

KINGFISHER - An Easily Built 9-Foot Pram

By WILLIAM D. JACKSON

Craft Print Project No. 75

ORIGINALLY developed separately by Scandinavian fishermen and Dutchmen hundreds of years ago for use upon rough open waters of the Old World, the pram reflects the qualities of these hardy seafarers, for it is exceptionally practical and useful under all conditions. This modernized pram, "Kingfisher," is a very versatile craft. It rows easily, sails well, and propels nicely with small outboard motors. It weighs only 90-100 lbs. and therefore is easily handled and carried atop any auto. It is wide beamed, and its capacity is the equal of much larger boats. Casting or still fishing is easily accomplished standing upright in it. This pram will safely seat three persons.

First saw the form to shape from any 2 x 10" x 8" rough lumber and mount upon legs similar to a saw-horse at any convenient working height. Cut notches in the form as indicated, for the mould frames. Begin the construction by drawing full-size paper patterns of both mould frames, transom and stem. The material for these parts is simply laid upon the patterns so as to conform to outline, marked and sawed to shape. The two boards of the transom and stem are secured with a $\frac{3}{4}$ x 3" frame, screw fastened with 1 $\frac{1}{4}$ " #8 fh screws. To build a rigid sturdy craft every adjoining surface should be coated with a waterproof glue, while every fastening should have lead holes drilled to prevent

weakened or split joints.

Temporarily assemble transom, stem, and mould frames, using a screw to hold each of these parts to the form. With the aid of a light batten bent around all frames, mark the correct bevel each must be trimmed, so that planking lies evenly. Remove all frames from form, and bevel edges accordingly. Before returning frames to form, cut notches for keel, chines and clamp, following the angle of beveled edges. Cut notches all the way through stem and through frame, only, of transom. Assemble all frames on form, and proceed to attach $\frac{3}{4}$ x 3 $\frac{3}{4}$ " keel using two 2" #10 fh screws to each joint. Do not fasten any parts to mould frames, as these must be later removed.

The $\frac{3}{4}$ x 1 $\frac{3}{4}$ " chines are now clamped in place and fastened to chine notches with one 2" #8 fh screw. The $\frac{1}{2}$ x 1 $\frac{3}{4}$ " clamps are next

USES: Modern adaptation of an ancient design. Most capacity in shortest length possible. Adapted to carrying atop autos, as a yacht dinghy, or general purposes. Short light-weight boat for use on sheltered or open waters for rowing, sailing, or propelling with outboard motors, 1 to 3 hp.

LENGTH: 9 ft.

BEAM: 4 ft.

DEPTH: 17 in.

WEIGHT Complete: 100 lbs.

SEATING CAPACITY: 3 persons.

CONSTRUCTION: Plywood covering over frames.

TYPE: Semi-Vee hullform, scow type bow.

MATERIALS LIST—KINGFISHER

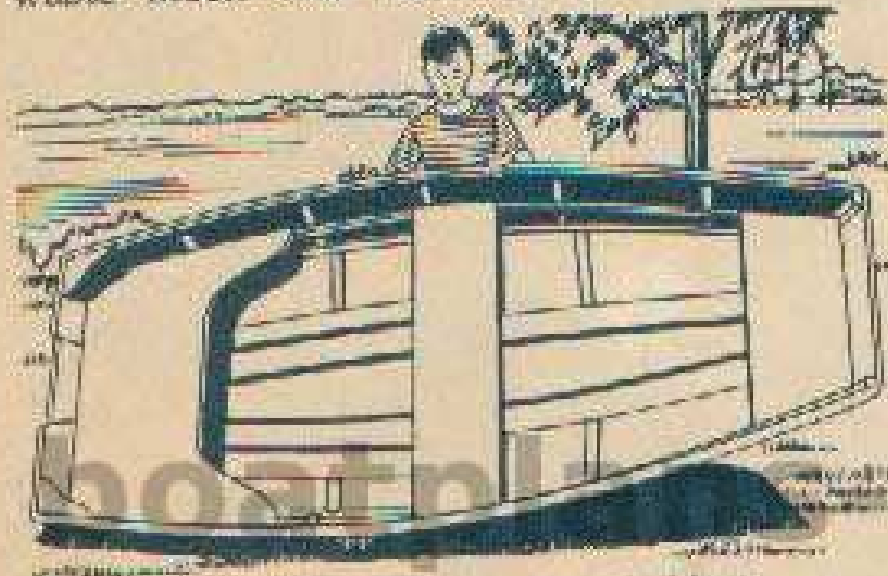
Parts	Pieces	Finished Dimensions
resin-banded exterior plywood.....	2	$\frac{1}{2}$ "x18" x 9'
transom.....	1	$\frac{3}{4}$ "x 8 $\frac{3}{4}$ "x 8'
stem.....	1	$\frac{3}{4}$ "x 7 $\frac{3}{4}$ "x 8'
motor board and frame.....	2	$\frac{3}{4}$ "x 3" x 6'
mould frames.....	2	$\frac{3}{4}$ "x 3 $\frac{3}{4}$ "x10'
form.....	1	2x 8 $\frac{3}{4}$ "x 9'
seats.....	1	$\frac{3}{4}$ "x11 $\frac{3}{4}$ "x12'
chines.....	2	$\frac{3}{4}$ "x 13 $\frac{1}{2}$ "x10'
keel.....	1	$\frac{3}{4}$ "x 13 $\frac{1}{2}$ "x10'
clamps.....	2	1 $\frac{1}{2}$ "x 13 $\frac{1}{2}$ "x10'
mouldings.....	2	$\frac{3}{4}$ "x 11 $\frac{1}{2}$ "x10'
side frames.....	1	$\frac{3}{4}$ "x 9" x12'
bottom ribs.....	2	1 $\frac{1}{2}$ "x 14 $\frac{1}{2}$ "x10'
seat risers.....	2	$\frac{3}{4}$ "x 13 $\frac{1}{2}$ "x10'
skag.....	1	$\frac{3}{4}$ "x 9" x 3'
transom knees.....	1	$\frac{3}{4}$ "x 8" x10'

Kinds of wood: spruce, fir, cypress, white pine, yellow pine, hemlock, or redwood.

FASTENINGS AND MATERIALS

- 3 $\frac{1}{2}$ doz. 1" #8 fh screws, cadmium plated, galvanized, or brass.
- 1 doz. 1 $\frac{1}{4}$ " #8 fh screws, cadmium plated, galvanized, or brass.
- 2 doz. 3" #10 fh screws, cadmium plated, galvanized, or brass.
- 1 lb. 1 $\frac{1}{4}$ " shingle nails (galvanized).
- 4 doz. $\frac{1}{4}$ " tacks.
- 1 lb. casein glue.
- $\frac{1}{2}$ gal. canvas cement.
- 5 yds. 36" width, 5 to 8 oz. canvas or heavy cloth.
- 1 pair oarlocks.
- 1 pair 6 $\frac{1}{2}$ " oars, spruce.

of 4' x 8' marine plywood. It is best to set the joints so they fall upon bottom ribs and side frames. This conceals the joint. If fir plywood longer than eight feet can be obtained, joints on side or bottom can be avoided. Before planking, trim and fair the various members, such as keel, chines and frames so the plywood lies evenly. The bottom is applied in two pieces, the joint coming on the center of the keel. Cut one of the 4' x 8' sheets to shape, use it as a pattern, and mark the other piece. Coat keel, chines, stem, and transom with waterproof glue, clamp plywood in place, and screw fasten to keel with 1" #8 fh screws, and to stem and transom with 1 $\frac{1}{4}$ " #8 fh screws, spacing all fastenings about two inches apart. The remaining areas that the plywood fails to cover are covered with the waste stock and fastened similarly. Trim



An interior view of the completed boat.

edges along chines evenly.

The sides are cut from the other 4' x 8' sheet, and this is clamped to sides, marked and cut to shape. Coat adjoining surfaces with casein glue, clamp pieces in place, and fasten with 1" #8 fh screws, spaced two inches apart. With hull planked, remove from form and turn right side up. The $\frac{1}{2}$ " x 1 $\frac{1}{2}$ " bottom ribs are now sawed, to fit bottom, at points indicated. The side next to the plywood is coated with glue and each rib is nailed in place with a 1 $\frac{1}{4}$ " galvanized shingle nail. Drive nails from the outside and finish by clinching on inside. The side frames are cut to fit position, glued and screw fastened to sides with 1" #8 fh screws. The $\frac{3}{4}$ " x 1 $\frac{1}{4}$ " seat risers are bent in place and fastened to side frames with 2" #10 fh screws. The seats are cut and fastened to seat risers with 1 $\frac{1}{4}$ " #8 fh screws.

To make a thoroughly water-tight job, the entire hull should be covered with light canvas. This is applied in two 36-inch widths, tacking even along clamp of upper edge, and pulling cloth towards keel and tacking along center of keel. In addition the cloth must be cemented with canvas cement to prevent entrance of water at any point. This cement is first spread over an area of three or four square feet with a brush, the cloth stretched, tacked in place, and the surface of cloth rubbed with a pad to insure complete adhesion. The laps of cloth are cemented together at keel and tacked.

To present a firm foundation for paint coats, thin the remainder of the cement with alcohol to the consistency of paint and apply to the canvas surface. Allow it to dry and sand it smooth. Enamel, or better, three coats of flat paint or colors ground in oil and thinned with turpentine, is applied to the canvas surface. Follow with varnish or enamel.

• Craft Print No. 75, in enlarged size for building Kingfisher, is available at \$1. 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¢; for 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 C.O.D.'s or stamps) to Craft Print Dept. 137, Schmeck and Merchants, 430 East Ohio Street, Chicago 11, Illinois. See coupon on page 167. Now available, our new illustrated catalog of "196 Do It Yourself Plans," 25¢. Please allow three to four weeks for delivery.

How to Calculate Outboard Gasoline Consumption

- To insure enough gasoline on board to last during a short cruise, figure the requirements of the outboard motor in advance on the basis of $\frac{1}{2}$ pt. of gas per horsepower per hour. Thus, a 25 hp outboard motor will use approximately 1 $\frac{1}{4}$ gal. each hour it is in use.—
WM. D. JACKSON.