

# A JEEP for JUNIOR

By LAURAN G. CLAPP



Paul Thompson is the envied possessor of this jeep, which has carried as many as six playmates at one time. Note the grilled radiator, sawed from plywood.

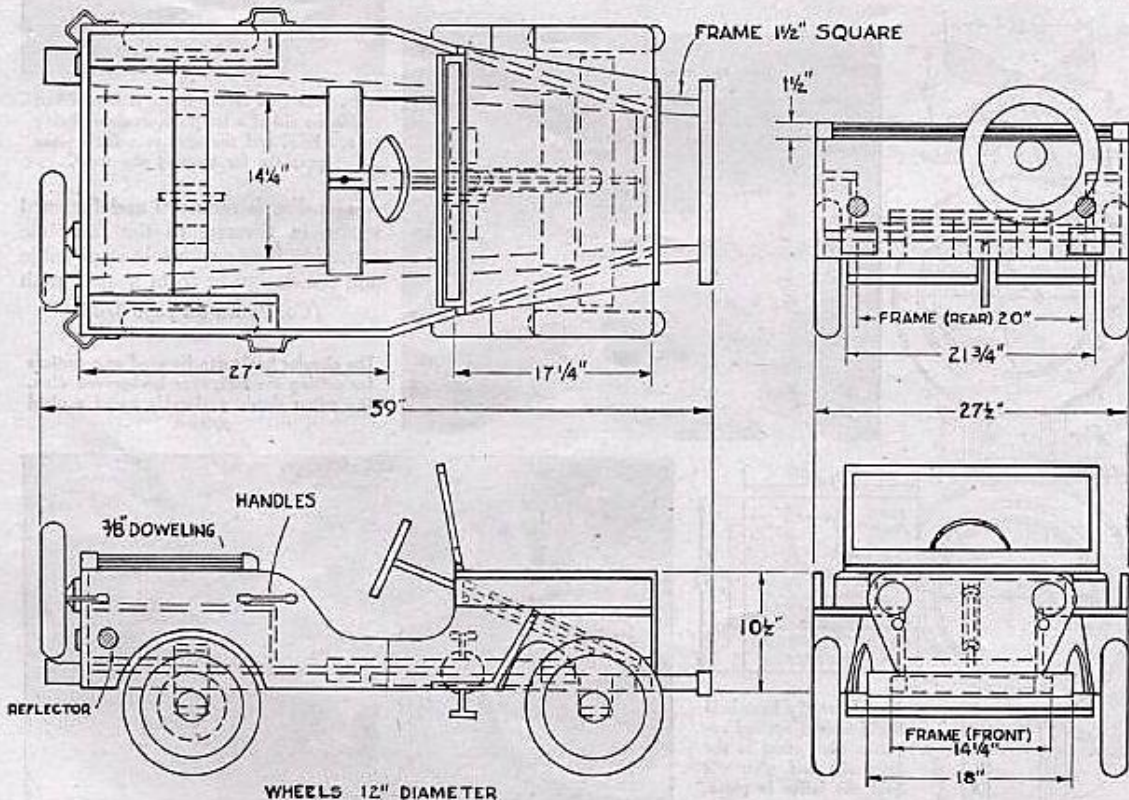
slight effort, and usually with two or three kids hanging on for the ride.

This jeep is the equivalent of around seventy hours' work. Total out-of-pocket cost was something less than five dollars, while the only tools required were a drill, screw driver, chisel, saw, power saw—and a lathe if you are to make your own wheels.

The frame (A) is made from  $1\frac{1}{2}$ " square lumber, the two side pieces being  $53\frac{1}{4}$ " long, the rear cross brace  $17$ " long, and the front cross brace  $11\frac{1}{4}$ " long. The rear cross brace fits snugly at the end, while the front cross brace is about  $4$ " back from the ends of the long frame. When assembled, the frame should be  $53\frac{1}{4}$ " long from tip to tip.

The bumper (B) is  $1\frac{1}{4} \times 2 \times 18$ " and fitted to the front of the frame. The axle brace (C) is of  $1\frac{1}{2} \times 3$ " lumber and should be cut  $12\frac{3}{4}$ " long to allow for trimming so that it fits

THERE'S no one prouder along Mountain View Drive in San Diego than four-year-old Paul Thompson. His daddy built a jeep for him . . . and it runs, too! With its powerful "V" belt drive, little Paul pedals his jeep over hills and bumps and backyard terrain with



tightly inside the frame. Drill a  $\frac{1}{2}$ " hole exactly in the center for the front axle bolt.

Size of the wheels depends on what is available. In this case, rubber pneumatic tires were obtained from a bicycle shop and wooden wheels to fit the tires were turned on a lathe from 2" stock. Metal bearings (auto water pump bushings) were inserted to fit the axle.

Axles were made from  $\frac{3}{8}$ " (inside dimensions!) water pipe and turned down on a lathe by using a file. Only the tips of the front axle were turned to fit the bearings of the wheels. The ends of the axles were threaded for lock nuts to keep the wheels in place. The entire rear axle was turned down so that bearings would fit on any part of it.

The front axle (I) consists of two pieces of wood. One is  $1\frac{1}{2} \times 3 \times 21\frac{3}{4}$ " with a  $\frac{3}{8}$ " groove along its bottom for the axle. Before laying the axle in this groove, drill a  $\frac{1}{2}$ " hole exactly in the center of this wood and insert the axle bolt, head down. Lay the axle in the groove and fasten a  $\frac{3}{4} \times 3 \times 21\frac{3}{4}$ " piece of wood over it to lock the axle in place. The front axle is then ready to bolt to the frame.

The rear axle assembly is a little more complicated, consisting of nine pieces. Two pieces (I) are  $1\frac{1}{2} \times 3 \times 11\frac{3}{8}$ " and  $1\frac{1}{2} \times 3 \times 8\frac{1}{2}$ " with a  $\frac{3}{4}$ " groove for the axle. To this are screwed four upright blocks (F)  $1\frac{1}{2} \times 3 \times 3\frac{3}{8}$ " held by a  $\frac{3}{4} \times 3 \times 14\frac{1}{4}$ " brace (H) at the top.

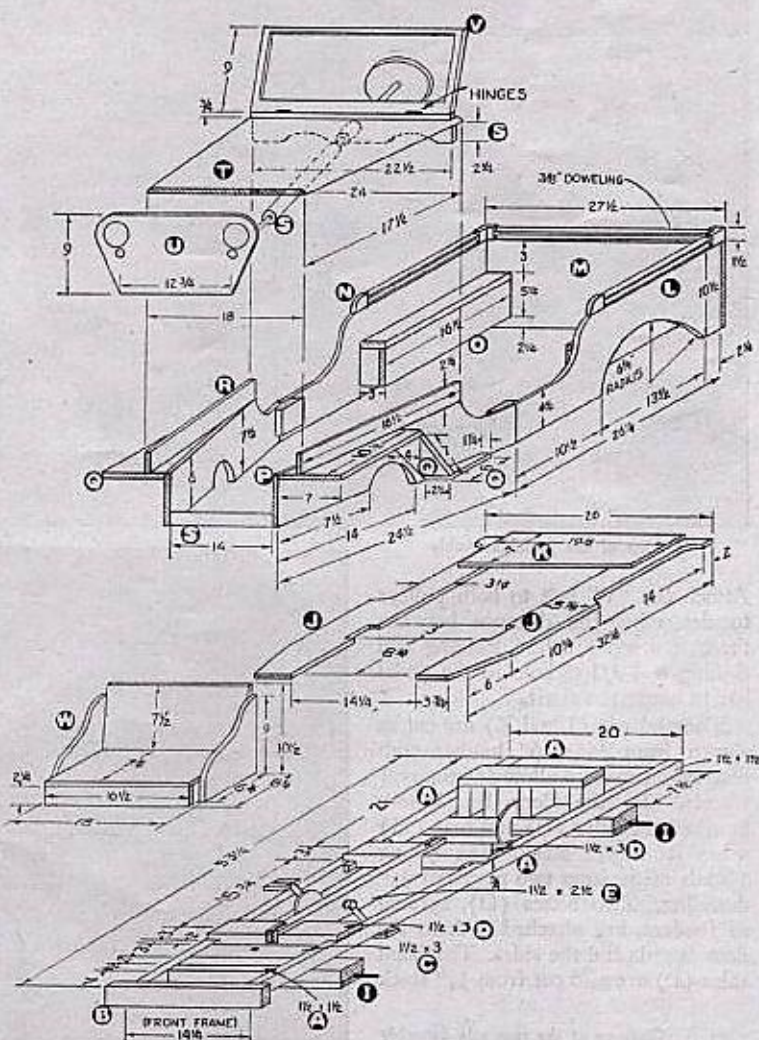
A metal flange (which is fastened to the driving wheel) is welded to one end of the axle. Next add the four bearings and a 6" lathe pulley as shown in the diagram. Fit the bearings and axle into the groove, as before, with the two caps (G) locking the bearings and axle in place.

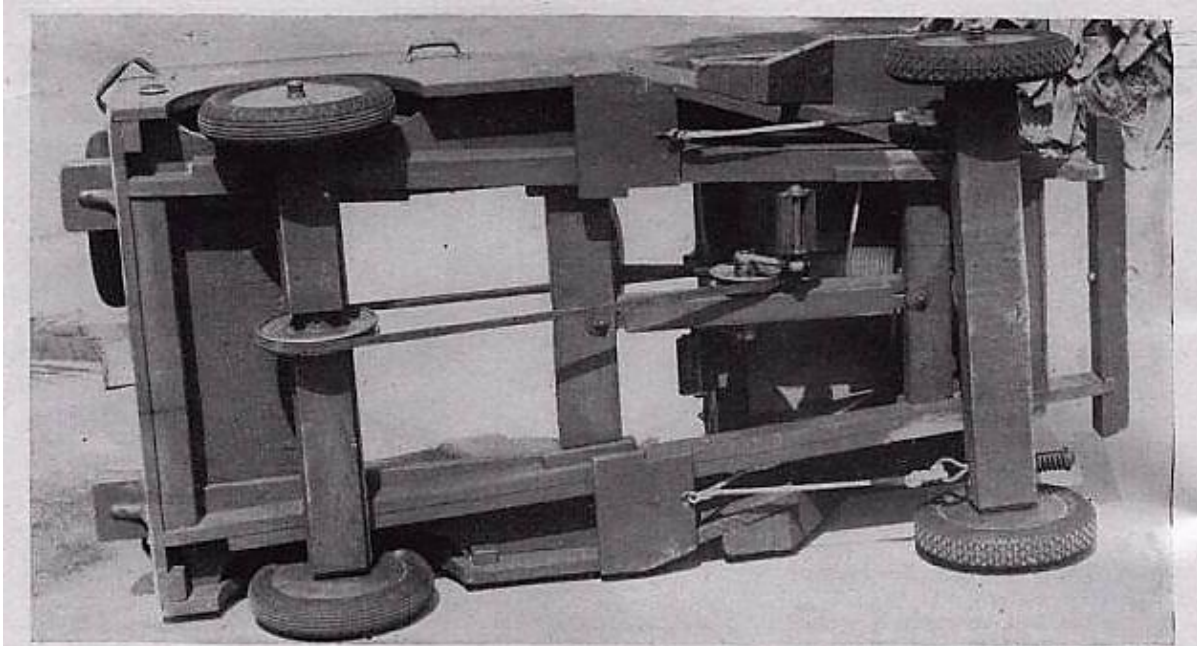
The pedal assembly consists of three pieces. Two cross braces (D) are made from  $1\frac{1}{2} \times 3$ " wood, one 15 and the other  $16\frac{1}{2}$ " long. Both have  $\frac{3}{4}$ " grooves on the ends to fit the frame and  $\frac{3}{4}$ " grooves in the center for the pedal bar (E). Drill a  $\frac{3}{8}$ " hole in the exact center of the braces for the bolts to hold the pedal bar.

The pedal bar (E) is  $1\frac{1}{2} \times 2\frac{1}{2} \times 21\frac{3}{4}$ ". It is slotted on the ends to fit the groove in the cross pieces (D) and to allow for adjustment back and forth so that slack, when the "V" belt is attached, can be taken up. A ball bearing water pump shaft and bearing assembly (used in all Chrysler Eight cars from 1938 on) was found to be ideal for attaching the 4" drive pulley and the two tricycle pedals. After locating the exact positions of the pedals and pulley on this shaft, drill several small holes in the shaft for the lock nuts.

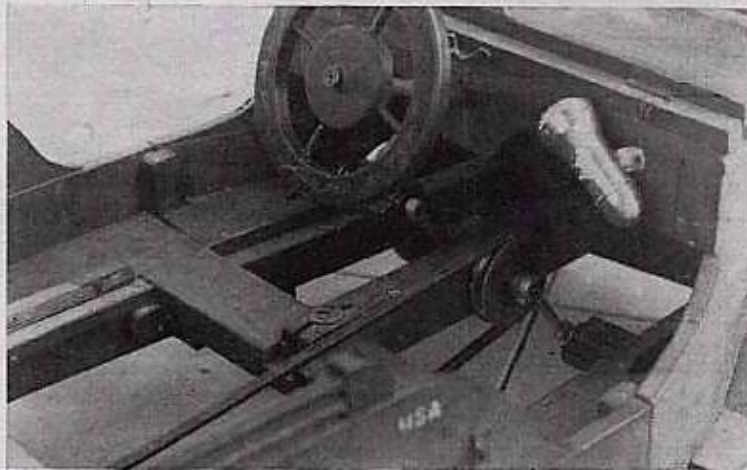


Rear view of jeep, showing spare wheel, block bumpers, and handles. Note the realistic windshield that can be laid down on top of the hood; a window lock serves to hold it in place in its upright position.





Underside of jeep, showing frame and final assembly.



Close-up of the pedal assembly

with a circular notch near the center to allow the front wheels to turn without rubbing; the exact position of this notch will have to be determined by swinging the front wheels around to see where they are apt to hit the wood.

Fenders (Q) consist of three pieces cut from  $\frac{3}{4}$ " stock. After following the dimensions of the diagram, it will be necessary to trim these pieces by fitting, as the wood angles in two directions at this point. The two side pieces (R) are resting partly on the fender and partly on the side (P).

The steering wheel assembly (S) consists of six pieces. The wheel  
(Continued on page 564)

Attach the "V" belt to both pulleys to determine the distance between these two axles before locating and drilling a  $1\text{-}\frac{3}{16}$ " hole in the pedal bar to house the shaft.

Floor boards (J and K) are cut as shown from  $\frac{3}{4}$  x 6" lumber with notches on each to allow for the rear wheels. To the floor boards are attached the sides (L) and rear (M) made from  $\frac{3}{4}$ " stock. The railing (N) is made from two pieces of  $\frac{3}{8}$ " doweling. Two boxes (O), serving as fenders, are attached both to the floor boards and the sides. The front sides (P) are also cut from  $\frac{3}{4}$ " stock

Close-up of the rear axle assembly



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out the tap as soon as it starts to bind, otherwise, a broken tap will be the result. This applies particularly to the smaller sized taps.

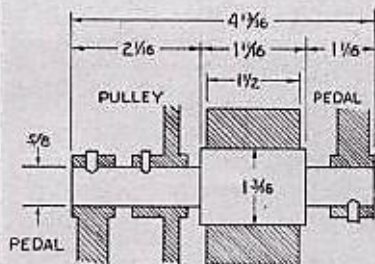
It is to be remembered that all of the foregoing, both for dies and taps, is for the cutting of short length threads of small sizes only, and not for larger sized threads or long lengths.

Remember, use plenty of cutting oil!

## A Jeep for Junior

(Continued from page 538)

(made of wood if you can find nothing better) is attached to a  $\frac{3}{4}$ "-dowel, which is the steering shaft. A dashboard is



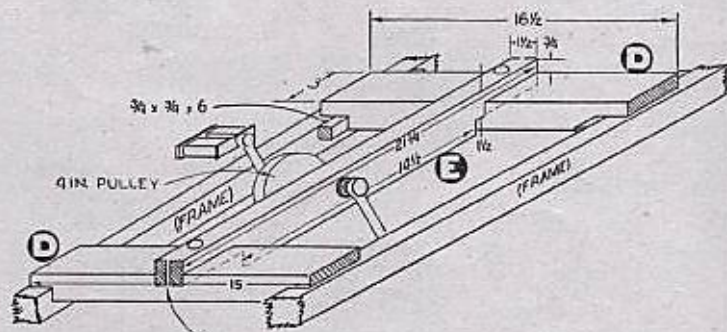
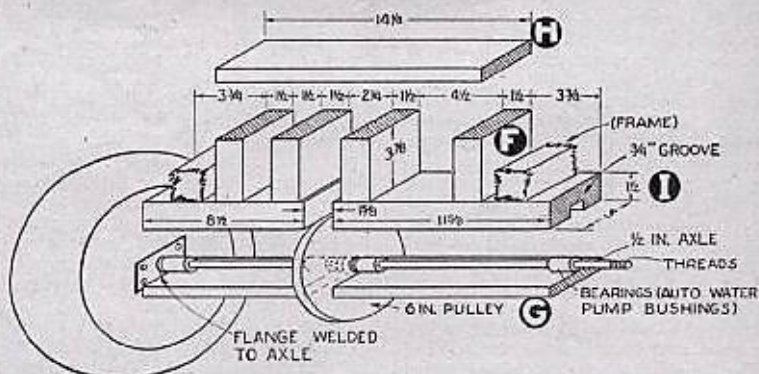
CROSS SECTION OF PEDAL BAR SHOWING BALL BEARING WATER PUMP SHAFT AND BEARING ASSEMBLY TO WHICH PEDALS AND PULLEY ARE ATTACHED.

made from 1-inch wood with two notches cut out to allow for leg room when pedaling. Fasten to this dashboard a short piece of rolling pin to act as a wooden bearing through which the steering shaft passes. A 10 1/2" piece of rolling pin is attached to the steering shaft on which to wind the steering gear rope. The lower end of the shaft rests on a cross brace (S) which is fastened between the two front sides (P).

After the hood (T) is in place, build the windshield (V) from  $\frac{3}{4}$ " stock. The frame is  $\frac{3}{4}$ " square with the bottom piece 1 1/2" wide, to allow for hinges. Actual glass was used in the construction, although it can be left out for the children's safety. The radiator (U) is made from plywood. Circles were cut out for the headlamps and black-out lights, and shiny tin placed behind them for the sake of appearance. Last comes the seat (W) which is made from  $\frac{3}{4}$ " stock. It rests on the floor board (J).

A spare wheel is attached to the back, as are two heavy block-like bumpers. Four small bicycle reflectors are placed on the corners of the back. Four metal handles are fastened one on each corner of the rear and one on each side just in front of the seats.

The jeep is painted army gray. White letters and numbers designating its army corp and other mysterious army insignia are stenciled on its hood, rear, and sides, as well as a big white star, giving it an "official" touch.



SLOTTED ENDS PERMIT ADJUSTMENT OF PEDAL BAR TO TAKE UP BELT SLACK.