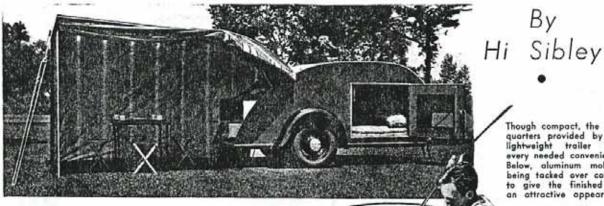
## **Kaycraft Kampster**

From Outdoor Life, December 1936-January 1937
For Reference Only... Do not use to build a trailer.
Check on Teardrop and Tiny Travel Trailers for up to date building information;
<a href="http://www.mikenchell.com/forums">http://www.mikenchell.com/forums</a>

# YOU ASKED FOR An Ideal



Though compact, the snug quarters provided by this lightweight trailer have every needed convenience.

below, aluminum molding being tacked over corners to give the finished job an attractive appearance

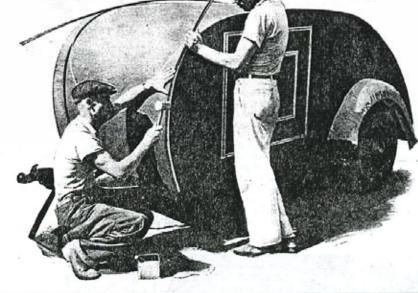
HIS compact, streamline trailer is especially adapted to the demands of the outdoorsman because of its unusually generous road clearance and light weight, making it possible to follow wagon trails through brush and to climb steep, rutty roads. Although it weighs only 650 pounds, its construction is exceptionally sturdy, as the de-tailed drawings indicate. The unique Beth, of Los Angeles, who have named it the Kaycraft Kampster.

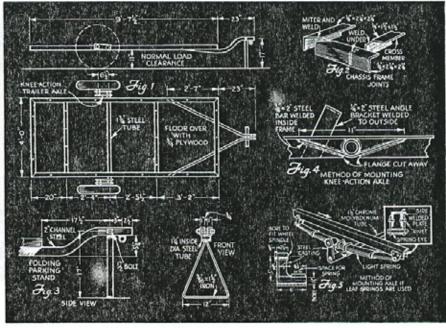
A snug, comfortable sleeping compartment is located amidships, an inner-spring mattress being laid directly on the floor. Forward is a compartment for clothes, and, over the sleepers' feet, a large shelf for bedding, duffel, and miscellaneous equipment. It has ample space for hunting and fishing gear.

In the rear, a lid lifts to give access to a complete kitchenette, including stove, refrigerator, water tank, shelves, a drawer for food, and racks for dishes. Even a swinging beverage rack can be built in if desired. Electric bulbs and switches are provided in both the sleeping compartment and kitchenette, the wiring for which can be arranged to plug in on a six-volt car battery, or a 110-volt circuit in an automobile camp.

Materials to build the trailer cost about \$100 east of the Rockies, and somewhat more on the Pacific Coast. A man who lacks the equipment to make the chassis himself, or would rather not go to the trouble, can buy the chassis complete with wheels, tires, and hitch. This will increase his cost about \$50.

The chassis frame is a flat rectangle 48 x 1151/2 inches, made of steel angle irons as in Figure 1. Side and end members are 2¼ x 2¼ x ¼ inches, mitered and welded at the corners.





# Outdoorsman's Trailer

TO BUILD YOURSELF ... .. HERE IT IS

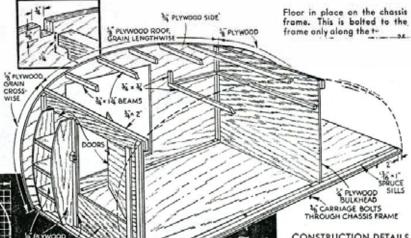
There are two cross members of 112 X 1½ x ¼-inch section, cut as shown in Figure 2, and welded to the side members. The axle, welded to the frame, also serves to reënforce the structure. To make sure no warp creeps into the finished frame, the various members should be laid upside down on a flat surface when welding. When complet-ed, the top is level all over.

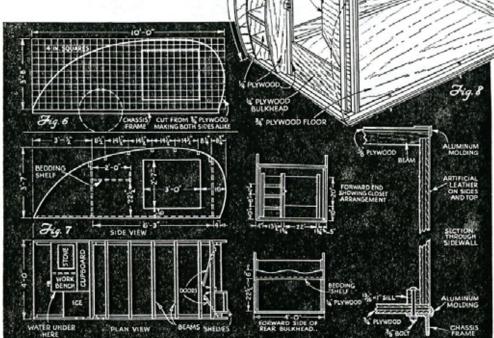
For the hitch bars, 2-inch channel steel is used, being bent in the form of an A, and welded on the underside of the frame, making an exceptionally sturdy job. A triangular parking stand is bolted between the ends of the channels. This swings up under the trailer when not in use. The upsweep of the hitch bars is illustrated in Figure 3, together with the parking-stand dimensions. A standard hitch, made by Zagelmeyer, Bay City, Mich., and shown in the photos, is well suited to this trailer, but it is possible to use other

An ingenious axle, with independent springs, or knee-action, was designed especially for this trailer, making possible the exceptional clearance of 11 inches. Heavy, coil springs, set be-tween the chassis frame and a yoke carrying the wheel spindle, form a very compact unit, and not only provide easy riding but keep the wheels up close to the chassis, and eliminate long springs, shackles, bolts, clips, and so on. In Figure 4 is shown the method of securing this type of axle to the frame.

In case you prefer to use a conven-

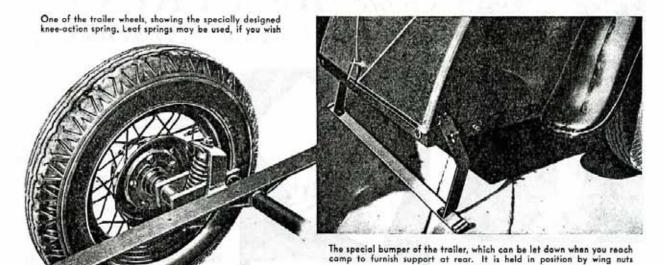
View of the chassis frame, constructed of steel angle bars, welded together. At forward end are the tow bar and stand





## CONSTRUCTION DETAILS OF CHASSIS AND BODY

The drawing above shows the way plywood is used to form sides and roof of sleep-ing compartment, and shelv-ing. At left are details of the chassis and springs as well as the method of applying body covering and molding



tional leaf spring, one may be mounted, as shown in Figure 5. This, however, entails some expense in the way of a pattern and castings.

The cast-steel knee, for the patterns of which dimensions are given, will give a 5-inch drop (or greater if you wish), and brings the wheel up close to the chassis. It is welded to the tubularsteel axle, and has a seat for the spring. The chassis frame should have a plate, welded to the side member, to carry the spring-hanger rivets at the forward end, and the shackle bolt at the rear. Select a light spring, or remove some of the leaves from any standard spring. bearing in mind that the moving load will be only 650 pounds, plus equipment. This type of axle naturally will not have so much clearance as the model shown in the photos.

The knee is used with a leaf spring because a one-piece forged axle of sufficient weight cannot be bent at a right angle, and, unless this were done, the wheels would be too far below the chassis, making the trailer look top-heavy.

The first step in building the body is laying the floor of %-inch plywood. This is cut to the exact size of the chassis frame, and secured with 14-inch carriage bolts through end and cross members, but not along the sides. Later, bolts will be put through the sills at the base of the walls as well as through floor and frame.

For the side walls, also, %-inch plywood is used. On wrapping paper, glued together in a rectangle 3 feet 8 inches x 10 feet, lay out 4-inch squares, and trace the outline shown in Figure Both walls of the body are identical. Notches for the intermediate ceiling beams are % inch deep, those at the ends 2 inches, as in Figure 7. This drawing also gives the locations of the forward and rear bulkheads, or partitions. Spruce sills, 13/16 x 1 inch, are screwed and glued along the bottom edge inside each side wall.

The body can be erected directly upon the chassis if the wheels are removed and the frame raised on blocks about 3 or 4 inches from the floor. With the wheels in place, the top is rather awkward to work on.

The floor plan, shown in Figure 7, gives an idea of the general arrangement of the built-in convieniences, and shows how the two doors in the forward partition open into the clothes closet and shelves. This compartment, as well as the entire body, is shown in the cutaway perspective, Figure 8. Plywood cleats serve as door stops. Shelves also are of plywood, with a 1/2 x 1/2-inch strip under the forward edge of each. On the forward side of the rear bulkhead is a large shelf, or bin, for bedding, duffel, and other equipment, well out of the way over the sleepers' feet. A spruce beam, 34 x 2 in., runs across the top of each bulkhead, with the beams between them being % x 114 inch. The bulkheads are further reënforced with vertical cleats in the corners.

Brass or galvanized screws and nails and casein waterproof glue should be used throughout. Flathead screws should, of course, be countersunk. Before the glue sets, check corners with a square.

## The Materials You Need

## CHASSIS

- 2 pieces 21/4x21/4x1/4x116-in. steel angle
- 2 pieces 21/4×21/4×1/4×48-in. steel angle
- 2 pieces 1/2x1/2x1/4x48-in. steel angle
- 2 light springs (with shackles, U-bolts,

rebound clips) 2 cast-steel knees

2 cast-steel knees 2 wheels 2 pieces 1x2x48-in. channel steel 1 piece 3/16x11/<sub>2</sub>x48-in. strap iror 1 bolt ½x3 in. 1 pair trailer fenders

## BODY

\*3 pieces 34x48x120-in. fir plywood 1 piece 4x48x96-in, fir plywood 1 piece 4x30x48-in, fir plywood 1 piece 4x34x84-in, fir or other wood

1 piece /gx48x48-in. fir or other ply-wood 2 pieces 1/8×48×60-in. fir or other ply-

wood

wood

pieces 34x11/4x48-in. spruce

pieces 34x2x48-in. spruce

pieces 13/16x1x112-in. spruce

pieces 13/16x1x112-in. spruce

pieces 13/16x1x38-in. spruce scrap

material for shelves

pairs brass 2-in. butterfly hinges

2 latches 4 sets continuous window hinges

1 door lock
1 slide bolt
8 sq. ft. copper fly screen
112 ft. aluminum corner-strip molding
2 ventilator brackets 1 gross 1-in. No. 7 flathead brass

screws

yd. 48-in. imitation leather, or canvas

yd. sponge-rubber weather strip

5 %-in. carriage bolts

3 pt. shellac or varnish

1 pt. casein waterproof glue

5 pt. rubber cement (1 qt. casein glue, if canvas is used)

30 ft. armored cable

2 sockets, 2 switches

Plugs, etc.

## KITCHENETTE

handle for lid nickeled drawer handles

wood drawer pulls lever-handle sink faucet sets standard refrigerator hinges

1 standard refrigerator ninges 40 sq. ft. ½-in. plywood 2x2-ft. panel ½-in. composition board 3x6-ft. panel 1-in. insulating wall

board 12 lineal ft. 34x11/4-in. Philippine ma-

hogany 51/2 lineal ft. 1x2-in. Philippine mahog-

any sheet 17x33-in, stainless metal water tank, with tap Scrap materials for cleats, drawer rails, etc.

## MISCELLANEOUS

tail-light bracket 1 license-plate holder 1 bumper 1 inner-spring mattress, and bedding 1 folding table 2 folding camp chairs

\*1/2 in. material can be used, if obtainable locally in proper sizes



Shelves in compartment at forward end of trailer, reached through door in bulkhead

## An Ideal Trailer

With beams and bulkheads installed, the roof is laid. Plywood 1/5 inch thick is used, and, over the sleeping compart-ment, it is installed with the visible grain lengthwise. This piece reaches only to the middle of the beams along the top of each bulkhead. Over the nose or forward compartment, another sheet of 8-inch plywood is put on with the grain crosswise. It is so placed because of the more abrupt curve here. Casein glue and brads are used to secure the plywood to sides and beams. The cov-ering over the kitchenette is a separate unit and will be described later.

For a first-class job, the whole inside of the body should be given a coat or two of clear shellac before the roof is laid, and the underside of the roof panels should be similarly treated. Spar varnish can be used instead of the shellac.

The model in the photo is covered with durable imitation leather, laid in rubber cement, and aluminum corner strips over the edges covering the joints as well as the tacks. If desired, canvas can be used for covering, if stretched tightly after thinned casein waterproof glue is applied to the walls and top. After the first coat of paint is thoroughly dry, smooth with a coarse sandpaper. paint, and sandpaper again with increasingly finer grades until the surface is smooth enough to suit you.

Half-round metal molding is placed over the joint between body and chassis

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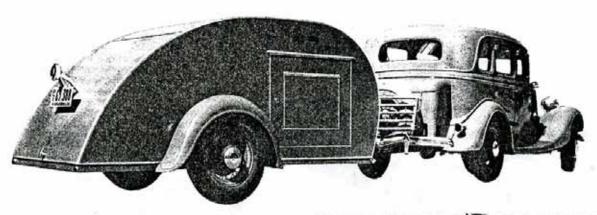


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# FINISHING AND deal



Ready for the road. The trailer's light weight makes it easy to tow, and the ample clearance permits it to be taken over the roughest trail

Simple Instructions on Putting the Final Touches to a Mobile Camp That Will Enable Touches to Cover More Ground in Greater Ease

## By HI SIBLEY

ITH the chassis and sleeping compartment built according to the instructions and drawings given last month, we are now ready to start on the kitchenette of our lightweight trailer. The general dimensions of the extremely compact and convenient kitchenette are given in Figure 9.

It is constructed of \(\frac{1}{4}\)-inch plywood, and, where framing is visible in front, of Philippine mahogany. Drawer rails and cleats may be of pine. The built-in conveniences include a cupboard with sliding panels, a bin or dish rack, large drawer, and a chromium-plated workbench top, a galvanized water tank, bread board, and refrigerator. A pair of rails, fixed to the cupboard next to the workbench, permit the gasoline camp stove to be pulled forward for greater convenience in cooking.

Since building the cupboard is more or less of a cabinet job, all joints should be true, square, and neat as possible, especially in front. Plywood is used for sides, top, and shelves, as well as for the large drawer, which has a ½-inch-thick front, with rabbeted ends. It is important that this drawer be made to slide freely. This holds true, also, for the panels in the upper part of the cupboard. The track for the panels is simply a 1-inch-wide piece of Philippine mahogany, with two rabbeted grooves in the top edge. Brads and casein glue are used throughout the cupboard. The finished job is given two or more coats of shellac.

The water tank holds ten gallons, and, like the drawer, extends nearly to the rear wall of the cabinet. The front of the tank is painted aluminum, and has a nickeled drawer pull and tap. A standard filler cap is set into the top.

It is possible to purchase a small ice box ready-made, but the box for which details are shown in Figure 10 is quite satisfactory, having a capacity of about 45 pounds of ice. First, a frame is built of ¾ by 1½-inch pine, and a galvanized box set inside it. The turned-up front edges of this galvanized lining are tacked to the front frame. Inside the metal box are





# Outdoorsman's Trailer

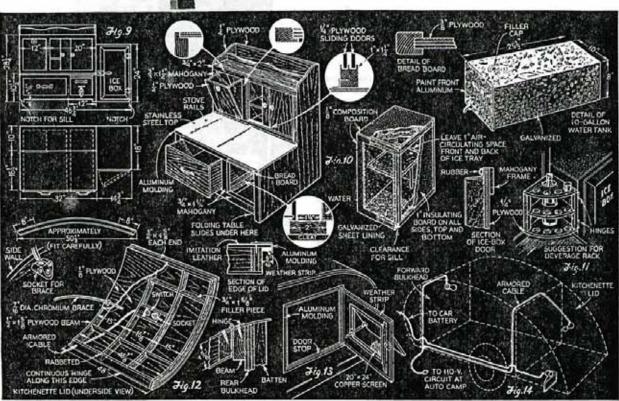


insulation should stop two inches from floor to let bottom frame member fit over side sill. Now cover the other side, the back, and the bottom of ice-box with plywood. The top is covered with ½-inch composition wood, and a neat frame of the same material covers the front, except, of course, for the opening for the door.

The door consists of a 4-inch plywood panel, with a rectangle of 1-inch insulating board on the back, and covered with galvanized iron, as shown in the sectional drawing, in Figure 10. Rubber weather strip, fitted to the inside edges of the door, make it airtight. A mahogany frame, with mitered corners, is nailed around the outside edges. The door is attached with nickeled refrigerator hinges, and held shut with a refrigerator latch. As the door must be fitted very snugly, it is well to make sure the frame is carefully squared up at the start.

A swinging beverage rack can be made to fit alongside the ice box. Details are shown in Figure 11. The shelves are of ¼-inch plywood, with three 1-inch mahogany corner posts. The shelves are cut to accommodate a dozen glasses and a bottle. The unit, being hinged, can be swung forward out of the way when meals are being prepared on the workbench.

Dish racks are not shown in the draw-



Detail drawings showing how the many conveniences in the kitchenette are built. The wiring diagram shows a circuit fed by outside current

ings, as the owner will prefer to install them to accommodate individual outfit. The racks can be built into the compartment which, in the drawings, is given over to a bin, or it can be built as a separate unit in the space above the icebox.

The large, hinged cover over the kitchenette compartment forms a shelter while cooking is being done, and, properly made, should fit closely when down. The frame consists of four curved beams of 1/2-inch plywood 1 1/8 inches wide, and the  $\frac{34}{5}$  x 1 %-inch end pieces and spacers shown in Figure 12. The curve of the beam will, of course, be the same as that of the side wall of the kitchenctte compartment. Ends of the two middle curved beams are rabbeted one quarter inch into the end members. The spacers are separate blocks.

Between the middle beams a well is formed with spacers, to accommodate the light socket and switch. A beam, one filler block, and the top end piece are bored for the armored light-cable. Assemble the frame with screws and casein glue, install the armored cable, and then lay on the 1/4-inch plywood canels top and bottom, first applying casein glue to the beams and end members. The plywood is laid with the visible grain crosswise, and extends about 9/16 inch beyond the frame on sides and bottom, so there will be ample clearance for the side in closing it. Aluminum molding is screwed to the side and bottom edges as shown, and fitted with weather strip to make a dust-proof job.

Two brackets are screwed on the under side at each edge to carry the braces which hold the top open. The cross member of the chromium-plated brace, between the small brackets, serves as a towel rack. Sockets attached to the sides of the kitchenette take the lower ends of the bracket, and clips, screwed to the under side of the roof, hold it firmly when top is closed. The top is attached by means of a continuous hinge that extends the entire width. The handle and lock are the standard type used in automobile door handles.

Both doors of the sleeping compartment are alike except for the fact that only the one on the curb side has an outside lock, the other being secured by a bolt on the inside. They are cut from 1/2-inch plywood. The ventilating window is hung on a continuous hinge at the top, and has a notched arm to hold it open, as shown in Figure 13. The ample width of the doors makes access to the sleeping compartment quite easy. Copper screen is secured to the door openings by a molding frame around the inside. Either aluminum corner strip or molding is placed around door, and the window opening. Around the inside edge of the door, sponge weather strip is cemented. This fits against a doorstop frame, rendering the sleeping compartment dust-proof. Between the window and the swinging end of the door, a wood brace is screwed on the inside to keep the door from twisting or splitting. The lock is a sturdy night latch.

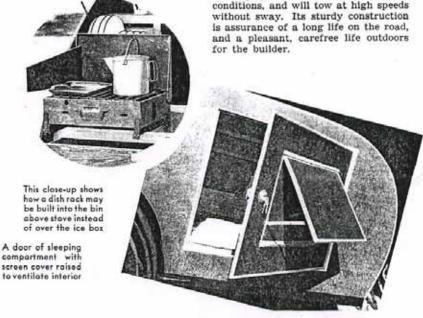
The lighting layout will be determined by the owner's special requirements. In Figure 14, the wiring shown is a circuit

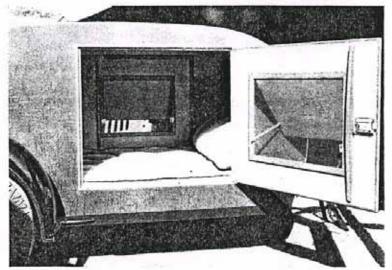
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... we have prepared a complete set of two blueprints to help you build this attractive trailer. These prints, which cost only 50 cents, are now ready. To make your work simpler, order your prints today. Address OUTDOOR LIFE, 353 Fourth Avenue, New York, N. Y. that can be plugged into an outside 110volt current, only the tail light drawing current from the car battery. One bulb is located on the forward bulkhead and serves as a dressing and reading light. The other is located on the under side of the hinged kitchenette lid. The regulation tail-and stop light is mounted on a bracket at the left rear side. Ruby reflectors should be set in the chassis frame, one on each side. These are required by law in some states, and, even in those in which their use is not compulsory, they will be found a valuable safeguard in night driving.

Because at some time you may camp where 110-volt current is not available, it would be wise to install a second circuit, which can be plugged into the car battery. The same wiring can be used if a two-way switch and the proper sockets and bulbs for a six-volt circuit are provided.

This trailer, as illustrated, has been thoroughly tested under all possible conditions, and will tow at high speeds for the builder.





The wide door makes it easy to climb into the comfortable sleeping compartment in which the mattress is laid directly on the floor. The screen covers can be adjusted to suit weather

