INSTRUCTIONS FOR ASSEMBLING MERCURY
ONE DESIGN CLASS

Designed By Ernest Nunes
MERCURY BOATS COMPANY
Sausalito, California

KEITH NEIL SWANSON

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The first thing in setting up a Mercury is to choose a place where you will have ample room to work. You should have at least two feet of working space on each side of the boat. The total area should be at least 10 x 20 or 22 feet.

The next thing is the tools -- a hammer, saw, chisel, plane, screwdriver, hand drill, good assortment of bits, and a few clamps are the essential tools. A rabbet plane, rachet screwdriver, power hand drill, would be helpful if available, but are not necessary. An assortment of bits is necessary as all screw and nail holes must be drilled. Those building on a concrete floor can make a frame from 2" x 4" with a timber down the center to be used as a center line and support for the upright.

FULL KIT

Lay the jig parts on the floor and line up lines A and B on the jig with a line or straight edge. See figure No. 1 on detailed construction plan. Temporarily tack the jig to the floor, after A and B are lined up, to keep in line until cleats are fastened to jig shown by the dotted lines in figure No. 1.

To set up trap, place a center line (see C and D) figure No. 1 on the floor. This line must be straight as it is the center of the boat. From center line erect post for each station on the jig.

Next brace the jig on both sides as shown on figure No. 1. As you set up the jig and the posts on the center line, this auto-

matically makes one side of the jig coincide with center line C and D, and thus will also be the center of the boat. After the jig is up and thoroughly braced so that it is quite solid, cut the notches as indicated at the stations for the frames.

Next place the frames in their respective notches on the jig. The frames should be centered to line up with the jig line or C and D and should also be squared off from the jig. Spalls are attached to frames as shown in blueprint using straight pieces to level frames athwartships, making sure spalls are even at frame tip.

You are now ready to place stem on forward end of jig as indicated in figure No. 3.

Next spring keelson into place in notches of frames and bolt to stem with three 5/16" x 4" carriage bolts as shown in figure No. 3, being careful not to hit frame No. 2. If the boat is being built where there is a low ceiling, shores can be used to hold keelson in place, otherwise clamp in place. Fasten keelson to frames with 1-3/4" No. 14 Everdur screws. Sink these screws well into the keelson. Countersink deep so that 5/8" plugs can be used.

Next fasten cheek pieces to the transom as shown in Figure 4 with 1¼" No. 10 brass screws. Set transom on end of jig to ascertain angle for keelson cut. Cut inthe keelson , then draw a line at right angles to center line of transom. Use a level to true up transom before fastening. Brace transom to the jig, either by nail or a clamp, and fasten keelson to transom using four 1¼" No. 10 Everdur Screws.

Next, put on the inside chine pieces, securing chine pieces on the frames at chine cut and bevel at forward end to fit

against stem on the inside of the rabbet line. Place the chine piece in the center of the chine cut at the frames so that there is equal distance at each side of the chine to the end of the chine cut. Fasten chine to the stem with 1½" No. 10 brass screws about ½" from the edge. Fasten to frames with 2 - 1½" No. 10 brass screws at each frame keeping center of chine clear for fastening outside chine as shown in figure No. 5. Notch transom to receive the inside chine piece, making sure that outer edge of both sides of transom are of equal distance from frame No. 9 before fastening the outside chine. Sheer battons are now secured and fitted into place in frame notches. Fasten the sheer batton into the stem similar to inside chine. Fasten sheer batton to frames with 1½" No. 8 brass screws.

Next, fair the keelson and inside chine for planking. Plane and bend the edge of the inside chine and the keelson rabbet so the bottom planking will fit evenly. The correct bevel for the inside chine and keelson rabbet can be found by using a straight edge or a straight piece of wood, laying same from keelson rabbet to inside chine. Do beveling on chine piece of frames first to insure not cutting too much. To fair the keelson where it meets the stem, fasten two stem cheek pieces between frame No. 1 and 2. To fair the frames, secure a fairly limber batton over the frames to locate the high spots and plane same down.

You are now ready to put on the bottom planks. Put a slight bevel on the planks to fit into the stem rabbet. Lay planking along keelson. Plane edges until it is uniform. Before planing edges make sure the plank is in place all along the keelson as the shape is not correct until this is done. To determine fore

put slight bevel on side of bottom planks for security

and after position of bottom plank, the planks should be as far forward as possible into stem rabbet. When the planking is planed and ready to fasten, spread sufficient elastic seam compound along the keelson rabbet. Hold in place with clamps and fasten planking to the frames with 1¼" No. 10 Everdur screws. Fasten screws approximately three or four inches apart, three inches at the narrow part of plank and four inches at wider parts. Fasten the planking to keelson rabbet with 1" No. 6 Everdur screws approximately 3" apart. Fasten planks to inside chines with 1" copper nails, about 1½" apart and clinch on inside with grain of wood. The mahogany outside chine is next fitted. This chine is fitted and fastened in place before side planks are put on. Start by placing outside chine in place over inside chine to check amount of bevel so as to fit as near a mitre as possible. After fitting is completed spread waterproof glue between outside and inside chines. Fasten outside chine at stem, spring around in place, secure with C clamps and fasten to inside chine. Outside chines are fastened to each frame with 1½" No. 8 brass screws, not far enough in to plug with 3/8" plugs. Elastic seam compound should be used between the plank and outside chine. Fasten outside chine to inside chine with 3/4" No. 8 brass screws approximately 3" apart, with the bottom plank and outside chine in place.

You are now ready to put on the side planks. Bend the side plank to fit the stem rabbet and outside chine and secure into place for fitting to stem. Fasten side plank at stem with 1½" No. 10 brass screws and use 1" copper nails along the outside chine and the sheer batton as shown in Diagram No. 5. Fasten side planks to the frames with 1½" No. 10 brass screws. In order to get a good fair

job of the butt at sides of hull it is better to fasten butt pieces with the planks flat on the floor after planks have been fitted. A good method of lining up butt before laying plank on the floor to fasten butts, is place glue on butt block and hold in place with four screws so alignment is not lost when plank is removed from side of boat after fitting of planks is completed. The butts are glued with Weldwood glue and fastened with 3/4" No. 8 brass screws. It is necessary only to countersink the screws in the planking slightly. However, it is necessary to set the nails with a nail punch so that the heads are just below the wood. This makes it easier to glaze later on.

You are now ready to take the boat from the jig. Take out all nails which were put in to hold the frame secure to the jig. After the boat is over, clinch the copper nails in the grain of the wood so they will not stick out. Next, sand the inside of the frames to a smooth finish. Please note before boat is removed from the jig, check width across hull about three places because the hull will compress a little from pressure of planking. After the hull is removed check spacing on same place and hold with temporary brace until beams are fastened in place.

DECK KIT

You are now ready to put in the deck beams. All beams are cut extra long so that when you cut the bevels for fitting against sheer batton, cut an equal amount from each end to keep the crown of the beam in center of boat. Fasten beams with one galvanized nail and one 1½" No. 10 brass screw. After all beams are in place, take a limber battonand lay over the beams and plane down any "high spots".

Next, fasten mast partner, mooring cleat block, rudder port block, into place with screws. Now fasten the cockpit fore and after in place with screws. Before doing this true up frames.

It is now well to give the inside of the boat at least one coat of paint before putting on the deck, and before the deck is put on it is well to give it a coat of plywood primer and the underneath side two or three coats of paint. It is also well while painting the inside of the boat to give the outside its first coat. After the paint is dry, put on the forward part of decking, cutting out notch for the stem. Fasten decking to sheer battons with 1" No. 6 screws. Fasten decking to deck beams with 1¼" No. 10 brass screws. Then fit side pieces to forward piece and butt together, using 1" No. 6 screws to the butt blocks. Butt similarly as side planks. Then fit after end of decking to side pieces and also butt. Trim the sides of deck at the sheer and along the cockpit. Then give deck its first coat of paint.

After the outside of boat has had the first coat, it will be ready to glaze. Glaze all screws and all nails using either prepared glazing or make your own by using a mixture of dry white lead powder and flat white paint.

HOUSE AND COAMING KIT

Fit the side pieces of the house and fasten to cockpit fore and after with 3/4" No. 6 flat brass screws. Also fit and fasten with 1¼" No. 6 brass screws the end pieces. Sink these screws sufficiently so you may use 5/16" mahogany plugs to cover.

Next fit the house beams into place, using 3/4" No. 6 brass screws, sinking sufficiently for plugging.

You are now ready to put on the house top. Fit the top and fasten to the house beams with 5/8" No. 6 brass screws and along the edges of the side coaming with 3/4" No. 6 screws. These screws can be sunk sufficiently for plugging or for filling with a mahogany wood filler. The forward ends of the side coaming can be fastened together by inserting a V block of mahogany or finished off to builder's taste. Also, a small hole should be cut in the forward end of the coaming, just outside of the house front to allow the water to drain.

TO FASTEN KEEL AND DEADWOOD TO HULL

First bore hole for third keel bolt hole from inside of boat through center of keelson so the center of 5/8" hole comes 11/16" after frame No. 5. This will locate keel and deadwood.

Second, bore 3/8" holes in lift rings and place them in the center of keelson at the proper position according to the blueprint and bore holes through keelson so as the bolts will be perpendicular.

Place top piece of deadwood under the hull so keel bolt hole No. 3 will line up with hole in keelson after frame No. 5 by putting a plug or dowl in temporarily in the hole of deadwood piece so it will not shift while boring other holes. To center deadwood on keelson, measure an equal distance on each side of deadwood, to the sides of the keelson. The measurements to be taken at the forward and after ends of the deadwood. Toenail deadwood to hold in position while boring other holes through from #1 deadwood piece. Also, bore holes for lift rings and drive 3/8" x 5" bronze carriage bolts in place as they cannot be driven in after the keel is all on.

When the above is completed, you are ready to place deadwood onto the lead keel. Plane both sides of deadwood good and even with lead keel. Before lowering boat down on keel, fit floor timber 4, 5, and 6, to the hull so that floor timbers touch keelson only, then when pressure is applied when keel bolts are tightened, there will be no pressure on planking. Fitting complete, hold floor timber in place while boring holes through keelson from bottom up into floor timbers; it is advisable to bore only halfway up and remove floor timber. Mark a line through to the top of floor timber and bore remainder of hole from top to insure hole coming through center. Prop up lead keel and lower boat down until bolts come through hull and slide on floor timber so bolts will be flush with top of floor timber. Drive deadwood bolts 5 and 6 up into place. Bore hole for quarter-inch bolt through tip of deadwood and drive bolt in place.

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MERCURY HARDWARE LIST

HULL FASTENINGS:

2 gross	1½" No. 10 flat head everdur screws
2 gross	3/4" No. 8 flat head brass screws.
1 gross	1" No. 6 flat head everdue screws
14	1-3/4" No. 14 flat head everdur screws
40	1-1/2" No. 8 flat head brass screws
6 doz.	1-1/4" No. 10 flat head brass screws
1 lb.	1" copper wire nails
2	1/4 x 3" flat head brass machine screws with nuts and washers
3	5/16" x 4" bronze carriage bolts with nuts and washers
14	5/8" mahogany plugs for keelson

DECK FASTENINGS:

1 gross	1-1/4" No. 10 flat head brass screws
1 gross	3/4" No. 8 flat head brass screws
2 gross	1" No. 6 flat head brass screws
54	2" No. 8 flat head brass screws
16	1-1/2" No. 8 flat head brass screws

HOUSE & COAMING FASTENINGS:

9 doz.	3/4" No. 6 flat head brass screws
5 doz.	5/16" mahogany plugs
14	1-1/4" No. 6 flat head brass screws

DEADWOOD & FOREFOOT FASTENINGS:

2	bronze lift rings
4	3/8" x 5" bronze carriage bolts with nuts
1	1/4" x 3" bronze carriage bolt with nut & washer
1	1/2" x 17" carriage bolt with nut & washer
1	3/8" x 8" carriage bolt with nut & washer
1	5/16" x 4½" carriage bolt with nut & washer
1	2½" No. 14 flat head brass screw
1	1-3/4" No. 12 flat head brass screw

RUDDER HARDWARE

1 pc.	1" x 3' brass pipe for rudder port
1 pc.	3/4" x 4' brass rubing for rudder stock
1	1/8" x 3/4" x 7" copper rudder strap
	copper wire nails for riveting rudder heel fitting
1 pc.	5/16" x 13½" bronze rod to be cut in three pieces to fasten rudder stock to rudder
3	5/16" bronze nuts & washers
1 pc.	3/4" x 1-3/4" bronze rod plug for rudder bearing
1	cast bronze rudder stock end
1	rudder heel casting
1 pc.	1/4" x 2-1/4" bronze rod to make pins for fastening cast rudder stock end to rudder tubing

DECK HARDWARE

4	brass chain plates 3/32" x 7/8" x 8"
12	1/4" x 1-1/4" round head brass machine screws w/ nuts & washers (chain plate fastenings)
1	jib stay chain plate 3/32" x 7/8" x 8" brass
2	1-1/4" #12 round head screws (jib stay chain plate fastenings)
4	2-1/2X #14 flat head brass screws (mast step fastening)
2 pcs.	5/8" x 17" track for adjustible jib leads
12	1-1/4" No. 8 32-thread round head brass machine screws with nuts & washers (jib lead track fastening)
1	4½" jib halyard cleat
1	4½" main halyard cleat
4	3/16" x 2" flat head brass machine screws cleats to house coaming.
2	4½" jib sheet cleats
4	3/16" x 2" flat head brass machine screws with nuts & washers (jib cleat)
1	main sheet cleat
2	3/16" x 2" flat head machine screws
1	mooring cleat (streamline)
2	1/4 x 2" flat head brass machine screws to fasten mooring cleat
2	jib sheet yacht blocks
5	main sheet yacht blocks
2	main & jib halyard check blocks
4	1" #8 flat head brass screws (fasten check blocks)
5	1/4" turnbuckles for shrouds
1	1/4" bronze turnbuckles for back stay
2	adjustible bronze jib sheet lead slides
2	1/4" x 1/2" round head brass machine screws set screw for jib leads
1	bronze backstay chine plate
2	1" #6 flat head brass screws (backstay)
1	3/4" #8 flat head brass screw (backstay)
1	bronze jib stay deck fitting
1	3/16" x 2" flat head brass machine screws with nuts & washers (jib stay fitting)
1	1/4" x 3" bronze carriage bolt (jib stay fitting)
40'	1/4" 3-strand manila jib halyard line
50'	1/4" 3-strand manila main halyard line
34'	1/4" 3-strand main sheet line
30'	1/4" 3-strand manila jib sheet line
1	3/16" bronze shackle (jib stay)
2	bronze deck main sheet eye fastening
4	1-1/4" No. 10 flat head brass machine screws with nuts and washers
4	deck stay reinforcement
4	1/4" x 3/4" brass hexagon cap screw (stay reinforcement)

MAST HARDWARE

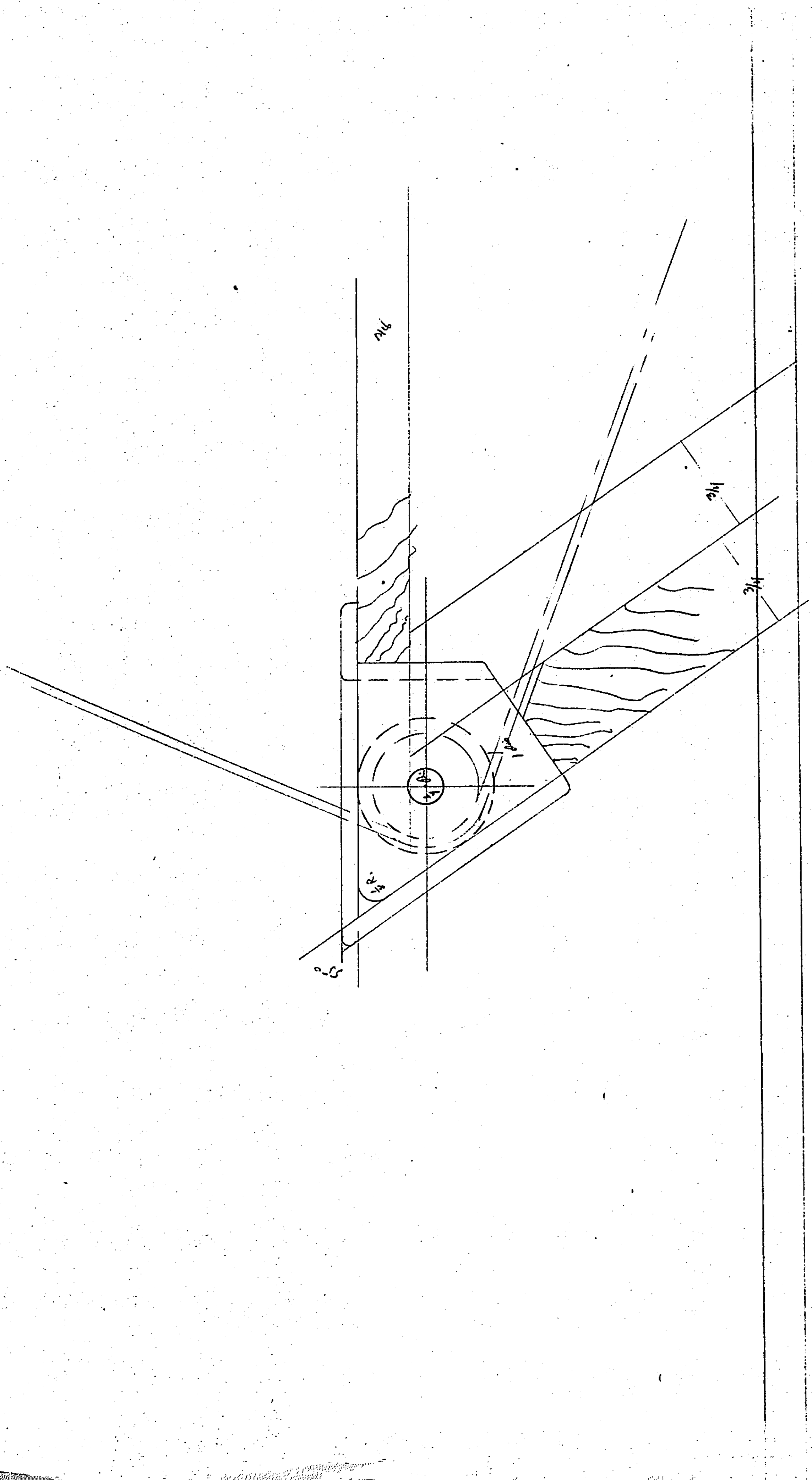
1	Main halyard sheave
1	jib halyard sheave
1	1/4" x 1-1/2" brass rod (main halyard sheave pin)
1	3/16" x 3/4" brass rod (jib halyard sheave pin)
2	3/16" bronze turnbuckles for jumper struts
94'	1/16" stainless wire rigging
50'	3/32" stainless wire rigging
1 pc.	8" x 13" 14-ga. brass for mast tangs
8	1-1/4" #12 round head brass screws for mast tangs
24	1-1/4" No. 6 round head brass screws for mast tangs
11	1/4" x 1/2" round head brass stove bolts with nuts (for fastening stay to tangs)
1 pc.	7/8" x 12" sail track for adjustible goose neck.
5	1" No. 8 round head brass screws
18	thimbles for rigging
18	3/4" No. 6 round head brass screws (spreader)
4	1" No. 6 round head brass screws (head fitting)
3	3/4" No. 8 round head brass screws (jumper strut)
4	1" copper nails with burrs (spreader and jumper struts)

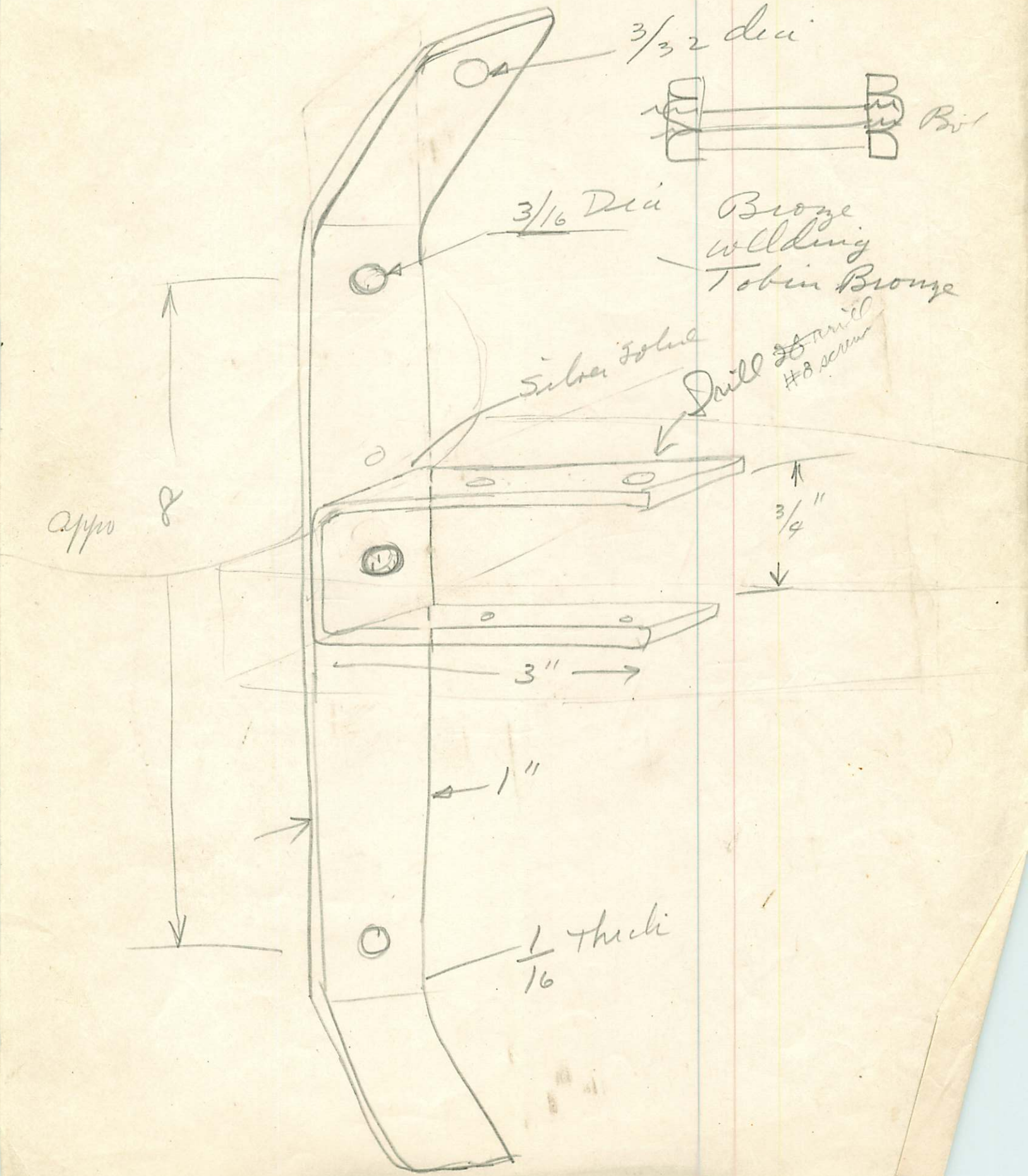
BOOM HARDWARE

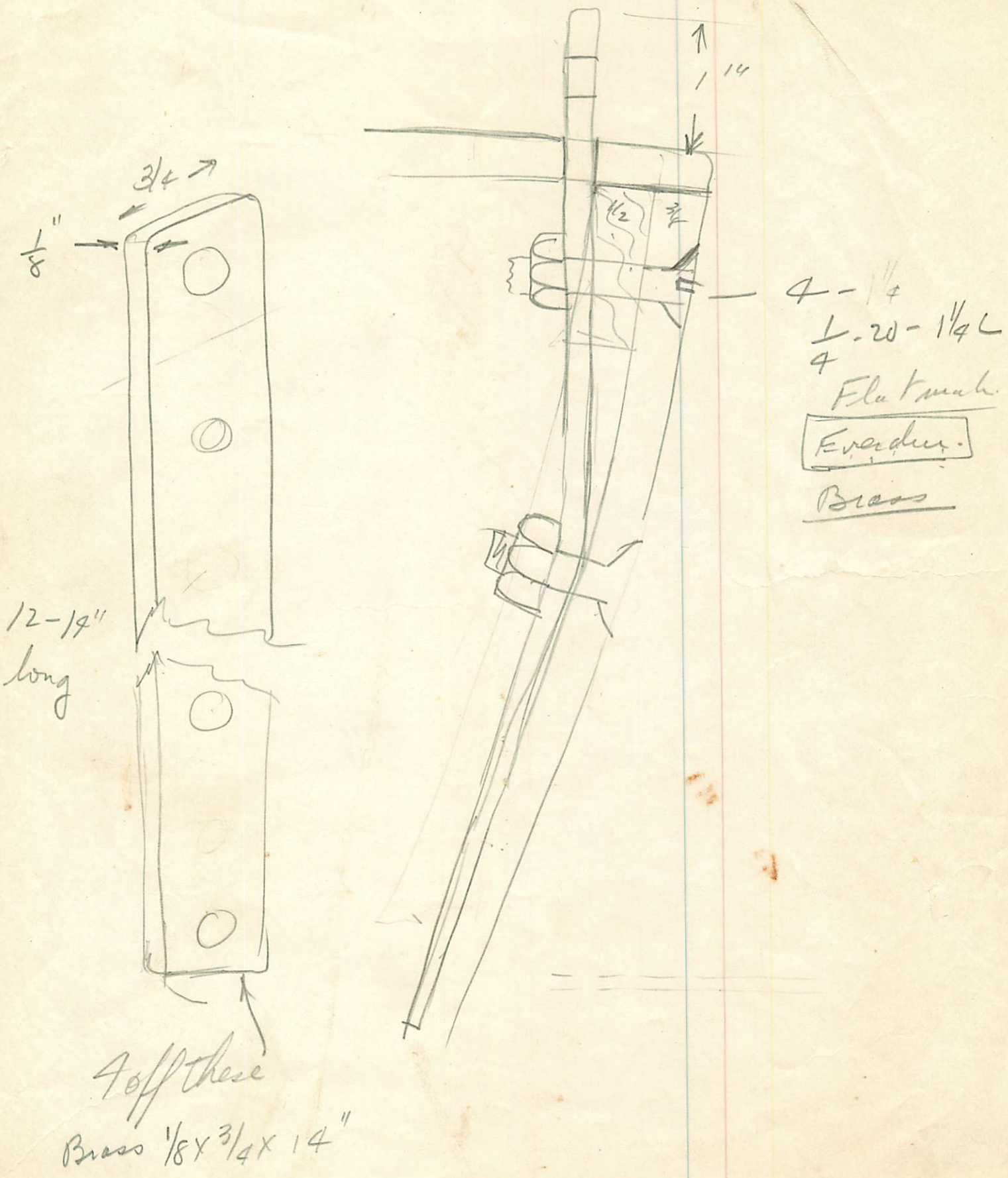
1	plank boom goose neck (three parts)
3	copper nails (fasten goose neck to boom)
1	1/4" x 2" bronze hexagon bolts & nuts (goose neck)
1	3/16" x 1-1/4" brass pin (out haul)
2	1/4" x 3/4" round head machine screw (goose neck)
1	1-1/4" x 1" round head machine screw (goose neck)
1	1/4" x 1/2" round head brass machine screw(set screw gooseneck)
2	cast bronze boom tangs
4	copper nails (fastening boom tangs)

TILLER HARDWARE

1	bronze tiller deck plate
3	3/4" No. 6 flat head brass screws (for deck plate)
1	1/4" x 3/4" brass cap screw with washer to hold tiller to shaft end
2	bronze tiller straps
3	copper wire nails cut to rivet tiller straps
1	cast bronze tiller head
1	3/8" x 2-1/2" bronze hexagon bolt & nut (tiller)




3/32 dia
Bit
3/16 Dia
Bronze welding Tobin Bronze
Silver Solder
Drill for #8 screw
approx 8
3/4"
3"
1"
1/16 thick


3/4
1/8"
12-14"
long
4 off these
Brass 1/8 x 3/4 x 14"
14
1/2
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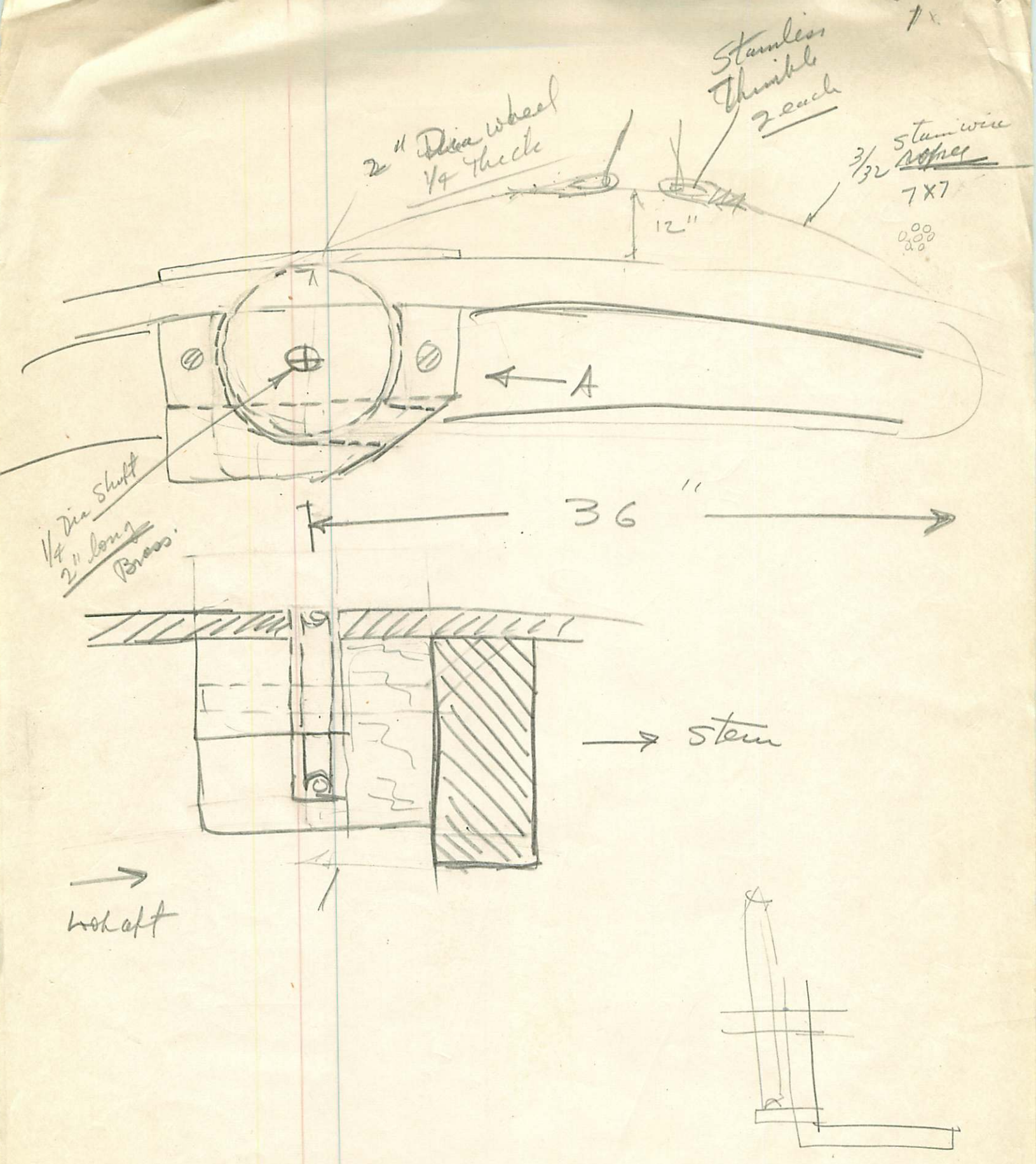
1/4 - 20 - 1 1/4 L
Flat mach.
Evaders.
Brass


Stainless Thimble 2 each
2" Dia wheel 1/4 Thick
3/32 stainless 7x7
12"
A
36"
1/4 Dia Shaft 2" long Brass
stem
Looking aft

GEORGE FISKE HAMMOND 1445 SOUTH JAMESON LANE SANTA BARBARA, CALIFORNIA

MAY 1 1958

Mr M.F Stoughton
1920 Skycrest Drive
Fullerton, California

Dear Sir,

In answer to your good letter of Oct 16, 1957
I enclose two completed forms and a
check. The forms are made out in
duplicate and I hope that they
are satisfactory.
I completed the boat and I am
the first one to have put it in
the water and ~~sailed~~ it. * (I in late Aug. 1957)
The boat has not been measured
yet, but Mr John F. Curran of
1010 Mission Canyon Blvd, Santa B.
says he will do it or get done.

Best Regards George F. Hammo

PRICE LIST

April, 1953

MERCURY BOAT COMPANY
315 Main St.
SAUSALITO, CALIF.

Kits:				Crating
Kit #1	-	Hull Kit	$ 168.00	10.00*
Kit #2	-	Deck Kit	40.00	8.00*
Kit #3	-	House & Coaming Kit	18.00	3.00*
Kit #4	-	Deadwood Kit	32.00	4.00*
Kit #5	-	Rudder Kit	12.00	1.00*
Kit #6	-	Lead Keel with Bronze Bolts	145.00	8.00*
Kit #7	-	Complete Hardware Kit	118.00	
		Spruce Mast	80.00	10.00
		Spruce Boom	15.00	
		Mahogany Tiller - cut to shape	2.00	
		Spreaders and Jumper Struts	12.00	
			$ 632.00	

*
If hull and deck kits are purchased together cost of crating is $15.00. If kits Nos. 1 to 5 inclusive are purchased together cost of crating is $18.00.

The individual may purchase either the full set of kits or if preferred, kits may be purchased one at a time or in any combination desired. Hardware kit may be broken down also to individual kits to be purchased one at a time.

All prices f.o.b. Sausalito, California, excluding California State Sales Tax, and subject to change without notice.

TERMS: 25% with order - balance on delivery.

MERCURY may also be purchased partially assembled or completed:

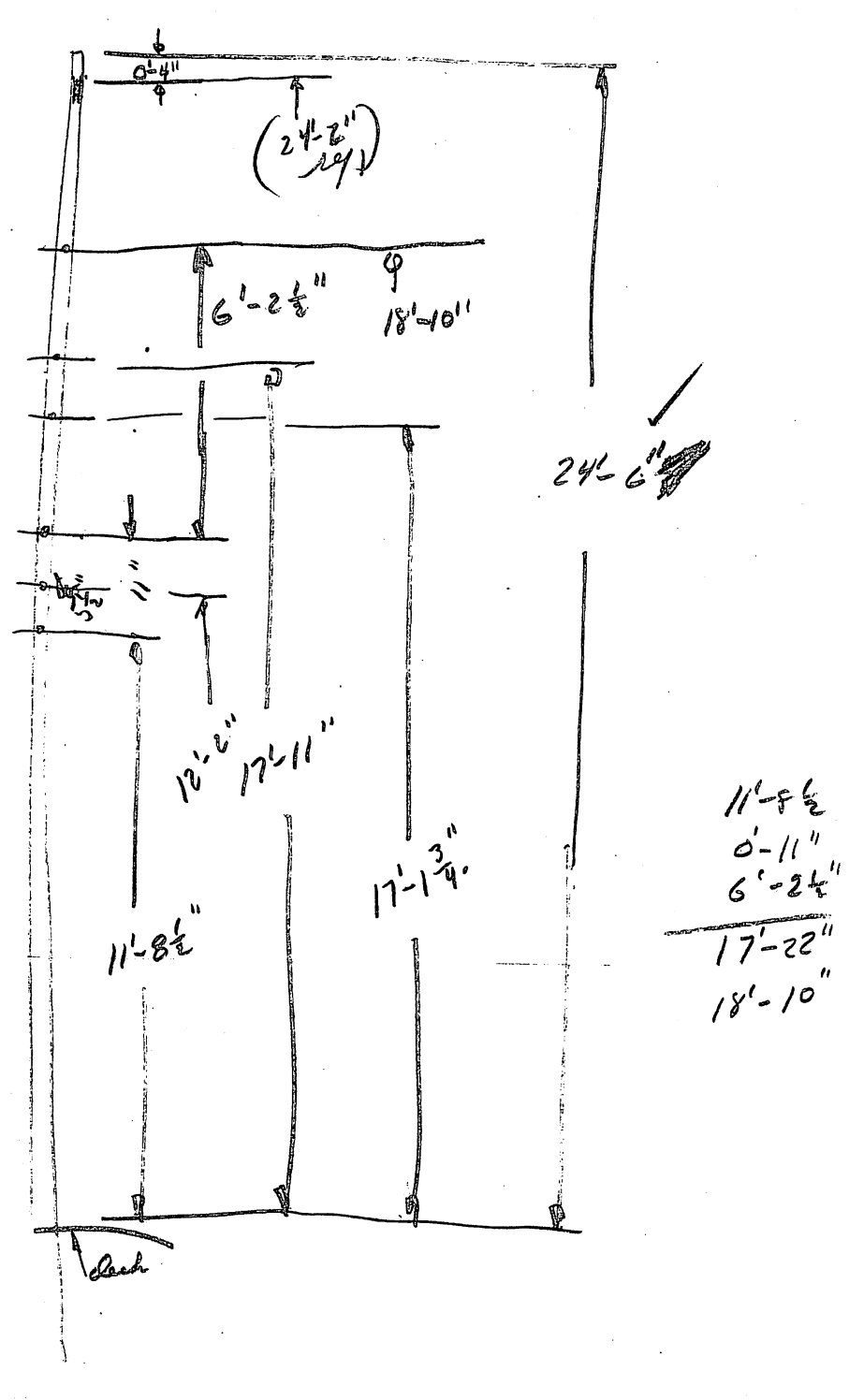
Hull assembled (does not include deck or house and coaming) $325.00
Balance in kit form as per above price list 466.00
$791.00

Completed boat, mast and boom furnished, boat unpainted, unrigged and unfitted, with all hardware, rigging, and line furnished to complete, no paint or sails $1,175.00

Completed boat, fitted and rigged, painted in colors to suit the individual, with or without house top, no sails included, optional cockpit arrangement. $1,475.00

Finest quality Egyptian Duck sails by Kenneth Watts. . . . . $ 185.00

Dear Kirk If you desire further information please write again Thank You
Mrs Bus Garth Bayford



11'-4½"
0'-11"
6'-2½"
17'-22"
18'-10"

Brass Rudder Tube

1,050 O.D.

.733 I.D. Alum.

spec rules Supreme

A) 24'-2" Top of Deck to Top of mast

B) 23'-11¼" " " " " Top of Deckcan

c) 24'-2½" max " " " " " "
(rules)

A) 24'-8" actual measurement

B) 24-4" " "

thus

24'-2½" may make it

plus 0'-4" now existing

24'-6½" To Top of mast

use

24'-2" safe

0'-4"

24'-6"

this mean cutoff bottom

24'-8" max

24'-6½"

0'-1½" To cut off