



SKEETER

Craft Print Project No. 157

FEATURES: A small, lightweight, high-speed outboard hydroplane. Readily planes with as low as 5 hp motors and will take motors up to 10 hp and has done 40 mph and then some with these motors. Not for sanctioned races but for general sports use. Easily constructed and quite inexpensive to maintain. Ideal for car-top carrying



By **WILLIAM D. JACKSON**
Naval Architect

LENGTH: 7 ft. 10 in.
BEAM: 45 $\frac{3}{4}$ in. (approx.)
DEPTH: 12 in. amidships
WEIGHT: 85 lb.
SEATING CAPACITY: One person
MATERIAL: Exterior plywood over a stressed frame
GENERAL CONSTRUCTION. Blunt nose. For convex bottom, plywood is applied in one piece for easy construction. Fabric deck is airplane "dope" coated. Can build in one week. Steering wheel needed for good control.

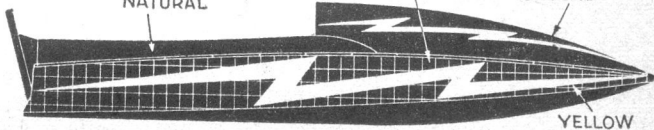
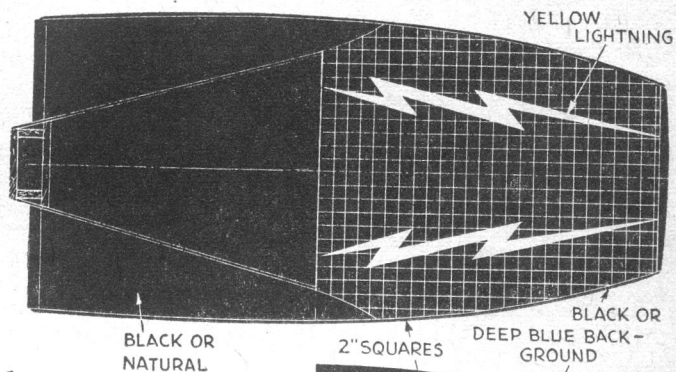
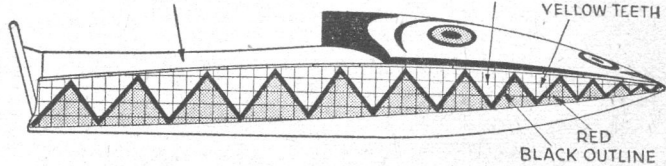
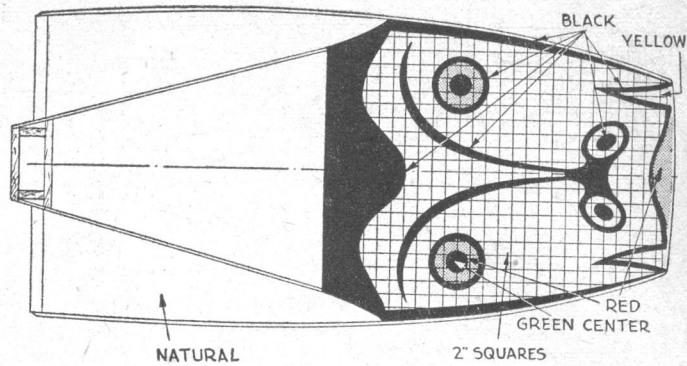
HERE'S a nautical "punkin seed" that will whip the pants off of many highly-touted commercial speedboats. In fact, she's just enough boat to support the driver and motor—the rest is pure flying. But, as is true of such lightning fast lightweights, there are certain tricks you can't try with them. *Skeeter* is not designed for sanctioned races as she won't make their tight hairpin turns, but given a little space, she banks nicely without "tripping" or capsizing.

You water bugs wanted speed and you'll find it in every line of this boat. Even though there are only 3 frames, the overall strength-to-weight ratio is high and *Skeeter* will withstand fast driving and indefinite pounding. Note the downward slant to the sheer-line and deck to take advantage of wind pressure to hold the boat's nose down on the water and prevent it from literally taking off, as most blunt-nose craft tend to do. *Skeeter* performs best in fairly smooth water.

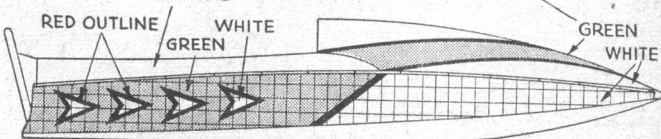
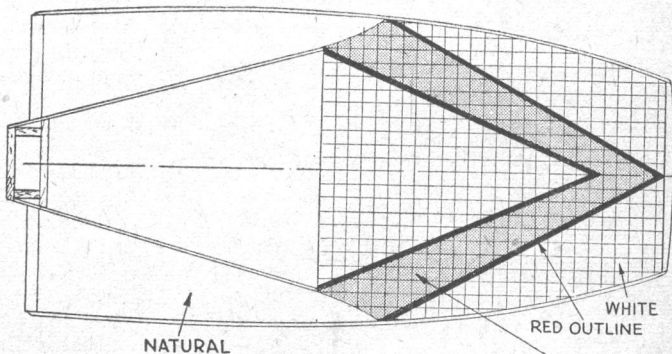
7 ft. 10 in. length just is not long enough to enable her to bridge the gaps between longer waves. You'll also have to lean forward when starting out in Skeeter to develop planing speed. But once she's planing, hold onto your hat, because she's just a glorified ironing board built to go places in an awful hurry. Since Skeeter is skittish, riding completely on top of the water, better use a steering wheel on her instead of steering the motor by hand. A 10 hp motor is about the limit for this craft. Even though you may be tempted, don't overpower Skeeter. If you do, you'll need wings.

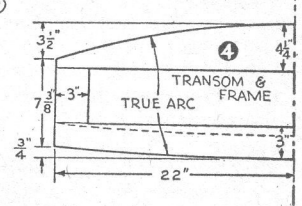
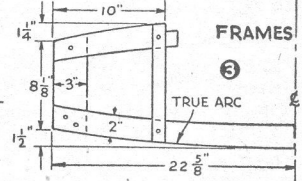
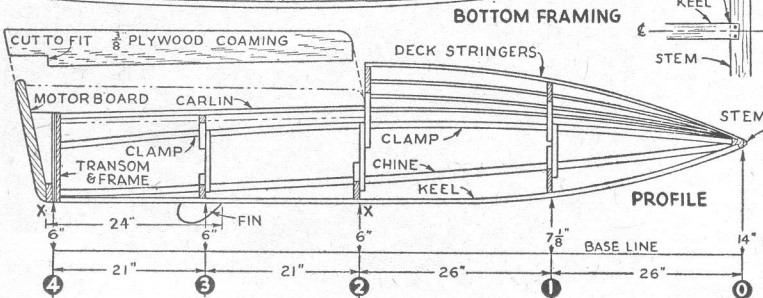
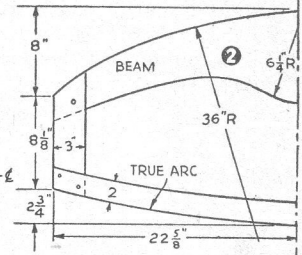
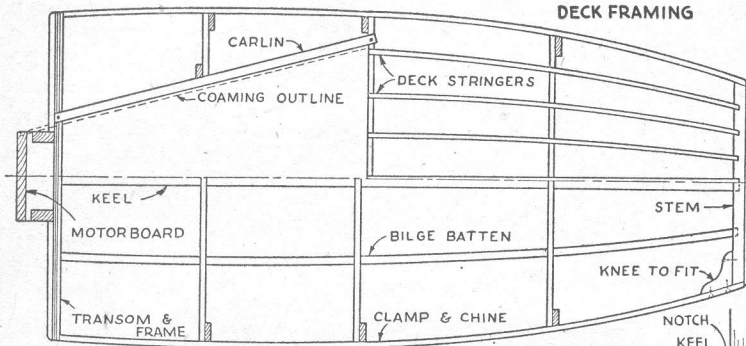
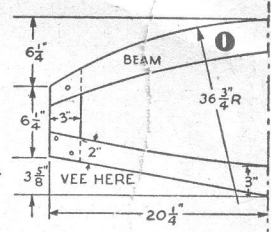
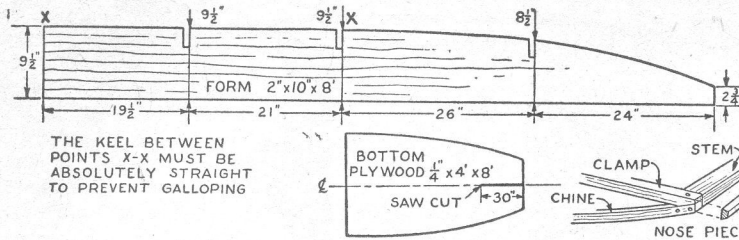
The materials needed for Skeeter shouldn't cost too much, even in these troubled times, and you can build her in about one week, working 4 hours a day. Study the materials list and, taking your lumber dealer into confidence, have the plywood and framing laid down on the shop floor before beginning the construction. You can either make full size paper patterns of the various parts or cut your lumber directly according to the drawing dimensions, though the full-size patterns are the safest method. In either case, make sure that the straight keel line marked X-X on the form remains straight and does not change shape. Even $\frac{1}{8}$ in. "rocker" on this line will cause galloping and render the hull virtually useless. So check this keel line especially before planking, since there is very little that may be done about realigning the bottom after the planking is attached.

Begin the construction by sawing out a 2x10x8 ft. piece of common lumber for the form, to the shape indicated. Mount this form on saw horse legs at a convenient working height. Now lay out transom #4 out directly on $\frac{3}{8}$ in. or $\frac{1}{2}$ in. plywood. Mark transom to the shape shown and then saw it to shape. Next, attach a frame to inner surface of transom as shown, coating contact surfaces of transom and frame



SKEETER COLOR SCHEMES





MATERIALS LIST—SKEETER

Exterior Plywood Required:

2 pcs.	$\frac{1}{4}$ " x 4' x 8'	Bottom, Sides, Floorboards
1 pc.	$\frac{1}{8}$ x 24 x 48" Fir	Decking (sides)
1 pc.	$\frac{3}{8}$ x 14 x 48" Fir	Transom
1 pc.	$\frac{3}{8}$ x 12 x 50" Fir	2 Coamings

Other Lumber Required: (Oak or Yellow Pine)

1 pc.	1x10' x 7'	Frames
1 pc.	1x 6' x 4'	
1 pc.	1x 4' x 4'	
2 pcs.	1x 3' x 8'	Chines, clamps & battens Deck stringers Keel Carlins Moldings Motor board 2 Angle pieces Stem Outer stem piece Stem knees Building Form
6 pcs.	$\frac{3}{4}$ x 1 1/4' x 8'	
7 pcs.	$\frac{1}{2}$ x 3 1/4' x 5'	
1 pc.	$\frac{3}{4}$ x 2 1/4' x 8'	
2 pcs.	$\frac{3}{4}$ x 1 1/2' x 5'	
2 pcs.	$\frac{3}{4}$ x 1 1/8' x 8'	
1 pc.	$\frac{1}{8}$ x 11 1/2' x 16"	
1 pc.	$\frac{1}{8}$ x 35 3/8' x 12"	
1 pc.	$\frac{1}{8}$ x 2 1/2' x 30"	
1 pc.	$\frac{3}{4}$ x 3 1/2' x 30"	
1 pc.	$\frac{3}{4}$ x 7 1/2' x 12"	
1 pc.	2x10' x 8'	

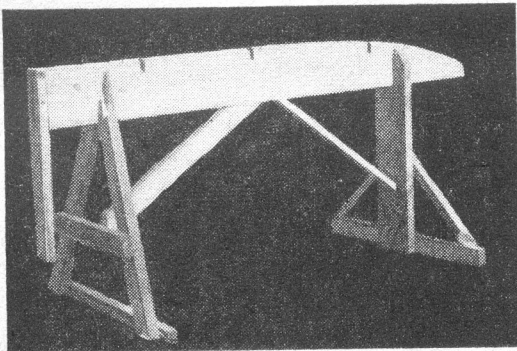
Fastenings and Miscellaneous

4 gross $\frac{7}{8}$ " #7 fh screws; 1/2 gross $\frac{1}{4}$ " #8 fh screws; 6 screws $\frac{1}{2}$ " #10 fh; 2 carriage bolts $\frac{3}{16}$ " x 6"; 18 carriage bolts $\frac{3}{16}$ " x 2"; 1/2 gal. airplane wing dope; 1 pc. cloth 50" wide x 60" long (for deck), 2 oz. $\frac{1}{4}$ " tacks; 1 lb. Weldwood glue; 1/2 gal. white Firzite Varnish and enamel of desired color to create deck paint scheme.

with resorcinol resin glue and screw-fasten the transom to frame with $\frac{7}{8}$ in. #7 fh screws spaced about 2 in. apart. Now draw full-size paper patterns of frames #1, 2, and 3, laying these patterns on the framing lumber, and pricking outlines through onto framing lumber. You only need to lay out bottom members since the sides are straight pieces. Outline bottom members legibly and then saw to shape.

Now return bottom frames to patterns, cut out the $\frac{3}{4}$ x 3 in. side frames, coat contact surfaces of side and bottom members of frames with resin glue, and fasten these joints, using two $\frac{3}{16}$ x 2 in. rh stove bolts to each chine joint. Lay the frames aside until glue dries and fashion the stem piece from a 2x4x30 in. (actually $\frac{1}{8}$ x $\frac{3}{8}$ x 30 in.) piece which is cut to the bevels shown. Leave the ends for trimming later so they will fit nicely into the chines.

Notch the frames as shown, and notch the transom for the keel, chines and clamps. Then notch form for the frames. When notching transom, notch all the way through both transom plywood and frame. Next assemble transom and frames on the form in their respective notches and clamp the transom squarely to the



Building form for Skeeter.

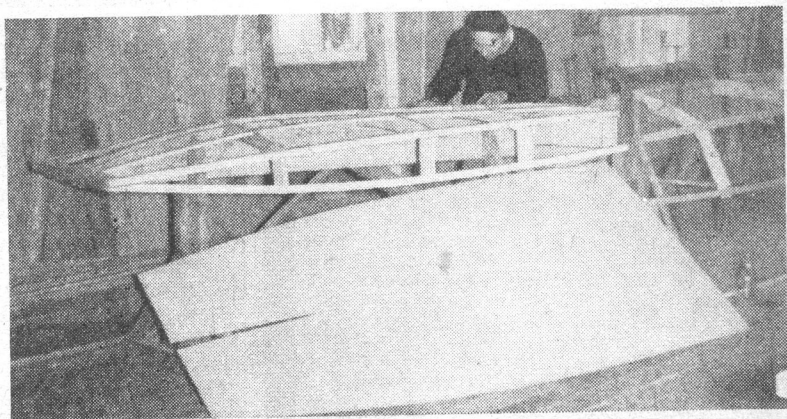
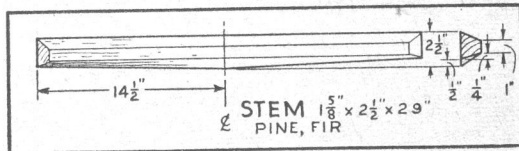
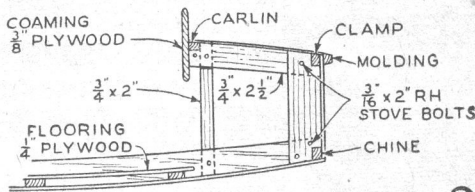
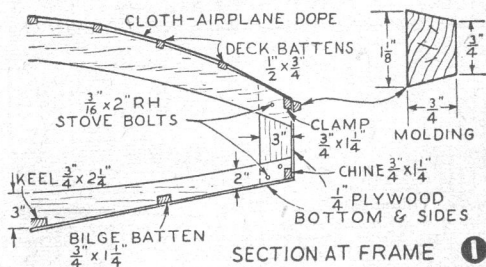
form as shown. Lay the keel in the keel notches and fasten it with two $1\frac{3}{4}$ in. #8 fh screws to each joint. To hold this keel securely to the form during construction, use short pieces of strap iron, screwing one end to the keel and the other to the form. After hull is planked these lugs are removed.

The next step is to butt the stem against the fore end of the form, notch the keel into the stem as shown, and secure it with two $1\frac{3}{4}$ in. #8 fh screws. Clamp the chines on each side of the frames, and align the frames squarely with the form. Then fasten chines to the chine notches with one $1\frac{3}{4}$ in. #8 fh screw to each joint. Let chine end extend aft of transom slightly to be trimmed squarely later. Now draw the chines in towards the stem on each side, mark the necessary bevel on the stem ends, saw these to shape and fasten chines to stem with two $1\frac{3}{4}$ in. #8 fh screws to each joint. Place the clamps in the clamp notches and fasten them with one $1\frac{3}{4}$ in. #8 fh screw to each joint. Then bevel clamp ends as shown and fasten clamp ends to chine and stem joint as indicated. Screw fasten the small knees to stem and chines.

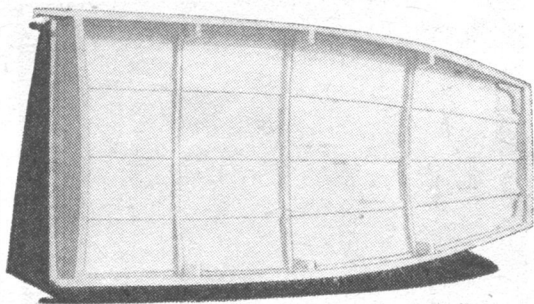
Notch the one batten on each side of the keel flush into the transom and frames. Locate these battens halfway between keel and chines and fasten them in place with one $1\frac{3}{4}$ in. #8 fh screw to each joint. Then notch batten ends partially into the stem as shown and fasten as you fastened the battens to the keel and chines. Now trim and fair the entire framework evenly with a jack plane to insure even planking surfaces, and remove the screws holding the keel in the transom keel notch. Daub this joint well with Kuhl's bedding composition and then refasten keel. Do this also for the battens and chines at this point, loosening one member at a time, daubing joint with bed-

ding compo and refastening. This treatment will insure strong watertight joints. Now trim the keel, chines, and clamps even with the transom and provide the extra, outer bottom frame for the transom as shown. Coat this with bedding compo and screw-fasten it to the transom with $1\frac{3}{4}$ in. #8 fh screws spaced about 3 in. apart. Trim this frame even with bottom edge of transom and you are ready to plank the boat.

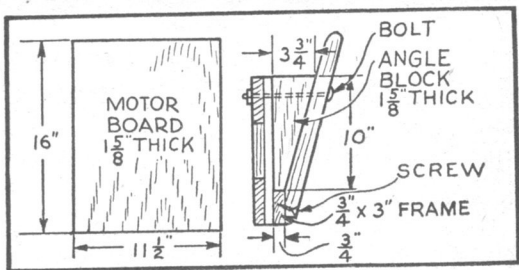
Plank the bottom first using a single $\frac{1}{4}$ in. x 4x8 ft. plywood sheet. Place this plywood piece in position on the bottom, clamp it evenly along the chines and mark it to shape. At the fore end, you'll need to slit the plywood as shown by running a saw down the exact center of the plywood. Then remove this plank, saw it to shape and return it to the boat. You may need to further trim this slit at the fore end until



Framing complete ready for bottom (shown in foreground).



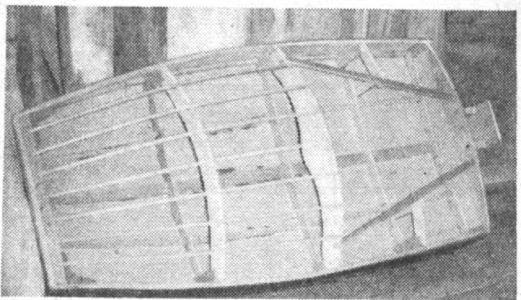
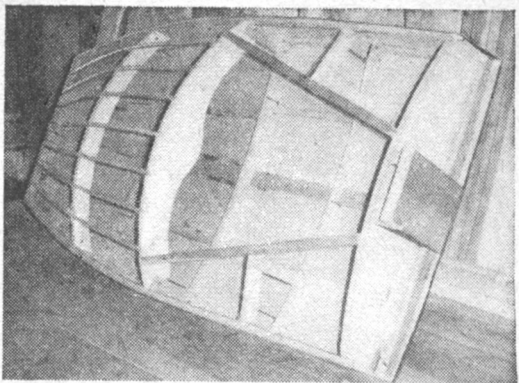
Completed shell.



it fits evenly when clamped in place along the chines. Before fastening plywood bottom in place, coat keel, batten frame edges and chines with resin glue and coat the transom edge with Kuhl's elastic bedding compo. Now clamp shaped plywood bottom in place and fasten at all points with $\frac{7}{8}$ in. #7 fh screws spaced about 2 in. apart, using a double row of screws along the transom. Trim plywood edges evenly along the chines, stem and transom. You can now plank and fasten the sides as you did the bottom, but use Kuhl's bedding compo when coating the chines.

With the hull planked, remove the boat from the form, turn it right side up and saw the deck beams to shape. Fasten these in place to the frames with one $\frac{3}{16} \times 2$ in. rh stove bolt to each joint. Now notch the 7 deck battens into the beams as shown, locating deck battens at equidistant intervals between clamps and deck center line. Notch battens flush into beam #2 and stem but only halfway into #1 beam. Fasten battens with $1\frac{1}{4}$ in. gal. shingle nails. Now notch carlins into #2 beam and transom flush with the surface and fasten with one $1\frac{3}{4}$ in. #8 fh screw to each joint. Fasten $\frac{3}{4} \times 2$ in. side beams to carlins and #3 side frames with $1\frac{3}{4}$ in. #8 fh screws as shown; these side beams support the decking and add overall strength.

Paint the inside of the hull with 2 coats of white Firzite, tinted the desired color (gray looks well), allowing each coat to dry thoroughly. Then cover the deck with closely woven, heavy-weight muslin, and tack this in place evenly along the sides, stem and #2 beam. Work wrinkles out of the cloth as you go along but don't stretch cloth too tightly. It should be snug and wrinkle-free. Apply about 4 coats of airplane wing dope to the cloth deck, waiting about $\frac{3}{4}$ hour for each coat to dry well and smooth the



Two views of deck framing prior to applying decking.

last coat lightly with very fine sandpaper. Cover the side decks with $\frac{1}{8}$ in. plywood, laying it in place, marking it to the shape shown, and screw fastening it with $\frac{7}{8}$ in. #7 fh screws spaced about 3 in. apart. Now cut the motor board and angle pieces to fit, beveling the bottom edge of motor board and screw fastening it to the transom with four $2\frac{1}{2}$ in. #10 fh screws. Secure angle blocks and upper part of motor board to the transom with two $\frac{5}{16} \times 6$ in. carriage bolts. The coamings, shaped from $\frac{3}{8}$ in. plywood, are now trimmed to fit as shown and screw fastened on each side of cockpit to carlins and to motor board, using three $1\frac{3}{4}$ in. fh screws to secure each end of coaming to motor board and $\frac{7}{8}$ in. #7 fh screws to secure coaming to carlins.

The flooring consists of $\frac{1}{4}$ in. plywood pieces shaped to fit between frames and screw fastened to bottom battens and keel. Finish the hull by screw fastening guard moldings to hull sides with $1\frac{3}{4}$ in. #8 fh screws spaced 8 in. apart. Shape $\frac{3}{4}$ in. square nose piece as shown and screw fasten it to the stem to conceal the tacked cloth edges at this point. Also tack a shaped piece of $\frac{1}{4}$ in. plywood to the #2 beam to conceal tacks and cloth edges at this point.

Now you are ready for a fancy paint job patterned after one of those shown on the cover of this issue or one of the alternate designs shown in an accompanying illustration.

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MECHANICS

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If You Want Speed,
Build the Skeeter
see page 160

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