

Sleeper Trailer

From Mechanics and Handicrafts, December 1936

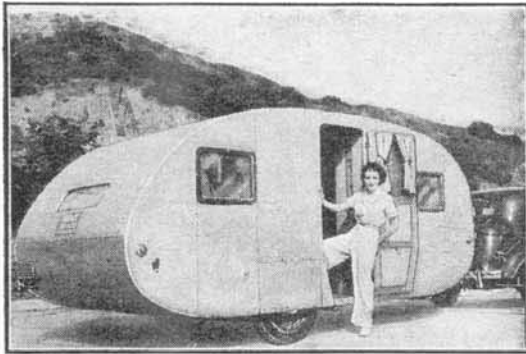
For Reference Only... Do not use to build a trailer.

Check on Teardrop and Tiny Travel Trailers for up to date building information;

<http://www.mikenchell.com/forums>

Building a Teardrop Sleeper Trailer

for \$50.00



Even the movie colony has become "trailer conscious"—photo shows Ida Lupino, famous movie star, entering a streamline trailer.

For the summer vacationist or motoring enthusiast who enjoys frequent outings, but who cannot afford frequent hotel bills or expensive camping equipment, a "teardrop" trailer, which comfortably accommodates two persons, will prove just the thing for many pleasant week-end trips. This can be built for approximately \$50 by anyone who has ordinary carpenters' tools.

By C. M. GEORGE

THE cost of the trailer described here is figured with sides, windows and door cut at a mill. If one has access to a jig-saw and band-saw large enough to handle the job, a little expense can be saved on these items. Prices mentioned here are actual costs.

Wheels, rims, springs and axle of a light car, such as a Chevrolet of about 1928, '29 or '30 model, are suitable for the running gear. The rear shackle and front frame hanger are left connected to the springs for welding to the frame.

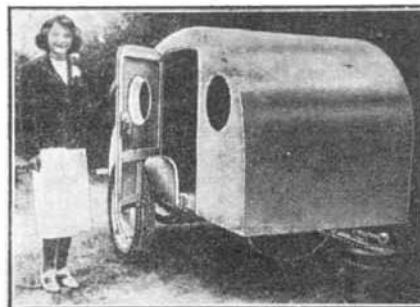
Framework for the bed of the trailer can be made at any welding shop, as is shown in Fig. 2. Main support and strength is obtained from the two cross members of $\frac{1}{4}$ " x 3" angle iron 42" long. Each end is cut, bent back at right

angles and drilled for $\frac{1}{2}$ " hole as shown. Cross bracing of $\frac{1}{4}$ " x 1" strap iron adds rigidity while assembling, as well as reduces twisting motion when on the road. The strap iron braces are welded where they cross.

The tongue is made of channel iron about $7\frac{1}{2}$ feet long (the size for a Model T Ford frame). Resilience of the frame steel reduces the chance of breaking the tongue.

As the running gear is finally assembled, the tongue should be attached so that the spring shackles are at the rear and the frame hangers are at the front. This improves the trailer's pulling quality. The tongue is welded in the three places where it touches the frame, to give added strength.

A malleable steel



Small and neat, yet serving the purpose for which it was built.

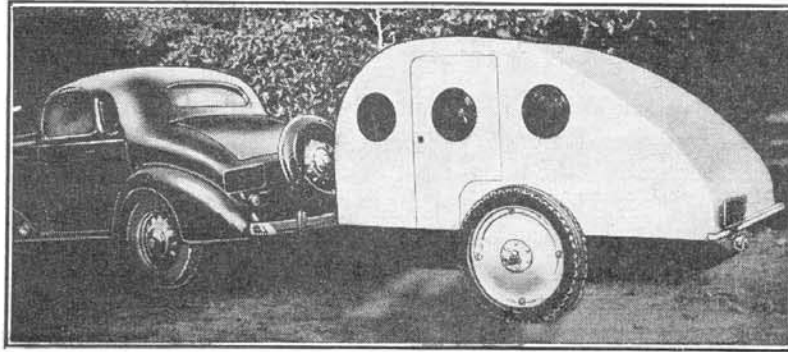
ball and socket hitch can be obtained from a mail order house for the price listed. This bolts on to the end of the tongue.

The ball is attached to the car by fastening it to a threaded forged steel eye, which in turn is bolted through a hole drilled in the rear bumper. If the bumpers are split, the ball will have to be fastened to a steel bar bolted to the two side pieces.

Construction expense may be further cut down if one is able to do his own welding.

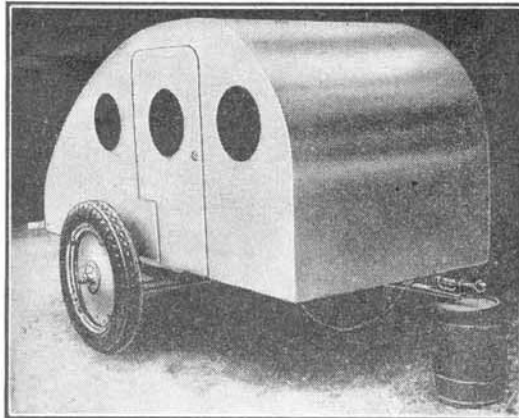
The trailer bed stringers are fastened to the metal frame with four $\frac{1}{2}$ " x $3\frac{1}{2}$ " carriage bolts. The heads of the bolts are countersunk. Note that the weight is approximately nine inches off center. With the weight bearing on the rear of the car, the trailer "rides" better than if it were perfectly balanced.

Corners of the 2" x 3" frame are nailed with 20-penny cement coated box nails.



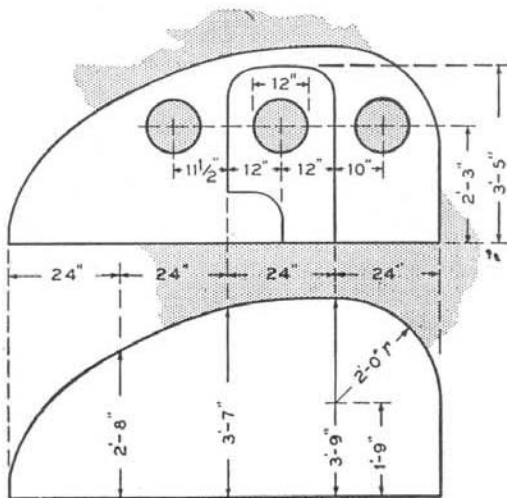
Hooked up to the car and ready to go on that "long trip"; and the owners will be entirely unmindful of hotel bills.

Further rigidity can be obtained by placing 6" steel corner braces in each corner, although this is not required. The front 2" x 3" member crossing the tongue is



Three-quarter view of the trailer. This, when painted with aluminum paint, makes an attractive job.

Fig. 1—This diagram (below) shows how the sides are laid out.



bolted to it with the bolt head countersunk to allow for the flooring.

The flooring (of second grade lumber) is nailed cross-wise with cement coated nails. Use of cement coated nails reduces chance of the boards working loose.

The sides of the compartment are cut from standard $\frac{1}{8}$ " x 8' x 4' pieces of presd-wood. Two pieces are tacked together where the nail holes will be in waste material, and the windows, door and curve of the "teardrop" are plotted as in Fig. 1. Material cut from the windows should be saved for use in making the

frames. Other left-over presdwood should be saved also for the window frames.

To give rigidity to the presdwood, 1" x 6" surfaced wood is applied along the inside bottom of the sides as in Fig. 3 with $\frac{3}{4}$ " x 1 $\frac{1}{2}$ " vertical bracing as

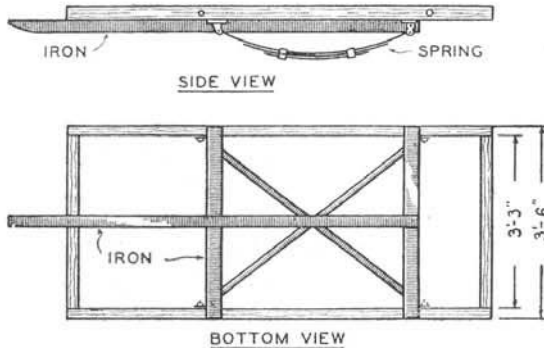


Fig. 2—The angle iron cross braces should be welded, as explained in the accompanying text.

shown. Boards are then cut about 2" wide to fit around the curve to which the roof is attached. All these are glued with casein glue and nailed with $\frac{3}{4}$ " box nails.

The two sides are then nailed into place flush with the bottom of the 2" x 3" members and bolted with three $\frac{1}{4}$ " x 4" carriage bolts on either side.

Tops of the three vertical siding braces may be left short enough to allow cross pieces of the same material, the width of the floor, to be attached. Use of three 6" corner braces on either side between side reinforcements and floor, adds materially to the strength of the sides.

Material for the roof is cut the proper width from presdwood and attached, beginning at the front. It is nailed and glued as it is bent over the curve. Presdwood is very easy to curve properly, and is rigid when fastened in place.

It will take two pieces to make the roof, as the presdwood comes only in

8-foot lengths. The first piece will reach about to the rear window. Therefore a light piece of wood must be glued and nailed under the seam. The second piece is applied just as was the first. The front and rear ends are bolted with two carriage bolts each.

The door is braced as shown in the drawing and is fitted with hinges in the ordinary manner. A night-lock (costing as little as 75 cents at a mail order house) provides an excellent latch.

Windows are made by cutting six circles, with inside diameter of 11", from the material saved from cutting the large circular holes. From the left-over presdwood, other circles with inside diameters of 11" and outside diameters of 13" are cut.

Two large sheets of heavy celluloid can be obtained from an auto-top shop or mail order house. From these, six 12" circular pieces are cut and nailed between the two frames.

The windows are then fitted on the inside of the compartment and hinged at the top to open upwards. All six windows do not necessarily have to open, but at least two should be hinged for proper ventilation.

The whole exterior of the trailer is painted with aluminum paint, which

gives a weatherproof as well as good-looking finish. On the inside, the bracing may be painted a color harmonizing with the brown panels of the presdwood or left unfinished.

(Continued on page 90)

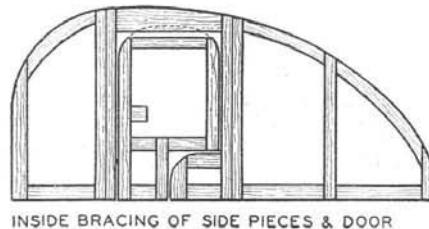
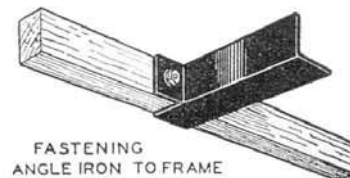


Fig. 3—The thin wooden sides will require some sort of braces. This shows a suitable arrangement.

Fig. 4—A suitable method of anchoring the wooden frame to the angle iron is presented at the right.



House Pests

(Continued from page 76)

wood holding this powder in position. This tiny beetle deposits the eggs in the fibro-vascular bundles of the wood and the hatched larvae eat themselves deep into the wood but do not touch its outer layer. At the beginning, the tunnels are small, but as the larvae feed and grow, they become larger, while the rear of the tunnel is filled with powdered wood. The mouth parts of the larva crush the wood into dust; part of it is used for food and the rest fills the tunnel formed by its feeding habit.

The nutritive value in the wood is difficult to extract, ordinarily. It is deficient in nitrogen and the greater part of the wood is passed out unused. The larvae live in dry, almost arid, surroundings. Only traces of moisture are taken up with their food. This means that these creatures are able to live and mature in dry wood.

The larvae are well protected against the loss of any moisture; little moisture is taken up by the wood out of the atmosphere. As is to be expected, the insects living under such unfavorable conditions are much retarded in their development. One year is required for a larva to mature; then it eats itself near the surface and pupates. In the spring the adult beetle emerges. At this time a small amount of the powdered wood is pressed out of the emerging hole. A short time later the adults begin to deposit their eggs.

A preventative is to remove the cambium or "growing" layer of wood, which is much desired by these beetles. Another system is to paint the end wood with boiled linseed oil, cresol or similar substances which clog the fibro-vascular bundles. When it is necessary to rid an infested house of these beetles, the only safe method of control is by fumigation, whereby both the beetles and larvae are killed.

The so-called death watch beetle (*Anobium pertinax*) prefers well dried and seasoned lumber and furniture. Old furniture, picture moldings, trim, etc., is especially well liked. This beetle produces the lumber and furniture called "wormy." Its presence is readily noticed by the fact that it makes a sieve-like opening in the wood, out of which a continual stream of fine dust is expelled. The beetle is about 0.3 inch long, brownish-black in color, and covered with a down of hairs. The wing covers are ornamented with minute shallow depressions like pin points.

In order to attract the female, the male "knocks" in the wood. This is continued in a rhythmic manner not unlike the ticking of a clock and may continue for a considerable time. To produce this knocking sound, the beetle folds in the front pair of feet and the feelers close to the body, braces itself with the middle pair of feet and knocks against the wood in its burrow with head and fore part of the thorax. This knocking is soon answered by the female.

Small pieces of wood, such as boxes, etc., may be freed of these pests by exposing the wood for a considerable time to heat. Another system of control consists in spraying bichloride of mercury, dissolved in water, into the bore holes of the insects, with the aid of a small syringe, or medicine dropper. This poisons the wood and the beetle with its brood will be killed.

Building a Teardrop Sleeper Trailer

(Continued from page 54)

A Model T Ford tail light and license plate holder assembly, bolted or screwed to the back member of the trailer, works entirely satisfactorily. This must be put on upside down in order to hold the license plate the legal distance above the ground. A double wire is run to the tail light of the car, allowing enough slack for right-hand turns. One wire is grounded to the body of the car and the other is spliced to the line to the battery.

Although no bed springs are included in the plans for this sleeper, a thick mattress on the flooring assisted by the trailer springs, enables very comfortable sleep. A two-foot space at the rear end provides ample room for two suitcases.

Anyone desiring to put more money into a trailer such as this, could elaborate upon the "minimum essentials" given here. Some additional ideas could include:

- 1, Bed springs or box mattress;
- 2, Construction of back portion of roof so it could be raised, and extra space at rear used as a table;
- 3, Installation of reading light;
- 4, Curtains for windows;
- 5, A shelf or sling from roof for carrying clothes, etc.

MATERIAL LIST AND APPROXIMATE COST

Wheels, axle, springs.....	\$12.00
Rims	1.00
Tires (second hand).....	5.00
Lumber	
2x3 three pieces 8 ft.....	.45
1x4 tongue and groove flooring (second grade),	
13 pieces 8 ft.....	2.10
Interior bracing, etc.....	.65
Welding (labor and material).....	10.00
Presdwood	
Four pieces 8'x4' @ 6½c sq. ft.....	8.32
Trailer hitch	2.00
Celluloid for windows	
Two large sheets, heavy @ 69c.....	1.38
Aluminum paint (1 quart).....	.90
Lock for door.....	.75
Tail light (Model T Ford assembly).....	.60
Wiring	
12 ft. @ 4c.....	.48
Connector plug15
Hardware	
Six 6" corner braces @ 15c.....	.90
Four ½x3½ carriage bolts @ 10c.....	.40
Ten ¼x4 carriage bolts @ 10c.....	1.00
One pair galvanized hinges for door.....	.15
Six small hinges for windows.....	.30
Miscellaneous nails25
Waterproof casein glue.....	.25
Mill work	1.00
TOTAL	\$50.03