

VACATION



Photos courtesy Honorbilt Trailer Co.

You can cut down on vacation costs by building this sixteen-foot trailer. It sleeps four, has a sink, gas range and refrigerator.

By A. Hamel and H. Sibley

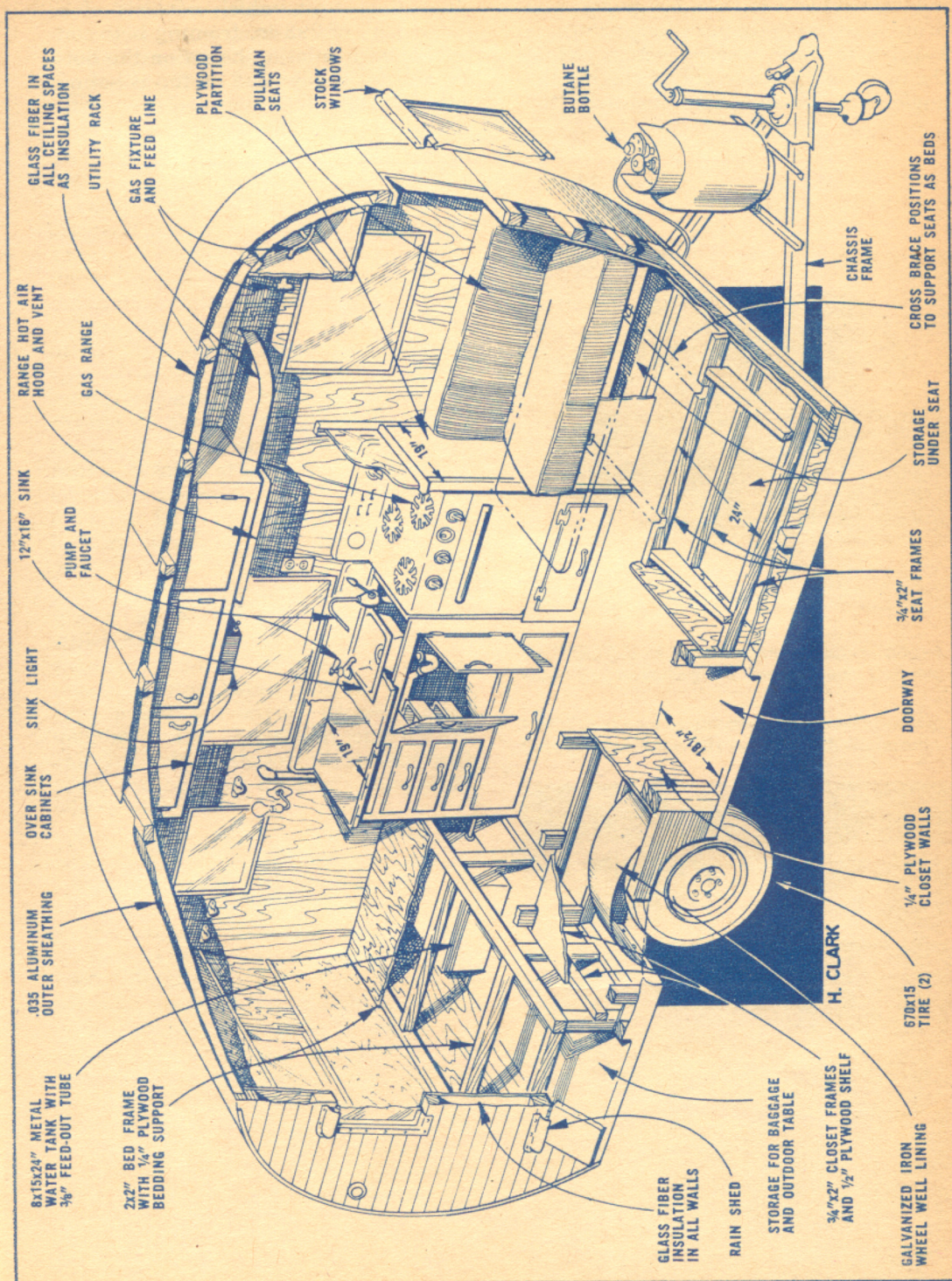
THIS compact trailer, designed and built by A. Hamel of the Honorbilt Trailer Co., Lakeview, Calif., has made exceptionally good use of space, sleeping four in a Pullman berth and a bed, with an additional take-down cot above the rear bed. Equipment includes an apartment-size butane gas range, combination ice-and-electric refrigerator, water storage tank and hand pump, water and electric utility connections, Formica sink top, clothes closet and three cabinets, with luggage space under the bed. Many identical units have been tested for thousands of miles over a long period, proving them easy to tow without sway.

With an aluminum-sheathed body on the channel steel chassis the center of gravity is kept low and a unique construction of the plywood and pine framing makes for light weight without sacrifice of strength.

If you camp where utilities are not available light is provided from the butane supply and water pumped to the sink by hand. Hinged windows plus the large roof vent insure ample ventilation in addition to the screen inner door.

The three-inch channel steel chassis shown can be purchased from Zeman Mfg. Co., El Monte, Calif. It is fitted with Goodrich 6.70x15 tubeless tires and

TRAILER

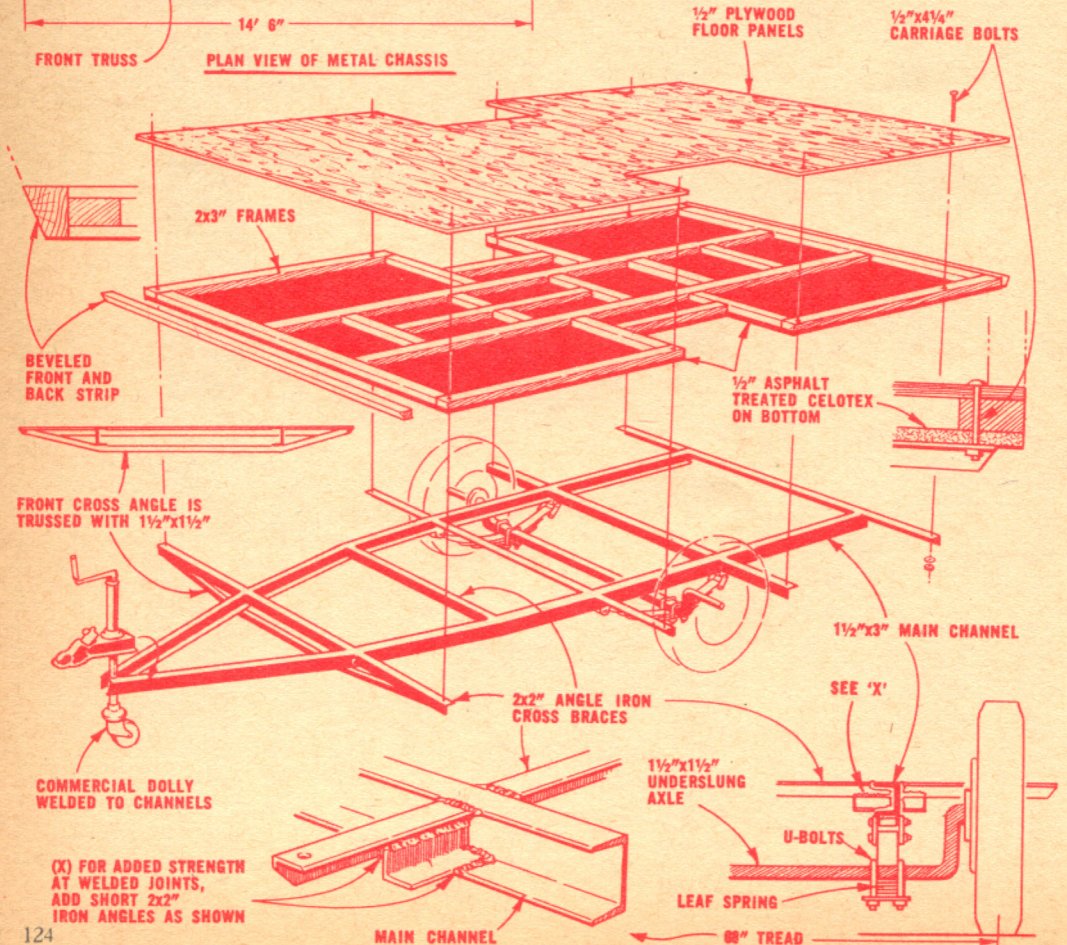
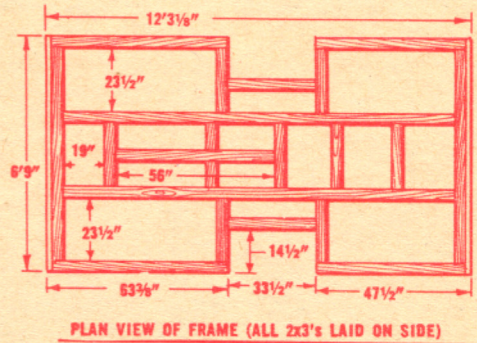
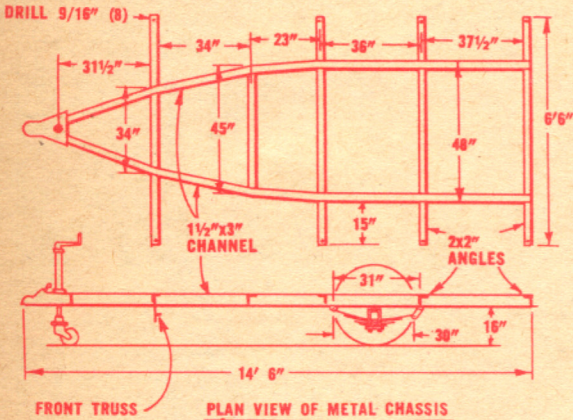


electric brakes, as well as an adjustable front wheel, making it very easy for one man to couple it to the towing car. The drop axle hung under the springs is $1\frac{1}{2} \times 1\frac{1}{2}$ in. solid square-section. Note the neat welding assembly, bringing the angle-bar cross-members flush with the

channel frame. The front cross member is trussed with an angle-bar.

The floor unit, which consists of a "sandwich" of 2x3 in. framing between tar-treated insulation board on the bottom and $\frac{1}{2}$ -in. plywood on top is bolted to the chassis. It is mounted even with

PLATE ONE - CHASSIS ASSEMBLY



the forward cross member of the chassis and extends beyond the rear cross member. The drawings and cross section show how the wood frame is covered on the bottom with Celotex, on the top with plywood. This "sandwich" is then bolted to the chassis with eight $\frac{1}{2}$ -in. carriage bolts. The floor bolts and the bolts for the side walls are offset so as not to interfere with each other.

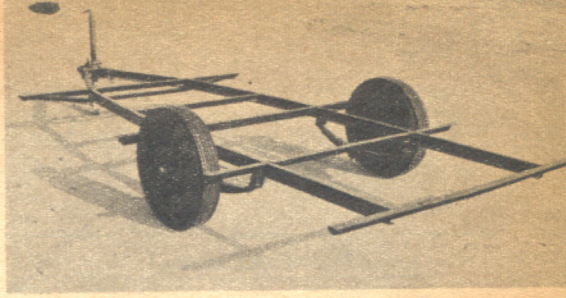
Tile-type flooring is cemented to the plywood before the walls are installed. This, of course, need not cover space under bed or cabinets if you wish to economize on the material.

The side walls are made of $\frac{3}{8}$ -in. birch plywood reinforced with laminated framing on the curved edges and solid members on the straight portions. Profile of the sides with radii of the curves is shown in the drawing. The profile is laid out on a flat surface with a rough wooden form of fixed blocks to hold the laminated and straight members in place until the plywood is nailed on.

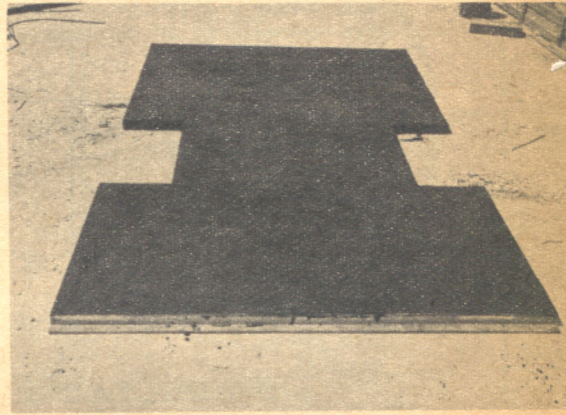
The curved members consist of three pieces of $\frac{3}{8} \times 1\frac{5}{8}$ -in. pine or spruce which have been thoroughly soaked (or steamed) to soften the fibres, then nailed together after being bent in position. Lap joints are made where curved members meet a straight one. Right and left side walls are illustrated with studs and bracing, the studs being 2×2 's where indicated.

Glue is applied to all contacting surfaces. Window openings are dimensioned to receive stock sash and frames, which are better and more economical in the long run than home-made units. (Those in photos were made by Woodland Metal Products Co., Marshall, Mich.) Plywood is available in various widths and lengths up to 96 inches and is laid out for minimum waste in cutting. Incidentally, window openings are not cut in the plywood until it is assembled with the framing. Note that the plywood will be on the inside of the framing when walls are mounted on the floor; the outside receives the aluminum skin.

Side walls are bolted and nailed to the floor as shown and temporarily braced. Next, the framing for the for-

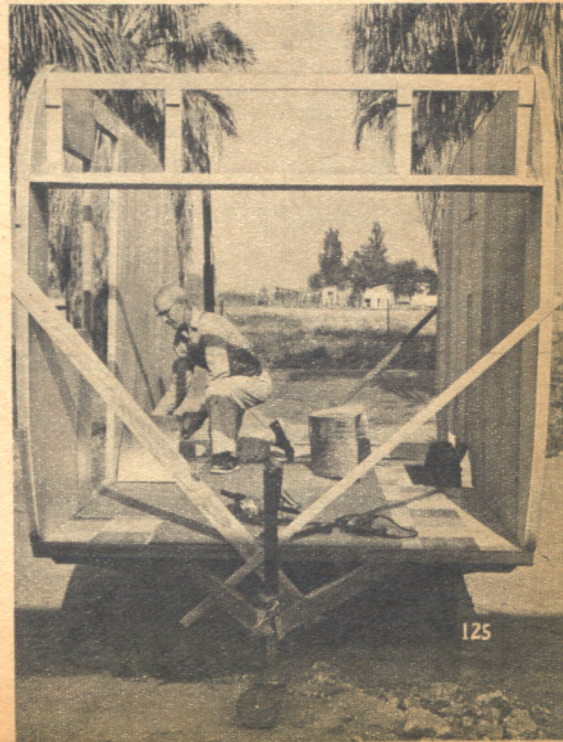


TRAILER rests on all-steel chassis. Tires are 6.70x15, front wheel is adjustable.



UNDERSIDE of floor frame is shown above with its covering of tar-treated Celotex.

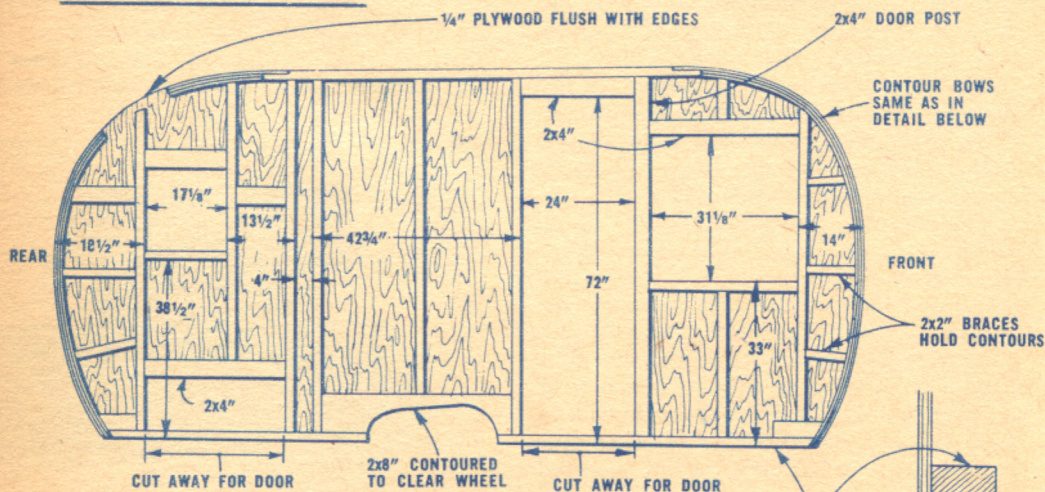
PHOTO shows installation of wheel housing. Sides are temporarily braced with diagonals.



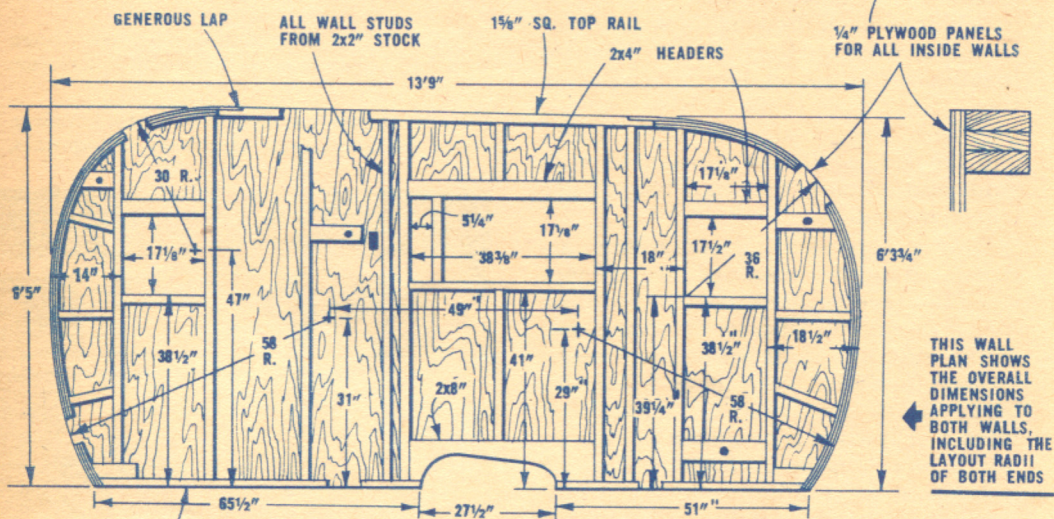
ward cabinet is installed, further reinforcing the structure. Wheel housings are nailed in place, followed by the sink cabinet and refrigerator-and-clothes

closet units. End walls are now installed, beginning at the bottom and proceeding toward the roof. If you find that you are unable to bend the plywood

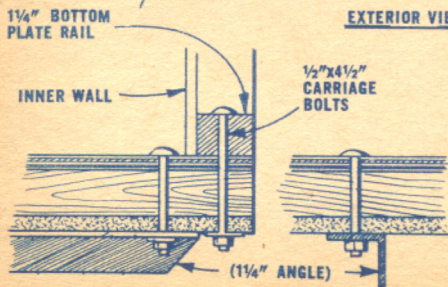
PLATE TWO—SIDE WALL ASSEMBLY



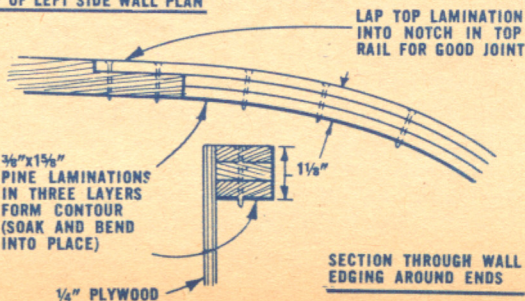
EXTERIOR VIEW OF RIGHT SIDE WALL PLAN



EXTERIOR VIEW OF LEFT SIDE WALL PLAN



METHOD OF SECURING WALLS TO FLOOR



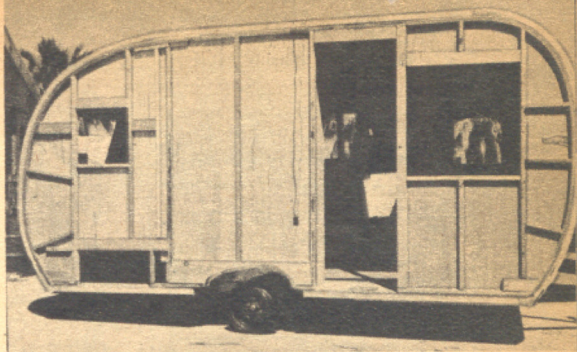
SECTION THROUGH WALL
EDGING AROUND ENDS

to follow the contour of the frame, cut it to fit from one cross beam to the next.

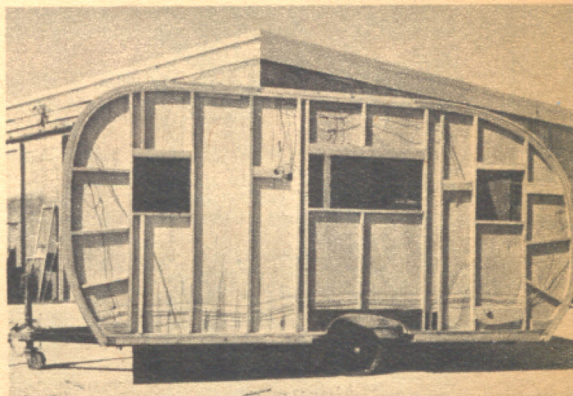
Our cutaway drawing shows the arrangement of the various furnishings. Pullman seats forward, stove and sink on left side, refrigerator and clothes closet on the right. The full size bed is at the rear with the water tank and luggage space underneath. The Pullman seats (by Newhouse Upholstery Co., El Monte, Calif.) rest on tapered beams. For night use two straight beams are set in the notches located at the front of the seat frame; the seats are then placed over these, making a comfortable bed, with space underneath for bedding stowage. A plastic shield protects the occupants of the Pullman seat from spattering off the stove, which is a compact, apartment-size range with three burners and oven. A generous size sink (Federal Enamel & Stamping Co., Pittsburgh, Pa.) sits in a $\frac{1}{2}$ -in. plywood board with Formica top (Pionite, Pioneer Plastics Co., Salem, Mass.) and is equipped with a hand pump which supplies water from the tank under the bed and with a tap for utility connection.

Directly over the stove is an enameled hood attached under the upper cabinet, having a vent into the side wall. The sink drain pipe is also vented into the side wall. Three drawers and a bread board are provided, as well as storage space under them and under the stove. There is a hooded electric light over the sink and another over the bed. On the forward cabinet is a gas light for use when utilities are not available. Gas is supplied to the stove from a Butane bottle through a tee with $\frac{3}{8}$ and $\frac{1}{4}$ -in. copper tubing. Above the sink is an outlet for 110-V current for toaster or other equipment. Note the handy shelf with curved plywood rim at the right of cabinet over the stove.

The refrigerator compartment is tailored to fit a combination ice-and-electric unit (made by Marvel Refrigerator Co., Sturgis, Mich.). The framework for this, including the clothes closet and the sink unit on the opposite side of the trailer, is made of $\frac{3}{4}$ x3-in. pine, with sides of plywood. Doors are $\frac{3}{4}$ -in. plywood rabbeted for a lip of $\frac{1}{4}$ -inch.



FRAMING for the right side has openings for door, window and luggage compartment.



LEFT SIDE framing. Most of the wiring is installed here and is carried over the roof.

FRONT END framing is ready to receive the Fiberglas insulation and aluminum skin.

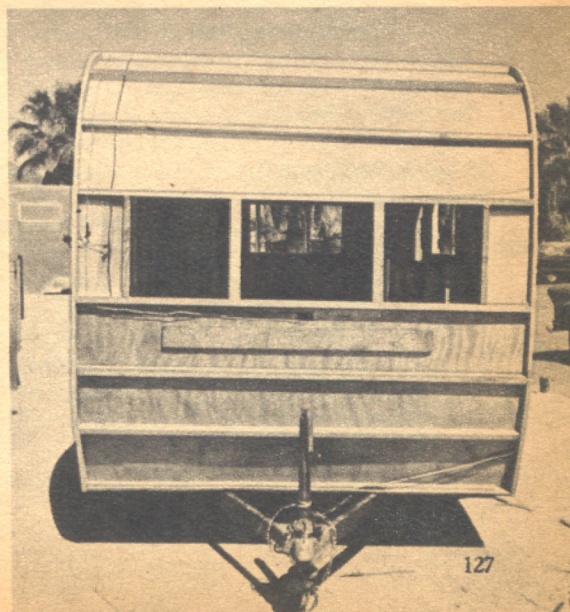
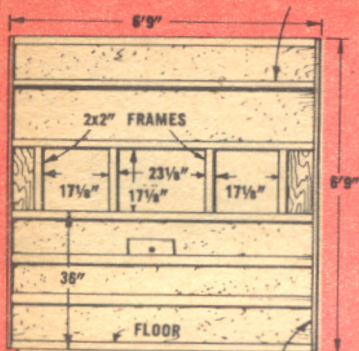


PLATE THREE

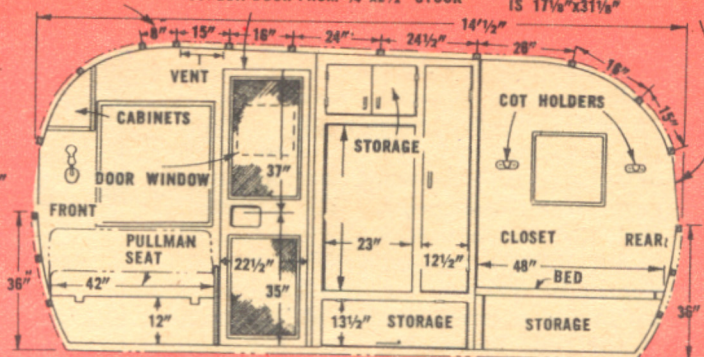
THESE DIMENSIONS SHOW SPACING OF 2x2" CROSS BEAMS



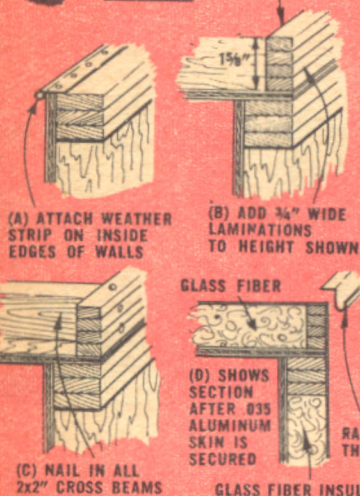
FRONT VIEW

SCREEN DOOR FROM 3/4"x2 1/2" STOCK

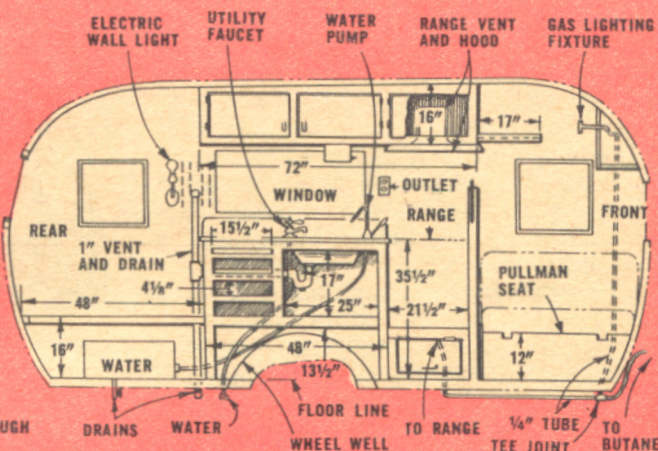
REAR WINDOW OPENING IS 17 1/2"x31 1/2"



INTERIOR VIEW OF RIGHT SIDE WALL UTILITY ARRANGEMENT



GLASS FIBER INSULATION



The .032 ga. aluminum skin can be put on before completion of the inside cabinets. It is cut to convenient size to join over the front and rear cross beams for a 1-inch lap and is secured with binding head screws. The edges are first bent 1/2 inch in a brake and nailed to the curved sides. This portion will buckle in places somewhat but is flattened with a hammer, later to be covered with a rain gutter. On the roof the joints are crimped and calked with Kool Seal mastic, as are the edges of the roof vent, a stock item. Sheets of aluminum siding are cut for the sides, here secured with round-head screw nails. However, flat sheets of aluminum as on both ends can also be used. Fiberglass insulation had of course been laid over the wood fram-

ing before the skin is finally installed.

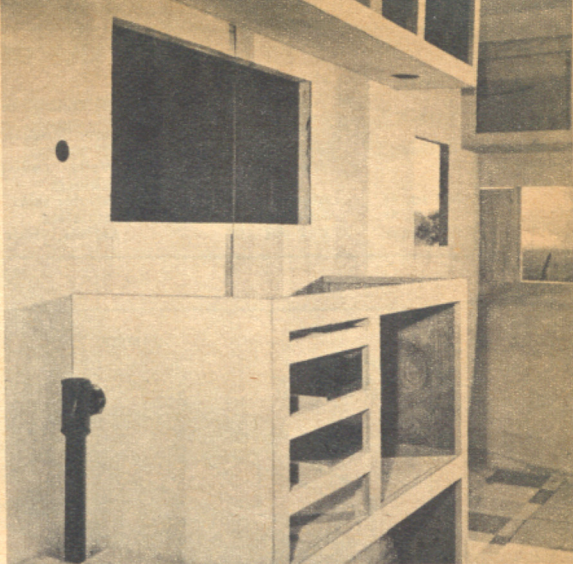
Cabinet doors are 3/4-in. plywood rabbeted for an overlap of 1/4 in. and hung on offset hinges. The sink top is of 1/2-in. plywood with Formica cemented to it and bound with stainless steel molding.

The main door is plywood on the inside, aluminum on the outside, over a wood frame and is hung on a full length piano hinge, with the screen door on offset hinges assembled on the same piano hinge. A sliding panel in the screen door gives access to the main door handle when both doors are closed.

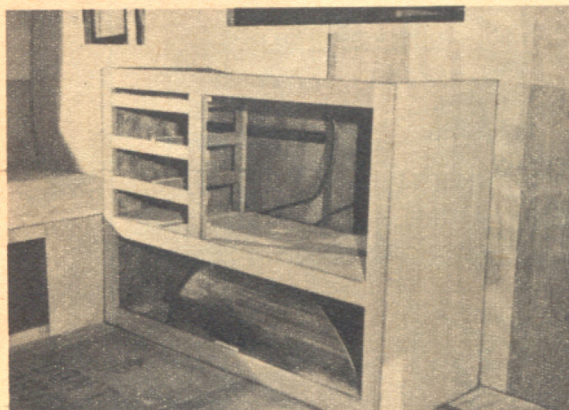
Half-round molding goes over the joints of the interior paneling. A fine varnish finish is applied to all exposed wood parts if they are left natural.



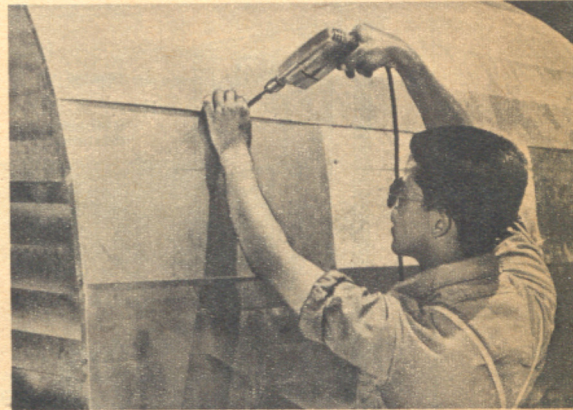
THE REFRIGERATOR and clothes closet unit is built outside, installed when finished.



FRAMEWORK for sink. Note the drain pipe at left which is carried up to vent hole.



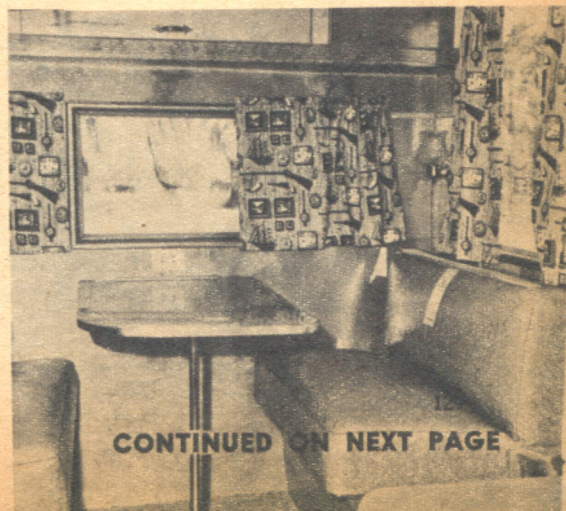
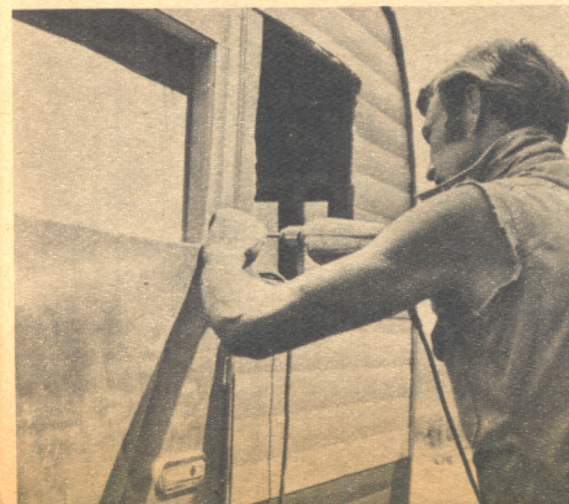
COPPER tubes are installed to lead from water tank to sink and to outside connection.



INSTALLING skin at rear end. Note Fiberglass, not yet cut away from rear window.

ROUND-HEAD screw nails are used to attach the .032 ga. aluminum to both trailer sides.

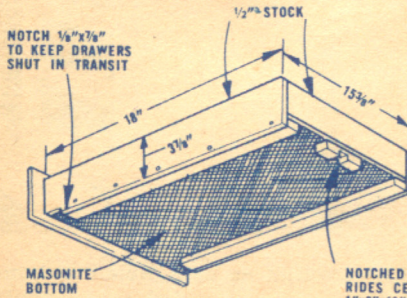
FOLD-AWAY table and Pullman seats below. Backs lay flat to form a roomy bed.



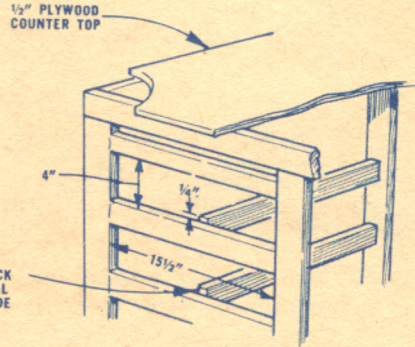
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BILL OF MATERIAL

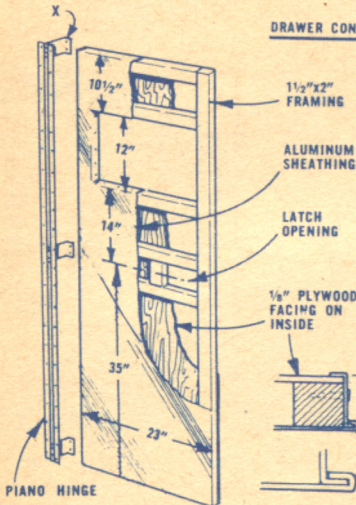
3 sheets	Plywood, fir, 5/8"x48"x84"	Floor	1 piece	Masonite, 1/4"x48"x84"	Beds
3 sheets	Celotex, tar impreg- nated, 1/2"x48"x84"	Floor insulation	1 sheet	Formica, 24"x96"	Table and sink
18 sheets	Birch veneer, 1/4"x48"x84"	Walls, ceiling, cabinets	6 sq. yds.	Linoleum	Floor
504 sq. ft.	Aluminum, .032 ga.	Exterior skin	200 lineal ft.	Pine, 3/8"x1 1/8"	Bow laminating
350 sq. ft.	Fiberglass	Insulation	120 lineal ft.	Ponderosa pine, 1"x3 1/2"	Cabinet facings
20 pieces	2"x2"x84", fir	Rafters, studs	2 pieces	Aluminum, 3/4"x16 ft.	Counter edging
			2 pieces	Aluminum drip mold- ing, 16 ft. long	Drp molding
			1 chassis frame with wheels, hitch, chain.		



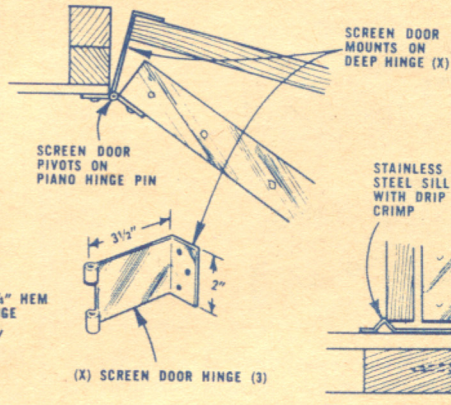
DRAWER CONSTRUCTION



DRAWER SECTION OF SINK CABINET



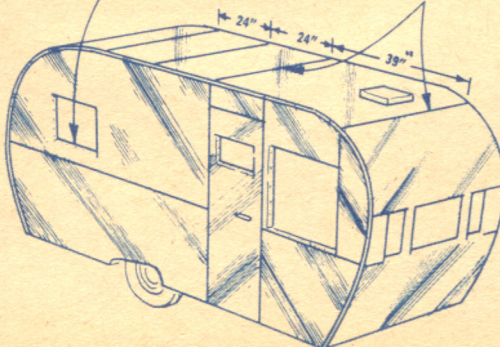
DOOR ASSEMBLY



DOOR SILL



ALL TOP JOINTS
ARE CRIMP LAPPED



METHOD OF APPLYING ALUMINUM SHEATHING PANELS

