



LIGHTWEIGHT TRAILER FOR WEEK-END VACATIONS

By John Gartner

PART 1

LESS than a thousand pounds of fully equipped trailer makes the kind of companion your car will be glad to take along on any trip. For all-year living, or leisurely travel on the main highways, the big commercial jobs still deserve your vote. But for quick week-end trips, cross-country jaunts over the mountains, or side-road excursions, you will want a lightweight traveler that gives you plenty of road clearance, tracks smoothly at any speed, and will even follow you off the road like Mary's little lamb.

You can get some of these things just by tying a kiddy car to the rear bumper, but you'd still be missing a good bet, for this trailer is no toy. It sleeps two adults and has plenty of room for two children on the floor, not to mention storage space for the family's needs. Measuring 10' in length and 6½' in width, it allows full headroom for a six footer with shoes on. You can get some idea of what it's like from the pictures on these pages; for a still better view of the finished job, see the color photos by Frank Lindgren, Jr., on page 117.

Cost is bound to be a major

factor in any project of this size, but no close approximation can be given because many of the parts will vary according to availability, regional price differences, and quality. Reasonable estimates of the total cost run from about \$200 to \$450.

It will be helpful to have most of the materials on hand before beginning construction. The sizes of window, door, and vent openings will depend on the fixtures you can procure, and your axle and spring assembly will govern the size of the fender wells and the spacing of the frame members.

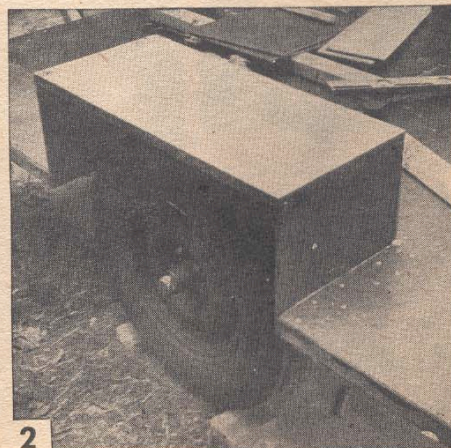
Hand tools are all you really need, but of course power tools will help a great deal. First, clear a space on the ground and lay out the frame as shown in a drawing on page 149. Smear all joints liberally with waterproof glue, make sure crosspieces are square with the stringers, and bolt the pieces together with carriage bolts and lag screws; the side members will have to be counter-bored for the lag screws.

As shown in the drawing, the forward crosspiece between the wheel openings is centered exactly 4' from the front edge. Place a sheet of ¾" by 4' by 8' waterproof plywood sideways across this portion of the frame, saw off 18" from the length, and secure the plywood with glue and drive screws. Trim another piece to cover the remainder,

THE HOME AND WORKSHOP



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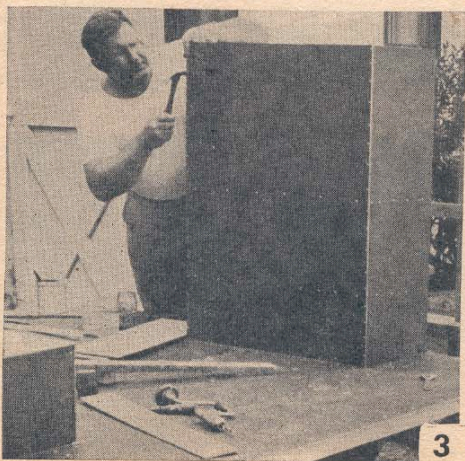


fasten it down, and saw out the wheel openings. Turn the frame over and install the undercarriage assembly. If you have the facilities for welding and metal working, you may be able to assemble a running gear from scrap, or renovate a junkyard bargain. Or you can purchase a complete undercarriage from a trailer-supply house. Figure 1 shows a typical installation.

Using the same $\frac{3}{8}$ " plywood, build up the housings over the wheels (Fig. 2). The one

next to the door is made quite high (Figs. 3 and 8) and will become a sideboard cabinet.

How well the trailer will track will depend largely on the accuracy of the tongue installation, and this, in turn, requires that the axle be perfectly square with the frame. Bolt a pair of two-by-four arms to the hitch-jack combination you have selected, and line up the tongue very carefully before notching and bolting the arms to the first two crosspieces. Assuming that the axle is



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squared, the tongue is aligned when the distance from the midpoint of the hitch ball to the point where one wheel joins the axle is exactly the same as the corresponding distance on the other side.

Side walls are made of $\frac{1}{4}$ " plywood. With the long edges placed together, lay out one 3' by 10' and one 4' by 10' sheet on a smooth floor. Chalk off the surface of the wood into 1' squares with a long straightedge. Transfer the pattern from the squares on the facing page, and fair up the lines with a long strip of flexible wood as shown in Fig. 4. Cut out the pattern with a keyhole saw, but don't spoil the waste you cut off, for this will be needed to make a jig. Using the cut pieces as a pattern, mark and saw the second wall.

Nail together the outline pieces as shown in the foreground of Fig. 5. Cut some scraps of two-by-twos and two-by-fours into 3" lengths, and nail them to the outline edges at 12" to 15" intervals (Figs. 6 and 7). Lay the jig on the ground and fasten to it with shingle nails $\frac{1}{4}$ " by 2" spruce strips from a point a few inches below the front floor line to a few inches beyond the rear floor line. Smear this first strip liberally with thick glue, and nail another strip to it, taking care to stagger the end joints. Continue adding laminations until five thicknesses have been built up. If you have a supply of small clamps, it won't hurt to use them while the glue is setting, but proper fitting and nailing should be enough.

After the glue has dried, hacksaw through the nails that fasten the first chine strip to the jig, leaving the nails right in the wood. Plane the edges until they are flat and smooth. Build a duplicate chine for the other wall.

Haul out the side walls and glue and screw them to the chines. Cut out the door opening on the right side, and save the pieces to make the door (Fig. 8). In the left wall cut an opening of proper size for the window you have purchased.

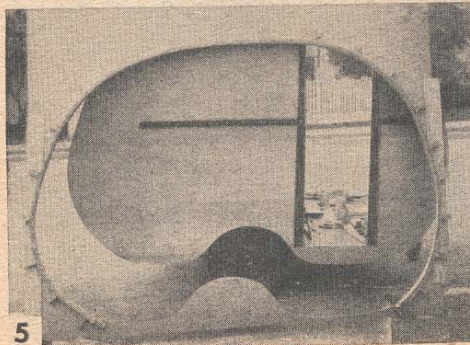
[To be Concluded]

LIST OF MATERIALS

- 1 complete undercarriage, $1\frac{1}{4}$ " or $1\frac{1}{2}$ " straight or drop axle; approx. 66" tread. Wheels, tires, and tubes.
- V-tongue.
- 1 window 18" by 24", complete with screen.
- 2 windows 18" by 30", complete with screen.
- 6' wire screen 18" wide.
- 1 roof ventilator approx. 14" sq.
- 1 stove vent approx. 12" by 15".
- 1 curved roof jack to fit above vent.
- 24 flush-type cabinet hinges.
- 12 flush-type cabinet catches.
- 1 5-gal. gravity water tank with faucet.
- 1 25-lb. upright refrigerator.
- 1 trailer sink approx. 12" by 15" with waste plug and tail pipe.
- 1 5' combination hinge, continuous type, for door and screen.
- 2 piano hinges, $1\frac{1}{4}$ " by 6'.
- 1 complete door lock, left hand.
- 1 stop and taillight combination.
- 2 clearance lights.
- 2 gross 1" No. 6 screws with brass collar washers.
- $\frac{1}{2}$ gross 1"-13 drive screws.
- 5 yd. 90" muslin (top).
- 1 roll felt padding (top).
- 1 gasoline stove, plate type.
- 3 electric fixtures with outlets.
- 100' No. 10 wire.
- 50' rubber-covered electric cable.
- 4' 4-conductor rubber-covered cable.
- 2 4-way male connectors.
- 1 4-way female connector.
- 4 lb. waterproof resin glue.
- 1 gal. spar or plastic varnish.
- 1 gal. canvas cement.
- 2 qt. top enamel.
- 1 mattress 24" by 6'5".
- 1 mattress 24" by 6'.
- 2' tubing, $\frac{3}{4}$ " dia.
- 2 rolls masking tape.
- 1 box $\frac{3}{8}$ " copper tacks.
- 20' rubber seal $3/16$ " by $\frac{3}{8}$ ".
- 4' safety chain.
- Assorted bolts, nails, screws.

LUMBER

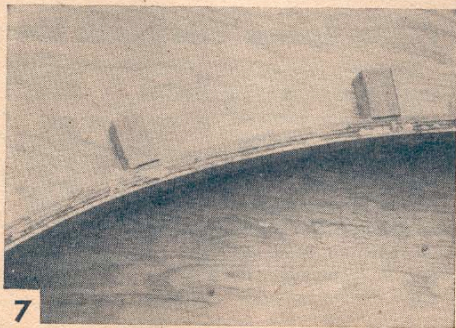
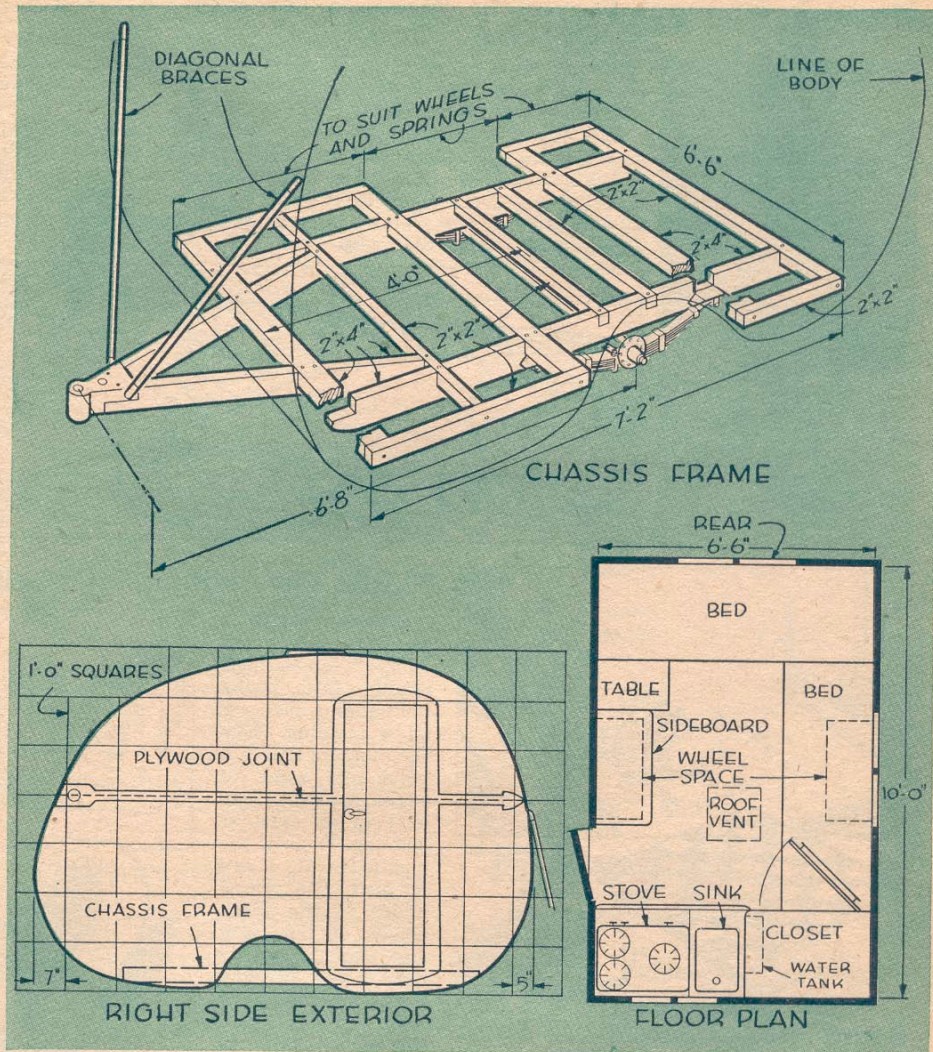
- 2 pc. 2" by 4" by 16' clear pine, spruce, or hardwood.
- 1 pc. 2" by 4" by 8' clear pine, spruce, or hardwood.
- 4 pc. 2" by 2" by 14' clear pine, spruce, or hardwood.
- 5 pc. $\frac{3}{8}$ " by 4' by 8' plywood (floor, cabinets).
- 2 pc. $\frac{1}{4}$ " by 4' by 10' plywood (sides).
- 2 pc. $\frac{1}{4}$ " by 3' by 10' plywood (sides).
- 5 pc. $\frac{3}{8}$ " by 4' by 8' plywood (floor, cabinets).
- 400' $\frac{3}{8}$ " by $1\frac{1}{4}$ " clear pine, spruce, or hardwood (studs, cabinets, ribs).
- 20 pc. $\frac{1}{4}$ " by 4" spruce lattice (roof).
- 30 pc. $\frac{1}{4}$ " by 2" spruce lattice (chines).
- 2 maple dowels, $\frac{3}{8}$ " by 4' (front braces).
- 4 pc. $\frac{1}{2}$ " quarter-round moulding, 12' lengths.



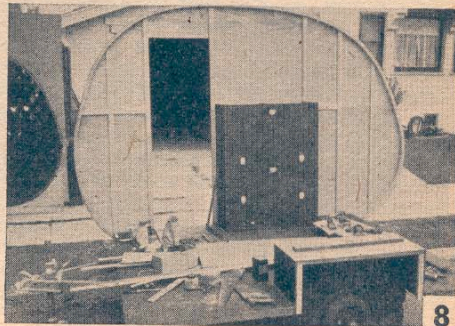
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