

# Paddle Boat for Summer Fun

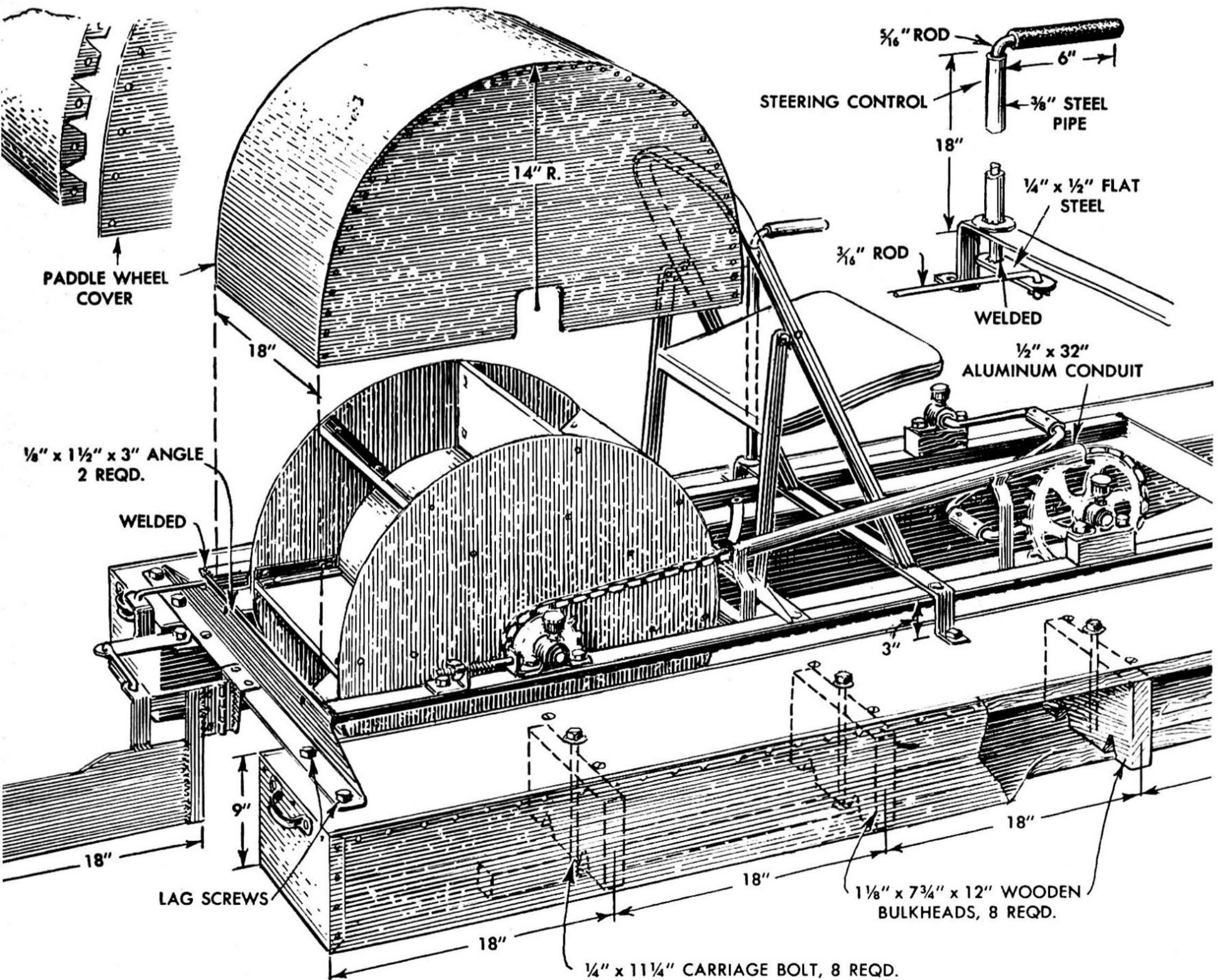
**D**O YOU WANT something different in a water sport at your lake cottage this summer? Then build this twin-hull paddle-wheel boat that will provide hours of safe fun and healthful exercise for children and adults alike. Constructed almost entirely of metal, the durable craft will retain its initial buoyancy all season and withstand unusually rough treatment.

The pontoons are made of 24-ga. galvanized steel, cut, bent and nailed to  $1\frac{1}{8}$  x 12 x 96-in. pine lumber as shown in the detail below. Four wooden bulkheads in each pontoon and a 5-ft. length of 2 x 2 bolted to the bottom act as reinforcement, while riveted and soldered seams at the bow and stern make the pontoons watertight. A drainage plug is fitted in the forward end

of each pontoon as shown, so that water can be removed in the event a leak develops. Heavy-duty drawer pulls screwed to the bow and stern of each pontoon facilitate tying up at a dock and carrying of the craft. All wooden parts are prepainted on all surfaces before assembly to reduce water absorption.

## Chassis, Steering, Pedal Assemblies

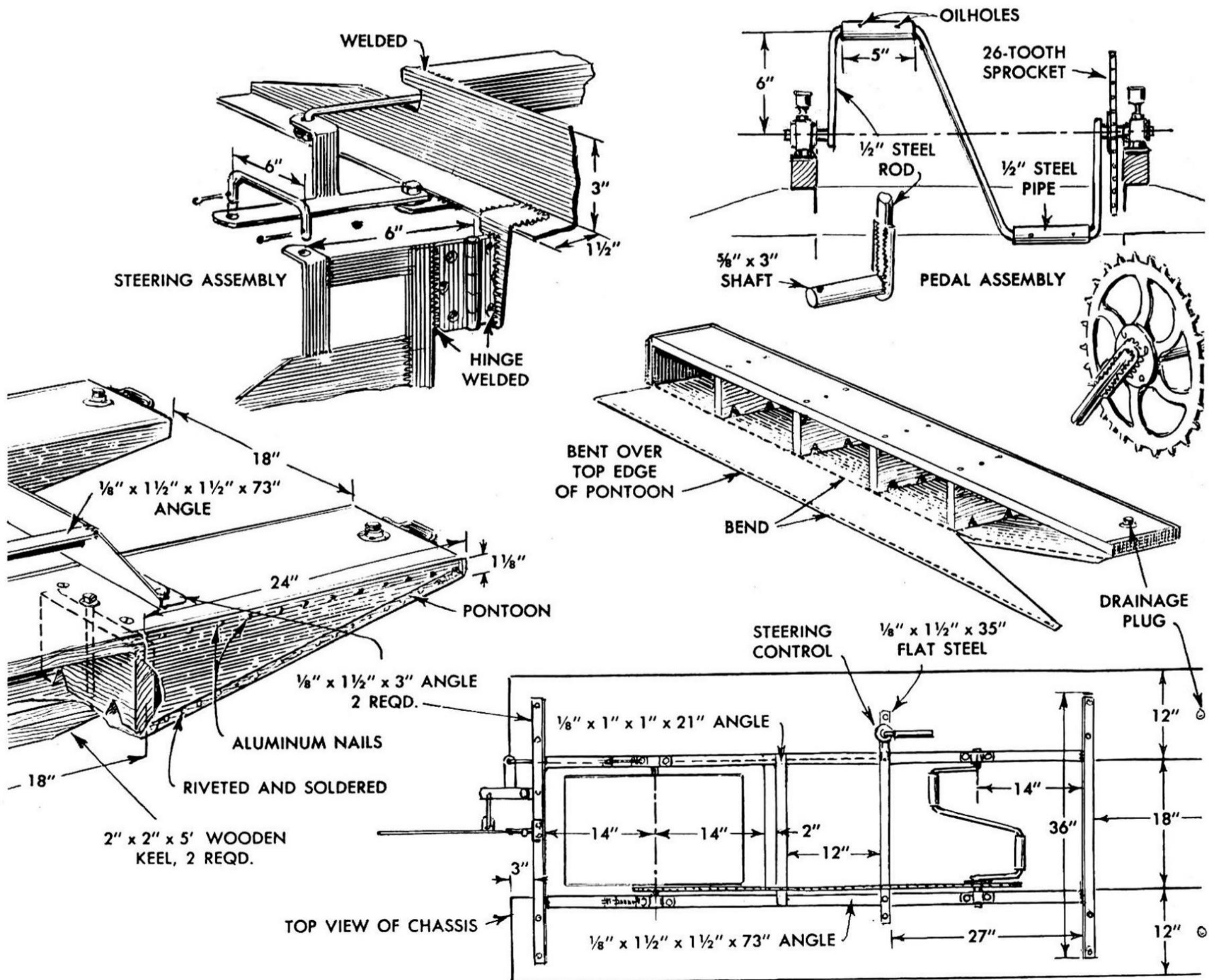
The chassis is made of welded steel angles fastened to the pontoons with lag screws. The metal folding chair is held rigidly in place by welding the legs to two crosspieces, the after crosspiece of which is welded to the chassis and the forward one bolted to the chassis and pontoons. The latter crosspiece also supports the chassis.



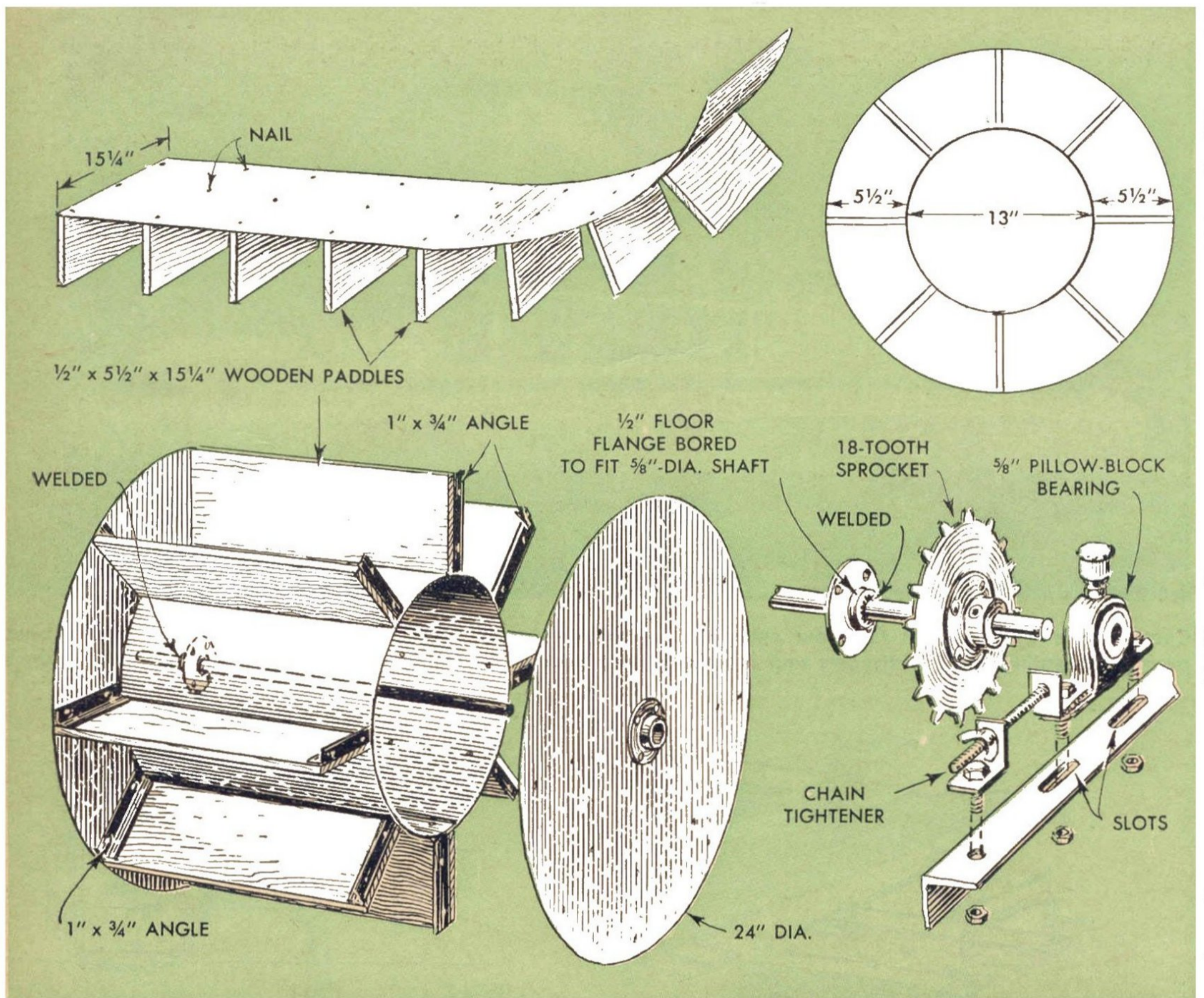




Considerable overhang at the bow ends of the pontoons, and shoal draft of this stable paddle boat permit navigating shallow streams and lakes and easy launching and boarding whether from beach or dock







**When mounting paddle wheel on chassis, assemble sprocket and pillow blocks on shaft before securing blocks**

The rudder is made of four pieces of 18-ga. sheet steel and a T-hinge welded into a unit as shown in the detail. A combination of levers and rods connect the rudder with the steering-control rod. The latter is housed in a vertical steel pipe welded to the forward crosspiece.

Two sprockets, one with 18 teeth and the other with 26 teeth, taken from an old bicycle, provide a favorable ratio for easy pedaling and sufficient speed. Before bending the steel rod for the pedal crank, it is necessary to drill oil holes in the lengths of steel pipe used for pedals and slide the latter into position on the rod. Then, the  $\frac{5}{8}$  x 3-in. shafts are welded on the ends of the crank and the joints reinforced by welding a U-shaped rod over the first weld of each as shown in the detail. After the pedal assembly is completed, it is mounted on pillow-block bearings, top view of the chassis.

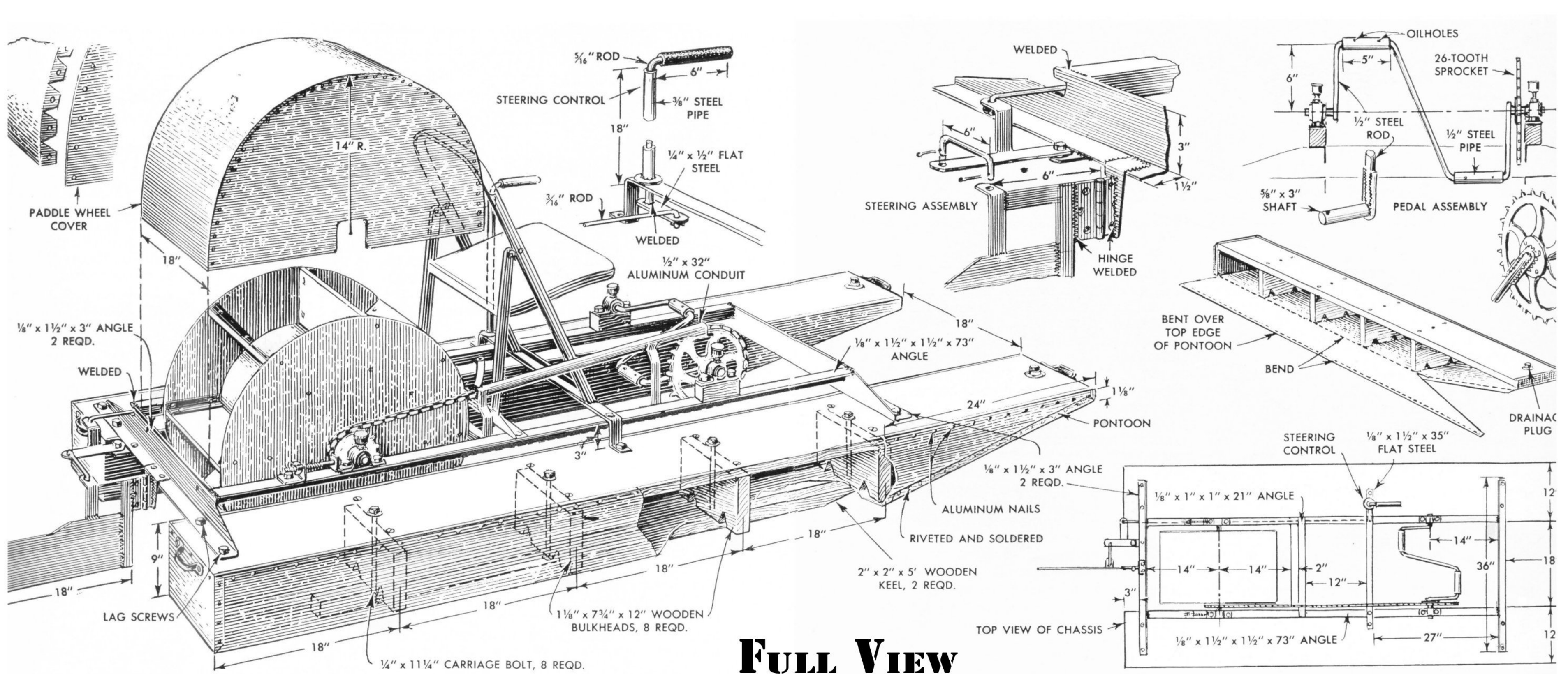
### Paddle Wheel

Constructing the paddle wheel is easy. Simply nail the eight wooden paddles to the strip of galvanized steel that forms the

hub as shown in the detail. The strip should be long enough to provide a diameter of 13 in. when it is formed into a circle and the ends overlapped  $\frac{1}{2}$  in. and nailed to the appropriate paddle. All the sheet metal for the paddle wheel and cover is 24-ga. galvanized steel, including the 1 x 4-in. angles that secure the paddles to the end pieces. The top of the paddle-wheel cover is screwed to the side pieces as shown in the detail. When the paddle wheel is completely assembled, the floor flanges are riveted to the ends and welded to the shaft as shown. Then, the small sprocket is slipped on the shaft for later positioning and securing, and the entire paddle-wheel unit is mounted on the pillow blocks. After the chain is installed, the chain tightener is bolted in place and given proper adjustment for efficient operation of the chain.

A chain guard made from  $\frac{1}{2}$ -in. thin-wall aluminum conduit, is welded to the chassis for protection of the rider's leg. Removal of the 10 lag screws that secure the chassis to the pontoons permits quick disassembly into three major parts for easy transport to and from the place of use.





# FULL VIEW