

PROCEDURE FOR LAYING OUT FUSELAGE

THE SHAPE OF THE FUSELAGE IS CONTROLLED BY THE LINE OF THE LOWER CHINE, THE LINE OF THE TOP AT THE CENTER, THE HALF-BREADTHS OF THE SIDE, AND THE TOP AND BOTTOM RADIUS FROM THE HALF-BREADTH OFFSETS. VERTICAL LINES ARE ESTABLISHED WHICH REPRESENT THE SIDE OF THE FUSELAGE IN SECTION FOR EACH STATION, AND ON WHICH ARC LOCATED THE HEIGHT OF THE LOWER CHINE WITH REFERENCE TO THE COMMON BASE LINE. WITH THE COMPASS SET TO THE BOTTOM RADIUS OF A GIVEN SECTION, AND THE POINT OF THE COMPASS ON THE POSITION OF THE LOWER CHINE, AN ARC IS STRUCK WHICH INTERSECTS THE SECTION ϕ. THE COMPASS POINT IS THEN PLACED ON THIS INTERSECTION AND THE BOTTOM ARC SWEEPED IN. THE INTERSECTION OF THE BOTTOM ARC WITH THE SECTION ϕ AT EACH STATION ESTABLISHES THE LINE OF THE FUSELAGE BOTTOM AT THE CENTER

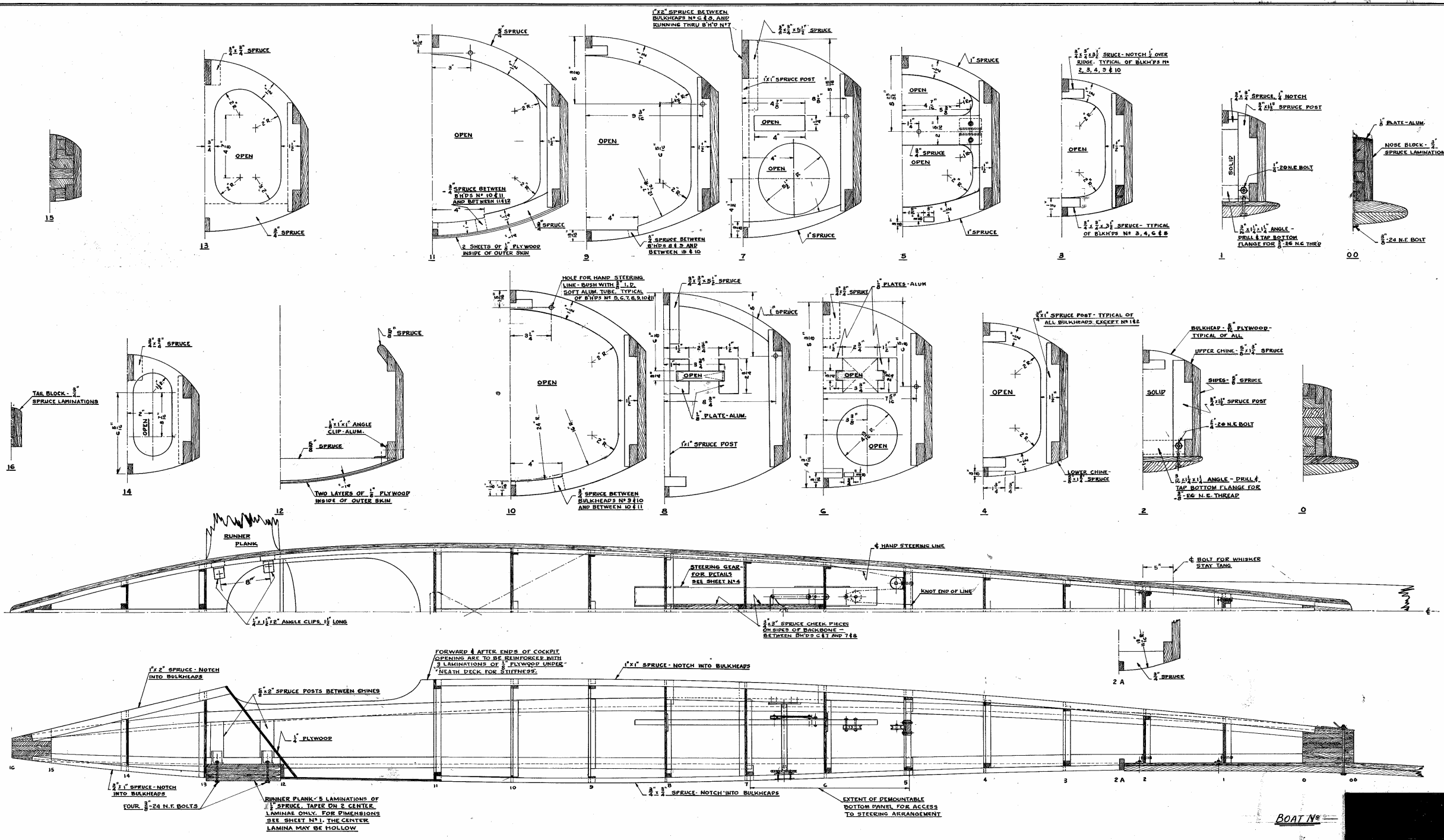
IN ELEVATION, WITH RESPECT TO THE LOWER CHINE. SECONDLY, THE TOP ARC IS SWEEPED IN, PASSING THROUGH THE ϕ AT THE HEIGHT OF THE FUSELAGE TOP AND INTERSECTING THE SIDE OF THE FUSELAGE. THE LATTER INTERSECTION AT EACH SECTION ESTABLISHES THE POINTS THROUGH WHICH PASSES THE LINE OF THE UPPER CHINE. TO LAY OUT THE COCKPIT OPENING, ESTABLISH A LINE PARALLEL TO THE SIDE OF THE FUSELAGE AND 2" INBOARD OF THE SIDE. SWEEP IN END ARCS OF SUCH A RADIUS THAT THE ARCS WILL PASS THROUGH THE GIVEN POINTS ON THE ϕ & BE TANGENT TO THE LINE OF THE COCKPIT SIDES. ALL OFFSETS ARE GIVEN TO THE INSIDE SURFACE OF FUSELAGE TOP & BOTTOM, & TO OUTSIDE SURFACE OF SIDE PANELS FOR WHICH DEDUCT 3/8" WHEN LAYING OUT BULKHEADS ETC.

SHEET N^o 1
LINES & OFFSETS
 ICE BOAT
RENEGADE II
 DESIGNED BY
E. A. MILLENBACH
 DRAWN BY
M. ZIMMER
 SCALE - 1/2" = 1'-0"
 OCT. 1947

BOAT N^o - [REDACTED]

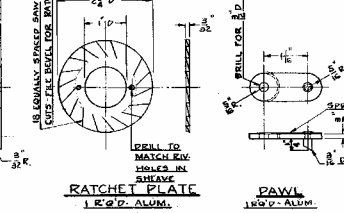
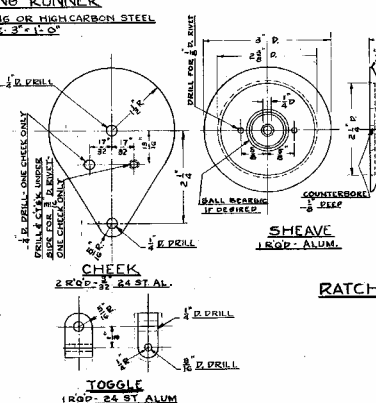
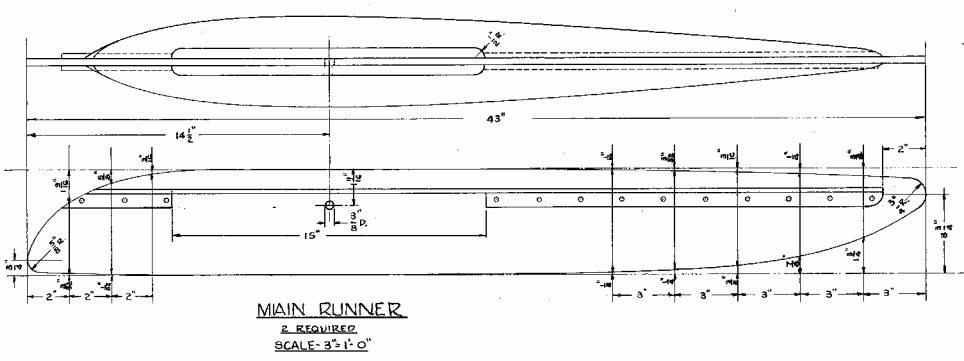
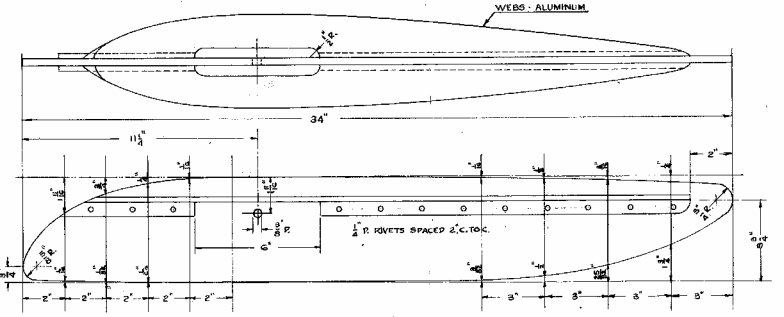
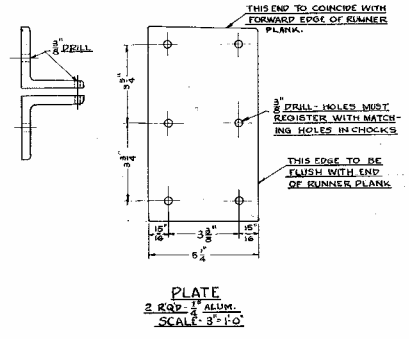
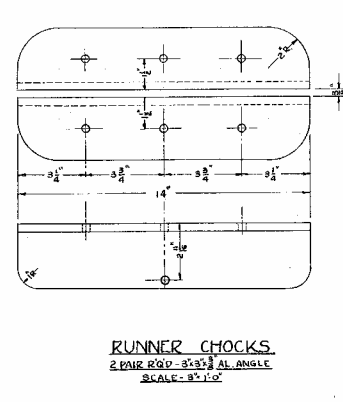
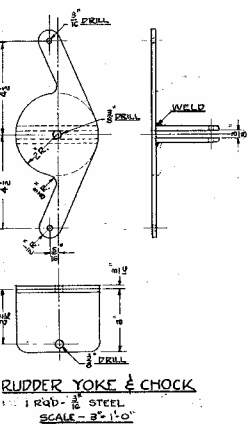
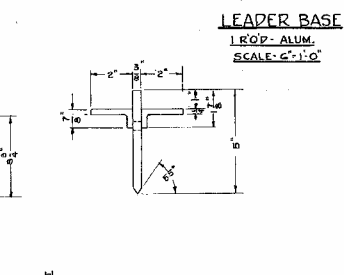
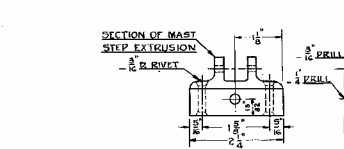
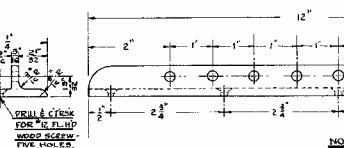
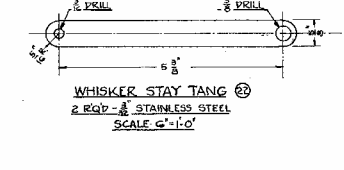
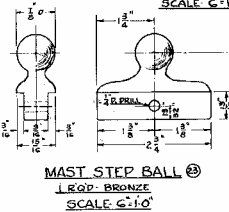
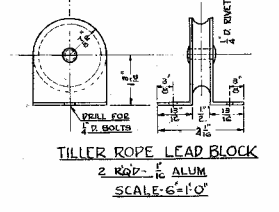
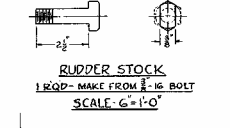
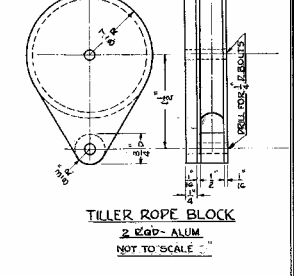
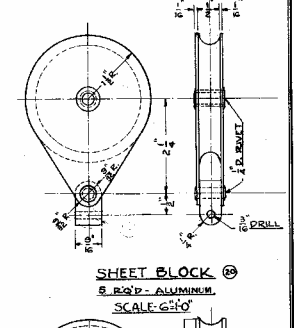
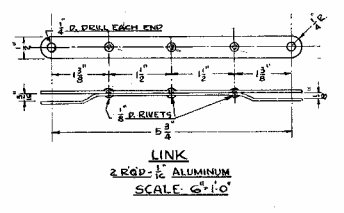
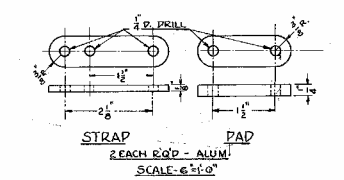
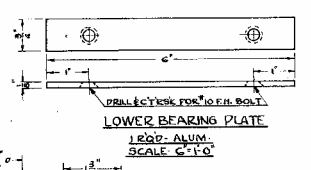
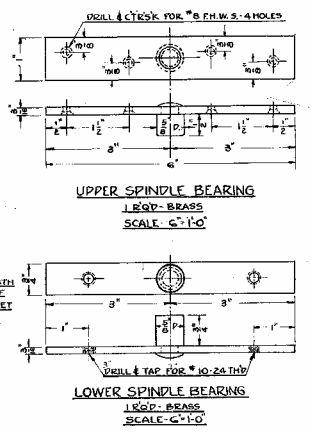
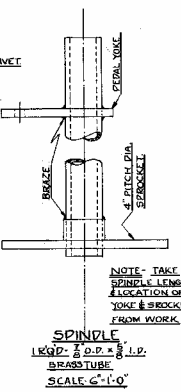
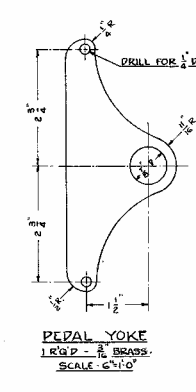
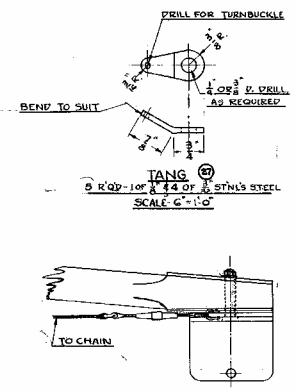
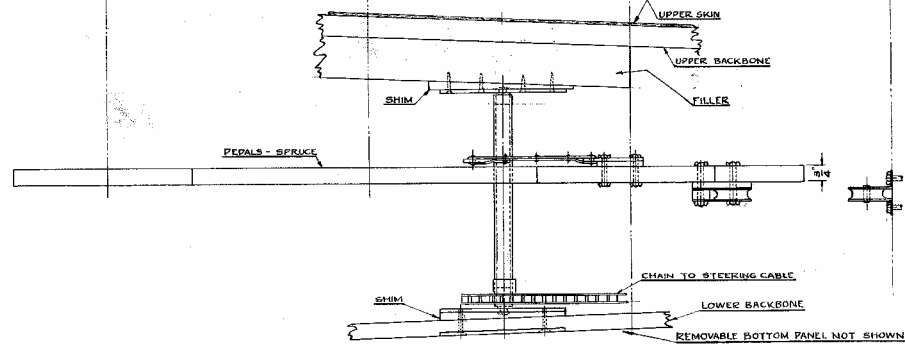
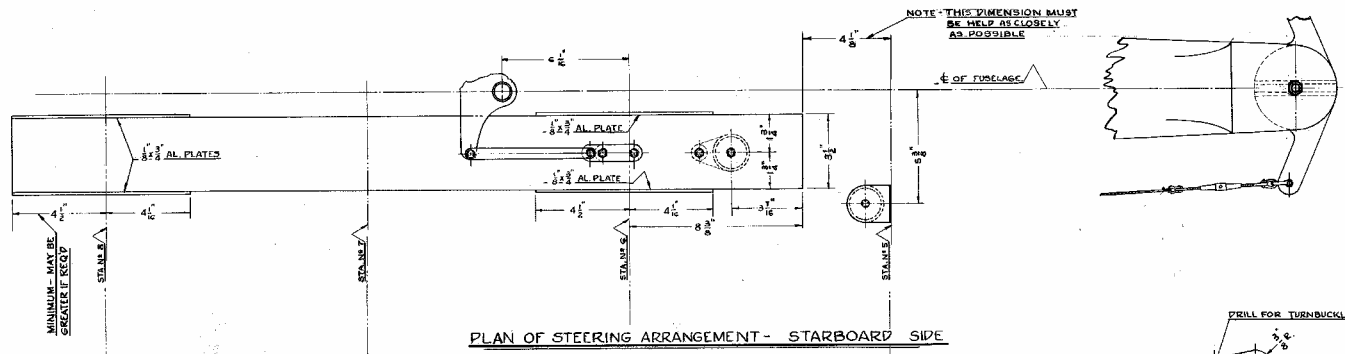
NOTES

1. ALL SECTIONS ARE VIEWS OF THEIR FORWARD FACES AND SHOW THE LEFT HAND SIDE WHEN LOOKING AFT.
2. BULKHEADS NO 1 THRU 12 INCLUSIVE, ARE PLACED WITH THEIR AFTER FACES ON THE STATION LINES. BULKHEADS 13 & 14 ARE PLACED WITH THEIR FORWARD FACES ON THE STATION LINES.
3. THE TOP & BOTTOM SKINS ARE NOT SHOWN. THEY SHALL CONSIST OF 1/2" PLYWOOD PANELS, WITH BEAMS ON THE 4" BUTTS FALLING ON BULKHEADS NO 5 & 8 ON THE TOP & ON BULKHEADS NO 5 & 7 ON THE BOTTOM.
4. ALL PLYWOOD SHALL BE OF MARINE TYPE, PHENOL-RESIN BONDED, AND OF THE MAKE KNOWN AS "WELD-WOOD" OR EQUAL.
5. ALL PLATES, CLIPS & BRACKETS ARE TO BE OF HARD ALUMINUM.
6. SPRING BOARD IS TO BE OF SPRUCE, IN 2 OR MORE LAMINATIONS.



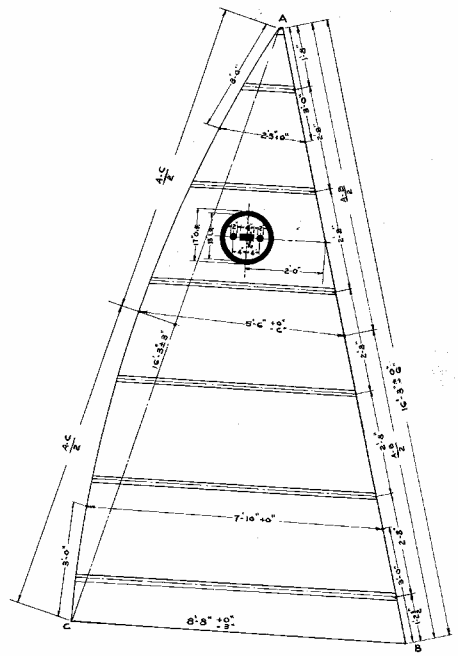
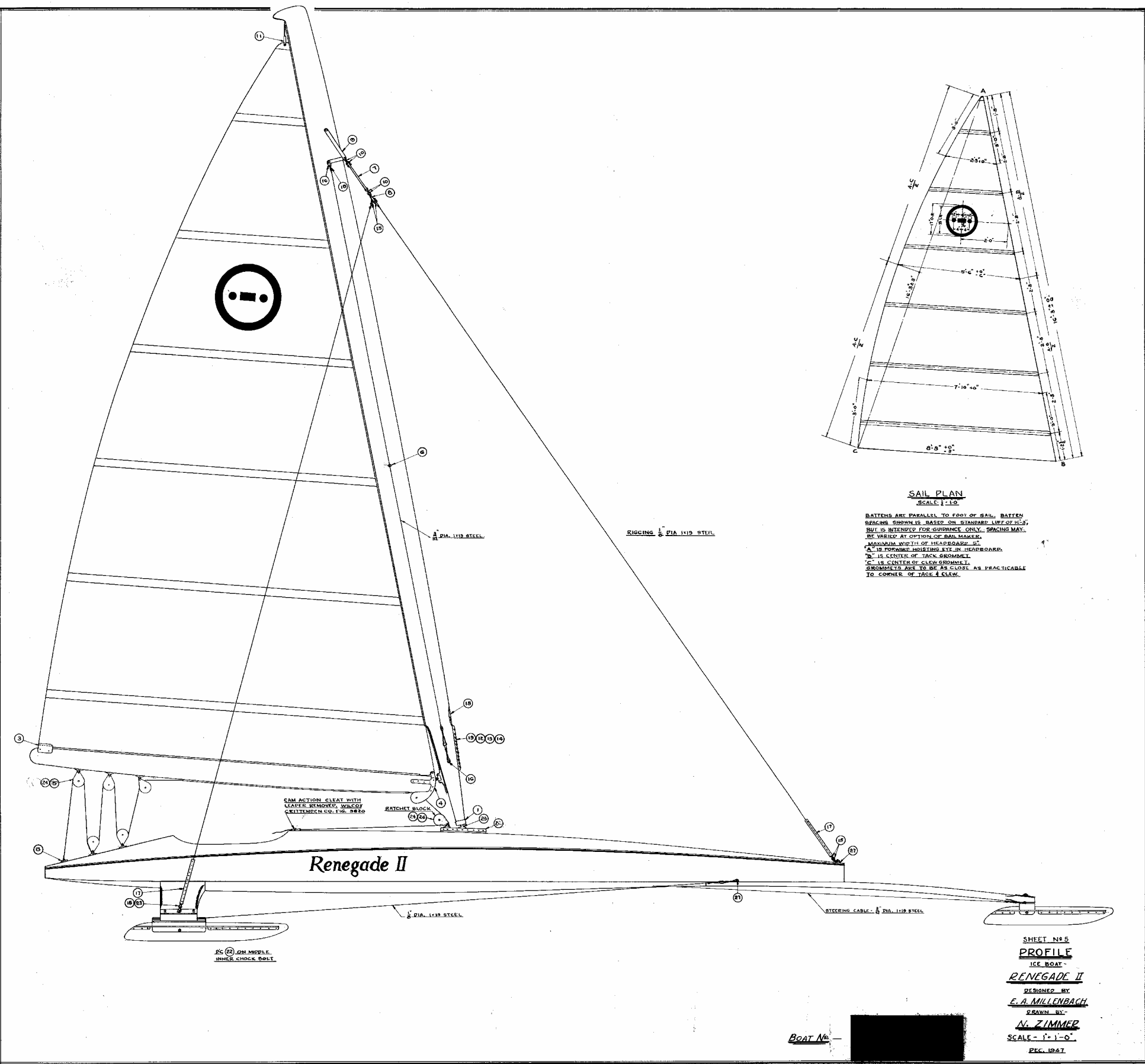
SHEET NO 2
CONSTRUCTION DETAILS
 ICE BOAT
RENEGADE II
 DESIGNED BY -
F. A. MILLENBACH
 DRAWN BY -
N. ZIMMER
 SCALE - 1/4" = 3' - 1'-0"
 OCT. 1947

BOAT NO. [REDACTED]



ICE BOAT
RENEGADE II
DESIGNED BY
E. A. MILLENBACH
DRAWN BY
N. ZIMMER
SCALE - AS NOTED
DEC. 1947

BOAT No. [REDACTED]



SAIL PLAN
SCALE: 1/2" = 1'-0"

BATTENS ARE PARALLEL TO FOOT OF SAIL. BATTEN SPACING SHOWN IS BASED ON STANDARD LEAF OF 12". SAIL IS INTENDED FOR SUMMER ONLY. SPACING MAY BE VARIED AT OPTION OF SAIL MAKER.
 MAXIMUM WIDTH OF HEADROCK: 5".
 "A" IS FORWARD HOISTING EYE IN HEADROCK.
 "B" IS CENTER OF TACK GROMMET.
 "C" IS CENTER OF CLEW GROMMET.
 GROMMETS ARE TO BE AS CLOSE AS PRACTICABLE TO CORNER OF TACK & CLEW.

RIGGING 1/2" DIA 1/16" STEEL

1/2" DIA. 1/16" STEEL

CAM ACTION CLEAT WITH LEADER REMOVED, WILCOY & MILLER CO. FIG. 8820

RATCHET BLOCK

Renegade II

1/2" DIA. 1/16" STEEL

STEERING CABLE 1/2" DIA. 1/16" STEEL

2" ON MIDDLE. INNER CHECK ROPE

SHEET NOS
PROFILE
 ICE BOAT
RENEGADE II
 DESIGNED BY
 E. A. MILLENBACH
 DRAWN BY
 N. ZIMMER
 SCALE - 1" = 1'-0"
 DEC. 1947

BOAT No. [REDACTED]