

Skimming along at 35 mph, Stingaree will show her tail fin to any runabout of comparable size and horsepower on the lake.

Stingaree

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Naval Architect

STATEMENT OF USES
STINGAREE

USES: Outboard runabout for water skiing, aqua-planing and general sports use on protected waters.

TYPE: Monoplane bottom with lapped plywood hi-lift after plane.

LENGTH: 14-ft. (13'-10").

BEAM: 67-in. over all.

WEIGHT: 200 lbs.

SEATING CAPACITY: 3 passengers.

POWER: 20 to 40 H.P. outboard.

SPEED: 36 M.P.H. with 35 H.P. Evinrude motor.

CONSTRUCTION: Combination of 3/8" and 1/4" plywood, with a lapped bottom forming a step, to produce 3 point hydro effect. One frame with stringers produces strong, lightweight hull.

TECHNICAL ASPECTS

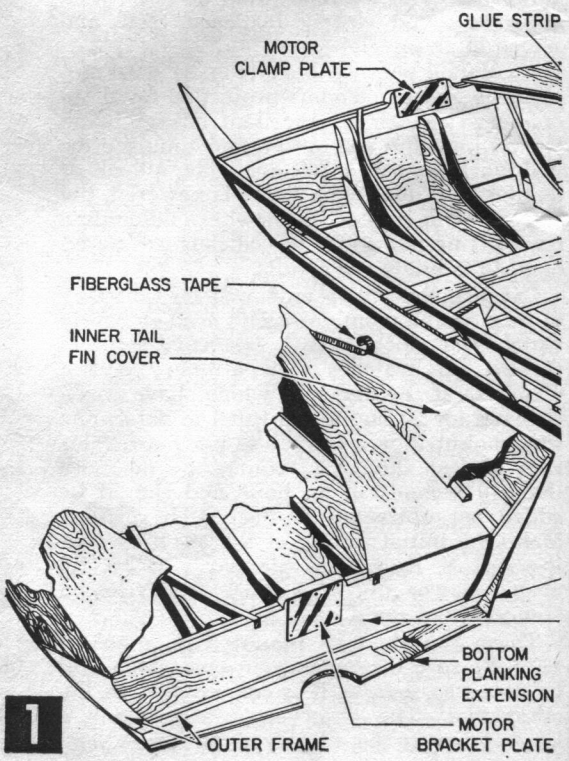
Aspect Ratio: .5.

Planing Angle, dihedral: 3.75 degrees.

Aft Chine Lift: 1.25 degrees.

Area Water plane at rest: 1 passenger—28 sq. ft.

Area Water plane, top speed: 1 passenger 1 sq. ft.



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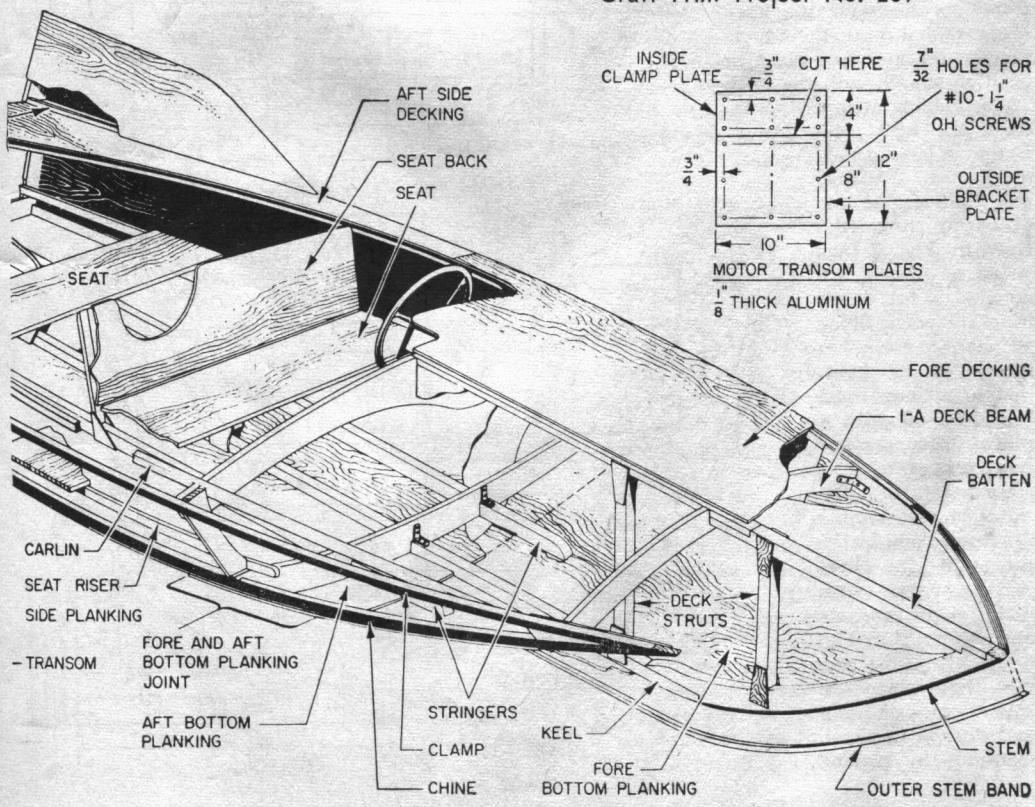
Speedy 14 ft. Outboard Runabout

Craft Print Project No. 289

IF you're looking for something that's flashy and fast in an outboard runabout, *Stingaree* is the boat for you. You can build it yourself in 60 to 75 spare-time hours for about $75. Its clipped chine and tail-fin design makes it as modern in styling as today's car. As for planing performance, at wide-open speeds you can see daylight under almost the entire length of the hull—it's practically air borne—in fact a very small pocket handkerchief will adequately cover the planing area. See Statement of Uses or additional performance and design data.

To build this demon of the waterways, start by drawing full-size patterns of the frames, transom, deck beam and stem (Fig. 2) on building paper. Use a sheet of plywood for a drawing board, taping the paper to it. To draw the curved lines, drive brads through the paper into the plywood at the corners of the drawing and bend a ⅜ x ¾ in. batten between the nails as in Fig. 5. Since the patterns will be used to position the frame parts for assembly, do not cut them apart to transfer the outlines of each frame part to the wood. Instead, use carbon paper or a tracing wheel (similar to a leathercrafter's spacing wheel) and mark the shape of each piece on ¾ in. stock. You need only transfer the bottom piece of #2 mold-frame because all other parts are made from stock-size lumber.

After sawing the parts to shape on a jig saw or band saw, place them in position on the paper patterns. Fasten the #1 frame together with glue and two 10-32x2 in. *rh* machine screws at each joint; fasten the #2 mold frame with glue and nails. Place the inside transom frame pieces directly on the ¾ in. plywood transom and fasten with glue and #8 x 1½ in. *fh* screws spaced 3 in. apart and staggered. Be sure to bevel the backs of the stringer uprights 2° and fasten to the inside of the transom so that the uprights lean inward or toward the keel upright. Fasten all uprights with glue and #10 x 2 in. *fh* screws. Do not fasten the transom outer frame pieces in place until later. Mark centerline locations on top and bottom pieces of all frames. Now, transfer the stem drawing to 1⅝ in. thick stock and saw to shape. Also lay out and saw the #1-A deck beam and knees and brackets



to shape, as shown in Fig. 8.

While the glue is drying on the assembled frames, rip saw an 8 ft. length of 2 x 6 in. stock (actually 1⅝ x 5⅝ in.) lengthwise for the two stringers (Fig. 7). Also rip a 12 ft. length of 2 x 4 in. stock lengthwise to use for the keel and other pieces detailed in Fig. 7.

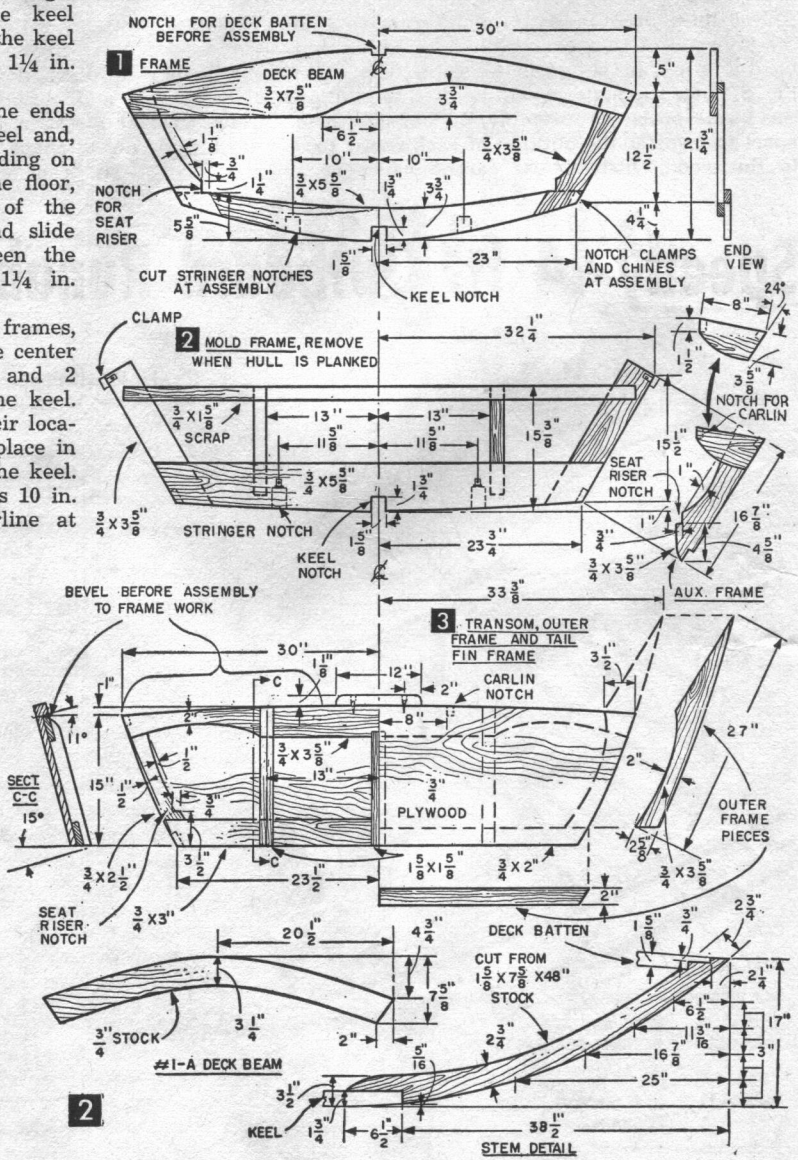
After the glue in the transom dries, saw the 15° bevel on the bottom edge and plane the 13° bevel on each side of the top edge to within 6 in. of the center as in Fig. 2. Fasten the ¾ in. plywood stringer knees to the inboard sides of the stringer uprights on the transom with glue and four #8 x 1¾ in. *fh* screws in each knee. Fasten the ¼ in. plywood stringer brackets to the other side of the uprights with glue and 1¼ in. thin-gage, galv. shingle nails, and fasten the keel knees to each side of the keel upright with glue and 1¼ in. galv. shingle nails.

Cut 15° bevels on the ends of the stringers and keel and, with the transom standing on its bottom edge on the floor, glue-coat the sides of the stringers and keel and slide them in place between the knees. Fasten with 1¼ in. galv. nails.

To assemble the frames, first cut notches in the center of the bottom #1 and 2 frame members for the keel. Measure and mark their location on the keel and place in position square with the keel. Then, holding stringers 10 in. from the keel centerline at frame #1 (Fig. 2), mark the #1 and #2 mold frame for stringer notches. Note in Fig. 6 that stringers are *not* notched to full depth in #1 frame. Since stringers are too heavy to be bent, bottom surfaces must be faired off with a plane after assembling framework.

After cutting the notches, reassemble the frames and fasten them to the keel and stringers with metal angle brackets and screws as in Fig. 6, again making certain the frames are square with the top and sides of the keel. Continue by placing stem at forward end of keel and fasten with glue and two #10x2 in. *fh* screws. The stem head, being previously notched, is now secured to #1 frame with built-up deck batten (Figs. 1 and 7). Fasten fore end of this batten to stem with glue and two #8x1¾ in. *fh* screws and the aft end to a notch cut in #1 frame. Use glue and one #8x1¾ in. *fh* screw and a knee at this joint.

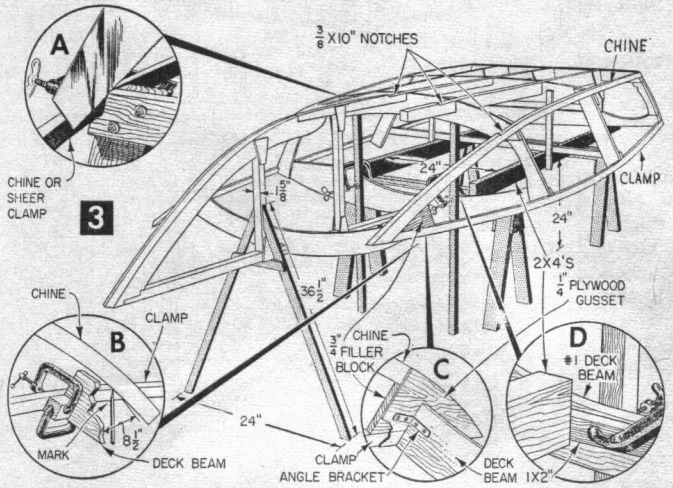
To provide further support for the deck batten, install the two strut uprights Fig. 7. Fasten struts in place with ¼ in. plywood gussets glued and nailed to each side of each joint. Lay out the #1A deck beam (Fig. 2) directly on the piece it is to be cut from and saw to shape. Cut a ¾x1⅝ in. notch at the center of the top beam



edge and assemble beam to the built-up deck batten by placing it against after end of 1⅝x1⅝ in. portion of the deck batten as in Fig. 7. Fasten with glue and one #8x1¾ in. *fh* screw.

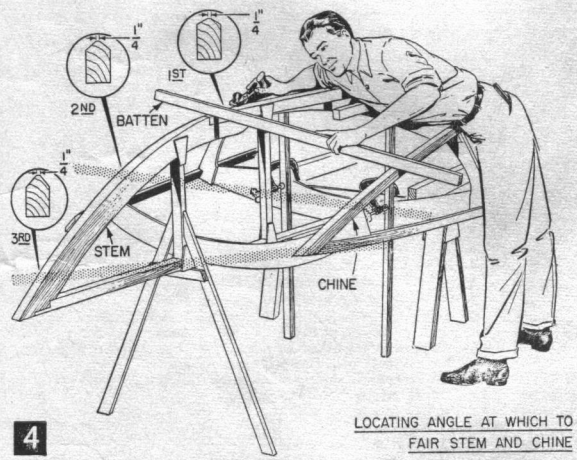
This basic framework is now placed in the upside-down position on top of two 2x4's supported by two saw horses (Fig. 3). Fasten deck beam of #1 frame with C-clamps to a length of 1x2 in. stock nailed to the end of the 2x4's (Fig. 3D). Nail the cross piece on the #2 mold frame to the 2x4's and nail a 1x2 in. piece across the 2x4's in back of the transom. To support fore end of stem, make up the A-frame and temporarily fasten to the forward strut with two #8x1¾ in. *fh* screws. After the framework is planked, the A-frame and #2 mold frame are removed.

Continuing with the construction of the framework, temporarily clamp the chines and sheer clamps to the frames and transom and mark them so that notches can be cut to take the chines and clamps. Cut the notches through the transom frame and plywood and through both thicknesses on #1 frame. Notch the mold frame for the chine only; the sheer clamp is not notched into the mold-frame side. Also mark the notches at the proper angle to coincide with the bend of these pieces. If you cut the notches slightly undersize at first, you can alter the angle of the cut for a snug fit by reclamping the chines and clamps in the notches and running a saw down between them as in Fig. 3A.



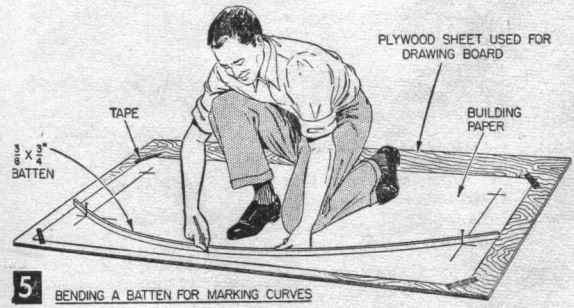
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To determine the juncture point where the fore end of the chine joins the sheer clamps, first fasten the sheer clamps on each side to the #1A deck beam with a wooden block and two C-clamps as in Fig. 3B. The top of the sheer clamp should be flush with the top of the deck beam. Then bend the chines down, overlapping the sheer clamps 8½ in. forward of the deck beam (Fig. 3). Have a friend help you do this so that both chines can be bent down simultaneously to prevent wringing the hull out of shape. Clamp chines to sheer clamps and mark them for cutting. Note that the sheer clamp is cut off to join the chine and not vice versa.



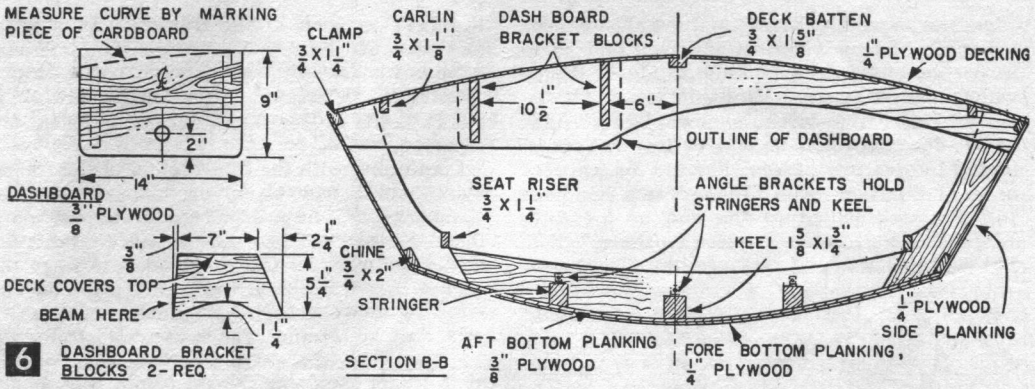
4 LOCATING ANGLE AT WHICH TO FAIR STEM AND CHINE

After cutting, clamp the chines and sheer clamps together and make up the ¾ in. filler blocks and ¼ in. plywood gussets (Fig. 3C). Fasten these at the chine and sheer clamp juncture with glue and 1 in. box nails. The gussets go on the inside between the deck beam and chine. Do not drive nails too close to bottom edge of chine because quite a bit must be faired off here. Bevel the ends of the deck beam to coincide with the angle formed by bending the chines and clamps and fasten them to the deck beam with metal angle brackets and 10-32x1½ in. *fh* machine screws (Fig. 3C). Trim the aft ends of the chines and sheer clamps flush with the transom. Bevel the lower edge of the bottom outer frame piece 15°, and fasten the outer transom frame pieces including the tail-fin brackets to the outside of the transom with glue and #8x1½ in. *fh* screws.



5 BENDING A BATTEN FOR MARKING CURVES

The entire bottom and sides of the



6 DASHBOARD BRACKET BLOCKS 2-REQ.

SECTION B-B

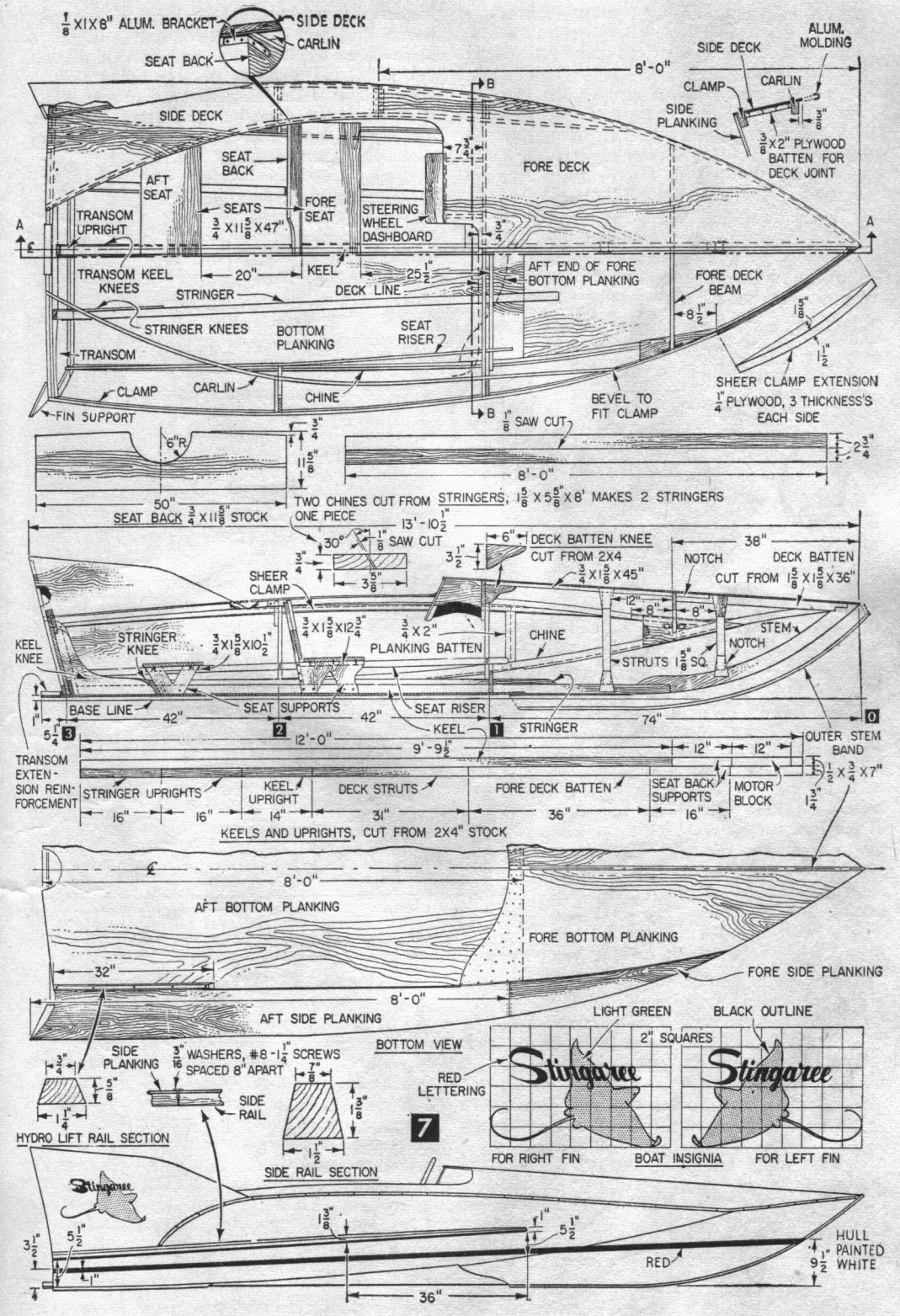
framework must now be faired with a jack plane and wood rasp so the plywood planking will be in contact with all frame members. The fore ends of the stringers will have to be planed off quite a bit to bring them down flush with the keel and chine surfaces. Place a batten across the frame members from time to time to check the angle at which to fair the pieces. This is especially important when beveling the stem and fore ends of the chines as shown in Fig. 4.

The first plank to be applied is the 3/8 in. plywood, after bottom plank. Lay out the sheet of plywood as in Fig. 9 and cut out the motor recess at the rear and saw cut a slit at the center of the fore end. Now place the plank on the framework, centering it on the keel, and temporarily clamp in position. Check for flatness with a straightedge as in Fig. 10. Then mark it on the underside along the chines and on each side of all the other frame members. Also mark the keel, stringers and chines at the fore edge of the plank for notching these parts. Remove the plank and saw sides to chine marks. Cut the 3/8-in. deep by 10-in. long tapering notches in the keel, stringers and chines as in Figs 3 and 7), so the outside surface of the plywood along the fore edge will be flush with these frame members. Coat the contacting surfaces of planking and framework with *Tarp Seal* (see Materials List) and reclamp the plank in position on the framework. Fasten with #8x1¼ in. *fh* screws spaced 3 in. apart.

Lay out the forward bottom planking on ¼ in. plywood as in Fig. 9, and temporarily clamp it in position as in Fig. 10. Make any adjustments necessary such as trimming the edges along the stem and mark the 3/8 in. aft planking along the overlapping edge of the ¼ in. fore planking. Then remove the fore planking and coat contacting sur-

MATERIALS LIST—STINGAREE

No. Req.	Size and Description	Use
1	3/8" x 4' x 8' AB exterior fir plywood	bottom
1	1/4" x 4' x 7' AB exterior fir plywood	bottom
3	1/4" x 4' x 8' AB exterior fir plywood	sides, decks, tail covers and gussets
1	3/4" x 16" x 7' AA exterior fir plywood	transoms, knees
1	3/8" x 7" x 14" AB fir or mahogany plywood	dash
1	3/4" x 3 5/8" x 14'	bottom, top and side transom framing
1	3/4" x 3 5/8" x 60"	tail fin supports
1	3/4" x 2" x 50"	outer transom bottom frame
1	1 1/8" x 1 1/2" x 12"	transom motor block
1	3/4" x 5 5/8" x 48"	#1 frame bottom
1	3/4" x 7 5/8" x 60"	#1 frame beam
1	3/4" x 3 5/8" x 36"	#1 frame sides
1	3/4" x 7 5/8" x 48"	#1A deck beam
1	3/4" x 5 5/8" x 60"	mold frame
1	3/4" x 3 5/8" x 48"	mold frame
1	3/4" x 3 5/8" x 72"	auxiliary side frame
1	1 5/8" x 7 5/8" x 48"	stem
1	1 5/8" x 5 5/8" x 8'	stringers
1	1 5/8" x 3 5/8" x 12'	keel, uprights struts and seat supports
1	3/4" x 3 5/8" x 12'	chines
1	3/4" x 3 5/8" x 8'	seat risers
1	3/4" x 3 5/8" x 12'	clamps
1	3/4" x 3 5/8" x 10'	carlins
1	3/4" x 1 5/8" x 48"	deck battens
1	3/4" x 1 1/4" x 72'	hydro lift rails
1	1 5/8" x 3 5/8" x 8'	side rails
1	3/8" x 5 5/8" x 16"	steering wheel brackets
1	3/4" x 11 5/8" x 12'	seats
1	1/2" x 3/4" x 7'	outer stem
1	3/4" x 5 5/8" x 48"	transom extension
1	1/8" x 10" x 12" sheet aluminum	motor board plates
1	1/8" x 1" x 16" bar aluminum	seat supports
2	12 ft. length of #182 aluminum molding	sheer
2	12 ft. length of D-682 aluminum molding	cockpit trim
5 doz.	#5 x 3/4 in. oval head screws (above aluminum moldings available from Youngstown Mfg. Inc., 66-76 So. Prospect St., Youngstown 6, Ohio)	sheer
3 gross	#8 x 1" fh screws	
2 gross	#8 x 1 1/4" fh screws	
1 gross	#8 x 1 3/4" fh screws	
18	#10 x 2" fh screws	
8	10-32 x 1 1/2" fh machine screws	
8	10-32 x 2" fh machine screws	
36	3/16" washers	
1 lb.	1 1/4" galv. thin-gage shingle nails	
1/4 lb.	1" galv. thin-gage shingle nails	
12	1 1/2" x 1 1/2" angle brackets	
2 lbs.	Weldwood glue	
1 qt.	Tarp Seal (Tarp Seal Adhesive, 2555 Boston Rd., New York, N. Y.)	
1 gal.	#9585 Dolphinite white exterior undercoater	
2 qt.	Condon's Boat Life—egg shell white (Maurice L. Condon Co., Inc., 250 Ferris Ave., White Plains, N. Y.)	
1	15" dia. steering wheel, right angle fiush mounted	
32 ft.	1/4" plastic covered steel tiller cable	steering gear
2	pulleys and deck straps	steering gear
5	single eye pulleys	steering gear
4	1/4" x 4" eye bolts	steering gear
2	springs	steering gear
2	clamps	steering gear


1/8 X1X8" ALUM. BRACKET
SIDE DECK
CARLIN
SEAT BACK
8'-0"
B
SIDE DECK
ALUM. MOLDING
CLAMP
CARLIN
SIDE PLANKING
3/8X2" PLYWOOD BATTEN FOR DECK JOINT
SEAT BACK
AFT SEAT
SEATS 3/4 X11 5/8 X47"
FORE SEAT
STEERING WHEEL DASHBOARD
FORE DECK
TRANSOM UPRIGHT
A
TRANSOM KEEL KNEES
20"
KEEL
25 1/2"
AFT END OF FORE BOTTOM PLANKING
FORE DECK BEAM
STRINGER
DECK LINE
STRINGER KNEES
BOTTOM PLANKING
SEAT RISER
TRANSOM
CLAMP
CARLIN
CHINE
BEVEL TO FIT CLAMP
SHEER CLAMP EXTENSION 1/4" PLYWOOD, 3 THICKNESS'S EACH SIDE
FIN SUPPORT
B 1/8" SAW CUT
6"R
11 5/8"
8'-0"
50"
SEAT BACK 3/4 X11 5/8" STOCK
TWO CHINES CUT FROM STRINGERS; 1 5/8 X5 5/8" X8' MAKES 2 STRINGERS
ONE PIECE
13'-10 1/2"
30°
1/8" SAW CUT
6" DECK BATTEN KNEE CUT FROM 2X4
38"
NOTCH
DECK BATTEN CUT FROM 1 5/8 X1 5/8" X36"
SHEER CLAMP
3/4 X1 5/8 X45"
12"
8"
8"
STEM
NOTCH
KEEL KNEE
STRINGER KNEE
3/4 X1 5/8 X10 1/2"
3/4 X1 5/8 X12 3/4"
3/4 X2" PLANKING BATTEN
CHINE
STRUTS 1 5/8" SQ.
BASE LINE
42"
SEAT SUPPORTS
42"
SEAT RISER
KEEL
STRINGER
74"
12'-0"
9'-9 1/2"
12"
12"
OUTER STEM BAND 1/2 X 3/4 X7"
TRANSOM EXTENSION REINFORCEMENT
STRINGER UPRIGHTS
KEEL UPRIGHT
DECK STRUTS
FORE DECK BATTEN
SEAT BACK SUPPORTS
MOTOR BLOCK
16"
16"
14"
31"
36"
16"
KEELS AND UPRIGHTS, CUT FROM 2X4" STOCK
8'-0"
AFT BOTTOM PLANKING
FORE BOTTOM PLANKING
32"
FORE SIDE PLANKING
8'-0"
AFT SIDE PLANKING
LIGHT GREEN
BLACK OUTLINE
2" SQUARES
BOTTOM VIEW
SIDE PLANKING
3/16" WASHERS, #8-1 1/4" SCREWS SPACED 8" APART
SIDE RAIL
RED LETTERING
Stingaree
Stingaree
HYDRO LIFT RAIL SECTION
SIDE RAIL SECTION
FOR RIGHT FIN
BOAT INSIGNIA
FOR LEFT FIN
Stingaree
RED
HULL PAINTED WHITE
36"

faces with Tarp Seal. Follow by reclamping fore planking on framework and fasten with #8x1 in. *fh* screws spaced 2 in. apart. Finish by trimming plywood flush with chines.

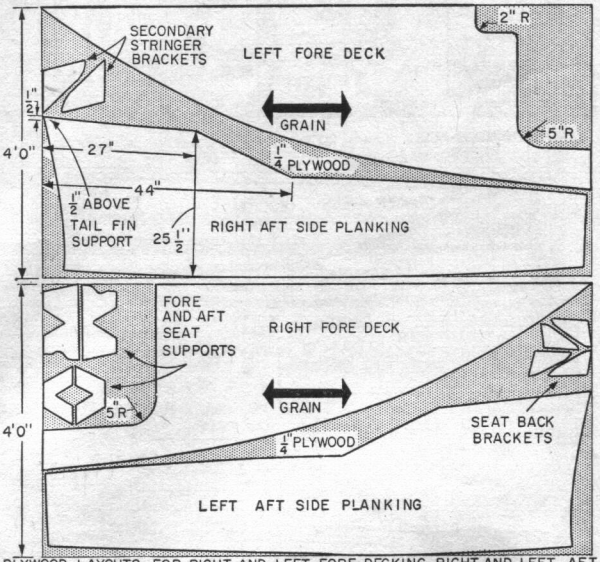
The side planking including fin tails are next. To aid in laying out the shape of the sides and cutting them from one sheet of ¼ in. plywood obtain a couple of large sheets of corrugated cardboard and clamp them against one side of the framework, taping them together where they join. Mark it along the bottom planking, sheer clamp and tail-fin extension, with a curved line at the bottom of the extension to join the projecting ⅜ in. bottom planking at aft end. Then remove and draw in the upper tail fin lines as in Fig. 8. Cut out the cardboard and use as a pattern to lay out two side pieces on ¼ in. plywood (Fig. 8).

Before fastening the sides in place, make up the transom extension reinforcement piece (Fig. 1) from ¾ in. stock. Bevel the fore edge 15° and mark the aft edge to the shape of the bottom plywood extending aft of transom. Saw to size and fasten with glue and #8x1¼ in. *fh* screws spaced 3 in. apart.

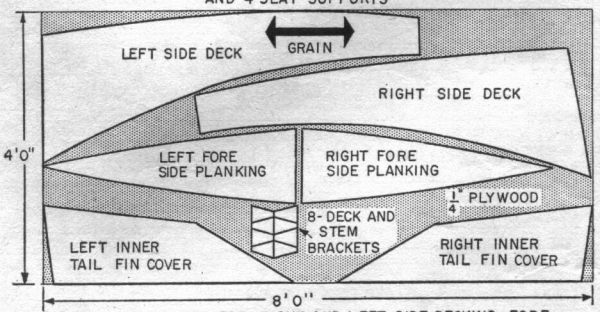
Getting back to the side planking, cut them to shape and fasten to each side of framework with Tarp Seal and #8x1 in. *fh* screws. Reinforce the seam between pieces of side planking with ¾x2 in. battens fitted between chines and clamps (Fig. 7). Use Tarp Seal and screws spaced 2 in. apart to fasten batten. Finish the bottom edge of the sides by planing them flush with the bottom planking. Also plane the edges of the fore bottom planking flush with the ¼ in. nose on the stem. Cover stem and edges of plywood with a ½x¾ in. outer stem band (Fig. 7). Coat adjoining surfaces with Tarp Seal and secure with #8x1¼ in. *fh* screws, spaced 5 in. apart. Before turning hull right side up, make and fasten the two hydro lift rails (Fig. 7) to the bottom planking along the chines with #8x1½ in. *fh* screws.

With the hull turned right side up, loosen the angle brackets holding the mold frame in place and remove from hull. In its place fasten auxiliary side frames (Fig. 2) with four #8x1 in. *fh* screws through hull sides.

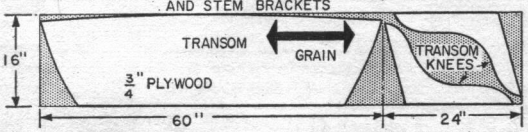
To reinforce the forward edge of the bottom planking at the sheer line and provide a fastening surface for the decking, a sheer clamp ex-



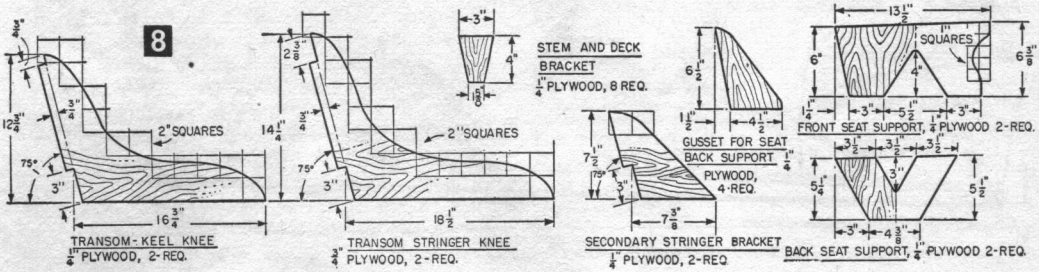
PLYWOOD LAYOUTS FOR RIGHT AND LEFT FORE DECKING, RIGHT AND LEFT AFT SIDE PLANKING, 2 STRINGER BRACKETS 4 SEAT BACK BRACKETS, AND 4 SEAT SUPPORTS



PLYWOOD LAYOUT FOR RIGHT AND LEFT SIDE DECKING, FORE SIDE PLANKING, INNER TAIL FIN COVERS, AND 8 DECK AND STEM BRACKETS



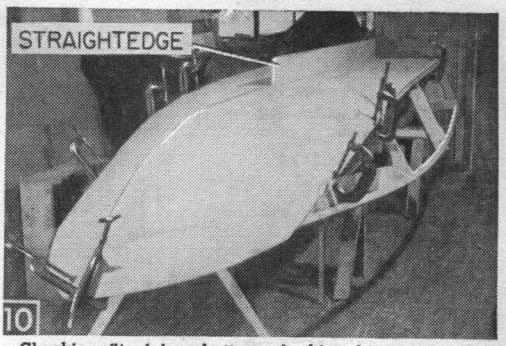
PLYWOOD LAYOUT OF TRANSOM AND 2 TRANSOM STRINGER KNEES



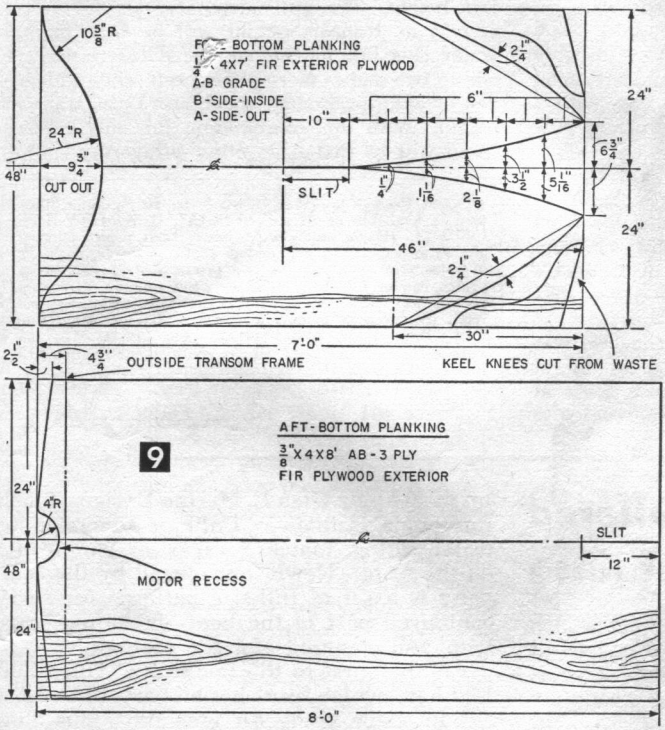
tension is needed. Make these from 3 strips of ¼ in. plywood shaped as in Fig. 7, and long enough to reach from the fore end of the sheer clamp to the bow stem. Glue the 3 strips together and, while the glue is still wet, fit and clamp them to the planking on each side of the bow. Fasten with 1¼ in. thin gage galv. shingle nails driven through the planking and clinched over on the inside of the sheer clamp extensions. After the glue dries, plane the edges of the side planking flush with the sheer clamp and fair deck beams, sheer clamp extensions and deck batten so plywood decking contacts all surfaces.

Now, rip the seat risers to size and install them on each side inside the hull as in Fig. 7 with one #8x1¾ in. *fh* screw to each joint. Follow with the installation of the carlins, notching them flush into the transom, auxiliary side frame and #1 deck beam. Taper fore ends of carlins to fit sides of sheer clamps at forward ends as in Fig. 7, and fasten at all points with one #8x1¾ in. *fh* screw. Continue by making fore and aft seat gussets, back supports, seat bottoms and fore seat back (Fig. 8). Temporarily clamp seat bottoms on seat risers and fit seat gusset assemblies on keel. Fore-seat back supports are fastened to stringers. Use glue and 1¼ in. nails to fasten gussets to keel and stringers. Make the steering brackets and dashboard as in Fig. 6, and fasten the brackets to the #1 deck beam with two #8x1¾ in. *fh* screws to each bracket. Fasten the dashboard to the brackets with three #8x1 in. *fh* screws to each bracket.

Now, remove the seat bottoms and paint the inside of the hull with two coats of primer followed with one coat of enamel. We added lamp black to white paint to get a pearl gray color for the inside, however, any color of your choosing can be used. *Do not* paint the top surfaces of the sheer clamps, deck beams, transom or carlins because the deck must be glued to these surfaces.



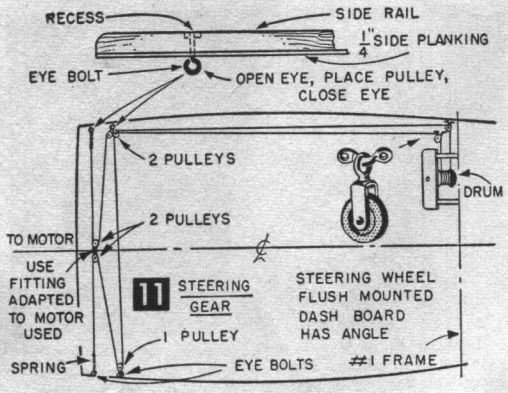
Checking fit of fore bottom planking by temporarily clamping in place. Place straightedge across aft bottom planking to check flatness along keel line from transom to fore planking lap.



To lay out the deck plywood simply place the sheet of plywood on the starboard (left) side of the forward part of the hull, centering an 8 ft. edge on the deck batten, and mark the underside of the plywood along the sheer, ⅜ in. from carlin and ½ in. aft of the dashboard. Then remove it, add connecting lines and curves at aft end as in Fig. 8, and saw to shape. Follow the same procedure to layout the port side of forward deck and two aft decks. Fasten decking in place with Tarp Seal and #8x1 in. *fh* screws spaced 3 in. apart. Where butt joints of decking meet, provide ¾x2 in. butt blocks on underside and fasten with glue and screws.

With all decking in place, trim edges flush along sheer and allow ⅜ in. overhang along carlins (Fig. 7). This overhang may be rounded and left as is, or covered with aluminum molding. Don't secure molding until deck is painted.

To fasten the inner tail-fin covers to the deck, rip the glue strips and fasten to deck as in Fig. 1 with glue and four #8x1 in. *fh* screws driven through the decking from the underside. Determine the size and shape of the fin covers by fitting a cardboard over the area first. Then, using it as a template, transfer the shape to ¼-in. plywood and saw to shape. Fasten fin covers with glue and #8x1 in. *fh* screws to glue strip and transom fin supports and 1¼ in. thin wire nails through both pieces of ¼ in. plywood along



the edge. Drive nail through from side-planking side of fins and clinch on fin-cover side. Sand top edge of fin round and cover with 3 in. wide fiberglass tape and resin. It would be a good idea to cover the chine and keel seams with a strip of fiberglass tape too. Do this before putting on the two hydro-lift rails.

Now, make the side rails as in Fig. 7, and fasten to the side planking with #8x1¼ in. *fh* screws and 3/16 in. washers driven through from inside of planking. Then varnish the seats and fore seat back with three coats of Condon's *Plasticlear* and fasten in place with three #8x 1¾ in. *fh* screws to each joint.

The outside of the hull on Stingaree was painted all white with a thin red boot topping at the waterline. We first applied three coats of Dolphinite #9585 white exterior undercoater to hull sides and bottom, and deck. After sufficient drying time the undercoater was covered with two coats Condon's *Boatlife* egg shell white.

Details of the steering-gear rig are shown in Fig. 11. Finish the sheer with two lengths of Youngstown aluminum molding fastened with #5x¾ in. oval headed screws spaced 5 in. apart. Bend the aft ends of the molding down as in Fig. 7. To prevent the outboard motor clamps from scoring the transom, make the aluminum plates (Fig. 1), and fasten to transom.

Operating Instructions. When getting under way with a high mounted motor as on Stingaree, don't leap the boat out of the water, but take it easy or dangerous cavitation may result and damage the motor. Transom height with motor-raising block is 17 in. Do not operate motor over this height. The outboard-motor service wheel and 16 in. transom height will be O.K. to pull water skis but for higher speed use a prop of one to two inches more pitch, preferably a Michigan or Johnson racing wheel, and 17 in. transom height. With this combination the only competition will be that from other Stingarees.

● Craft Print No. 289 in enlarged size for building Stingaree is available at $1.50. SPECIAL QUANTITY DISCOUNT! If you order two or more craft prints (this or any other print), you may deduct 25¢ from the regular price of each print. Hence, for two prints, deduct 50¢; three prints, deduct 75¢, etc. Order by print number. To avoid possible loss of coin or currency in the mails, we suggest you remit by check or money order (no CODs or stamps) to Craft Print Dept. 2196, SCIENCE and MECHANICS, 505 Park Ave., New York 22, N. Y. Now available, our new illustrated catalog of "194 Do-It-Yourself Plans," 25¢ (refundable, first order). Please allow three to four weeks for delivery.

Small Runabout Offered In Wide Choice of Kits

SLEEK-LOOKING, fast-running boats such as *Tuffy*, the 13-ft. outboard runabout shown below, are now available to do-it-yourselfers in complete template or ready-cut forms.

This little speedster, designed for motors up to 40 *hp* by Glen L. Marine Designs, 9152B Rosecrans, Bellflower, Calif., is adaptable for water skiing, matched races, or simply fun on the water. Newly introduced by the company is a set of full-size patterns for every contoured part of the boat—including seats, trim, and planking—for $25 postpaid.

Another first in the line is its "Tuffy Ruff Kut Kit," which furnishes all parts of the boat cut to shape ready for assembly, plus glue, fastenings, putty, and fin for $199.99 f.o.b. factory. Only such finishing touches as hardware, motor, fiberglass, and paint are left for the builder to obtain from local marine stores.



Slick speedster built from plans, templates, frame kit, or complete boat kit.

The builder who can acquire and cut the bulky plywood panels locally can save the cost of shipping them by acquiring a basic frame kit for $75 f.o.b. factory. If he wants to do the whole job from scratch, he can purchase a plan set including full-size patterns for stem, breasthook, chine blocking, and transom knee for $15 postpaid. Each kit or plan set is furnished with step-by-step instructions and construction photos.

