



This kayak folds like a book

By JESS E. RATHBUN

You can carry a fleet of these lightweight craft on top of your car

IT'S NOT FAST, it's not roomy and you won't find many practical uses for such an outlandish craft. In fact, this center-folding kayak has only one feature to recommend it—it's fun.

It's also inexpensive so you can afford to make one for every member of your family. And you can tote a whole fleet on top of your car.

Construction is unorthodox. Instead of using screws, nails or other common fasteners, you "tape" the boat together with canvas and contact cement. No metal parts are required.

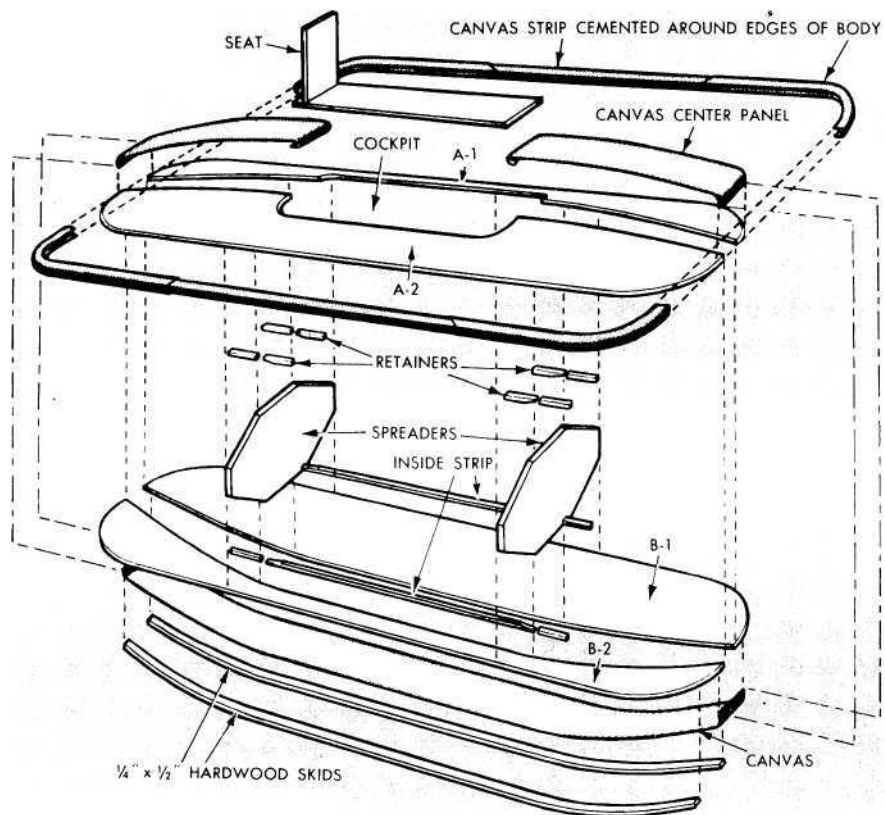
Built according to the specifications included here, the kayak will weigh only about 40 lbs. and will accommodate an average-sized man. However, so long as the correct proportions are maintained, you can shrink the dimensions to turn out a midget version or increase them slightly to gain a little more leg room.

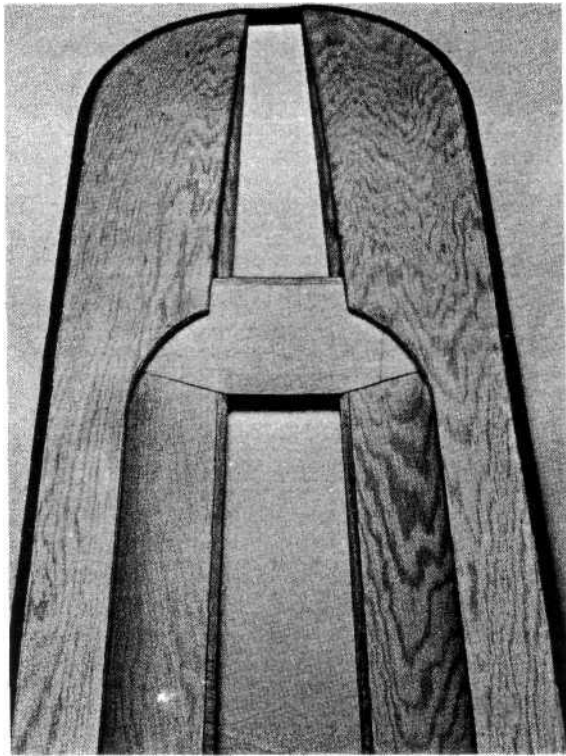
While marine plywood may be used for the side panels, exterior grade AA (or even AB) will do just as well here. Canvas can be anywhere between 14 and 18-oz. weight, but should have a tight, close weave for easy waterproofing.

Begin construction by cutting the four side panels from a 4 x 10-ft. sheet of 1/4-in. plywood. All these panels have the same outline, the only

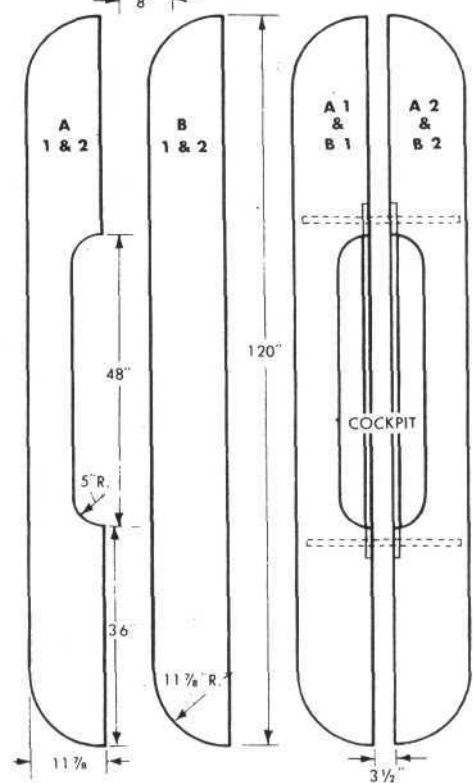
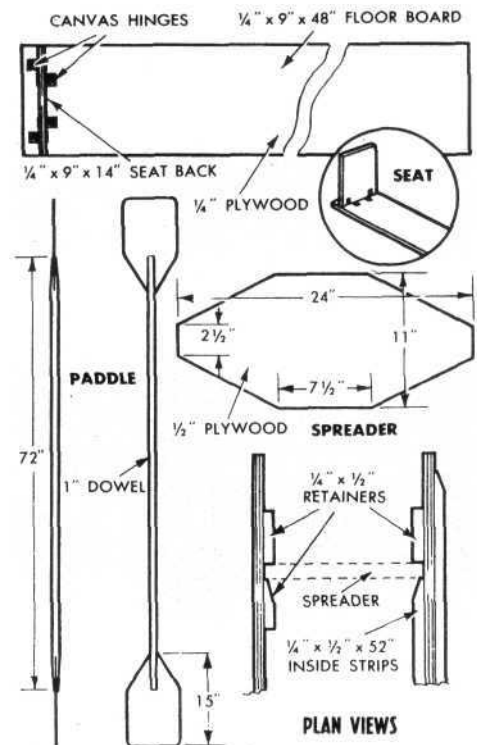


This kayak weighs only 40 lbs. and folds down the middle so that you can carry it easily. Note the bottom rub rail which protects the canvas. You can carry a fleet on your car





Install the spreaders after "taping" the edges of the panels. These should be trimmed for a proper fit before the center gap is covered with canvas. Allow enough slack for removal of the spreader for folding



difference between the top and bottom pair being the cockpit cutouts. If you're planning to make two or three kayaks, cut the required number of panels at one time so that you can use the first two as patterns. The rounded ends of each panel are squared off slightly to present a 1-1/2-in. square edge so that the canvas will go around from top to bottom without wrinkling.

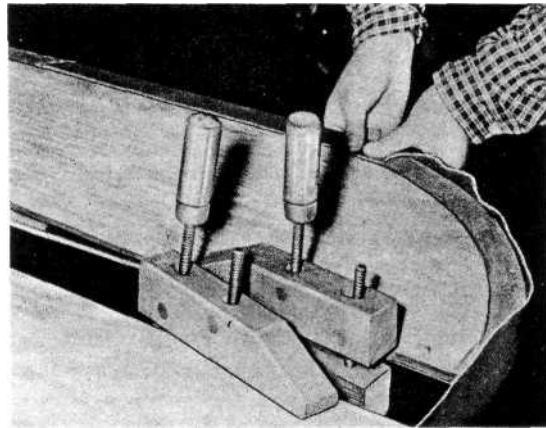
Next, cement the 1/4 x 1/2-in. inside strips and retainers to the panels, positioning them flush to the edge with the 1/4-in. face down. The strips are designed to provide reinforcement for the seat-bottom floorboard, but also to form notches to hold the spreader boards. Taper the ends of these strips and the inner retainers so that you can remove and insert the spreaders easily. Outer retainers act as stop blocks and need not be tapered. Once these are in place, paint the inner surfaces of the panels since they will be almost inaccessible once the boat is assembled. You

should be careful to keep paint off the outside surfaces for this will prevent the contact cement from adhering.

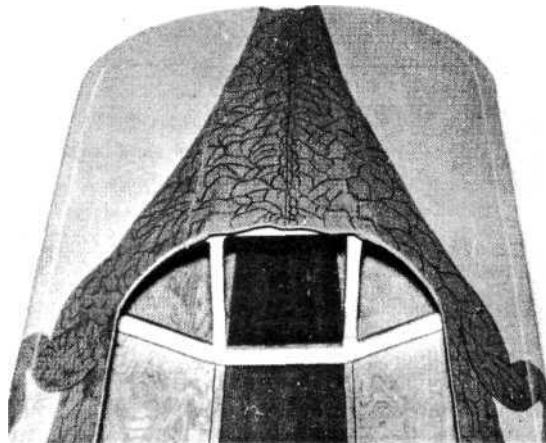
To assemble, position top panels on bottom panels. Then, using clamps and a spacer block at each end, mount the right-hand pair 3% in. from the left, as shown in the photo. You'll have to cut the canvas edging strip at a 45-deg. angle to the weave to provide the necessary stretch so that it will fit around curves without wrinkling. Apply cement to both wood and canvas surfaces, but *do not* cement the canvas which stretches across the gap between the two pairs of panels since this will stiffen the fabric.

To apply the canvas edging, hold one end flat against the edges of the plywood and stretch it. Then, while it is stretched, fold the sides of the strip over both top and bottom panels at the same time. Do a short section at a time, overlapping joints in the canvas about 2 in. Try a practice session with scrap plywood before attempting it on the boat itself. After edging is complete, pound the cemented surfaces with a block of wood and hammer or mallet to insure a good joint, then let the cement set overnight before inserting the spreader boards.

Next, cut the spreader boards, check the fit and trim if necessary. However, keep in mind that there will have to be a certain amount of slack in order to remove the spreader boards easily. With the spreaders in place, cover the center gap with Canvas, then remove the spreaders and cement the skid strips to the bottom. After making the seat and the double-blade paddles, waterproof the canvas and paint all wood parts.



Clamps and a spacer block are used to position the two pairs of panels the correct distance apart



Cutting out portions of the spreader will lighten it without reducing strength to the critical point. An alligator treatment is used to decorate the hull

The covering of the gap between the right and left pairs of the panels is the last step before the hull is finished. You should allow 2 in. extra at the cockpit and fold it underneath

MATERIALS LIST		
Plywood (Ext. grade AA or AB)		
1 pc.	1/4" x 4' x 10'	Body panels
1 pc.	1/4" x 9" x 4'	Floor board
1 pc.	1/4" x 9" x 14"	Back rest
2 pcs.	1/4" x 8" x 15"	Paddle blades
2 pcs.	1/2" x 1' x 2'	Spreader boards
Lumber (All hardwood)		
2 pcs.	1/4" x 1/2" x 6'	Inside strips
2 pcs.	1/4" x 1/2" x 10'	Outside skid strips
1 pc.	1" x 6' dowel	Paddle bar
Misc.		
24-ft. strip of canvas 2 1/2 in. wide, cut on bias		
17-ft. strip of canvas 10 in. wide		
1 qt. contact cement		
Finishing materials (waterproofer, paint, etc.)		

