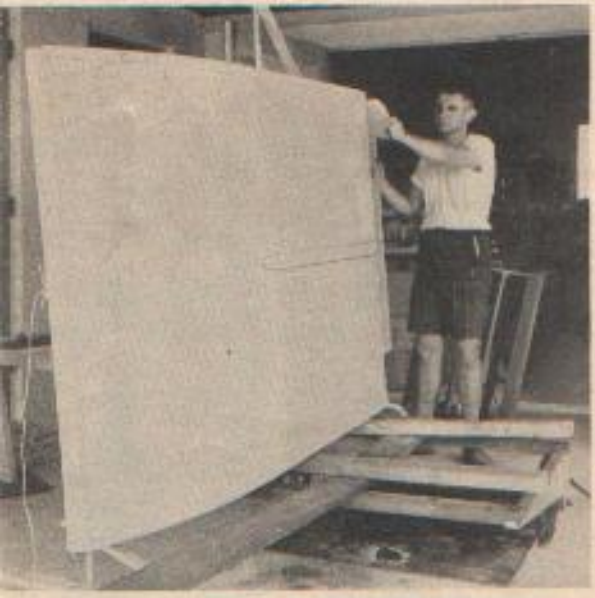




FLAT-BOTTOMED boat has no propeller to foul in weeds, lily pads or other growth.

Build POGO

—a paddle wheeler that skims over shallow waters at 9 mph.

By Harry J. Miller

POGO isn't a boat for navigating rough waters, but 15-year-old Jimmy Tench of Bradenton, Florida, had no such intention when he designed her. For his hobby of gathering orchids and exploring the placid bayous near home, he needed a boat with shallow draft and a propulsion system that wouldn't foul in the dense growth of mangrove, hyacinth and grass. Thus he produced this flat-bottomed paddle

wheeler which skims over the watery vegetation and takes him right up to the shores bordering the inlets.

The little boat moves along, too. Jimmy heads her up the Braden River at a 9 mph clip under the thrust of an old 3-hp mower engine which he bought in a junk yard for $15 and overhauled himself, spending another few dollars for new rings and gaskets. His total cost for the boat and engine came to just $50.

Thought out and built in six weeks of spare time, Pogo is quite simple in construction. A 4x8-foot sheet of quarter-inch exterior plywood provides the bottom, with some left over for the spray shield. The sides are two six-foot lengths of 1x10-inch fir, cut to the shape indicated in the drawing. The transom is another piece of 1x10-inch fir, cut to the dimensions shown, and a beveled piece of 2x4 stock is used at the bow.

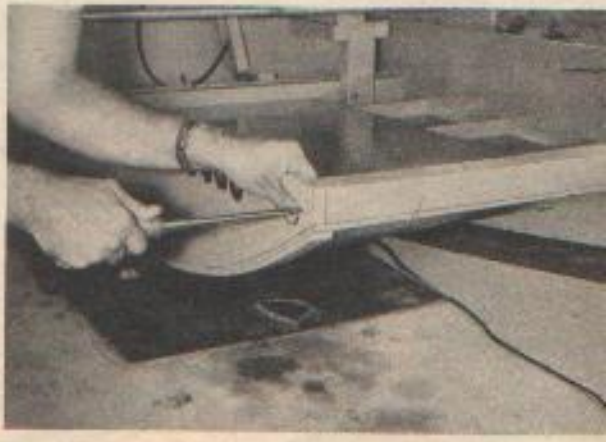
First assemble the frame, which consists of transom, sides and bow piece. Use waterproof glue and 1½-inch brass or galvanized screws at each joint. Then install the plywood bottom, using glue and Anchorfast copper nails. Note that the 48-inch-wide bottom does not cover the full width of the frame. Center it on the transom and work forward, allowing the frame to project equally on each side. When you reach the bow curve, the bottom may be bent easily by soaking it with hot water and clamping it until the fastenings are in.

Next the reinforcing strips are installed on each side. These strips also should project beyond the bottom so that the outside edges are flush with the sides. Use glue and 1¼-inch screws to secure the strips and, when the job is done, fill the recesses between the strips and the sides with calking compound.

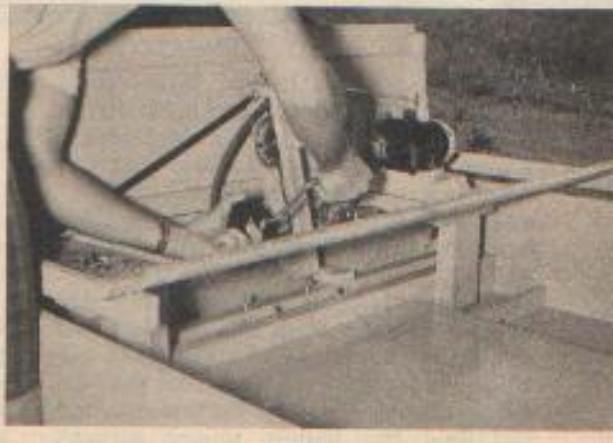
With the hull complete, the 2x4 engine supports and the 2x2 bat-



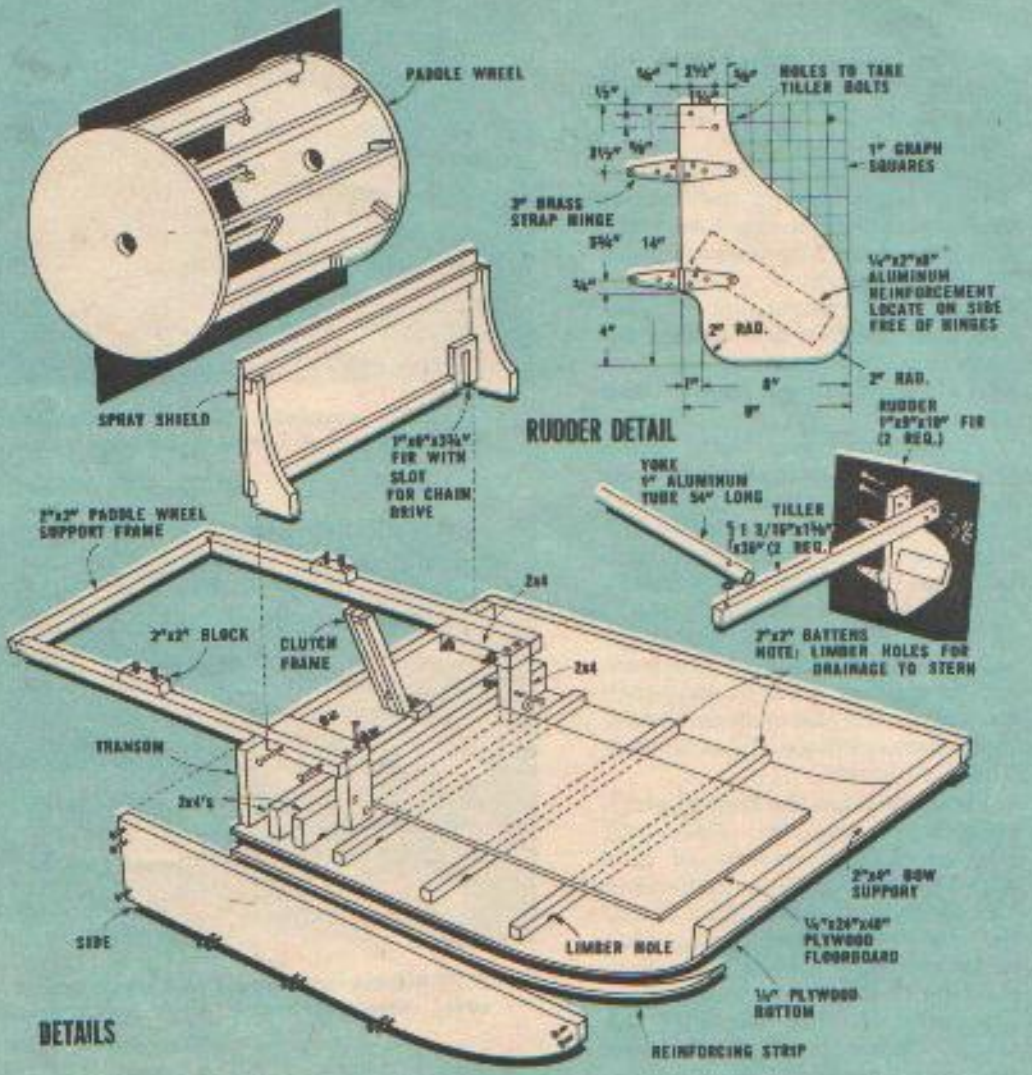
CALKING compound fills the recesses between sides and bottom reinforcing strips.



SCREWS are countersunk and heads calked over. Note reinforcing strip installation.



STURDY 2x4 platform is provided for engine, clutch and the 10:1 reduction gear.



tens are installed inside. First cut a ¼x1-inch notch about three inches from each end in the bottom of each piece. These limber holes will allow water to run the length of the hull and flow out through a drain which is later installed in the transom. The 2x4's are secured with glue, screws through the sides, and four extra-long lag bolts which are passed through from the bottom and double as engine mounts. The 2x2's are simply glued and screwed from the bottom and sides. Notching the transom and installing the paddle wheel support frame completes the basic structure.

The ends of the paddle wheel carry eight blades spaced equidistant around their perimeters. The blades, 1x2½-inch fir, are set on 1x1-inch cleats for added strength at the joints. A detail shows the half-inch steel shaft assembly which passes through the middle of the wheel and terminates in pillow blocks mounted on the support frame.

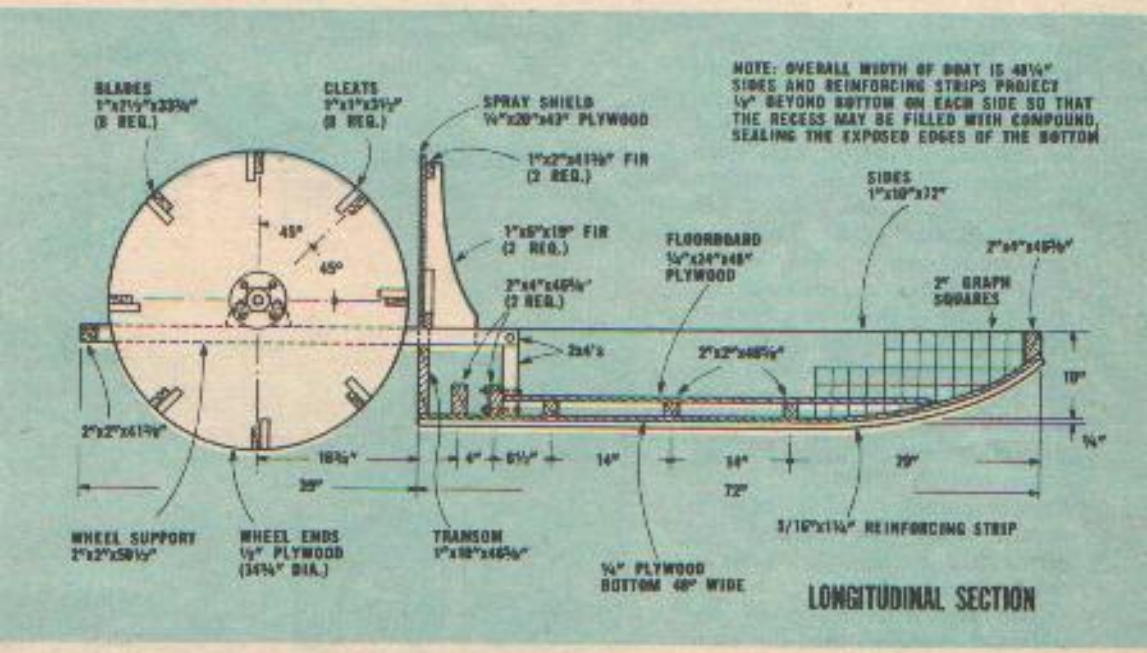
To decrease the speed of the paddle wheel and permit mounting of the engine in the center of the boat, Jimmy used a series of reductions. A 10:1 reduction gear which came from an old piece of machinery in a junk yard was bought for five dollars. Between this gear and the paddle wheel, a 3:1 reduc-



TWIN RUDDERS are installed with 3-in. strap hinges at the ends of the transom.

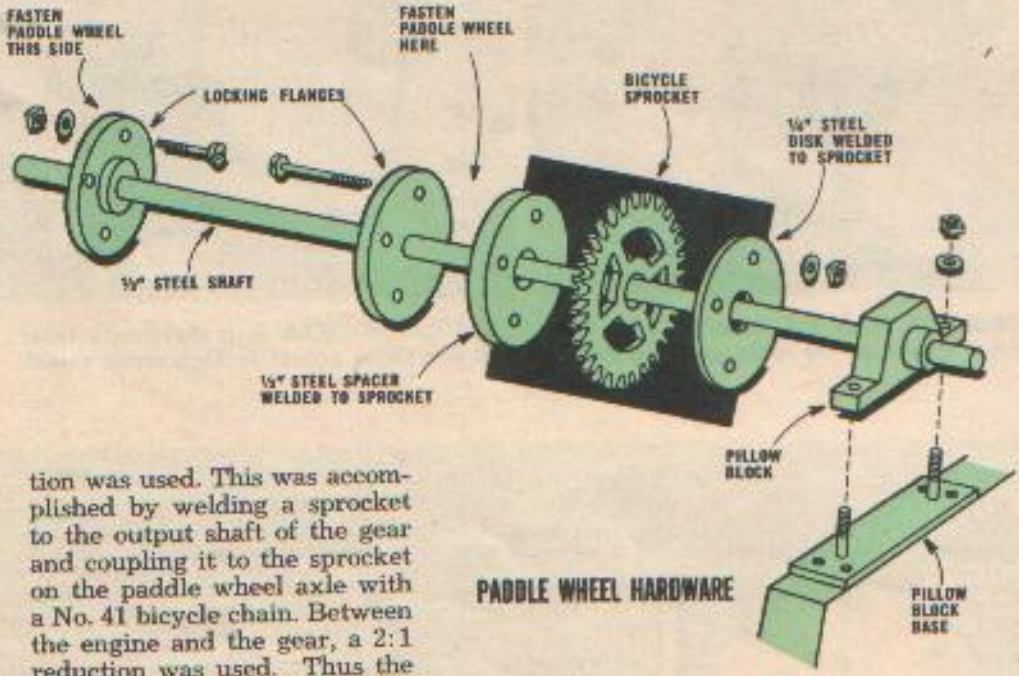


REDUCTION GEAR is a right-angle type: bicycle chain passes through spray shield.





MOUNTING of engine, spring-loaded clutch frame and reduction gear are shown above.

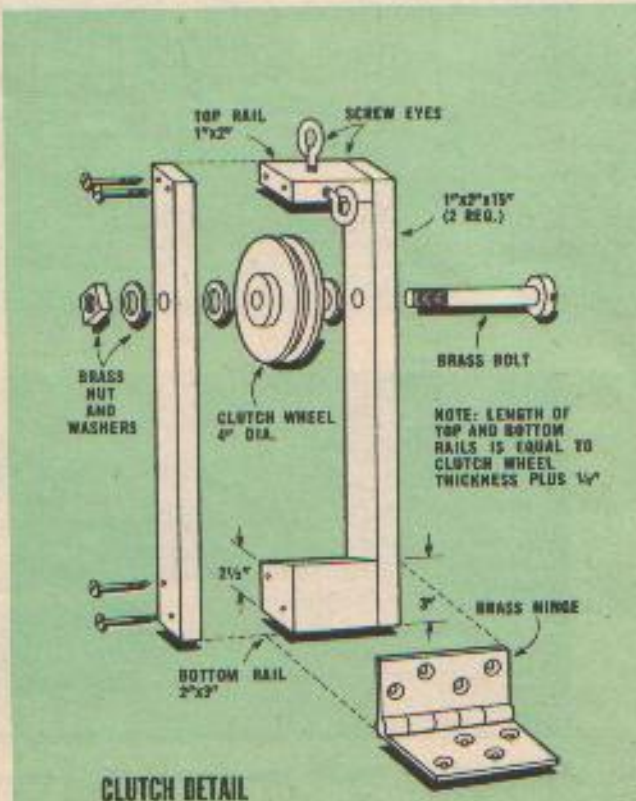


PADDLE WHEEL HARDWARE

tion was used. This was accomplished by welding a sprocket to the output shaft of the gear and coupling it to the sprocket on the paddle wheel axle with a No. 41 bicycle chain. Between the engine and the gear, a 2:1 reduction was used. Thus the total reduction is 60:1, which properly loads a Briggs-Stratton Model 6-S or equivalent engine. For convenience, two engine controls are carried forward. A cable leads to a throttle control lever mounted on one side, and a single-pole, double-throw switch is installed below the lever and wired so that the engine may be stalled by grounding out its spark plug to the engine housing.

The clutch is mounted between the engine and the gear and is essentially a spring-loaded idler wheel operating inside a pivoting wooden frame that is controlled by means of steering cable passing through pulleys to the bow. A refinement here would be a rubber-faced brake mounted in conjunction with the clutch to prevent creeping when the clutch is disengaged.

Pogo is steered by dual rudders, has a spray shield which deflects paddle wheel spray and a sheet plywood floor on which Jimmy sits as he wends his way around the waterways. •



CLUTCH DETAIL


POGO