Here's DOLPHIN

By WILLIAM D. JACKSON, N.A.

A 16-foot boat specially designed for those who move their craft about by trailer

Craft Print Project No. 62

THIS trailer boat, the Dolphin, is the answer to low-cost travel over protected waters. The hull is light enough to be transported anywhere by trailer and the boat is of a size to be easily handled. It will accommodate two persons for extended trips or a party of four for day cruises and do it comfortably.

Construction and operating costs are low. Plywood is used throughout, and the hull is designed to exact the utmost from low power motors. Any engine of 2½ to 8 horsepower will do. One like the U. S. Falcon 2½ hp. water cooled marine engine will provide very low operating costs with a maximum number of miles per gallon of fuel consumed. This has been proved.

Outboard motors can be used with this hull if a suitable opening is cut in the transom. Small, water-cooled marine engines are considered best for this boat, however, with air-cooled engines a doubtful last choice. Impeded air-flow around the cabin might create cooling difficulties with this last-mentioned type of motor.

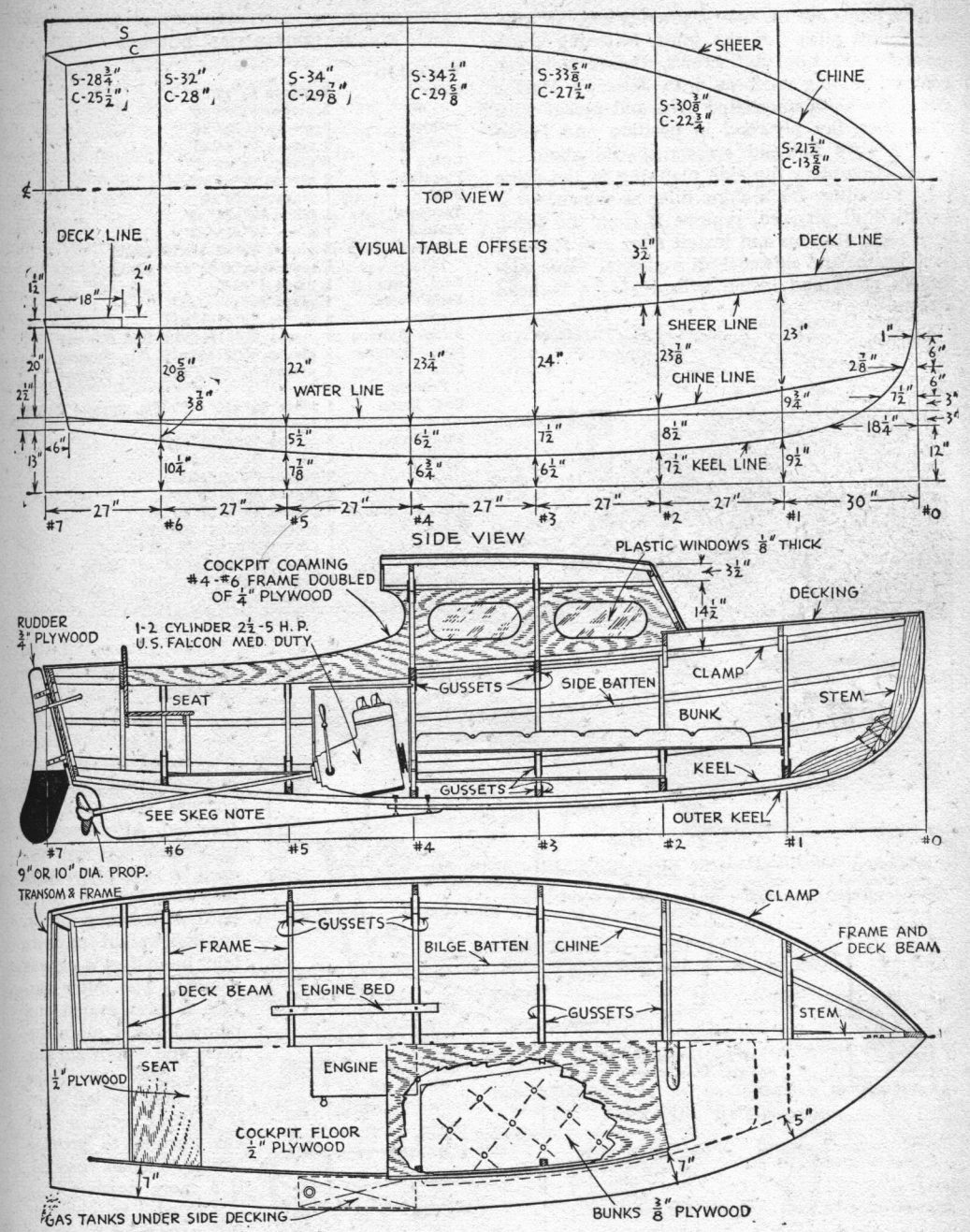
Construction of the Dolphin is not difficult. Each item has been simplified as much as possible.

The form on which the boat is to be built is mounted on legs, similar to sawhorses, at a convenient working height. To provide full size patterns of all members and to serve as a check on the plans, draw the lines of the hull full size on a large sheet of paper. Corrections or additions can thus be made where needed and full size patterns will assure better fit at all joints. If you know in advance what engine you are going to use, you can easily draw this into the full size layout to get patterns of skeg and engine bed before you start building.

Lay full size patterns on the frame material, mark and cut to shape. Fasten all joints with ⅜" plywood gussets on each side, glued with resinous glue and secured with 1" #8 flathead screws as indicated.

The stem is cut to shape from the full size patterns and the two parts are joined together with ⅜" carriage bolts, finished by beveling edges of stem as marked on the full size layout. The frames are notched for keel, chines and clamp pieces and are then mounted atop the form in their respective places, with wood strips, temporarily nailed in place, to hold them in proper alignment during construction.

Attach the keel at the notches in the stem and frames with two 2" #10 flathead screws to each



joint. The chines are next sprung around the frames, both being fastened simultaneously to prevent wringing frame out of shape. Chine ends are beveled to fit against the stem and fastened at each joint with one 1½" #8 flathead screw. Clamps are similarly attached to all frame notches and stem with the same type of screw.

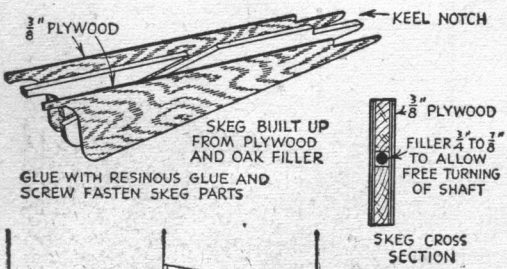
The framework is now trimmed and faired to let the planking lie evenly at all points. Before planking the battens, which will lend stiffness to the planking, are notched into bottom and sides and fastened with one 1½" #8 flathead screw at each joint.

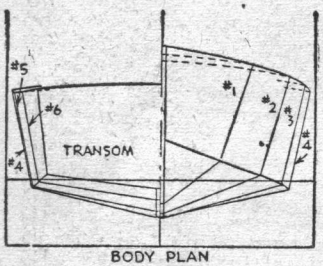
Now is the time to attach the skeg and outer keel. Fasten the skeg from inside with 2½" #10 flathead screws and fasten the outer keel from outside with 1½" #8 flathead screws.

When you are ready to start planking the hull, place the plywood in position, starting with the bottom. Mark and cut the plywood to shape.

Where joints are necessary, provide a ½"x6" plywood butt strap for the joint, fastening edges securely with glue and screws. Before planking, coat all mating surfaces with Jeffery's Marine Glue, lay cloth on coated area and recoat with glue, then lay plywood in position and fasten with 1" #8 flathead screws spaced about 2" apart. Complete the side planking in the same way, but allow for a chine filler as shown.

With hull planked, remove it from the form, turn right side up and install after and forward deck beams and side cockpit supports. Glue gussets in place and fasten with 1½" #8 flathead screws.





MATERIALS LIST—DOLPHIN

PLYWOOD	
Sides	**2 pieces ¼"x4'x8'**
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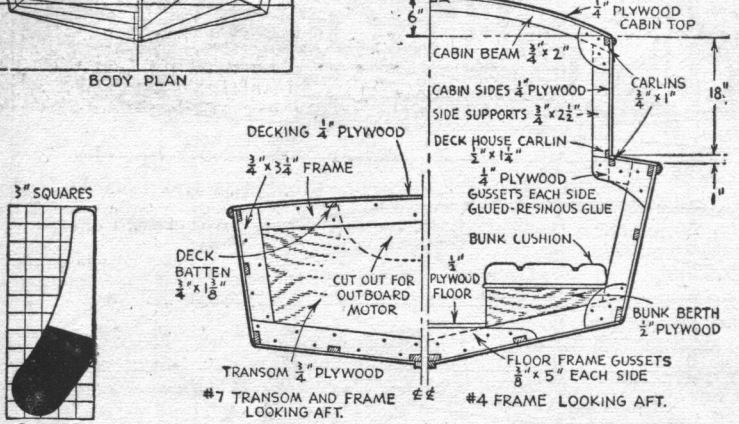
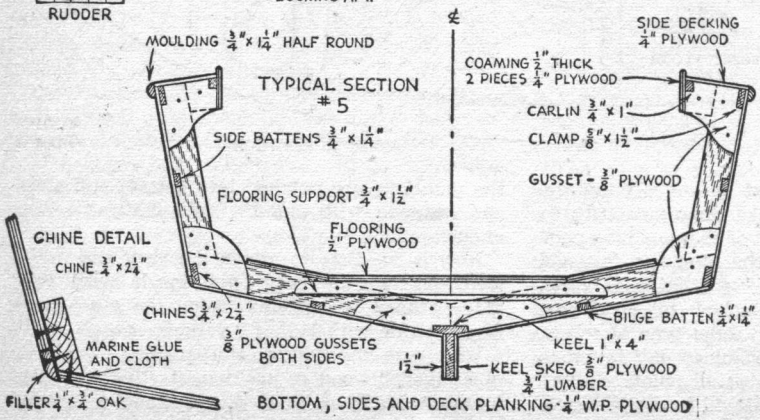
Bottom	**3 pieces ¼"x4'x8'**
Decking	**3 pieces ¼"x4'x8'**
Cabin	**3 pieces ¼"x4'x8'**
Flooring	**2 pieces ½"x4'x6'**
Bunks	**1 piece ⅜"x4'x8'**
Transom	**1 piece ¾"x24"x5'**
Rudder	**1 piece ¾"x15"x3'**
Chines & Chine Filler	**2 pieces ¾"x2¼"x16' (Oak)**
	2 pieces ¼"x ¾"x16' (Oak)
Keel, Inner	**1 piece 1"x14'**
Keel, Outer	**1 piece ¾"x1½"x12'**
Clamps	**2 pieces ⅝"x1½"x17'**
Bilge—Battens	**2 pieces ¾"x1¼"x13' (Fir, Spruce)**
Side—Battens	**2 pieces ¾"x1¼"x17' (Fir, Spruce)**
Side & Bottom Frames	**4 pieces ¾"x3¼"x16' (Fir, Spruce)**
Deck Beam	**1 piece ¾"x10"x12' (Fir, Spruce) Cabin Beams**
Mouldings	**2 pieces ¾"x1¼"x17'**
Carlins	**2 pieces ¾"x1"x12'**
	2 pieces ¾"x1"x6'
	2 pieces ½"x1¼"x6'
Deck Battens	**5 pieces ¾"x1¼"x5'**
Stem	**1 piece 2"x8"x6' (Oak)**
	1 piece ⅜"x1½"x7' (Plywood
Skeg	**1 piece ¾" or ⅞"x8"x7' (Oak)**
Engine Bed	**1 piece 1¾"x6"x8' (Oak)**





Construction of the cabin and interior are sufficiently explained by the drawings themselves. Everything is built of ¼" plywood over a frame, with all corners gusseted and fastened. After fore deck and cabin top are covered with plywood it may be best to cover both with heavy muslin or lightweight canvas laid in Jeffery's canvas cement. The outer surface is also coated and painted for a more durable and watertight job.

The after end of the cabin may be left open if desired, with a canvas curtain to provide privacy when needed. If a more finished boat is wanted, a bulkhead of ¼" plywood may be provided at #4 frame, with a door to suit. When decking has been attached, fasten sheer molding on each side with 1½" #8 flathead screws spaced about eight inches apart.

If an inboard motor is used, fashion a rudder

as shown from ¾" plywood, with edges tapered and blade hung with pintles and gudgeons. The rod tiller will project through the transom and the boat will be steered with tiller ropes and blocks on each side. A suitable steering wheel can be mounted in the cabin forward or a tiller handle can be provided in the cockpit.

The engine is mounted as indicated. A bed of 1¾" oak is provided and secured to frames with angle irons. Use a standard inside stuffing box. If an outboard motor is to be used, cut an opening in the transom to receive it. Gas tanks for any engine are best installed on each side under the side decks.

Cabin windows are of ⅛" plexiglas, with ¼" masonite gaskets around the edges and with the window assembly screw-fastened to cabin sides.

A small hatch opening cut into the forward deck, with hatch cover provided, can be used to provide ventilation through the hull. It can also serve as a vantage point from which to toss the hook overboard when rough weather is encountered.