



Family outings are no harder on the budget than staying at home—and they're 10 times more fun—with this quick-converting trailer home.

FOLDing Travel-Trailer

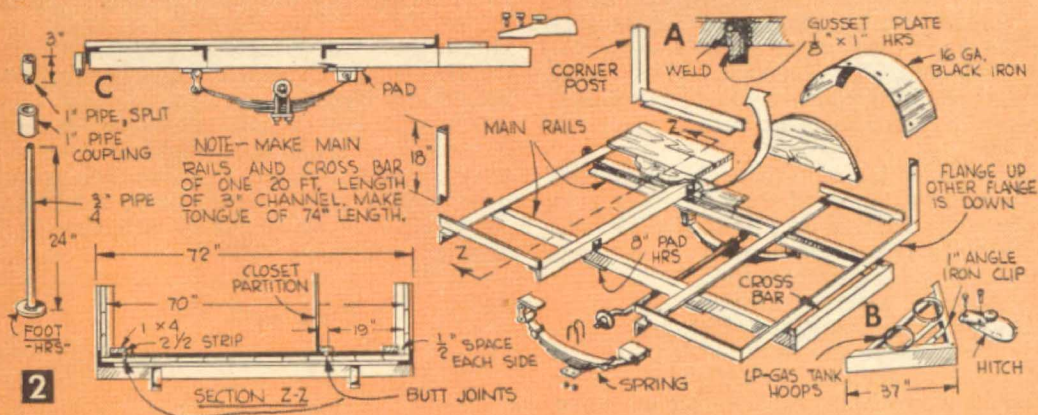
For hunting and fishing, week-
ending, family vacations, and
getting away from it all

By HARRY BOWER

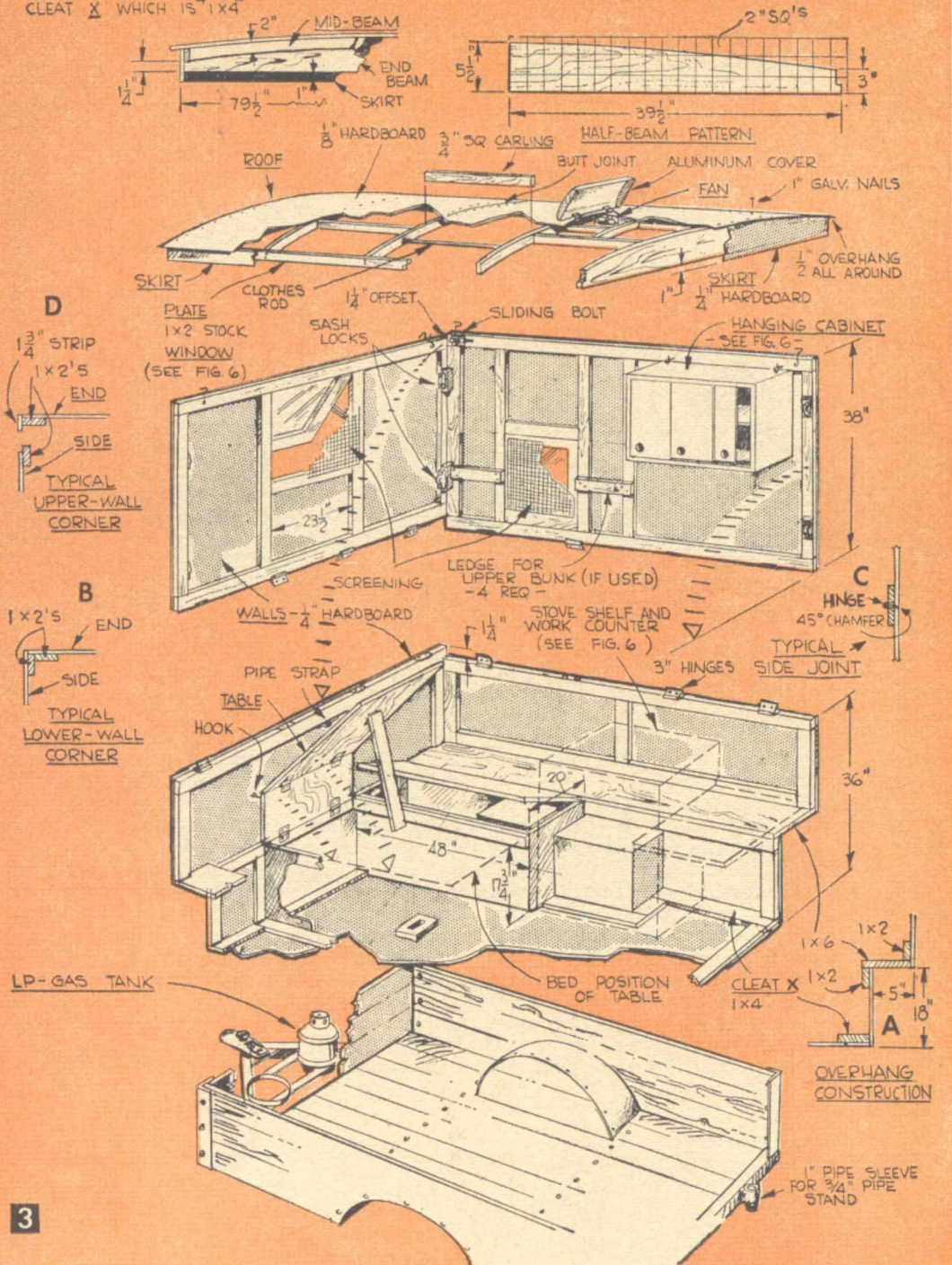
Craft Print Project No. 335

ALL you members of the "Thank Heaven It's Friday Club" will find this convertible, collapsible trailer outfit just about the perfect answer to that question of how to get out of town fast after you've put in those 40 hours.

Just pop the folded-up house unit into the utility trailer, pick up a few groceries, and you're off to the wilds without a waste motion. Bring the kids along too. There's room



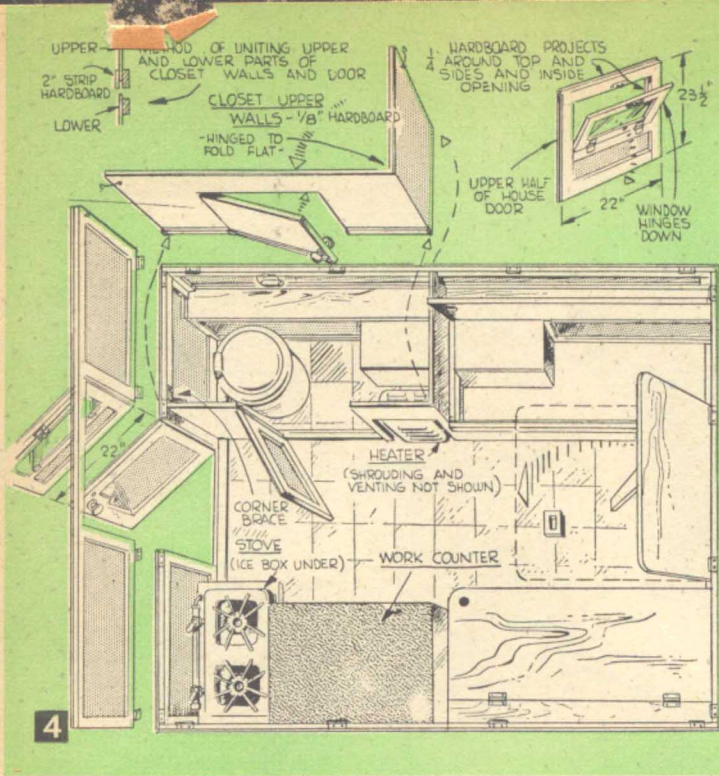
NOTE - ALL CLEATING $\frac{3}{4} \times 1\frac{3}{4}$ " (1x2) EXCEPT
 CLEAT X WHICH IS 1x4



for them and they'll love the whole deal. On the highway you'll find that this rig, with its low profile and low center of gravity, slips along behind you without fuss and doesn't eat up the horsepower like some of

the big blobs you'll be passing up. At your destination, about 10 minutes is all you need to get set up for the night.

Then when you return home, if you feel you must, slide out the house unit and you've



reinforce the notched cross rails (Fig. 2A).

Notch and bend up the tongue, fit the LP-gas tank hoops and braces, and weld this assembly to the front of the frame (Fig. 2B).

Weld hrs pads on the main rails where the spring shackles of the trailer axle assembly you have selected will land.

On the rear cross-rail, weld two 3-in. lengths of 1-in. pipe, threaded and split on their bottom ends (Fig. 2C).

Now paint all this ironwork with a good rust-preventive paint, and you are ready for the flooring.

Lay the 1x6 tongue and groove floorboards fore-and-aft, cutting out gaps for the wheel

got the utility trailer for everyday, practical use.

The ingenious folding house is not complicated. Construction is straight-forward, employing standard materials.

You can build the whole outfit from scratch, as described in this article, or if you already have a suitable utility trailer you can modify the dimensions of the house to fit it.

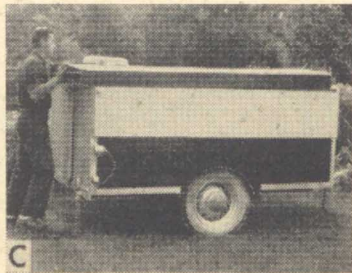
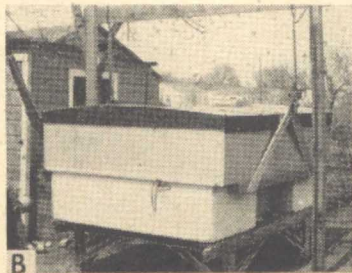
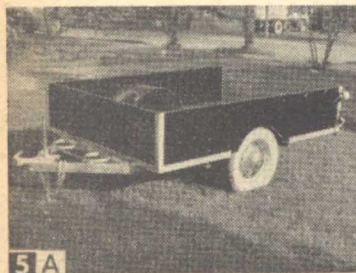
Building the Trailer. If you decide to build a new trailer, start by cutting the steel and welding it up according to Fig. 2. Note that the front cross member is welded onto the main rails flange up; the other three are flange down, and the two middle ones are notched over the rails. Do the work on a flat surface to be sure the finished frame will be true. Weld on the angle iron side rails and corner posts, coping where necessary. Add the hot rolled steel (hrs) gusset plates to

wells, and secure them with 1/4x1 1/2-in. carriage bolts, nuts underneath. Plank in the sides the same way, but cut a curved notch at the wheel wells. All nuts must be on the outside. Make the wheel wells (Fig. 2) of 16-gauge black iron secured with carriage bolts. You can make a cleated tail gate, if you wish, that bolts on when needed.

Paint all this new construction with the rust-preventive paint, and follow with an exterior enamel.

House Bottom. Start assembly of the house bottom right in the trailer. Fit 1/4-in. hardboard in the trailer with 1/2-in. clearance all around (Fig. 2). Cleat it as shown, using 1 in. galvanized screw shank nails driven through the hardboard into the cleats.

Then add the 18-in.-high lower side walls, cleating with 1x2s at all joints. Box in the trailer wheel wells with the same hardboard-



The photo-sequence starting here shows the quick transition from utility trailer to assembled house trailer. (A) The basic trailer. (B) The folded house suspended in its trestle. (C) Ready for the road. (Cont'd next page.)

and-cleat construction. Make the front wall of one piece 36 in. high. Nail 1x6 overhangs along each side wall (Fig. 3A). Then continue the side walls to a final height 1¼ in. less than the front wall, to allow for folding the upper walls. Use two cleats (Fig. 3B) in all four corners.

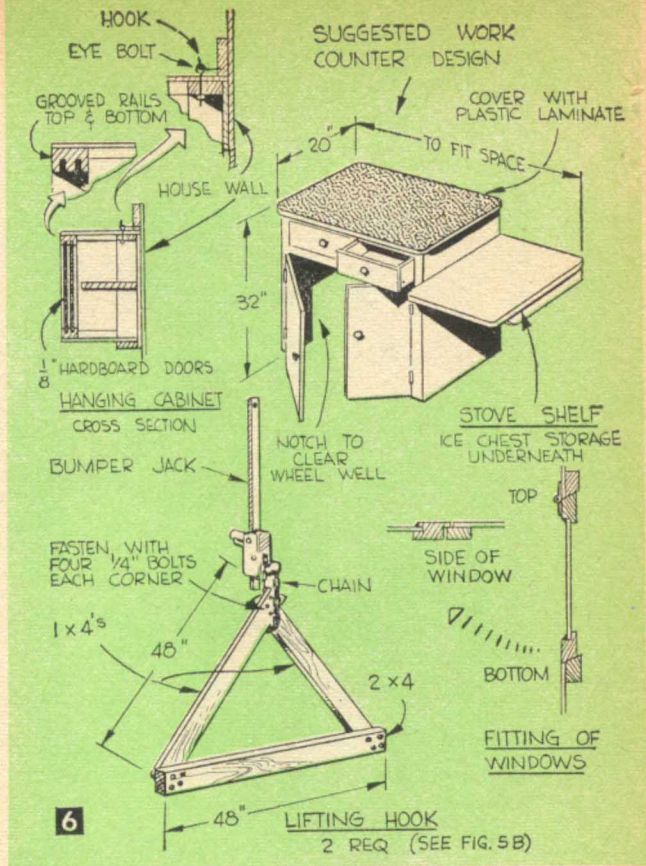
Make the rear wall (where the door will be) the same height as the front wall. After nailing the cleats flush with the top edges of the walls, chamfer the hardboard edges 45° (Fig. 3C) to shed water.

Cabinetry. Inside joinery of the bottom half of the house should be completed now. The layout shown (Fig. 4) works very well for family groups or for hunting and fishing, but if you prefer some other arrangement, you can probably work it in without affecting the folding feature of the house.

Build the dinette first, using ½-in. plywood cleated at the corners and edges. Hinge the seats to the house overhangs. Make the table top of ¾-in. plywood, in two pieces hinged together so it can be propped up in the table position or dropped to the bed position without taking it apart.

Wall in the lower half of the closet, but do not cut the door opening yet. There is room for a small gas-fired heater between the wheel well and closet wall. If you install a heater, box it in with sheet aluminum lined with asbestos paper. Run the gas line through the storage compartment and out the front wall just above the front wall of the trailer. Note: Be sure to install your heater with proper venting, as no open-flame heater should be permitted to operate in a confined space without it.

Construct the cabinet and work counter (Fig. 6) at the right side of the house next. Design of this structure can be adjusted to



accommodate a different stove and ice box arrangement if desired. You could use a portable ice-chest in the ice-box space, or use one of the new trailer-size refrigerators. Lead the gas line from the stove down to the floor along back of the sill into the closet, and tee it into the heater gas line. Cover the counter top with ½-in. hardboard, or plastic laminate.

Upper Walls. Construction of the upper walls is the same in principle as that of the lower walls. Note the arrangement of the corner cleats (Fig. 3D) that allows adjacent walls to come together in a snug closure.



7 A

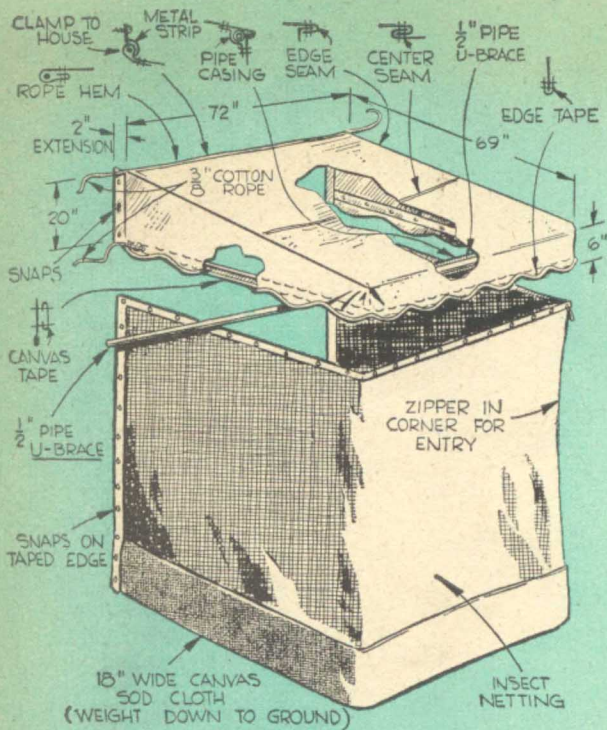


B



C

(A) Front erected and roof started up. (B) Roof and ends in place, side wall going up. (C) Raising the last side wall. (Cont'd next page.)



8 AWNING AND INSECT TENT



9 Woodsmen can have all the comforts of home, even on remote back roads, with this compact, easy-trailing outfit.



(A) Canopy erected. (B) Mosquito netting porch added.

Don't forget to chamfer the lower edges of the upper side walls before attaching the lower-edge cleats (Fig. 3C).

The finished height of the side walls is 1 1/4 in. more than that of the end walls so that when all four walls are folded, the lip of the roof will cover the wall edges. Cut the window openings in the hardboard of the side and front walls before nailing on the vertical cleat members, which must project 1/4 in. inside the openings (Fig. 6). Then cleat the openings and bevel their tops and bottoms. Bevel the window sash to correspond to this and rabbet the sash sides to fit the 1/4-in. projection of the cleats.

Use four hinges uniformly spaced on each of the four upper wall sections and nail the sections together temporarily at the corners.

Cut out the rear door opening and use the cut-out pieces to build the door. This door will open outward, so let the cleats around the opening project inward 1/4 in. Fit the window sash in the door to fold inward, hinging it at the bottom (Fig. 4). Now that you can get back inside, install sash-locks in the upper wall corners to hold the corners together.

The Roof. Make up the pattern (Fig. 3E), then use it to lay out the five roof beams. Use good straight-grained lumber for this. Cut the plates and carlings to length, then nail the frame together with ring-shank nails. Note that the roof frame dimensions are the same as the *outside* surfaces of the walls. Nail the hardboard skirt around the roof frame; this overlaps the side walls both in the folded and unfolded positions.

Cover the roof with 1/8-in. hardboard, letting it overhang 1/2 in. all around. Caulk the butt joint between the sheets on the center roof beam. Do this whole job with the roof frame in place on the house to insure trueness.

Now go inside and install the hooks that hold the roof on (Fig. 3). Also inside, make the upper half of the closet walls, hinged together for storage when traveling, then cut out and finish the closet door. Attach this fold-

(Continued on page 136)

Travel-Trailer . . . (Continued from page 96)

ing wall with sash-locks. You can also make a removable hanging cabinet (Figs. 3 and 6) to hang against the wall over the work

counter.

If you need the extra sleeping capacity, make an upper bunk that stows against the roof when not in use, or on the lower bunk when traveling. This can be a three-quarter size link-spring bed spring, used upside down so its side frame acts as guard rails. Use a cotton-filled mattress on this bunk.

Make the lower bunk/dinette cushions out of a three-quarter size cotton-filled mattress cut into sections and covered with denim, tightly fitted.

To finish up inside, install the chemical toilet, secure the stove, tack screening over the window openings, and install a clothes rod in the closet.

Optional Features are an electricity supply and the ventilating fan. You can install an automobile battery on the tongue between the gas bottles and run wiring in to the needed points inside. For the ventilator, use an auto heater motor and fan blade. Make an aluminum cover for it, hinged on spring hinges, with a bead chain to hold it closed.

Water can be carried in cans inside, under the stove.

Paint the house, inside and out, to suit your taste, and, for a finishing touch, get someone on the distaff side to sew up some curtains for the windows.

To steady the rig when it is in use as a house trailer, slip two pieces of 3/4-in. pipe with welded-on feet (Fig. 2) into the slit pipe pieces on the rear cross-rail of the trailer and clamp them at the desired height with pipe couplings.

Support the front end with a bumper jack if you want to unhitch your car.

For hot, buggy locations you may want to make an insect netting "front porch," roofed by a canopy. Figure 8 shows a suggested design for this refinement.

Finally, you will need some way to get the folded house into and out of the trailer. For this, make a trestle (Figs. 5B and 6) and use two bumper jacks as hoists to lift the house up by the overhangs. Then you can run the trailer in or out or leave the house sitting on two low wooden horses.

MATERIALS LIST—TRAILER

No. Req.	Size and Description	Use
TRAILER		
26 ft. 2 in.	3/8 x 1 3/8 x 3" channel iron	trailer frame
41 ft.	1/4 x 2" x 2' angle iron	trailer frame
6 ft.	1/8 x 1 x 1" angle iron	tank racks
10 ft.	1/4 x 1" HRS	tank hoops, pads, gussets
22	1x6 x 8' tongue and groove spruce	floor and sides
8	1x6 x 6' tongue and groove spruce	front and tail gate
1 gross	1/4 x 1 1/2" carriage bolts with nuts and washers	fastenings
1	3" drop, 5' tread house trailer axle with springs and hubs (Obtain at local trailer supply house, or from: Aberdeen Products, 3521 No. Harlem Ave., Chgo. 34, Ill.	trailer
2	wheels and tires to fit axle	
4	4" shackles	trailer springs
4	4" T-hinges	tailgate
1	12" x 9", 16-gauge black iron trailer hitch with attaching bolts	wheel wells
1 set	trailer stop/tail lights, with wiring	
1	safety chain	
1	bumper jack	front stand
6 in.	1" pipe	rear stand
4 ft.	3/4" pipe	rear stand
2	3/4" pipe couplings	rear stand
	—rust preventive paint, enamel—	

FOLDING HOUSE

10 sheets	1/4" x 4 x 8' tempered Masonite	walls and floor
3 sheets	1/8" x 4 x 8' tempered Masonite	roof and cupboards
1 sheet	1/8" x 4 x 8' untempered Masonite	closet walls
1 sheet	1/2" x 4 x 8' interior plywood	seats and table
8 ft.	1x4 pine or fir	floor cleat
32 1/2 ft.	1x2 pine or fir	other cleating
40 ft.	1x6 pine or fir	roof and overhangs
3	18 x 24" single-light sash	windows
1	12 x 18" single-light sash	door
24	3" butt hinges with 1" screws	walls and doors
22	2" butt hinges with 3/4" screws	seats, cupboards, windows
3	casement window operators	windows
12 sq. ft.	window screening	windows
1	locking-type screen door latch	door
1	non-locking screen door latch	closet
10	crested sash-locks	walls
2	suitcase latches	closet wall
8	4" hooks and screweyes	roof
*1	chemical toilet	
*1	10,000 Btu LP-gas heater, vented	
*1	LP-gas 2-burner stove	
*1 or 2	20 lb. LP-gas tanks with regulators and fittings	
5 lbs.	1" galvanized screw-shank nails	
1 lb.	6-penny box nails	
1 lb.	2 1/2" ring-shank nails	
	—paint—	

*Obtain at local trailer supply house, or at Sears

AWNING AND TENT

18 ft.	1/2" pipe
9 yds.	36" wide 10 oz. canvas
6 yds.	66" wide insect netting
24	wood-to-canvas-snaps
18 ft.	3/4" snap fastener tape
20 ft.	1" cotton twill bias tape
12 ft.	3/8" cotton rope

● Craft Print No. 335 in enlarged size for building the Folding Travel-Trailer is available for \$2. To avoid possible loss of coin or currency in mails, remit by check or money order (no C.O.D.'s or stamps) to Craft Print Division, SCIENCE and MECHANICS, 505 Park Avenue, New York 22, N. Y. Now available, our new illustrated catalog of "194 Do It Yourself Plans," 25¢. (Refundable on first order.)