

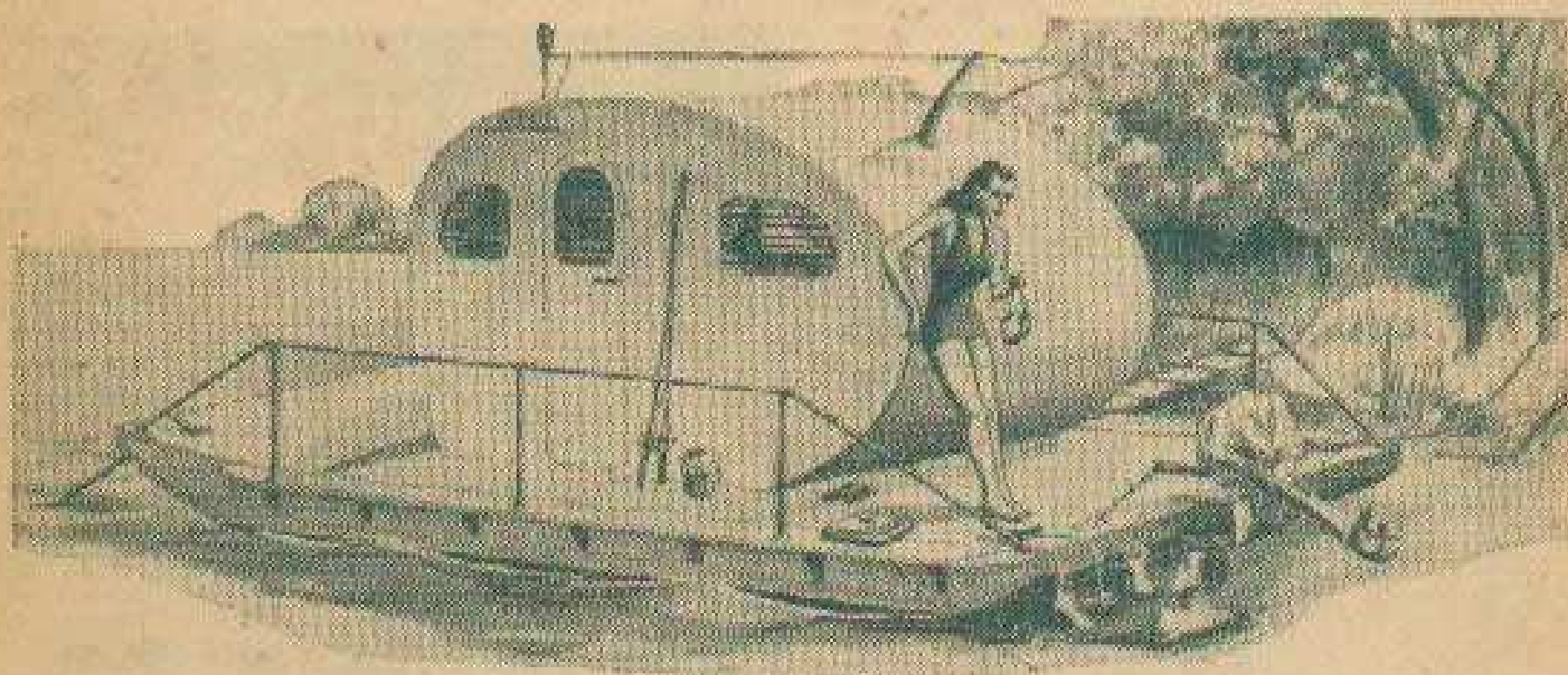
trimmed with the  $\frac{1}{2}$ " x  $\frac{3}{4}$ " moulding which is also screw fastened in place with 1" No. 8 fh. screws spaced about eight inches apart. The cloth along the stem edges is best covered with narrow strips of wood or brass bands.

As paint applied to canvas results only in a heavy, lifeless surface, the entire canvas covering must be doped with airplane dope which fills the canvas weave, tautens the cloth, and renders the whole waterproof. Apply three or four applications of the airplane dope to the canvas surface, allowing one-half-hour intervals for drying and sanding lightly. The final finish may be either pigment colors added to the dope or a coat of lacquer. Before applying paints or enamels to

the doped surface allow hull to air a few days, then apply a coat of varnish and follow with one or two coats of porch or floor enamel.

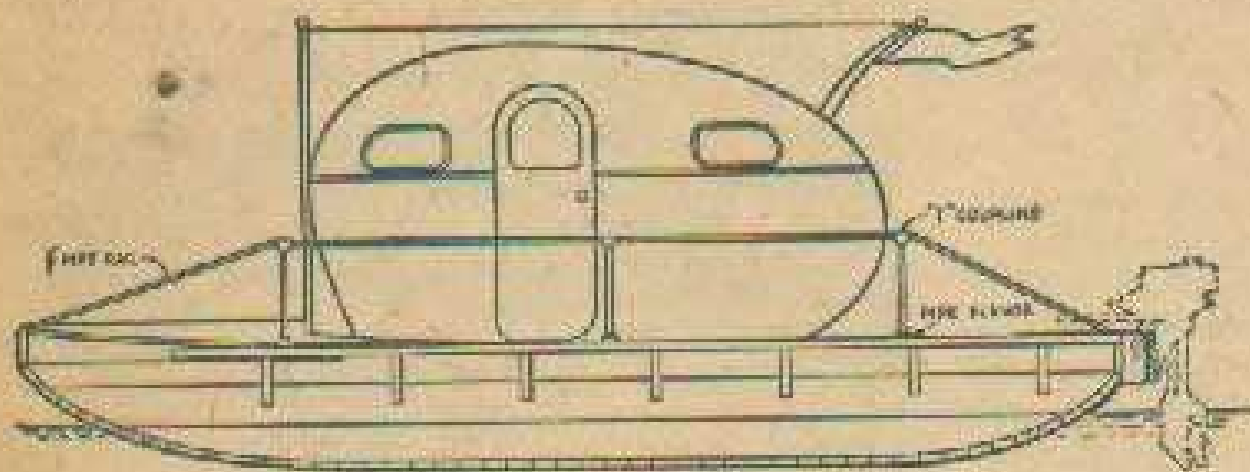
The  $\frac{3}{8}$ " x 4" floor boards are screw fastened with 1" No. 8 fh. screws to the frames. A regular canoe paddle will propel the boat easily.

• Craft Print No. 80 in enlarged size for building the Blue Hill is available at 50¢. SPECIAL QUANTITY DISCOUNT! If you order two or more craft prints (this or any other prints), you may deduct 10¢ from the regular price of each print. Hence, for two prints deduct 30¢; three prints, deduct 30¢, etc. Order by print number, enclosing remittance (in C.O.D.'s or stamps) from Craft Print Dept., B-156, SCIENCE AND MECHANICS, 450 East Ohio Street, Chicago 11, Illinois. See coupon on page 192.



## House Trailer Becomes a SEA HOME

By WILLIAM D. JACKSON, N.A.



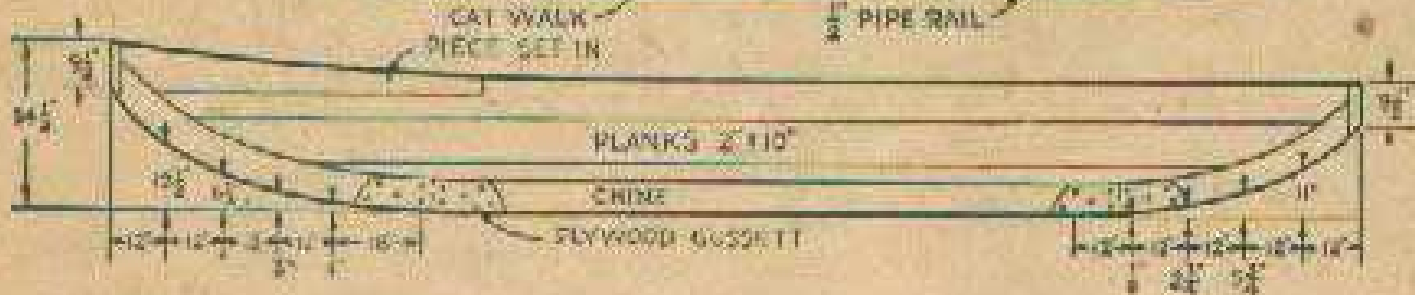
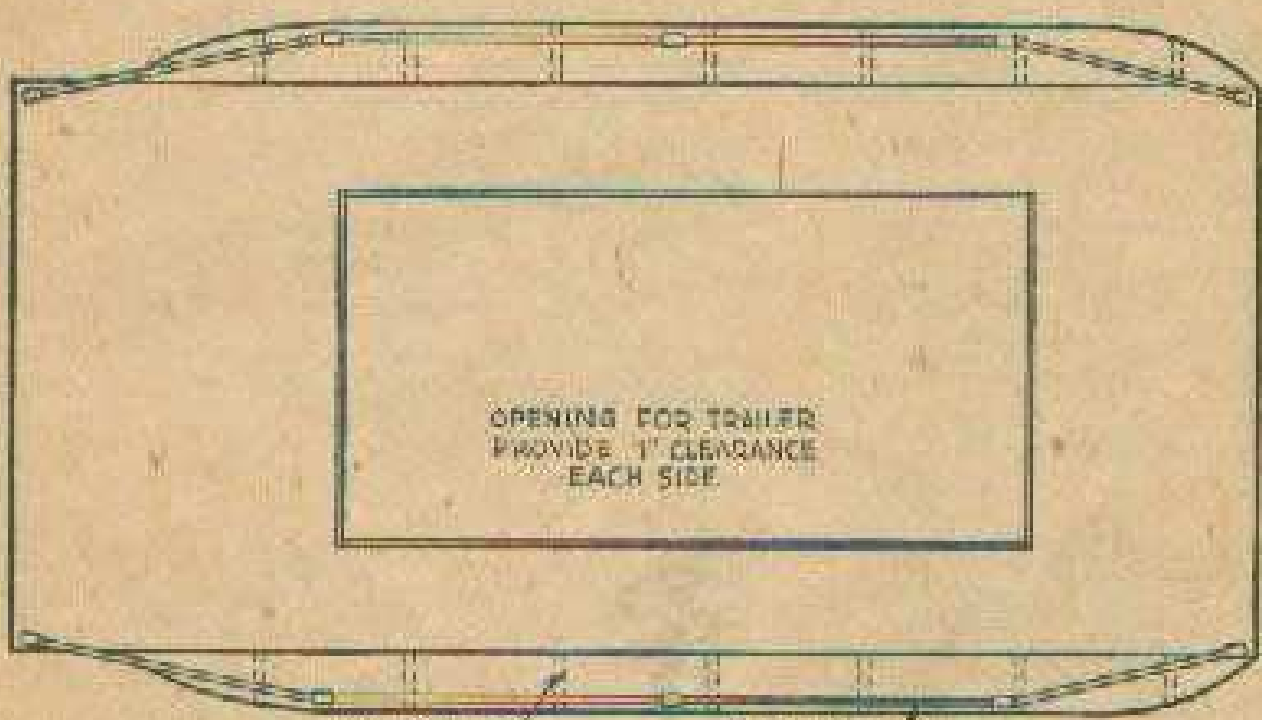
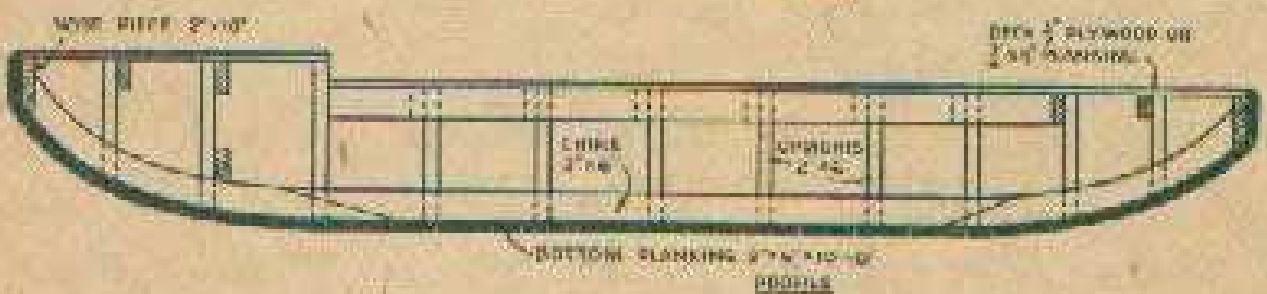
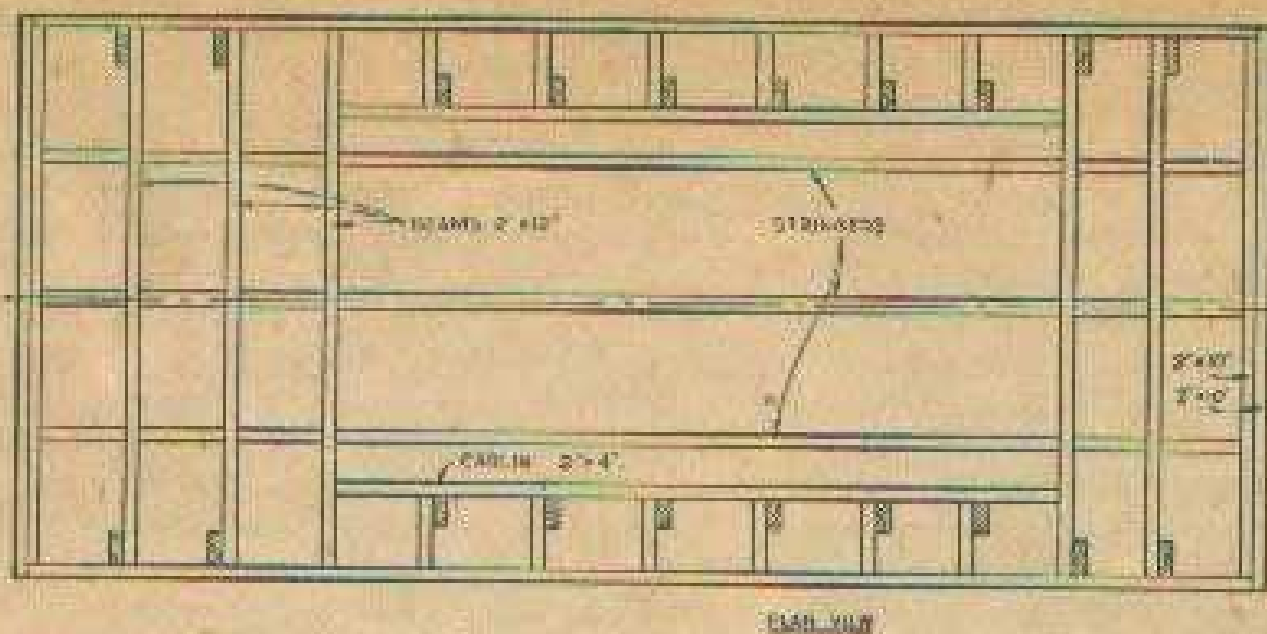
**H**OUSE trailers are ordinarily confined to the highways. But with the mounting congestion in trailer parks and along the highways, a most welcome variety of trailer travel is yours with this easily propelled barge for house trailers. With this barge, any trailer owner can have a house boat that may be moved on the countless picturesque miles of U. S.

rivers or sheltered waterways—one that retains all of the decided conveniences that only modern house trailers have.

You can purchase a good low-priced house trailer from any dealer specializing in used trailers. Even if the tires and running gear are in poor condition, this need not deter the buyer, since the body is all that is needed for this house boat home. The plans show suggested barge sizes for various lengths of trailers. Even on large bodies of water there are sheltered nooks where dock space could be rented at a nomi-

nal fee and the *Sea Home* kept at some likely spot convenient to one's work or used for play or sport when you can find the time.

To propel the *Sea Home*, use an outboard motor of 10-30 horsepower according to size of barge built, for speeds of 5 to 12 miles per hour. The outboard motor is held astern with an outboard bracket such as a 2 x 12 x 18 inch motor

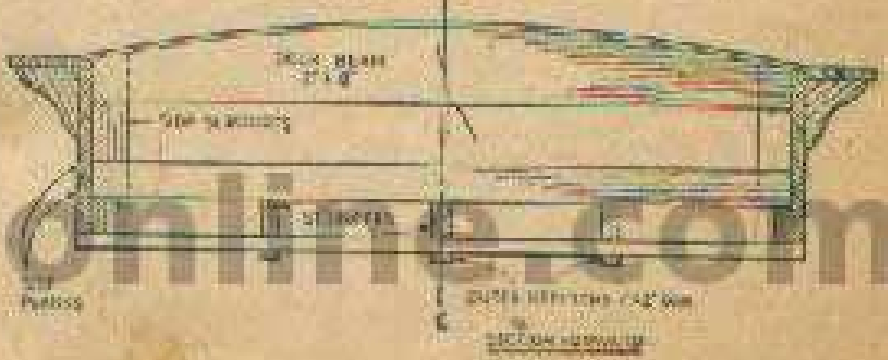
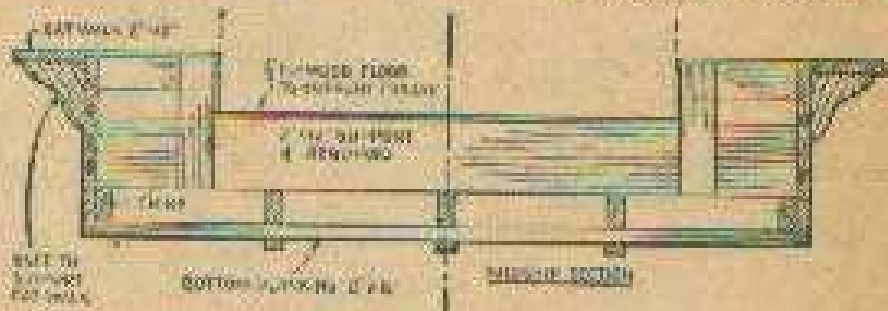


prove to be very satisfactory.

Construction of the *Sea Home* is fairly simple. You can use ordinary hand tools and secure the materials you need from any lumber yard. For strength and to prevent leaking, be sure to make accurate, close-fitting joints and pay particular attention to underwater joints and seams to make them water-tight for long continued usage. The *Sea Home* may be planked with lumber or plywood—plywood is better—it requires fewer joints and gives a stiffer stronger hull. If plywood is used, cover sides with a 3/4 inch thickness while decks and bottoms are covered with 1/2 inch thickness plywood, resin bonded water proof and preferably of 5 to 7 plies. However if only lumber is available, it will be satisfactory.

Begin by assembling the three 2x10's for each side. Mark the

board secured to the rear of the hull with 1/4 x 2 inch strap-iron brackets. Steering lines may be rigged to operate the motor by remote control and pulleys located at the most convenient place for steering the motor. A shut off button attached forward will enable convenient operation, especially when mooring. For mooring the *Sea Home*, attach cleats along the sides. The best anchoring bridle is to place two large eye bolts forward with a bridle of chain or steel wire between bolts and the anchor made fast to the center of the bridle. If an anchor is to be used for mooring, use a mushroom anchor of much larger size than would be ordinarily used on a conventional boat of similar size. An anchor of 175 to 200-pounds is about right, or even a heavy car wheel might



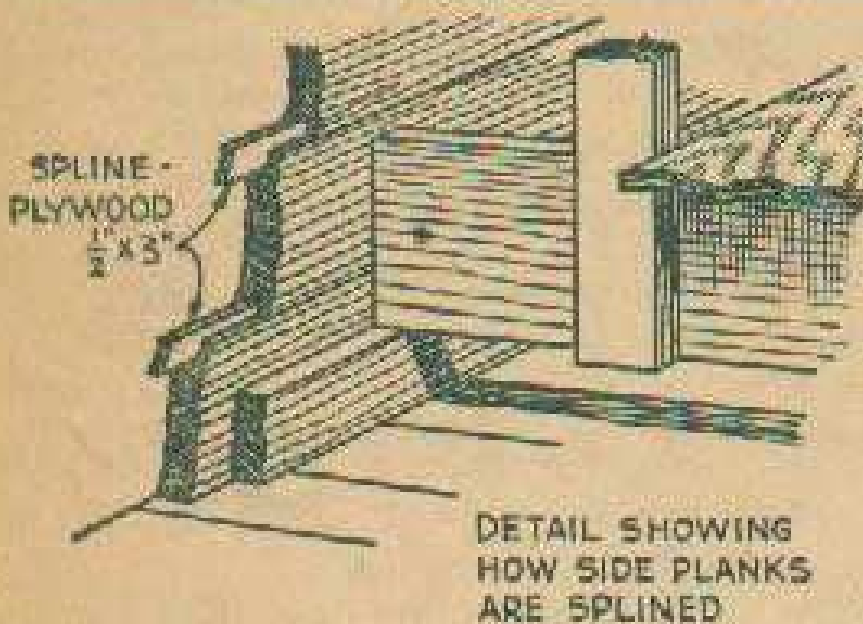
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on bottom and saw out. Groove each of the three side planks and spline together with a piece of  $\frac{1}{2}$  x 3 inch plywood. All adjoining surfaces are coated with resin glue and clamped until dry. With the side assembly as a pattern make three stringers and screw fasten them as indicated.

With the two sides placed together lay each side down carefully and prepare to attach 2x4 chines and side supports on each side assembly; attach supports and chines with 3 inch No. 12 flathead screws. With both side assemblies ready, turn bottom side up and prop them up exactly ten feet apart. Fasten the fore and after stem or nose pieces in place and then continue by placing the three stringers in place; space one exactly in center of two sides and two others equidistant between chine and center stringer. Continue by fairing and planing all contact surfaces evenly until a batten laid across the bottom touches at all points. It may be necessary to adjust stringers slightly so that they align properly. Be sure that the entire assembly is square and nail temporary cross pieces in place to maintain alignment while planking. The planking consists of 2x6x10 foot planks laid crosswise or, if plywood is used, sheets measuring  $\frac{1}{2}$  inch x 4 feet x 10 feet are laid across hull with grain run-

BARGE SIZES TO SUPPORT VARIOUS TRAILERS

Trailer Length	Barge Size	
	Length	Beam
12 to 14 Ft.	22'	10'
14 to 16 Ft.	24'	11'
16 to 18 Ft.	26'	12'
18 to 22 Ft.	28'	14'
22 to 26 Ft.	30'	16'



ning crosswise. If plywood is unobtainable, use the planking and if you caulk it properly, it will give long satisfactory service. Before planking, coat all adjoining surfaces with marine glue or heavy paint. Lay cloth strips upon coated area and recoat. Then clamp bottom planking in place and fasten to chines and stringers with 3 inch No. 12 flathead screws or galvanized or cement coated spikes.

Plane the edge of each plank to allow an  $\frac{1}{8}$  inch V-shaped opening between planks for caulking. When the entire bottom is planked prime coat with this paint, running the paint

well into the seams. Now caulk each seam to within  $\frac{1}{8}$  inch of surface with oakum or cotton caulking. Prime coat caulked seams again and fill seam flush with seam filler or caulking compound. Now apply two or three coats of paint to outside of hull, allowing ample drying time between coats. Attach outer keelsons of oak to bottom to prevent abrasion to planking when grounding the *Sea Home*.

With all outside work done, turn the hull over. This operation will require some help as the hull is by now quite heavy. Apply two or three coats of paint inside and measure the trailer to be used aboard the *Sea Home* and, allowing one or two inches on each side, measure for and install the side deck supports. To support the trailer off the bottom and to allow the door of the trailer to be opened and also to further stiffen the hull, fasten about four or five 2 x 12 inch boards from side to side and bolt to side supports. Also bolt 2 x 4 supports from side beams to 2 x 12 crosspieces. Over these 2 x 12 bottom cross beams, lay a plywood floor of  $\frac{1}{2}$  inch plywood to fit trailer width, and then fasten. When the trailer is run on the *Sea Home*, it is jacked up, and the wheels are removed. Trailer is then blocked up on floor in position.

The decking is either  $\frac{1}{2}$  inch plywood or 1 x 4 boards with seams caulked and puttied. The fore beams are curved while the after beams are straight. To secure the proper curve on the forward beams, simply make the beam nearest the trailer first and then obtain remainder of beam measurements to nose pieces. Catwalks on the sides are now shaped to fit. For greatest strength, make these catwalks of 2 x 12's, and support under sides with strap iron brackets or heavy oak knees. A pipe railing will afford protection from falling overboard.

The outboard motor bracket is made of a 2 x 12 x 18 inch piece of oak, secured to the hull with 2 $\frac{3}{4}$  x 2 inch strap iron brackets at the best operating height for the motor used. (The best operating height is found with *Sea Home* loaded.)

A small lighting plant operated from an air-cooled motor furnishing 110 volts will allow one to utilize regular house lights and appliances. If the light plant motor's exhaust is submerged it will deaden the bark considerably. After the first week's immersion the *Sea Home* may leak a little but will soon swell tight. A small trap door arranged in the deck or along side the trailer will soon rid the hull (using a hand pump) of bilge water. If this hull is used upon interstate waterways it will be necessary to have the ship documented and show registration numbers as well; also you must carry the equipment prescribed by law, that is, life preservers for each passenger, running and riding lights, and so forth. When loading the trailer aboard the *Sea Home*, run it on the hull over planks loading from stern, jack the trailer up, remove wheels and block in position; secure blocks and trailer to prevent shifting.