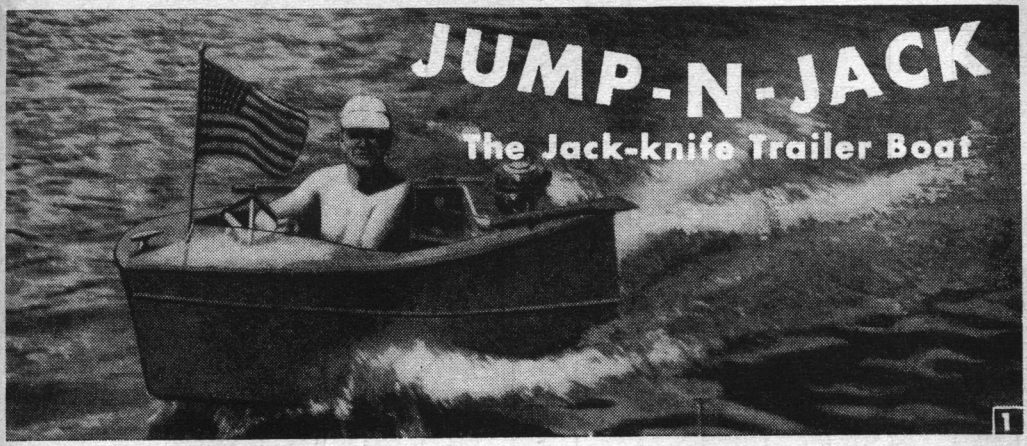


USE: General purpose small outboard runabout. Designed as a combination fold-up boat and trailer. Powered with outboard motors up to 5 *hp*.
LENGTH: 9′ 7″ DEPTH: 2′ 0″
BEAM: 3′ 10½″ WEIGHT 120 lbs.
SEATING CAPACITY: 2 people (4 in a pinch)
CONSTRUCTION: Built of ¼ in. exterior plywood with oak framing. Carefully designed to utilize maximum amount of plywood in 4 x 12 panels.

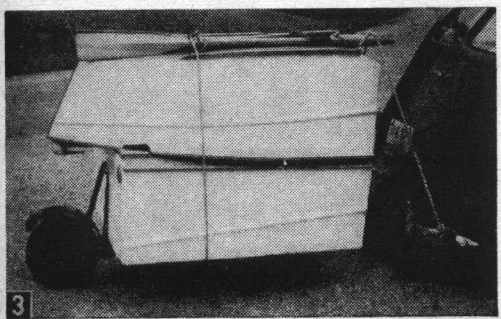
Craft Print Project
No. 192

Fore and aft halves of *Jump-N-Jack* float by themselves in case the girl friend wants to row home alone.

By BERTHEL MADSEN

FISHERMEN-CAMPERS! Here is your boat and trailer combined into one easy-to-build project. As a boat, you can use oars or outboard motor up to 5½ *hp*. Simply folding it over like a knife changes it into a one-wheel trailer for carrying your fishing or camping gear. But that's not all—slipping the wheel into the keel makes it easy to portage the whole unit right down to the water's edge, using the oars as handles. As a trailer, there's 40 cu. ft. of storage for fishing and camping gear, food and clothing.

Not only is this boat functional, it's easy to build. There's no form necessary, and you build the boat in one section, sawing it in two when complete. All in all, it's an ideal boat to build.

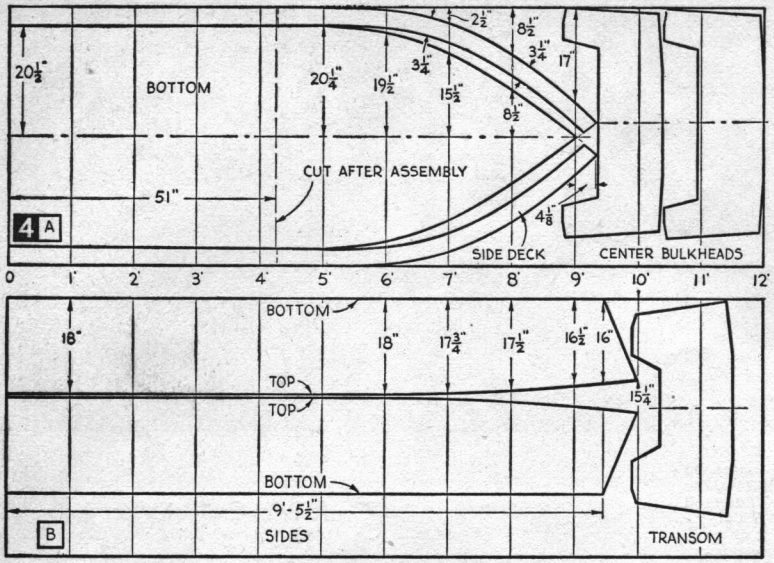


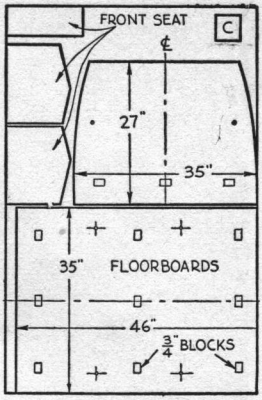
As a trailer, *Jump-N-Jack* hauls 40 cu *ft* of equipment.

First lay out the sides directly on one of the 12-ft. lengths of plywood (Fig. 4A). Check the one end of the plywood for squareness, then measure 1-ft. intervals down each side of the panel, connecting with lines for a grid. The measurements given allow about ¼ in. for waste, so cut on the line or as close as possible. Also draw the cutting line for sawing the boat in two. After sawing, clamp the cut-out sides together so grid lines match. Plane the edges so both sides are identical, and attach them to the 2 x 2-in. oak stem (Fig. 5A).

Cut out the transom and the two center sections or bulkheads. Along the edges of each bulkhead and transom glue and screw ¾ x 1⅛-in. strips for framing. The strips are secured flat with glue and No. 6 x ¾-in. *fh* screws. Follow the sequence of cutting and fitting as shown in Figs. 6A and B for assembling the frame to eliminate measuring angles.

Fasten the transom to one side plank with screws only. Then, remove the transom and fasten it permanently with glue and No. 6 x ¾-in. *fh* screws spaced at 4 in. to the opposite side.





MATERIALS LIST—JACK-KNIFE BOAT

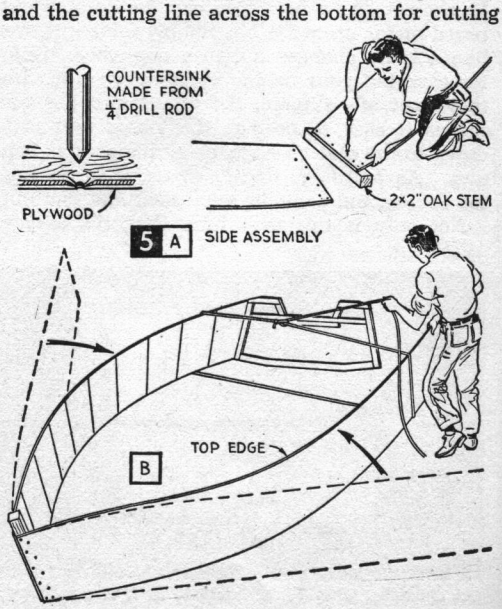
No. Pcs. Req.	Size	Use
2	4 x 12′ x ¼″ ext. plywood	Sides, bottom, deck, transom and bulkheads
1	4 x 6′ x ¼″ ext. plywood	Floor boards, seats
9	1⅛ x ¾″ x 10′ oak	Cut into ¾″ strips for framing
1	2 x 2 x 18″ oak	Stem
1	1⅛ x 3 x 10′ oak	Keel
6	¾ x ¾ x 12′ ¼-round oak	Rub rails, gunwales, coamings and floor board strips
1	⅝ x 2½″ x 8′ oak	Deck beams
1	½ x 3″ x 4′ oak	Deck braces
3	¼ x 2 x 10′ pine	Deck
3 gr	Screws, #6 ¾″ brass	
½ gr	Screws, #8 1¼″ brass	
3	Bolts, ¼ x 5″ brass	
2	3″ brass hinges	
1	#12 2″ brass screw	Keel to stem
		Oak locks
1 pr	70″	Oars
2	3/16 x 2¼ x 15″ brass or steel	Keel locking plates
2	3/16 x 2 x 15″ steel	Wheel bracket
1	3/16 x 2 x 7¾″ steel	Wheel bracket
1	¼ x 2 x 6″ steel	Wheel bracket
2	7/16″ dia. rod, 14″ long, steel	Wheel bracket
1	¼ x 2 x 4¾″ steel	Trailer hitch block
1	3/16 x 1½ x 2″ channel iron	Length to suit car
1	3/16 x 2 x 3½″ steel	Trailer hitch
1	4 x 8″, 2-ply pneumatic tire, 7″ hub, ⅝″ axle	Wheelbarrow wheel
5′		Chain
1	5/16″ carriage bolt, 1½″ long	Wheel bracket
2	⅜″ bolts, 2″ long	Wheel bracket
2	⅜″ bolts, 1″ long	Wheel bracket
2	⅜″ bolts, 2½″ long	Trailer hitch
1	½″ bolts, 2½″ long	Trailer hitch
2	⅜″ bolts, 3″ long	Trailer hitch
1	⅝″ bolt, 1½″ long	Trailer hitch king pin
1	¼″ carriage bolt, 2″ long	Chain bolt for king pin

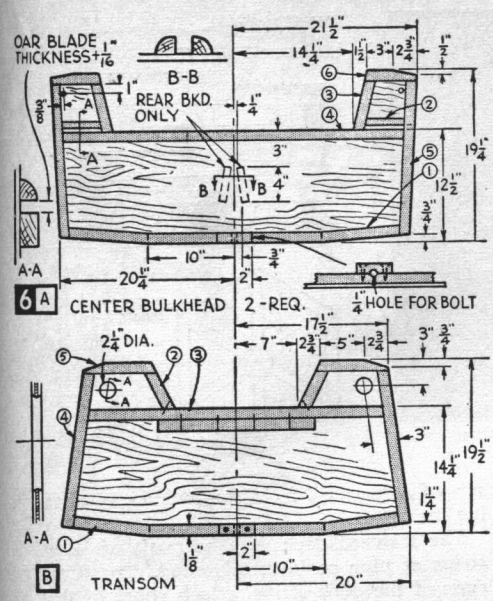
Now we are ready to shape the sides. Put the side attached to the transom against a wall with a rope around the stern end. Place yourself at the stern end of the opposite side, holding the loose end of the rope in your hand. Walk toward the wall, bending the sides until the side and transom meet, and secure the two with *Weldwood* glue and screws (Fig. 5B). Next locate the two center frames accurately by measuring from the transom. Check by cross-measuring as in Fig. 8.

Clamp them in position and glue and screw them using No. 6 x ¾-in. *fh* screws at 4-in. intervals.

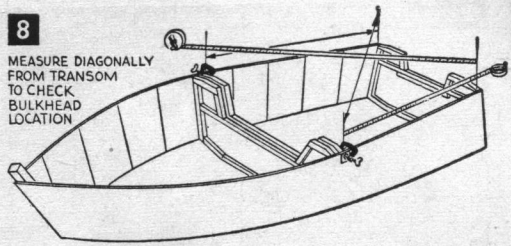
Chine-cleats are next, and should be prebent roughly to the shape of the hull. Soak the ¾ x 1⅛-in. oak strips for an hour or so until the oak becomes pliable. Then place one end of each of the strips on a box about 1½-ft. high. Simply run the wheels of your car up on the strips (Fig. 7D) and let them dry overnight. Cut the curved strips to fit front section and glue and screw securely in place. Do the same to the rear section. Remember that all of the joints have to be water-tight, so don't spare the glue. After the glue has dried, plane the edges of the boat flat to receive the bottom. Test the surface to be glued with a straight-edge to be sure the bottom lies evenly at all points.

Lay out the bottom as you did the sides, using station lines at one-foot intervals (Fig. 4B). Mark the centerline (used later for alignment) and the cutting line across the bottom for cutting





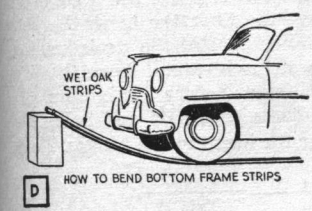
the sections apart. After cutting the bottom to shape, line up the centerlines at the ends. Locate and drill for several No. 6 x ¾-in. *fh* screws around the edges, starting at the bow and working both sides aft. Temporarily secure the screws as you drill. One screw every foot will do. Then

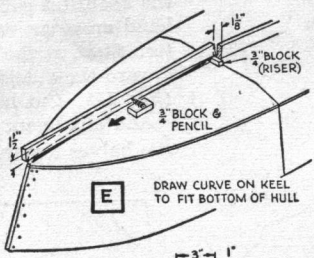


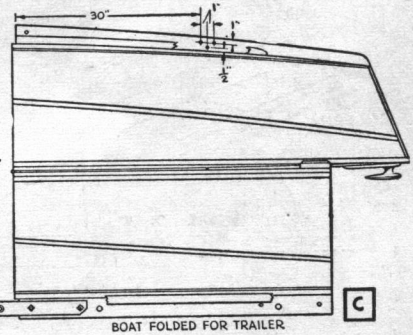
go back and drill for intervening screws every 4 in. slightly staggered. Mark around the frames on the inside of the bottom to show the extent of the glue area. Take the bottom off, liberally coat both the contact surfaces of the framework and the bottom with *Weldwood* glue. Fasten the bottom in place, first with the key screws, then the intervening ones. When the glue has dried, trim the edges flush and sand.

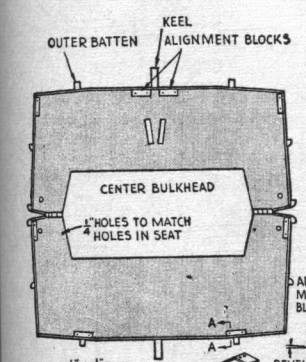
She's ready for the 1⅛ x 3-in. keel now, which is made in two pieces. The separation will come at the point where the boat will be cut for folding (Fig. 7E). Make sure the keel is lined up on the centerline, and secure it with glue and screws from the inside every 4 in. From the outside, use three ¼-in. brass bolts and one 2-in. brass screw into the stem.

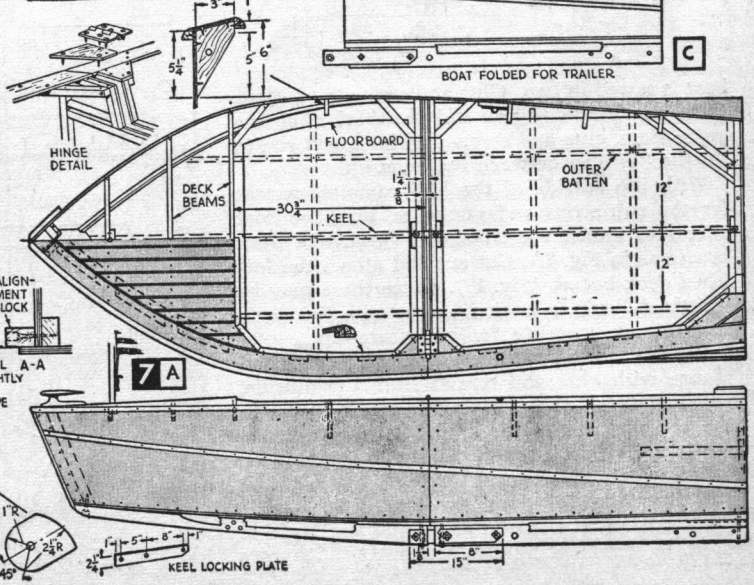
The ¾ x 1¼-in. outer battens are next, and are attached in one piece, to be cut when the



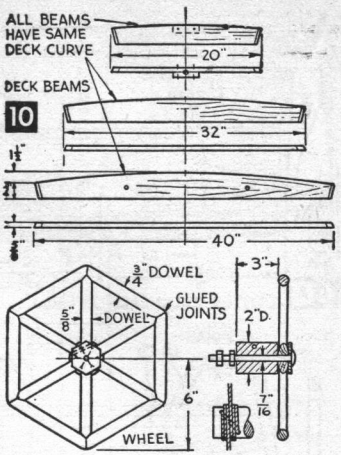


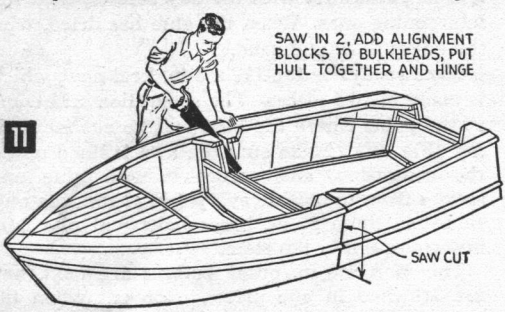


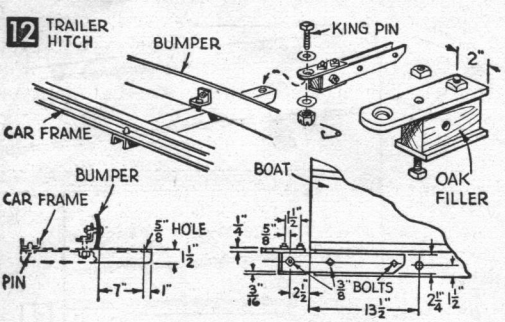




Jump-N-Jack makes an ideal boat for lake fishing and water fun.







boat is sawed in two. Glue and screw the battens from the inside as you did the keel. For the outer stem, glue and screw a ½-in. dowel rod to fill the "V" gap between the ends.

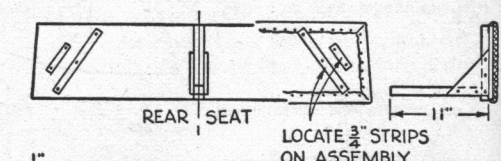
With the outside of the hull complete except for the rub strips and gunwales, turn the boat over and attach the triangular ½-in. oak deck braces as in Fig. 7A. Cut out and attach the forward deck beams (Fig. 10). Since these may be a little difficult to work in, start with the beam farthest aft, measure forward from the center section to locate beam, bevel ends to fit side and secure with glue and screws from the outside. Cut and fit all of the diagonal corner braces in the cockpit, and secure the long plywood side decks to half deck braces with glue and screws.

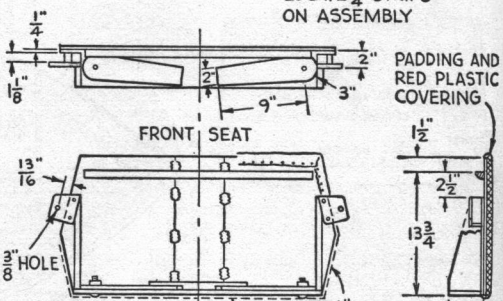
Before going further, attach the ¾-in. ¼-round rub strips and gunwales from the inside. Attach them starting at the bow with glue and No. 6 x ¾-in. *fh* screws at 5-in. intervals. At the frames screwfasten strips from the outside, countersinking the heads.

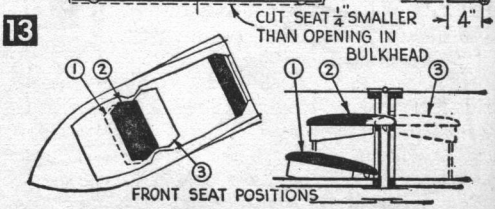
The forward deck may be made of ¼ x 2-in. strips of pine or ¼-in. plywood. To secure the ends of the deck strips, attach short battens between the beams to the underside of the side deck (Fig. 7A), then fasten the strips with ½-in. copper nails or screws. Quarter-round oak molding is used for the cockpit coaming, screwfastened in place with No. 8 x 1¼-in. *fh* screws (Fig. 7A).

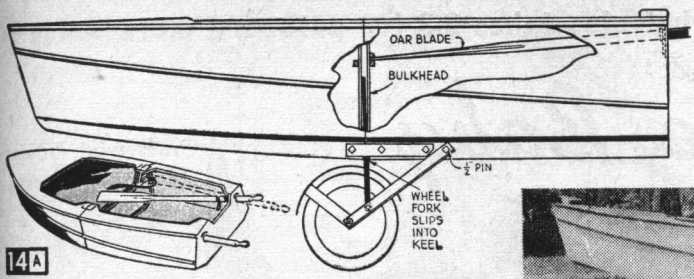
Now is the time for your magic act—cutting the beautiful gal in two. You can use a common hand cross-cut saw—the finer the teeth the better. Start at the inner part of the deck, sawing toward the outside of the boat and down the side (Fig. 11). Cut both sides before the bottom.

Add alignment blocks (Fig. 7B) and bring the two halves together for locating the hinges. Next,





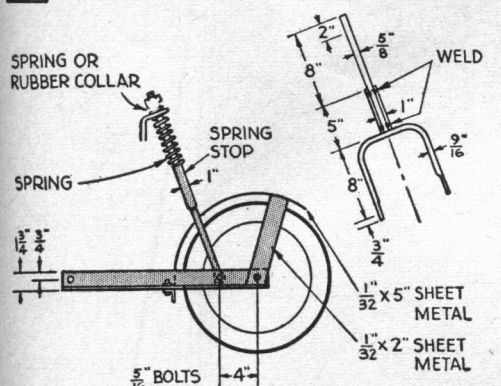


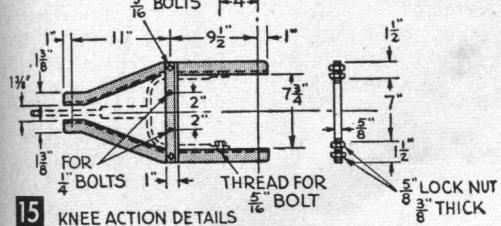


14A

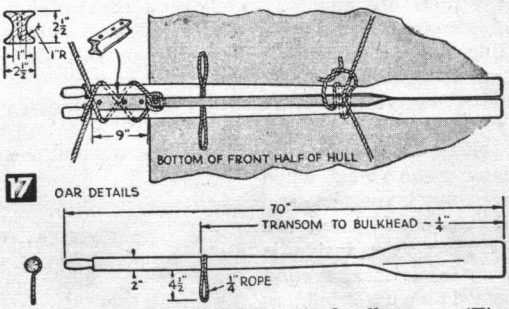
With the wheel mounted between halves and the oars through transom, *Jump-N-Jack* wheels to the water.

B





15 KNEE ACTION DETAILS



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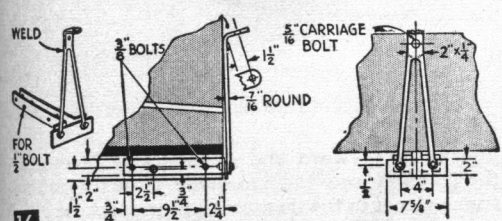

16 WHEEL BRACKET DETAILS

with the boat upside down, locate and drill holes in the keel for the 3/16-in. brass or steel locking plates at the joint (Fig. 7A). These locking plates double as supports for the trailer hitch piece.

The hitch piece and the automobile bracket are made next (Fig. 12). Screw the bow guide blocks on the stern deck (Figs. 7A and C) to keep the two sections aligned in folded position. Note the two guide blocks on the forward bulkhead for the shaft of the knee action fork used when the boat is being wheeled (Fig. 14B).

The center seat (Fig. 13) is used to fill the opening left in the bulkheads when the boat is folded for road travel. A bow chock will be needed to fill the motor opening in the transom and provide a place for the bow to rest when folded for traveling on the road (Fig. 7B).

Saw holes in the transom for the oars when the boat is wheeled like a wheelbarrow (Fig. 6B). A cam (¼-in. thick plywood) inside the transom locks the oars when wheeling boat (Fig. 7B). Rope loops, tacked on the oars, keep them from sliding through the holes. A small piece of rope is tacked over the oar holes in the transom to shed water and 3-in. reflectors cover the holes for road travel to reflect headlights of other cars if it should be necessary to drive at night. Some states may require an electric rear light which can be run from the rear lights of your car.

Now we are ready for the wheel bracket at the stern of the boat (Fig. 16). You may need help from a local welder for these parts, but it shouldn't be expensive. Make the knee action fork according to Fig. 15. A heavy 6-in. coil spring with ⅝-in. I. D., rubber collar, ⅝-in. nut and a cotter pin complete the knee action unit. Use an ordinary pneumatic rubber-tired wheelbarrow wheel with roller or ball bearings.

Give the boat two coats of *Firzite* inside and out. After the second coat, fit and screw the floorboards in place on small oak pads (Figs. 4C and 7A). Paint the boat and add hardware.

A steering wheel can be easily made from glued hardwood dowels (Fig. 10). Bolt the finished wheel assembly to the boat.

Craft Print Project
No. 192