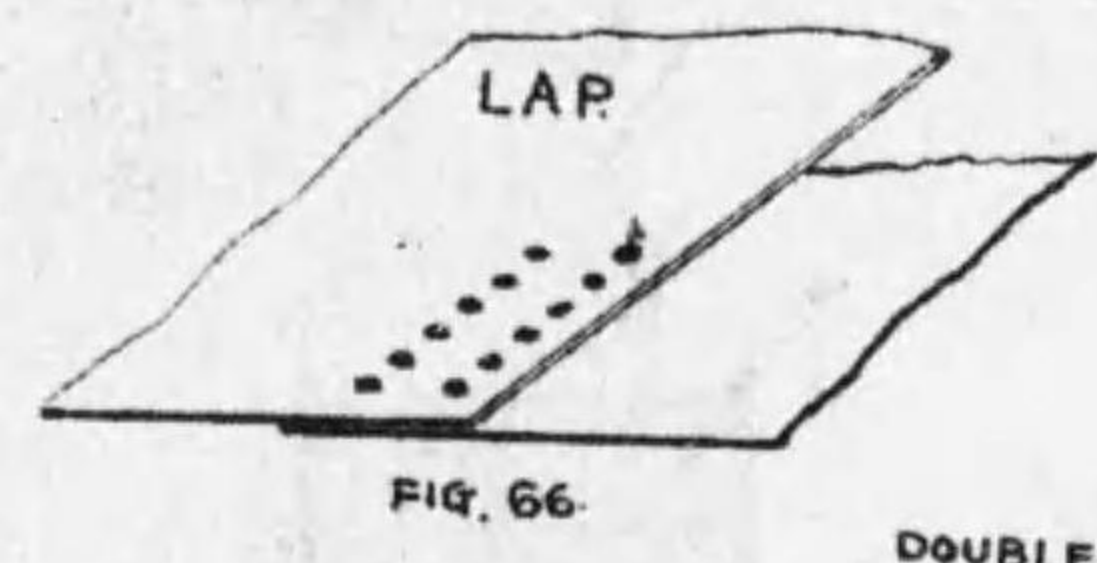
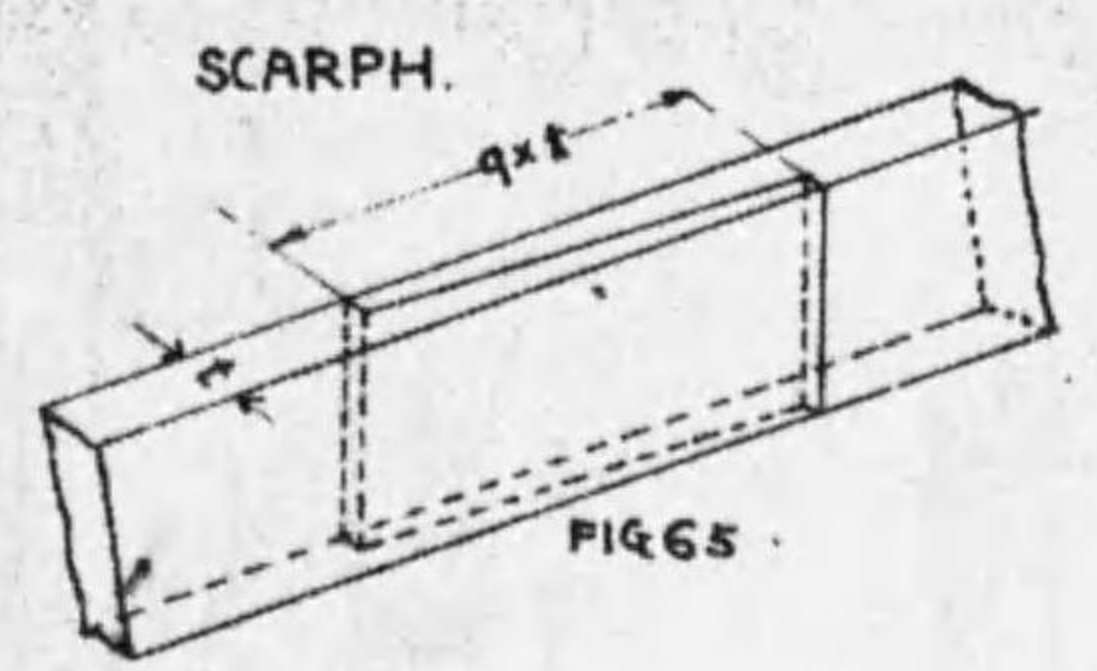
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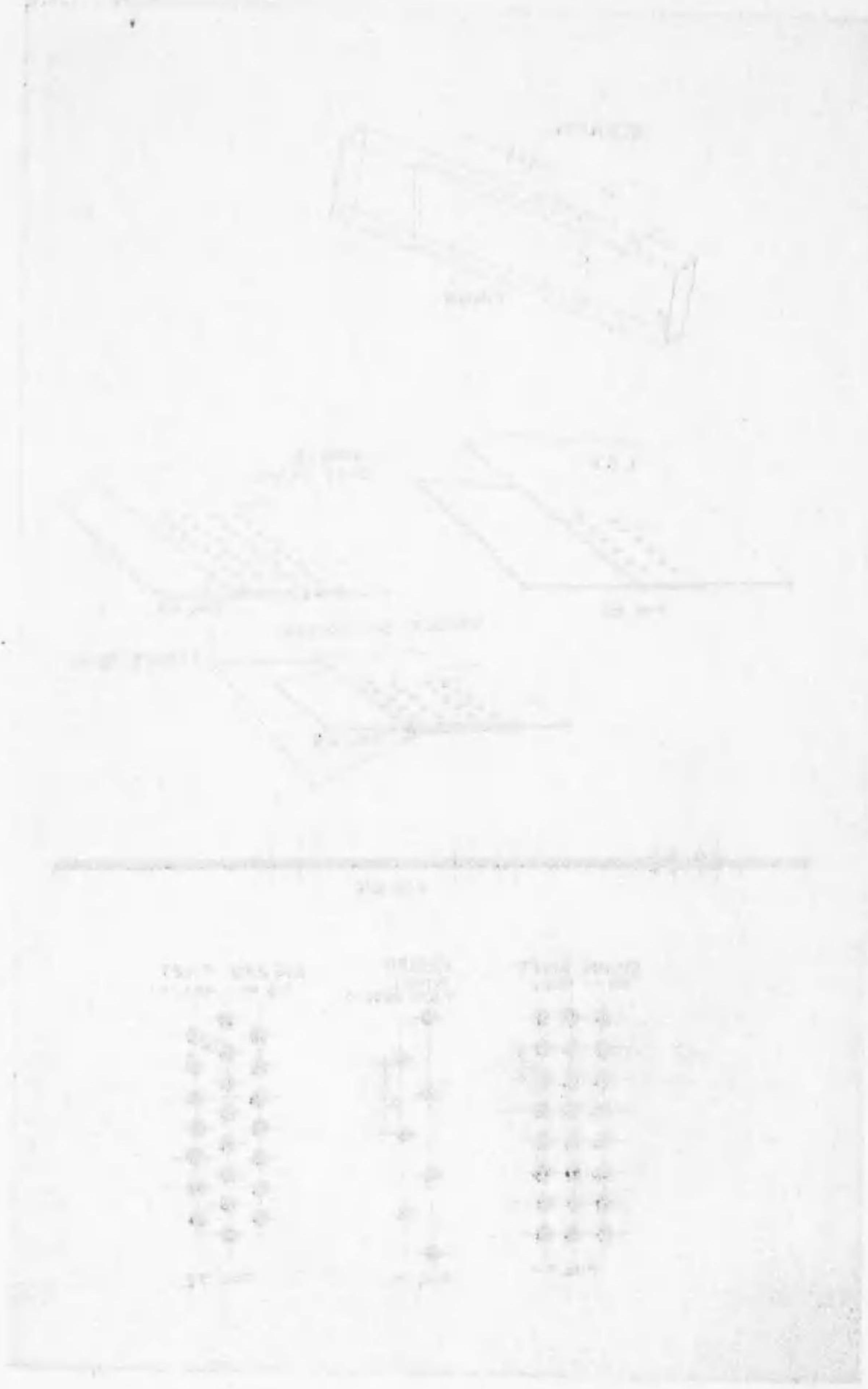


5.

6.







SINGLE BOTTOM CONSTRUCTION.

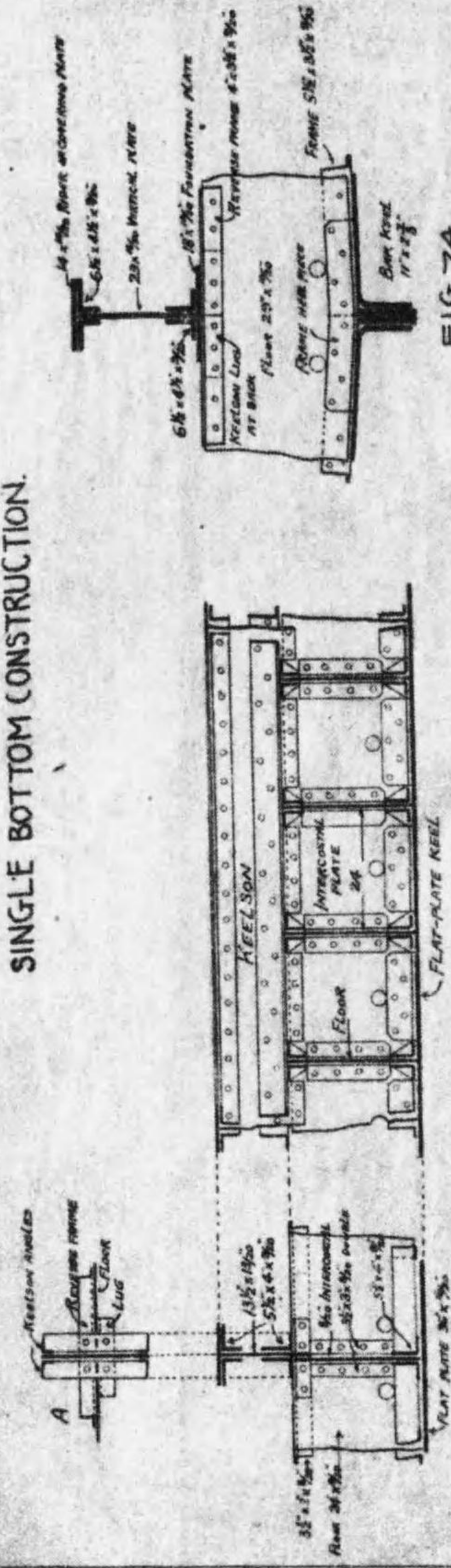


FIG. 73.

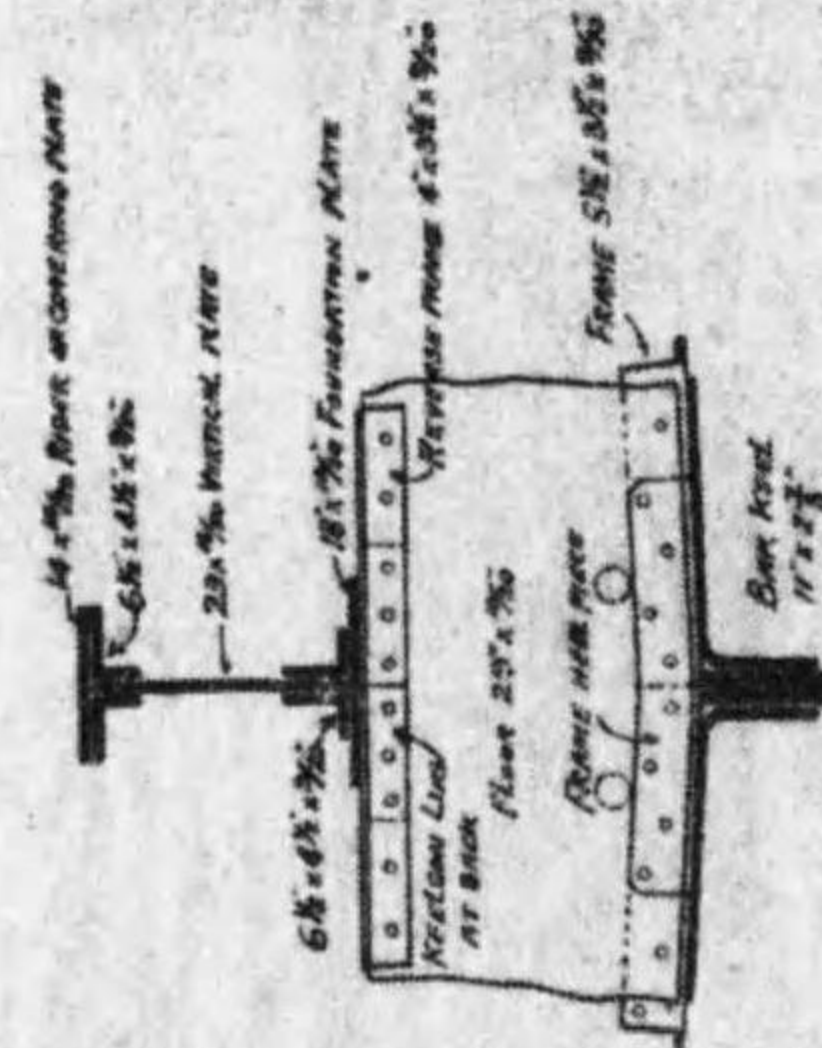


FIG. 74.

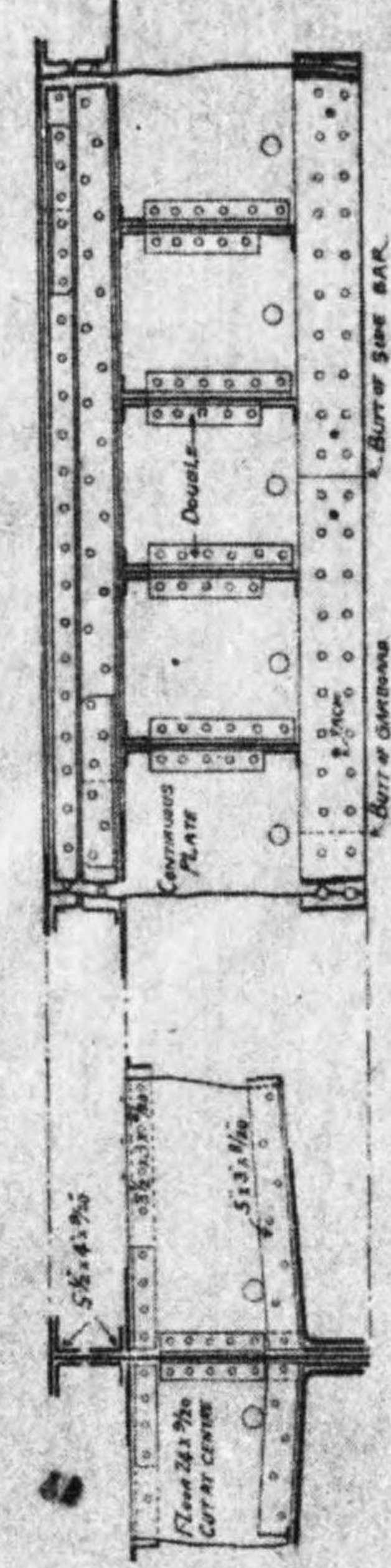
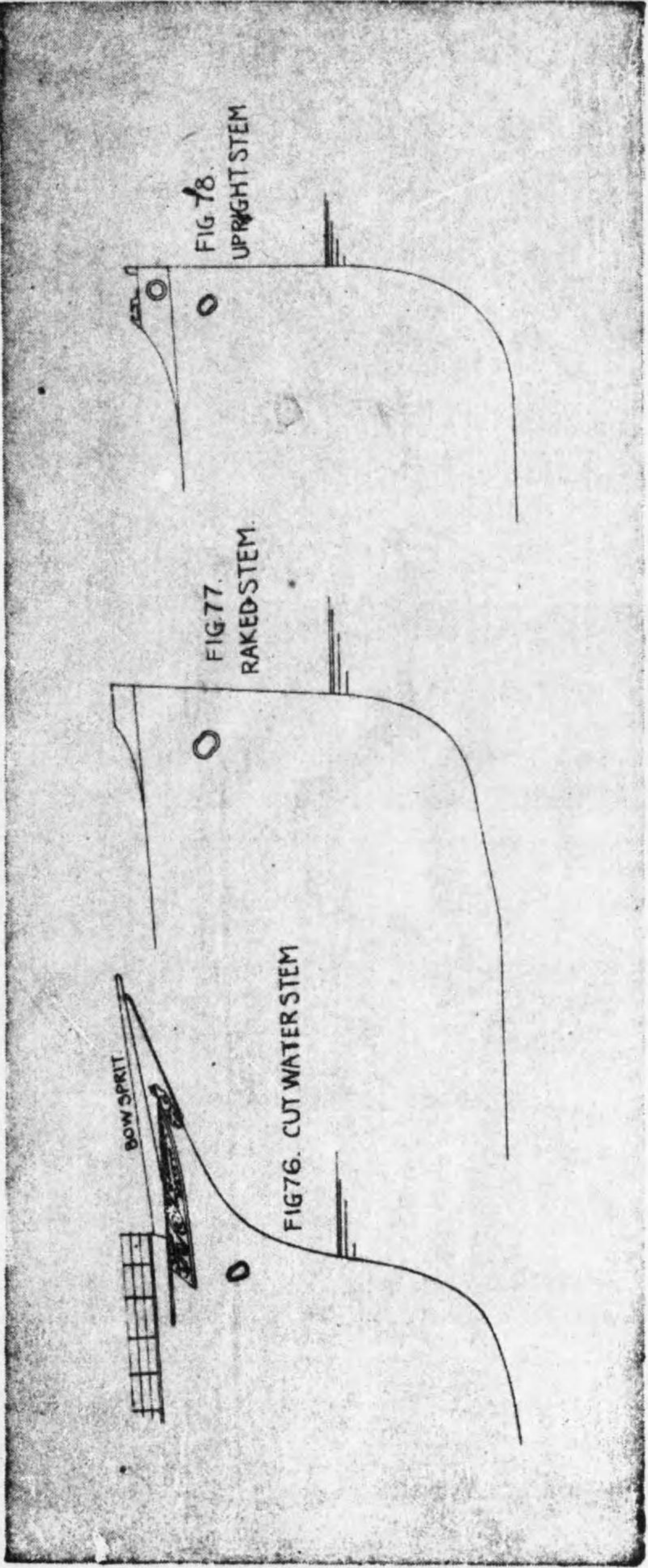
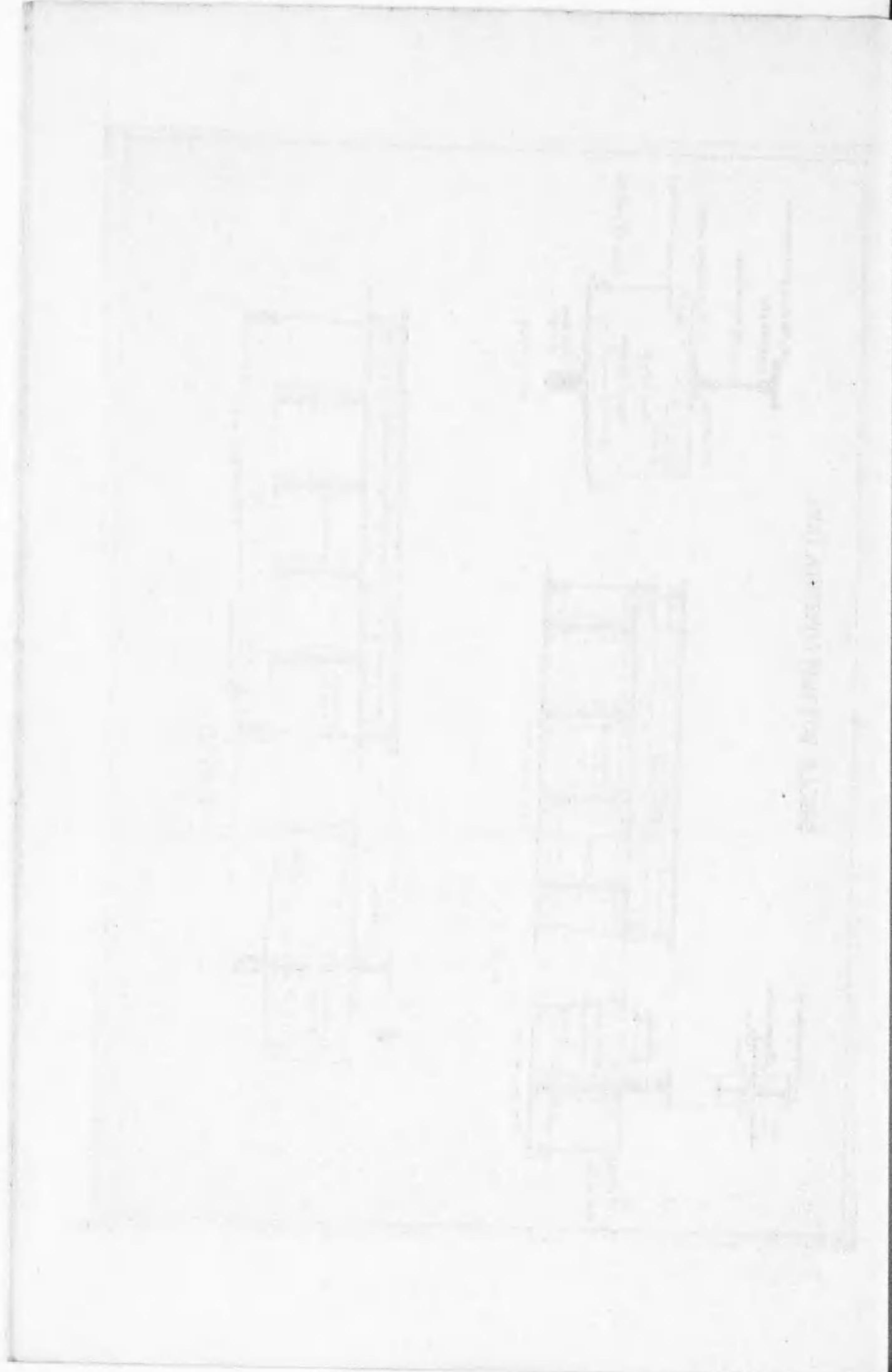
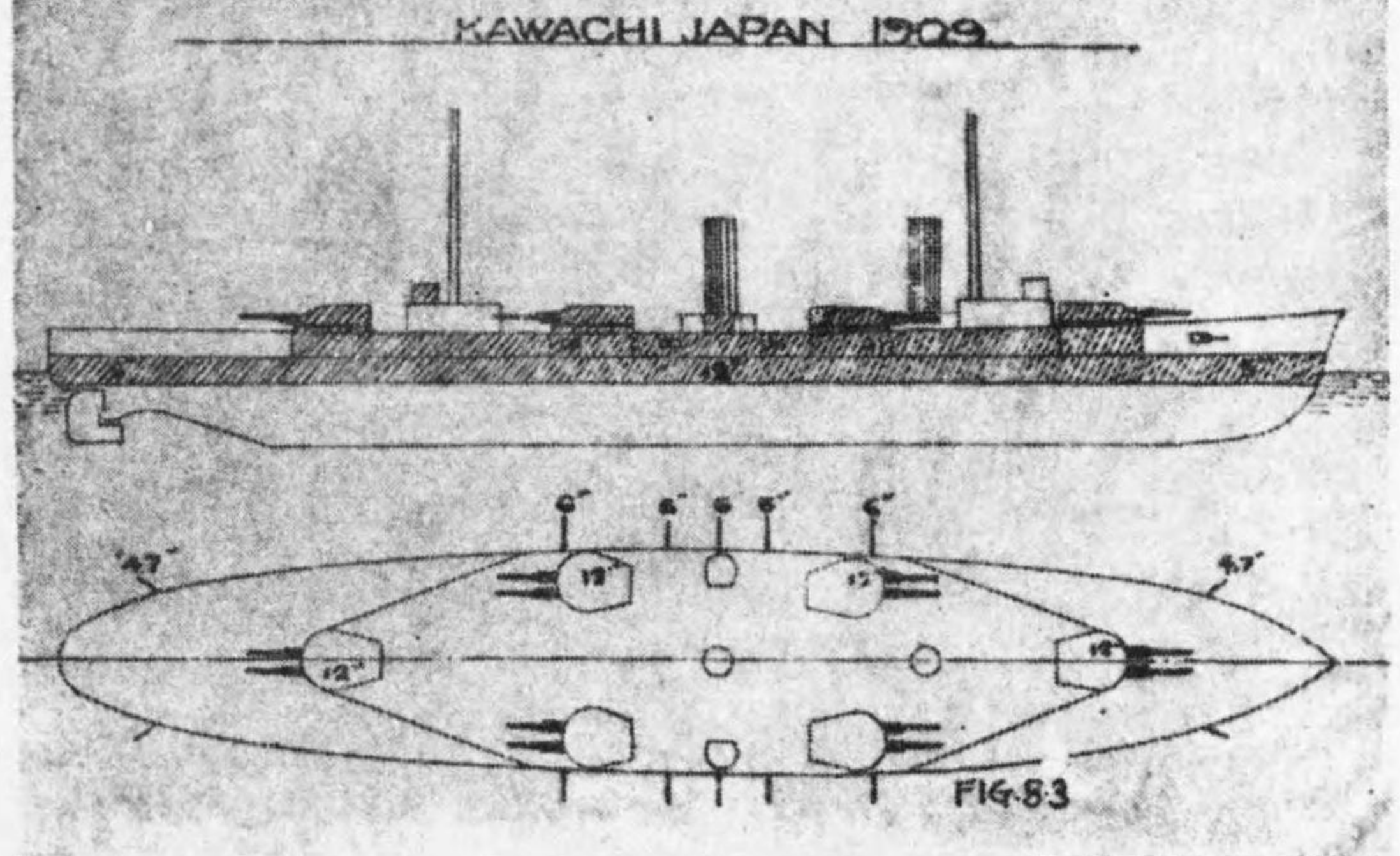
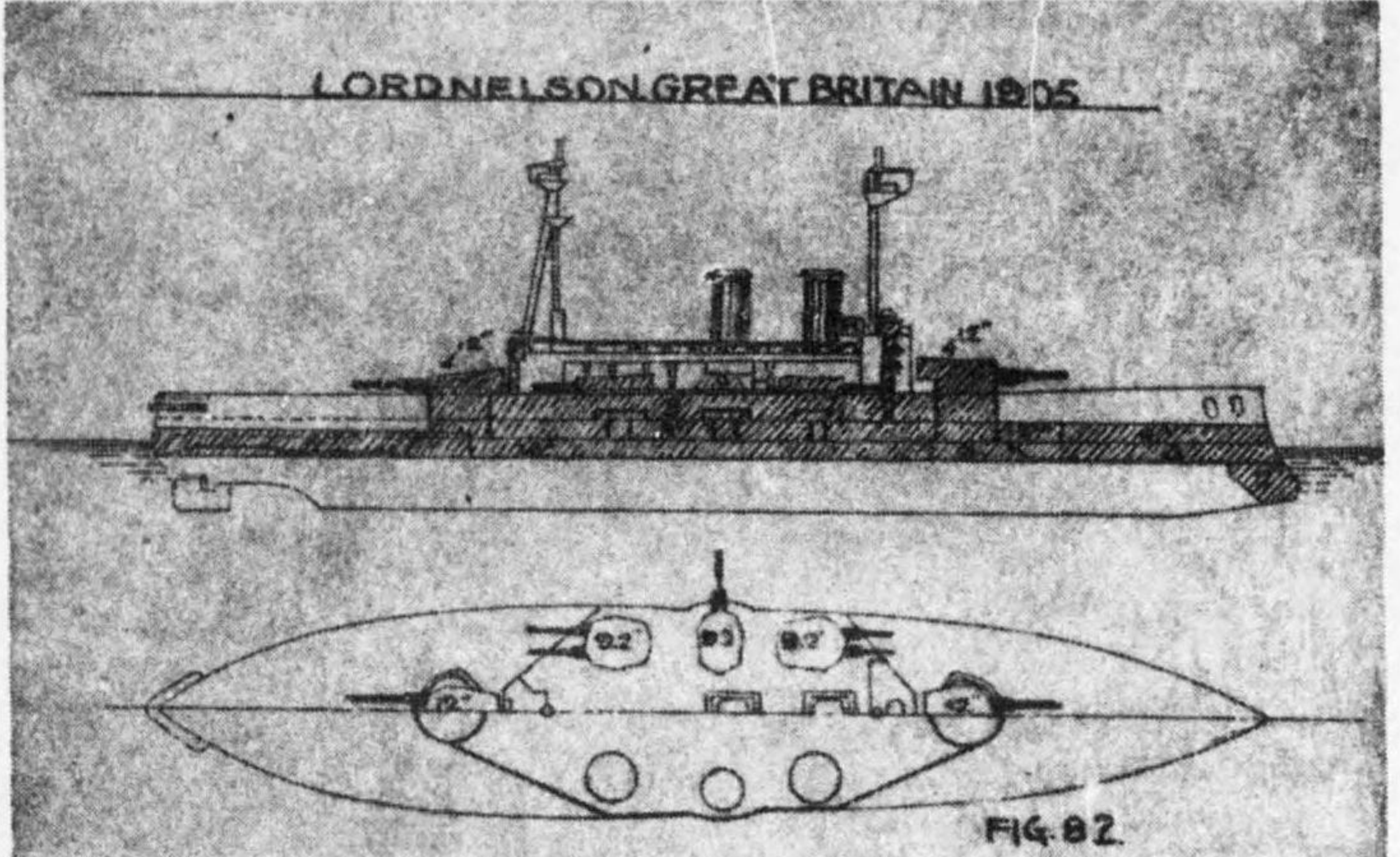
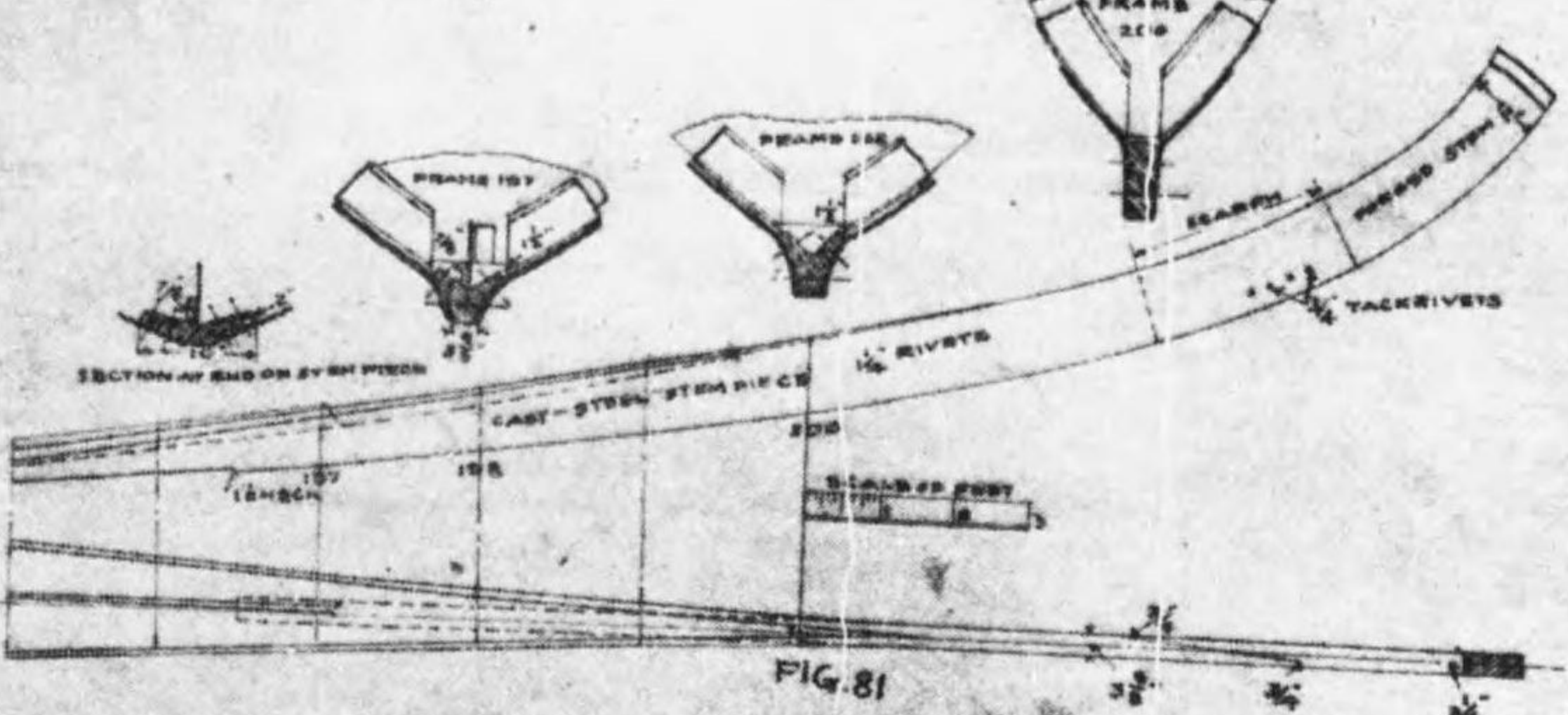
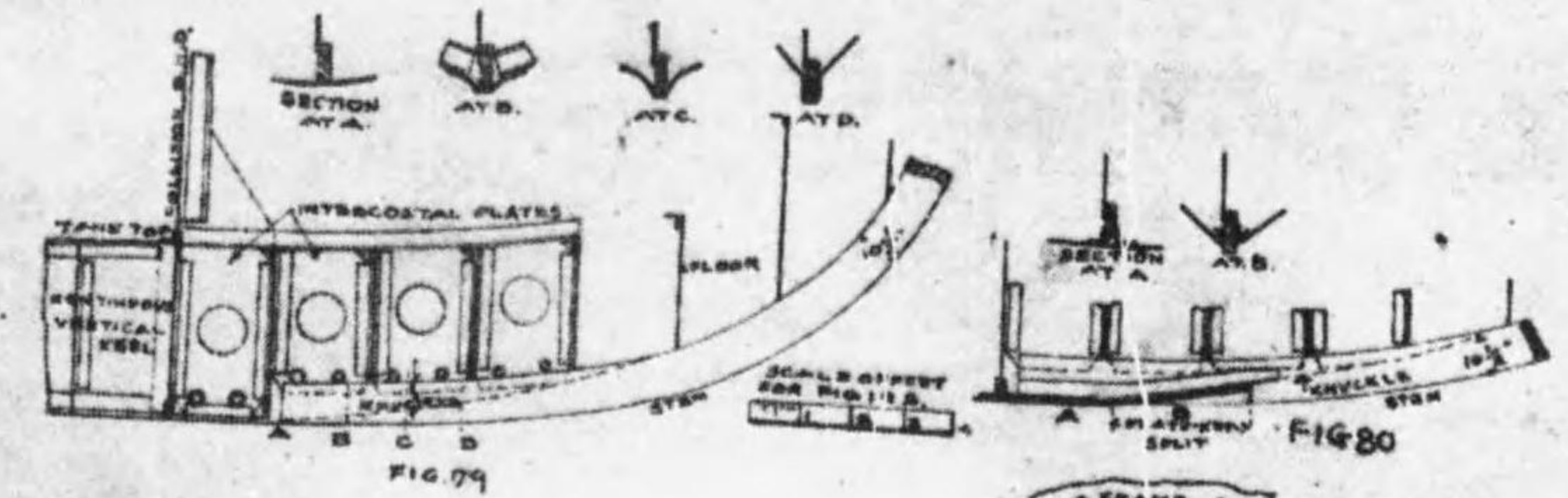


FIG. 75.





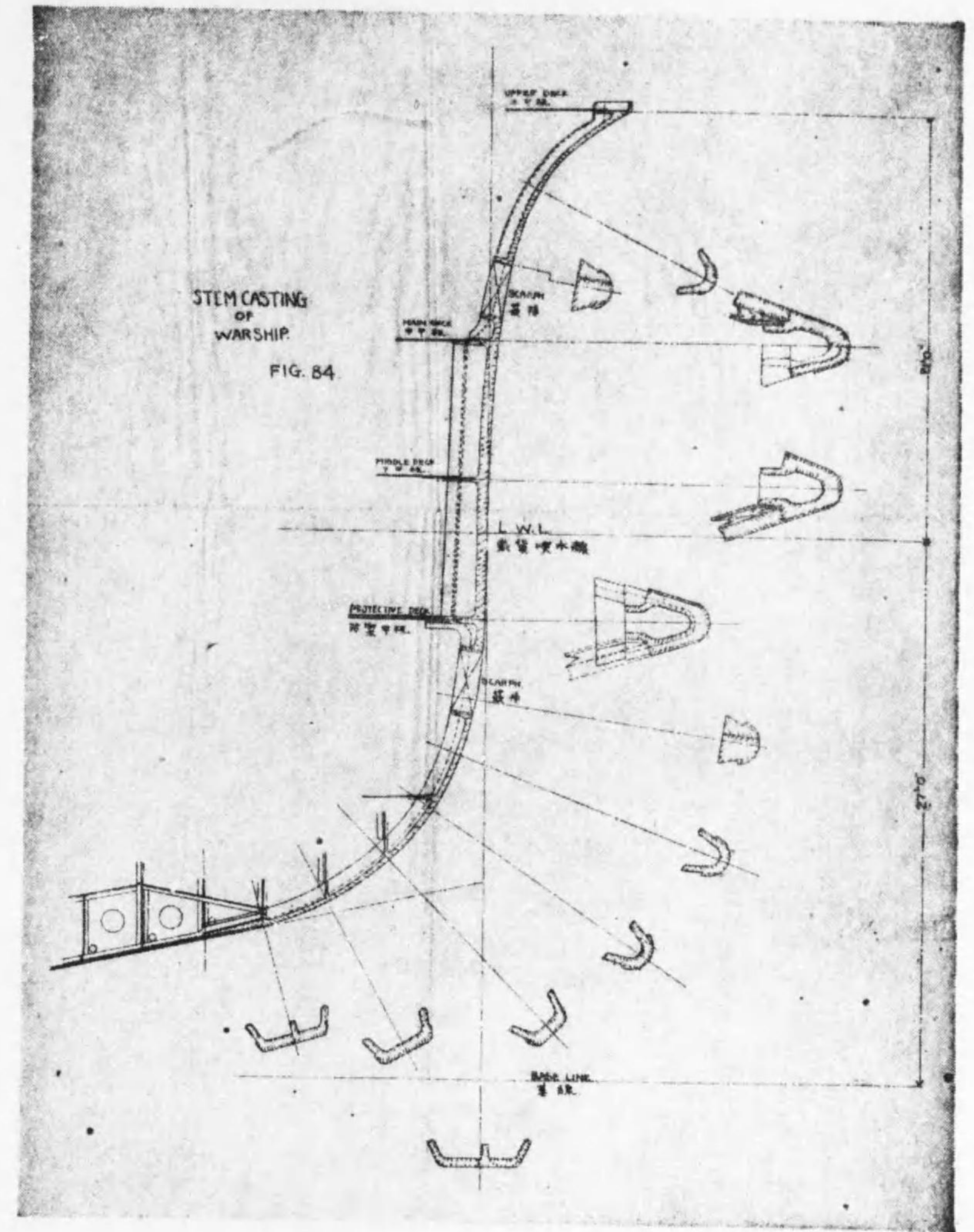
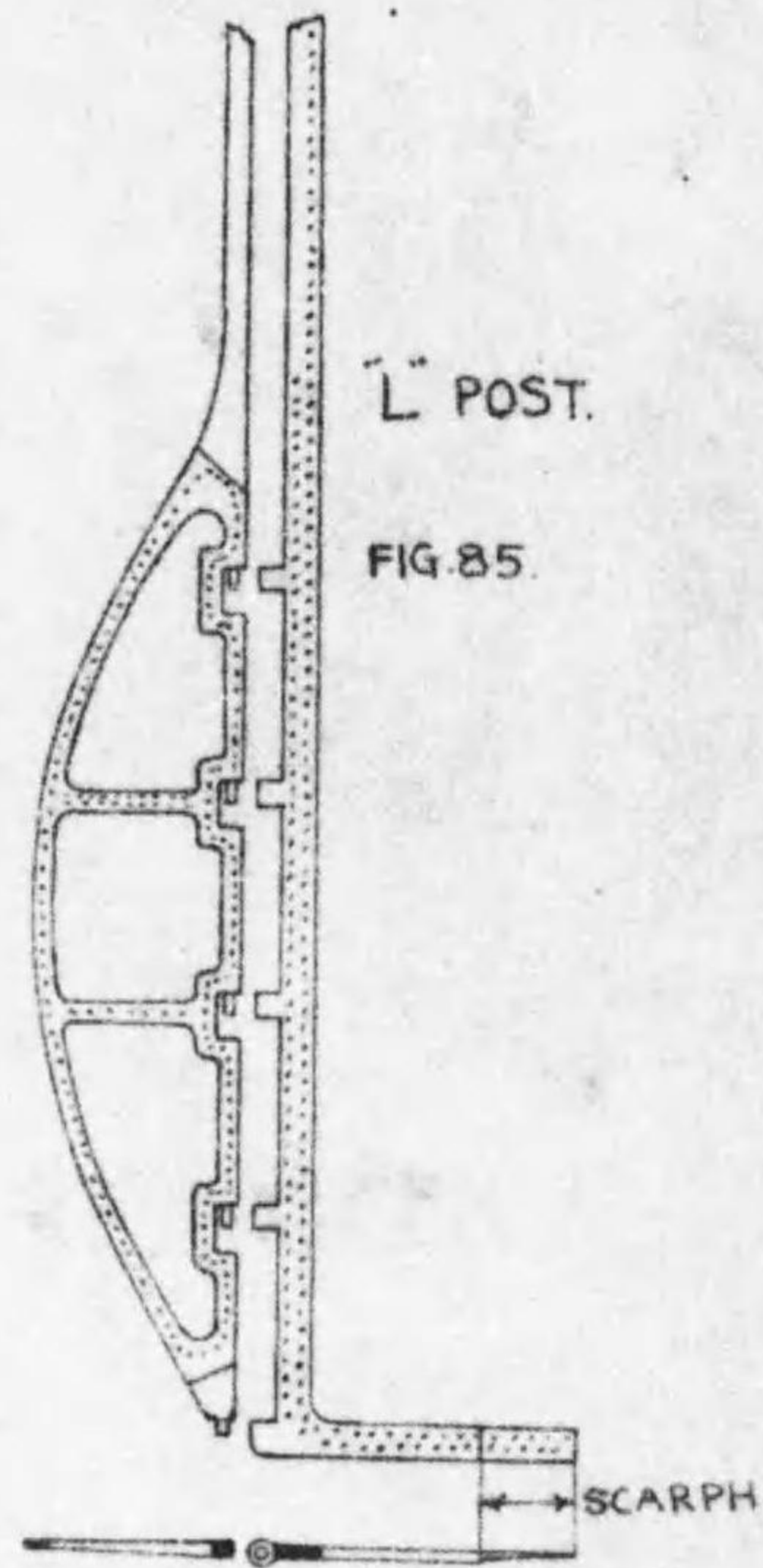
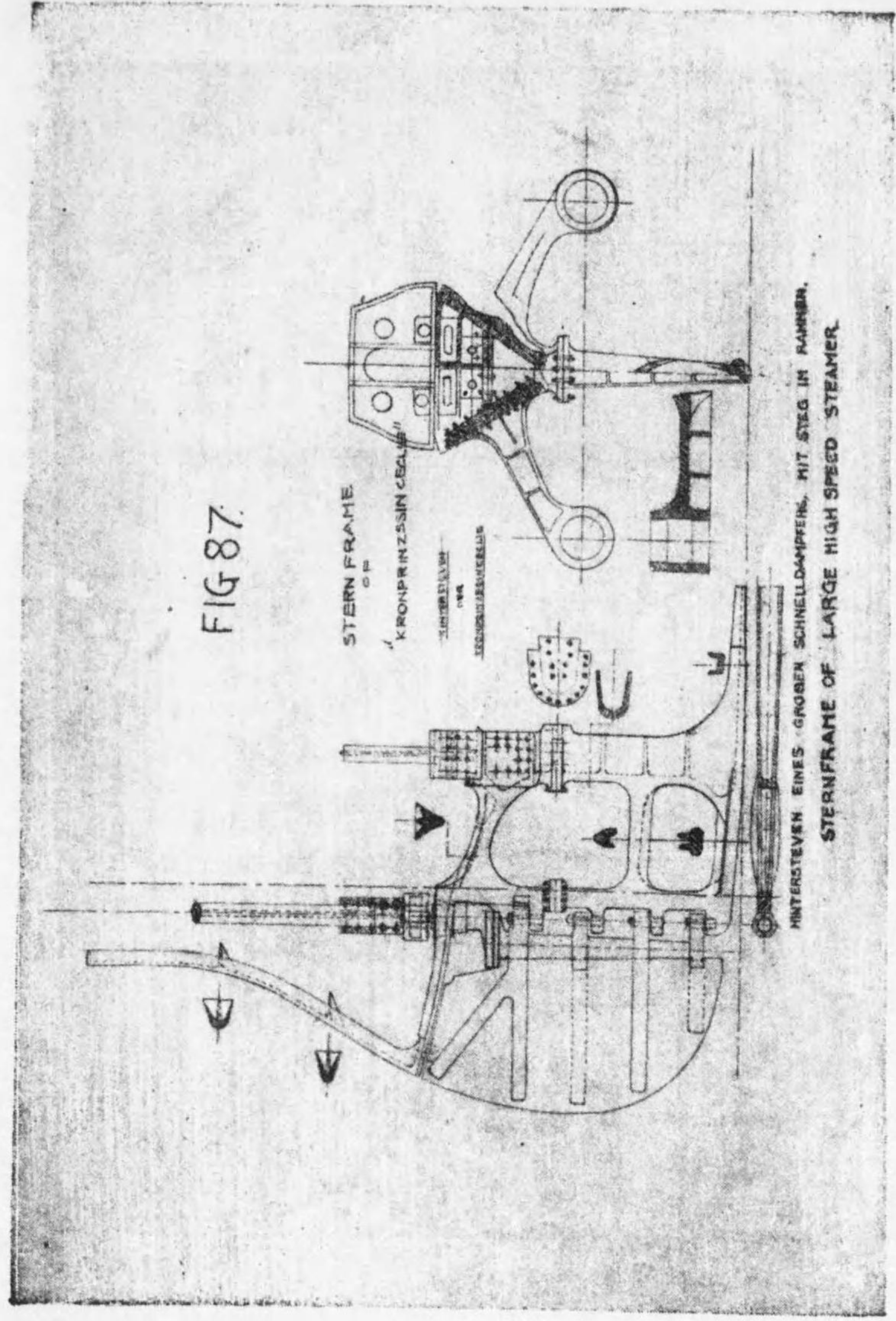
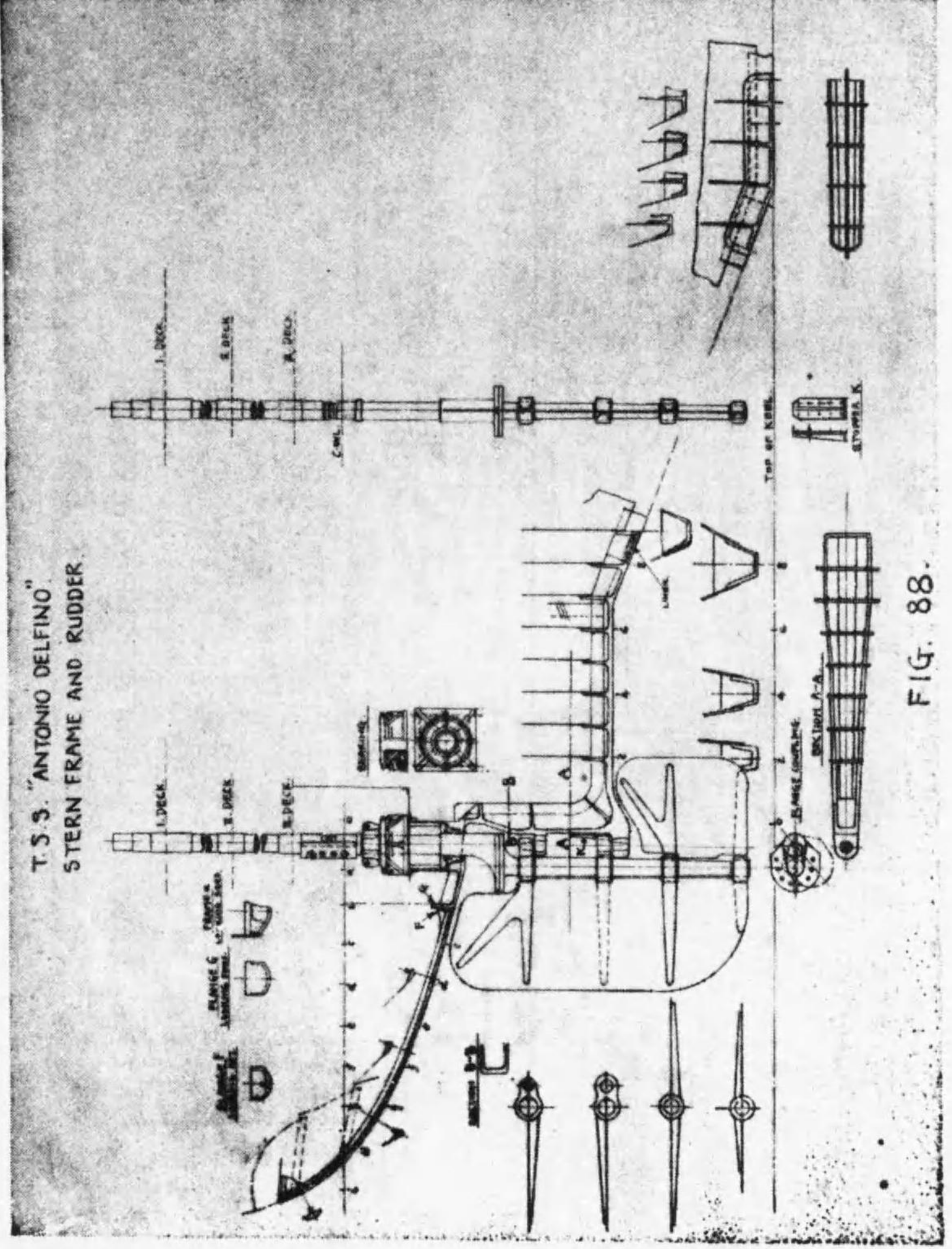


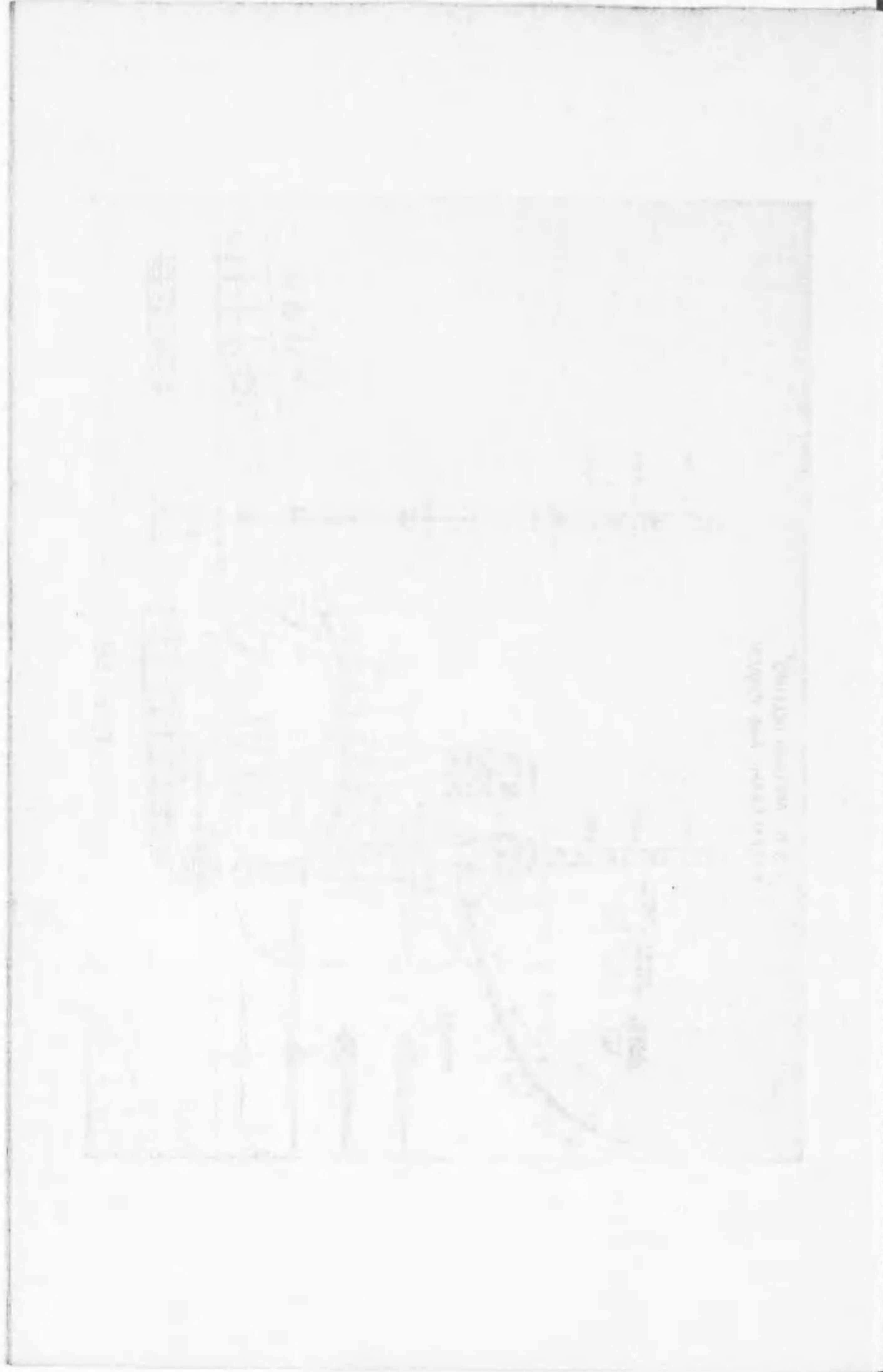
FIG 87.





T.S.S. "ANTONIO DELFINO"
STERN FRAME AND RUDDER.

FIG. 88.



STERN FRAME & RUDDER
OF
TRIPLE SCREW STEAMER.

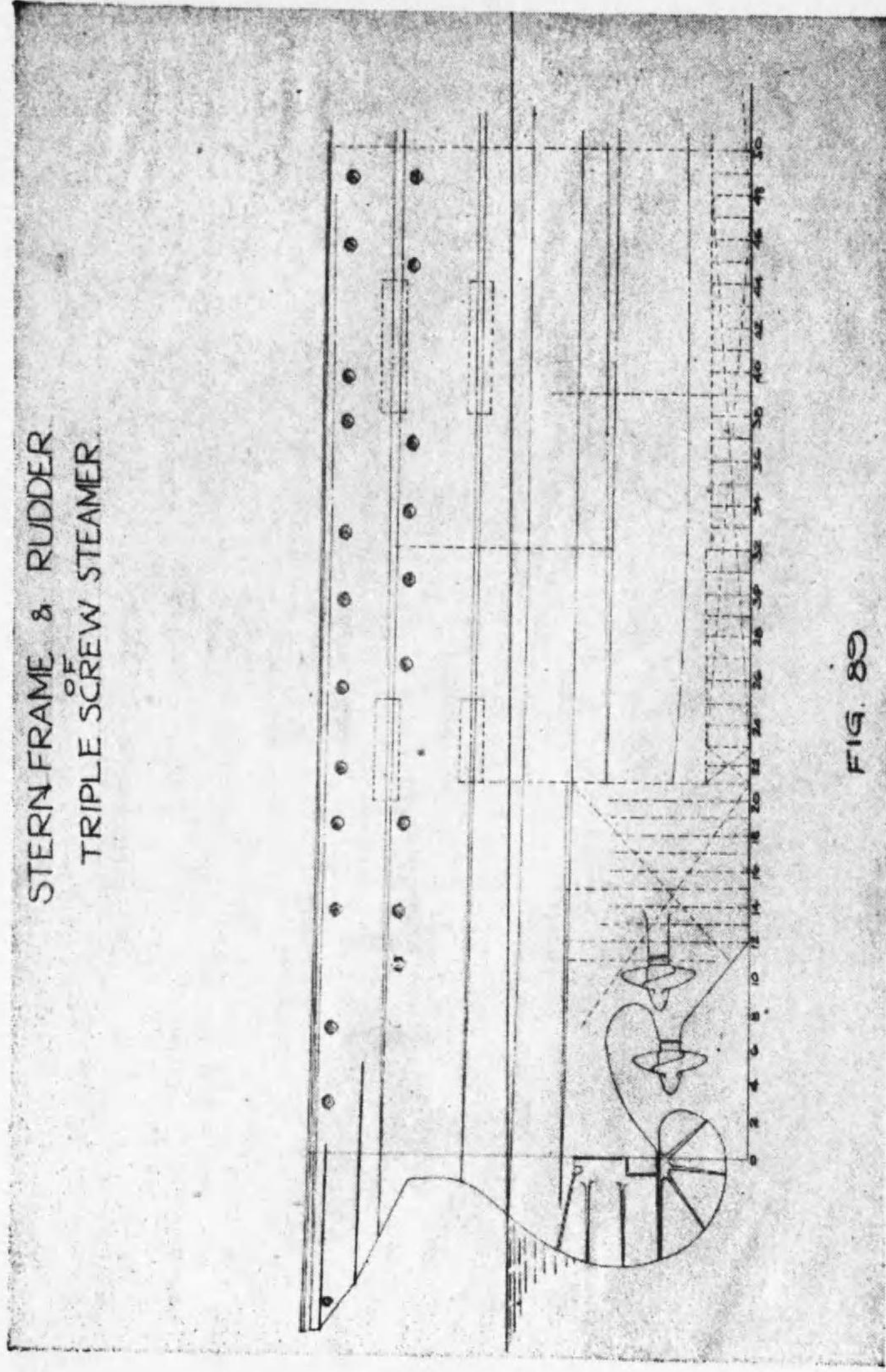


FIG. 80

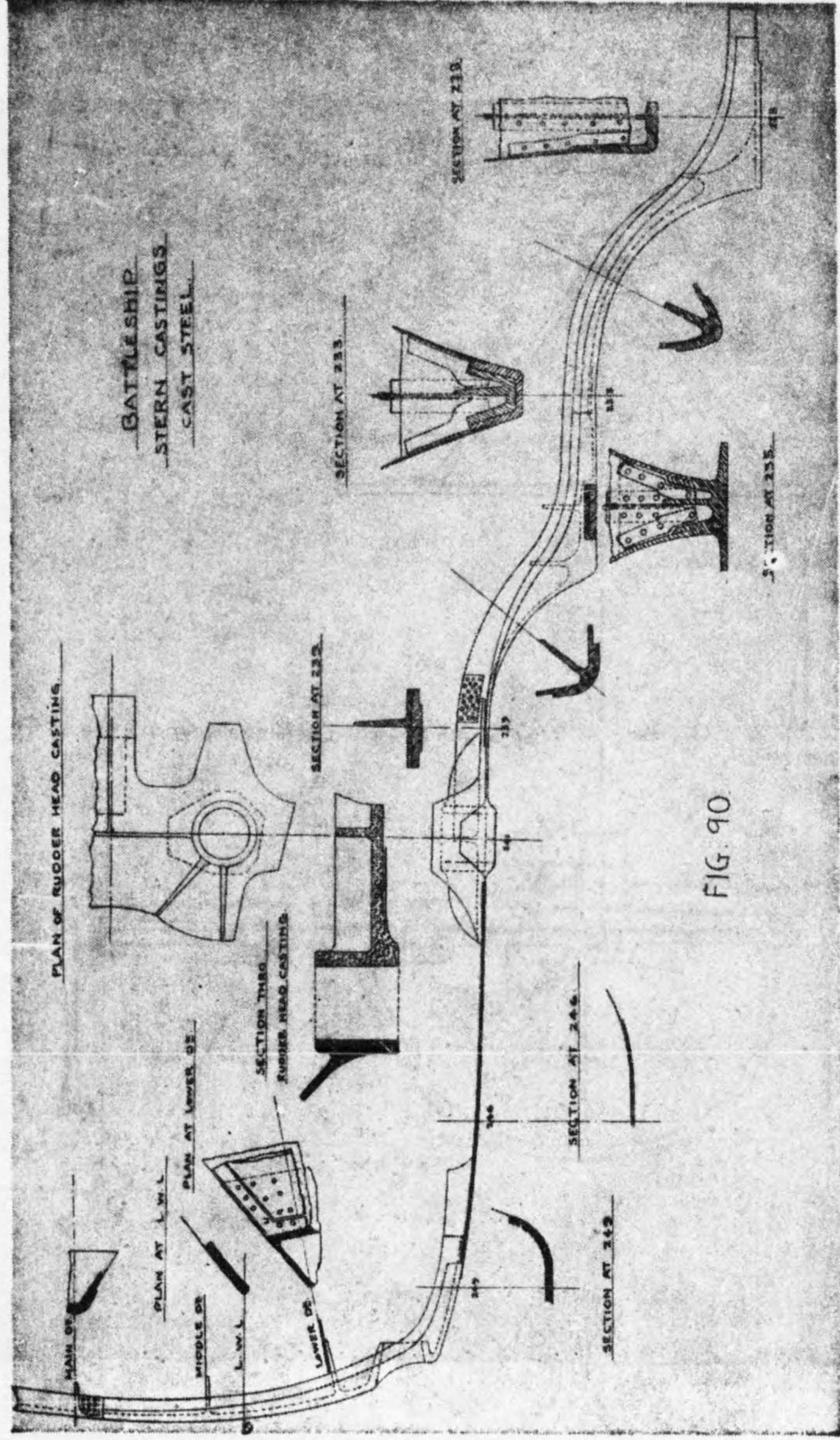
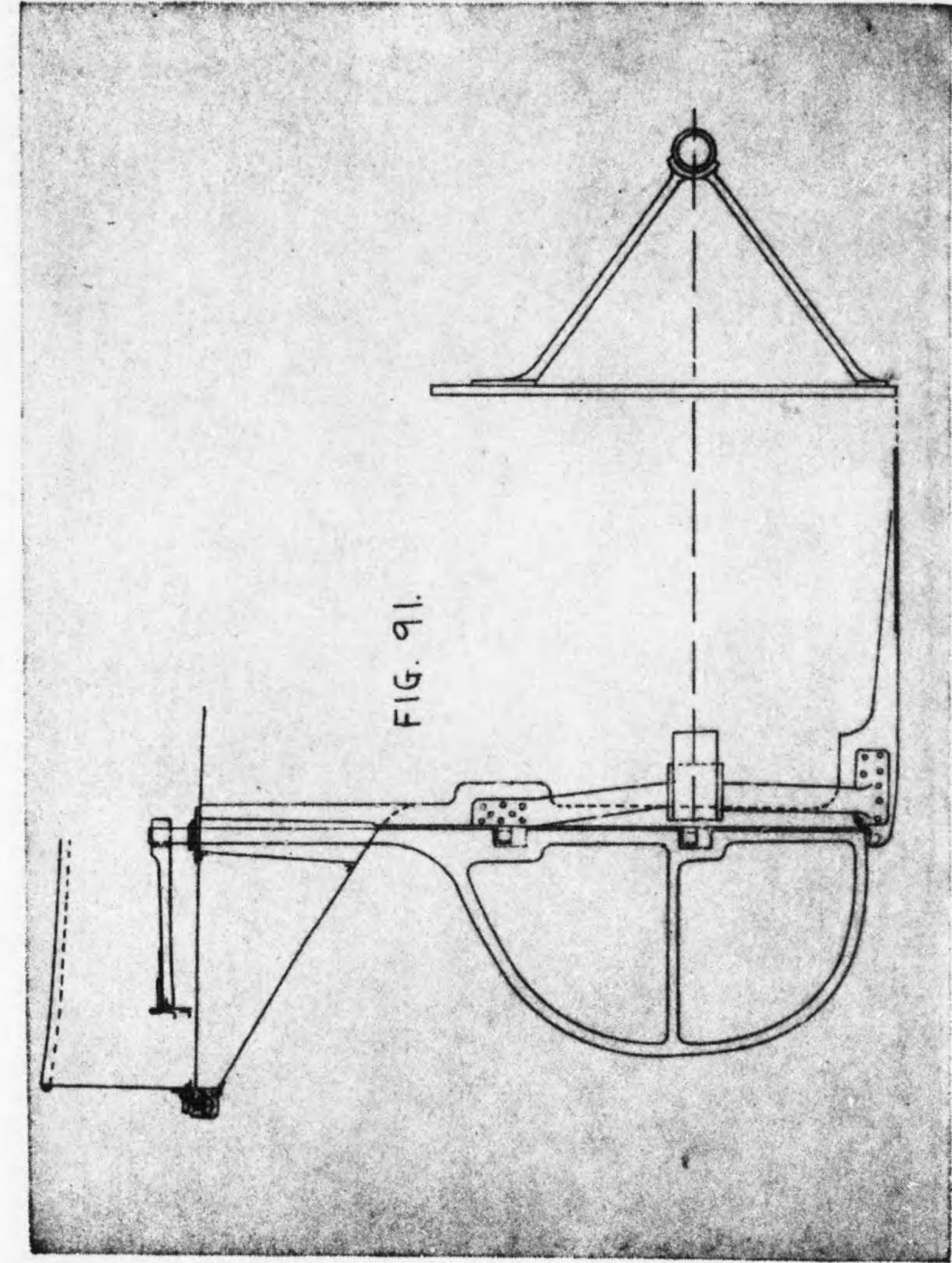
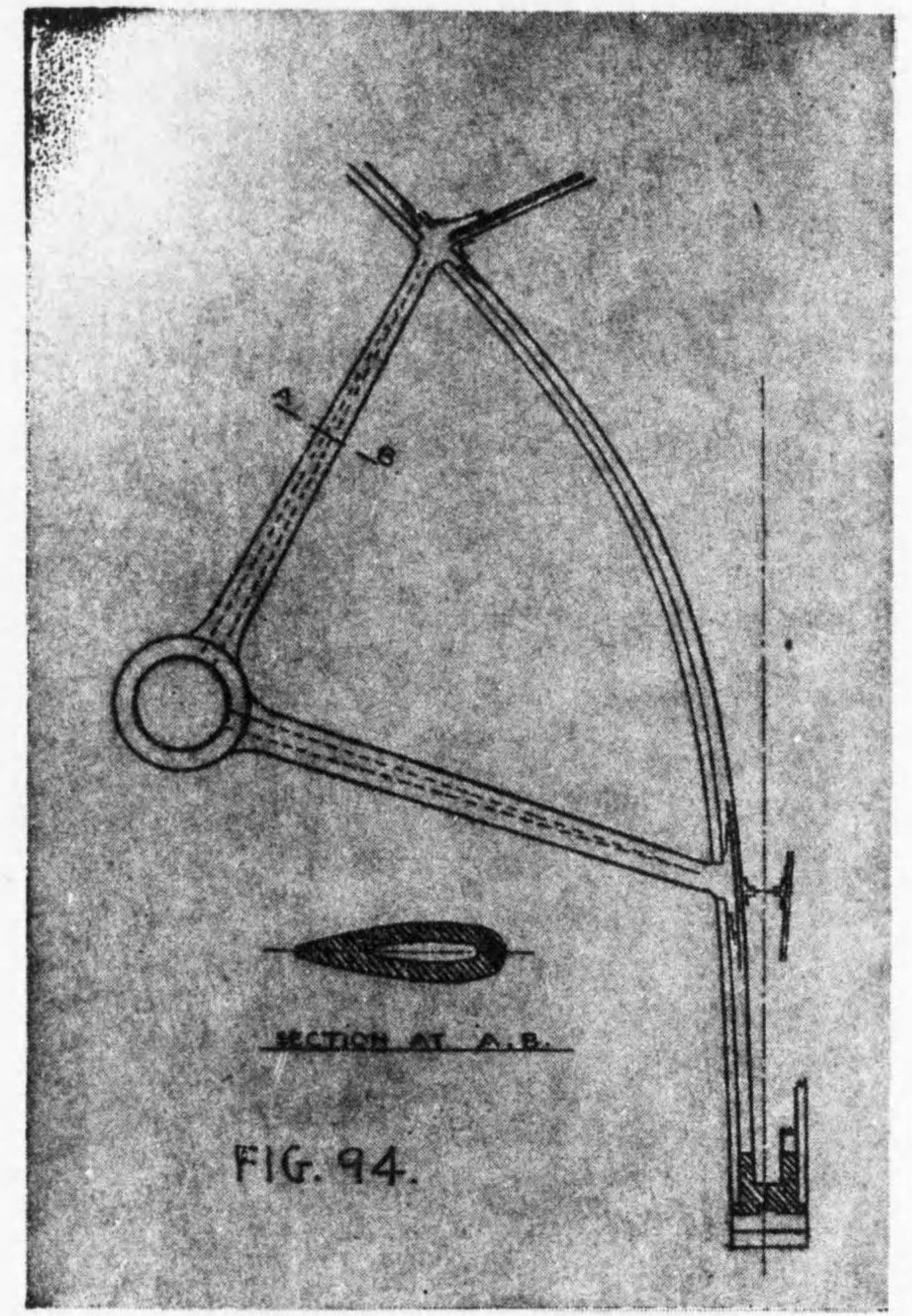
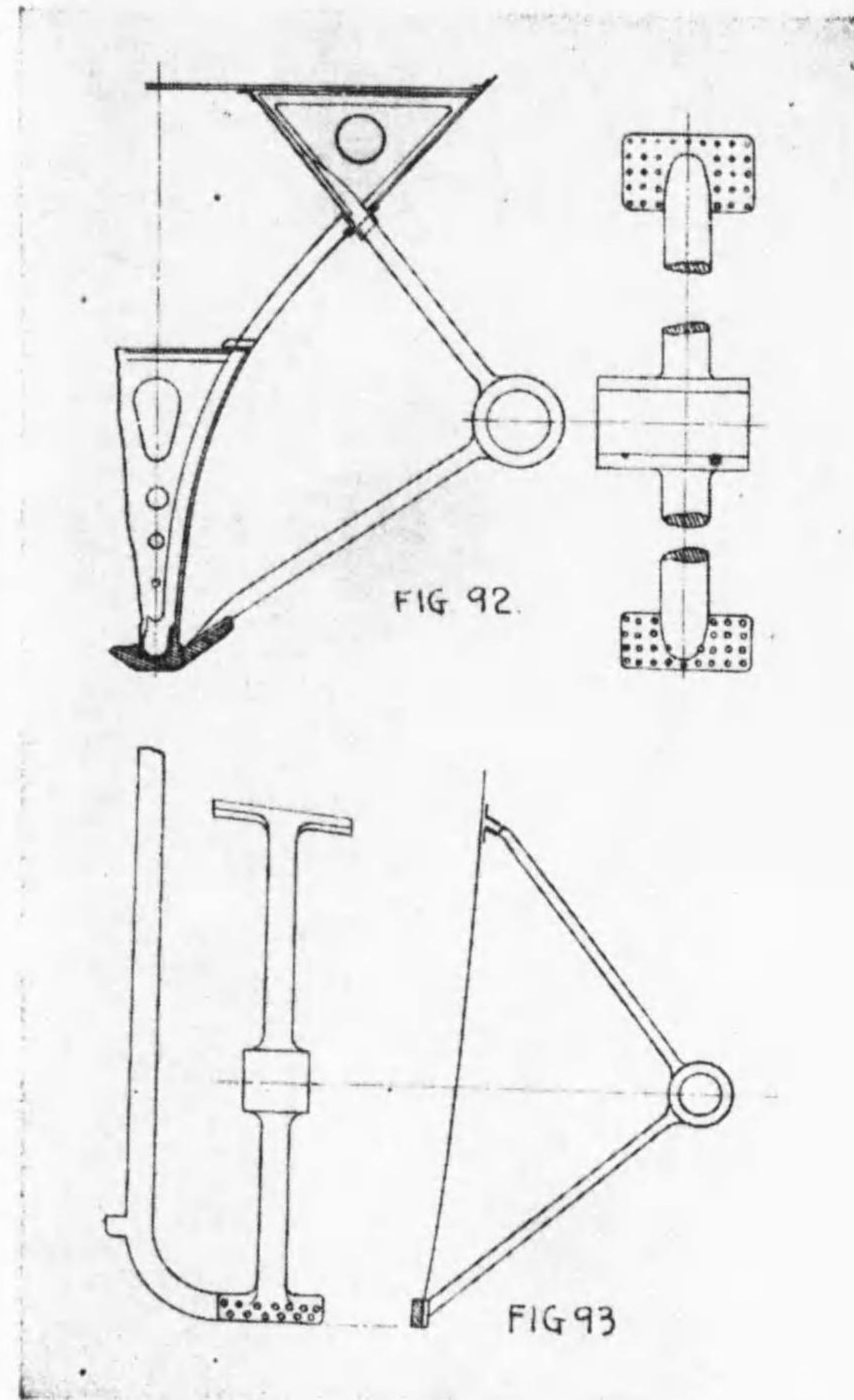
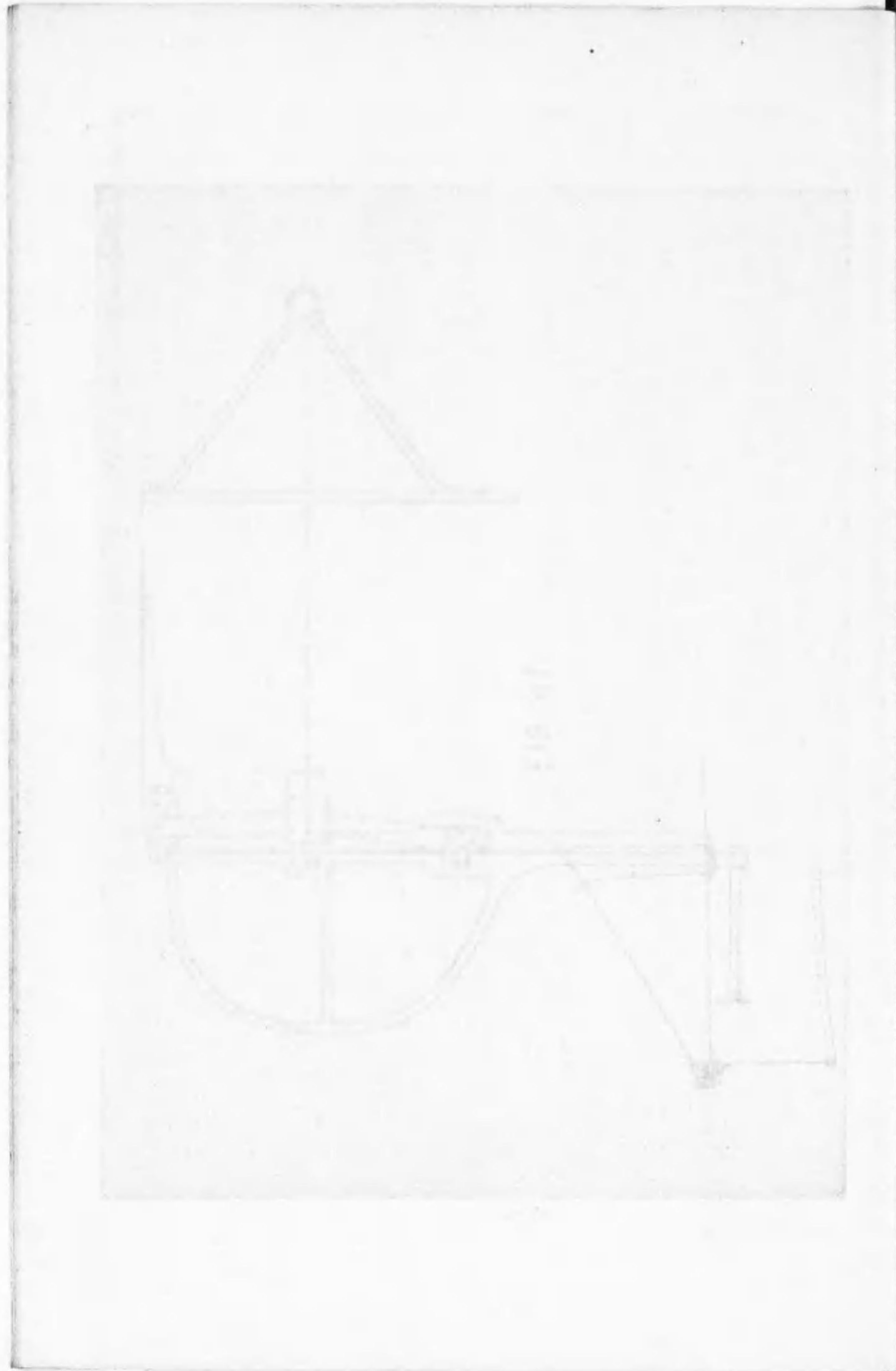
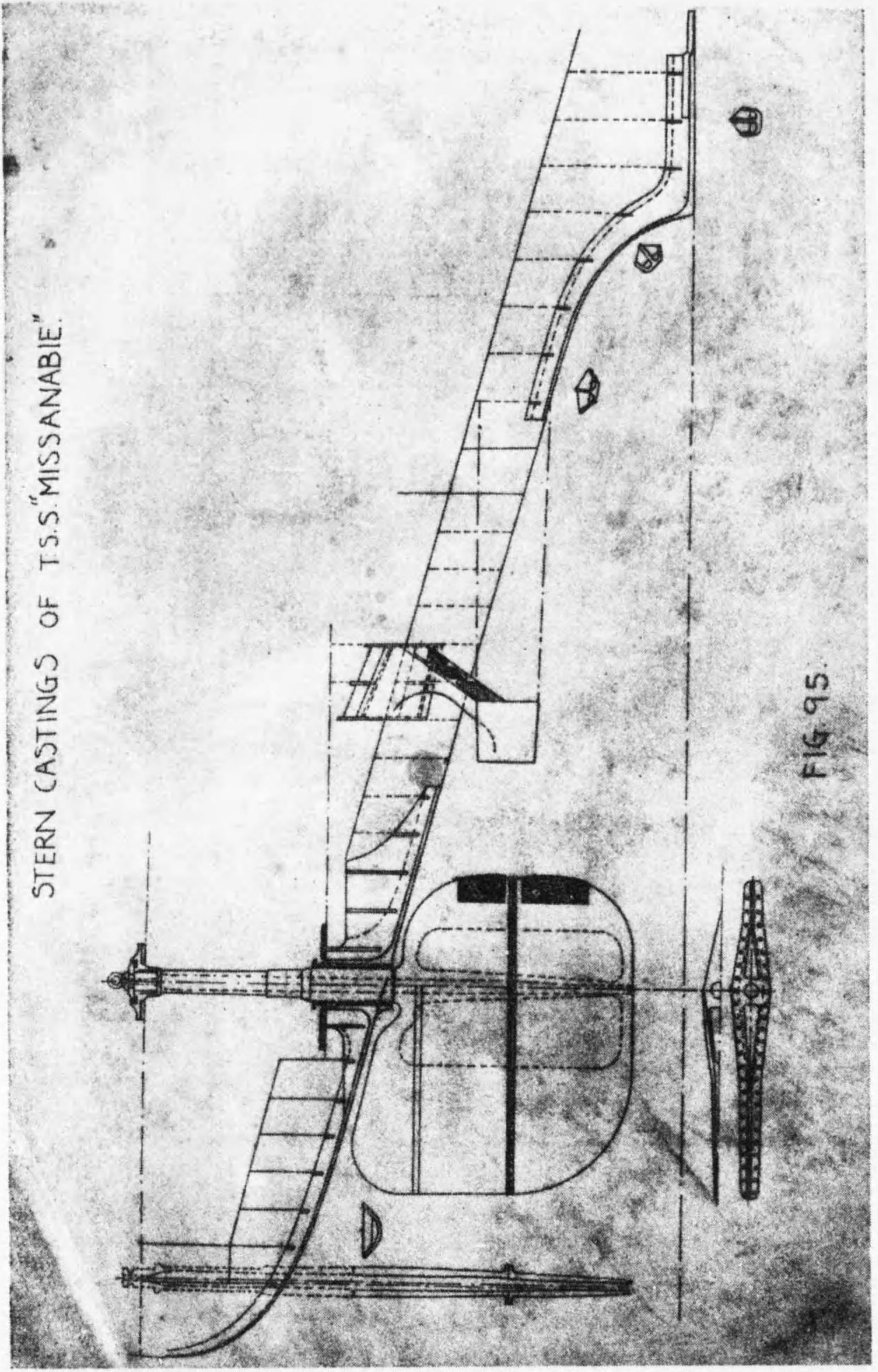


FIG. 90

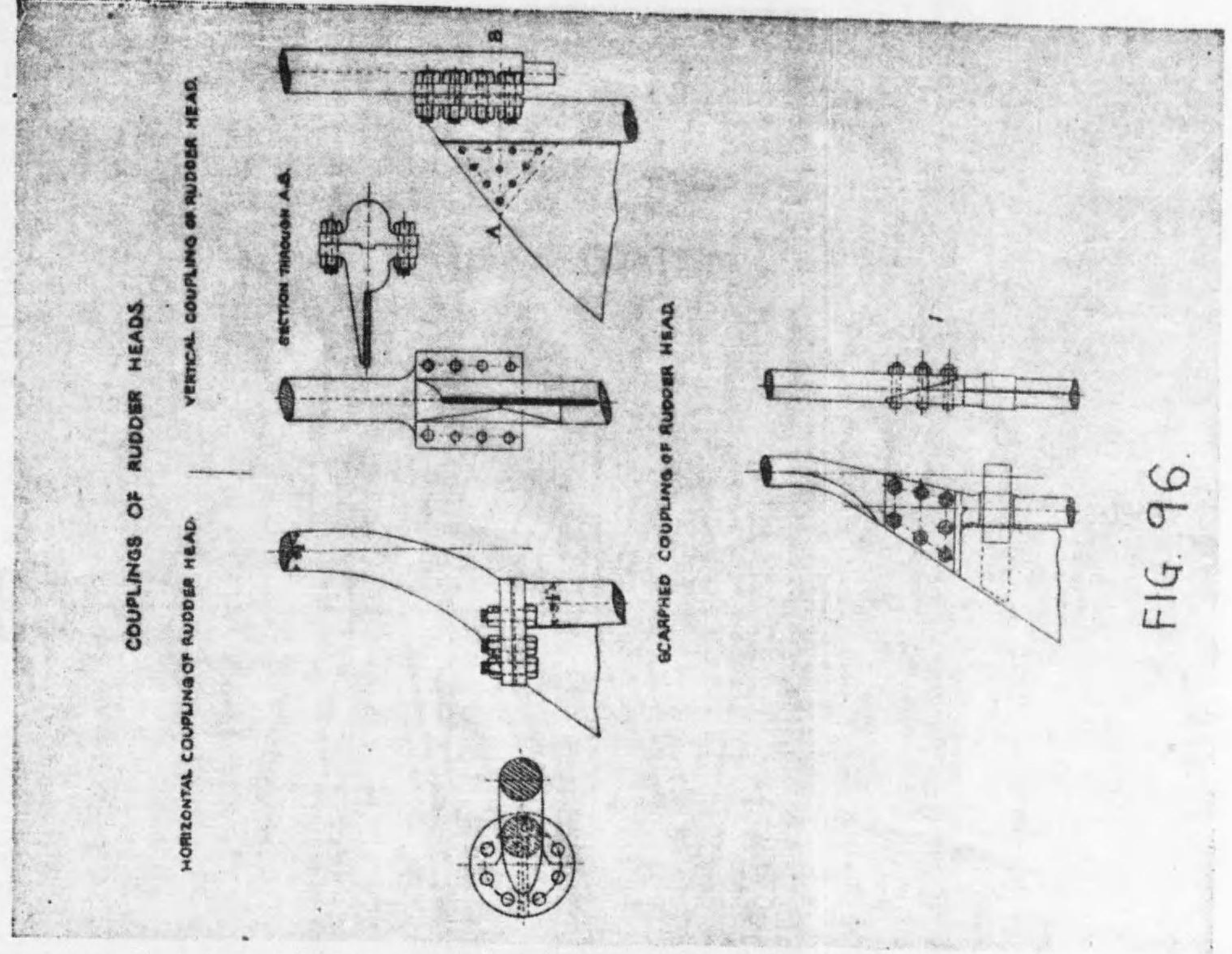
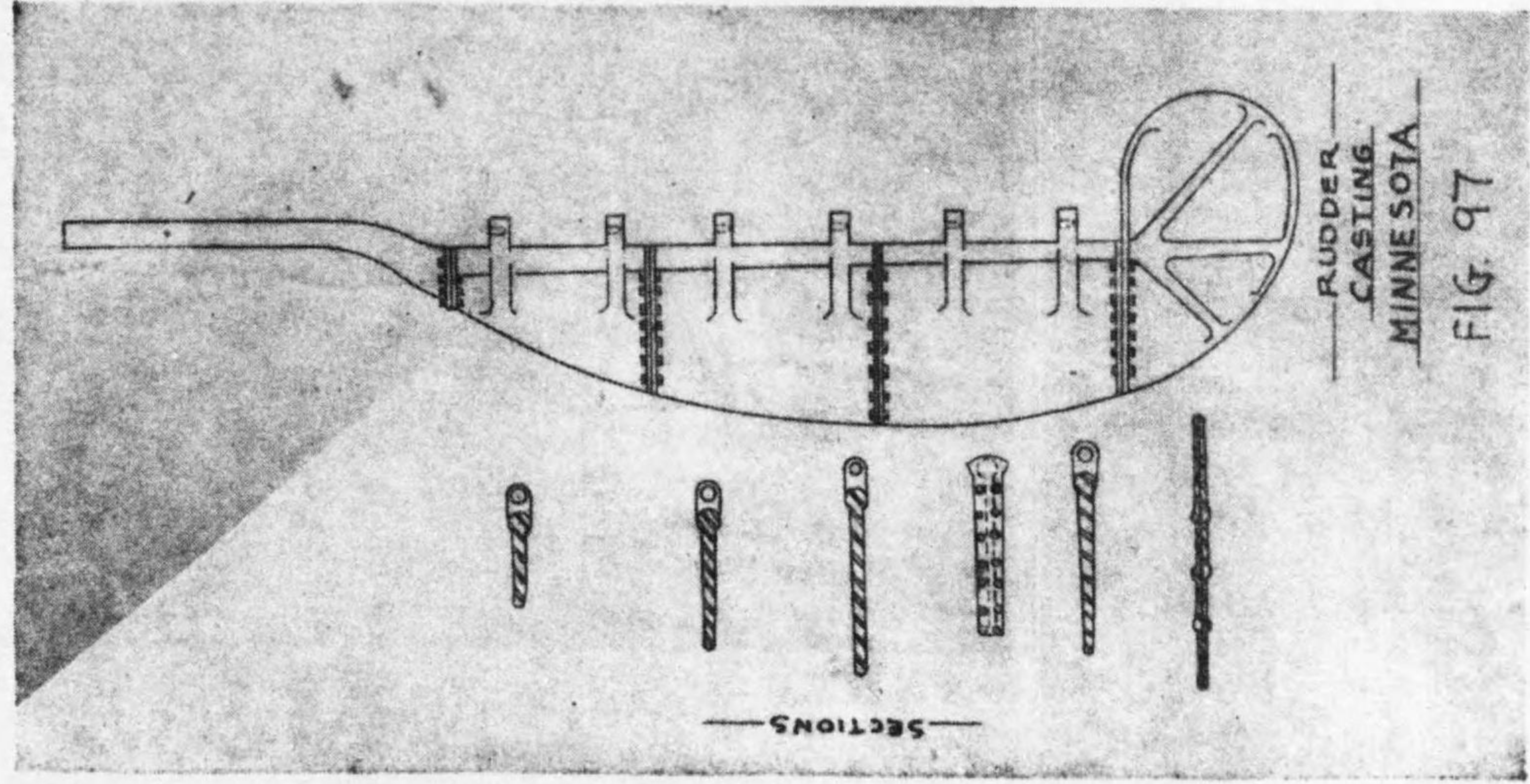
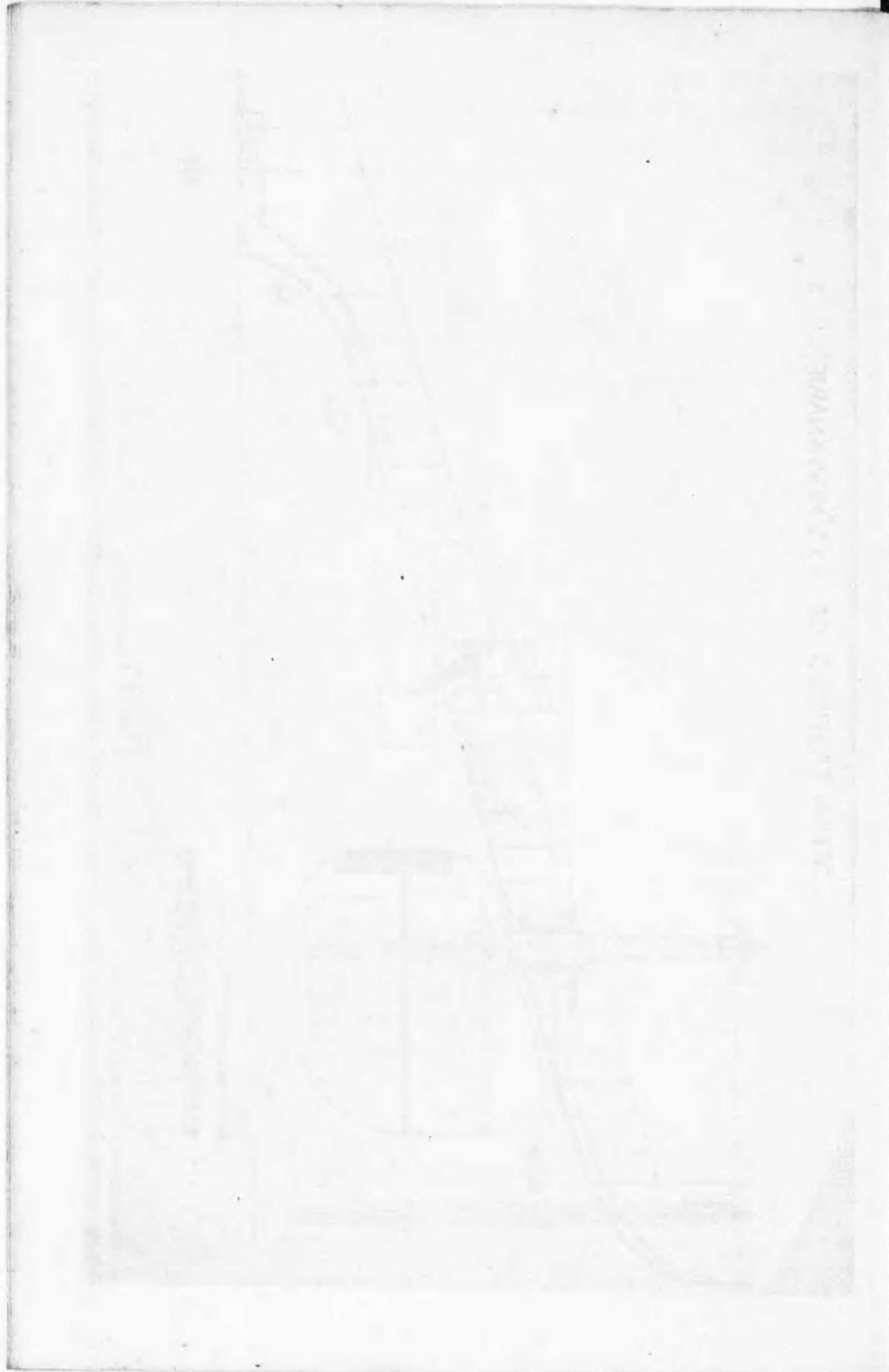






STERN CASTINGS OF T.S.S. "MISSANABIE."

FIG 95.



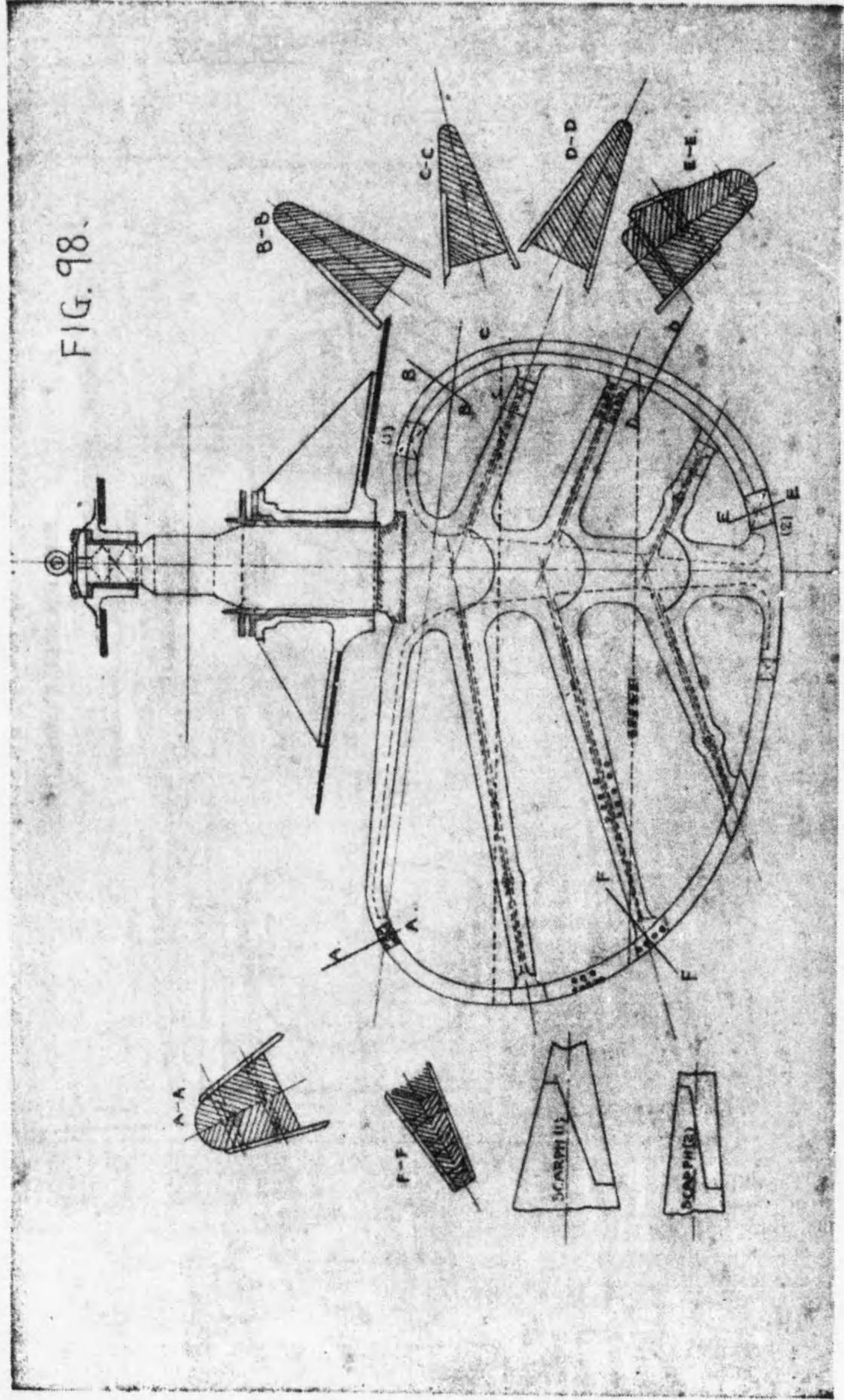
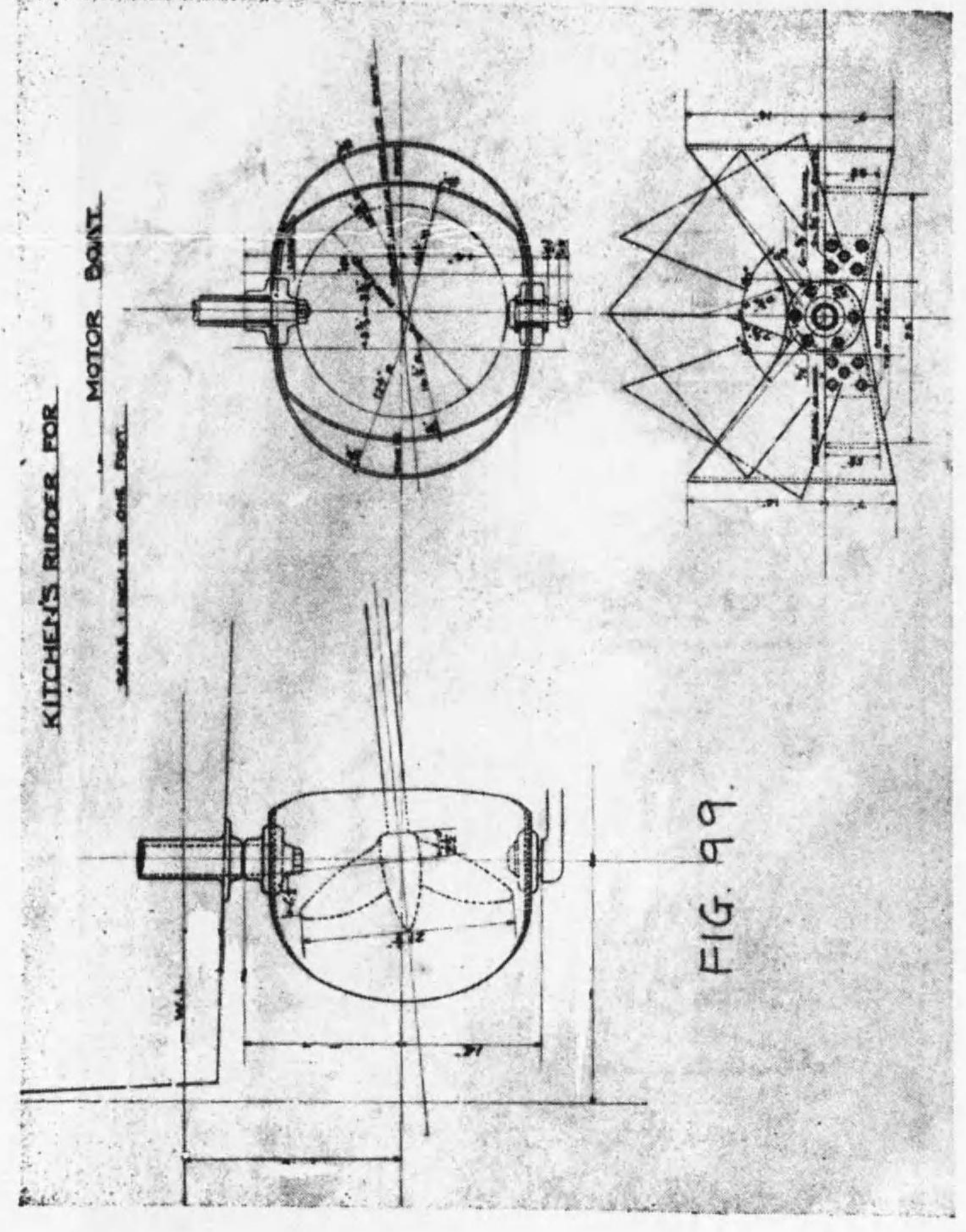




FIG. 100



DOXFORD
BALANCED RUDDER.

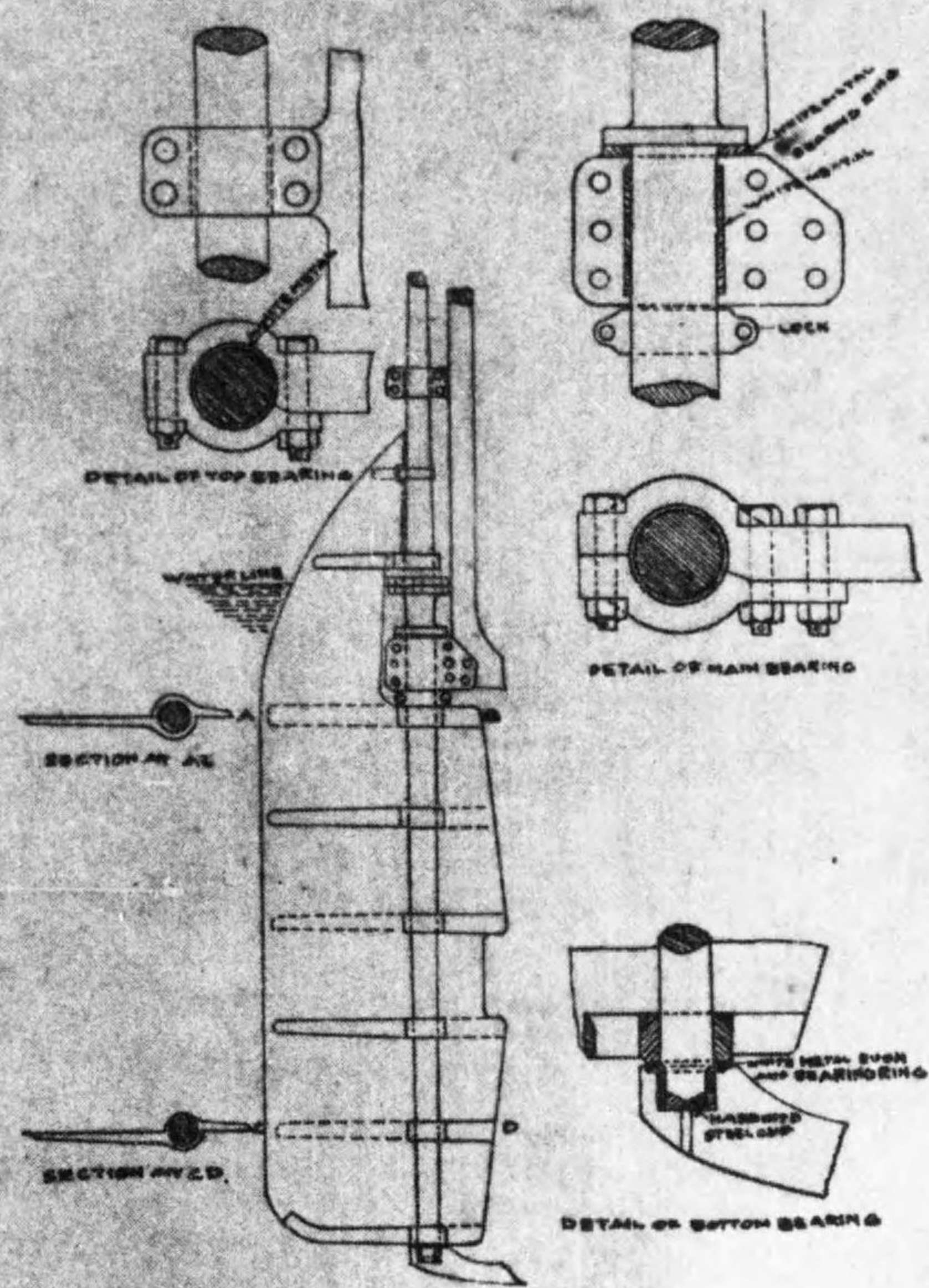


FIG. 100.

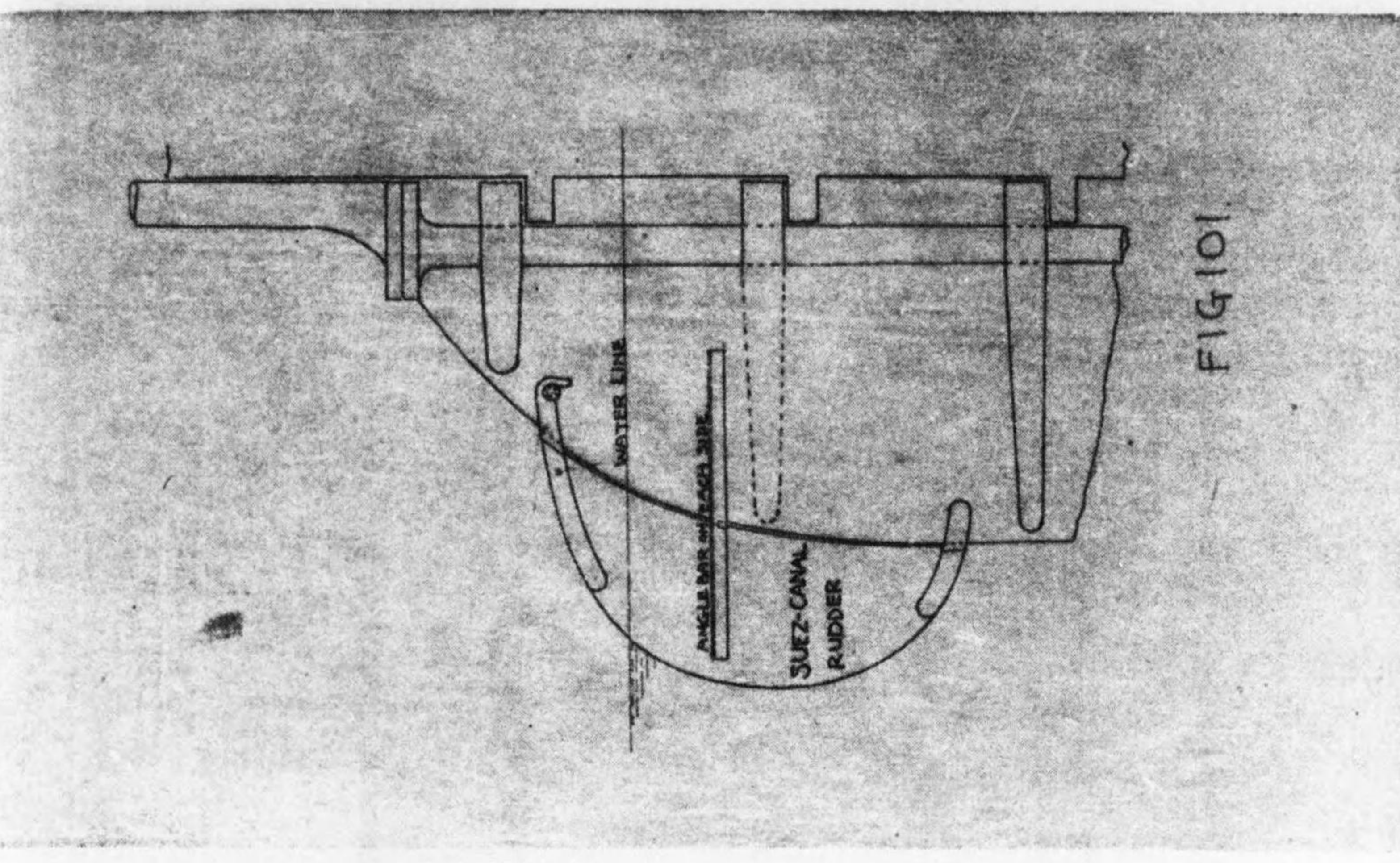


FIG 101

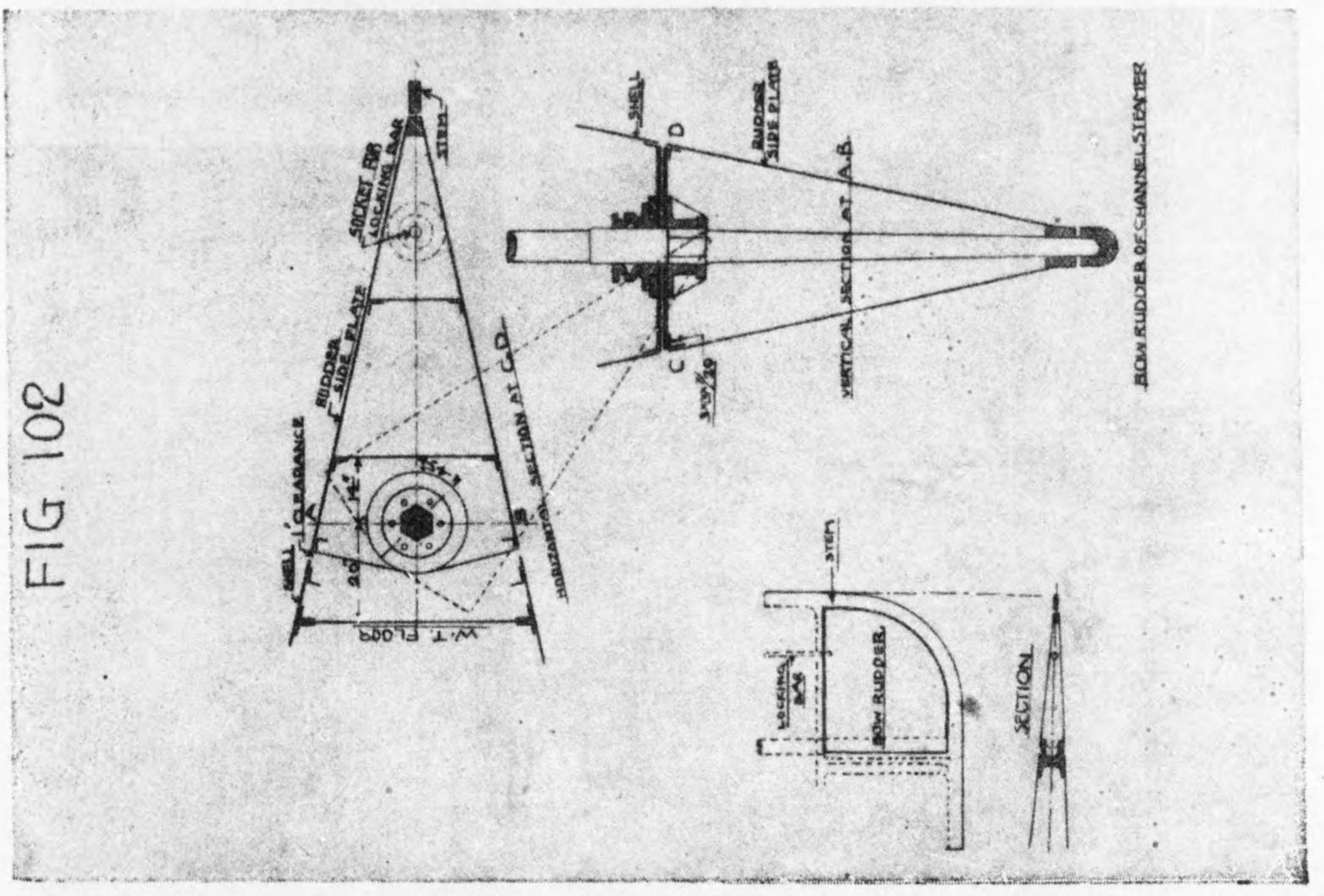
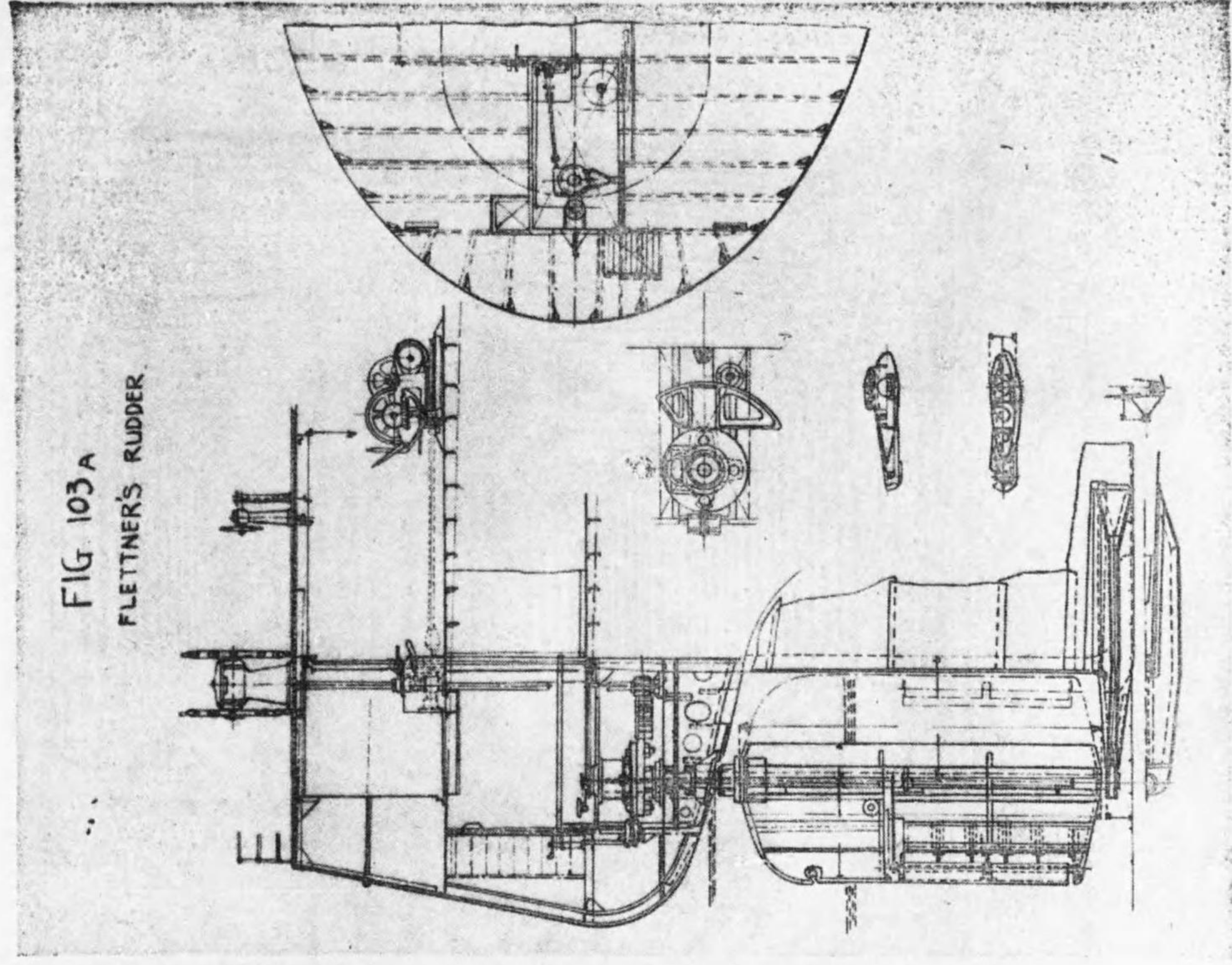
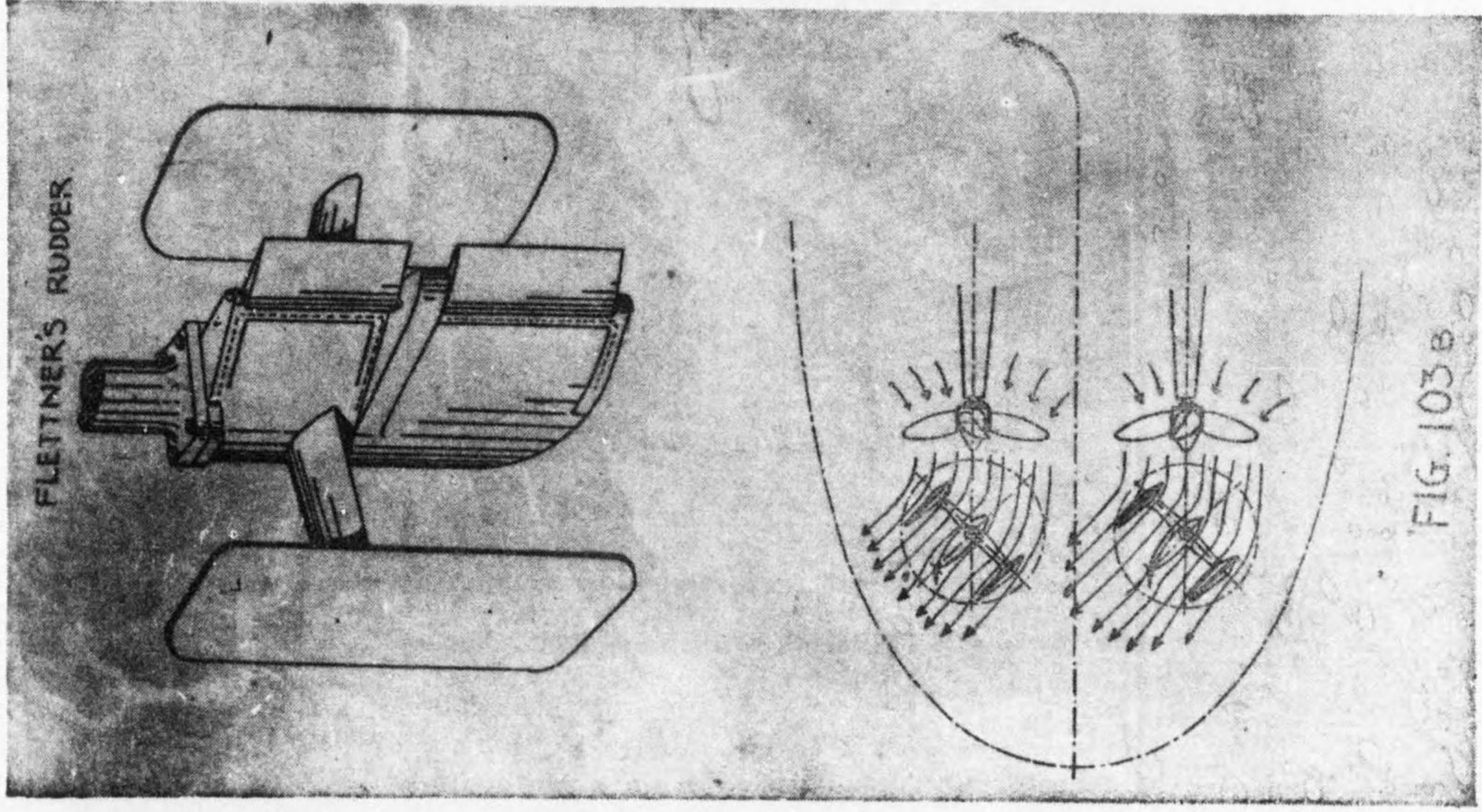


FIG 102

BOW RUDDER OF CHANNEL STEAMER

FIG. 103



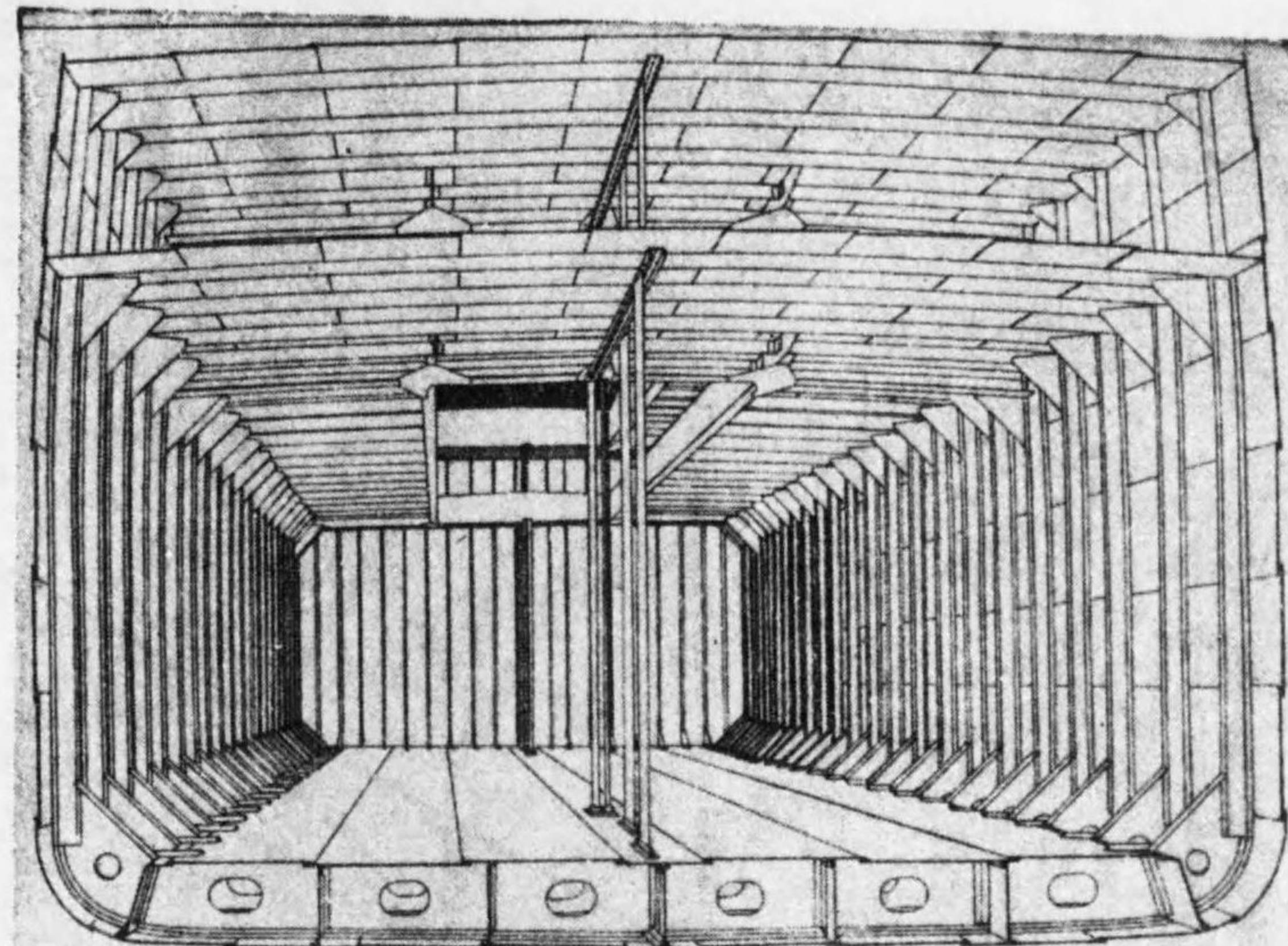


FIG 104. VESSEL WITHOUT SIDE STRINGERS.

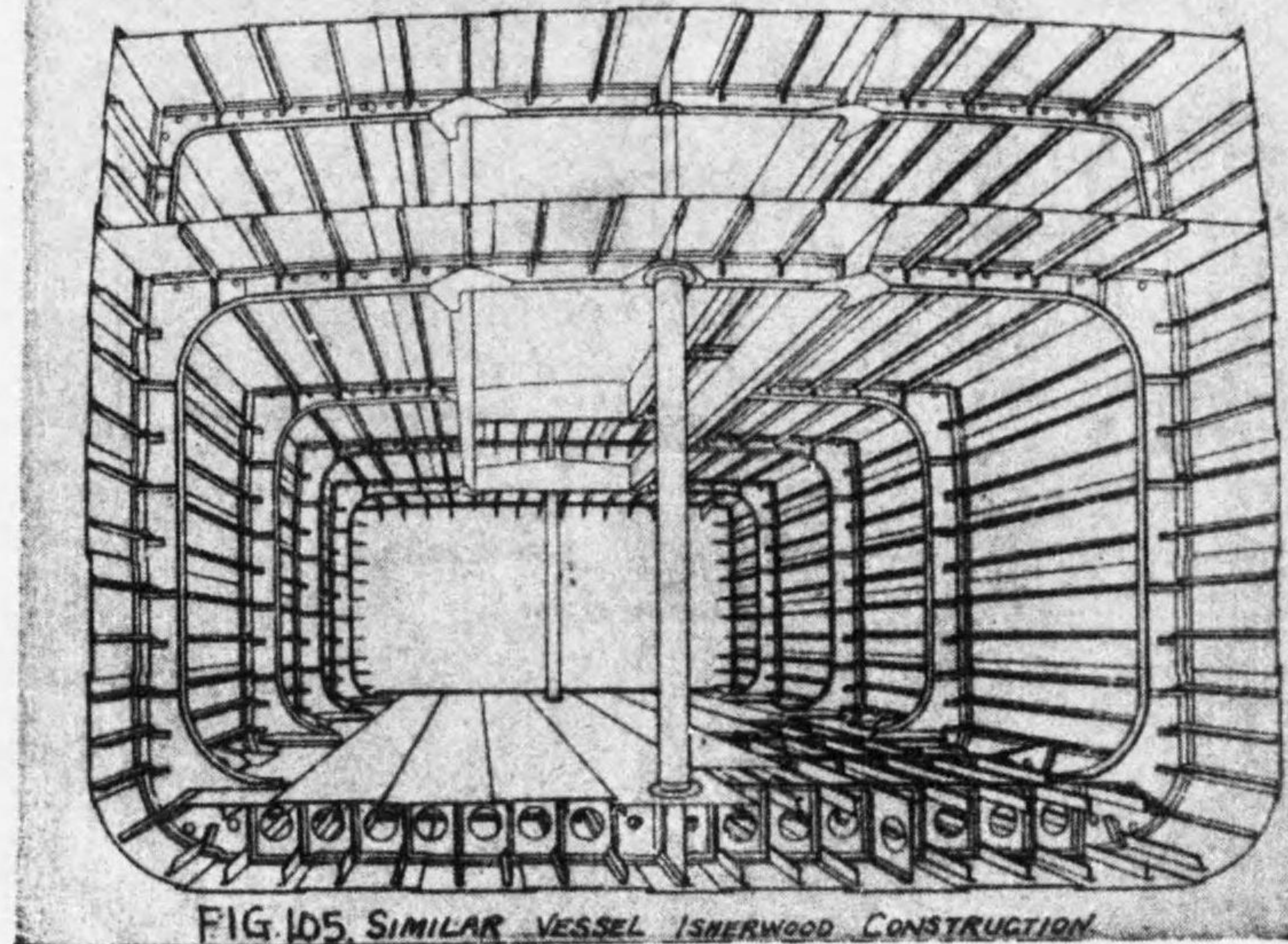


FIG 105. SIMILAR VESSEL ISHERWOOD CONSTRUCTION.

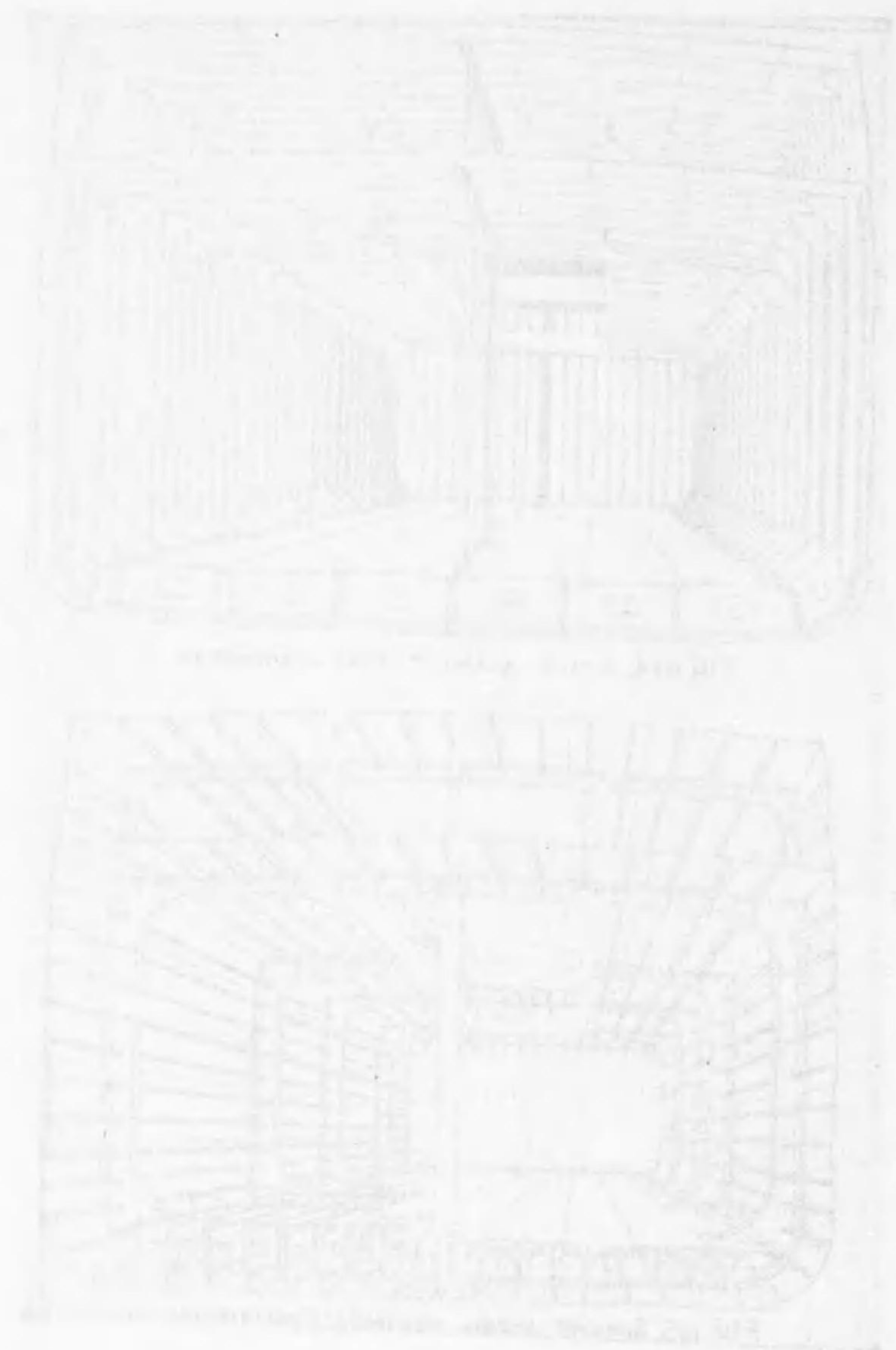


FIG. 106.

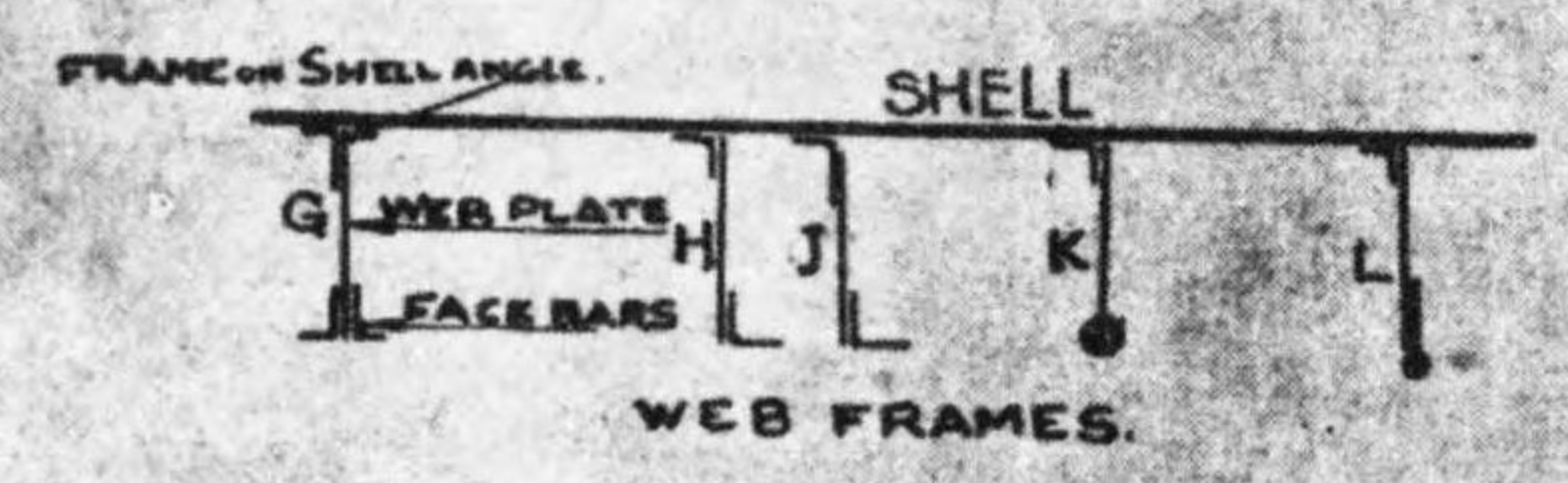
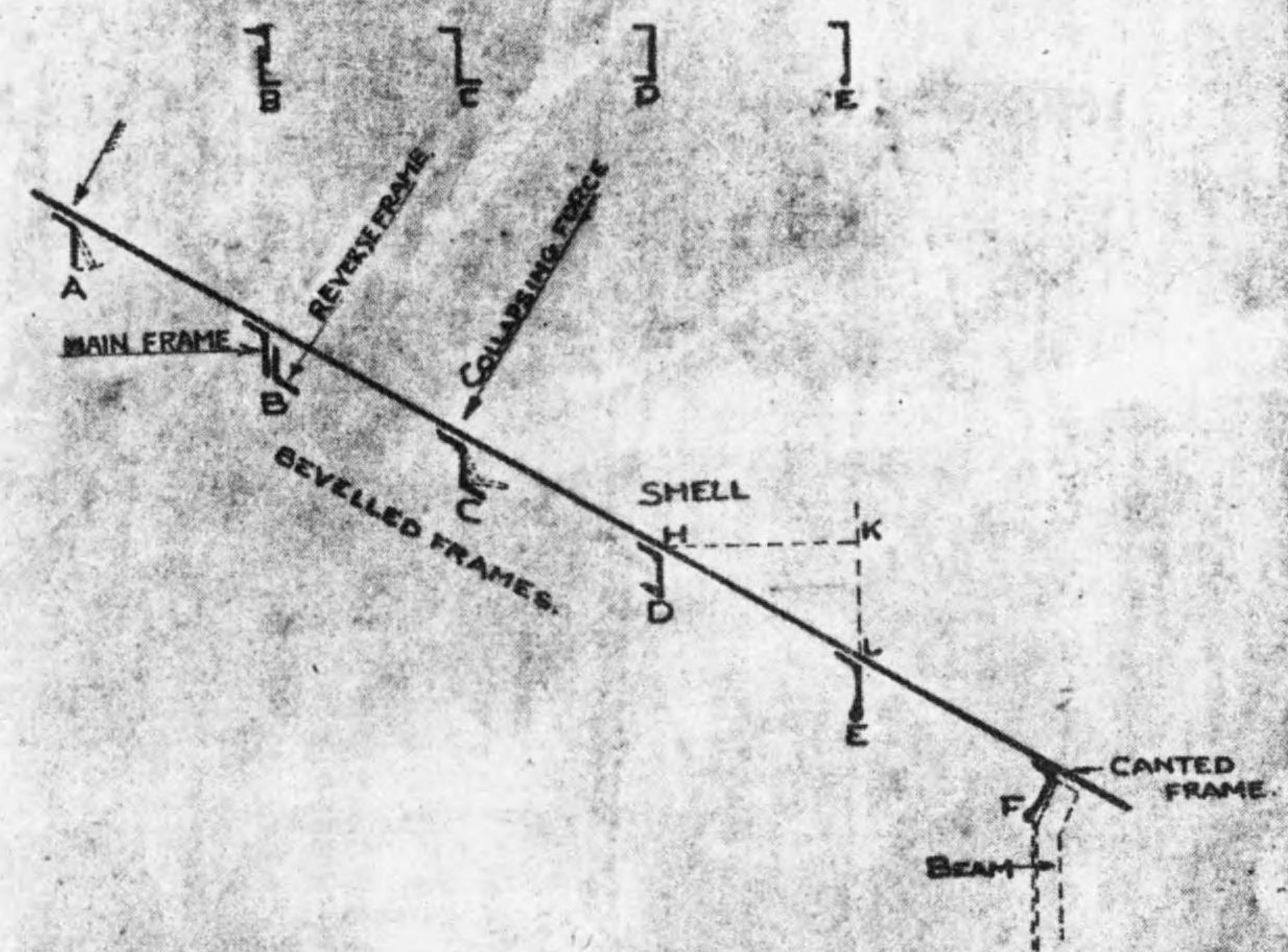




FIG 107

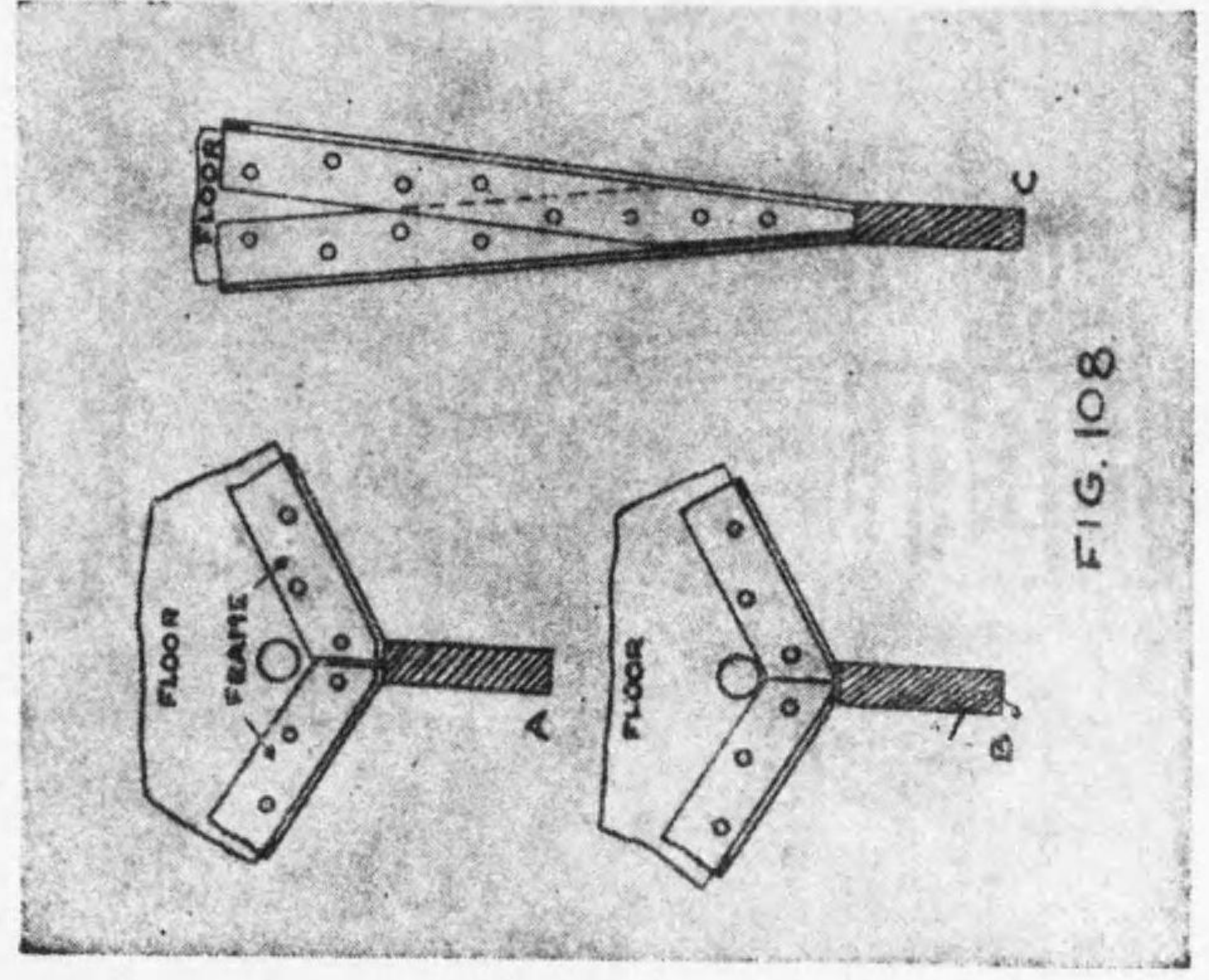
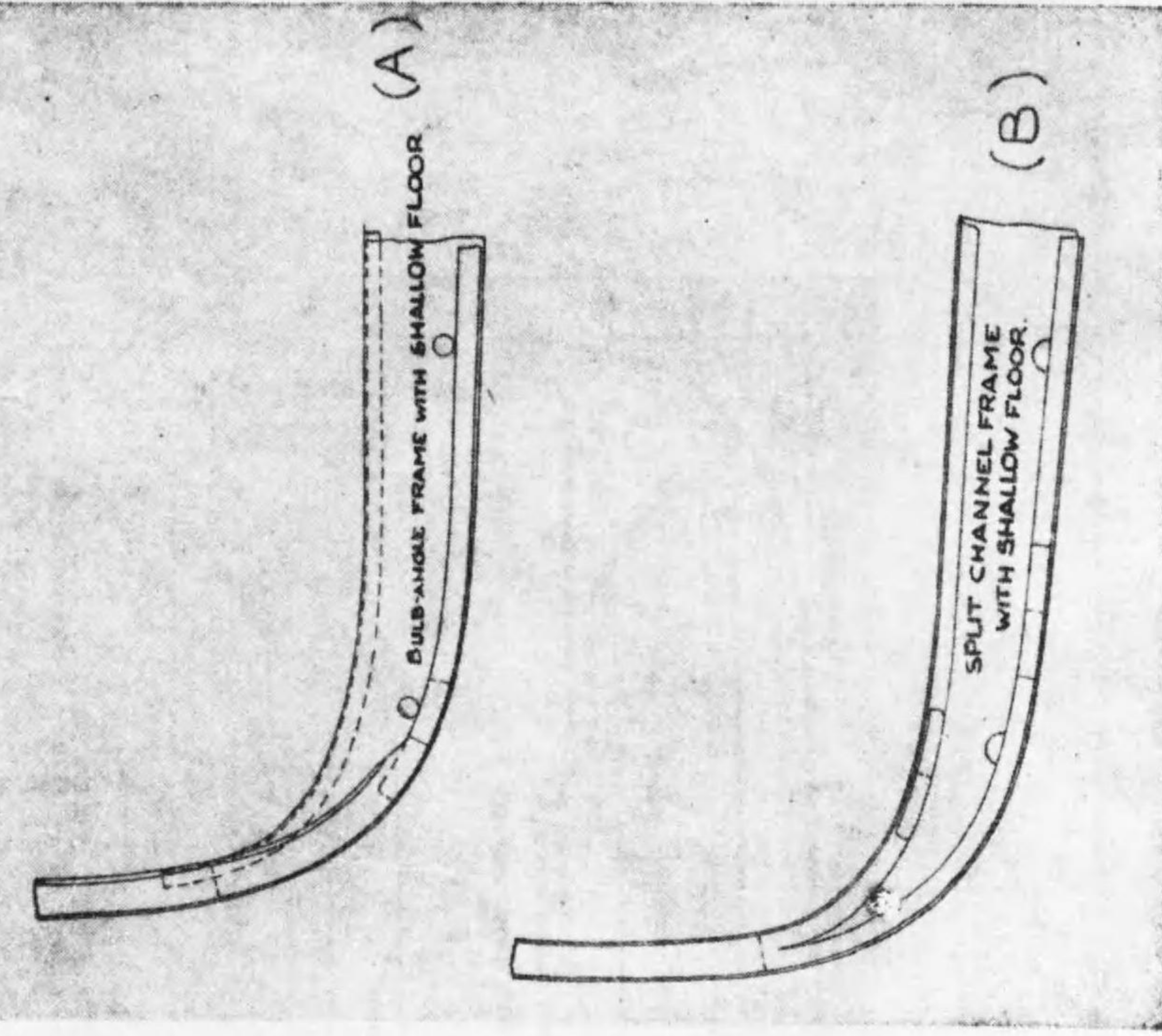
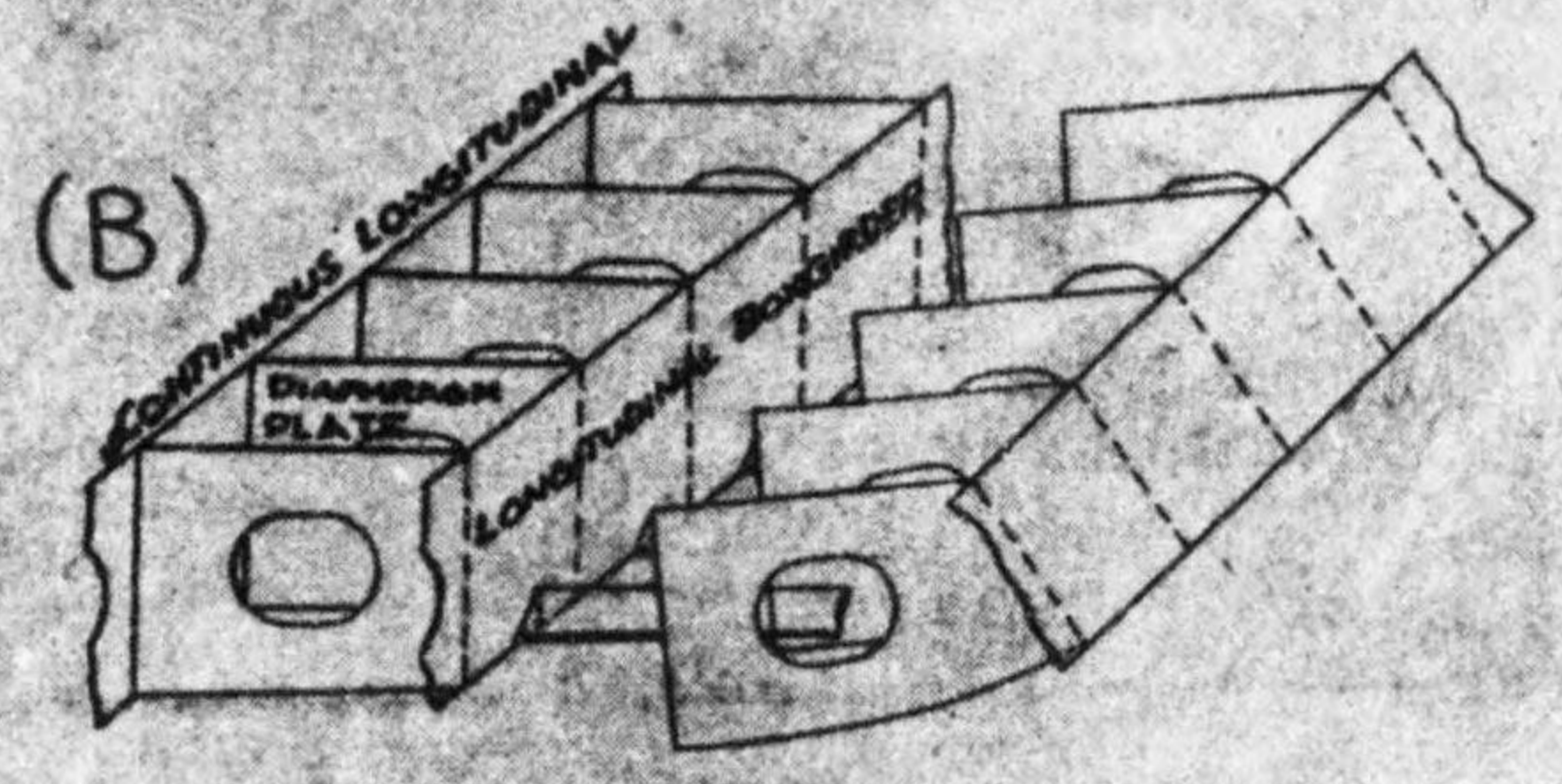
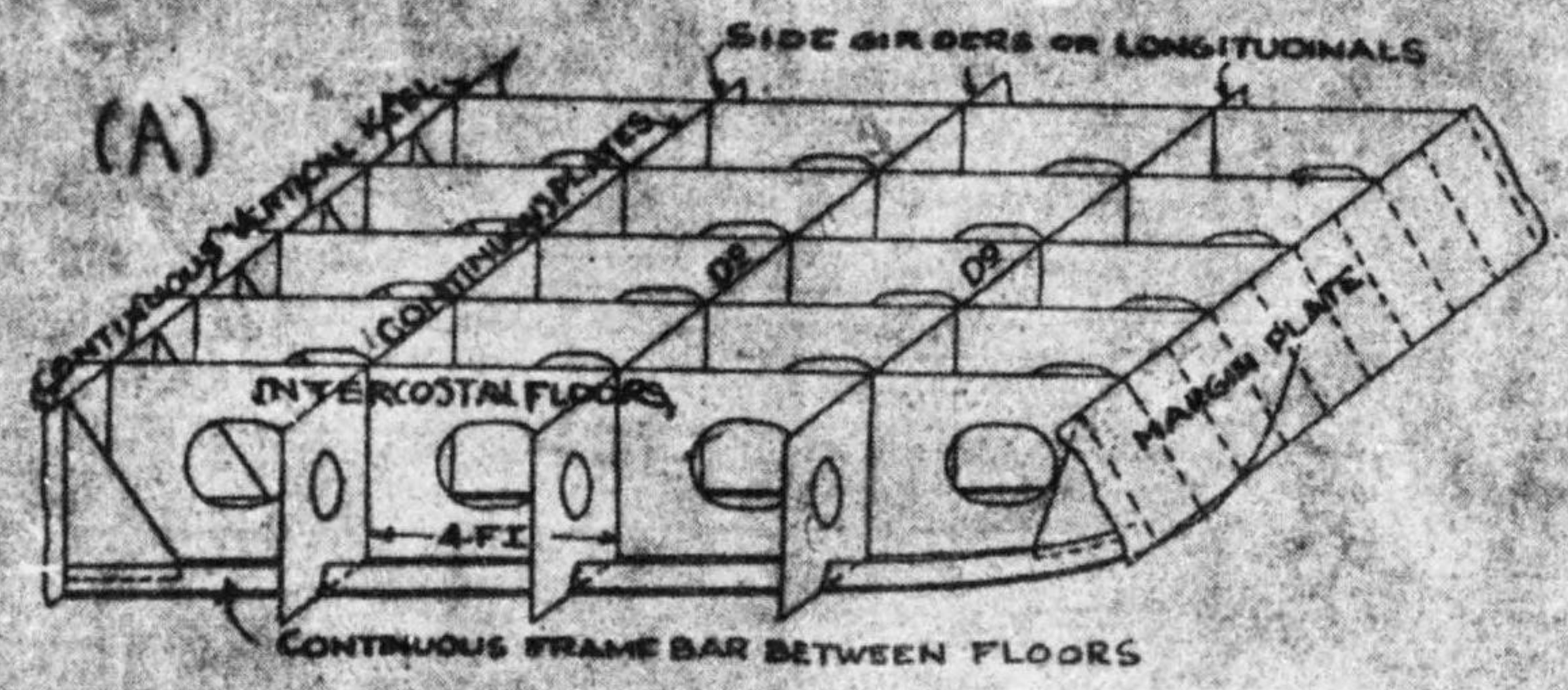


FIG. 108

FIG 110



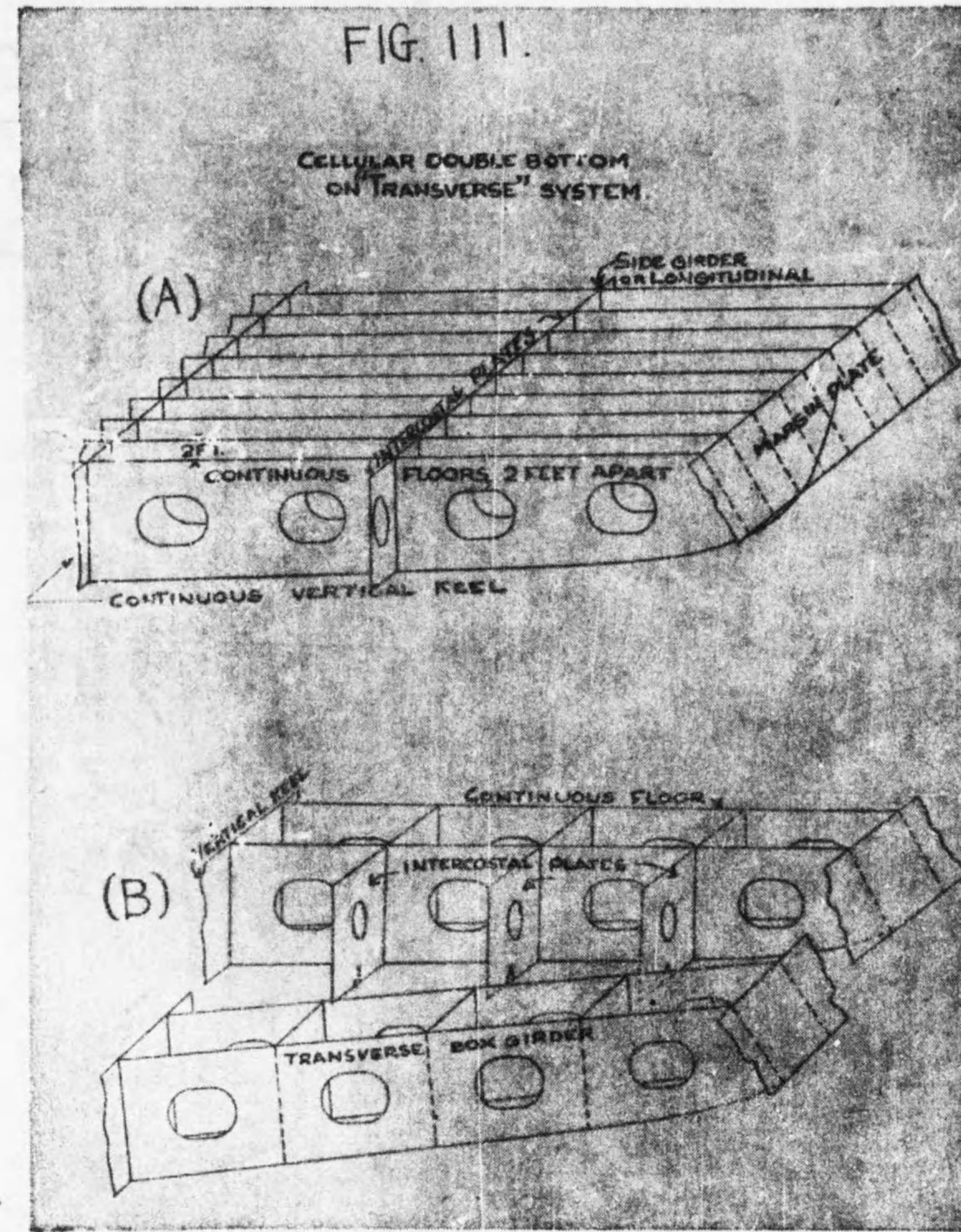
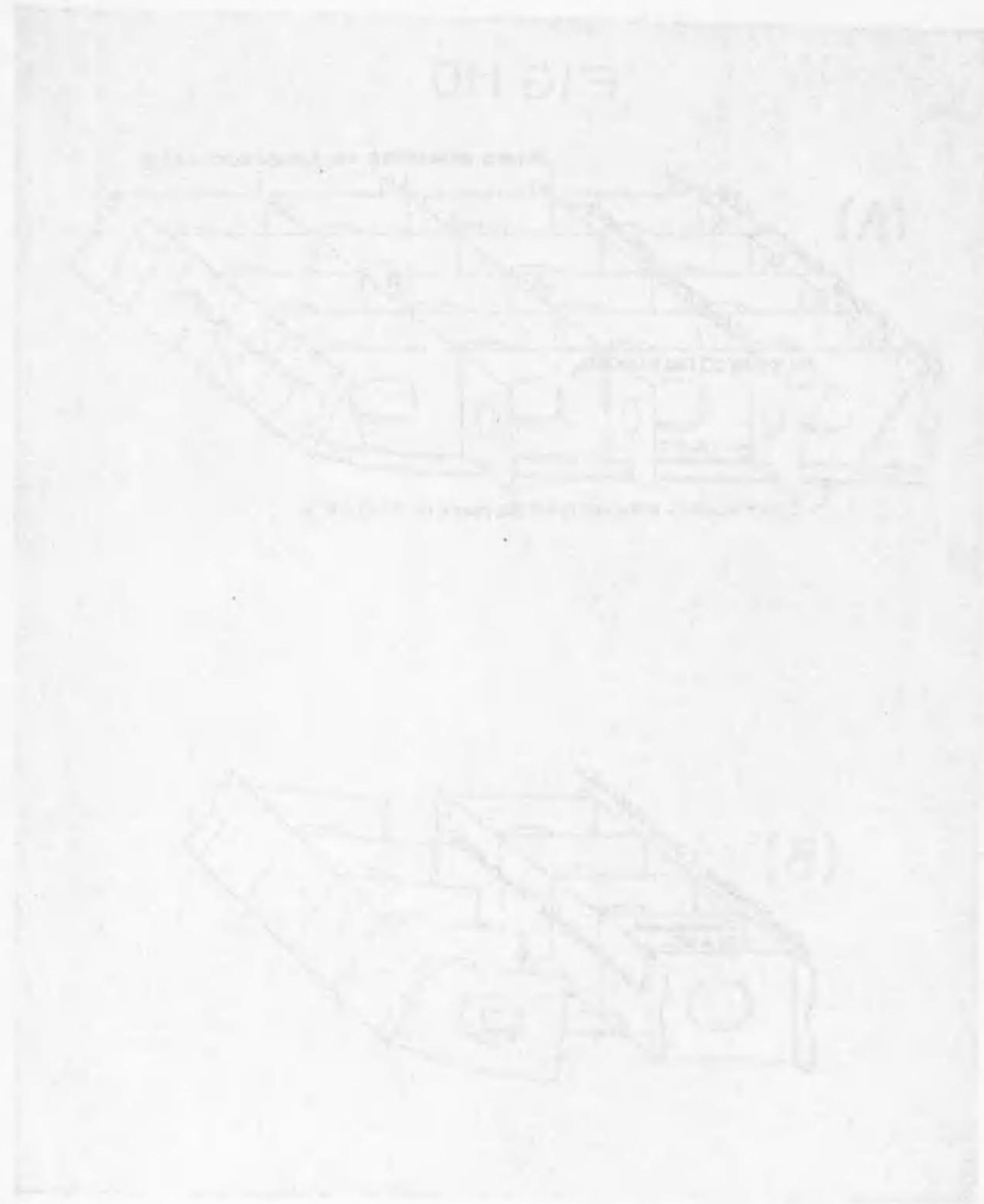


FIG. 112.

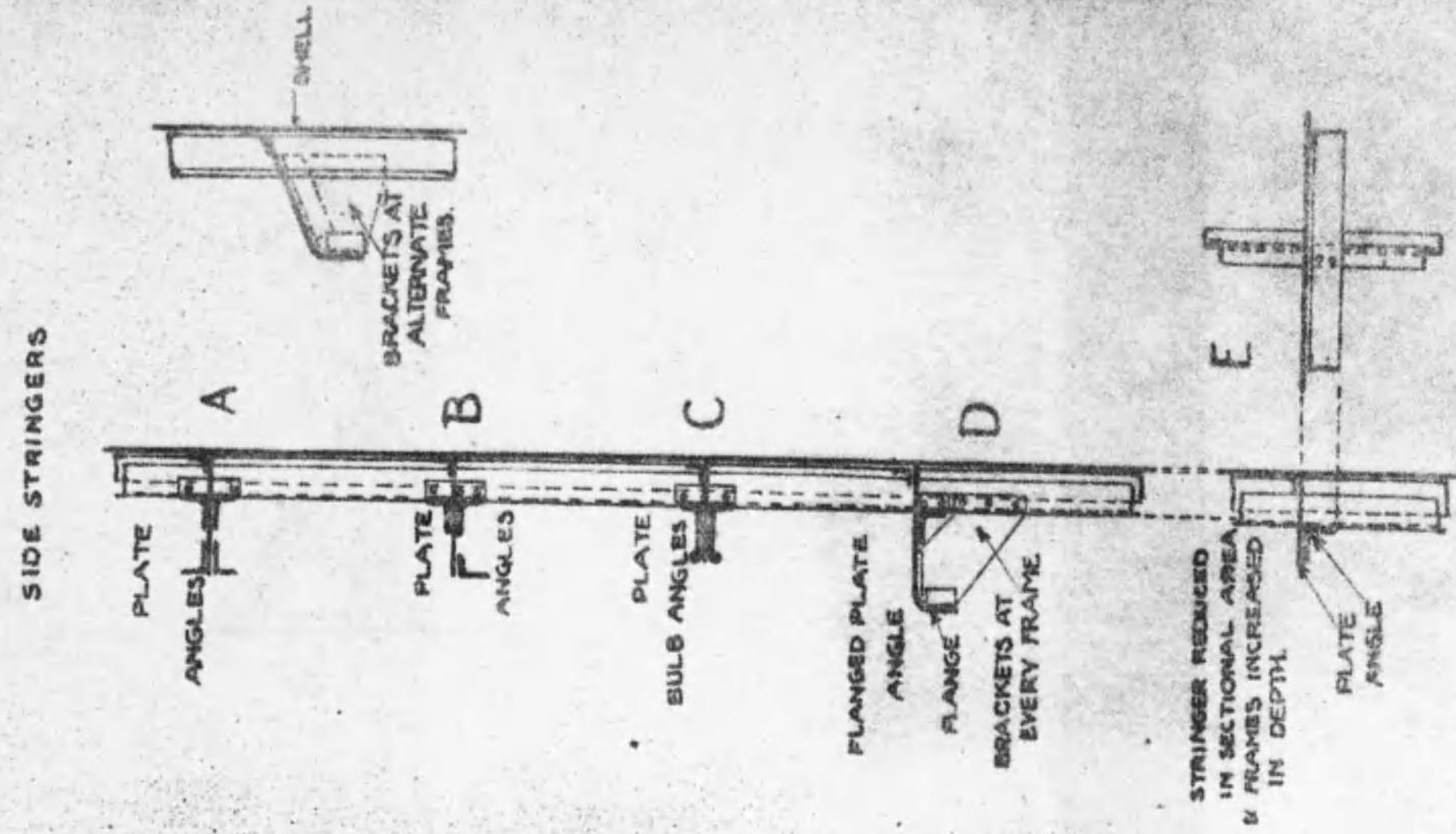
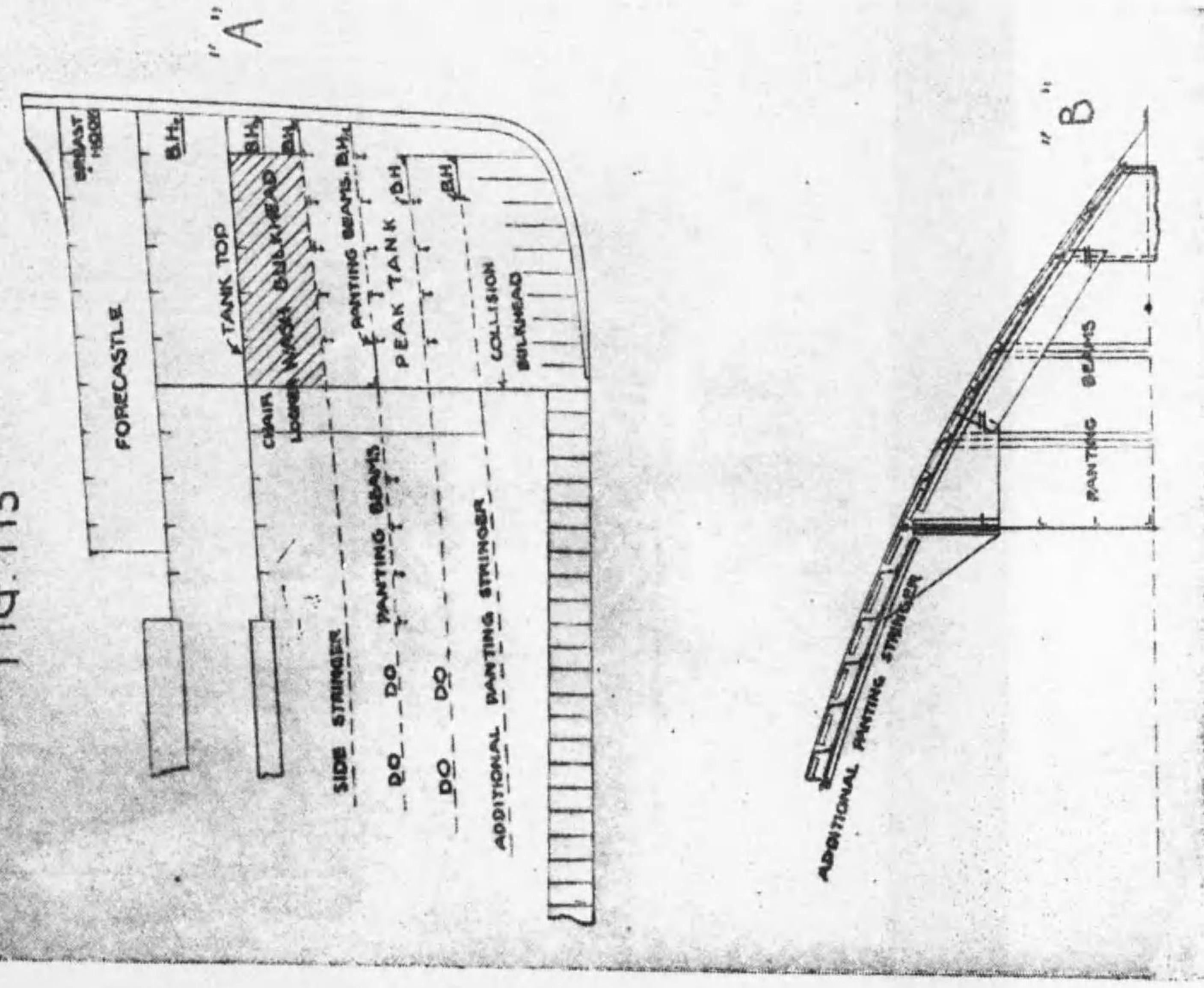


FIG. 113



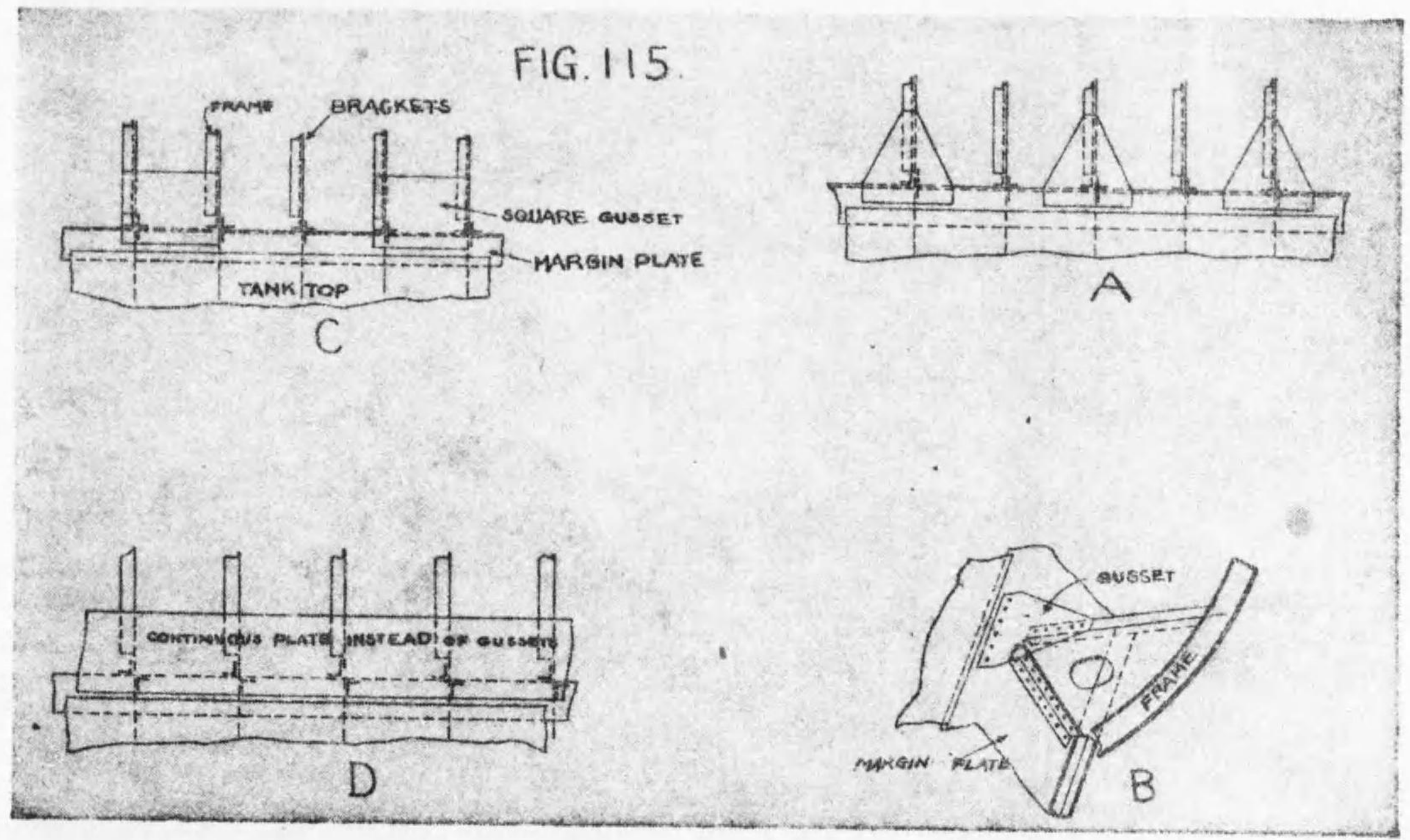
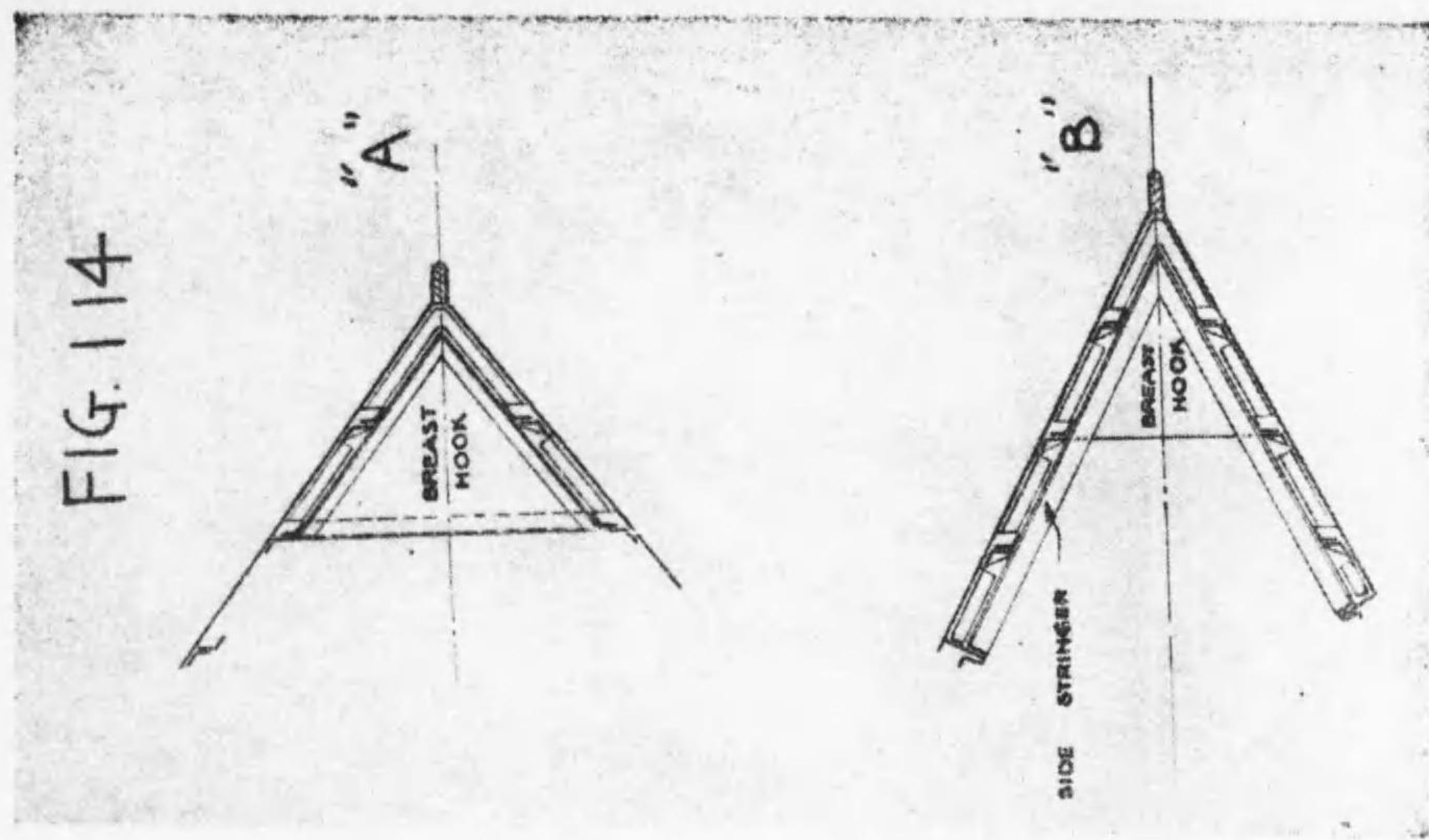


FIG 116 A PANTING STRINGER IN FORE PEAK TANK.

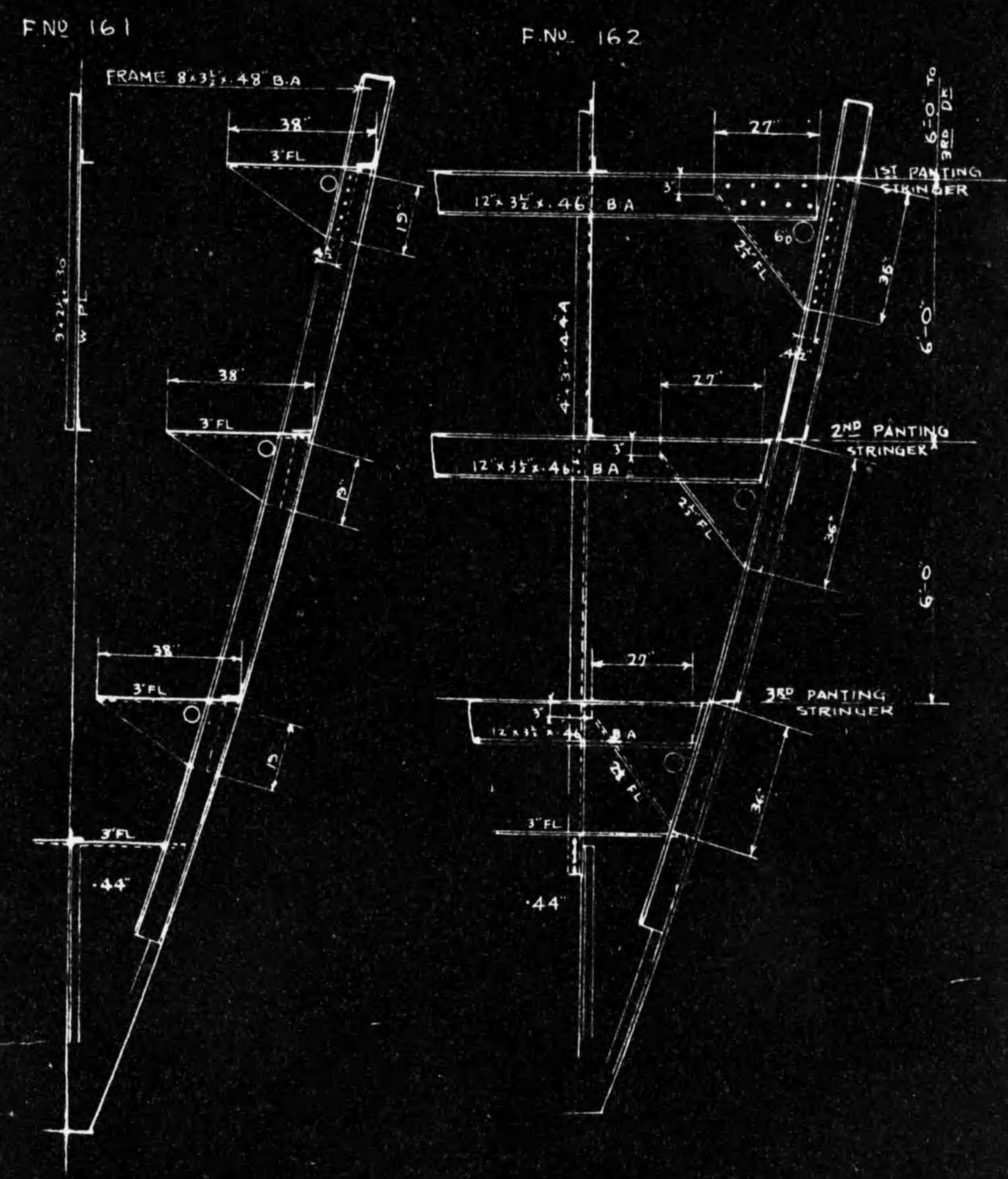


FIG 116 B

PANTING STRINGER IN FORE PEAK TANK

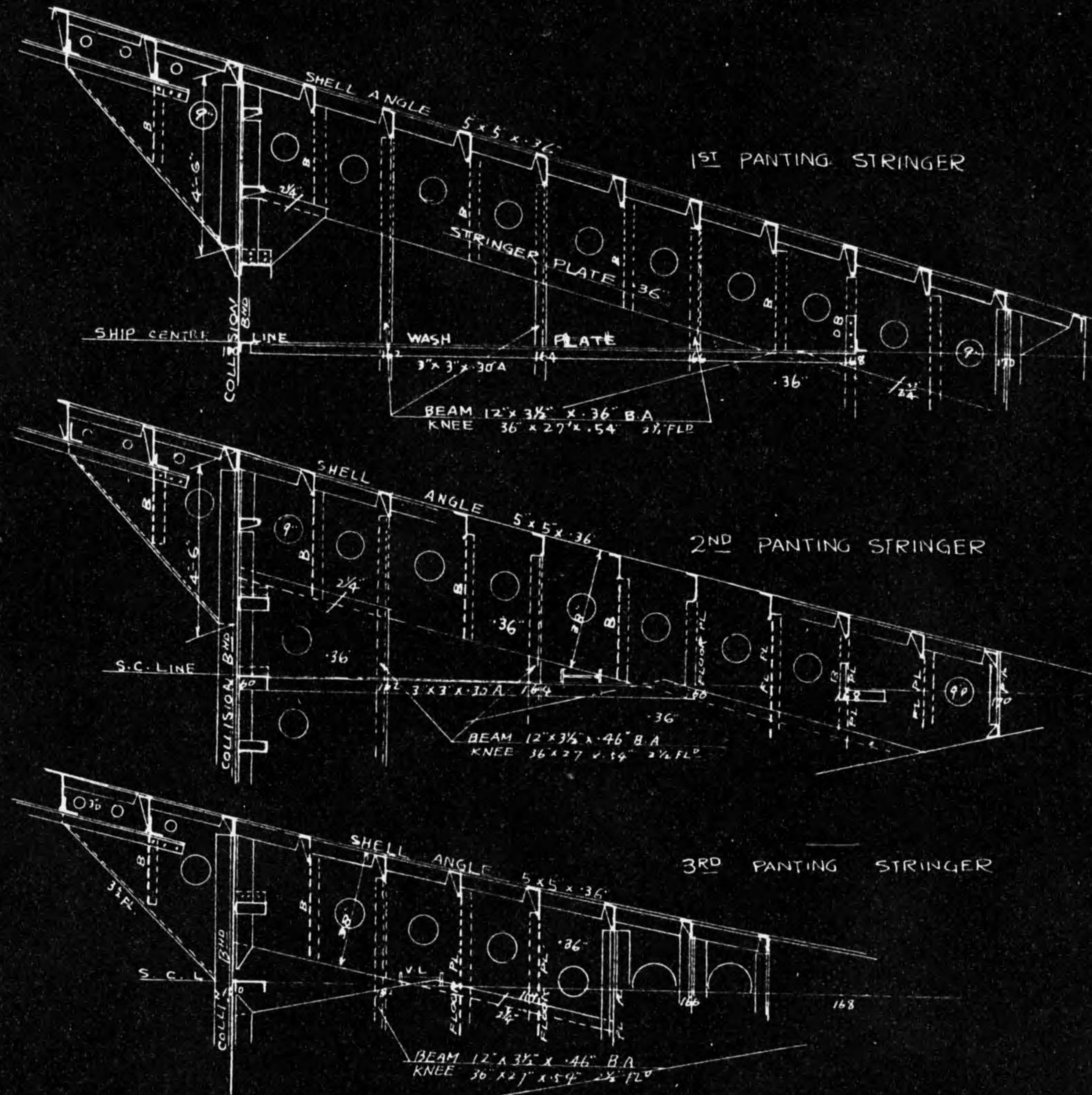
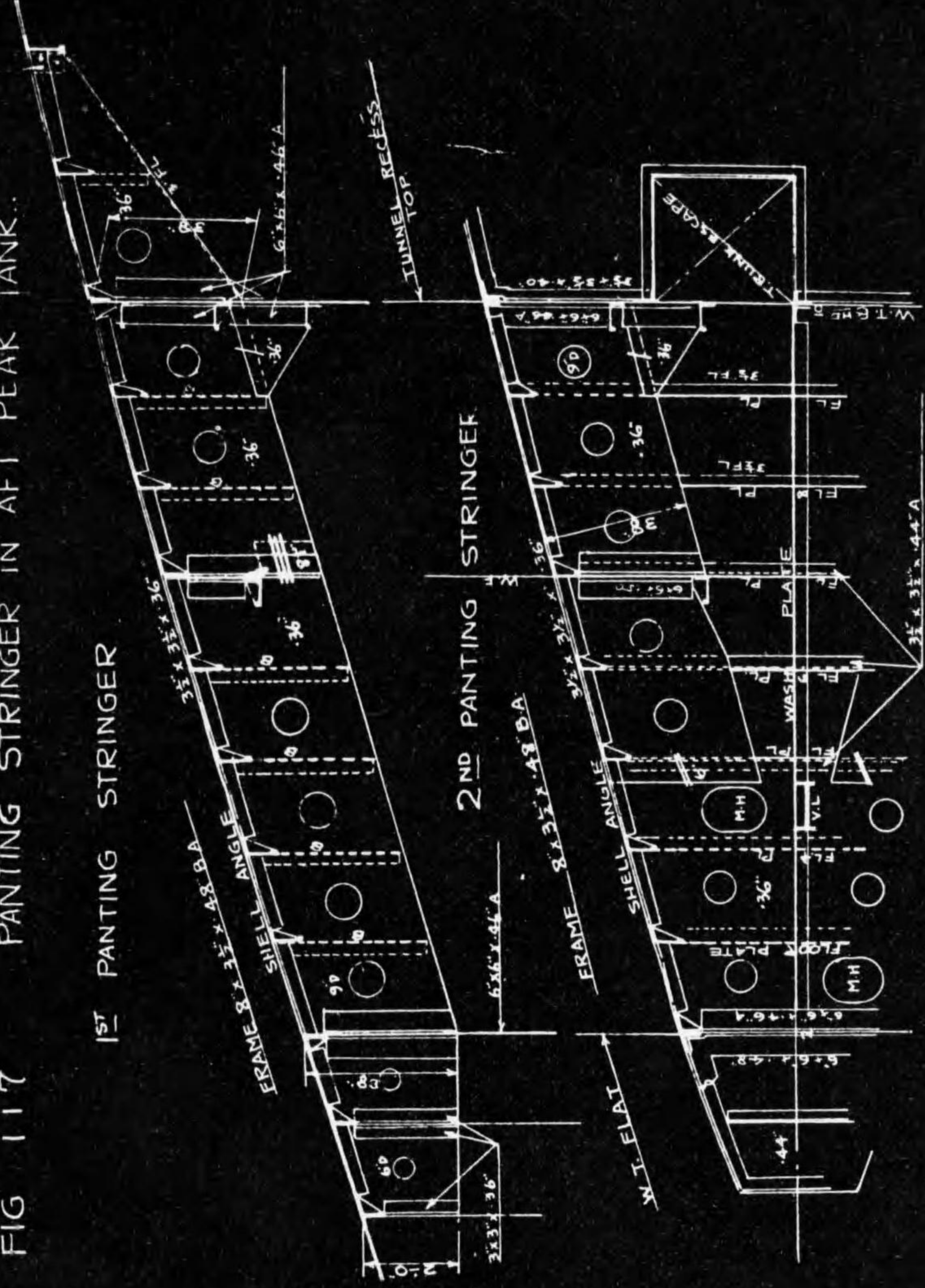


FIG 117 PANTING STRINGER IN AFT PEAK TANK

1ST PANTING STRINGER

2ND PANTING STRINGER



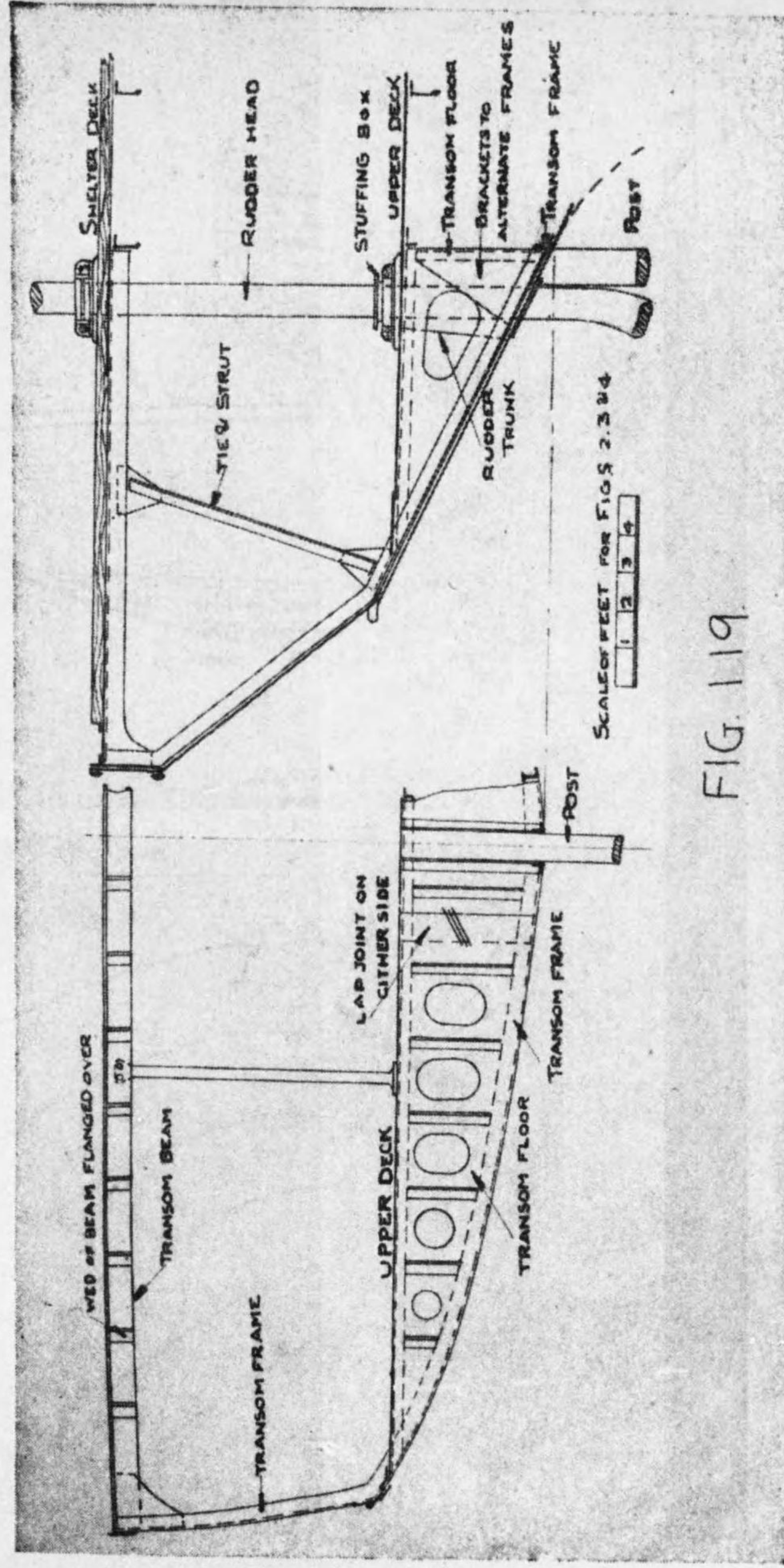


FIG. 119.

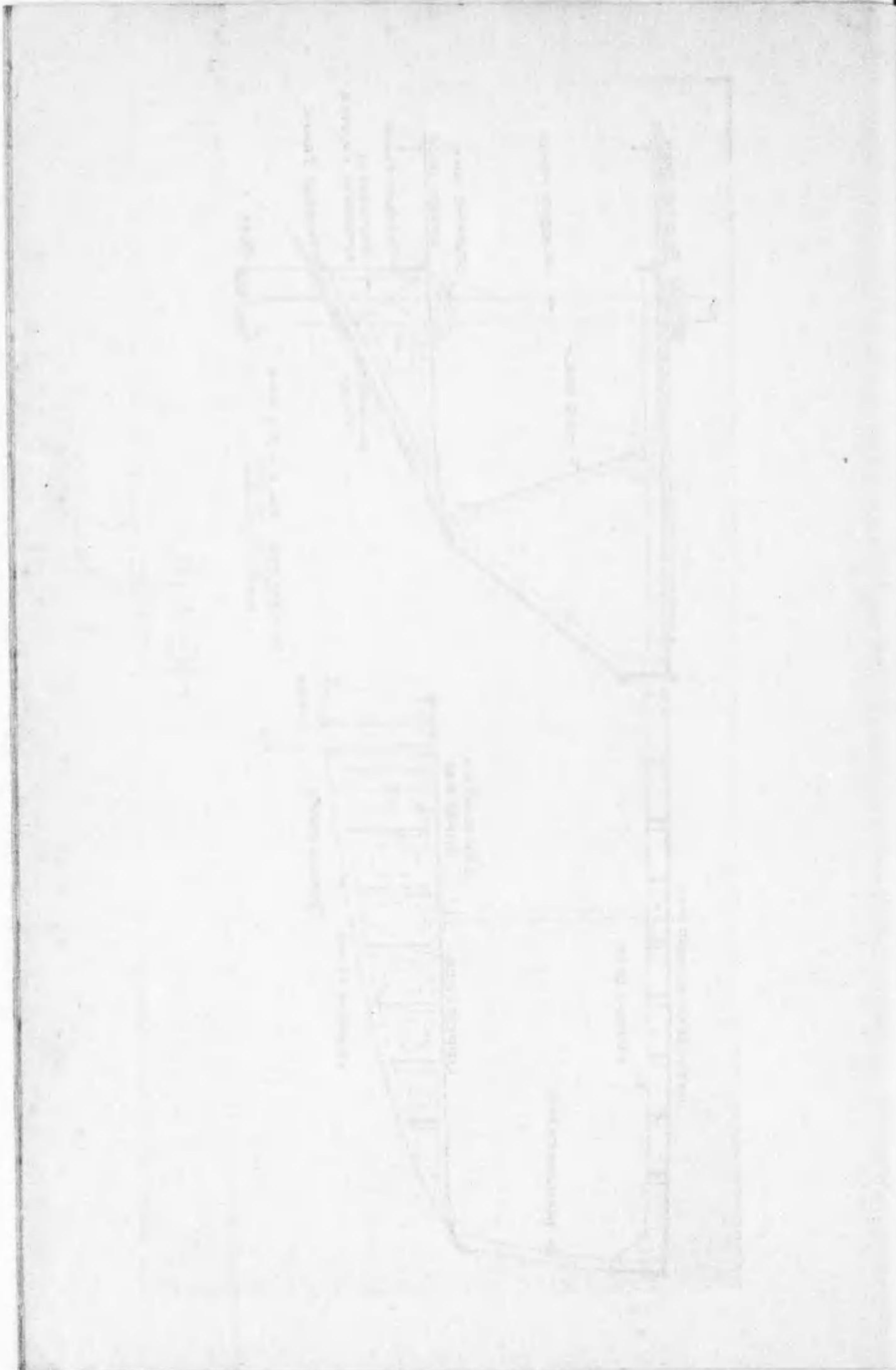


FIG. 120.

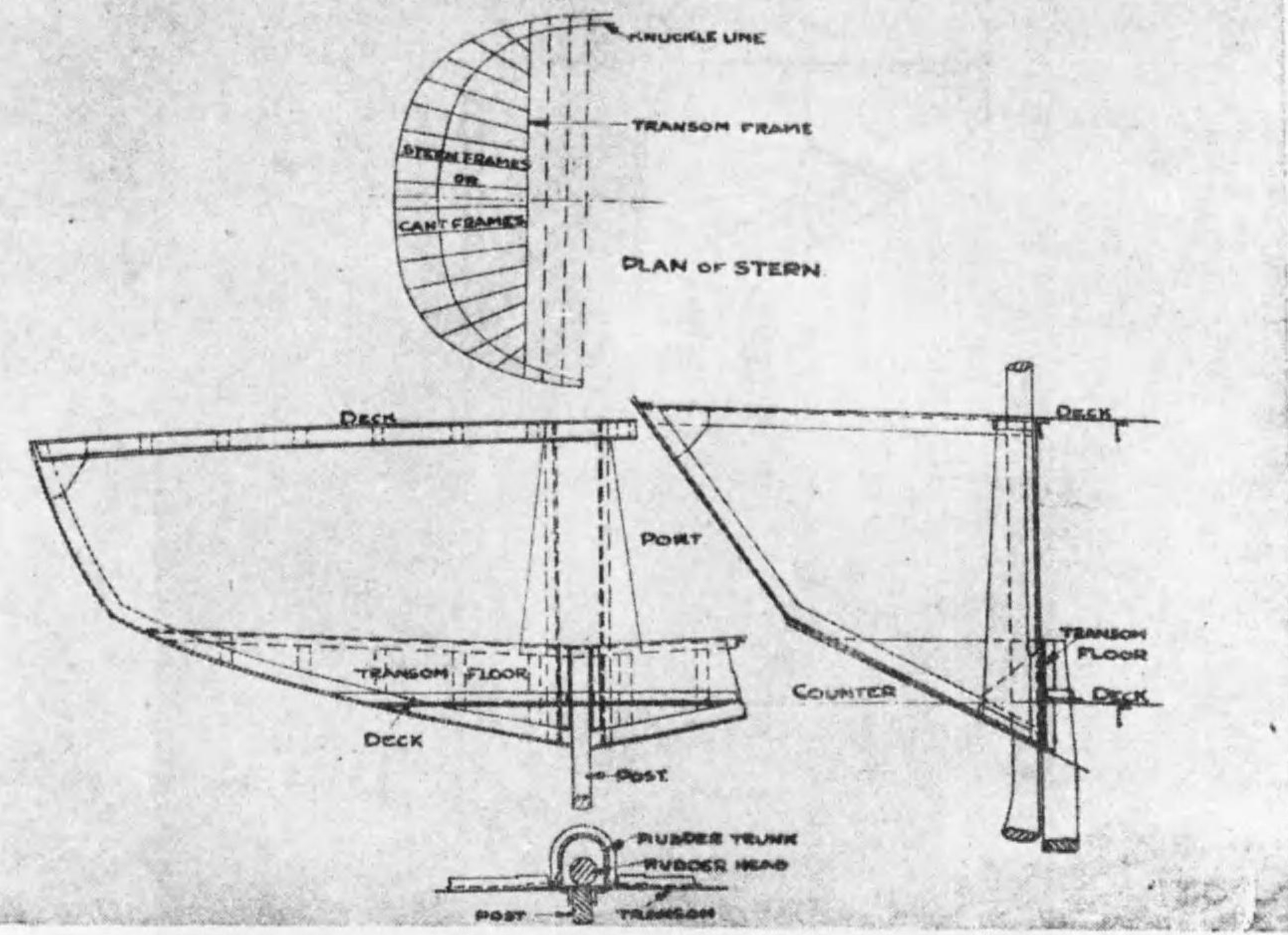


FIG 121

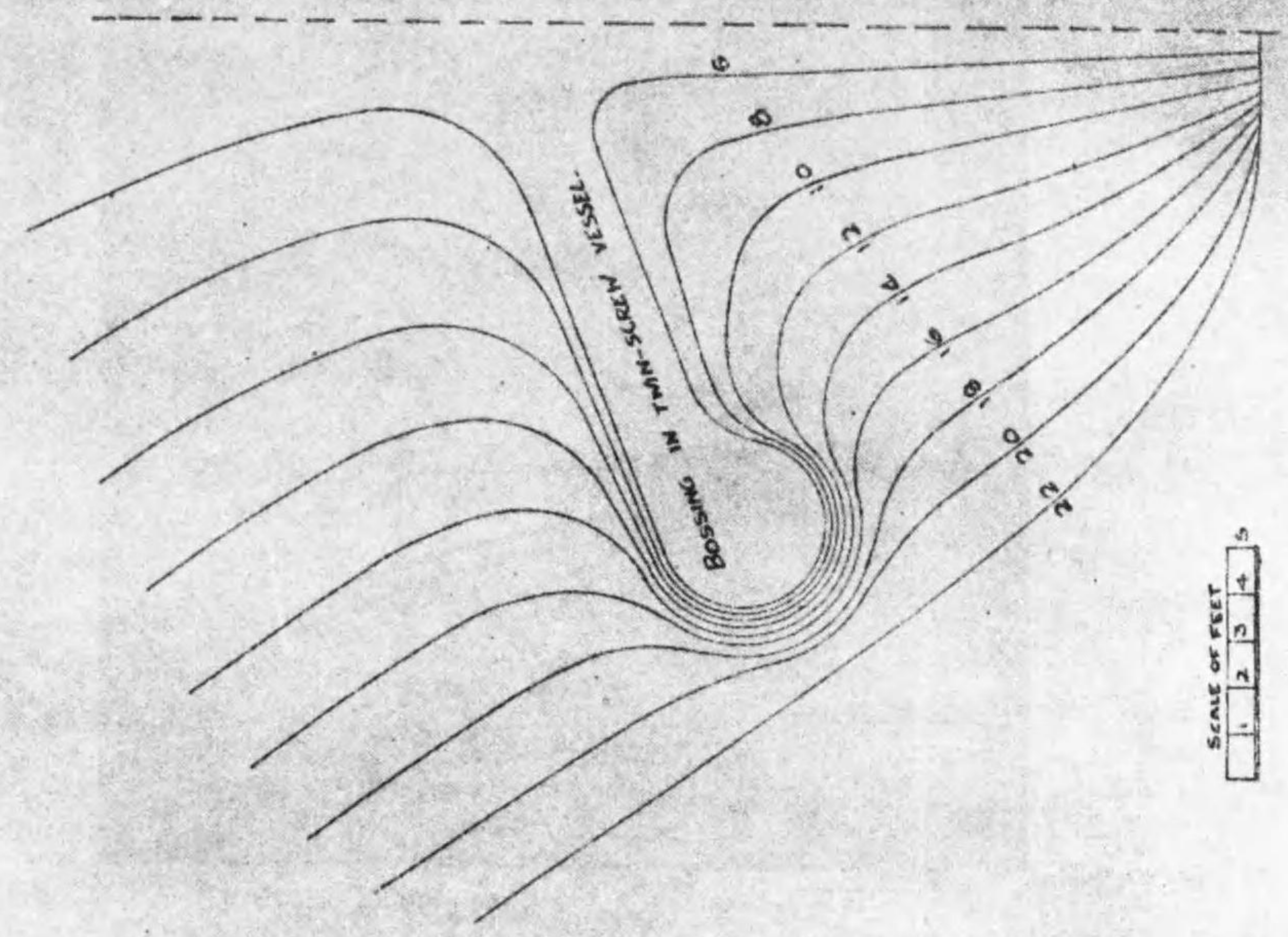




FIG. 123.

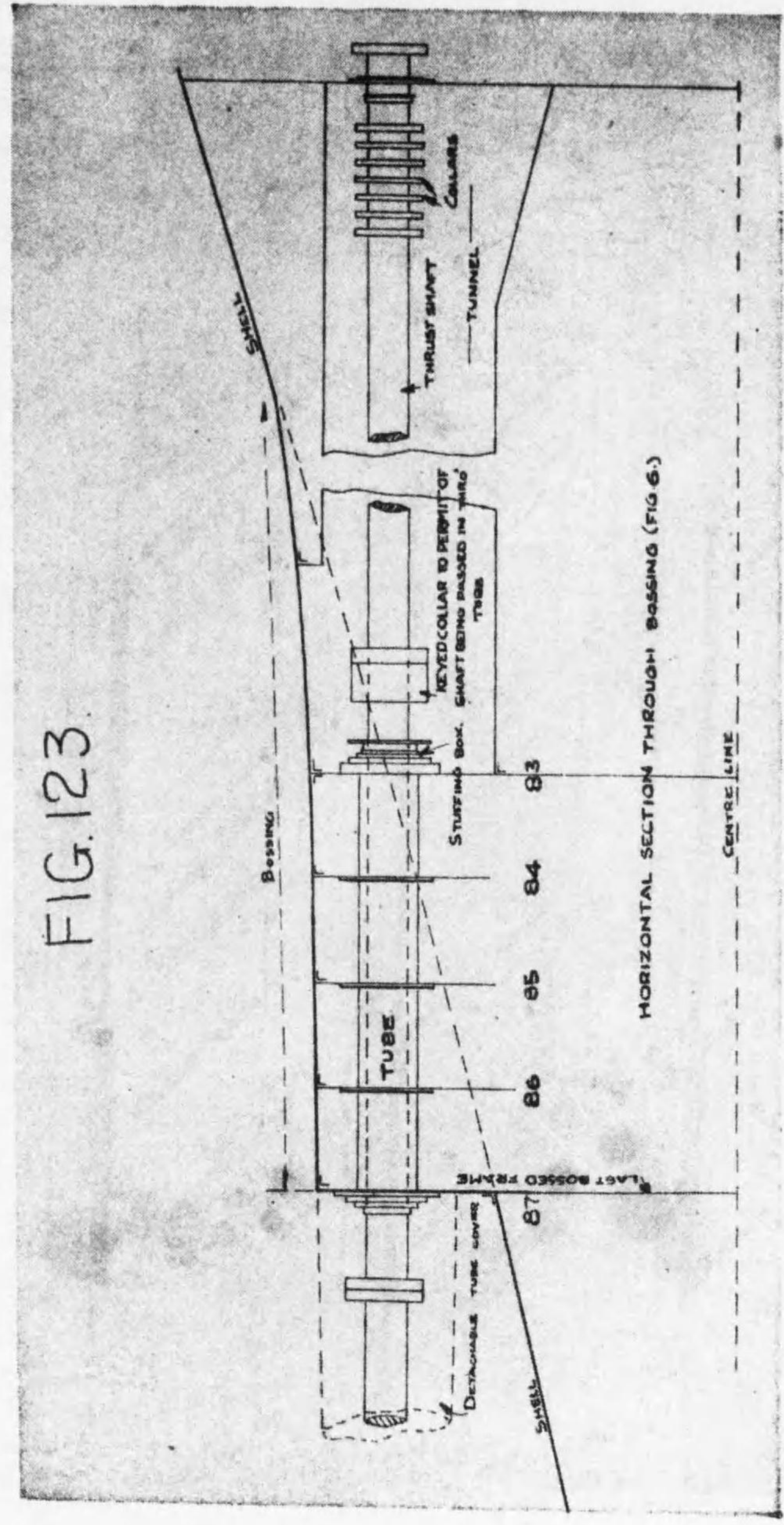
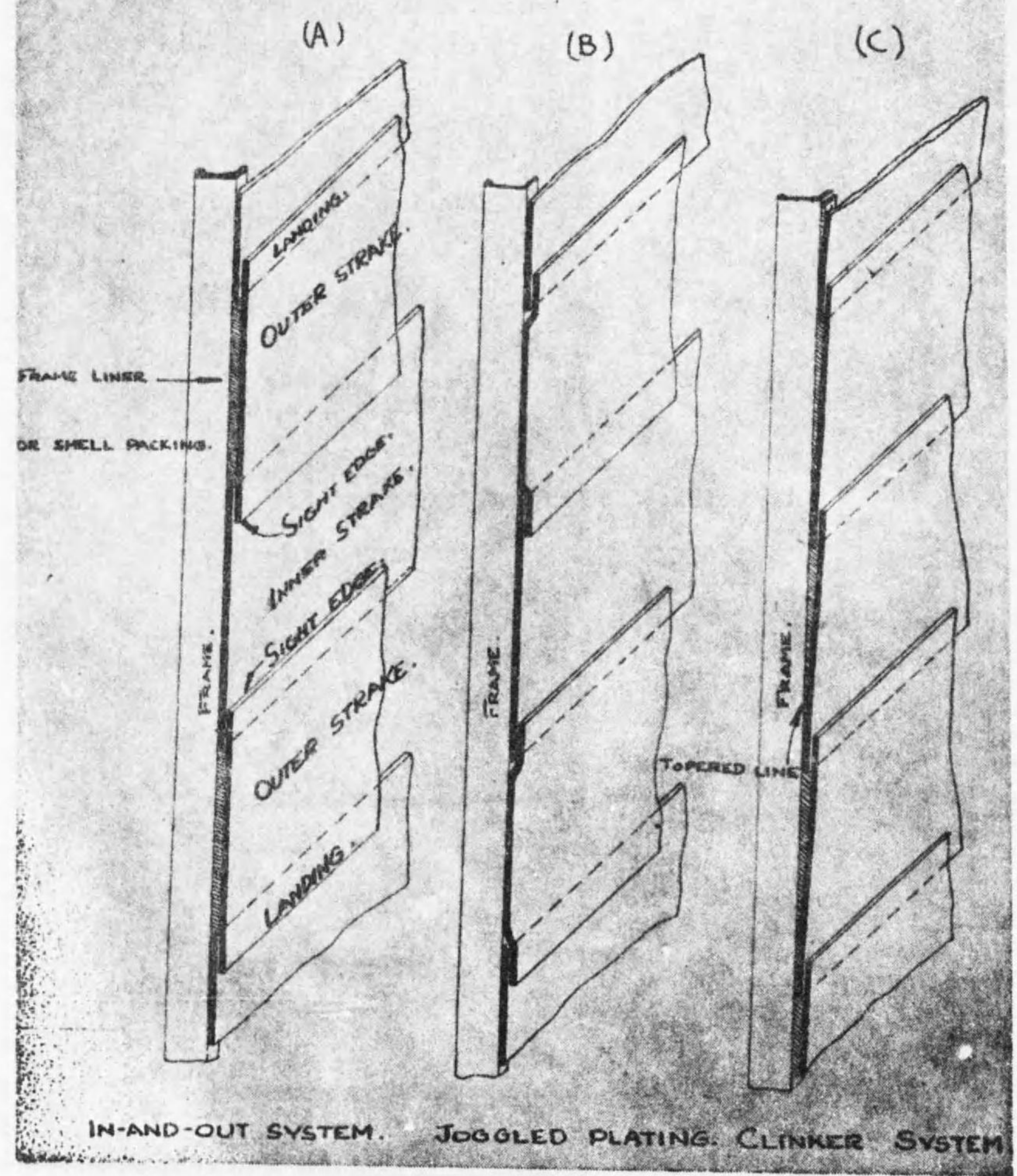




FIG. 124. I.



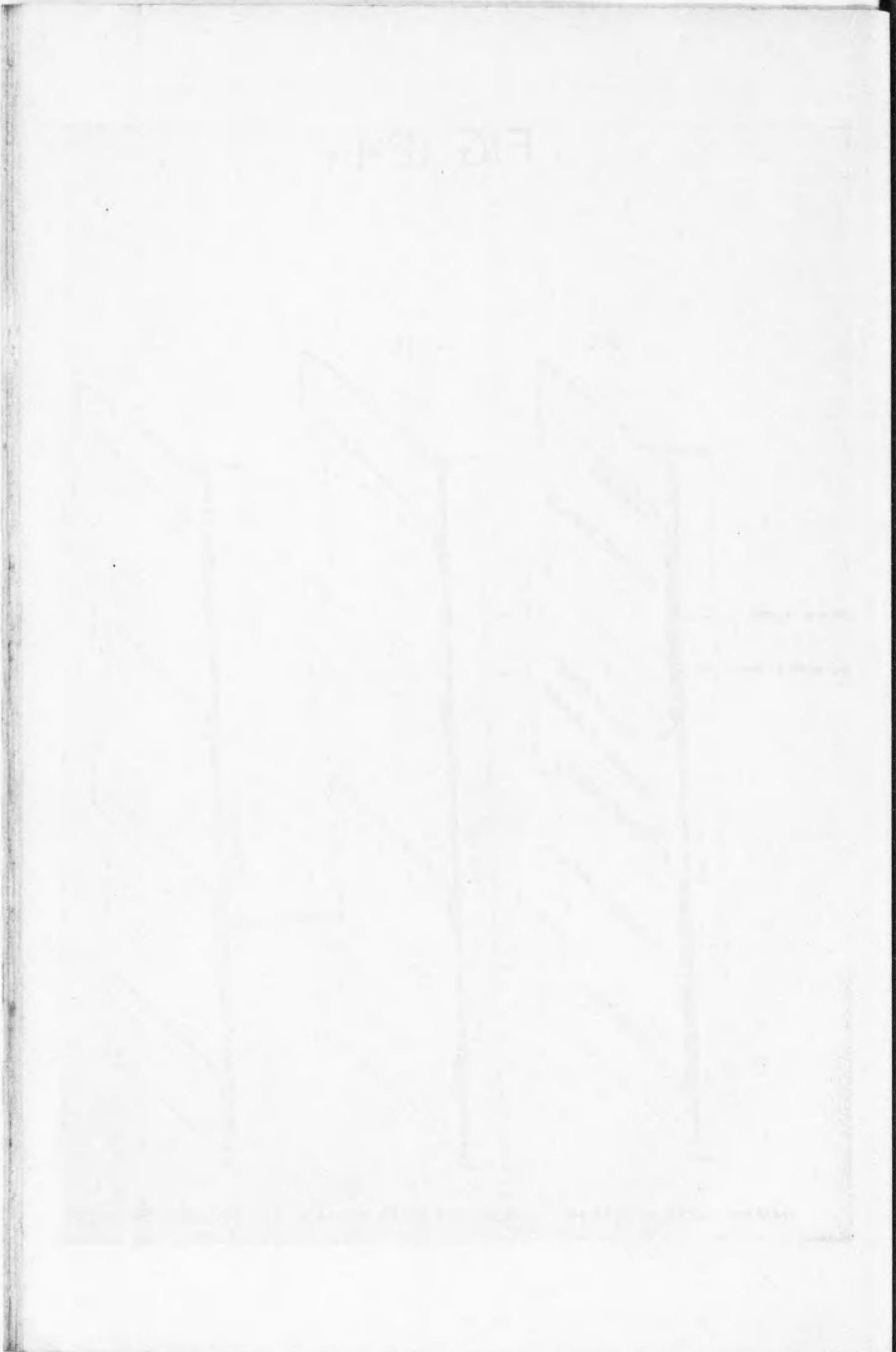


FIG. 124. II.

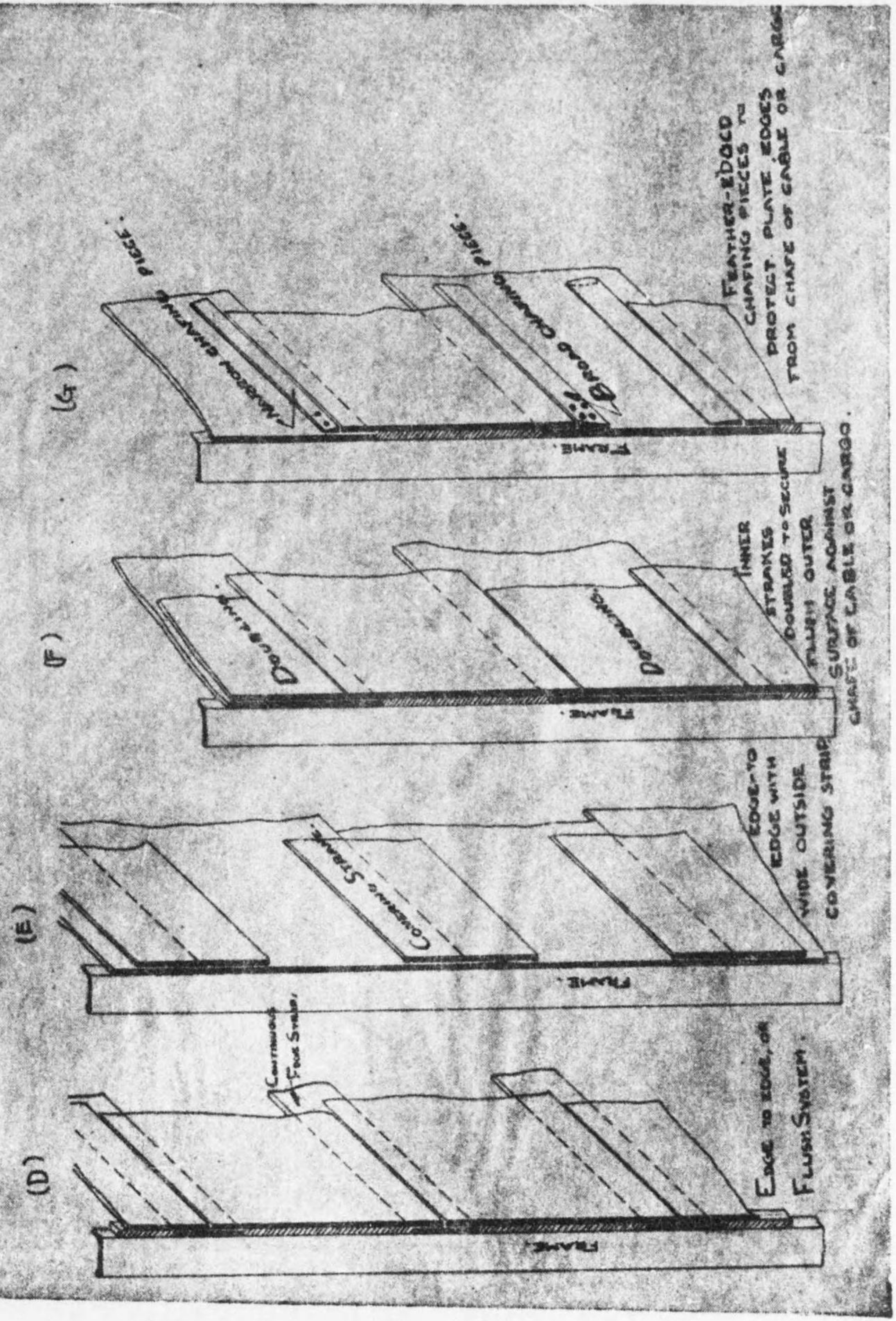


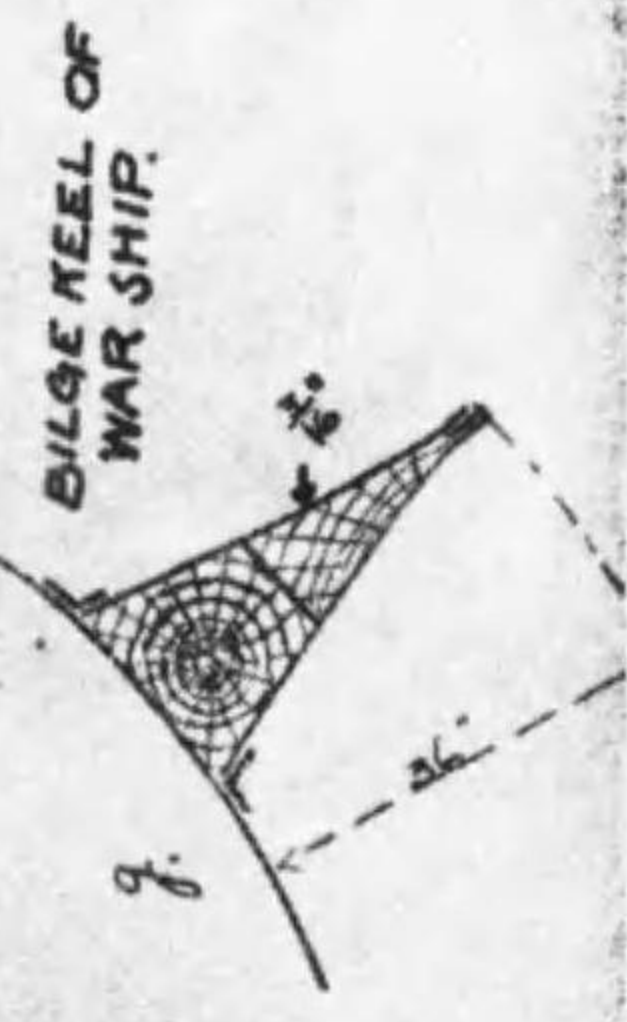
FIG 125.

(A)



(B)

B I L G E K E E L S



TOGGLED FRAME

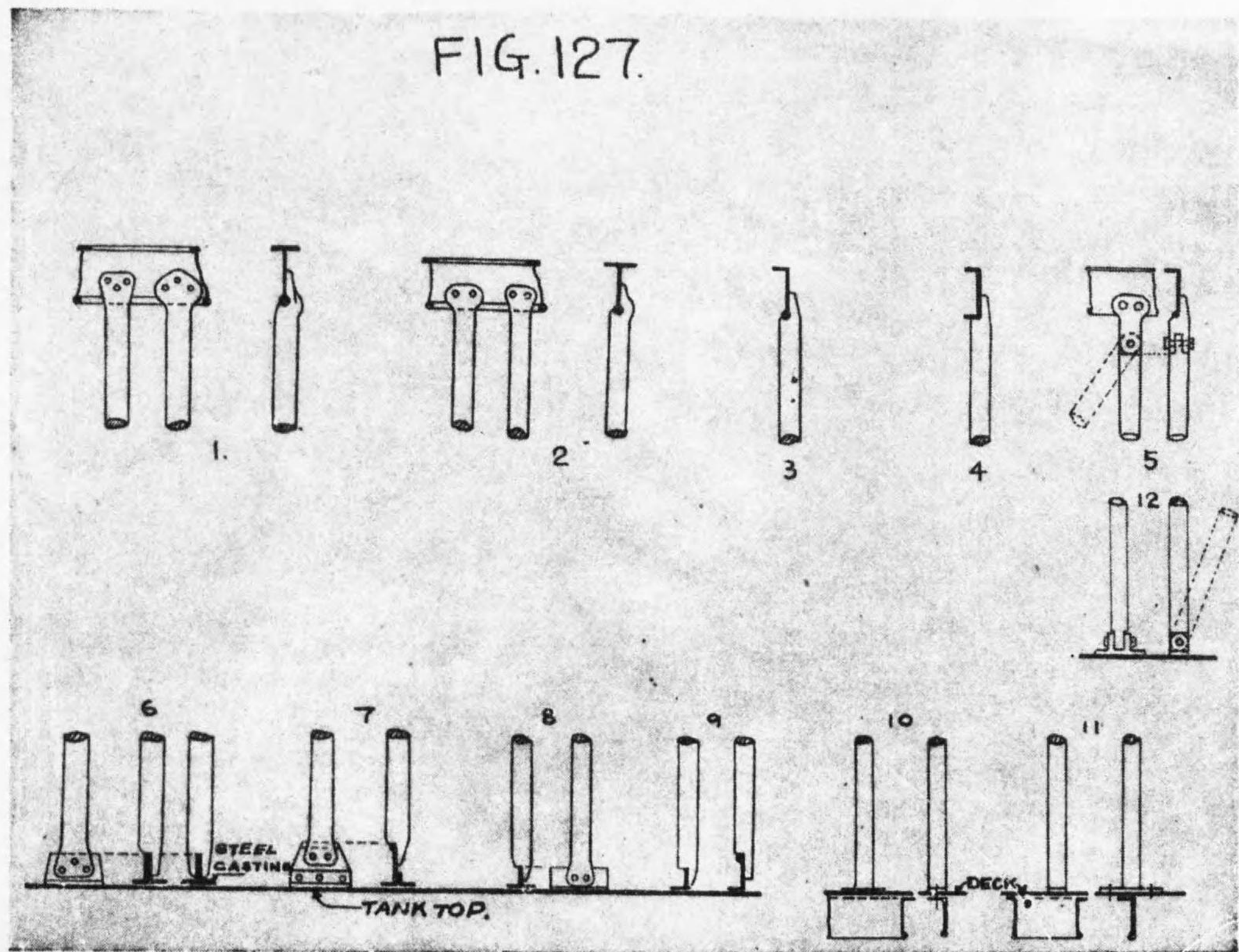
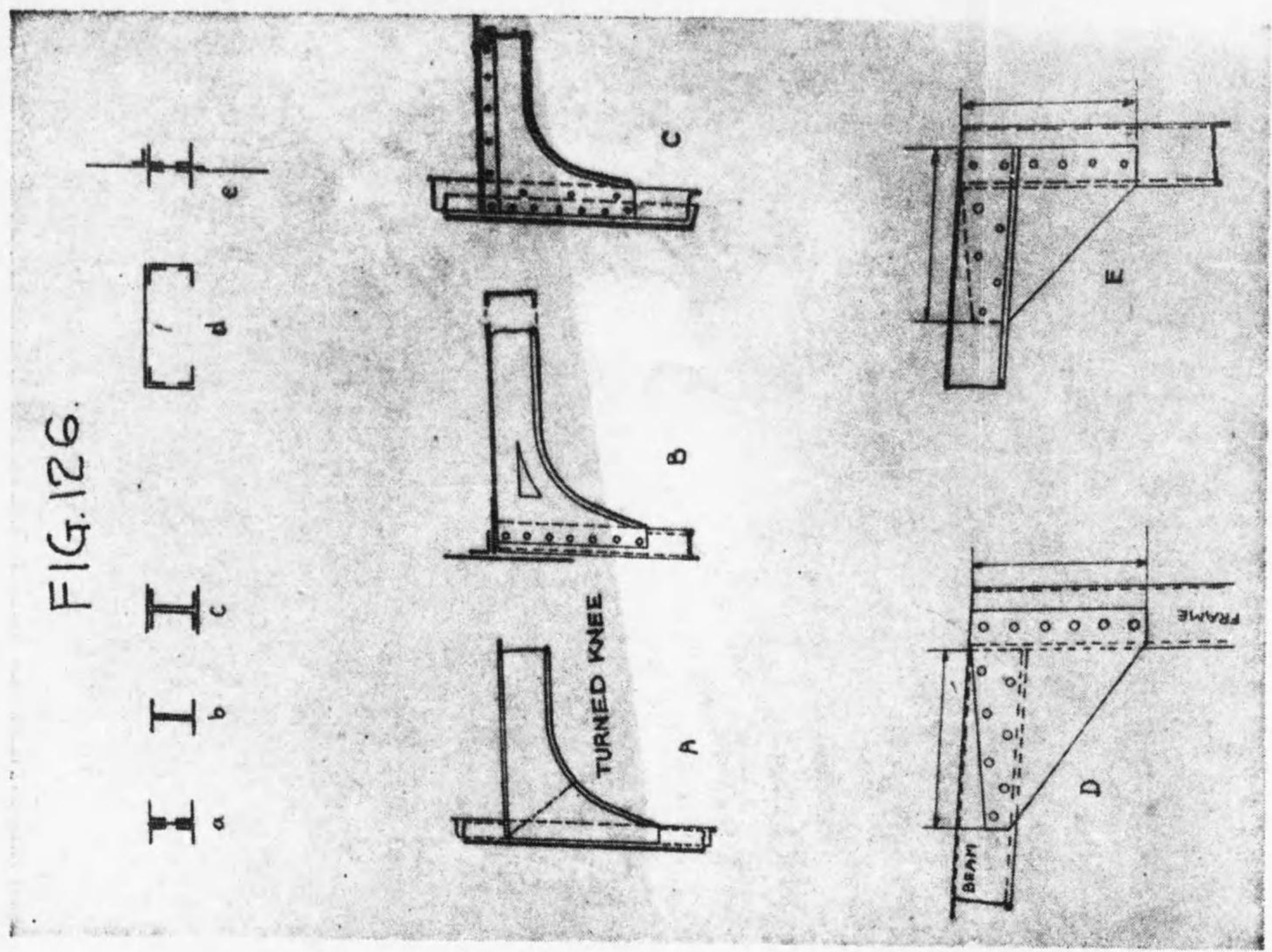
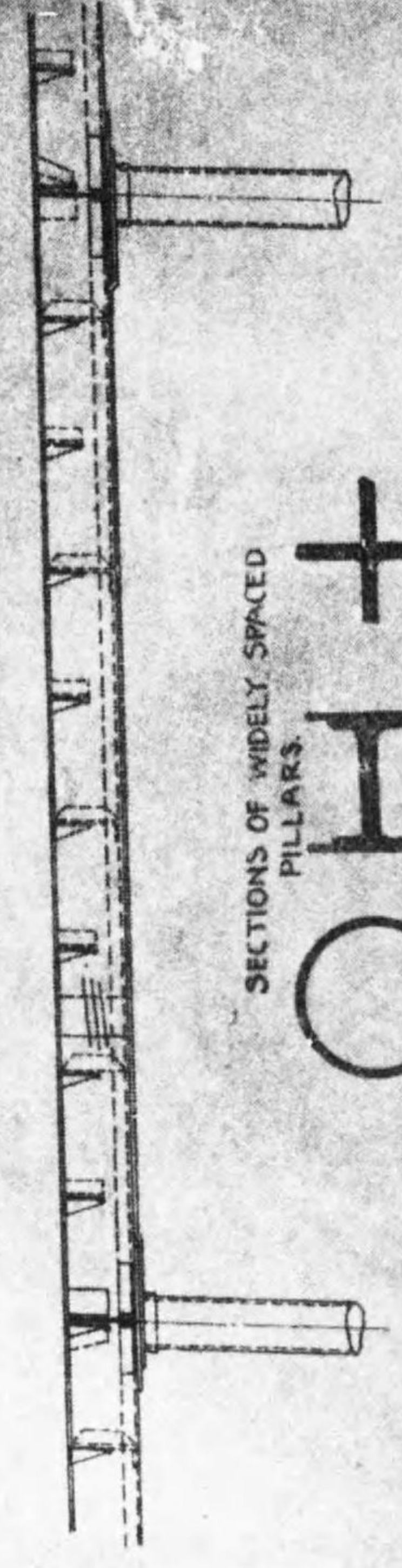
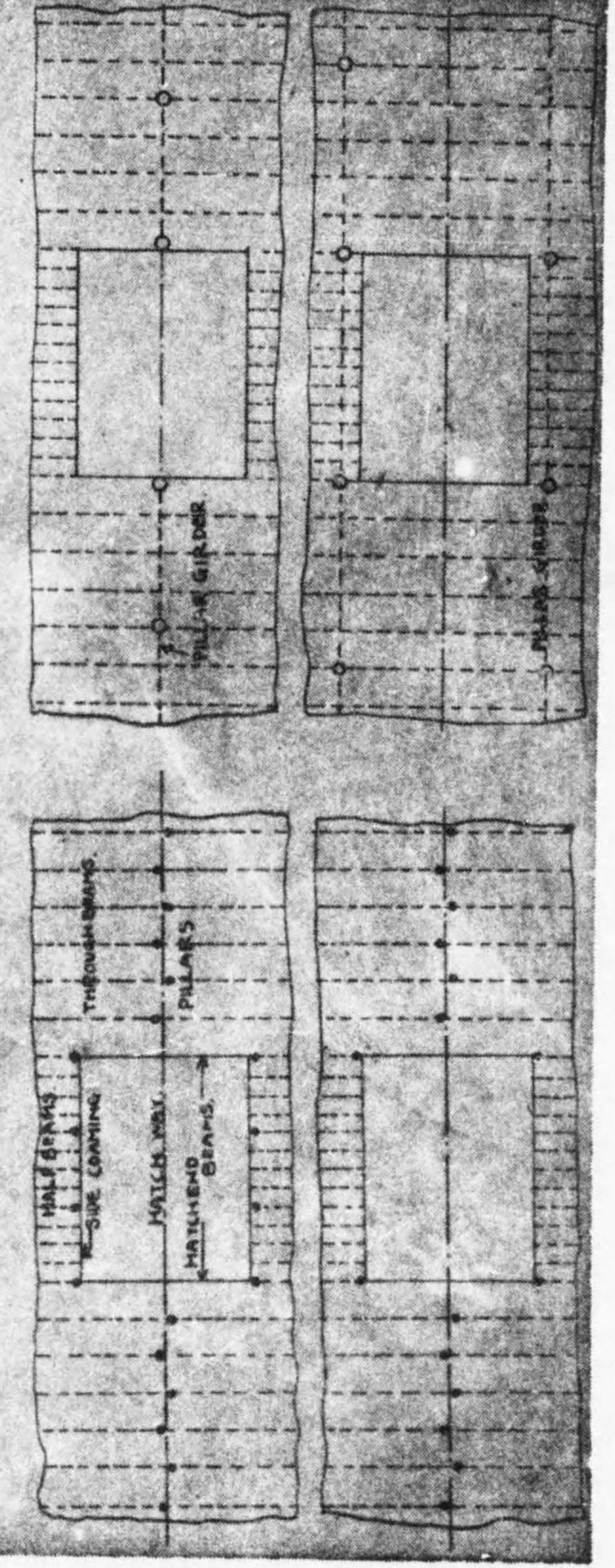




FIG. 128



SECTIONS OF WIDELY SPACED
PILLARS.

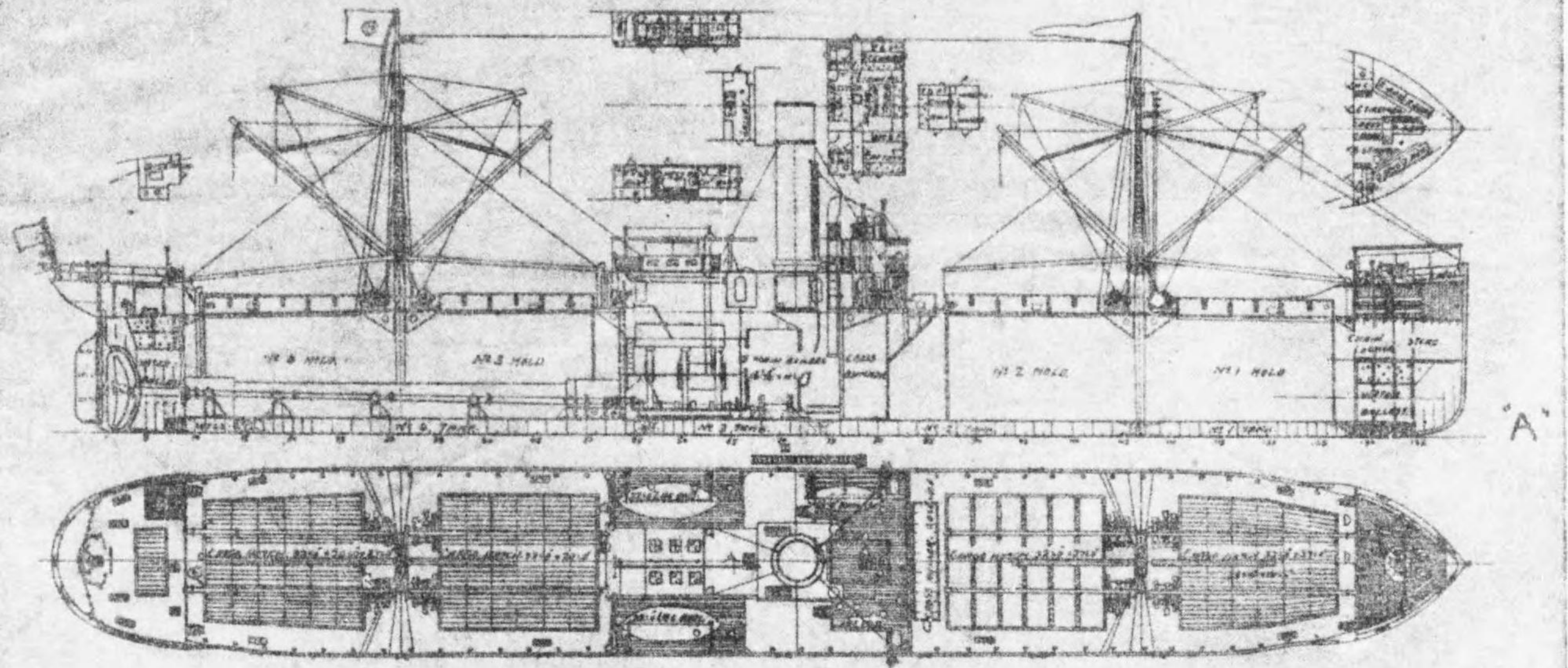


A CARGO STEAMER.

274'-0" x 40'-3" x 22'-6"

GENERAL ARRANGEMENT

FIG 129



CONSTRUCTION PROFILE AND DECK PLAN.

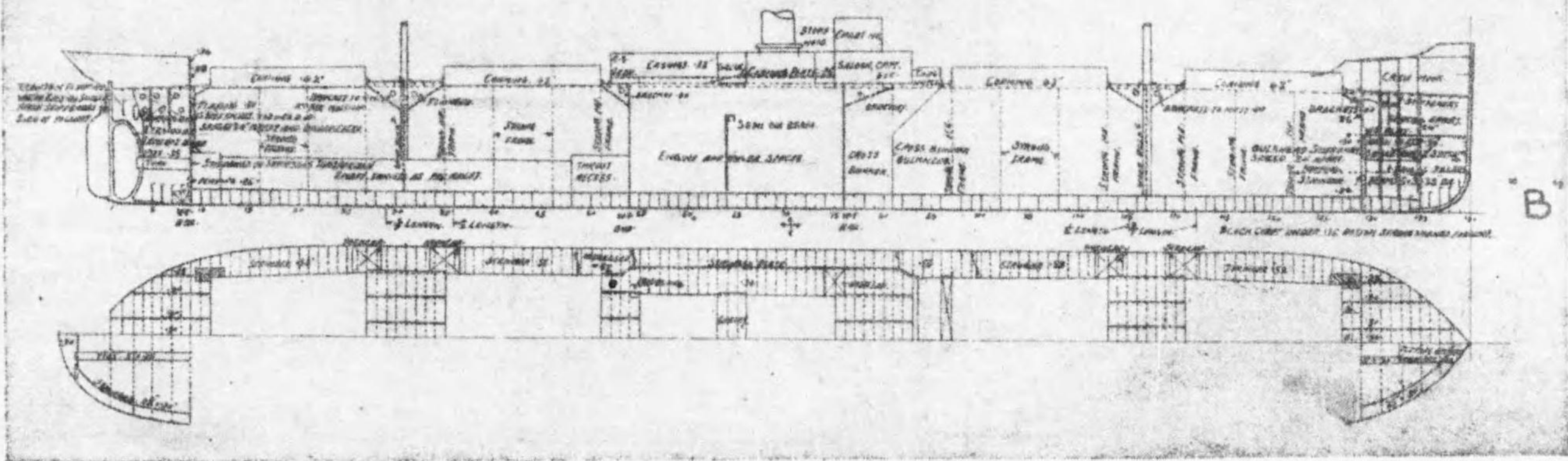


FIG. 130

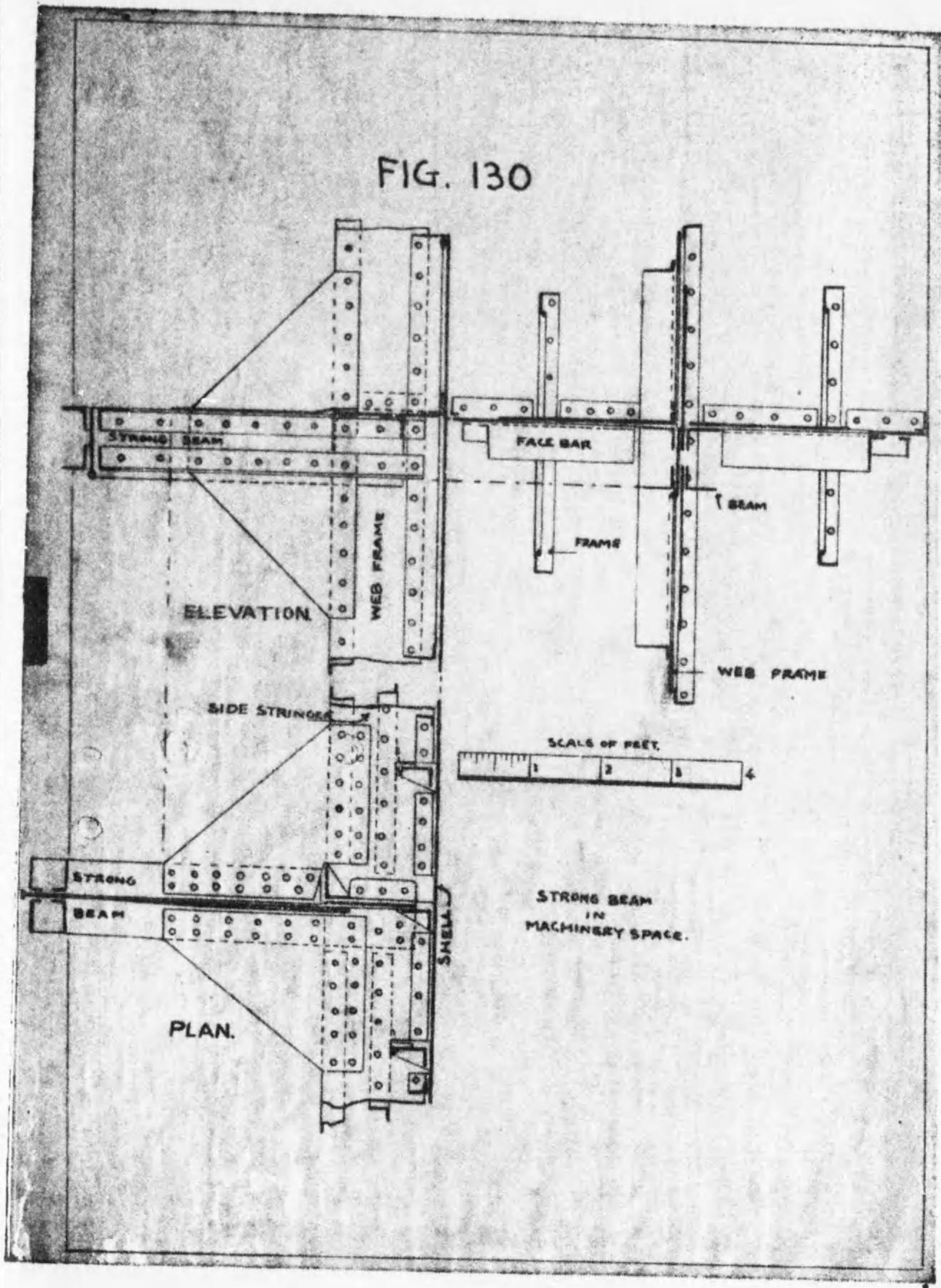
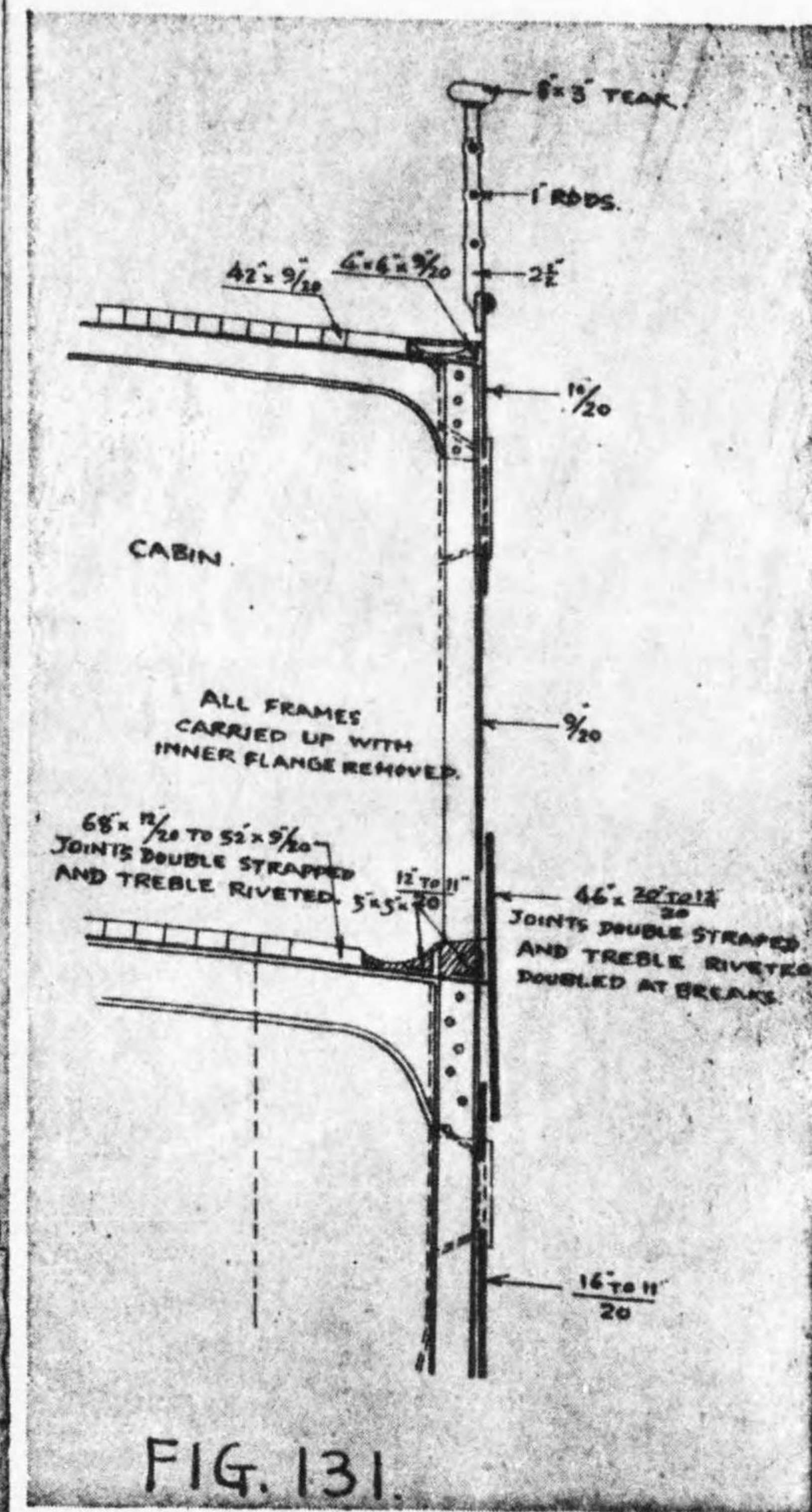
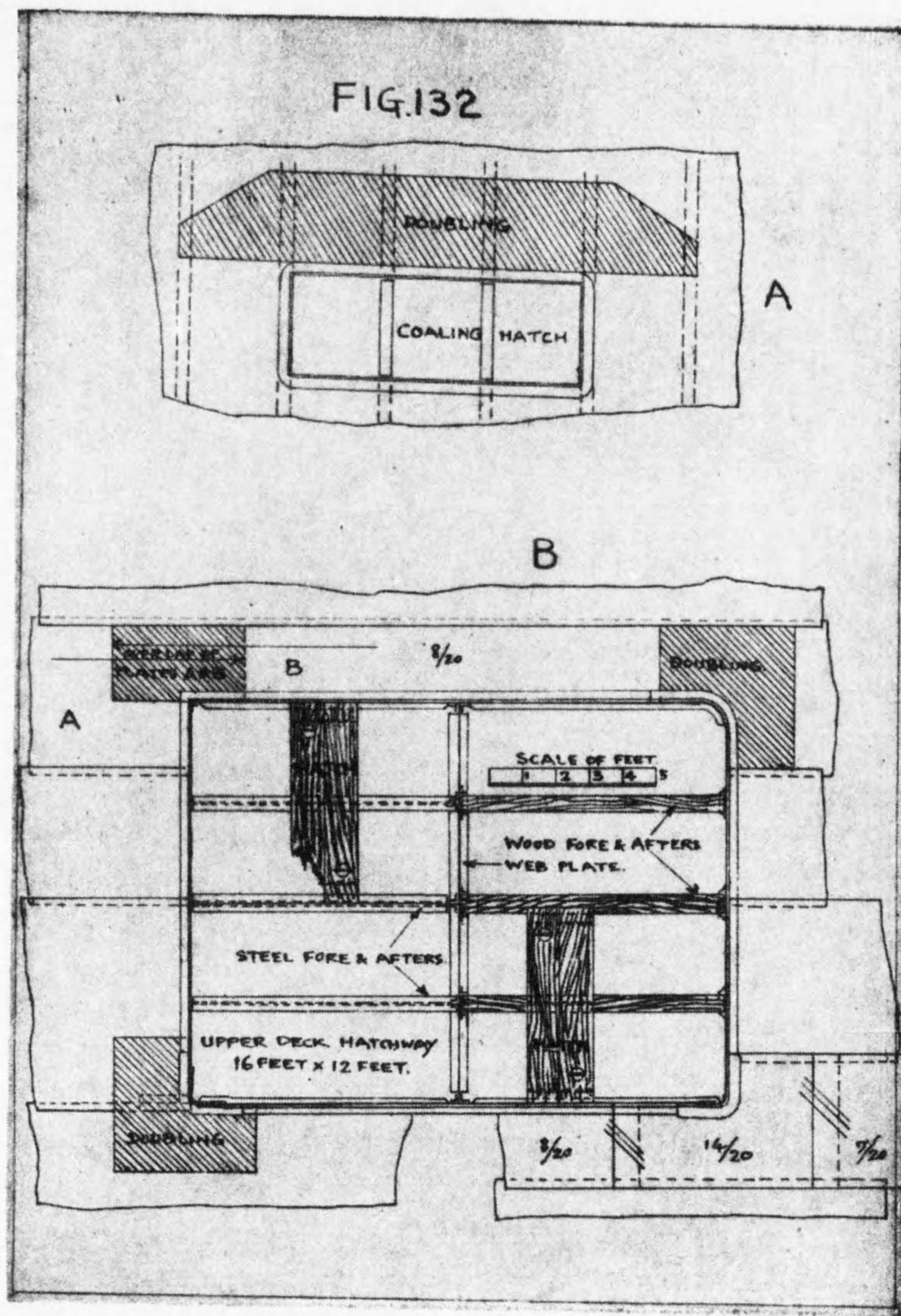


FIG. 132



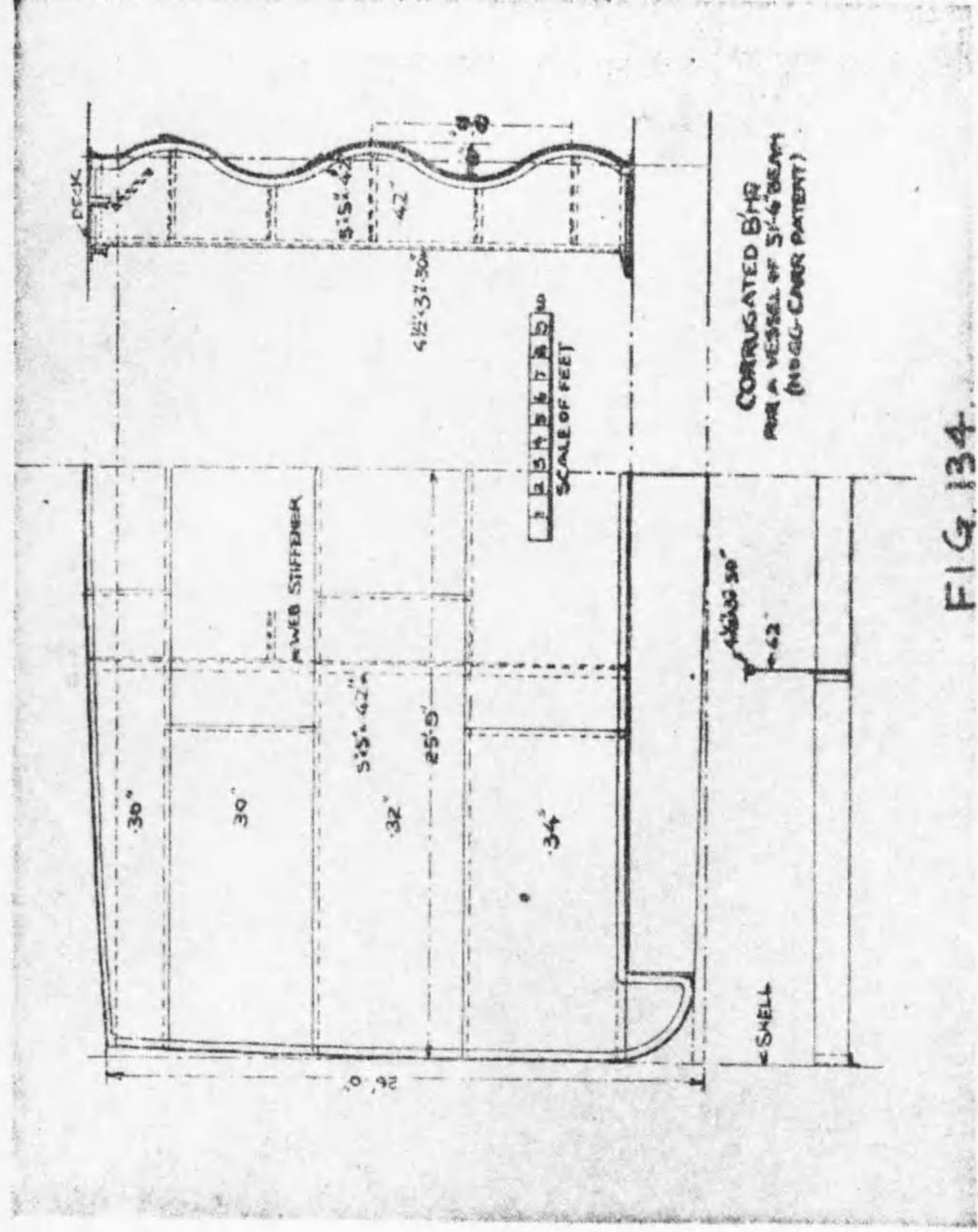
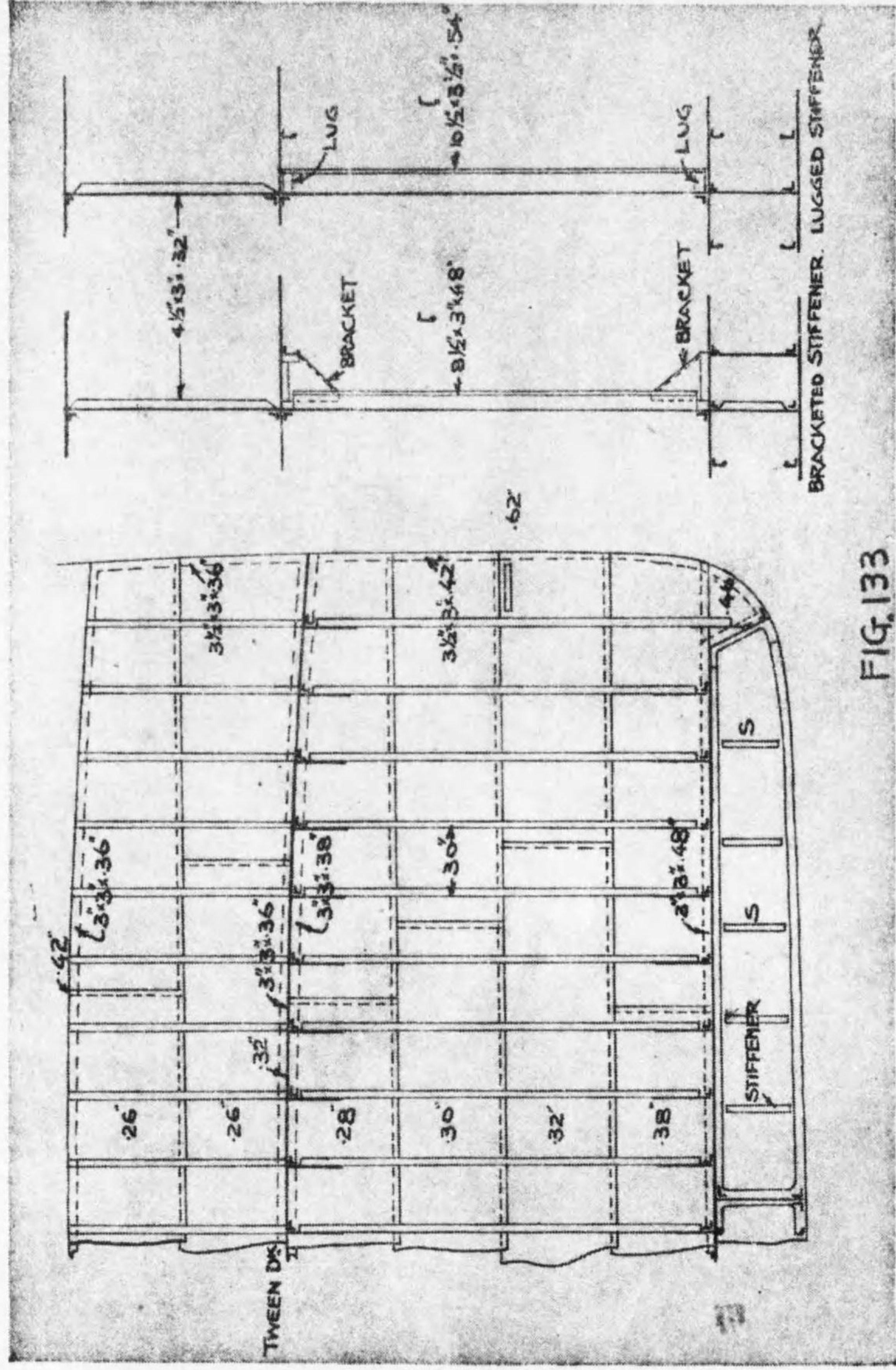
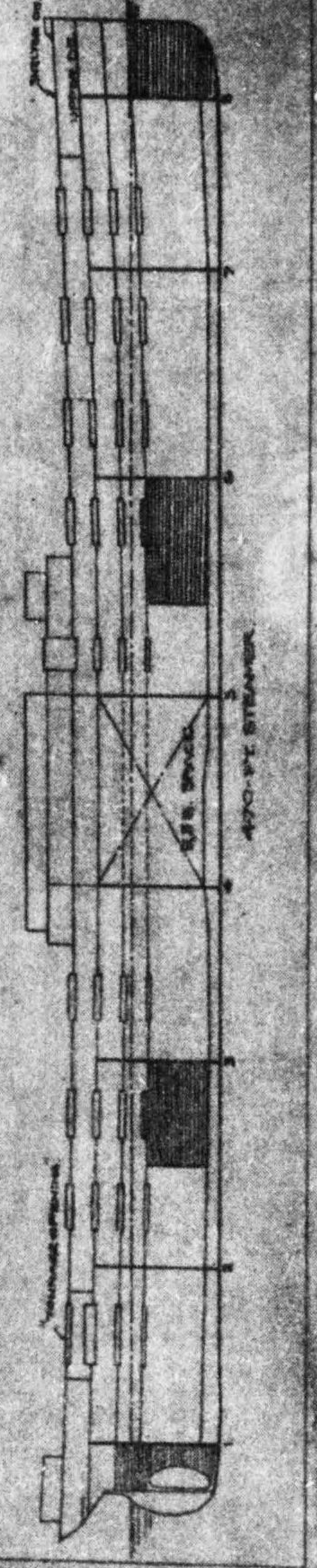
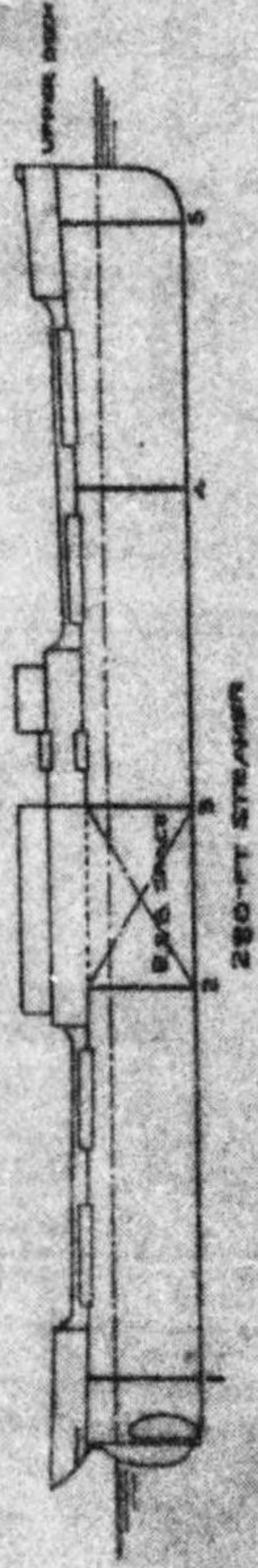
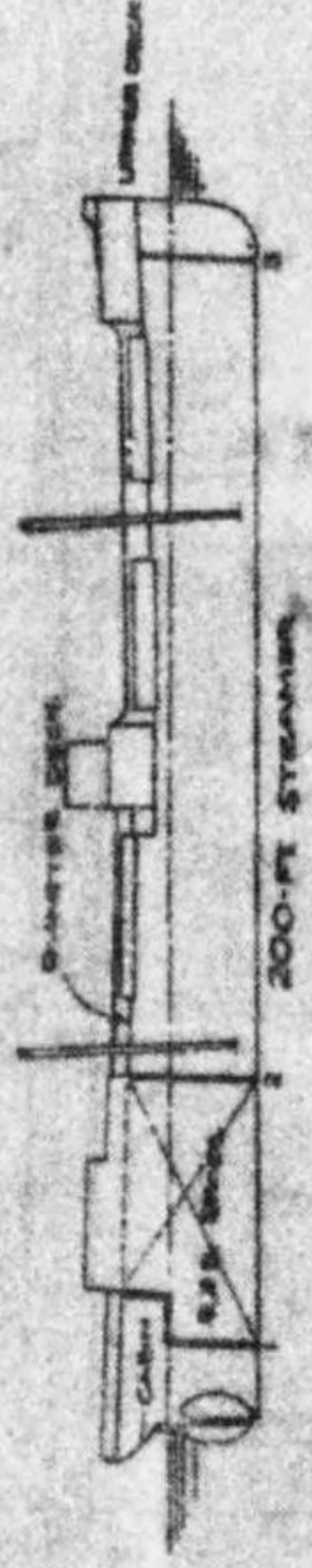
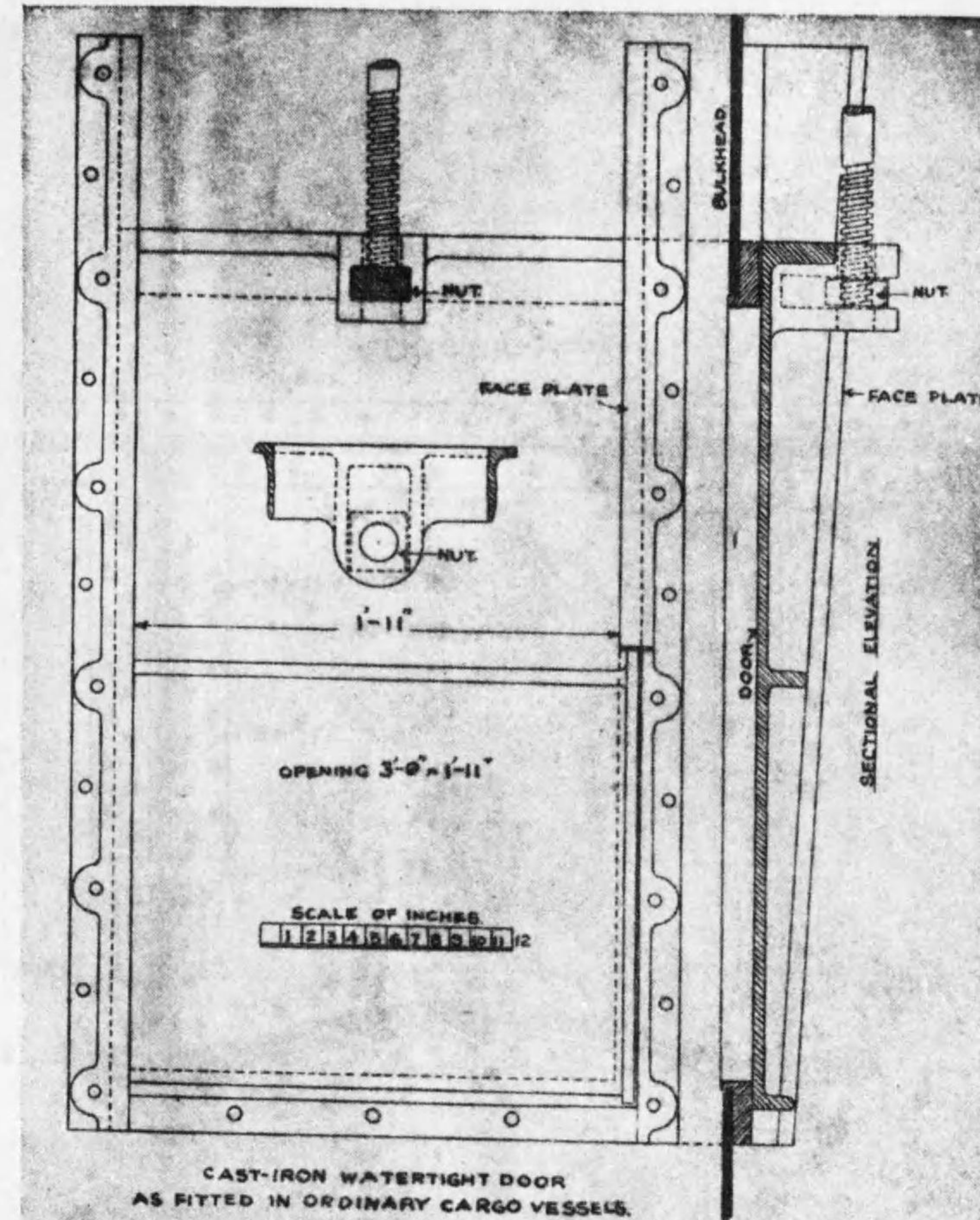


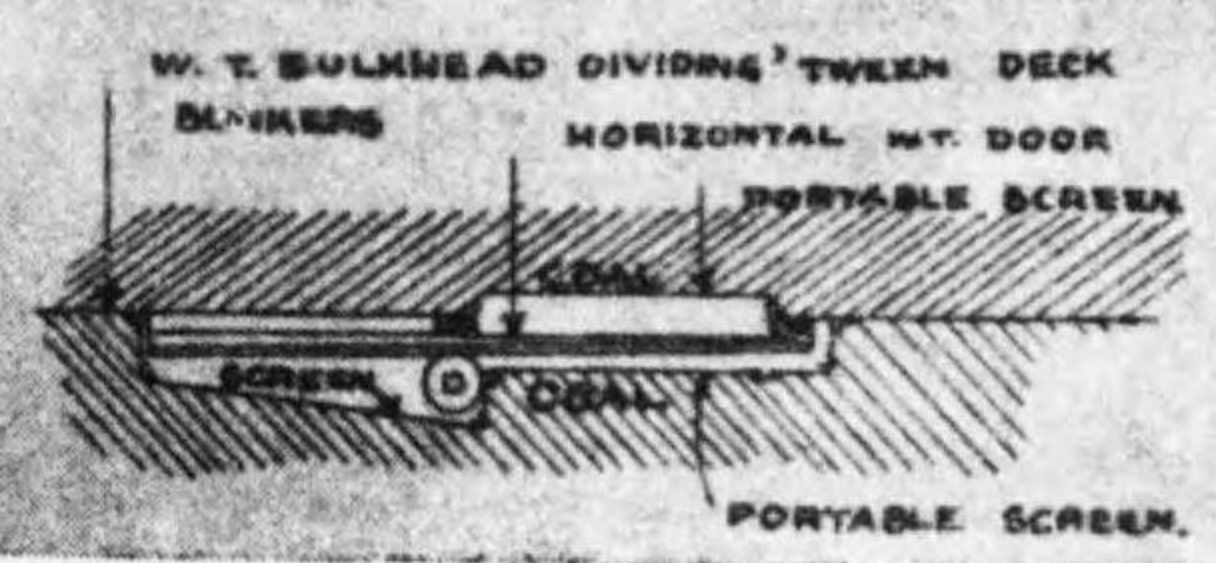
Fig. 135



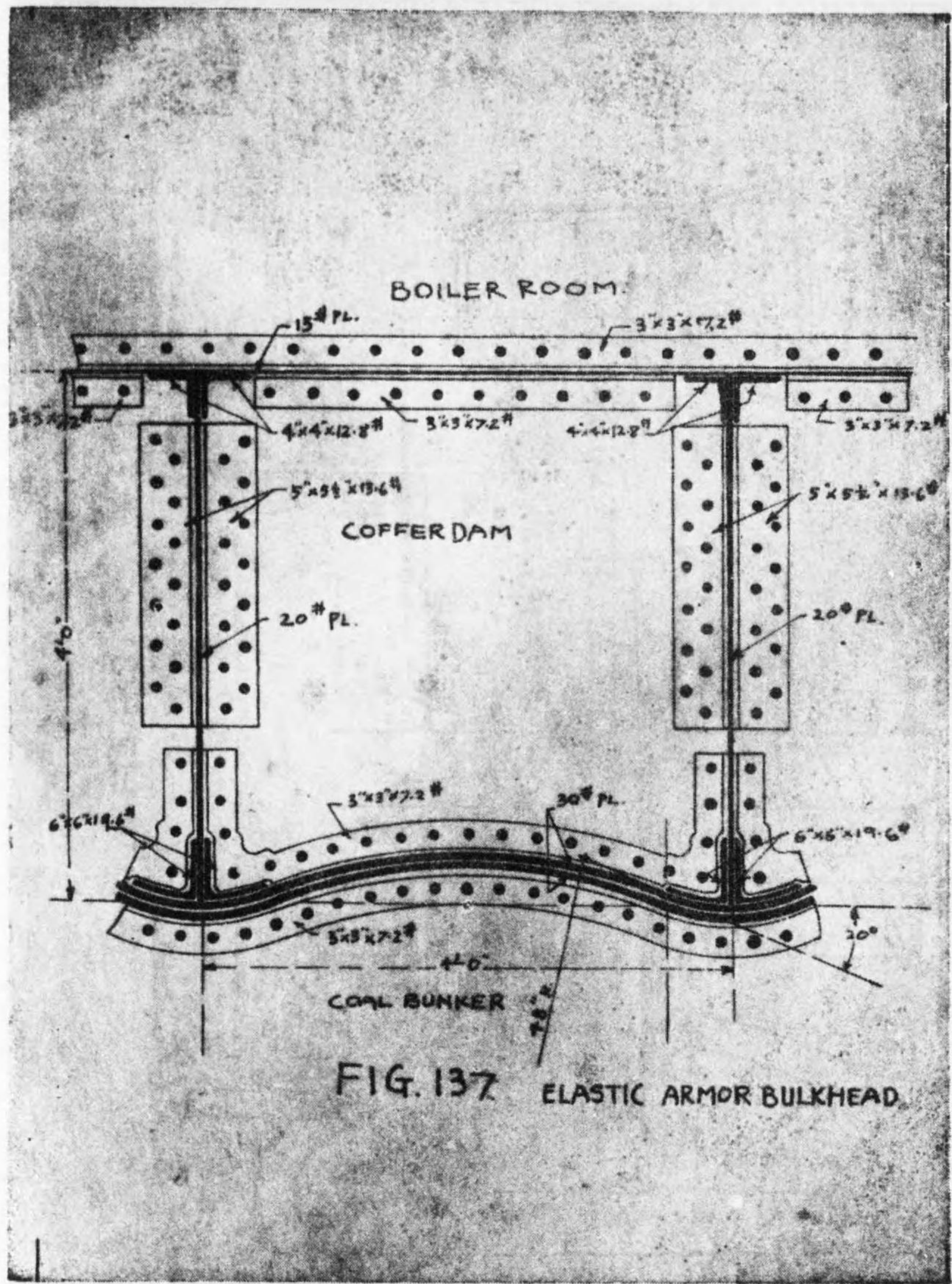
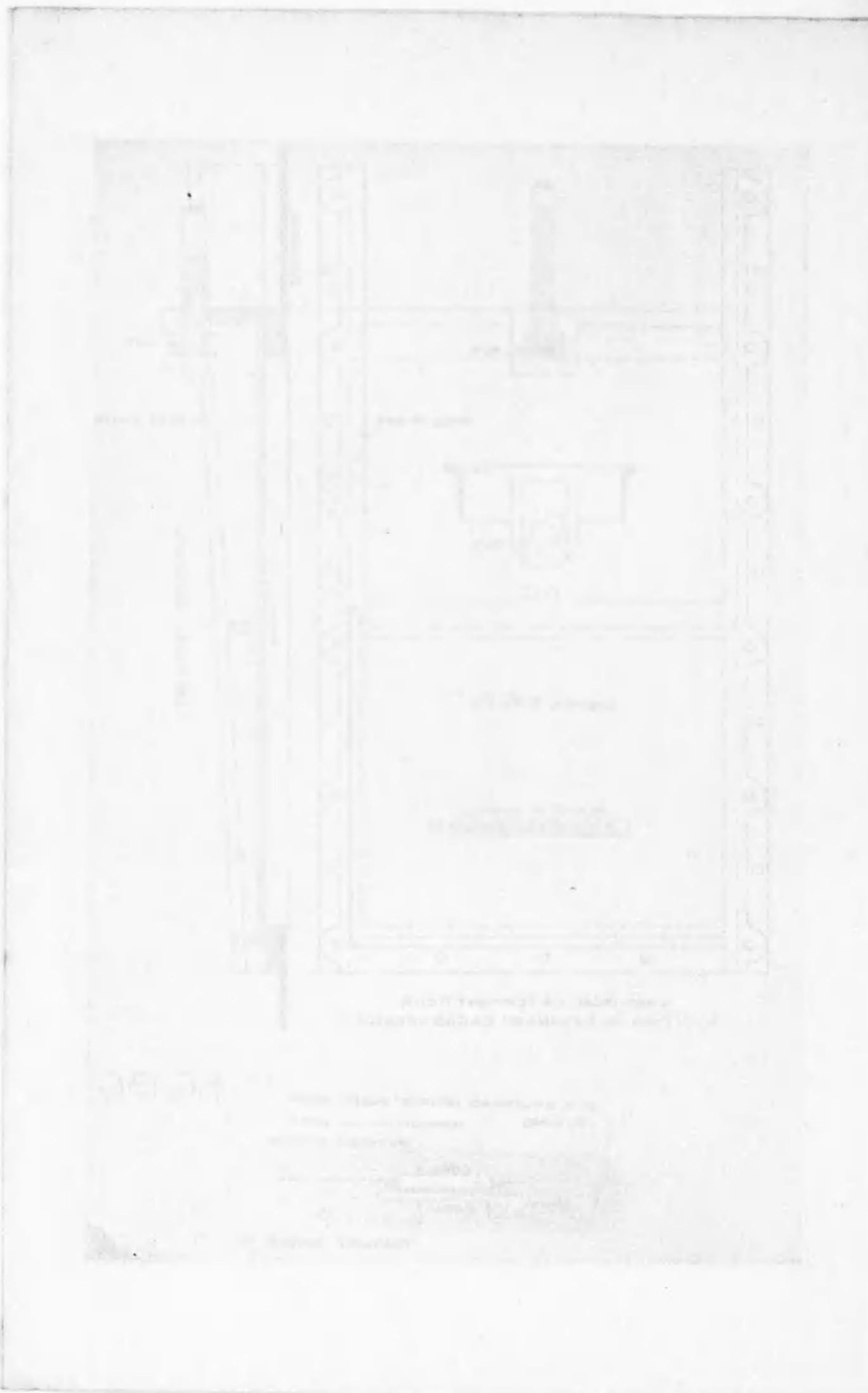


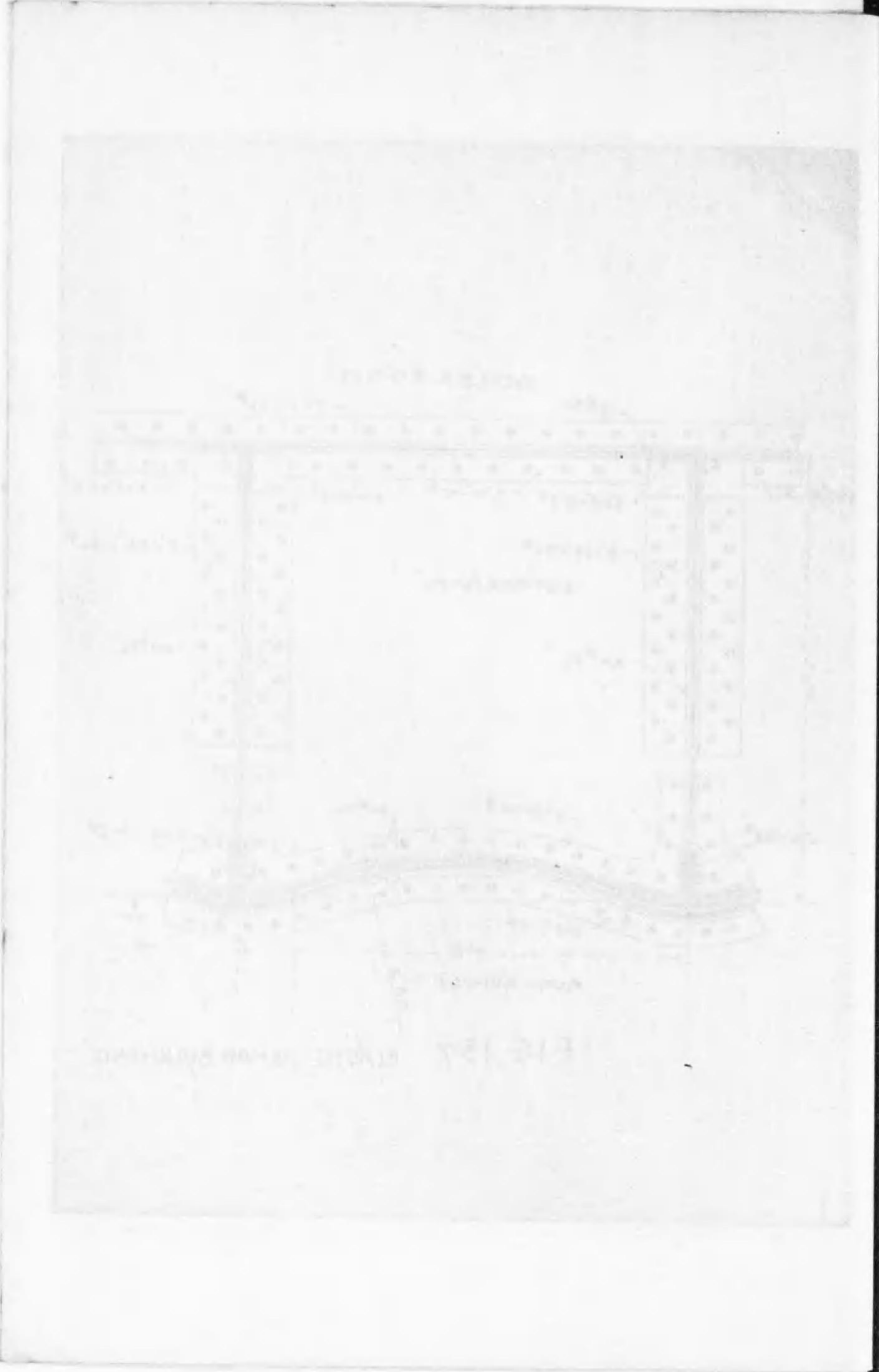
CAST-IRON WATERTIGHT DOOR
AS FITTED IN ORDINARY CARGO VESSELS.

FIG 136



PORTABLE SCREEN.





SECTION AT A-A, FIG.

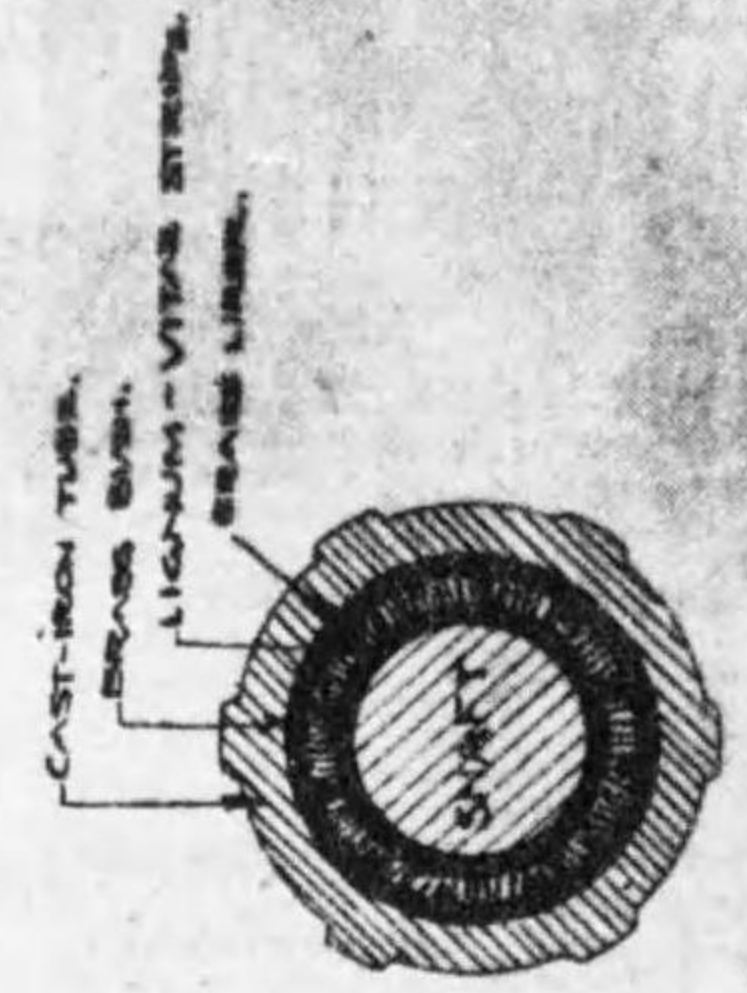
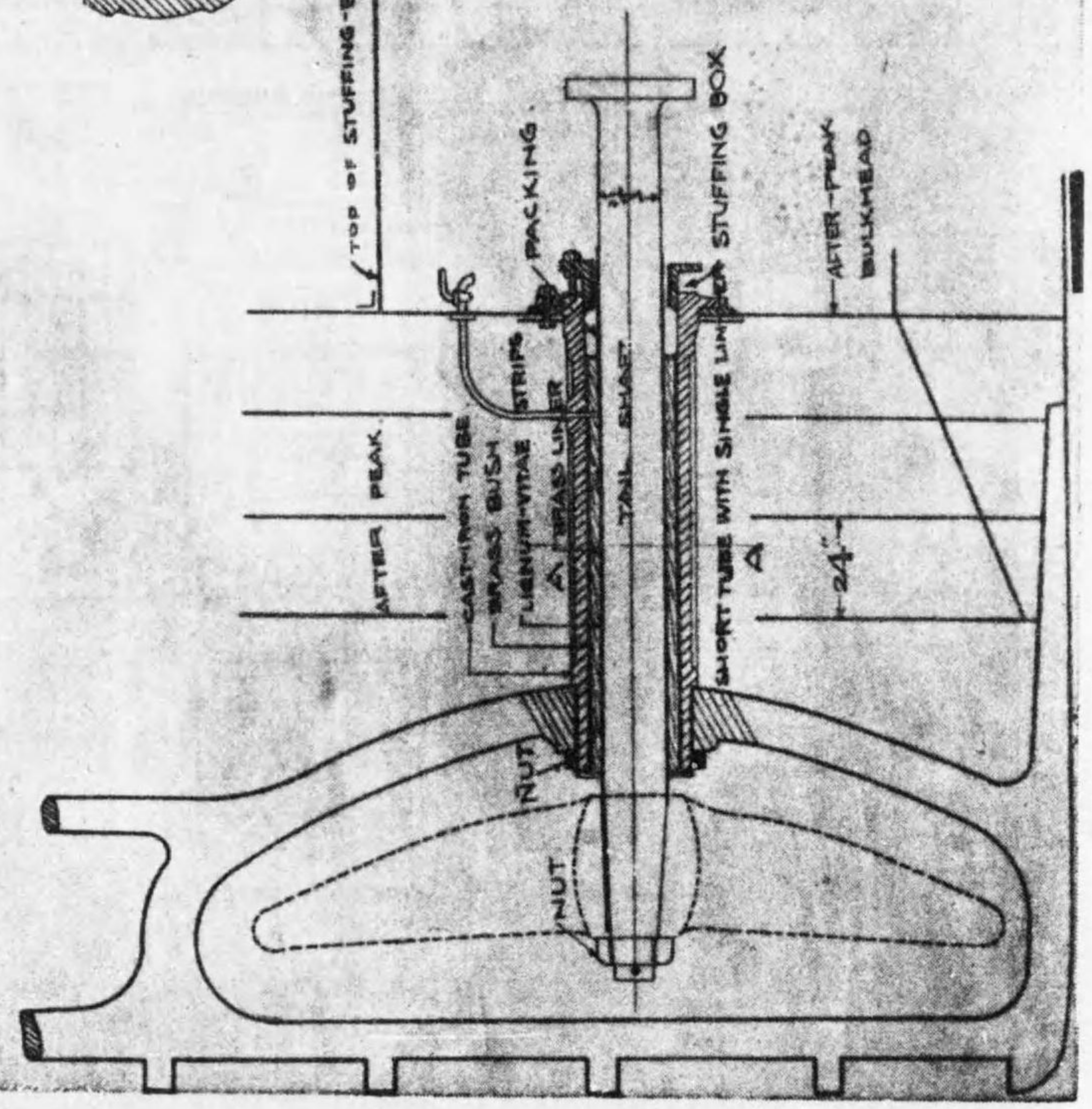


FIG. 138.



SECTION AT A-A, FIG.

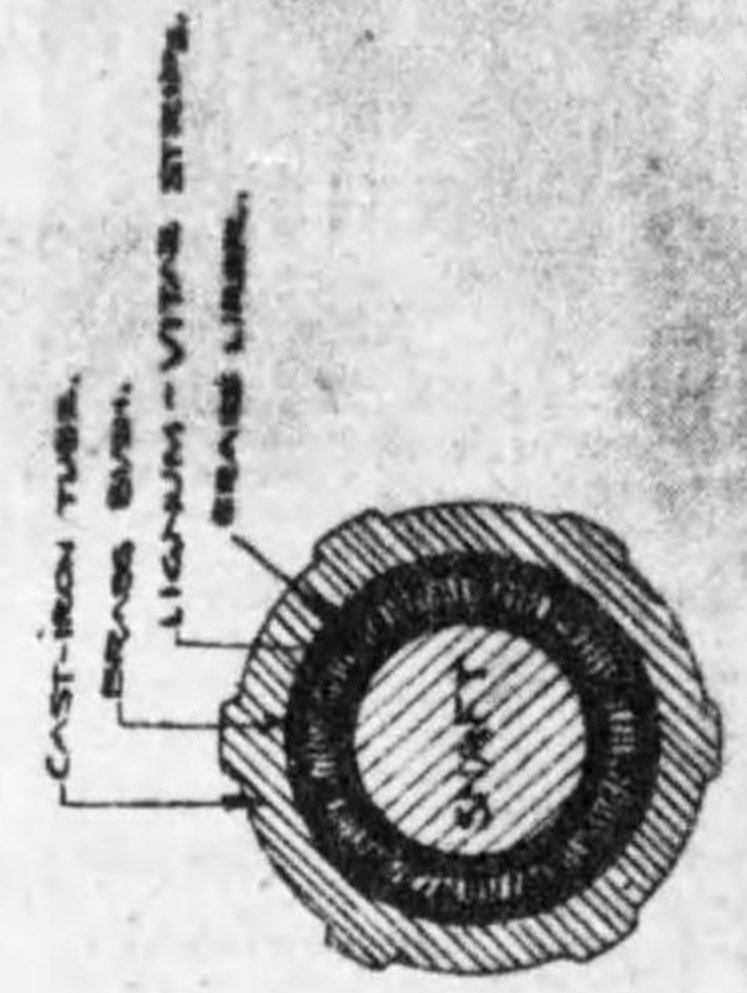
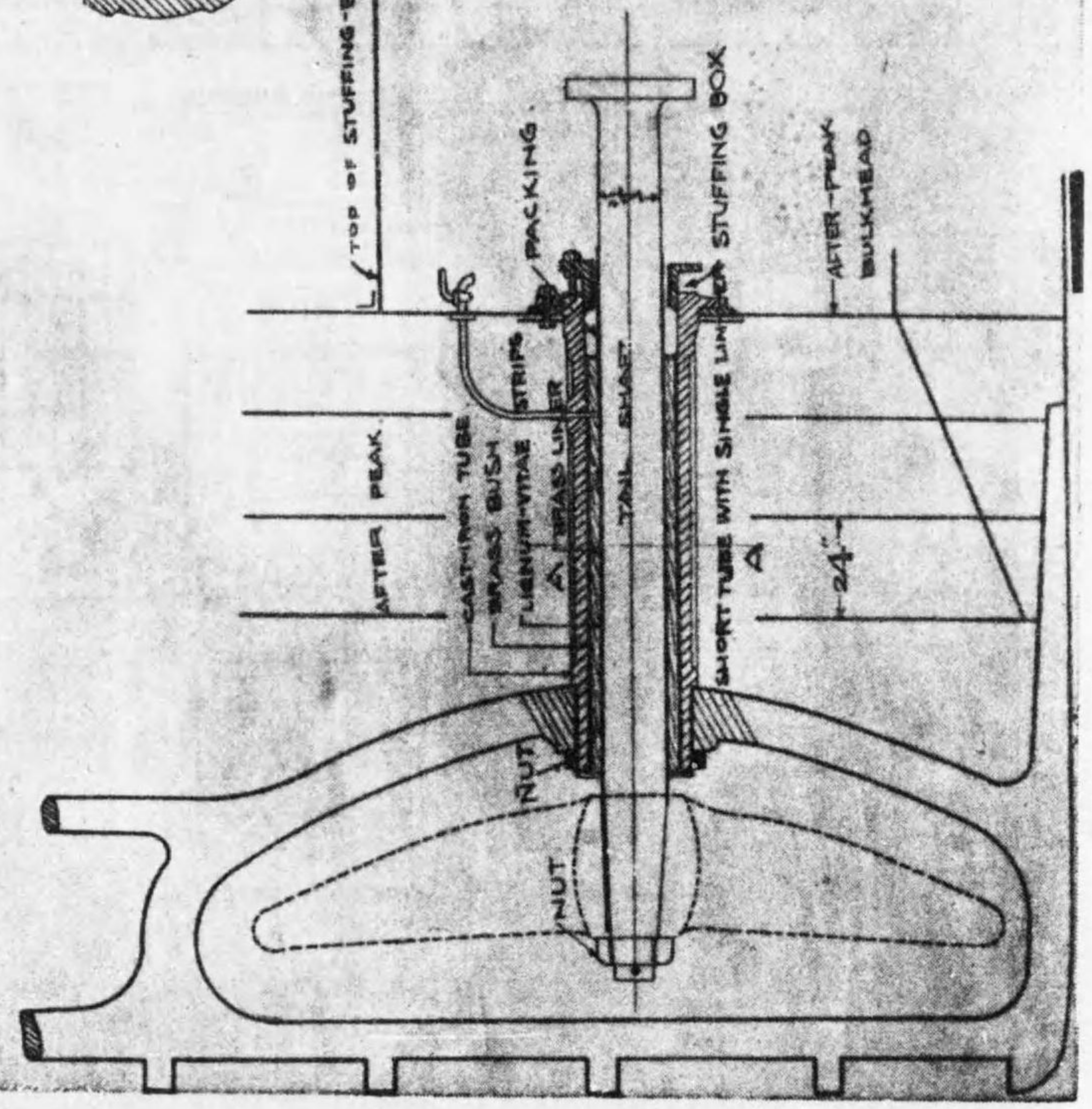
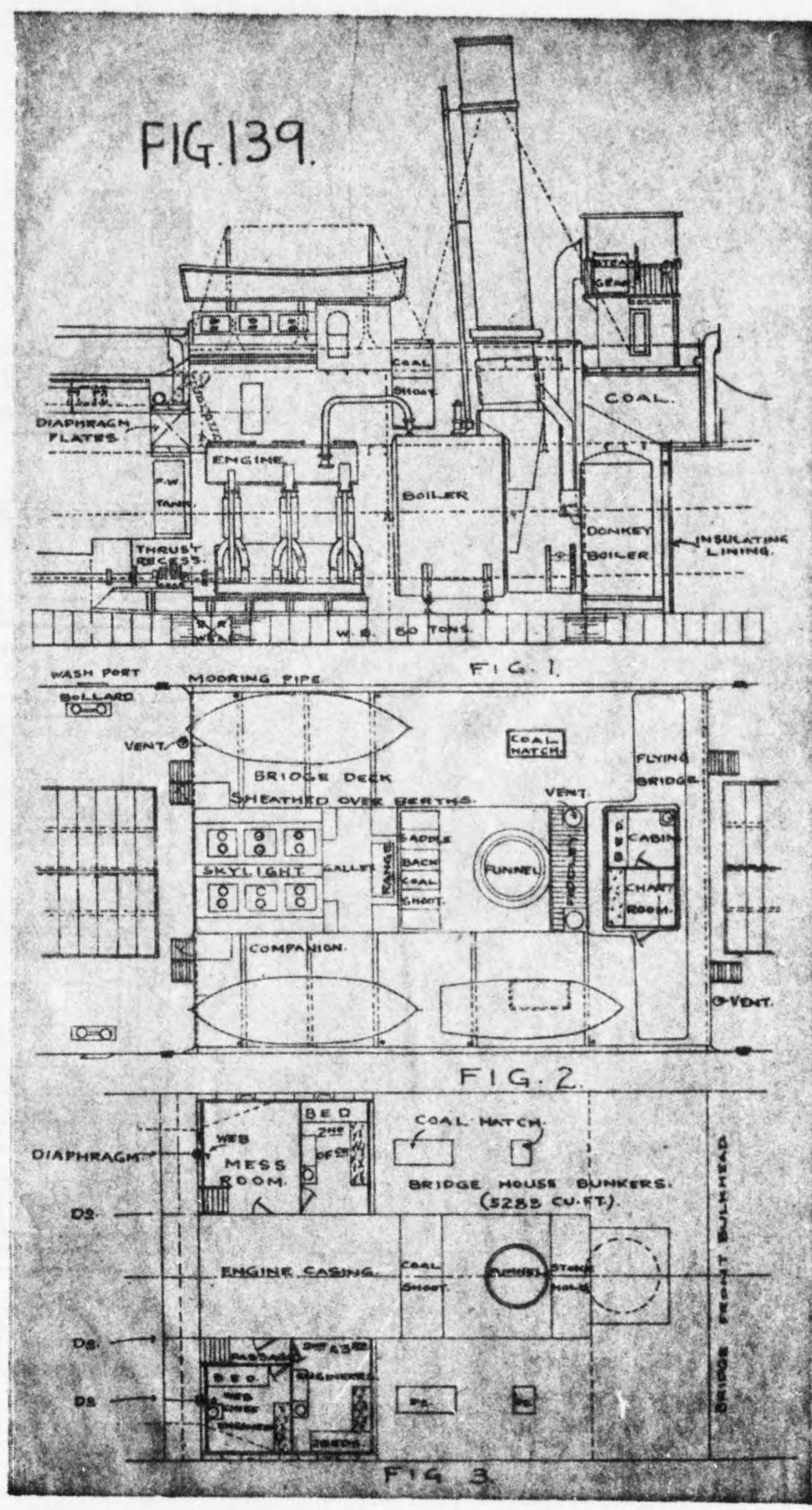
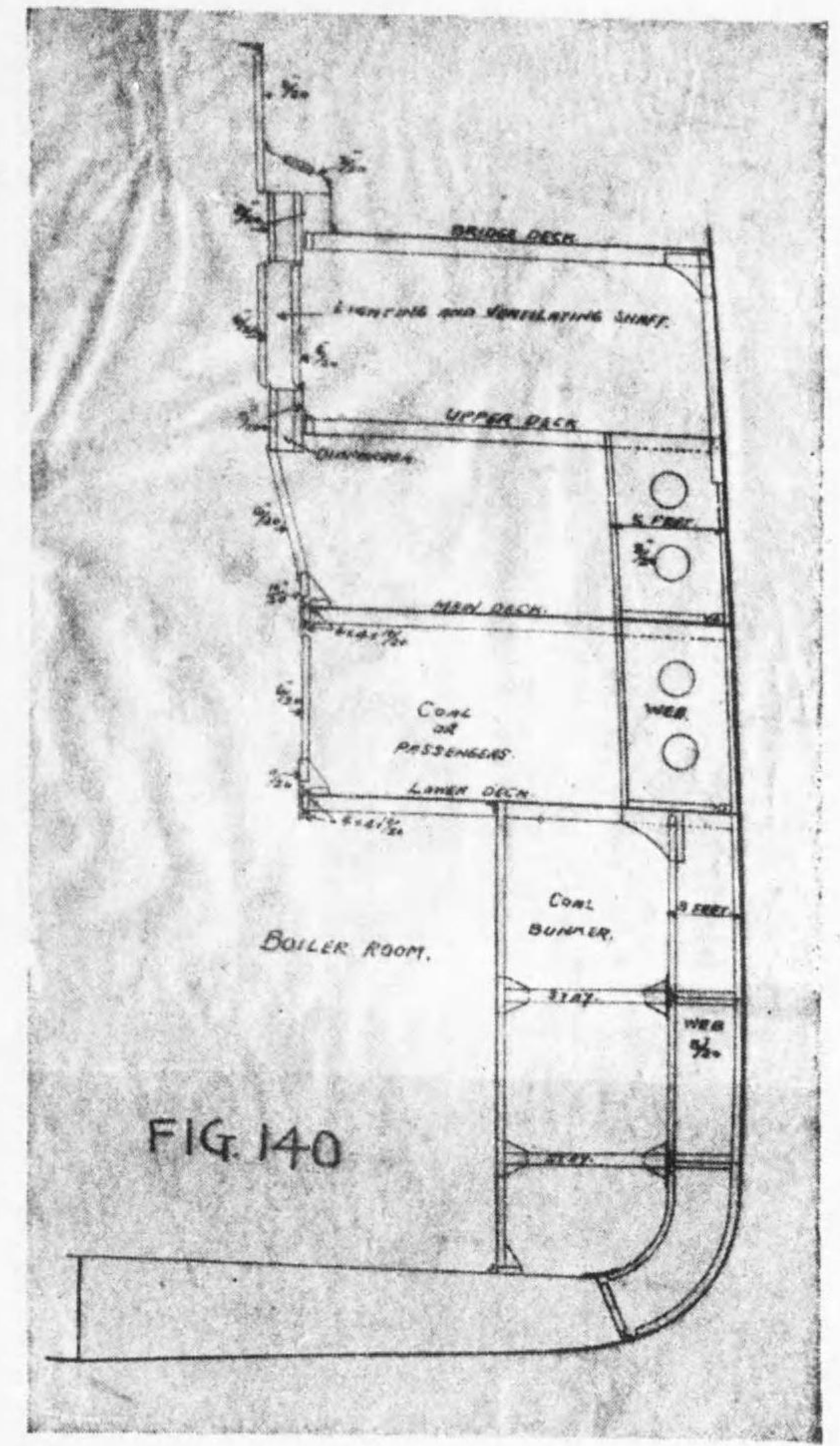
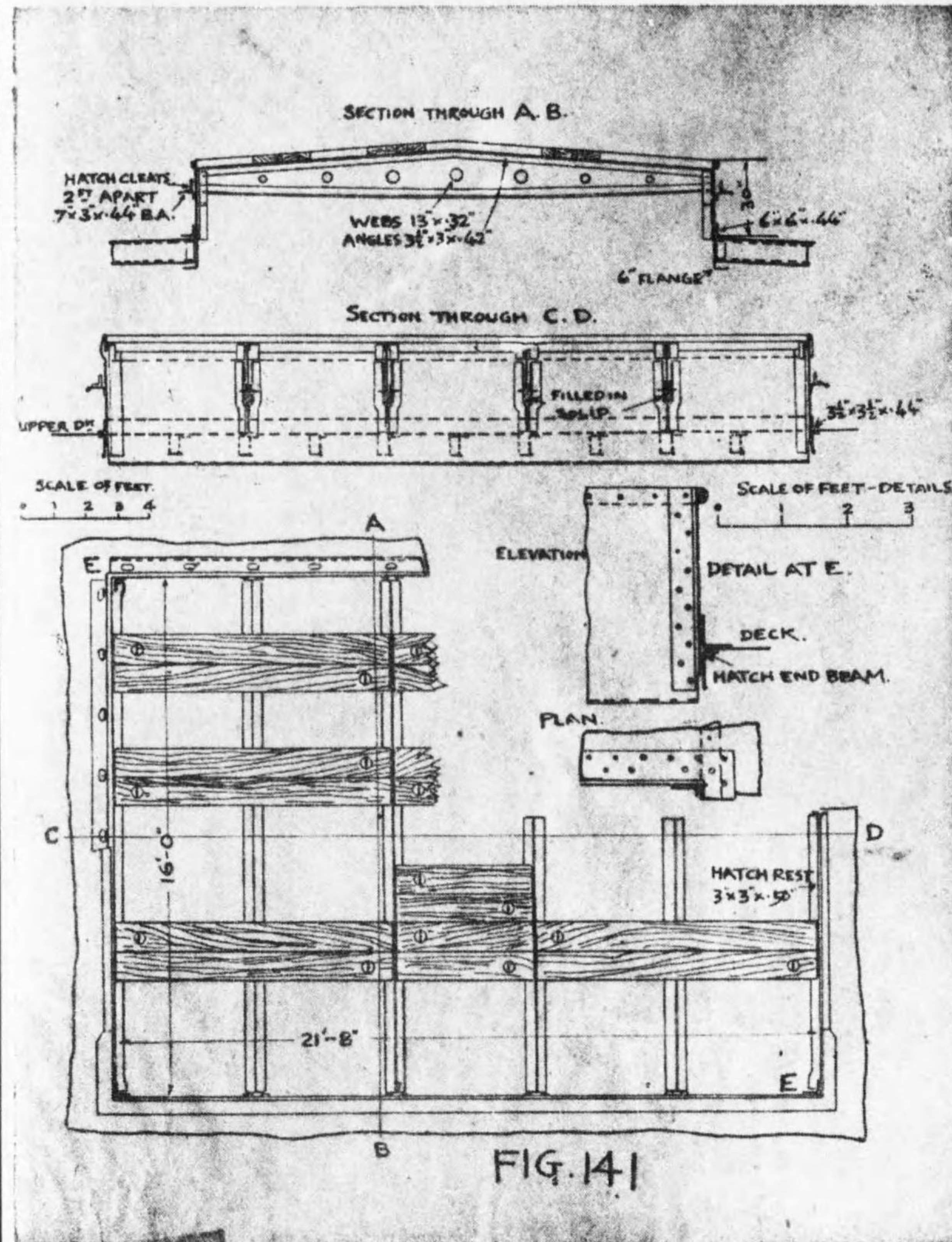


FIG. 138.







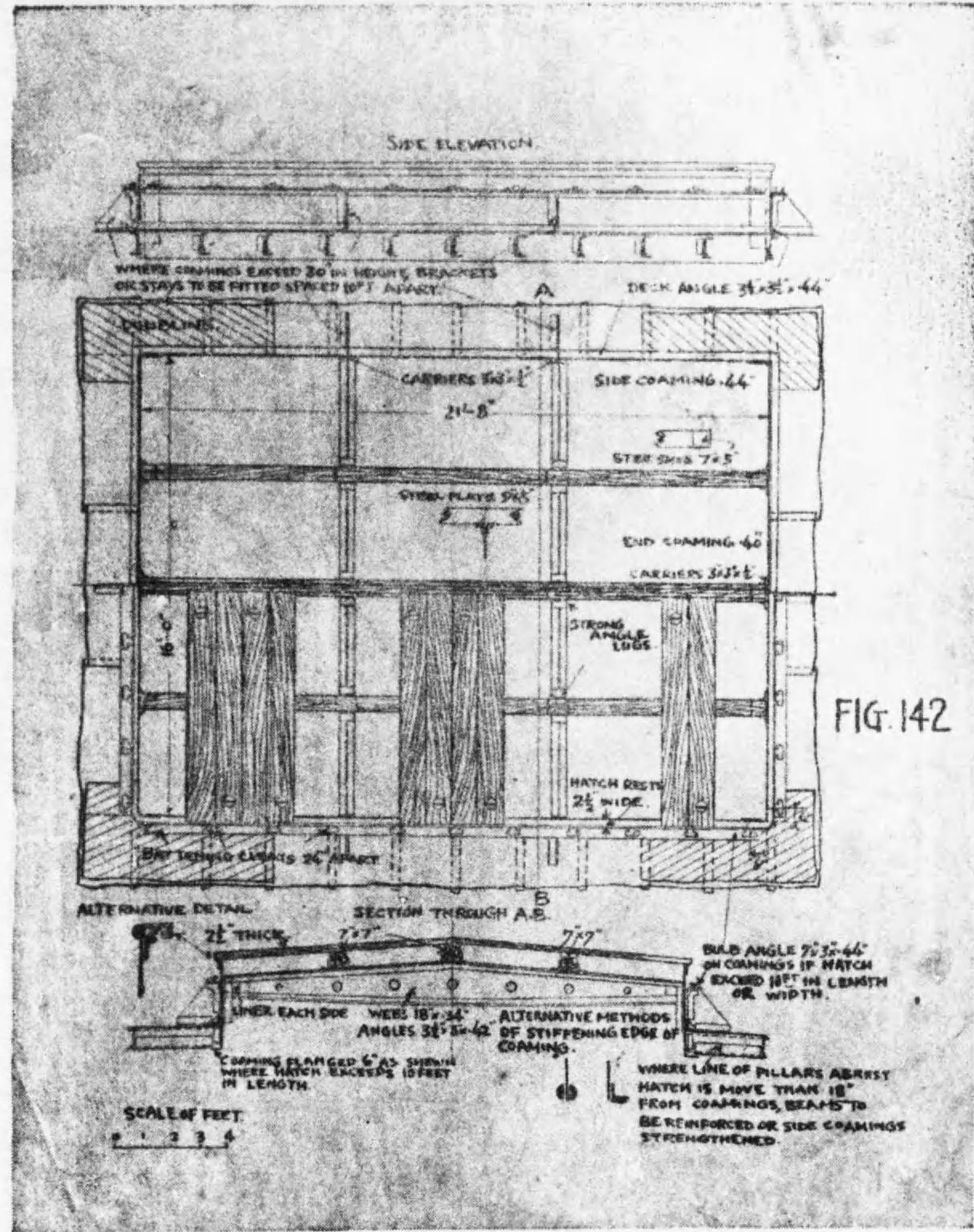


FIG 142

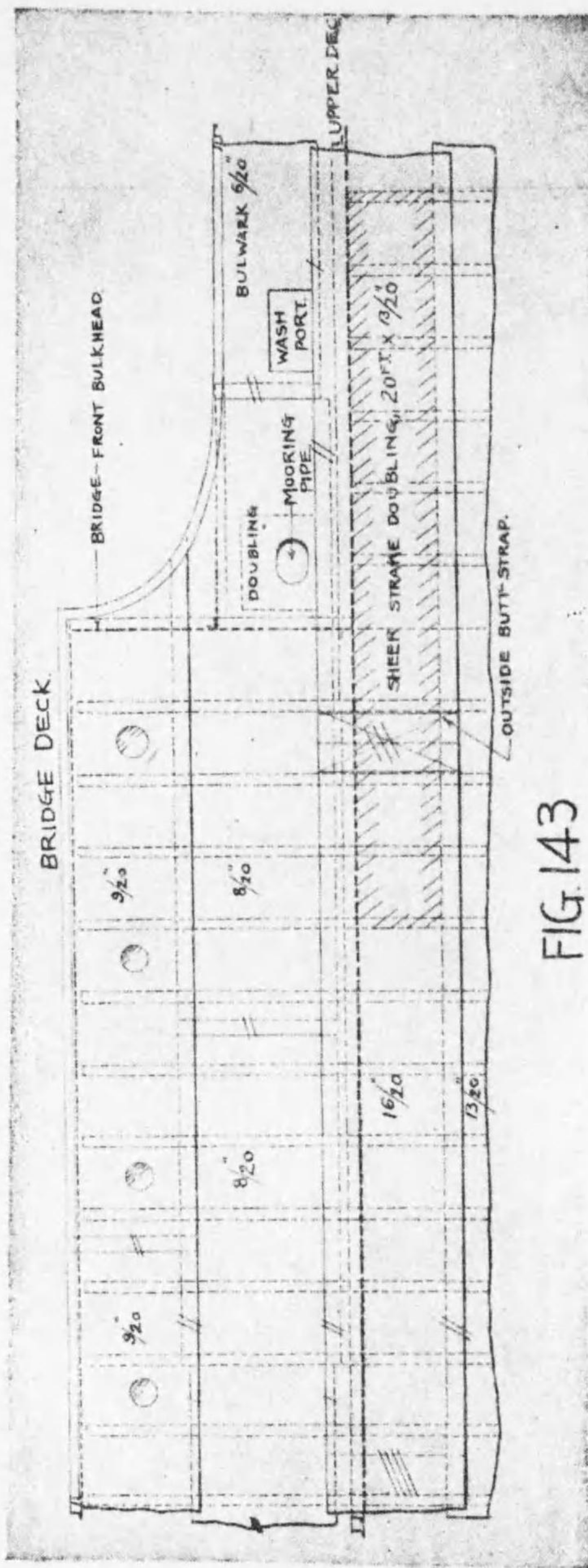


FIG. 143

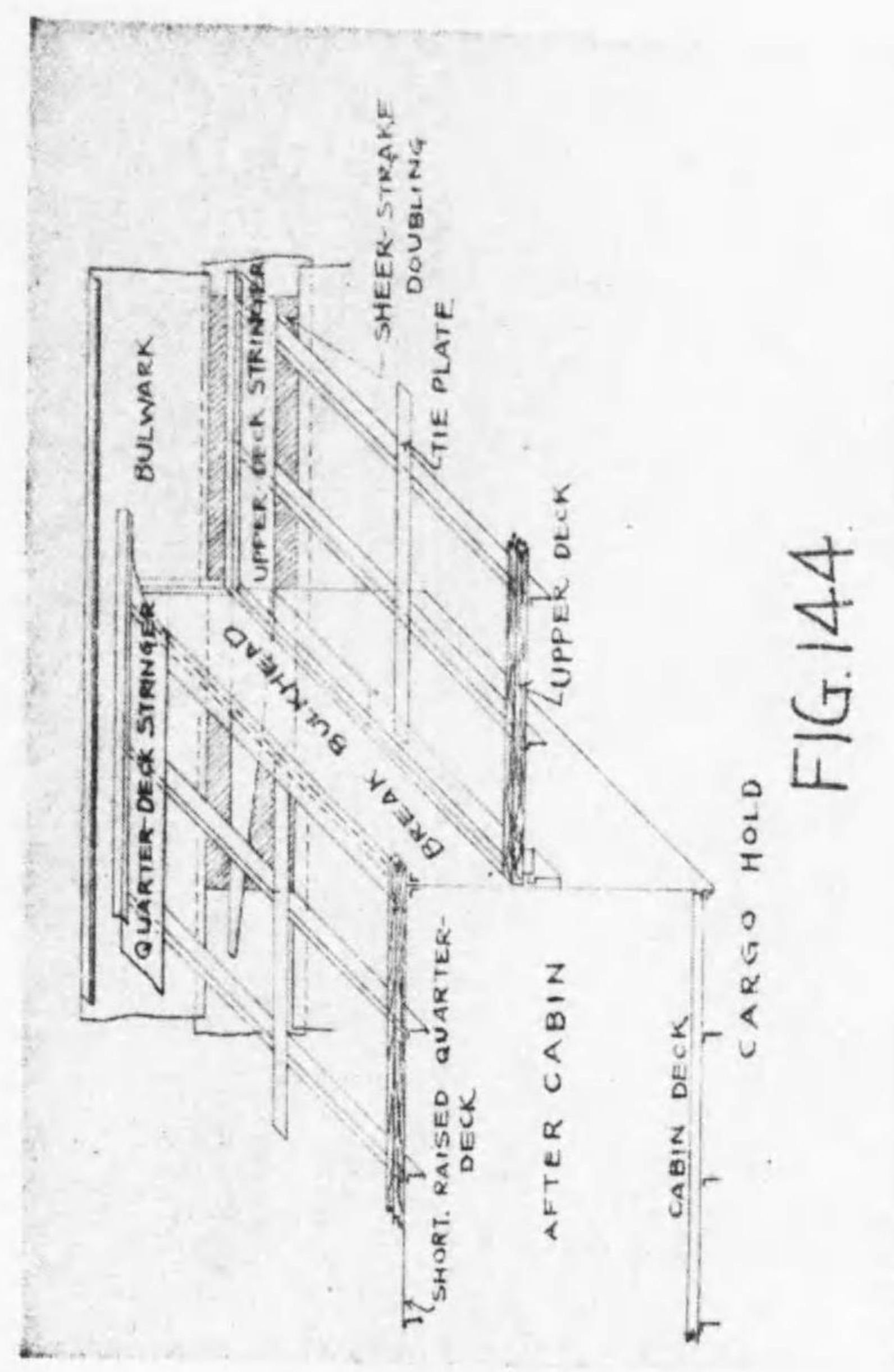


FIG. 144

FIG. 145

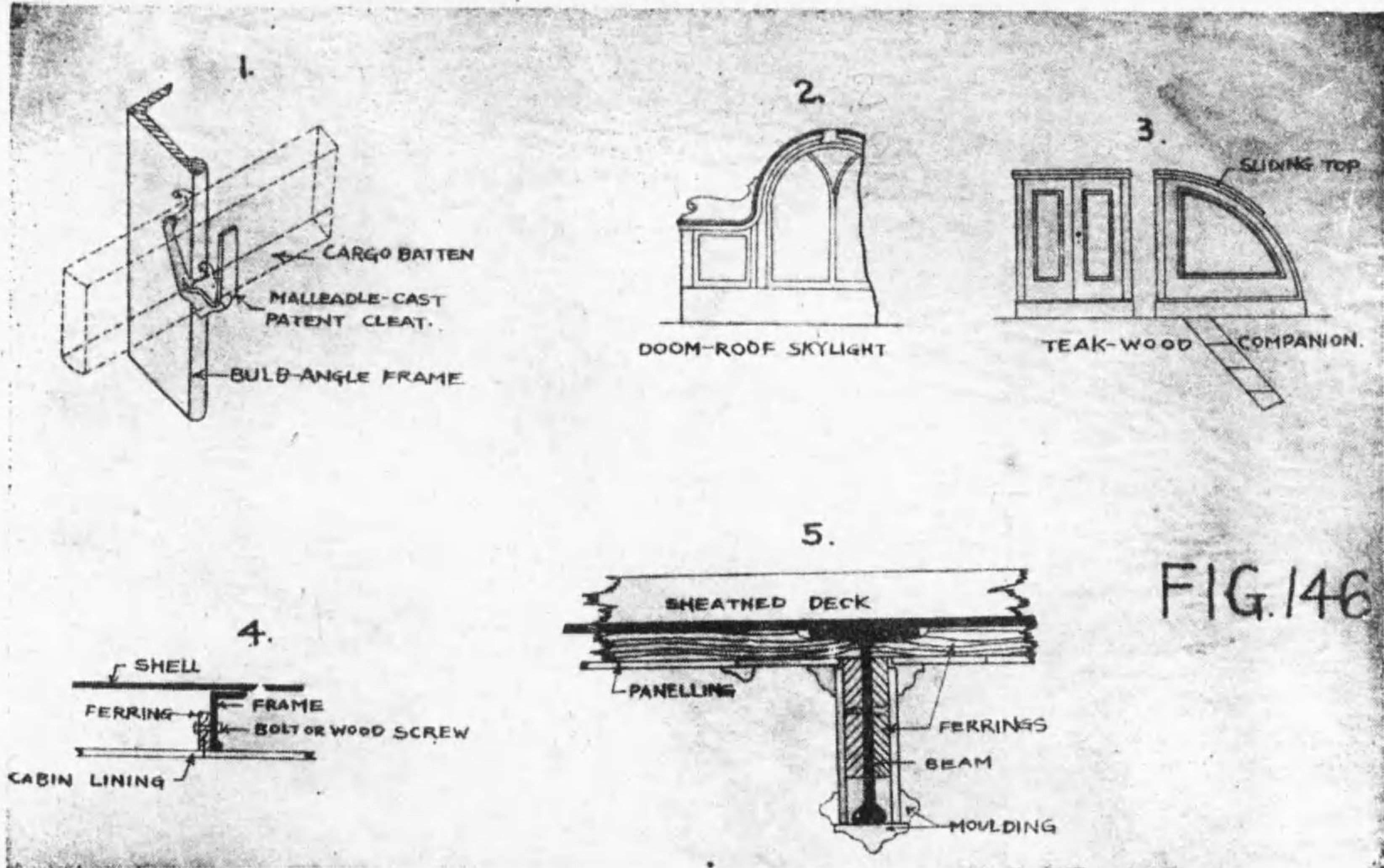
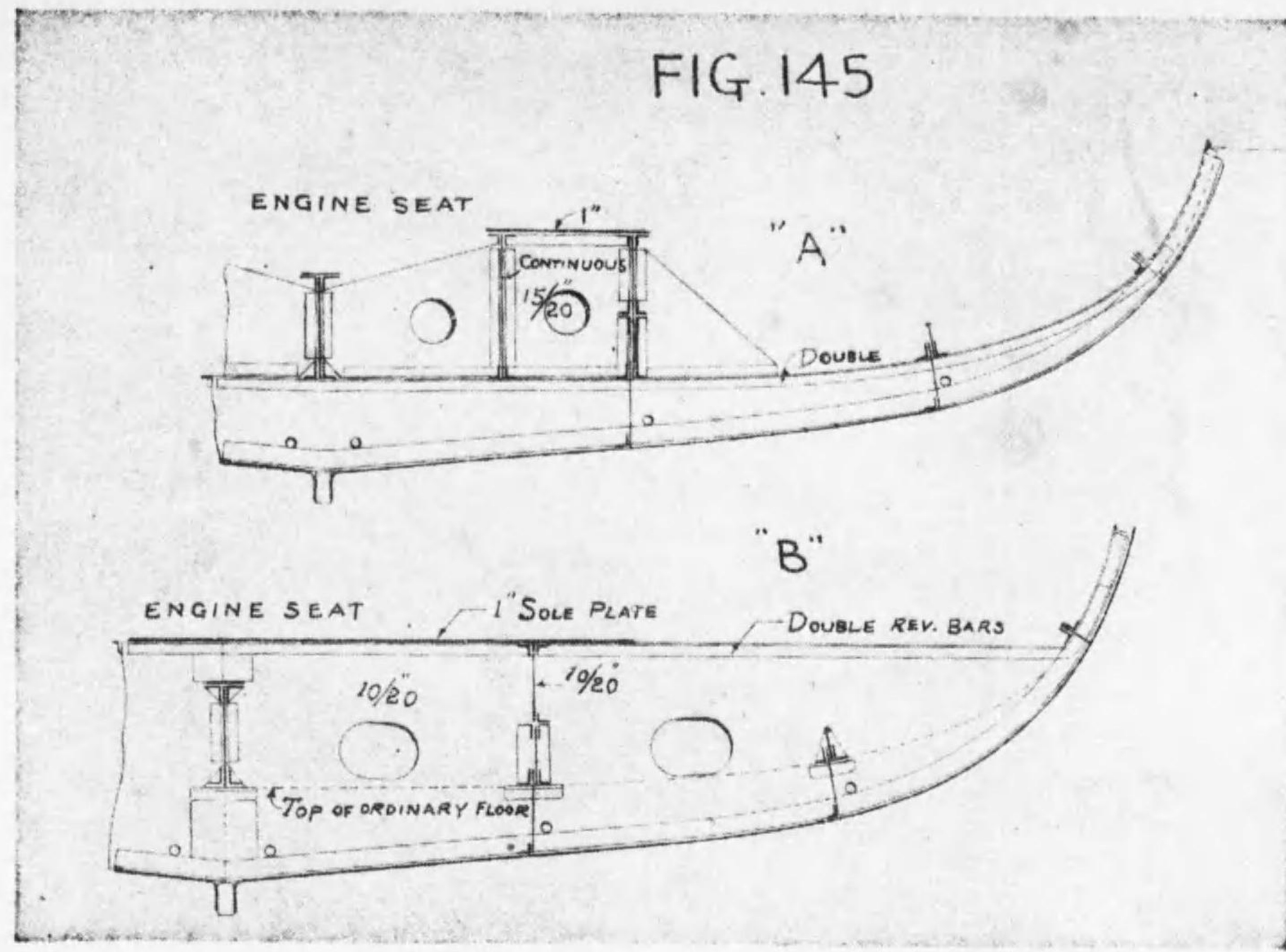


FIG. 146

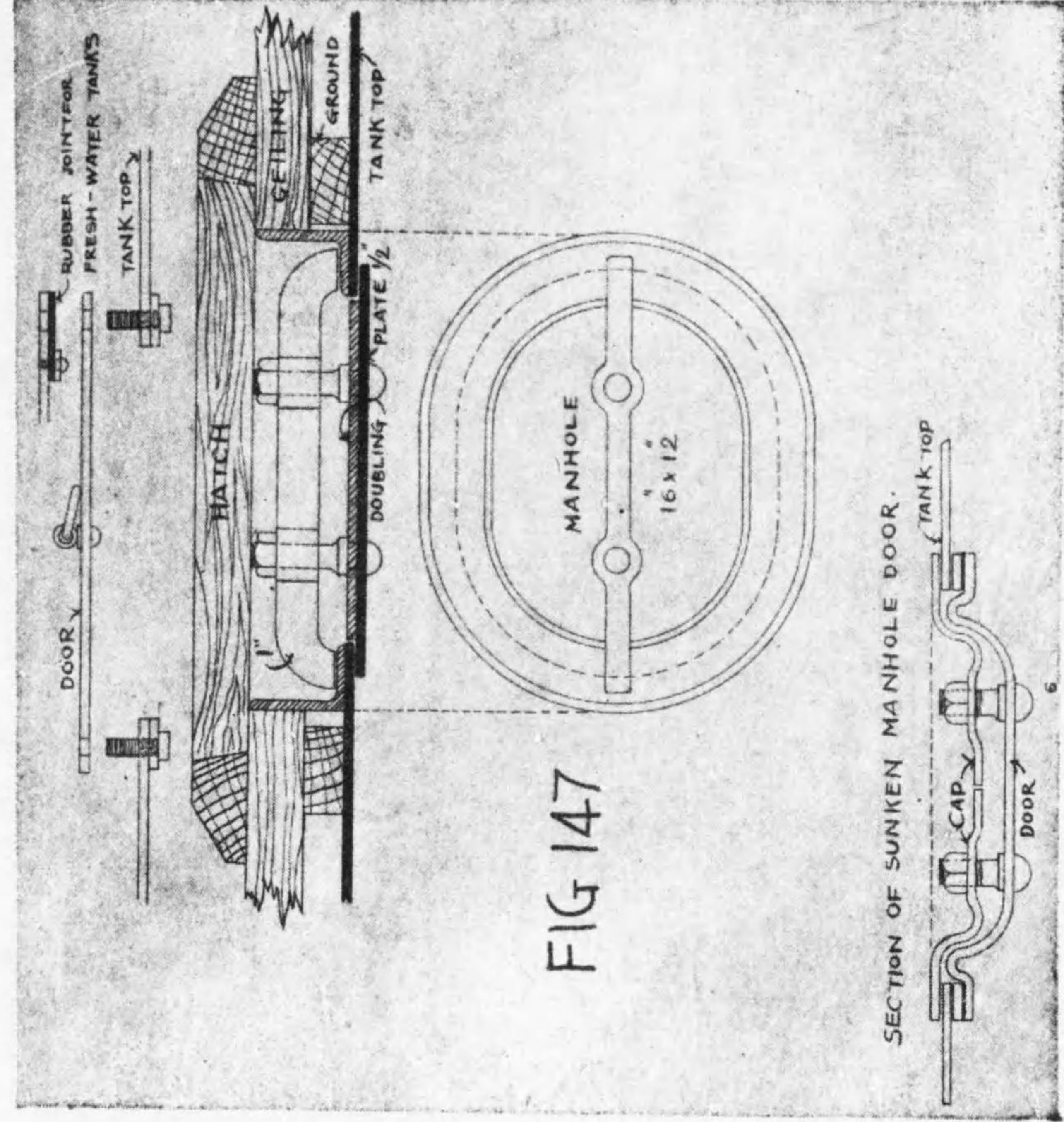


FIG 147

FIG 148-149

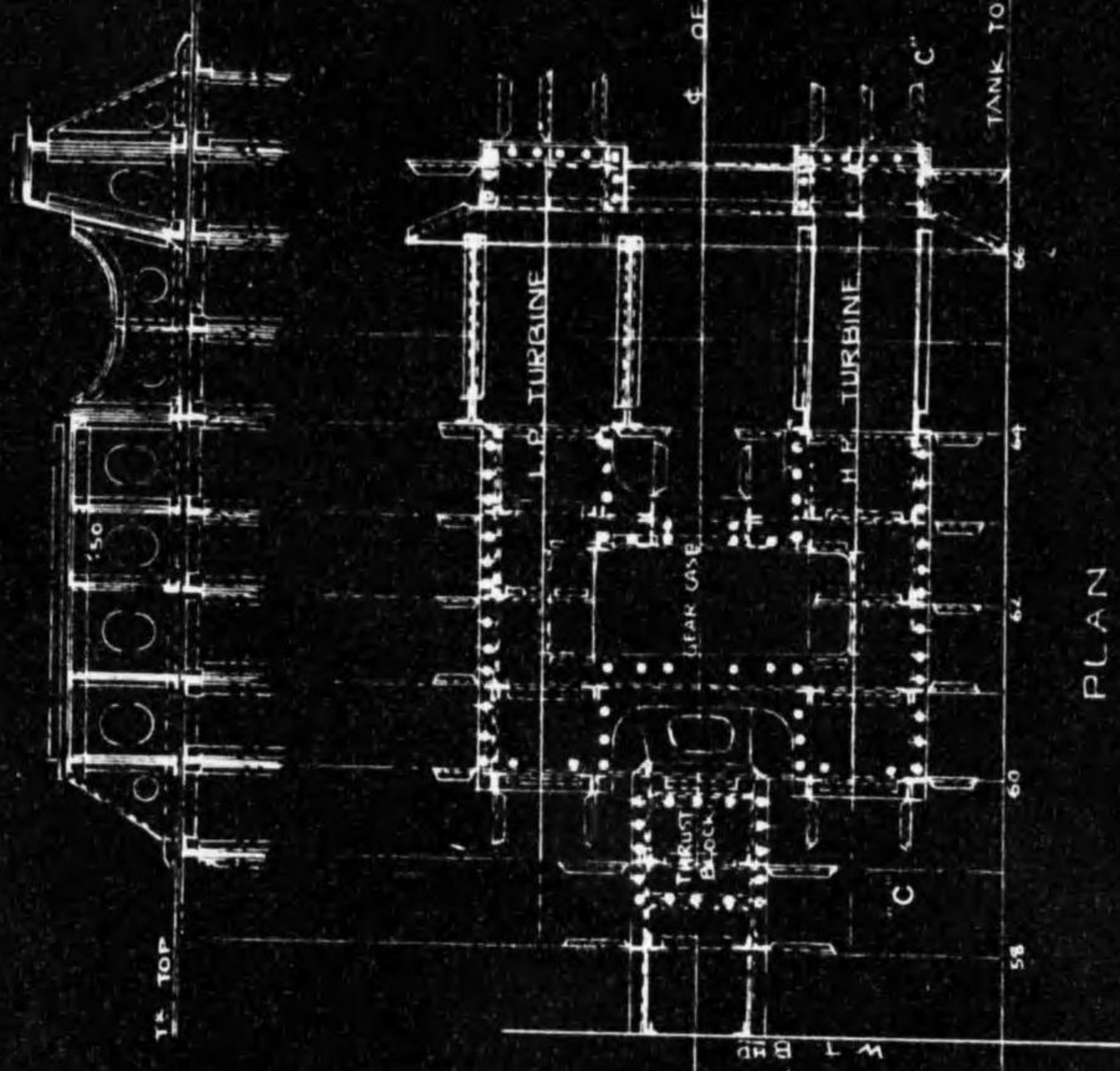
C C GIRDER

C C OF SHAFT

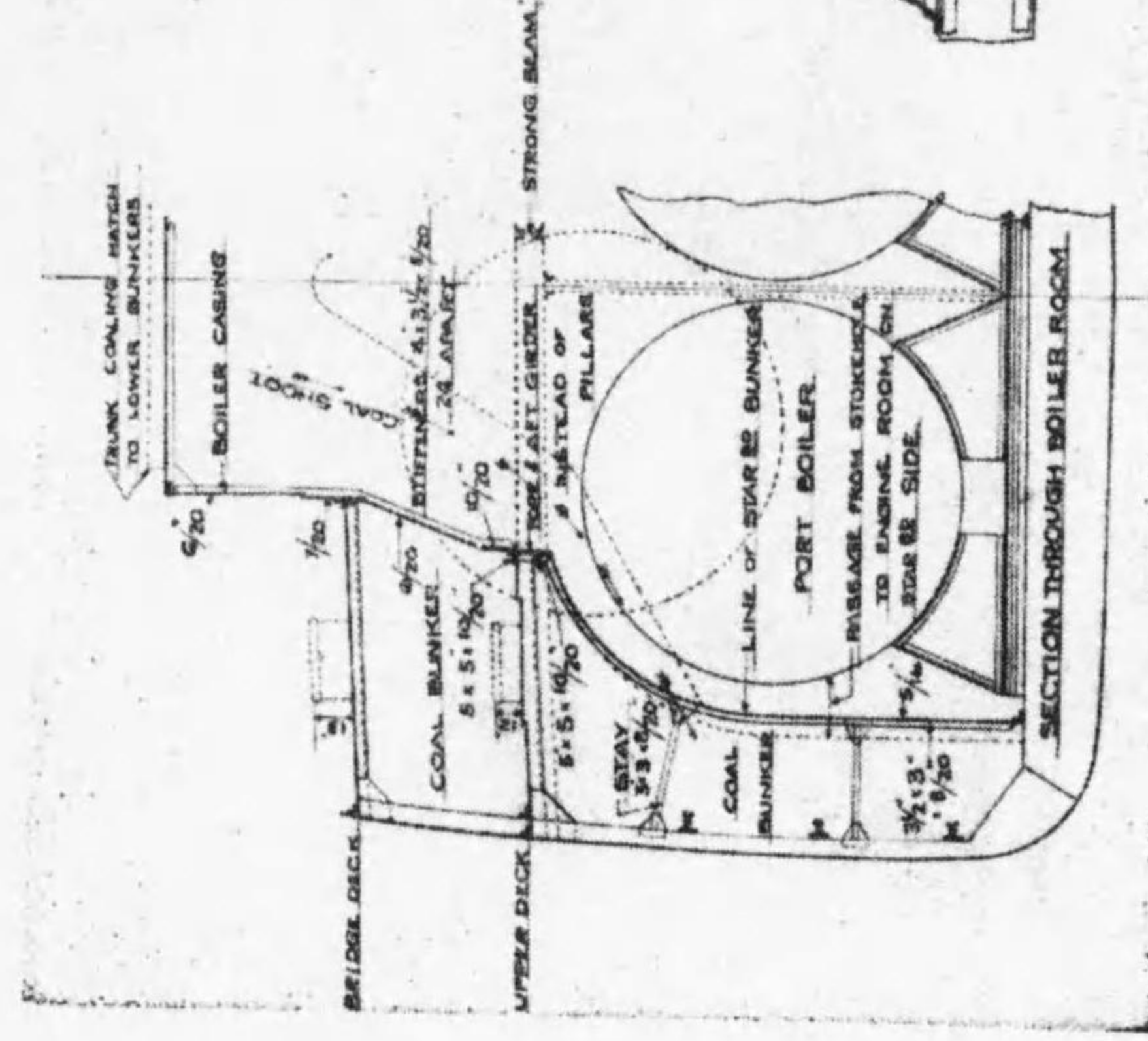
SECTION ENG 60

SECTION ENG 61

ENGINE SEAT
(FOR STEAM TURBINE)
SHOWING THE S. SIDE
SCALE 3/8" TO ONE FT.



PLAN



BOILER STOOL

FIG. 150

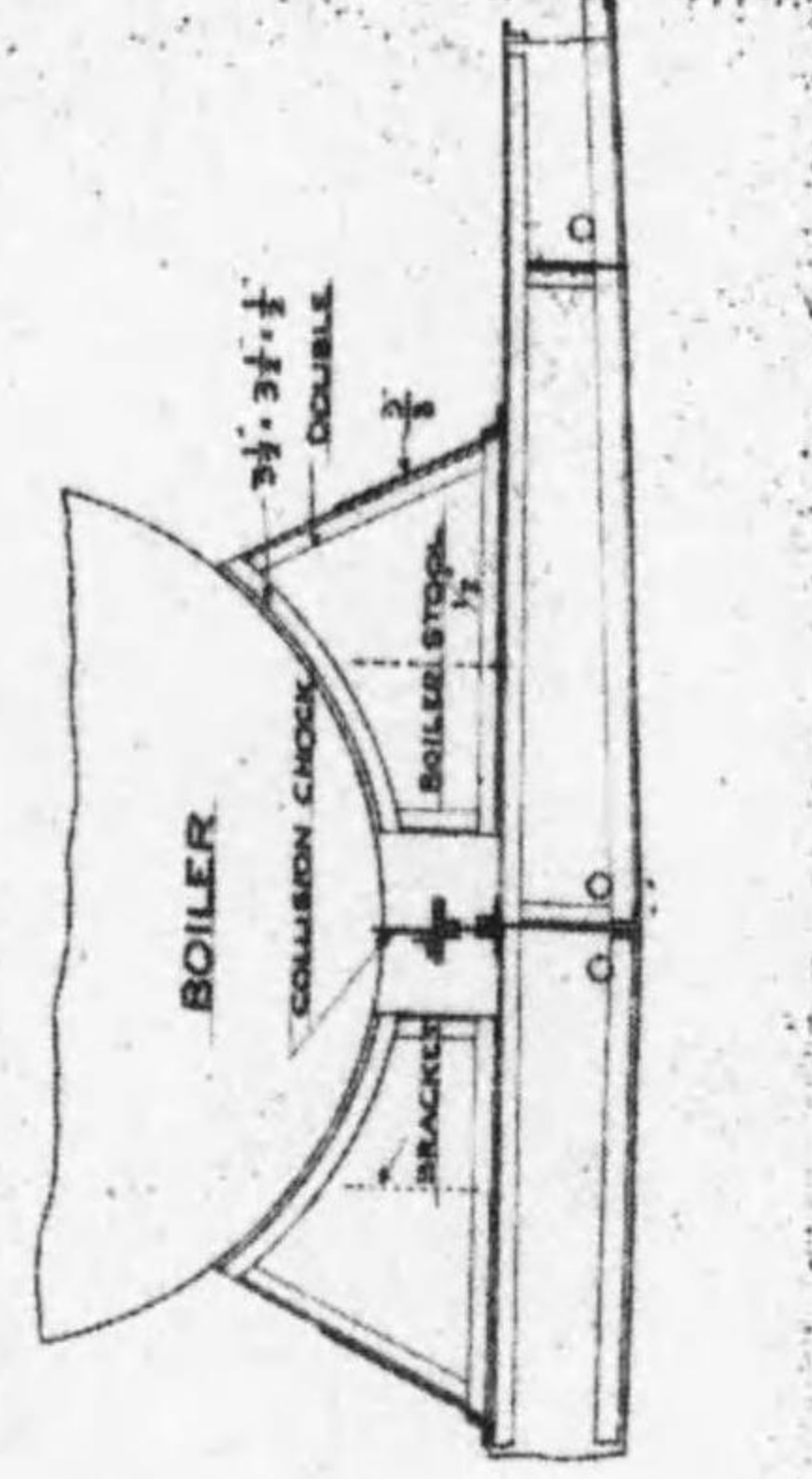


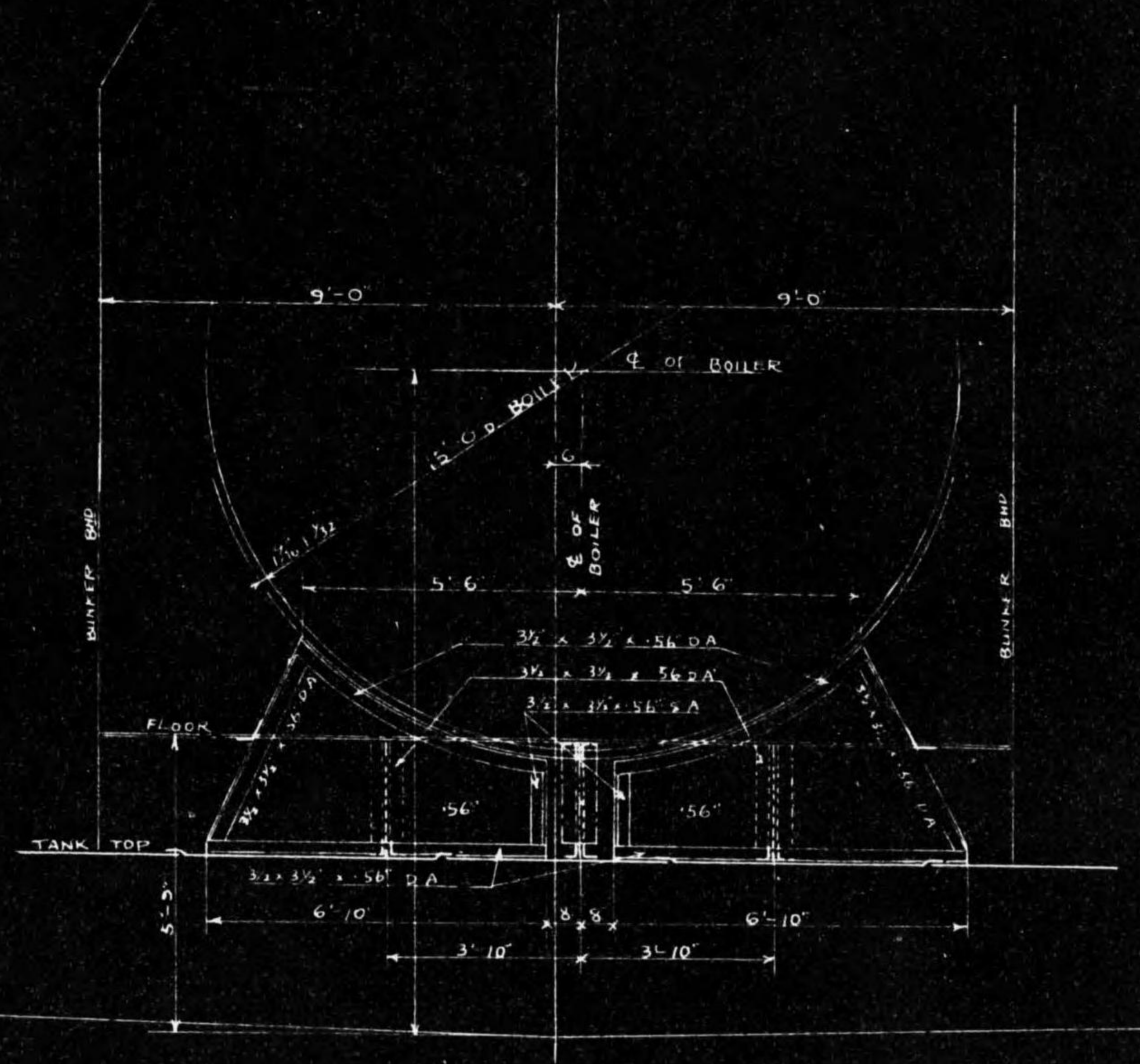
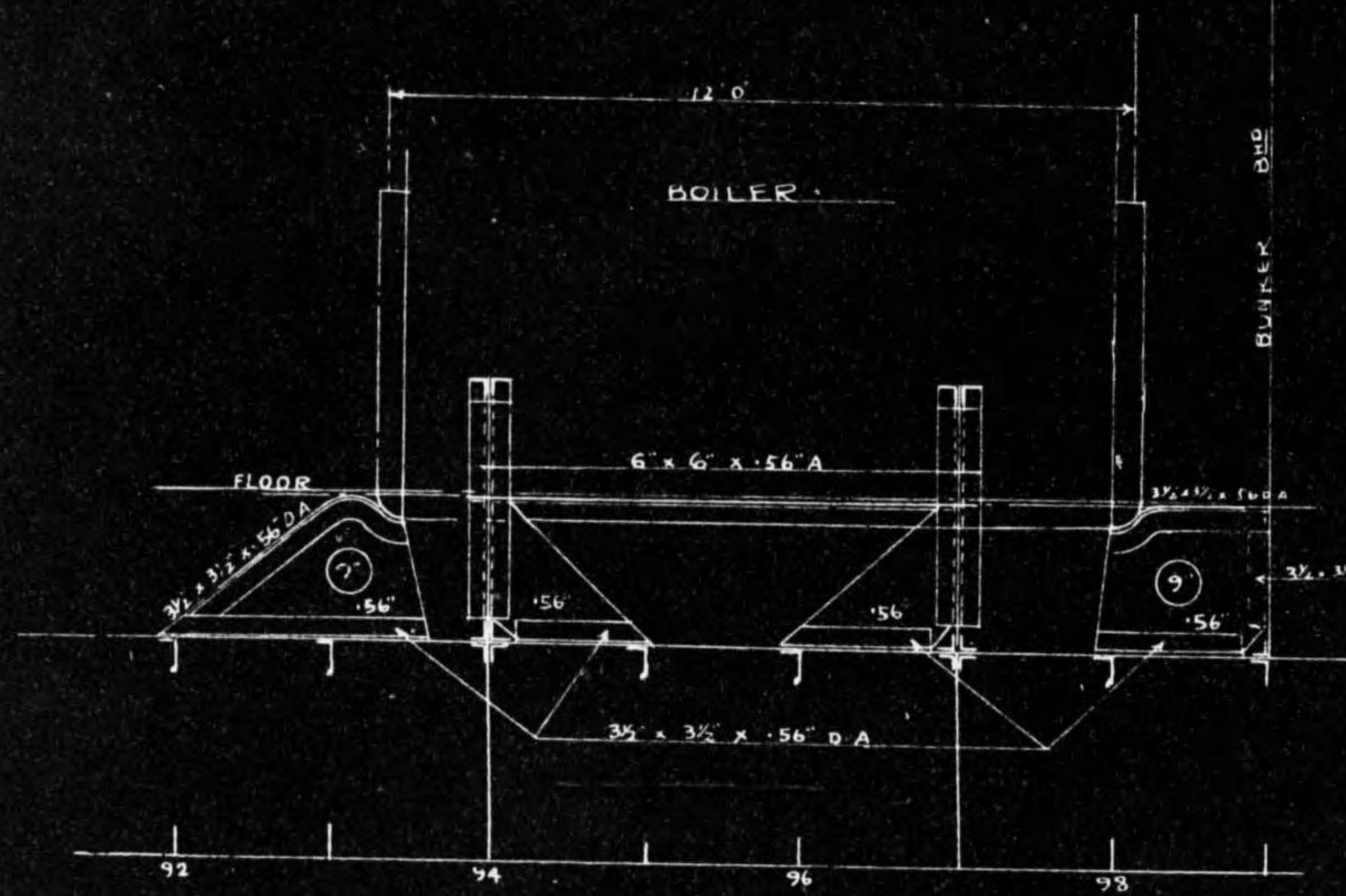
FIG 151
BOILER STOOL

SCALE 1/4" TO ONE FT.

RIVETING NOTE :

BOILER SEAT ANGLE (TANK TOP (11' 50) 10' 1/2" G.D.
TANK TOP TO FLANGE SEAM 10' 1/2" HORIZONTAL FLANGE 10' 1/2" 11' 50"

MAX. PITCH



TRUNK DECK VESSEL.

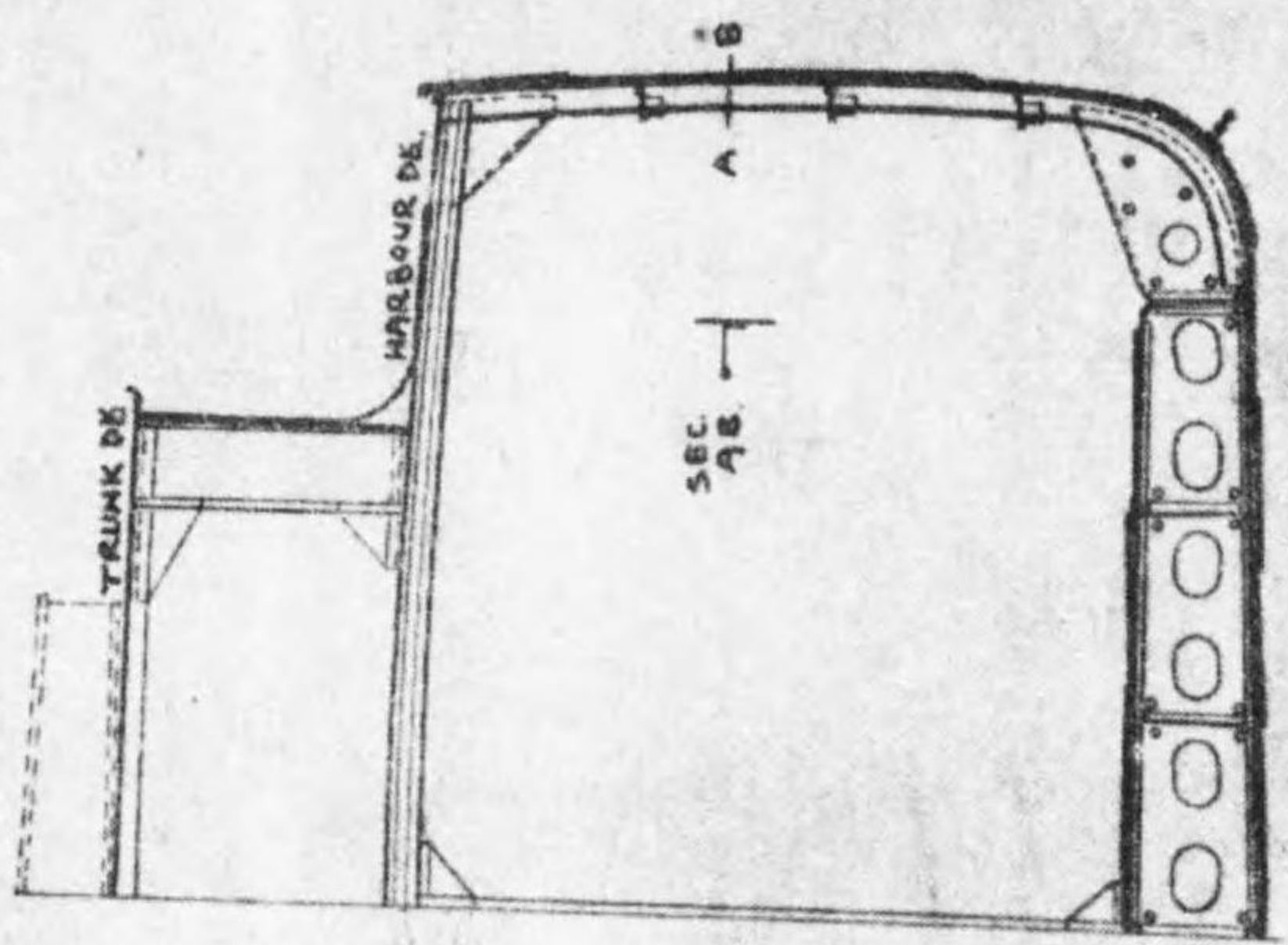


FIG. 153

CANTILEVER SHIP.

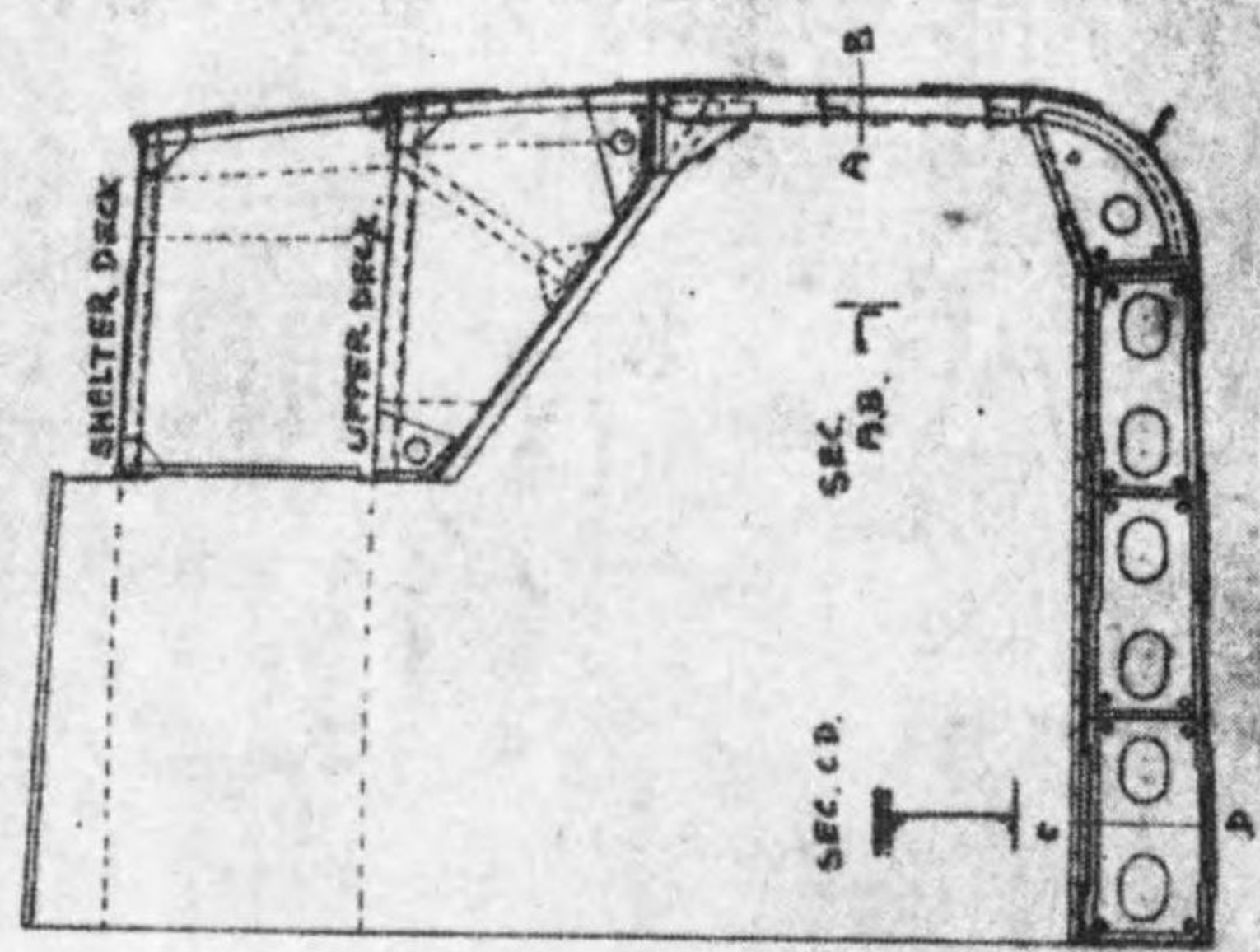


FIG. 154

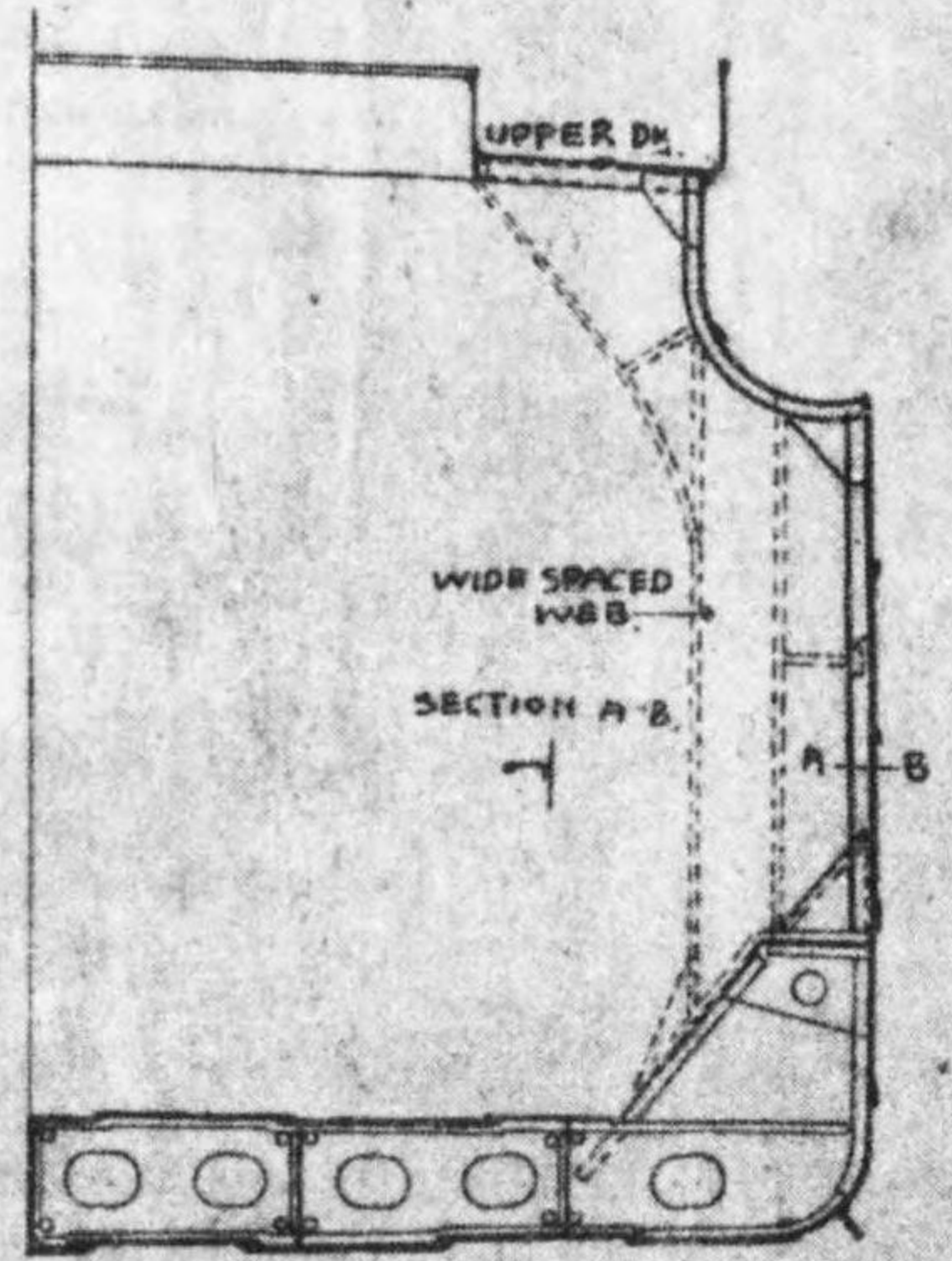


FIG. 155.

TURRET DECK VESSEL

SS. 350' 0" x 50' 0" x 26' 3" AND 33' 6".

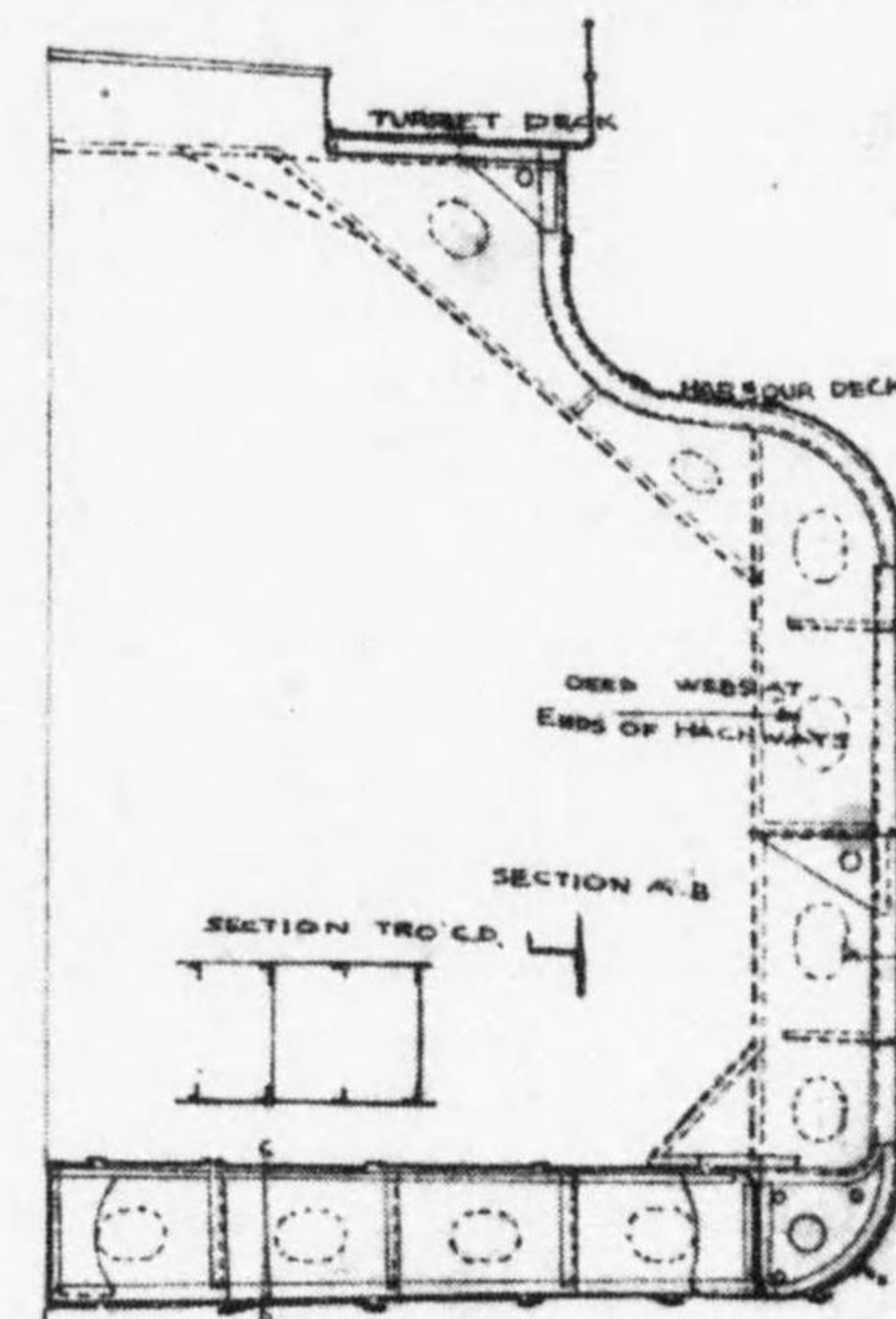
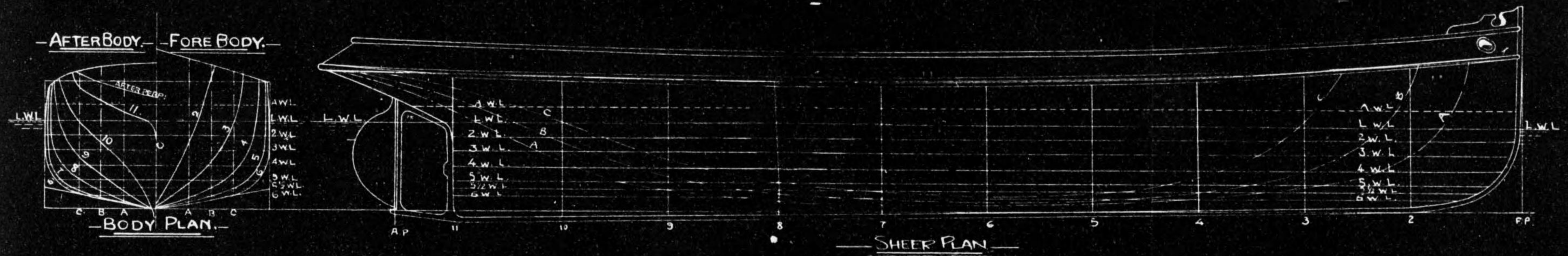


FIG 156

FIG. 157 a.

SHEER DRAWING OF A TUG

SCALE 1/8" = 1 FOOT



PRINCIPAL DIMENSIONS

	FT.	INS.
LENGTH BETWEEN PERPENDICULARS	74	0
BREADTH MOULDED	14	6
DEPTH MOULDED	8	3
DRAUGHT MOULDED FORWARD	5	1
D° AF	6	2
D° MEAN	5	9 1/2



FIG. 159

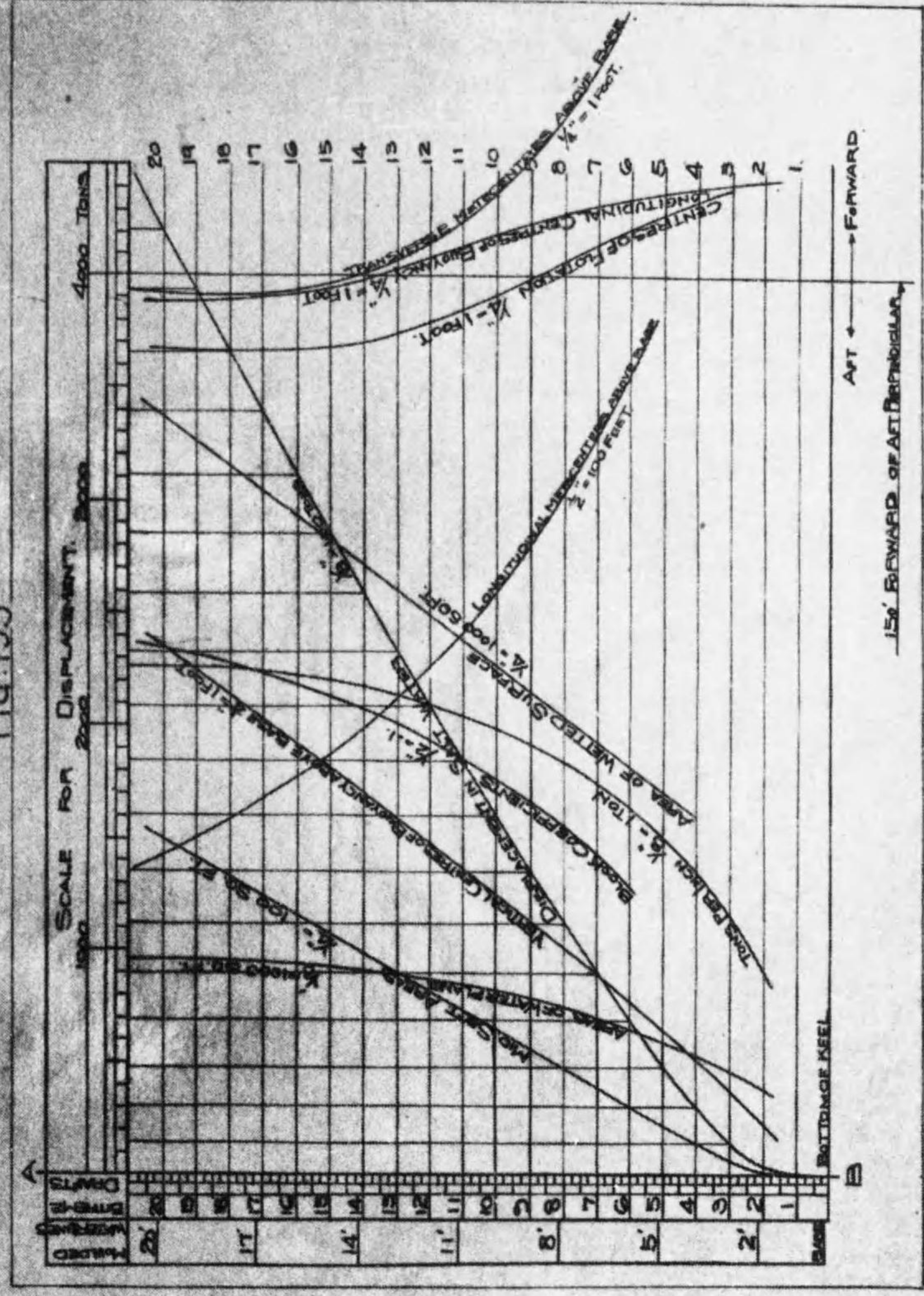
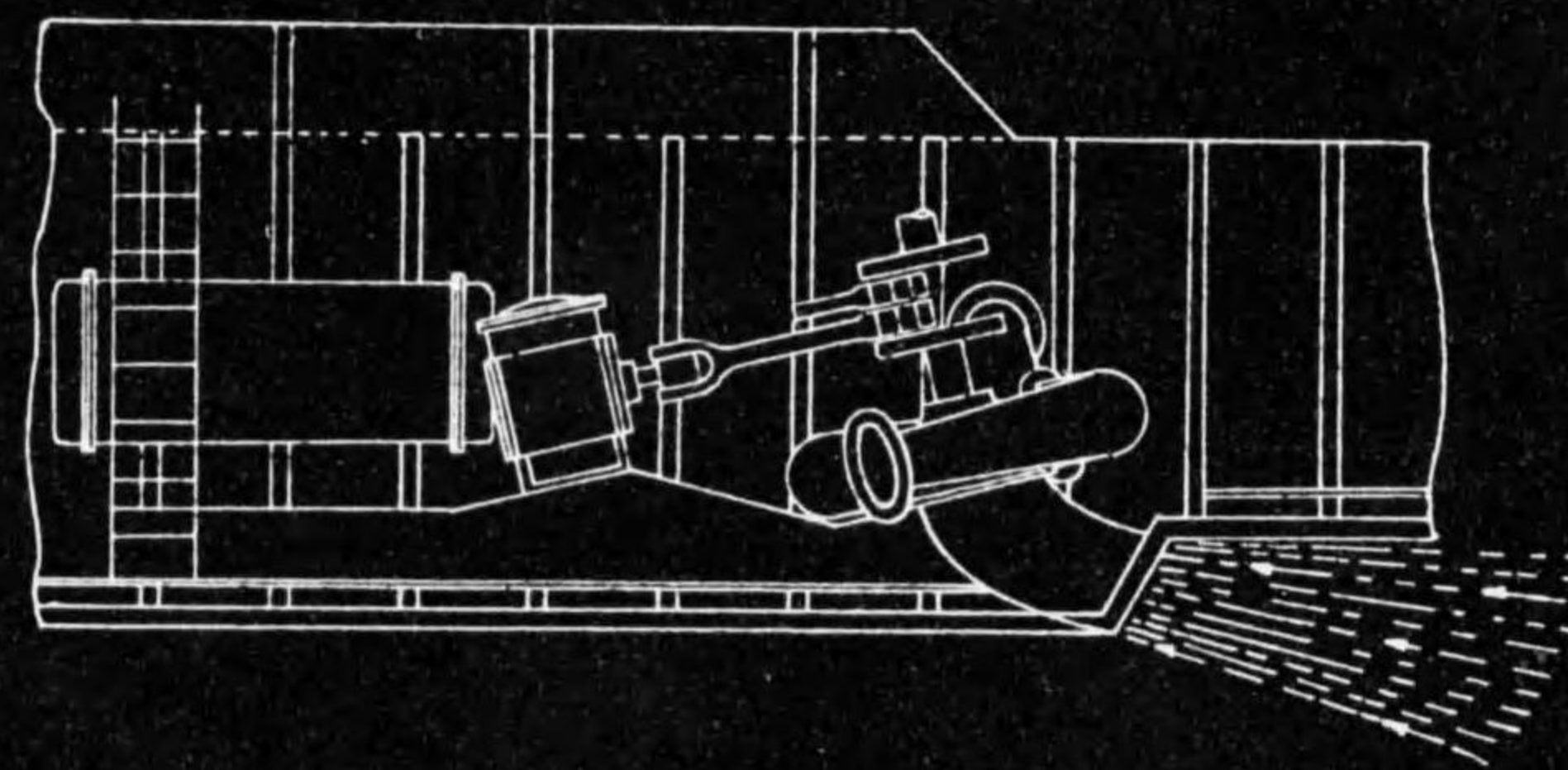
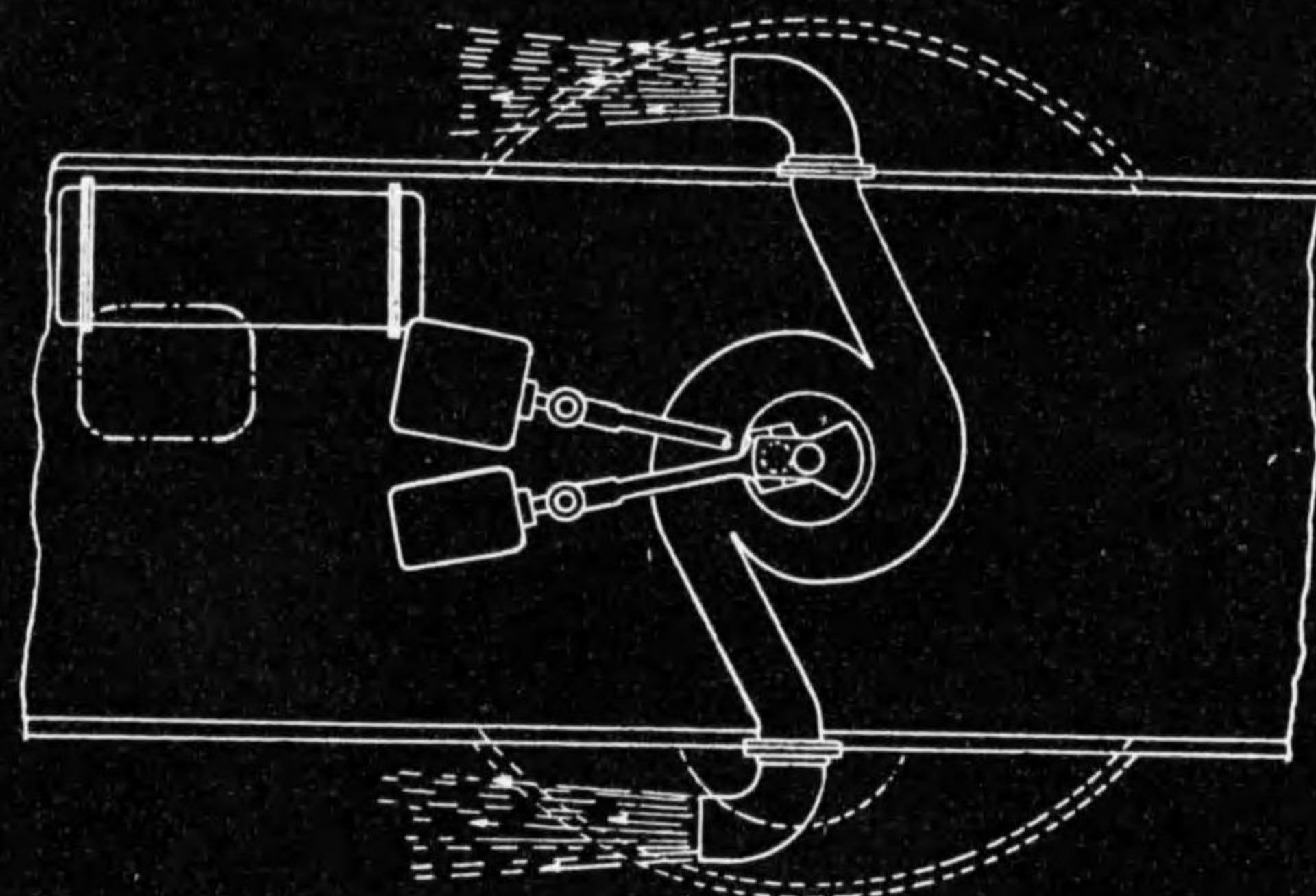


FIG. 160

JET PROPELLER



JET PROPELLER

FIG 160

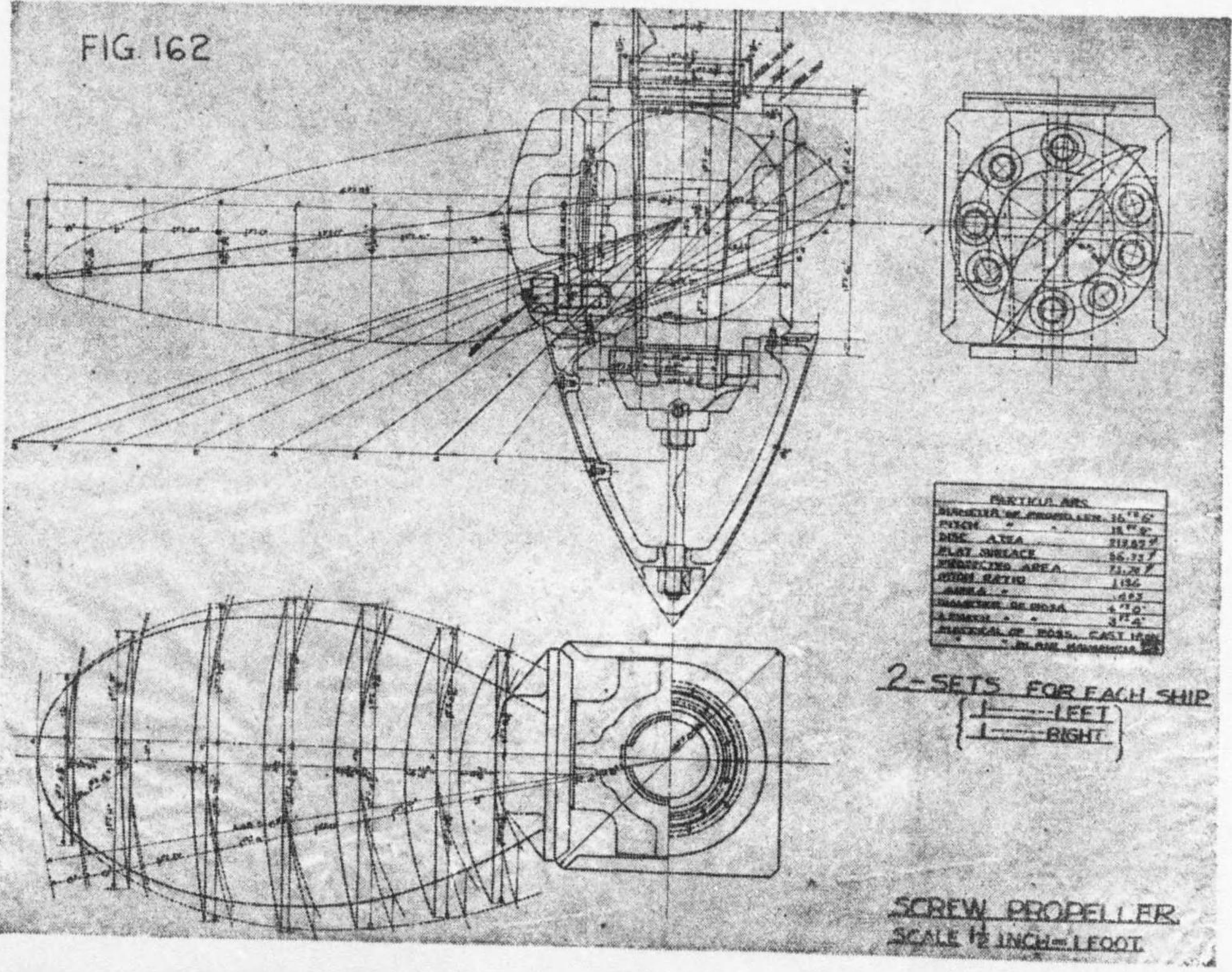
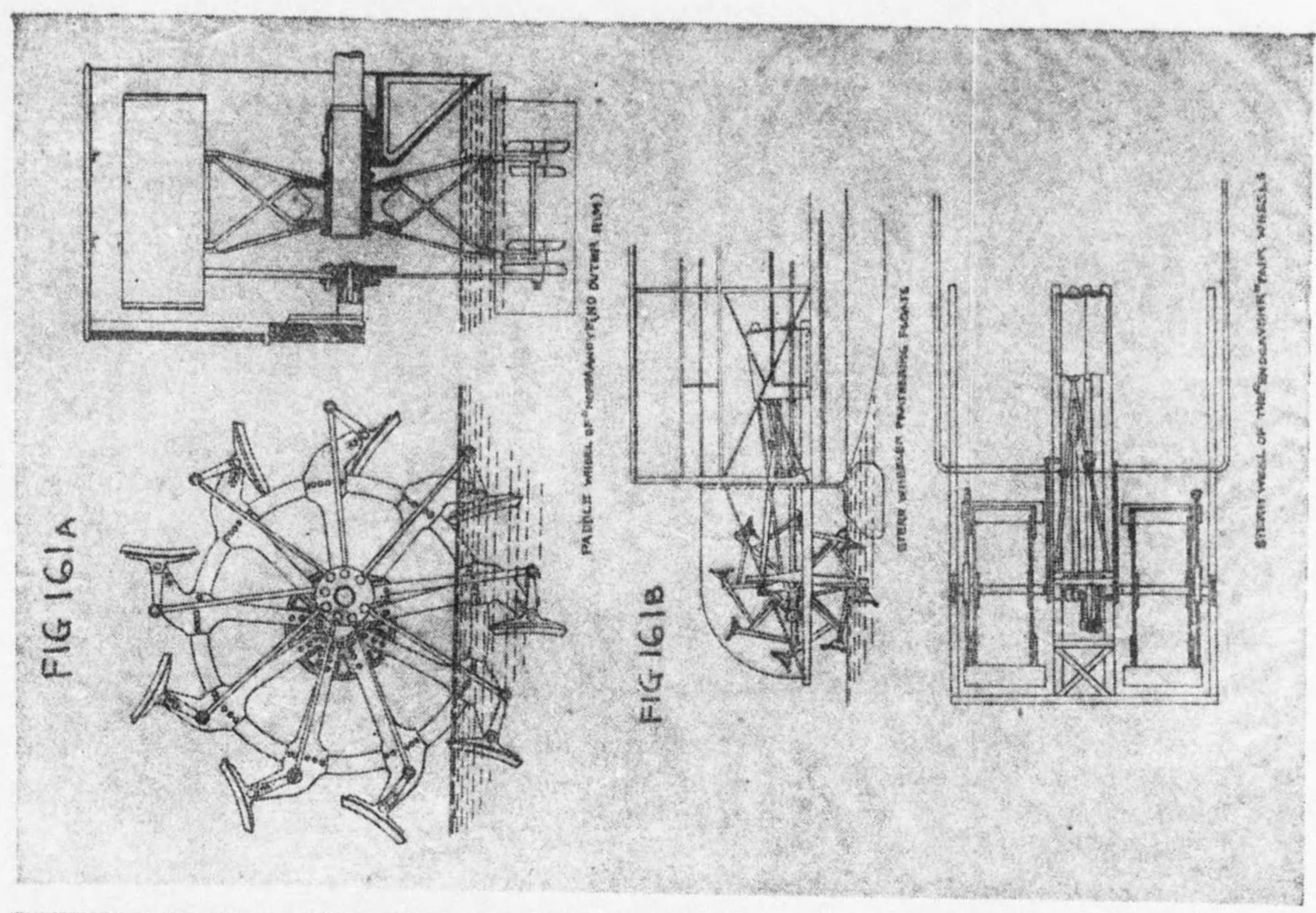
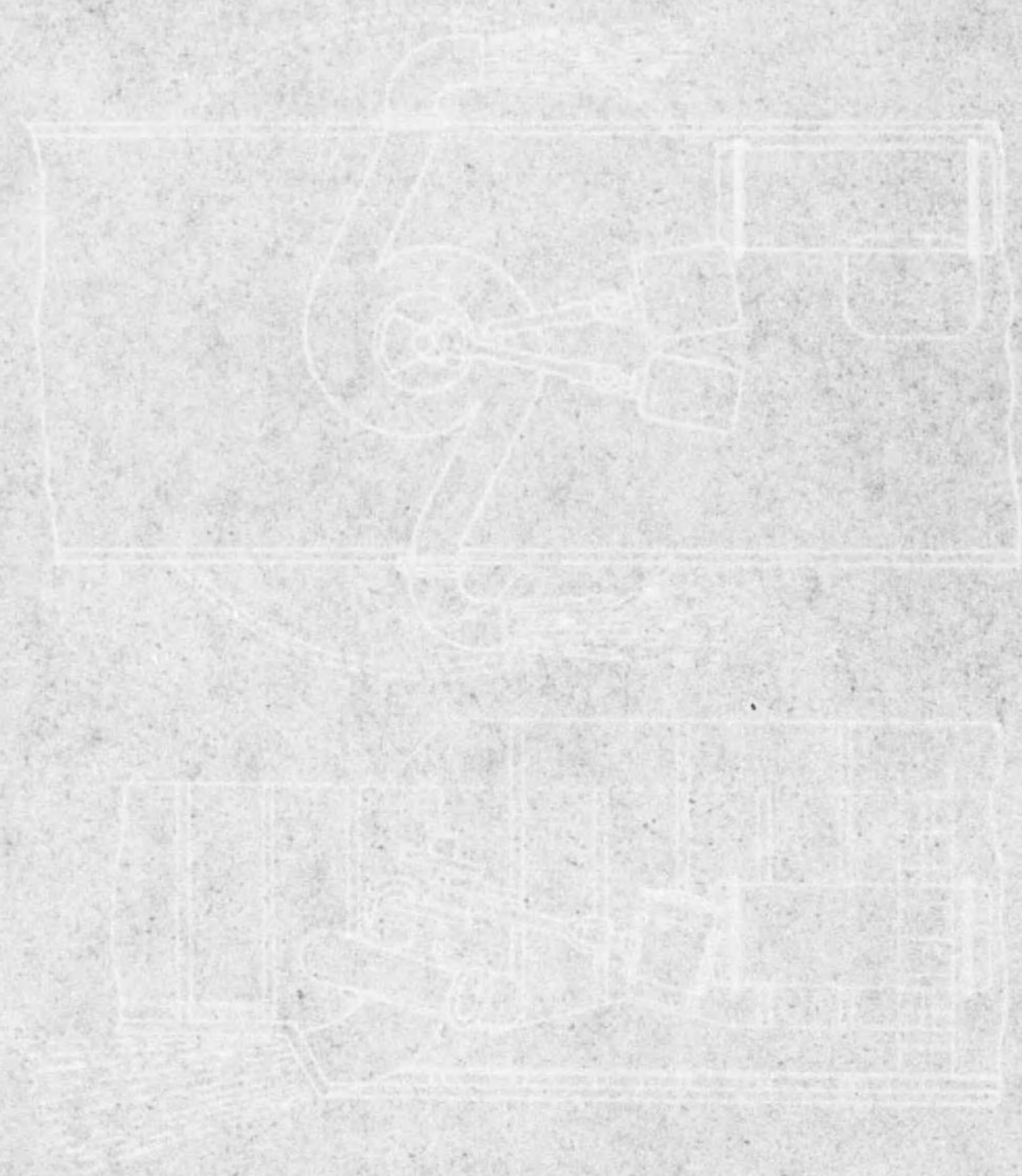
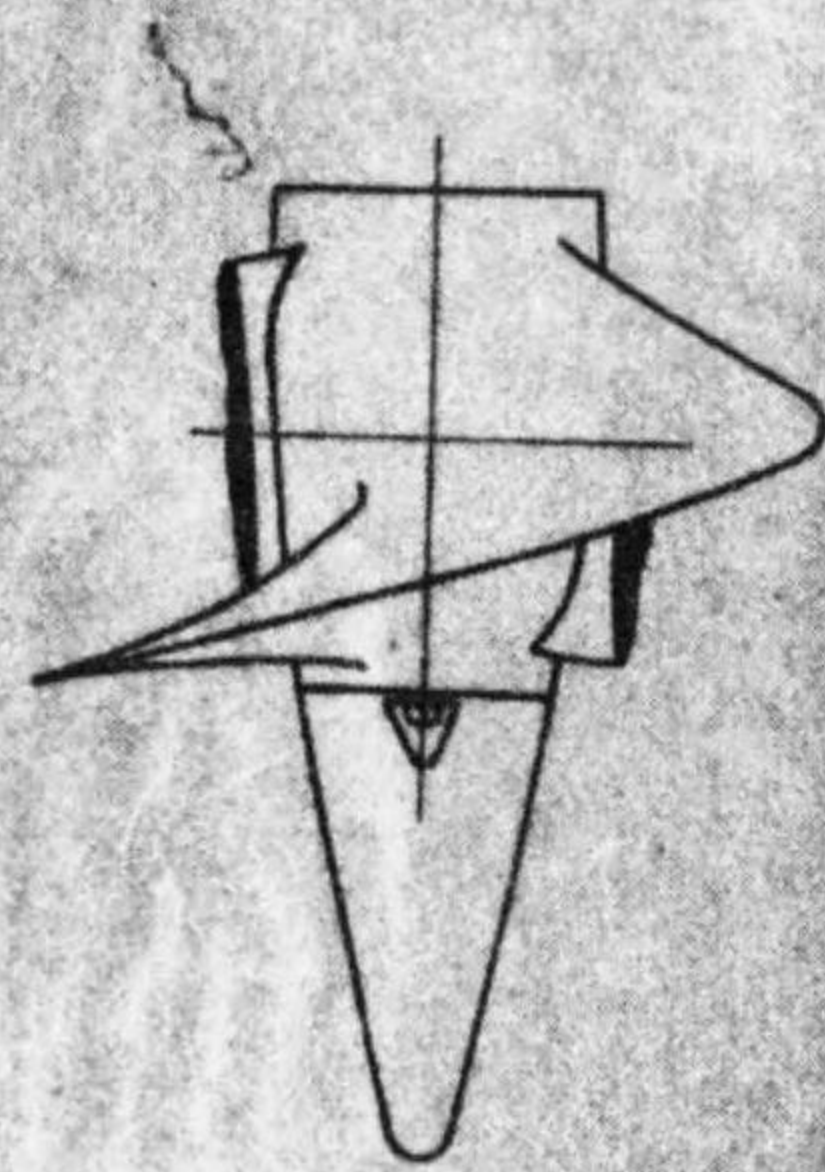
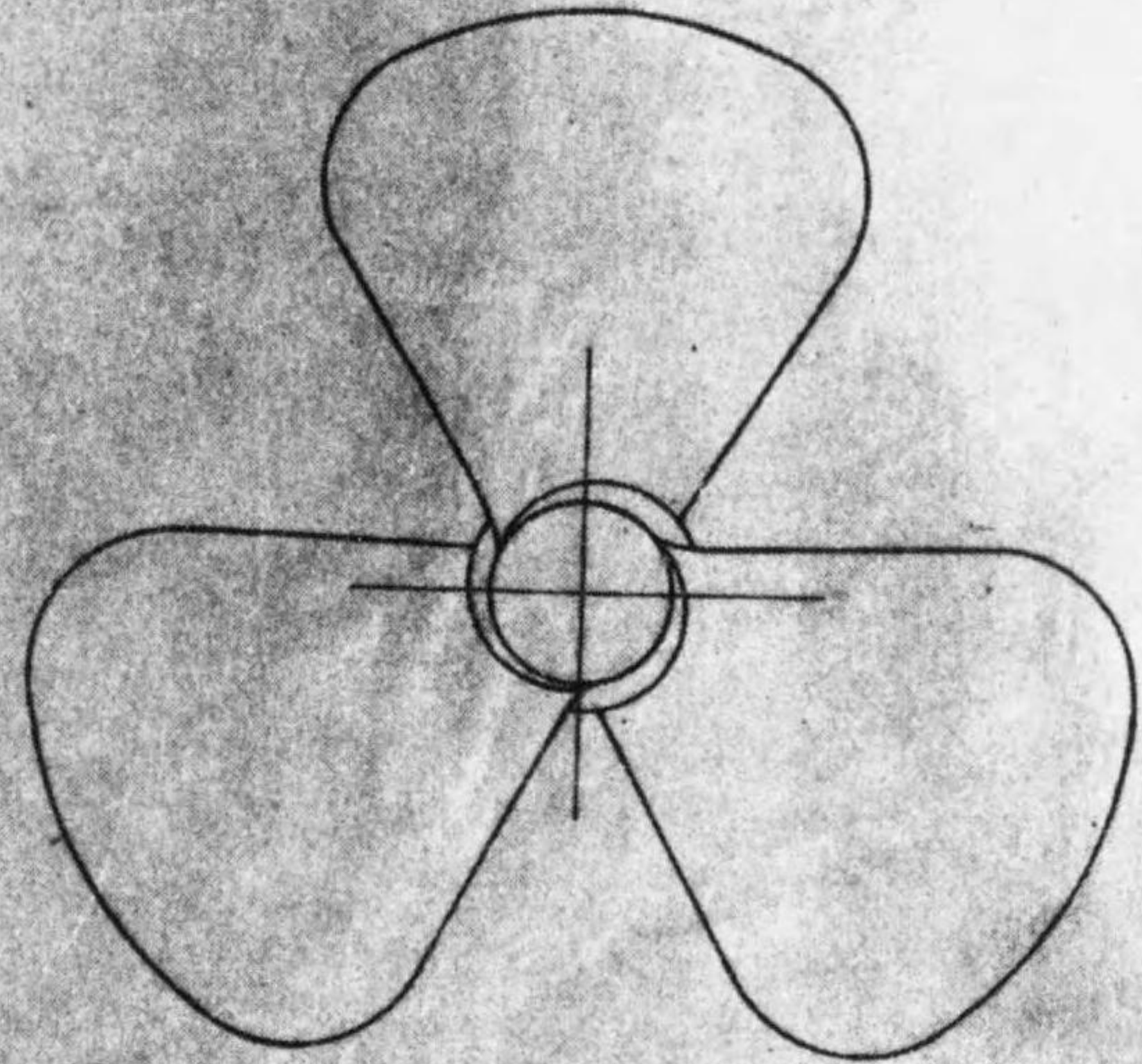


FIG. 163



BRONZE TURBINE TYPE PROPELLER
DIAMETER 8'-3" PITCH 6'-6"
PITCH RATIO .91 AREA RATIO .56
SCALE 1/4" = 1' PER FOOT

FIG. 164

ANALYSIS OF TRIAL RESULT

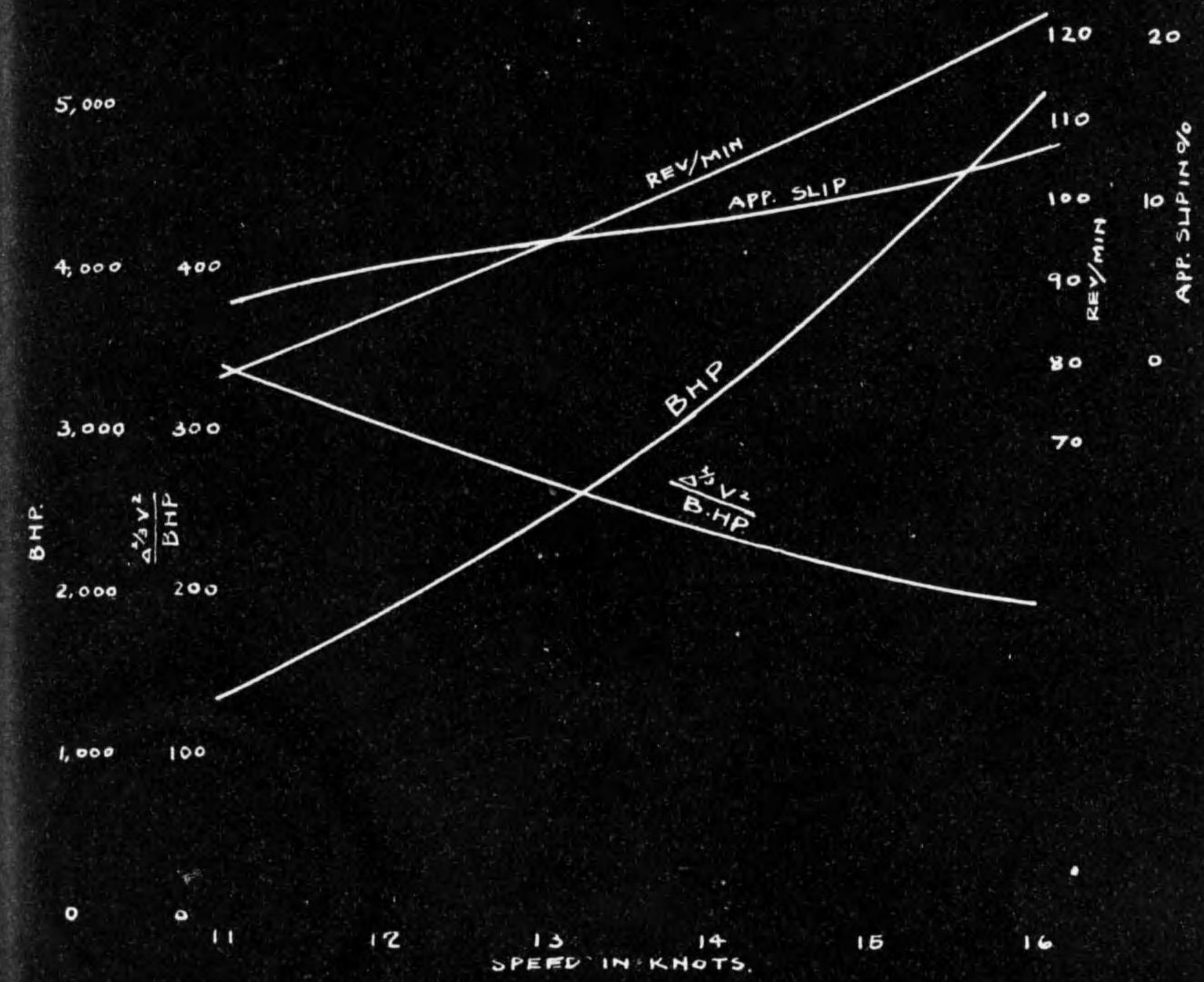
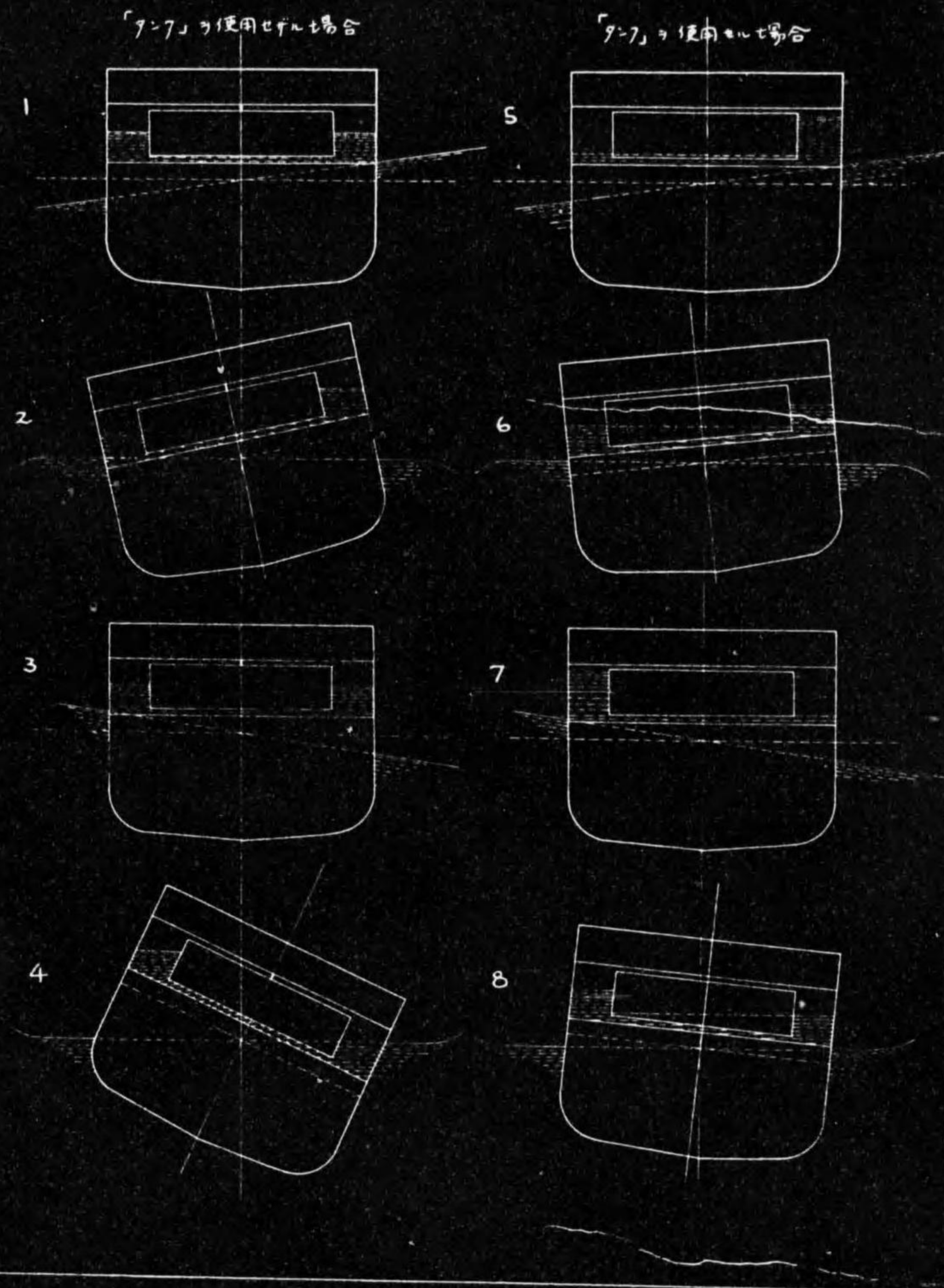


FIG. 165.

FRAHM'S UNTIROLLING TANK



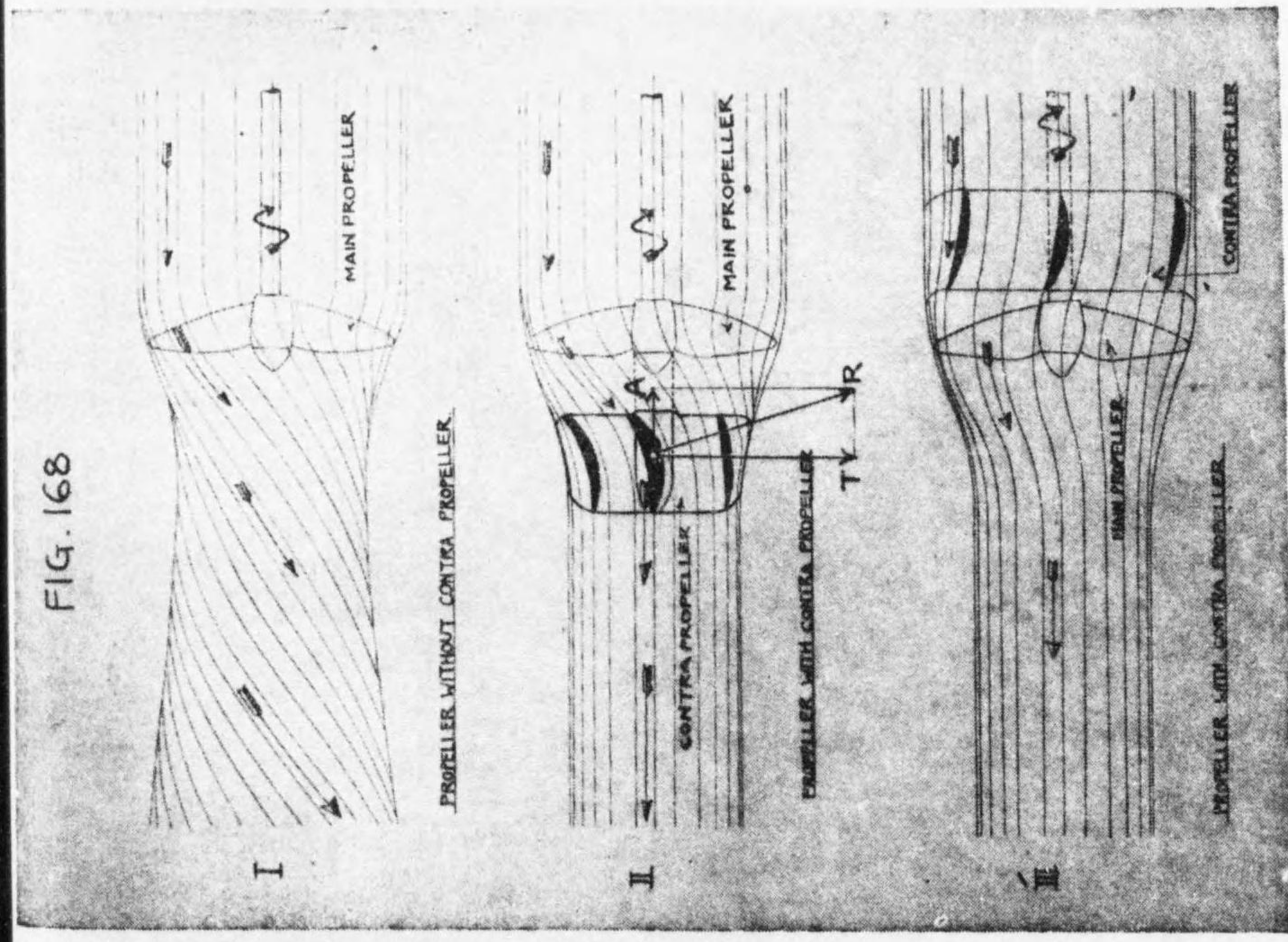
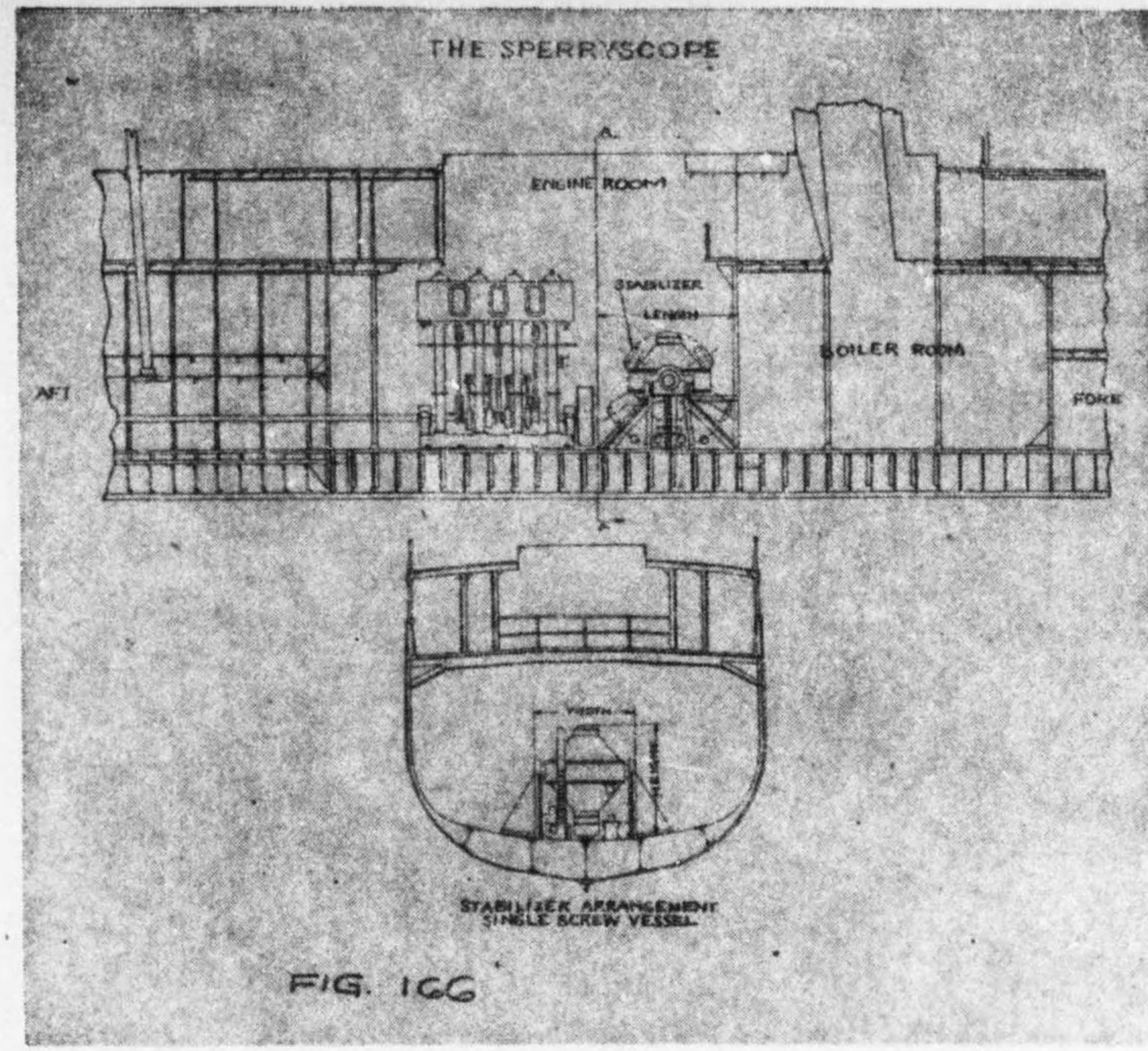
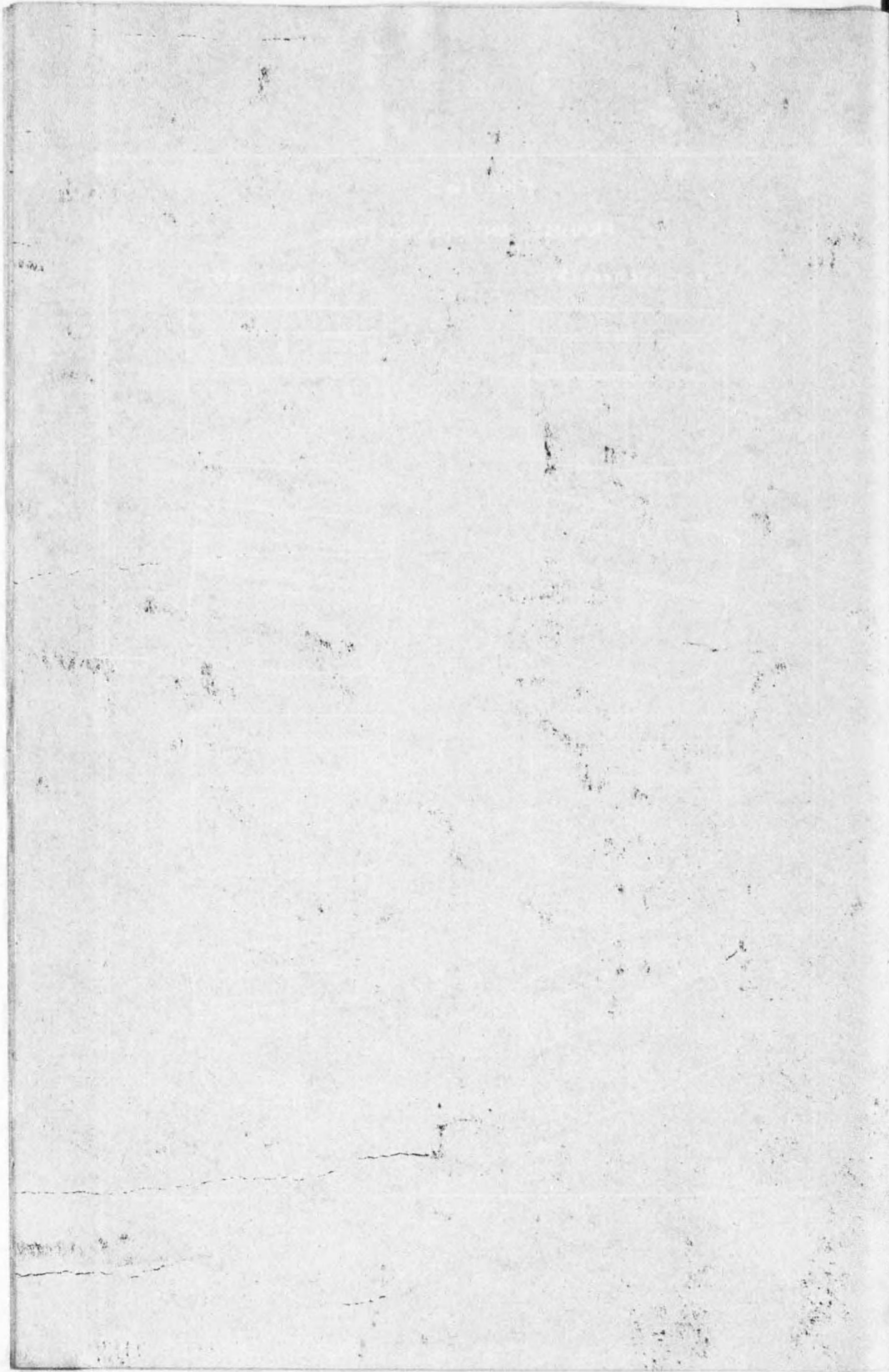
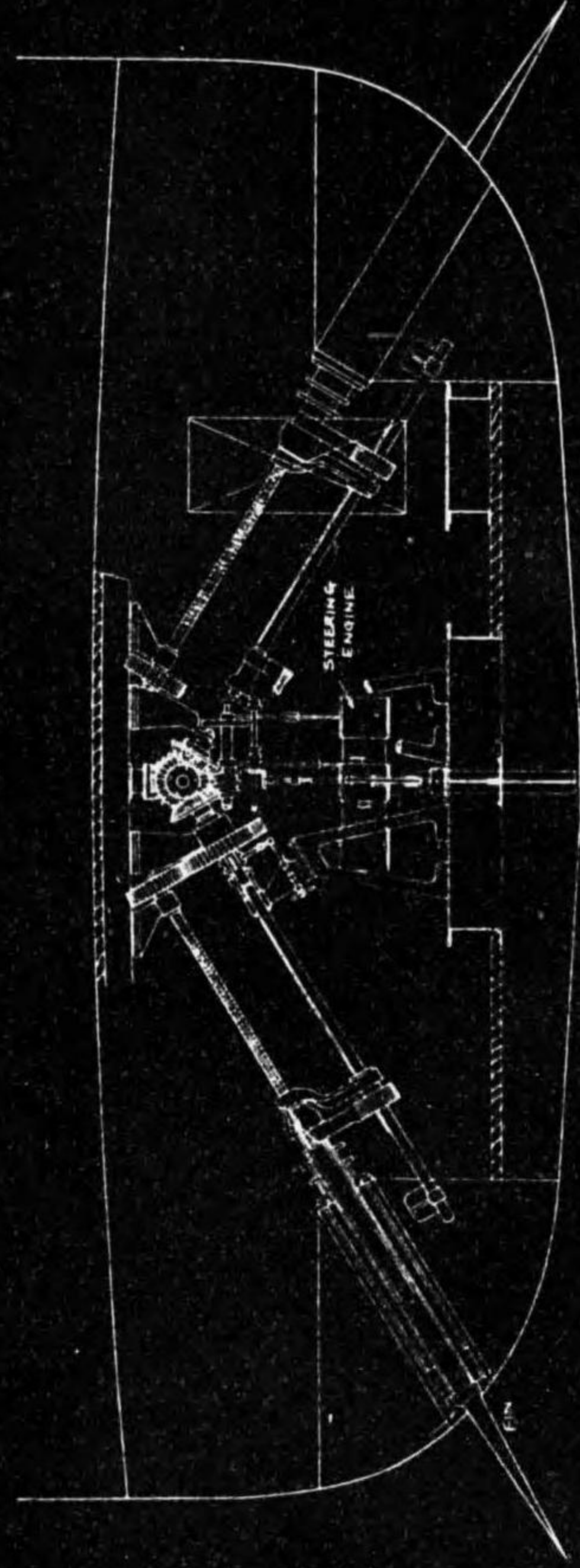
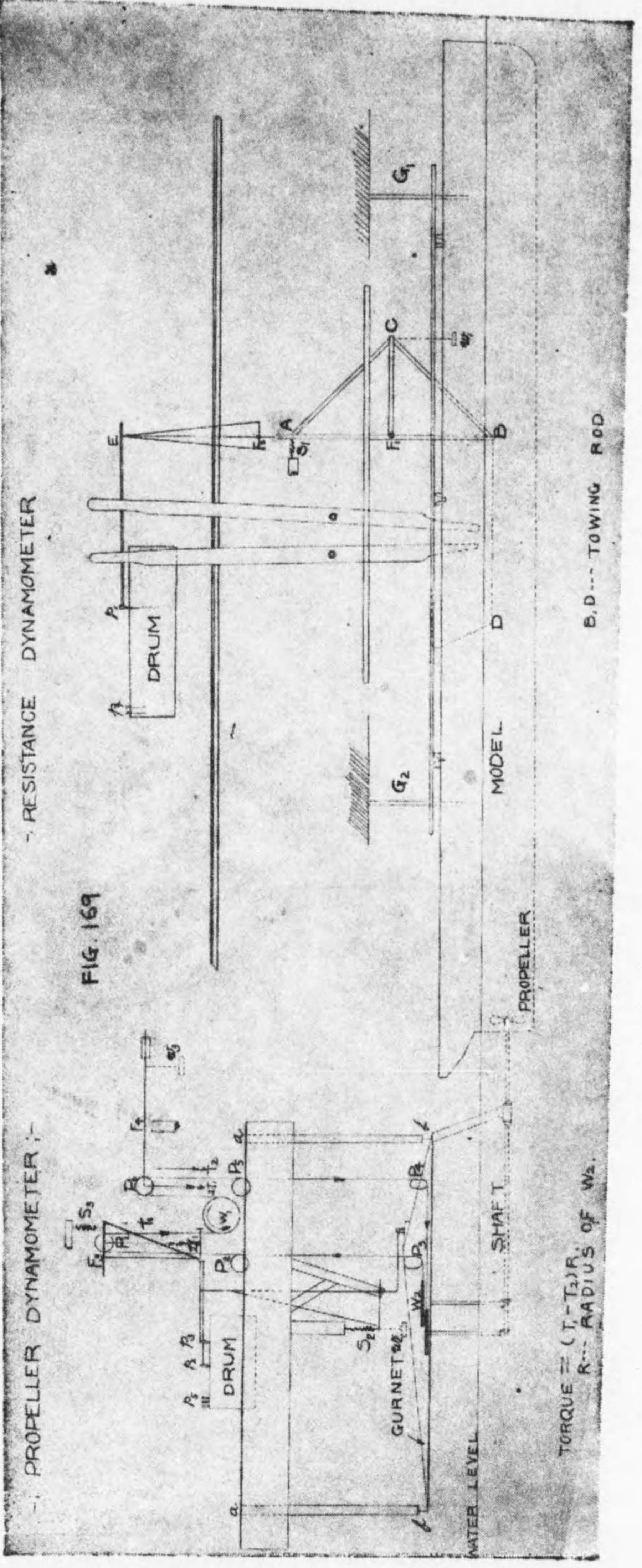
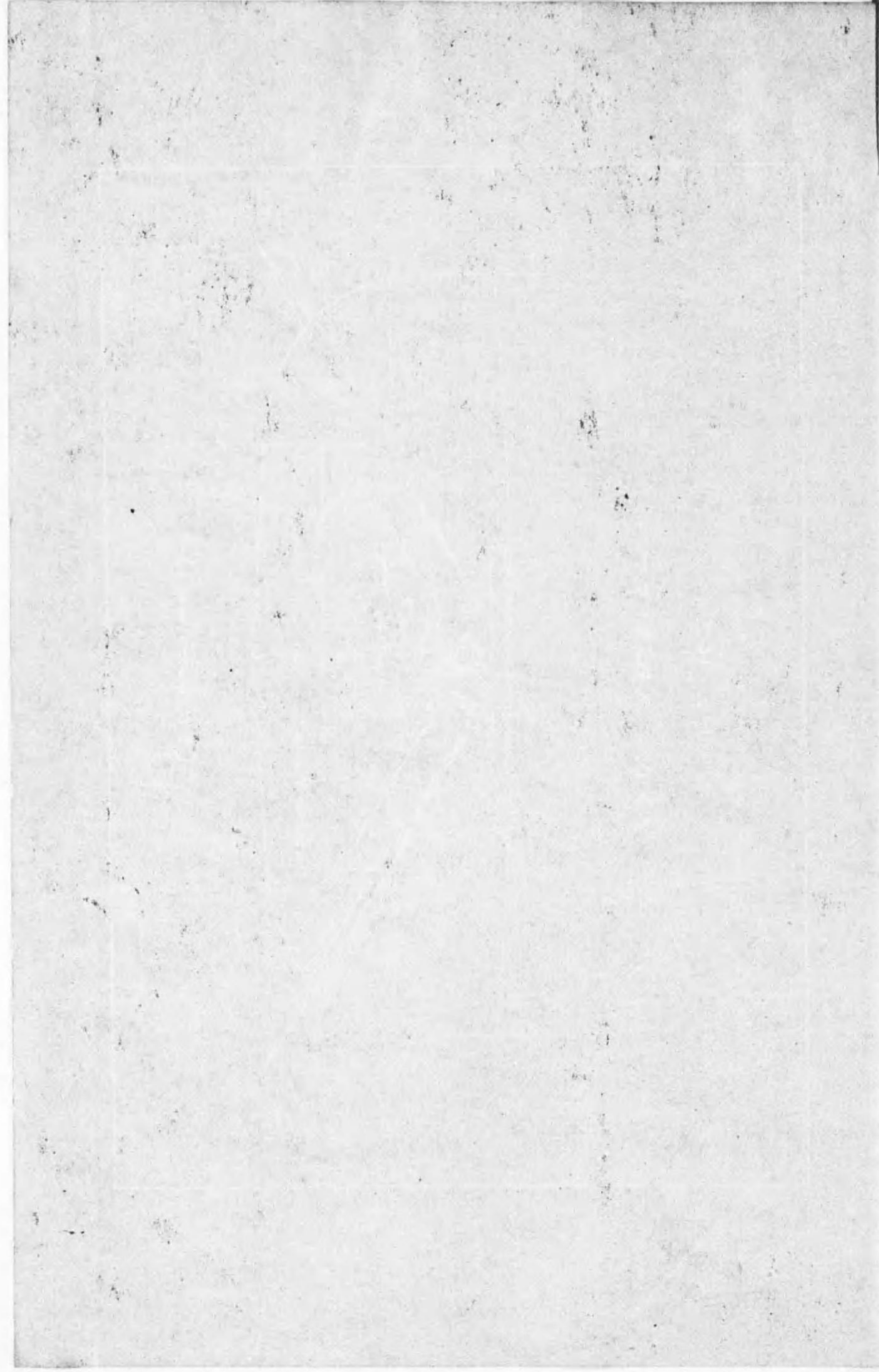


FIG. 167
元良式「ステライザー」

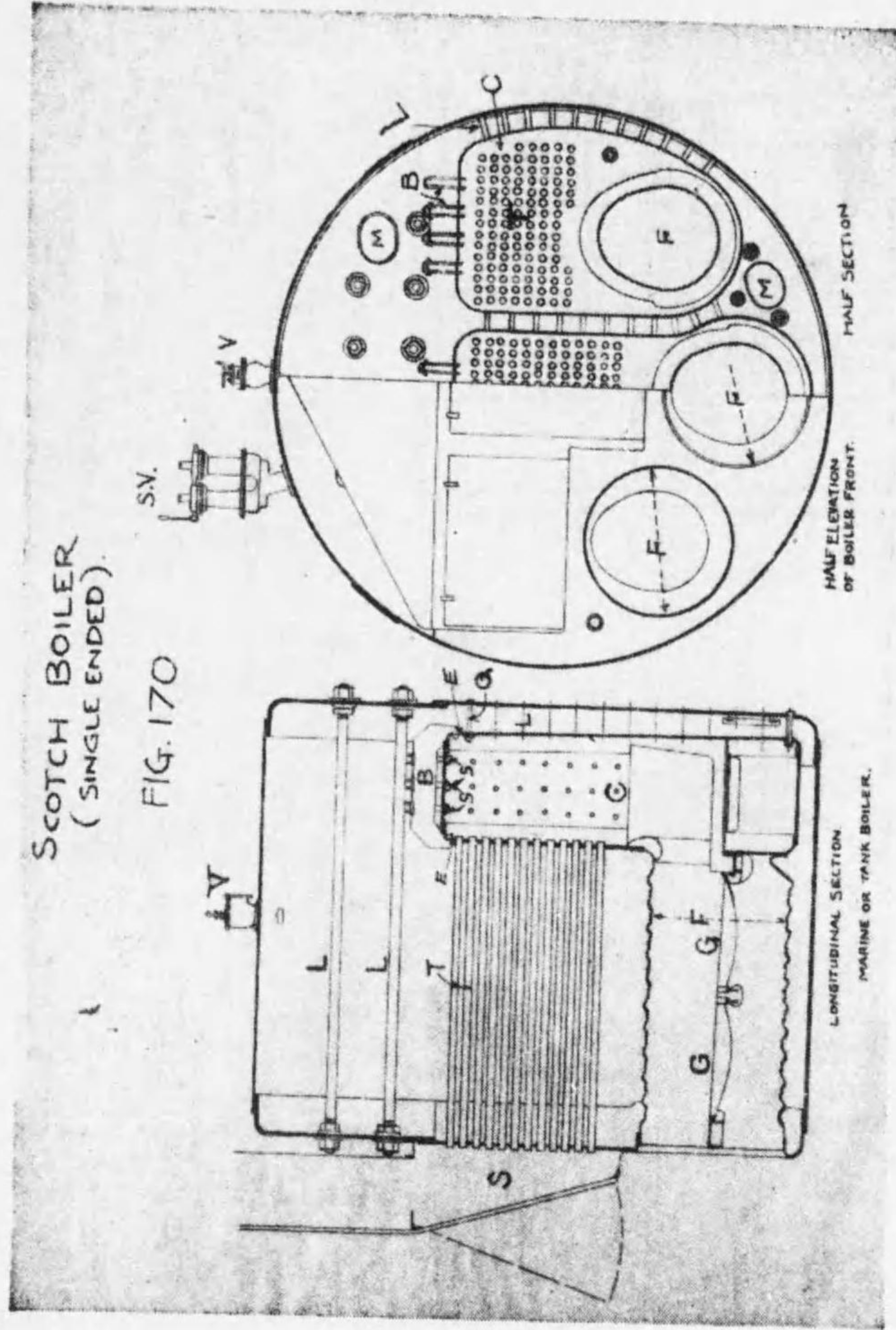


(S.S. MUTSU MARU)



SCOTCH BOILER
(SINGLE ENDED)

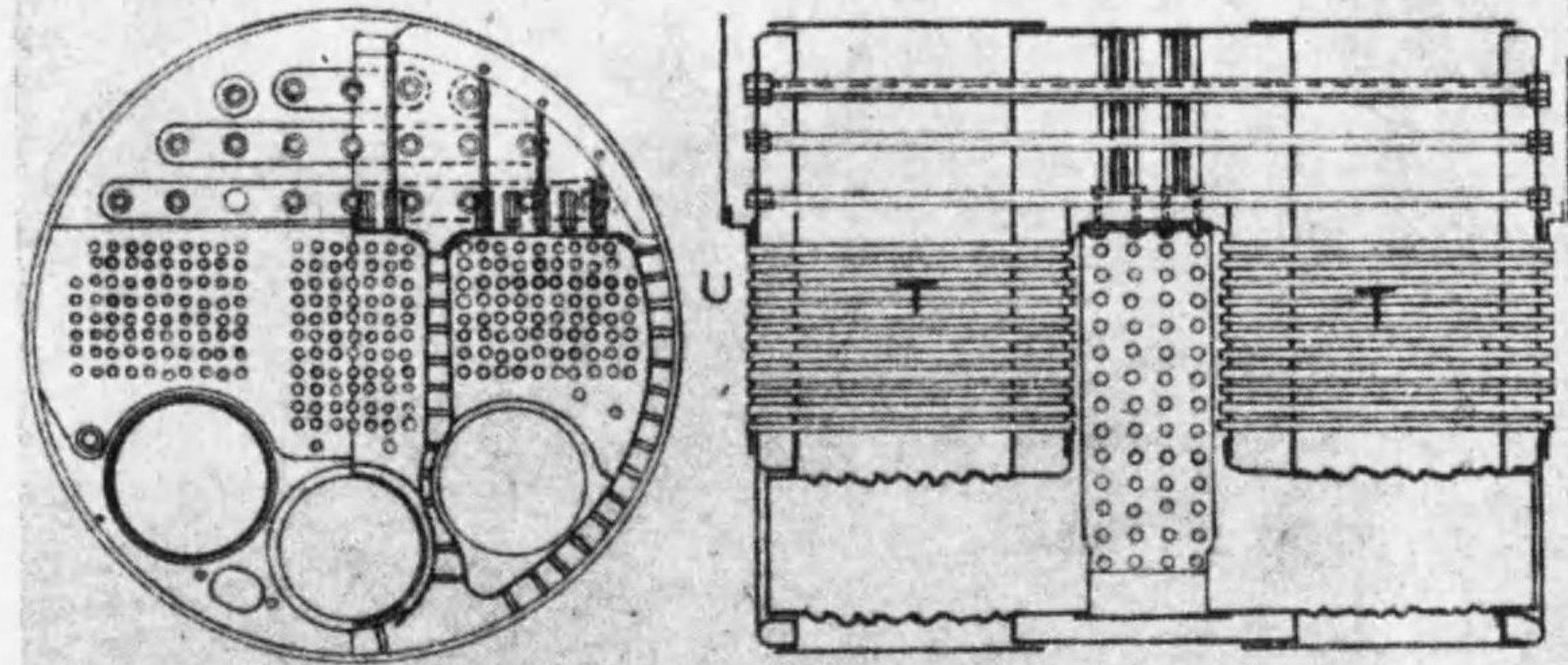
FIG. 170





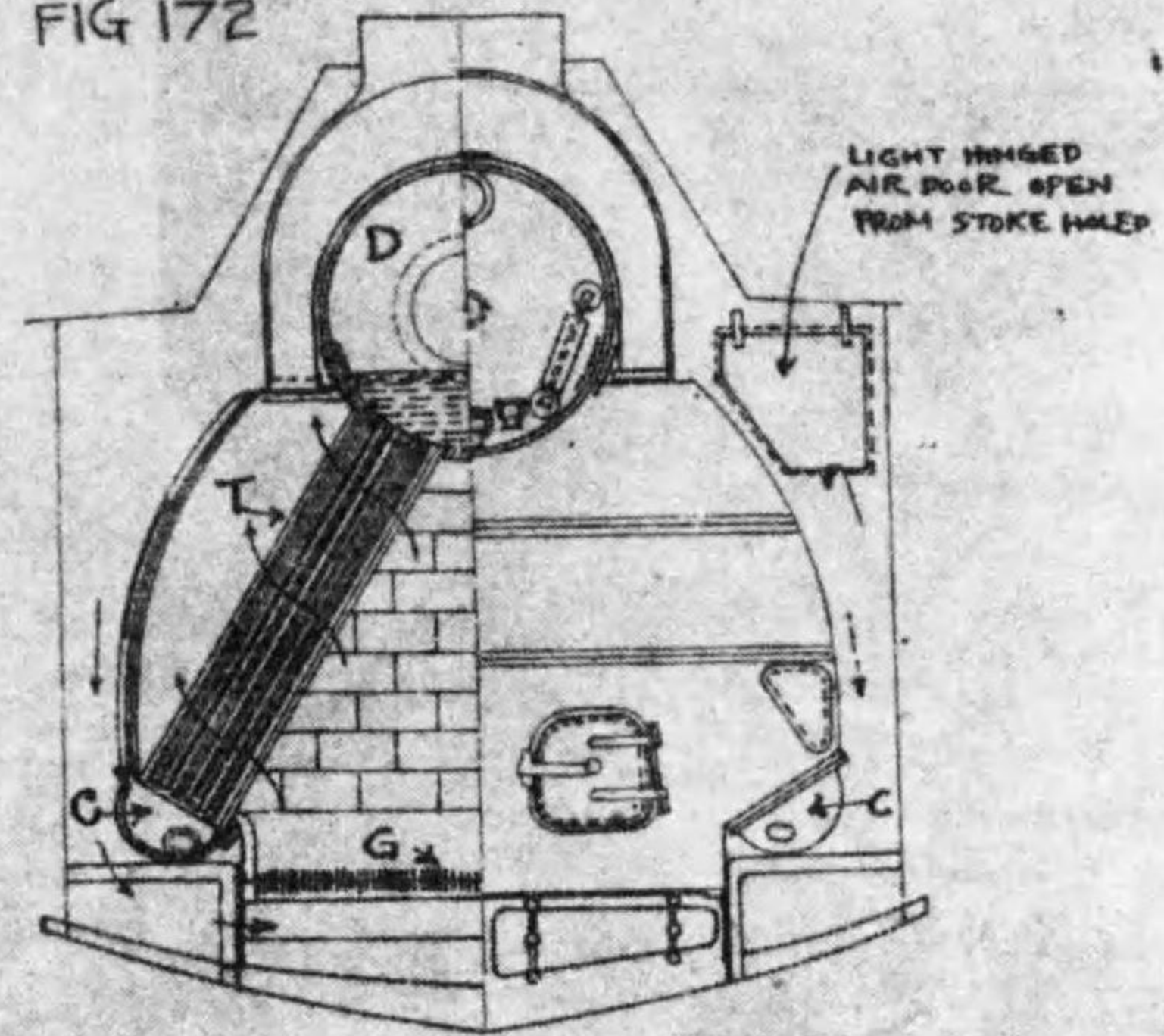
DOUBLE ENDED BOILER (FOX'S FURNACES)

FIG. 171



YARROW BOILER

FIG 172





S.C. STEAM CHEST.
 S+S. STEAM PORT.
 E. EXHAUST PORT.
 S.V. SLIDE VALVE.

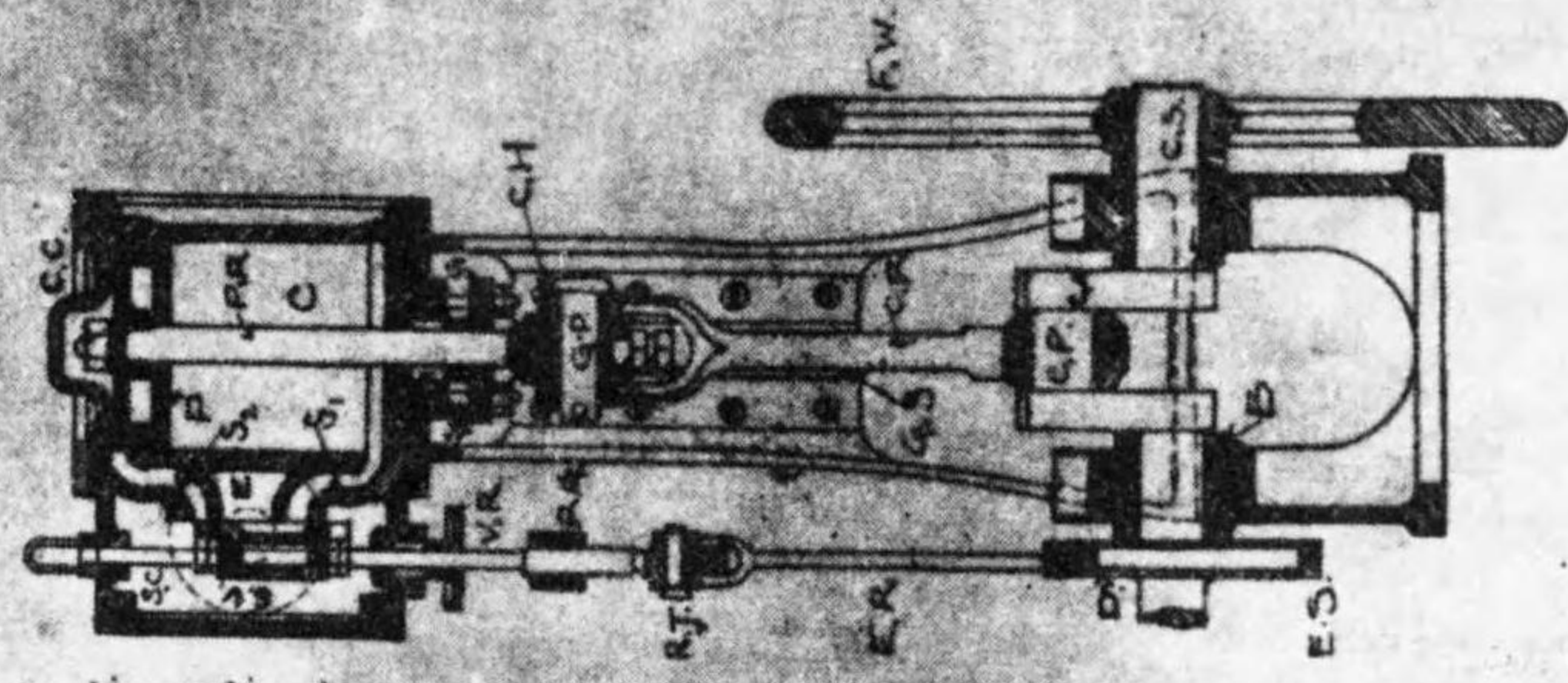
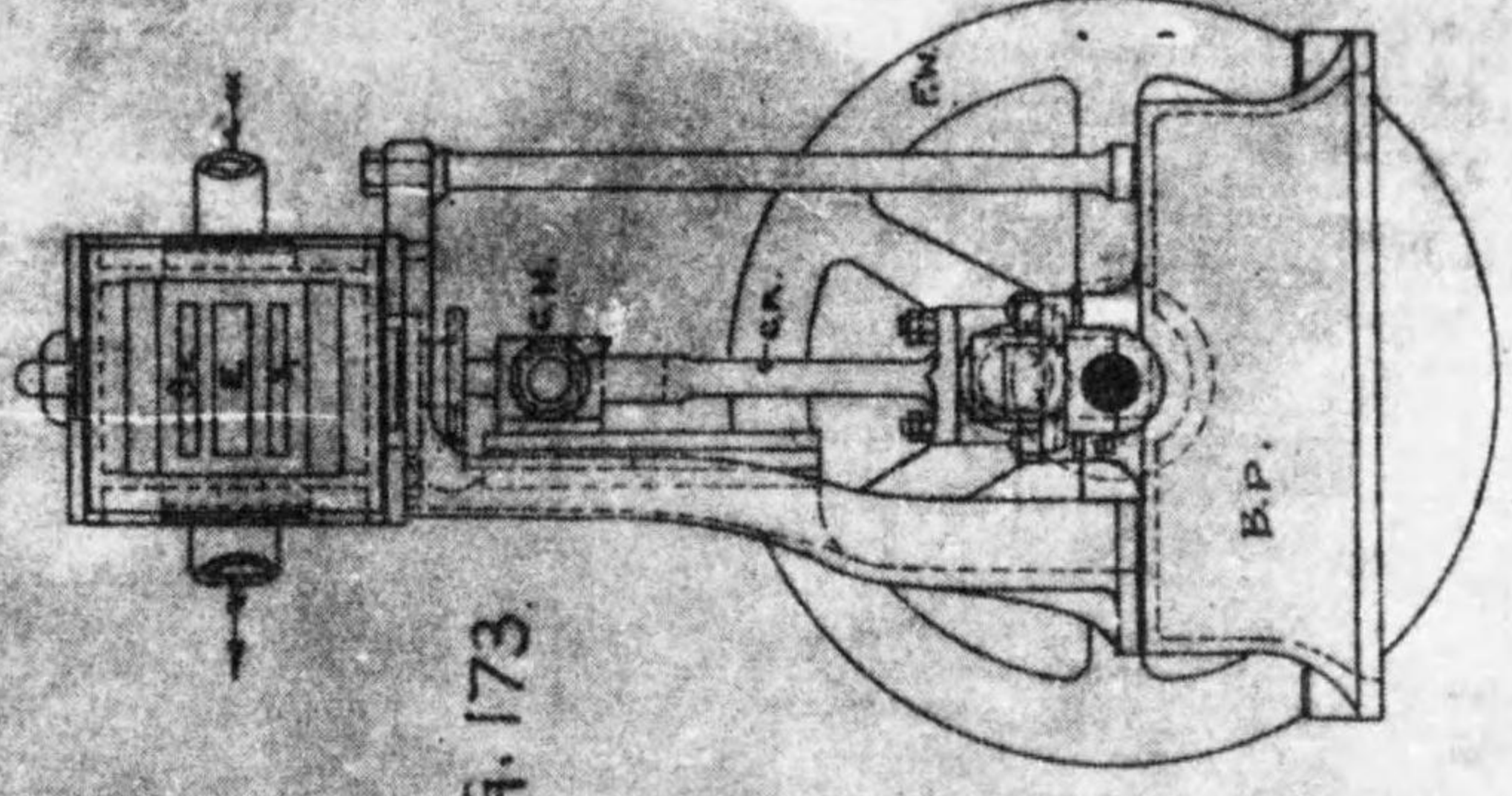
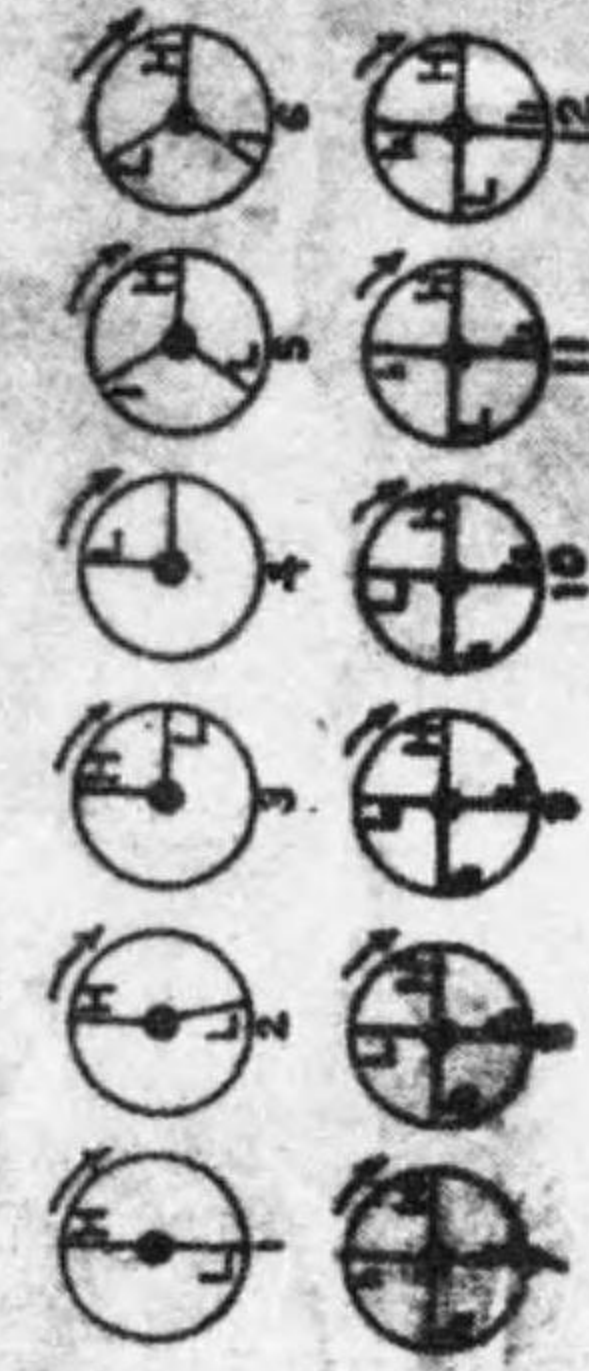


FIG. 173.

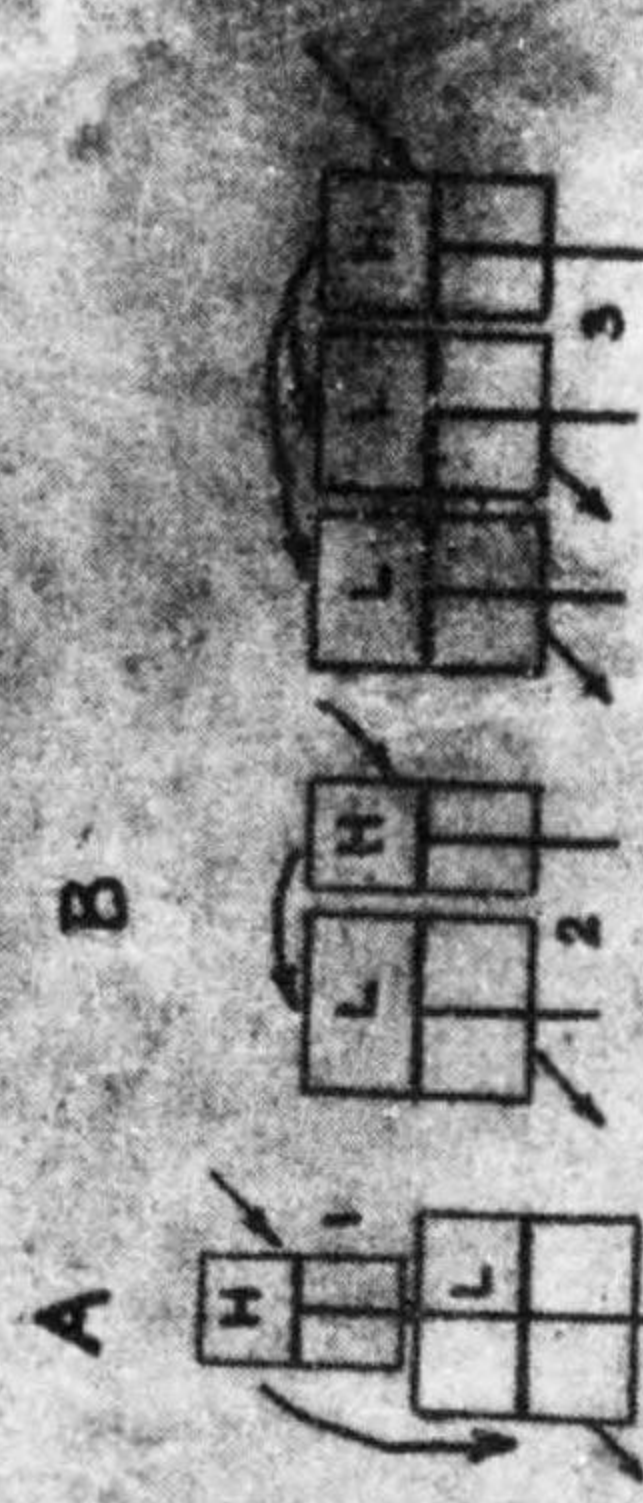


C. CYLINDER.
 C.C. CYLINDER COVER.
 P. PISTON.
 P.R. PISTON ROD.
 S.B. STUFFING BOX.
 G. GLAND.
 C.H. CROSS HEAD.
 B.P. BED PLATE.
 G.P. GUDGEON PIN.
 C.R. CONNECTING ROD.
 C.P. CRANK PIN.
 C.S. CRANK SHAFT.
 C.A. CRANK ARM.
 B. BEARING.
 F.W. FLY WHEEL.
 D. ECCENTRIC SHEAVE.
 E.S. ECCENTRIC STRAP.
 E.R. ECCENTRIC ROD.
 R.J. ROD JOINT.
 V.R. VALVE ROD.
 G.S. GUIDE SHOE.

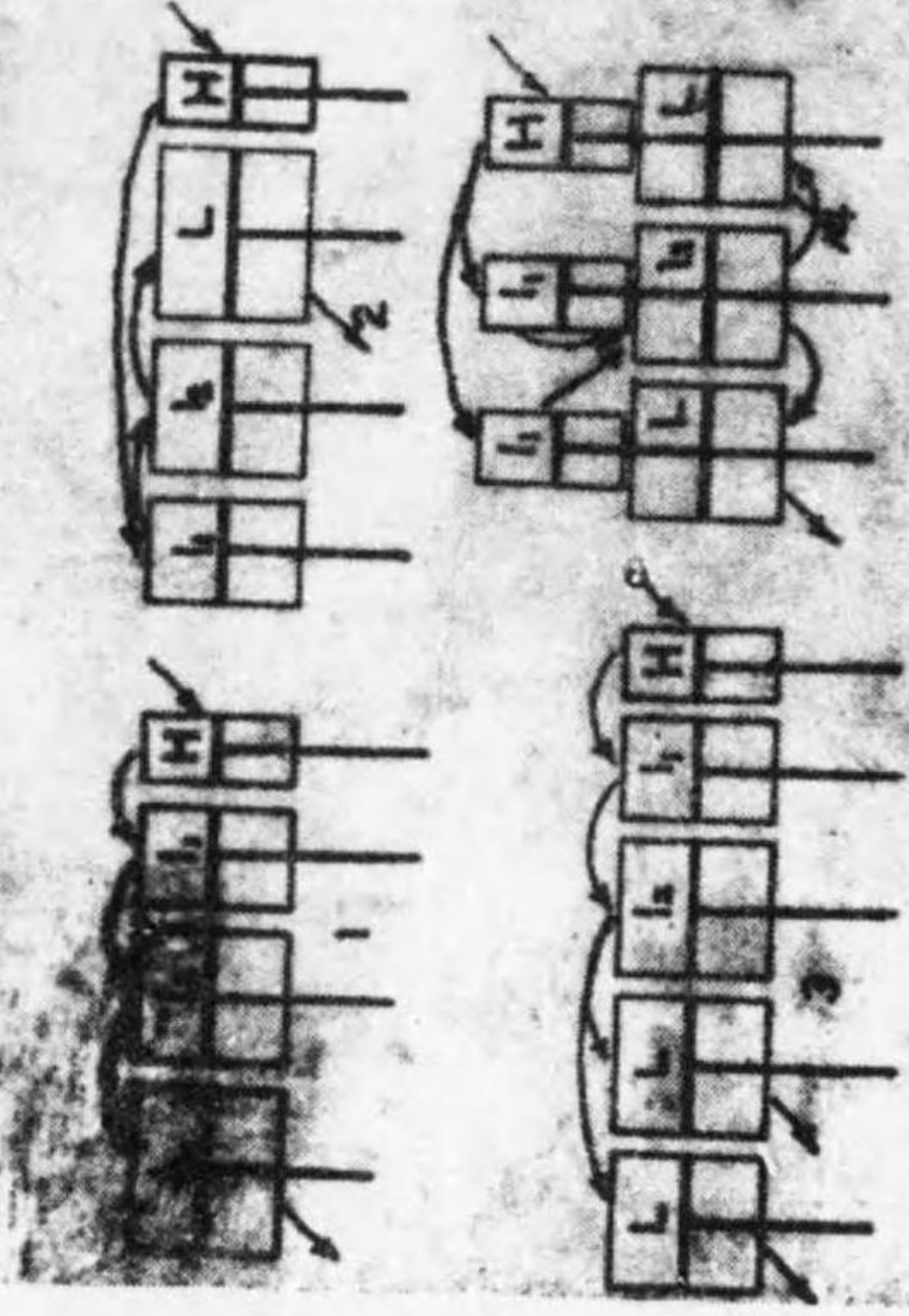
FIG. 174.



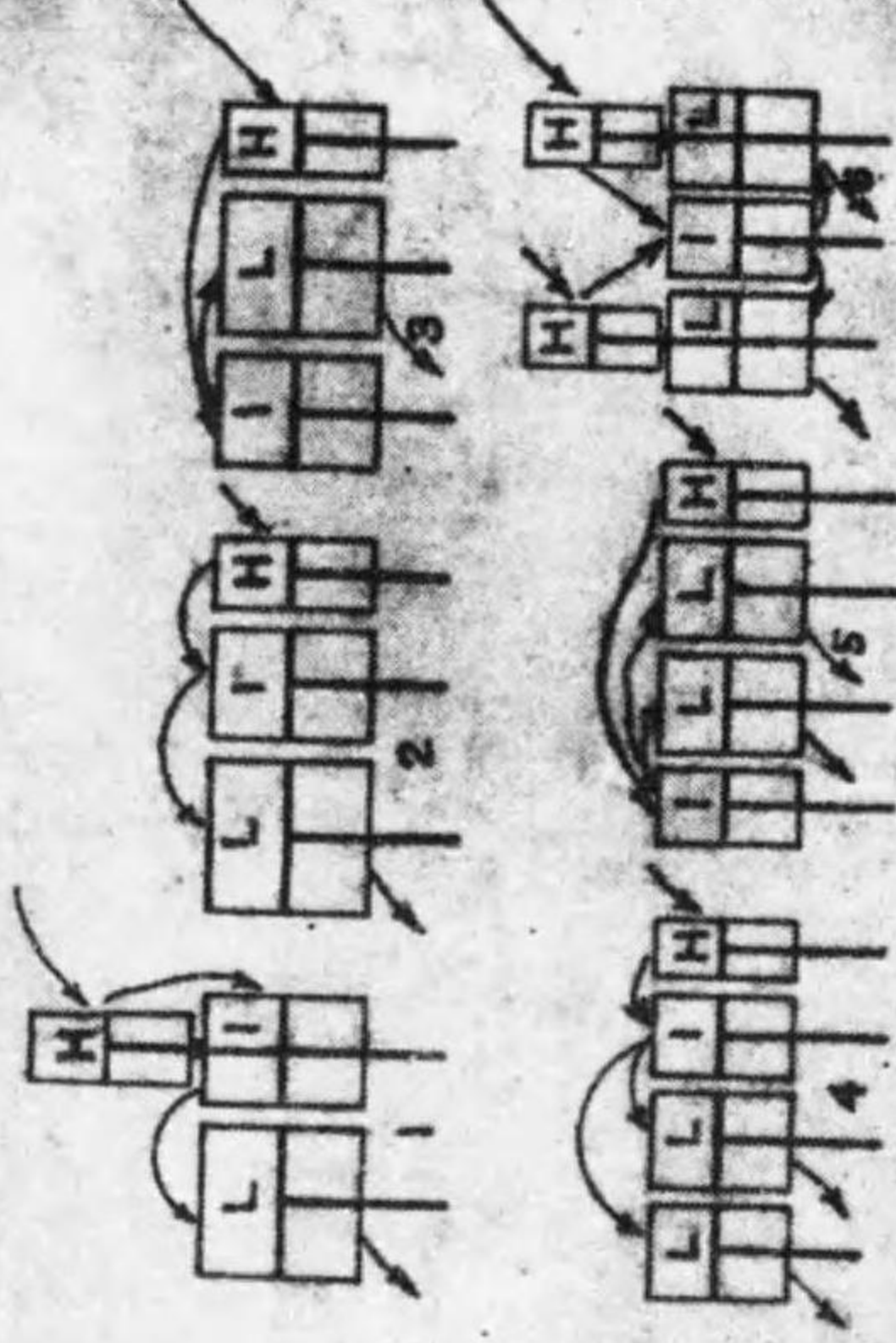
DOUBLE CRANK ARRANGEMENTS



CYLINDER ARRANGEMENTS FOR COMPOUND ENGINE



CRANK ARRANGEMENTS FOR QUADRUPLE EXPANSION ENGINE



CYLINDER ARRANGEMENTS FOR TRIPLE EXPANSION ENGINE