

Building "SEA SCOUT"

A 14 1/2 Foot Runabout

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Craft Print Project No. 138

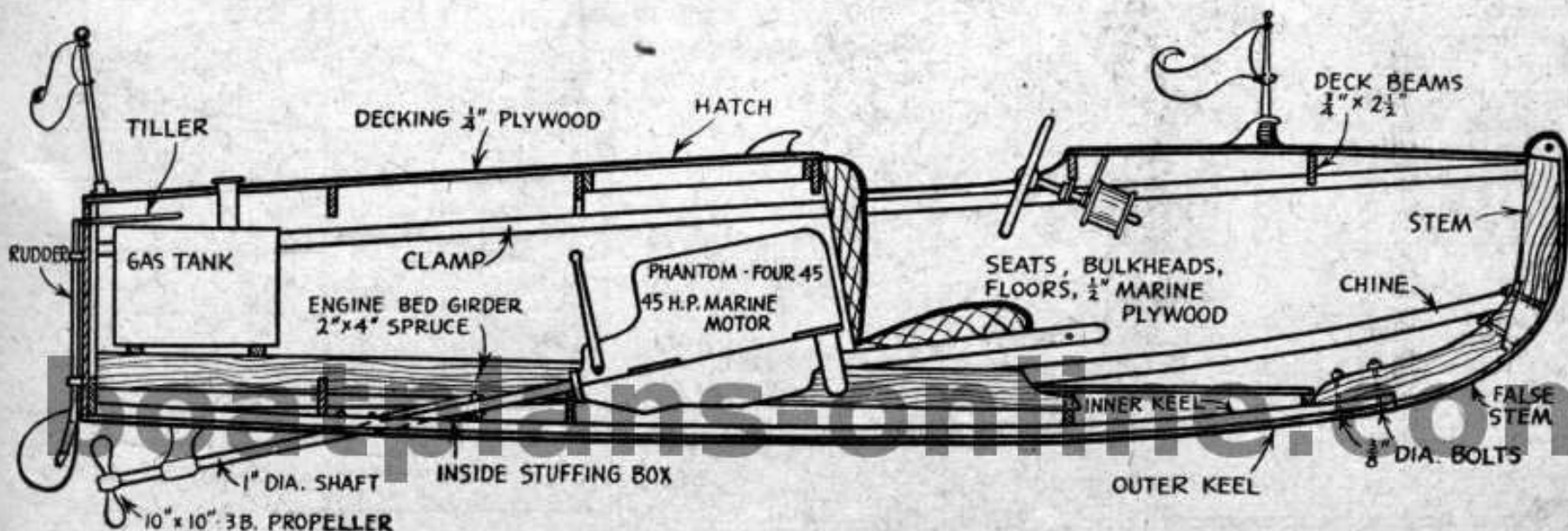
SEA SCOUT is the type of boat its name implies—a small inboard runabout with single cockpit destined for use by one to three persons and for fairly high speeds with comfort not found in outboards and convenience comparable to a coupe ashore.

If waterproof plywood is used in the construction, the finished boat will be stiff, sturdy, leak-proof and quite fast, especially if powered by any

of the lightweight, high speed marine engines such as Gray Phantom 4-45, Universal, or its equal or, if properly converted, there is no reason why any high speed, lightweight auto engine — not exceeding 65 H.P. shouldn't be used. With an engine of the proper size you'll have speed and convenience in a sporty little inexpensive craft it'll be a pleasure to own.

Building Sea Scout is best accomplished over a form and, following the plans, saw the form to shape from any rough lumber and mount atop legs similar to a saw horse at a convenient working height. If desirable, and it is nearly always best, this boat should be laid out full size on large sheets of paper not only to gain a better understanding of the boat as a whole but to prove all measurements and obtain full size paper patterns that fit of frames, stem and various bevels each will be cut to fit properly.

With full size patterns of all frames available, obtain frame material, lay upon pattern outlines, saw to shape and fasten all joints with 3/8" plywood gussets, glued in place with casein or resinous waterproof glues, fastening gussets in place with 1" No. 8 F.H. screws. The transom is sawed from 3/4" plywood with a 3/4" x 3" frame around edges all glued and screwed in place, while the stem is sawed from 2" oak, jointed and bolted as

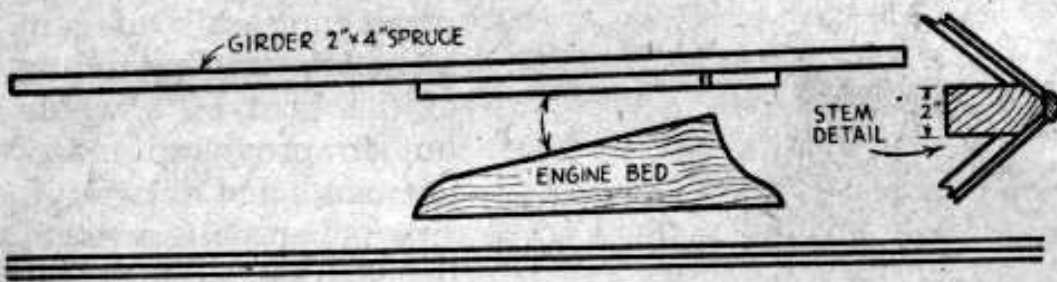
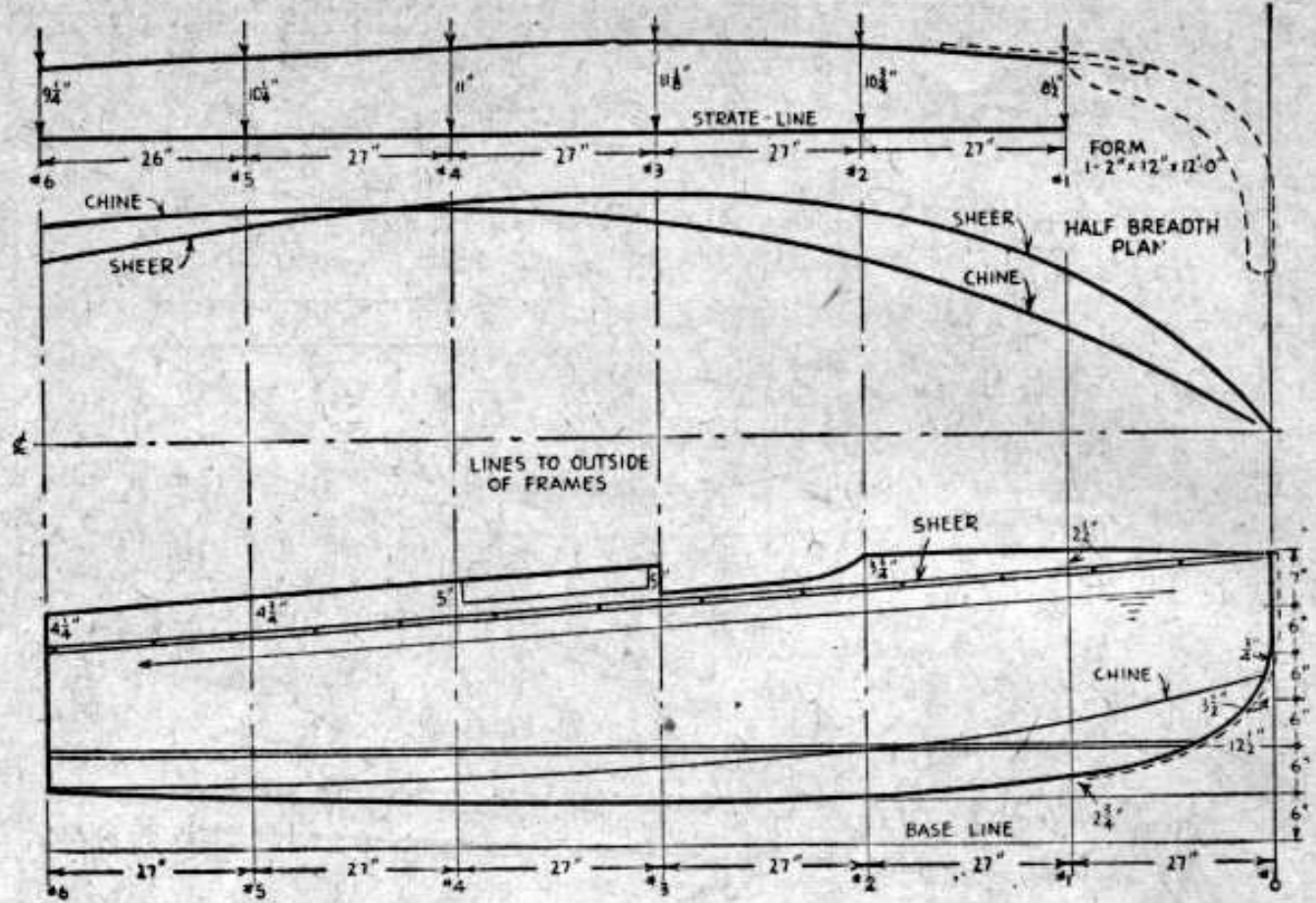


indicated. Notch out form for each frame assembling all parts on form, clamping or nailing wood strips to hold frames in proper alignment, "square" transom with form, and brace securely.

Notch frames for inner keel, chines, and clamps and proceed to fasten these pieces in place, also fastening stem to keel, using 1 3/4" No. 10 F.H. screws for keel, chine, and stem joints and 1 1/2" No. 8 F.H. screws for attaching clamps to frames. With the framework assembled, fair and trim, so planking to be applied lies evenly at all points and proceed to attach outer keel to inner keel, fastening with 1 1/2" No. 8 F.H. screws and notch bottom battens flush into frames—using two each side of keel, four in all on bottom and one each side midway between chine and clamp. These pieces reinforce the framing and plywood planking, permitting of

hard service with inboard motors. Fasten battens to frames with 1 1/2" No. 8 F.H. screws, being careful to notch the frame only of the transom and not plywood transom also.

Again fair frames, using a block plane set fine so as to be absolutely certain that plywood will lie smoothly at all points and proceed to fasten plywood in place at all points with 1" No. 8 F.H. screws spaced about 2 1/2" apart. If plywood is not long enough to



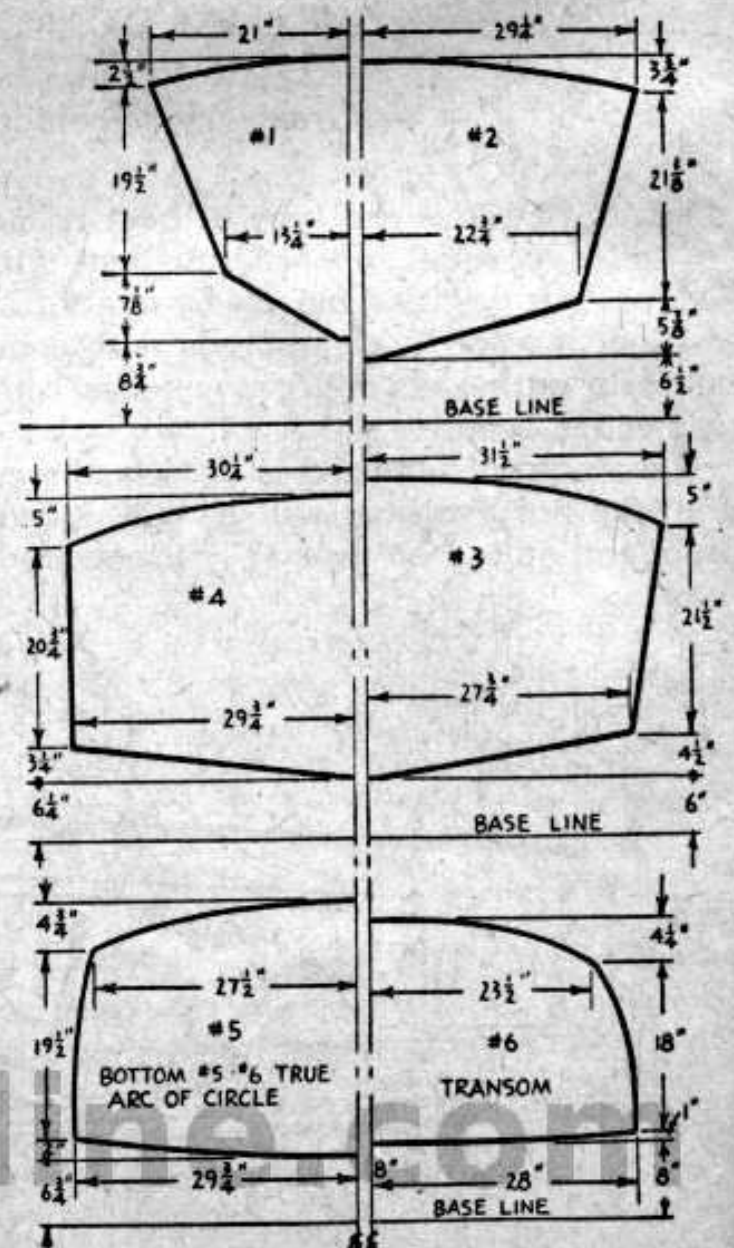
Material List

NOTE—All Listings only approximate

Part	Pieces	Sizes	Material
Plywood Required:			
Planking for sides, bottom, and decking	4	1/4" x 36" x 8'	Waterproof plywood fir or Philippine Lauan for decks.
Gussets	4	1/4" x 36" x 6'	
Seats and floors	1	3/8" x 24" x 6'	
Transom	1	1/2" x 48" x 8'	
Frames	1	3/4" x 24" x 5'	
Inner keel	4	3/4" x 3" x 16'	
Outer keel	1	1 1/4" x 4" x 12'	
Chines	1	3/4" x 1 1/2" x 12'	
Clamps	2	3/4" x 1 3/4" x 14 1/2'	
Mouldings	2	5/8" x 1 1/2" x 14 1/2'	
Stem	2	3/4" x 1 1/4" x 14 1/2'	Oak, ash, or fir.
Bottom and side battens, also deck battens	1	2" x 12" x 4'	
Engine girders	10	3/4" x 1 1/2" x 14'	
Engine beds	2	2" x 4" x 10'	
Deck beams	2	1 3/4" x 10" x 4'	
	3	3/4" x 12" x 6'	

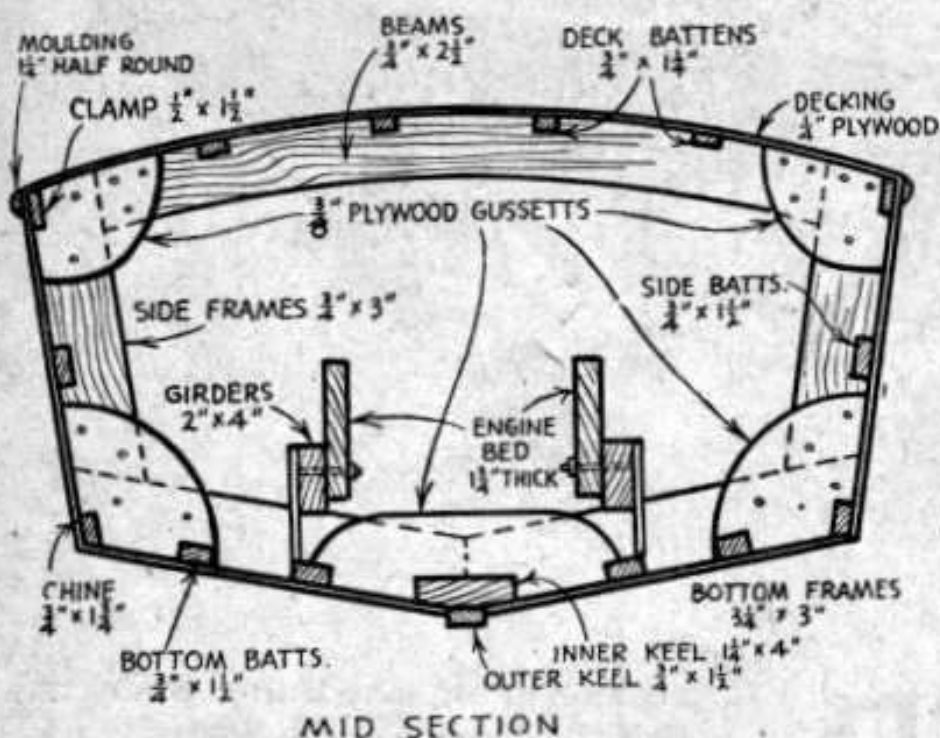
Fastenings

- 6 Gross 1" #8 flat head screws.
- 1/2 Gross 1 1/2" #8 flat head screws
- 1/2 Gross 1 3/4" #10 flat head screws
- 1 Pound 1 1/4" galvanized shingle nails
- 1 Quart Jeffery's aviation glue
- 1 Pint Waterproof resin glue



cover sides and bottom, simply provide a $\frac{1}{2}$ " x 6" plywood butt strap, for joints, gluing in place with resinous glues and screw fastening edges of joints. Along keel, transom and chine joints coat well with aviation glue, lay 1" wide cloth strips on glued area, recoat, clamping plywood in place and fastening. Along sheer coat, clamp with casein or resinous glue, clamp plywood in place, and fasten with $1\frac{1}{4}$ " galvanized shingle nails clinched on the inside. Planking completed, trim hull smoothly along edges and bend an outer false stem in place to cover exposed edges at this point and joint outer stem against outer keel, fastening with $1\frac{1}{2}$ " No. 8 F.H. screws.

Remove hull from form and apply a coating of plywood sealer to inside and out of hull. Cut and install all deck beams, fastening with $1\frac{1}{2}$ " No. 8 F.H. screws. The deck battens are now notched flush into beams and similarly fastened. At this point decide upon the exact size of engine cockpit, install cockpit beams and hatch carlis for openings. Now is also the time to install gas



tank, chocking well to prevent shifting, as it will be difficult if not impossible after the decking is in place.

Lay the $\frac{1}{4}$ " plywood decking in place, mark and cut to shape, cutting out parts for engine hatches and cockpit openings and when applying plywood to deck, utilizing joints where necessary, securing as mentioned before. Attach plywood decking in place at all points with 1" No. 8 F.H. screws spaced about 3" apart. Hatches are now covered and secured to hull with piano type hinges. Seats and flooring in the single forward cockpit are cut from $\frac{1}{2}$ " plywood, while sheer mouldings are fastened in place with $1\frac{1}{2}$ " No. 8 F.H. screws.

The engine bed is fastened in place last, according to the engine to be installed. The 2 x 4 engine stringers are secured to frames with angle irons bolted in place while it is an easy matter to align the engine bed proper on girders to meet the exact shaft angle to be bored. All fittings such as ventilators, bow light, steering wheel, rudder, strut, stuffing box, is standard and available from any marine dealer.

An effective paint job will go far toward pre-

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senting an attractive hull. If Philippine Lauan plywood is available for the deck this may be finished natural or varnished for a beautiful job, however a paint finish of well selected colors is also extremely attractive, such as Smith's Cruising Bottom green for the bottom, Yacht White flat for the sides, and a combination of Smith's Canoe Enamel red or blue and white for the decks as shown, coupled with a few choice pieces

of chromium plated yacht hardware will dress Sea Scout for company anywhere. Under the urge of a suitable motor, you'll have one of the smartest small craft afloat—a real water coupe.

● Craft Print No. 138 in enlarged size for building the "Sea Scout" is available at 25¢ each. Address Craft Print Dept. B-48, SCIENCE AND MECHANICS, 49 East Superior St., Chicago 11, Ill.