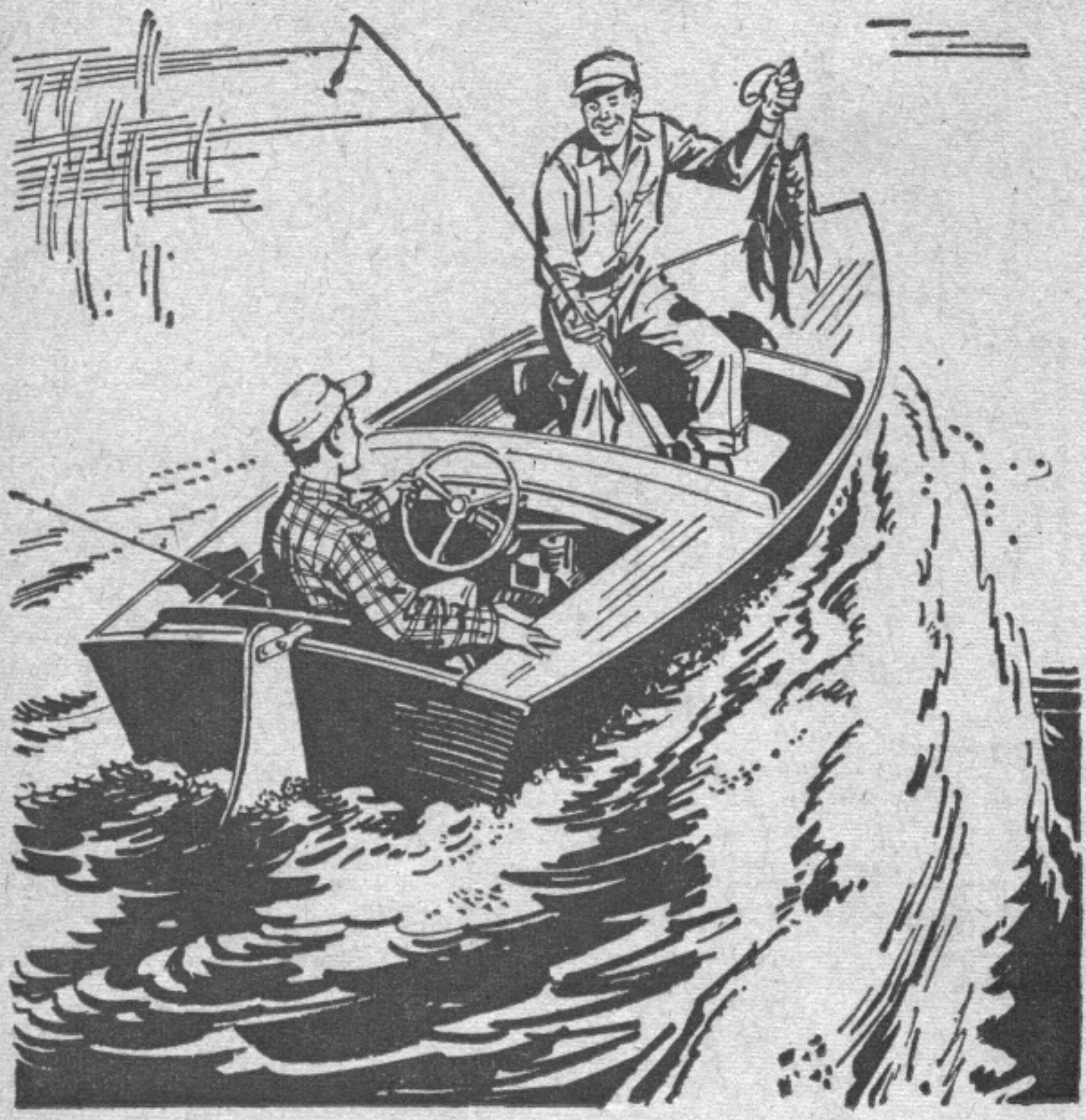


# Taxiboat

By WM. D. JACKSON

Craft Print Project No. 18

THERE'S good money to be made in the renting of boats, provided you own the type of boat that meets the needs of a majority of the boating public. Here is a sturdy, dependable livery scooter that's ideal for fishermen and small family outings. It can be powered by a small, air-cooled inboard motor (such as the 1¾ or 2 *hp* U.S. Motors Corp., Clinton, Briggs, etc.) which costs little and will operate all day long at 5 to 10 *mph* on a minimum of fuel. You'll find that a fleet of these serviceable scooters is easy to build and may provide you with a profitable boat rental business.

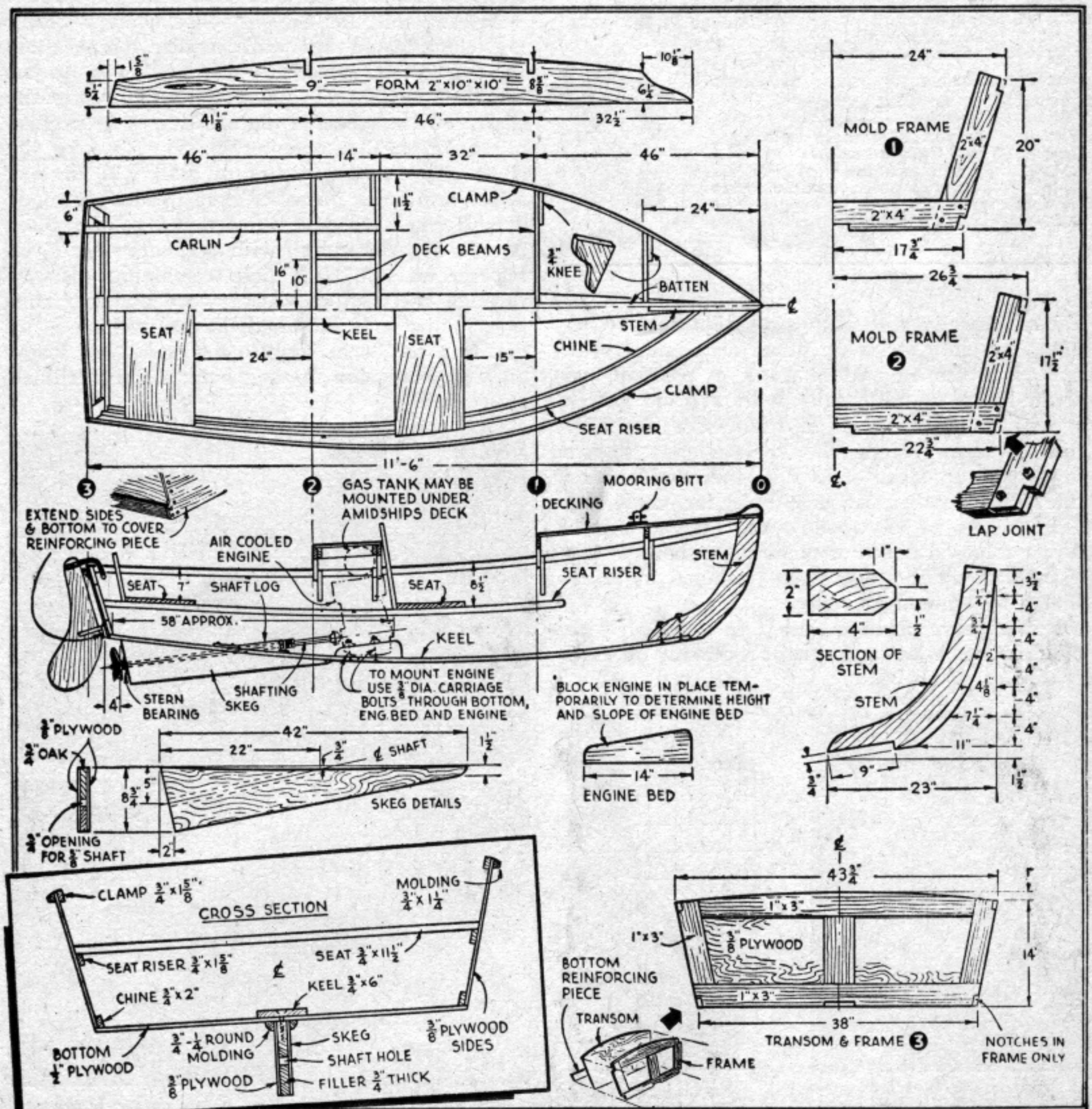
In constructing this scooter, if you keep plywood patterns of everything you can use them over again to help you build as many of these boats as you think you can use. First saw the form to shape from a 2x10 in. x 10 ft. pine plank; mount form on legs similar to a sawhorse at a convenient working height. Next cut the transom from ⅜ in. plywood and glue and screw-fasten the frame to the transom, using resorcinol resin glue (Weldwood or Cascophen) and 1 in. #8 *fh* (flathead) screws. Saw the stem to shape and bevel it as shown. Then cut mold frames from pine 2 x 4's, lap the joints and screw-fasten them together. (These mold frames serve only to give shape to the hull during construction and are later removed.) Next notch the frame part only of the transom assembly, notch mold frames for keel, chines, and clamps and notch the stem for the keel. Taper the keel from the #1 mold to the stem as shown. Now notch form for mold frames and mount transom, stem and molds atop form. Place keel in position and fasten it to transom and stem using two 2 in. #10 *fh* screws to each joint; don't fasten the keel to the molds as these will be removed later. Should the keel or any other member spring away from molds, hold it temporarily in place with small angle irons screw-fastened in place; these are easily removed when hull is planked.

Side view of Taxiboat ready for launching.

**Framework ready for bottom and sides, with chines and clamps in place.**

Spring the chines in place on each side, trimming them to fit transom frame, beveling them forward to fit the stem, and fastening in place with one 2 in. #10 *fh* screw to each joint. Next spring clamps in place and fasten them as you did the chines. Now fair and trim the frame work so that plywood to be applied lies evenly at all points.

To plank the sides, lay a plywood sheet in position, mark and cut to shape and use shaped plank as a pattern for the opposite side. Coat adjoining surfaces (chines, clamps, etc.) with resorcinol resin glue and clamp planks in position. Fasten planks to transom, stem and chines with 1 in. #8 *fh* screws spaced about 2 in. apart, and along the clamps, fasten plywood with 1¼ in. galvanized shingle nails. Trim this plywood evenly along chines and stem. Then place a ½ in. thick plywood on bottom of hull and mark and cut to shape. Now coat keel, transom and



### MATERIALS LIST—LIVERY TAXICAB

**Exterior Plywood:**

| | |
|---|---|
| Sides | 1 pc. 3/8" x 4' x 12' |
| Bottom | 1 pc. 1/2" x 4' x 10' (waste makes skeg sides) |
| Transom | 1 pc. 3/8" x 15" x 44" |
| Rudder, seats and beam knees | 1 pc. 3/4" x 48" x 60" |
| Decking | 1 pc. 1/4" x 4' x 8' |

**Other Lumber:**

| | |
|---|---|
| Keel | 1 pc. 3/4" x 5 3/4" x 10' pine |
| Chines | 2 pcs. 3/4" x 2" x 12' pine |
| Clamps | 2 pcs. 3/4" x 1 5/8" x 12' pine |
| Deck beams | 1 pc. 3/4" x 11 1/2" x 5' pine |
| Moldings | 2 pcs. 3/4" x 1 1/4" x 12' pine |
| Stem | 1 pc. 2" x 11" x 30" oak |
| Seat risers | 2 pcs. 3/4" x 1 5/8" x 8' pine |
| Mold frames | 1 pc. 2" x 4" x 12' used lumber |
| Form | 1 pc. 2" x 10" x 10' used lumber |
| Engine beds | 1 pc. 2" x 4" x 2' oak or yellow pine (cut to suit engine used) |

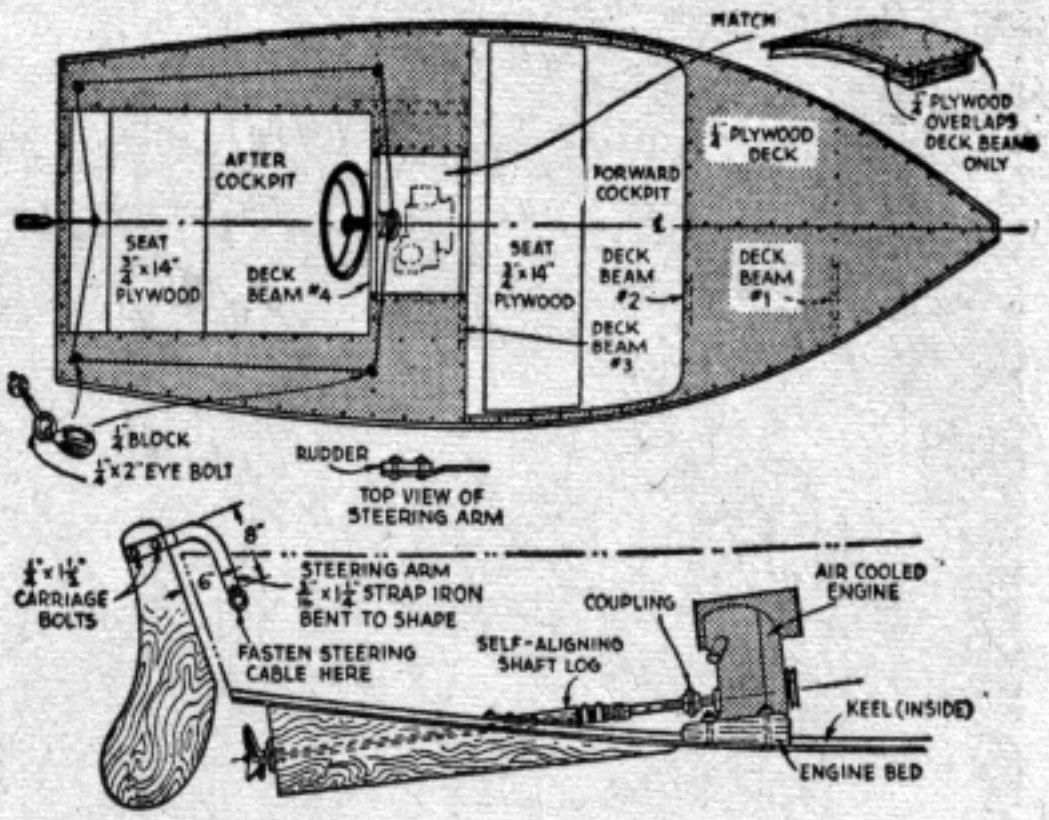
**Hardware:**

1 #1903 mooring bit
2 #724 lifting handles
1 #790 shaft log
1 #781 propeller shaft
1 #788 rudder (optional)
1 #1149 standard stern bearing

} Kainer Wesco Corp., 763 W. Lexington St., Chicago 7, Ill.

**Miscellaneous:**

2 gross 1" #8 flathead screws
3 gross 1 1/4" #8 flathead screws
1/2 lb. 1 1/4" galvanized shingle nails
1 gross 2" #10 flathead screws
1 pint Kuhl's aviation glue
1 pint Weldwood or Cascophen resin glue
1 gallon Firzite
16 ft.—1/4" steering cable




chines liberally with Kuhl's aviation (not resin) glue, lay cloth strips on glued area and recoat, and place shaped bottom plank in position and screw-fasten at all points with 1¼ in. #8 *fh* screws spaced about 2 in. apart. Use a double row of screws along the keel, placing screws toward outer edges of keel so there will be no interference when drilling hole for shaft log. Trim edges of plywood evenly along chines. Cover exposed edges of planking at bow with a ½ x 2 in. outer stem, screw fastened in place. Finish by trimming evenly.

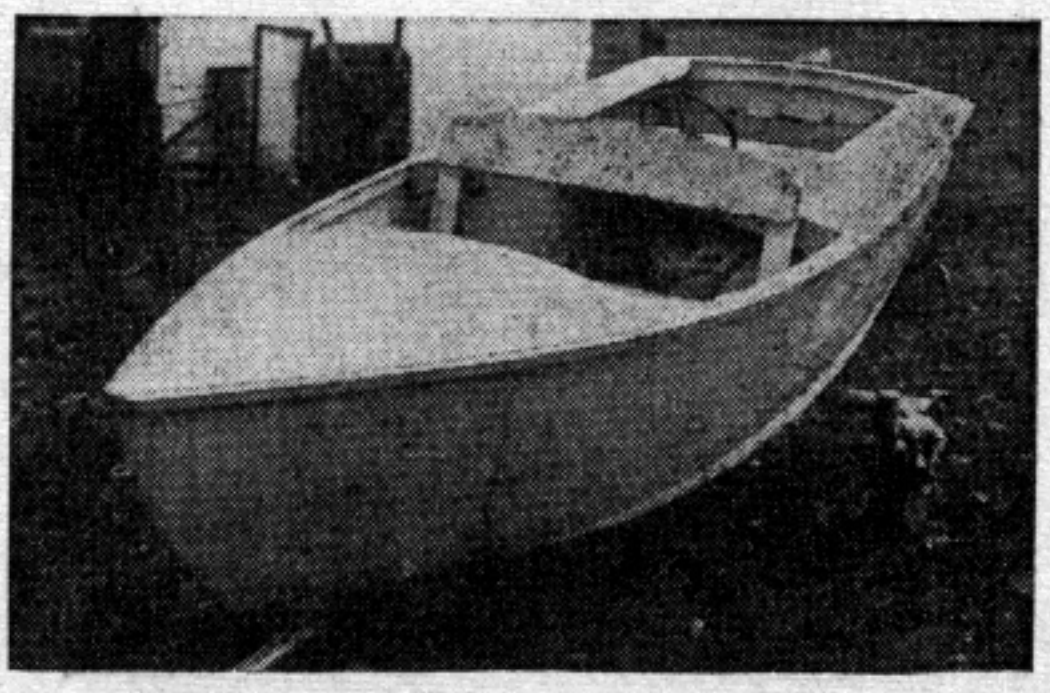
Now remove planked hull from the form with mold frames intact and turn it right side up. Saw the deck beams to shape and fasten them to the hull sides with ¾ in. knees which are screw-fastened in place. Then remove the mold frames.

Drilling hull for the propeller shaft is really not complicated but will require preparation. First make and install the skeg. Allow clearance for the swelling of the wood surrounding the shaft. For instance, if the shafting is ½ in. dia., allow ¾ in. dia. opening in skeg to take the shaft. The center pieces of skeg (¾ in. oak filler) and outer pieces of skeg (⅜ in. plywood) are all glued and screw-fastened together. Skeg itself is secured to hull with #12 screws or ¼ in. lag screws. To drill hole remaining distance through keel and bottom plywood planking simply acquire a ¾ in. wood bit and weld a ⅜ in. dia. iron rod 30 in. long to the end. Now insert bit with extension in skeg hole; simply drill all



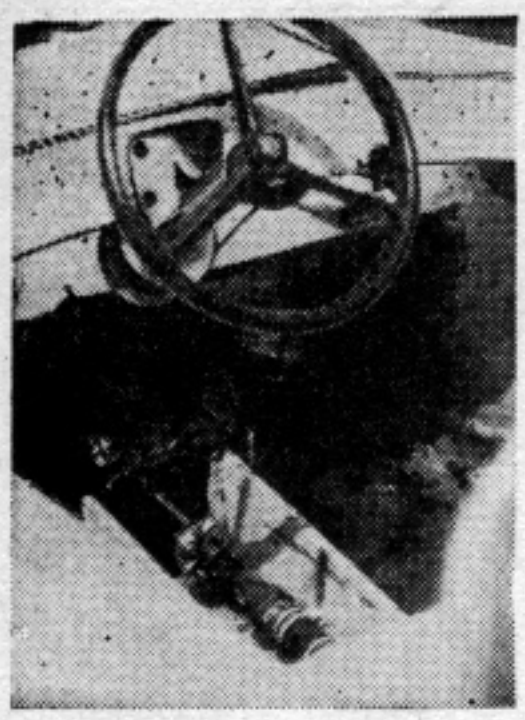
Rudder in place on transom. Note bottom reinforcing piece for transom.



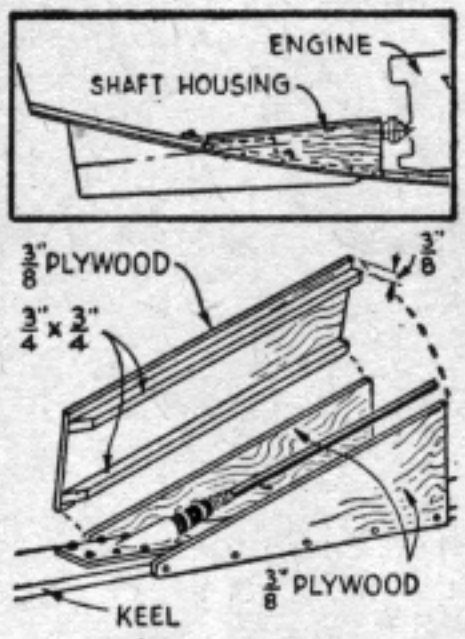





Above, top view of scooter. Below, view of motor located under midship deck.



Detail of shaft and motor coupling.




HOUSING TO COVER PROPELLER SHAFT TO PROTECT DRIVER FROM ROTATING SHAFT

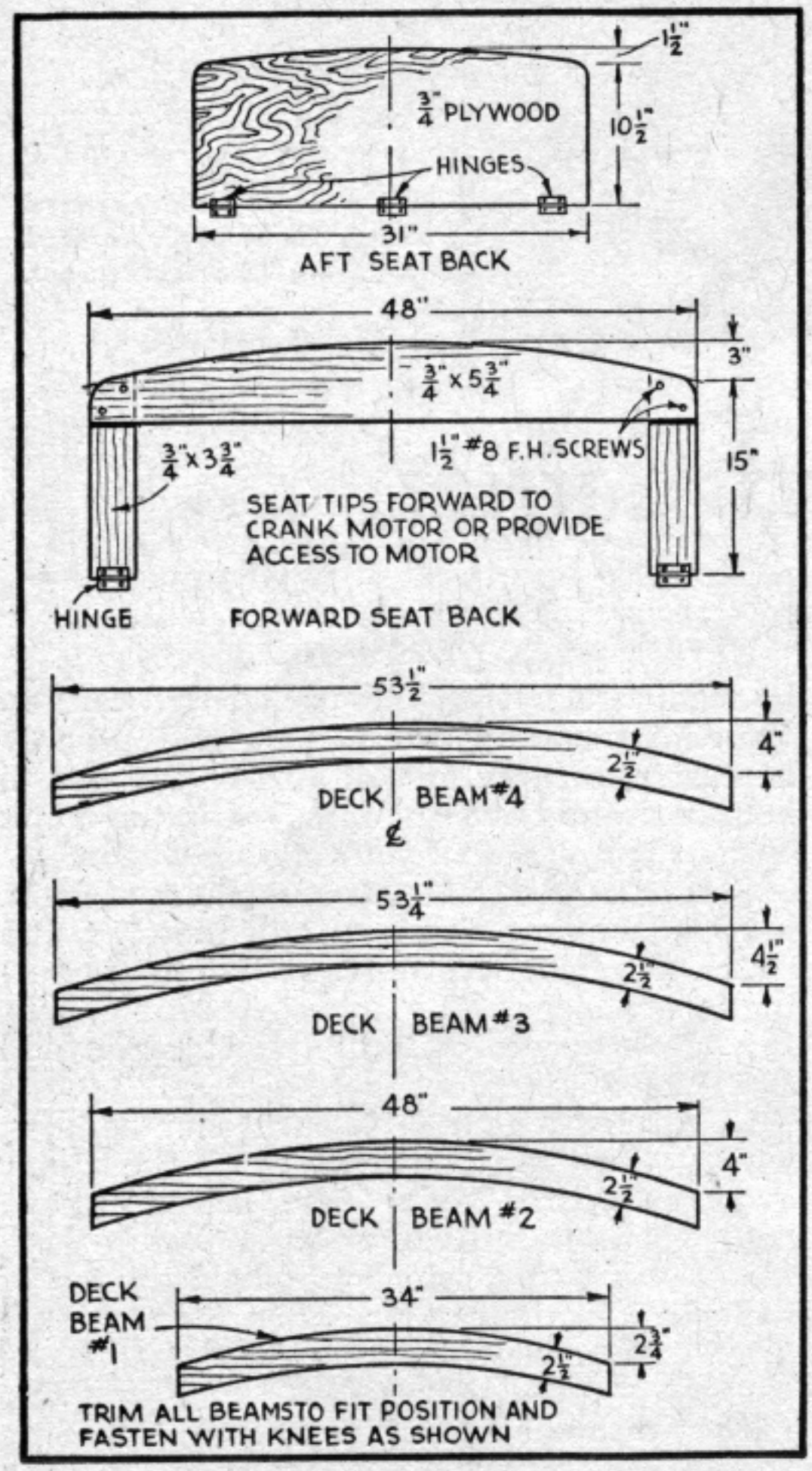
way through keel and plywood bottom. The shaft hole should come out perfectly inside hull.

The shafting is shoved through the hull until it extends inside. Each individual engine differs in depth of oil pan and engine bed bolt locations, therefore the engine should be blocked up temporarily in the hull, so that measurements for the engine bed and proper spacing for the couplings can be made. Secure engine beds to hull with 3/8 in. carriage bolts inserted through bottom of hull into beds and motor base; place plenty of marine glue around bolt holes.

The gas tank on an air-cooled engine is customarily attached to the motor, but if desirable remove tank and mount under midships deck.

Cut decking to fit and screw-fasten it in place with 1 in. #8 *fh* screws spaced about 3 in. apart. Place seat risers in position and fasten them from outside the hull with 1 in. #8 *fh* screws spaced about 6 in. apart. Then screw-fasten seats to risers with 2 in. #10 *fh* screws, and make the seat backs as shown. Next screw 3/4 x 1 3/4 in. moldings in place on each side with 2 in. #10 *fh* screws spaced about 8 in. apart.

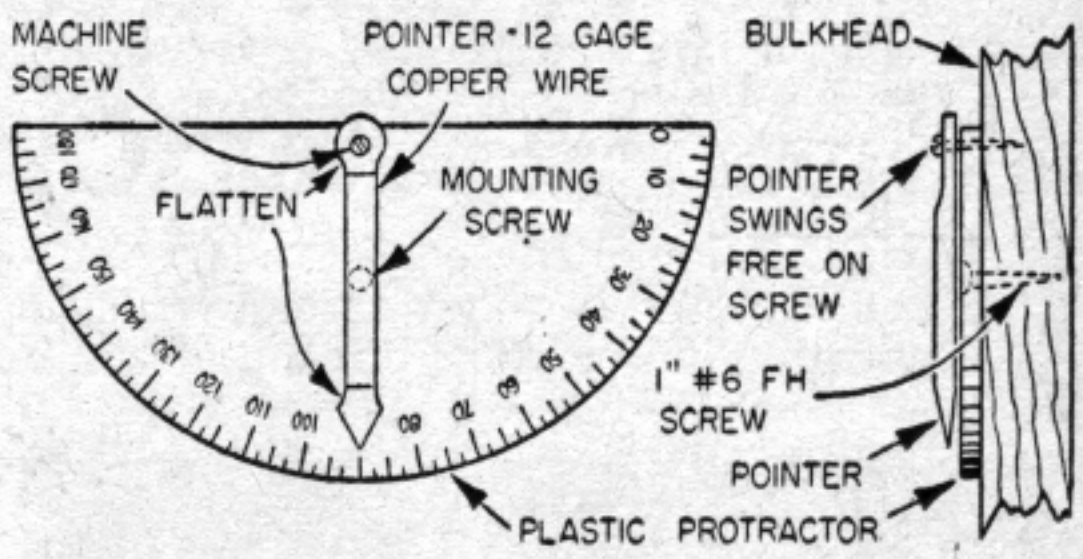
Paint hull inside and out with a first coat of clear *Firzite* and 2 or 3 finish coats of white Firzite (which may be tinted any desired color). Fittings for the scooter consist of a mooring bit on foredeck and 2 lifting handles on transom.




● Craft Print No. 18 in enlarged size for building Taxiboat is available at $2. Order by print number. To avoid possible loss of coin or currency in the mail, we suggest you remit by check or money order (no CODs or stamps) to Craft Print Div., SCIENCE and MECHANICS, 505 Park Ave., New York 22, N. Y. Please allow three to four weeks for delivery. 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¢; three prints, subtract 75¢, etc. Now available, our new illustrated catalog of 212 do-it-yourself plans, 25¢ (refundable, first order).

## Inclinometer for Small Boats

● An inclinometer will help you determine the best trim fore, aft and athwart ship for greatest speed on either sail or powered boat. Make the instrument as shown in the drawing from a plastic




protractor and screw it to a bulkhead. Use to check angle of heel on a sailboat or to indicate correct placement of gear on a motorboat.—W. D. JACKSON.

## Underwater Light

● A flashlight will help you recover jewelry, money, false teeth or other valuable objects from murky, shallow water. Remove the lens or cover glass first, and be sure flashlight is completely under water before lighting to prevent bulb from cracking.—JOHN KRILL.