

Put your small fry in the driver's seat of this great little buggy and watch him grin



## Build your kids the sidewalk classic

Designed by ROBERT WOOLSON

■ WITH ITS BLACK FABRIC TOP, leather dashboard straps and gas headlamps, this bright red replica of its prototype—the open roadster of the early years of this century—will bring a twinge of nostalgia to grownups and a shriek of delight from the younger set.

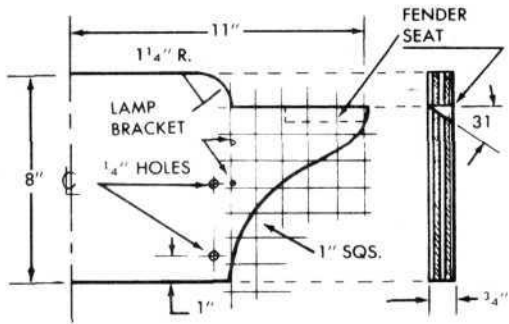
It does a safe, quiet 5 miles per hour, has a 12-volt electrical system driving a 12-volt automobile generator which serves as the motor, and carries its own built-in battery charger.

It's great for everyday fun on the sidewalk and

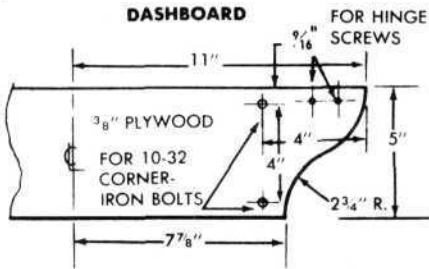
sensational in the local Fourth of July parade.

You can buy nearly all of the parts at your hardware store or at an automotive-parts store. Assembly is not difficult, particularly if you follow the pull-apart drawings carefully.

Before you buy or cut any materials, run over the list of keyed parts and carefully check each one on the pull-apart drawings. This will give you a good idea of what goes where on the plywood frame. The dimensions of some of the parts you have to make, bolt sizes and other im-

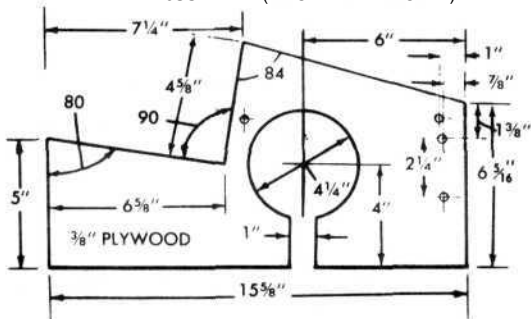


**DASHBOARD**

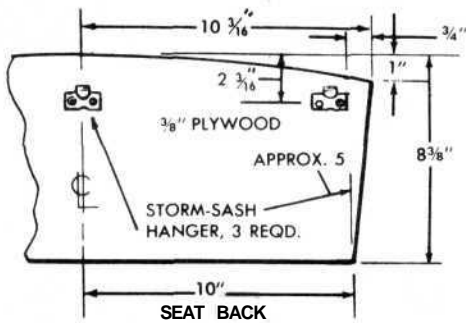


**FRONT PIECE, BODY**

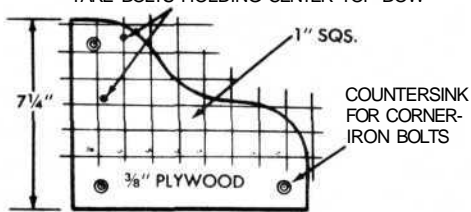
OPENING FOR DRIVE-BELT ADJUSTMENT (IN ONE PANEL ONLY)



**SIDE PANEL, BODY, 2 REQD.**



TAKE BOLTS HOLDING CENTER TOP BOW



**END PIECE, SEAT, 2 REQD.**

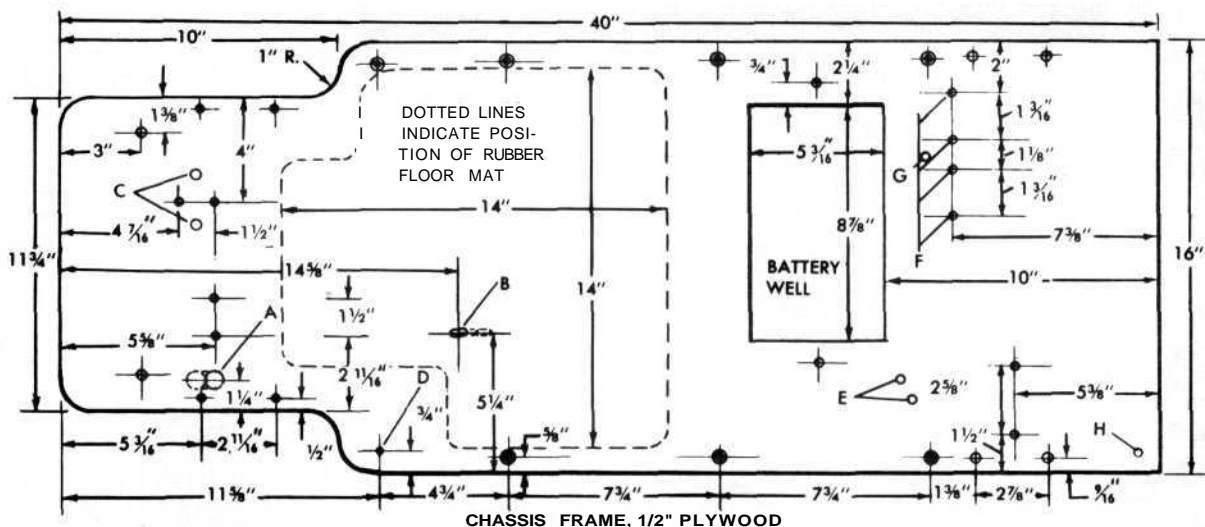


The steering column is held in position by a plywood support and metal brace to the frame. A metal angle serves as the top bearing

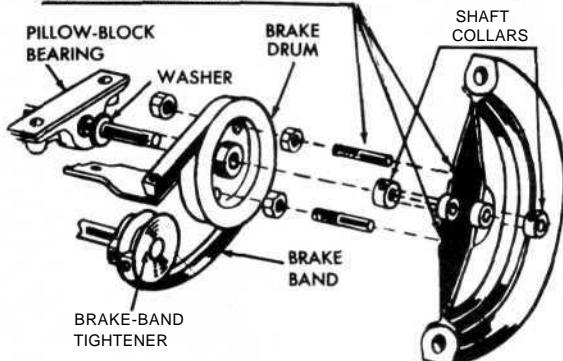
portant information are in the keyed list along with parts nomenclature.

Begin construction with the frame which is cut from a piece of 1/2-in. plywood. Cut the piece slightly oversize, about 1/8 in. all around, to allow for finishing the edges; there must be no splinters. Then lay out the hole pattern and drill all the holes which are located by dimension, except the holes F. Hole diameters are taken directly from the bolt sizes given in the parts list. The seven countersunk holes (indicated by concentric circles) are drilled and countersunk for 1.5-in. No. 8 F.H. wood screws. These hold the brake-shaft supports and the front-fender support, parts No. 27 and 31. One hole, D, is not countersunk, as it takes the screw holding the lower end of the steering-column brace, part No. 59, which passes through the frame and turns into the front-fender support.

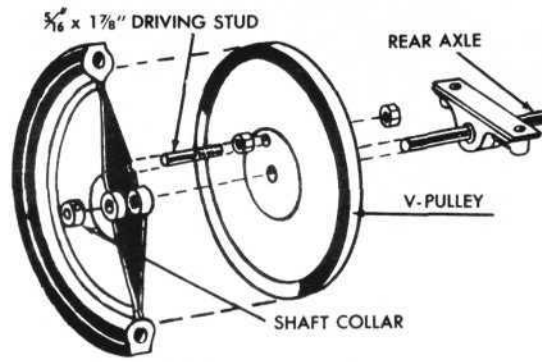
Holes A and B in the frame must be drilled at an angle, hole A for the steering post and B for the brake cable. Drill hole A slightly undersize and at the approximate angle and then work it to size and the correct angle later on with a round



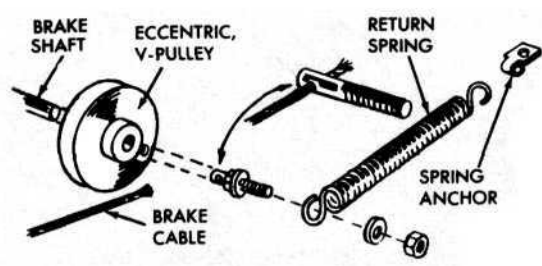
5/16" x 1 7/8" STEEL STUDS ENTER HOLES DRILLED THROUGH INNER HALF OF WHEEL HUBS



BRAKE ASSEMBLY



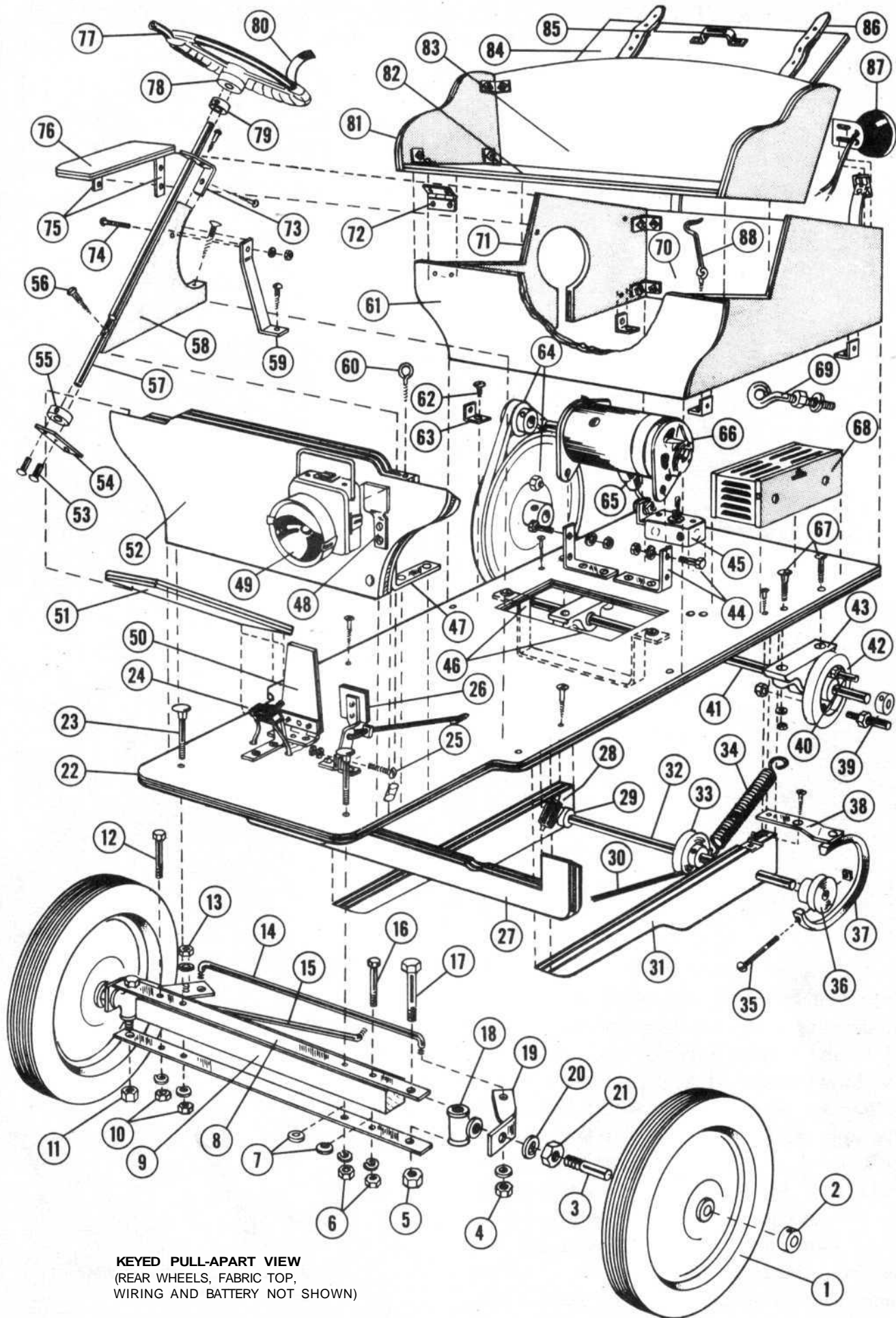
GROUND-WHEEL DRIVE



BRAKE ECCENTRIC ASSEMBLY

file when you fit the steering post. Also you'll have to do some work with the round file to bring hole B to the correct angle to take the brake cable without binding. Holes C, E, G and H are for the passage of wiring through the frame and only the approximate location is indicated. The four holes F take 10-24 F.H. screws (with nuts) and hold two 3-in. corner irons which serve as motor-mounting brackets. It's a good idea to have your motor on hand so that you can determine the distance between the pairs of holes, as it may vary from that given. Be sure of the over-all dimensions of the battery case before you cut the well and make the support.

The front axle consists of a length of hardwood and two steel straps. Note in the pull-apart



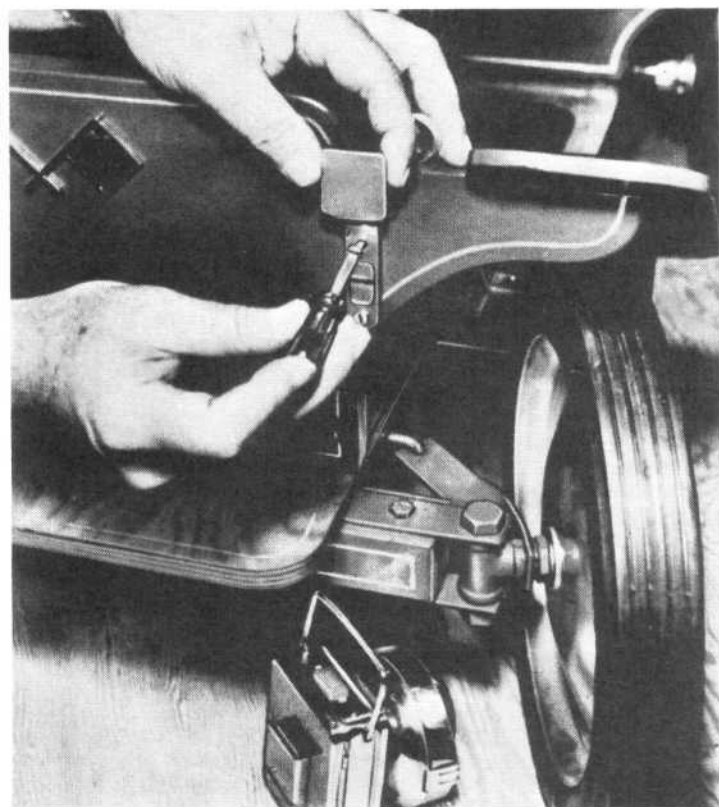
**KEYED PULL-APART VIEW**  
 (REAR WHEELS, FABRIC TOP,  
 WIRING AND BATTERY NOT SHOWN)

## KEYED LEGENDS

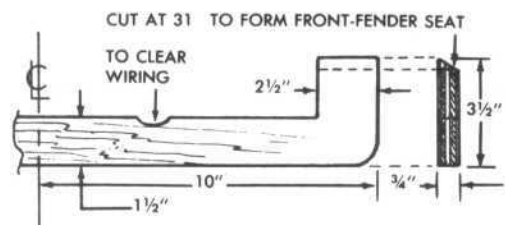
1. WHEEL, SEMI-PNEUMATIC, 12 x 1.75. BALL-BEARING. FOUR REQUIRED (SPARE WHEEL OPTIONAL)
2. SHAFT COLLAR, 1/2 IN.
3. WHEEL SPINDLE, 1/2 x APPROX. 3 IN. STEEL. TH'D. 1/2-13. TWO REQUIRED
4. HEX NUT, 1/2 IN., WITH WASHER
5. HEX NUT, 1/2 IN., TWO REQUIRED
6. HEX NUTS AND LOCK WASHERS, 1/4 IN.
7. FLAT SPACER WASHERS, ONLY TWO SHOWN; FOUR REQUIRED
8. AXLE STRAPS, TWO REQUIRED
9. AXLE, HARDWOOD
10. SAME AS PART NO. 6
11. SAME AS PART NO. 5
12. HEX-HEAD MACHINE BOLT, 1/4 X 2 1/3"
13. HEX NUT AND WASHER, VA IN., TURNS ONTO END OF STEERING ROD
14. TIE ROD
15. STEERING ROD
16. SAME AS PART NO. 12. NOTE THAT BOLTS NO. 12 AND 16 PASS THROUGH AXLE ONLY, NOT THROUGH FRAME
17. KINGBOLT, 1/2 x 2 1/2 IN., TWO REQUIRED
18. PIPE TEE, 1/4-IN. TWO REQUIRED. THREADS REAMED OUT TO TAKE 1/2-IN. KINGBOLT
19. STEERING ARM, TWO REQUIRED, R AND L, ONE HAS THIRD HOLE FOR STEERING ROD
20. LOCK WASHER, 1/2 IN.
21. HEX NUT, 1/2 IN.
22. CHASSIS FRAME, 1/2-IN. PLYWOOD
23. CARRIAGE BOLT, 1/4 X 3 IN. TWO REQUIRED
24. FOOT SWITCH, DPST, PUSH-BUTTON TYPE, NORMALLY OFF
25. ROUND-HEAD 10-24 SCREW, 3/4 IN. LONG. REQUIRES TWO NUTS, LOCK WASHER BETWEEN NUTS AND TWO SPACER WASHERS
26. BRAKE PEDAL
27. FRONT-FENDER SUPPORT
28. SPOTLIGHT SWITCH, LEVER-ACTUATED, SPDT, BUT USED AS SPST ONLY
29. SHAFT COLLAR, 1/2-IN., ACTUATES SPOTLIGHT SWITCH. A SECOND COLLAR IS REQUIRED ON BRAKE SHAFT TO HOLD IT IN POSITION AFTER ASSEMBLY
30. WIRE BRAKE CABLE 1/8-IN. DIAMETER, OVERALL LENGTH APPROX. 28 1/2"
31. BRAKE-SHAFT SUPPORT, OR BEARING. TWO REQUIRED
32. BRAKE SHAFT, 1/2 x 17-IN. STEEL SHAFITING
33. BRAKE ECCENTRIC, 3-IN.-DIA. V-PULLEY
34. BRAKE RETURN SPRING, 6 3/4 IN. LONG, 1-IN.-DIA. COILS
35. ROUND-HEAD 10-24 SCREW. 2 IN. LONG. LOCKS END OF BRAKE BAND
36. BRAKE-BAND TIGHTENER, 2-IN. V-PULLEY
37. BRAKE BAND, 1/2-IN. V-BELT, OVERALL LENGTH APPROX. 16 1/2"
38. BRAKE-BAND LUG, 1/8 x 1 x 6-IN. STEEL OUTER END GIVEN ONE-QUARTER TWIST
39. SHAFT COLLAR, 1/2-IN.
40. BRAKE STUD, 5/16-IN. STEEL, TWO REQUIRED. THREADS 5/16-18 AND FIT EACH WITH TWO HEX NUTS
41. REAR AXLE, 1/2 x 23 1/4-IN. LENGTH OF DRILL ROD
42. BRAKE DRUM, 4-IN. V-PULLEY. DRILL 5/16-IN. HOLES THROUGH WEB ON 2 1/8-IN. CENTERS FOR BRAKE STUDS
43. BALL-BEARING PILLOW BLOCK FOR 1/2-IN. SHAFT. TWO REQUIRED
44. MACHINE BOLT, 1/4 X 1 IN. WITH NUT AND LOCK WASHER. TWO REQUIRED. THESE BOLTS JOIN MOTOR MOUNTING LUGS TO 3-IN. CORNER IRONS, ONE LEG OF EACH IRON BEING CUT TO 2 1/8 IN. LENGTH. DRILL HOLES FOR BOLTS CENTERING 15/8 IN. ABOVE THE CORNER-IRON BEND
45. DPDT TOGGLE SWITCH. SEE WIRING DIAGRAM
46. BATTERY WELL AND SUPPORT
47. CORNER IRON, TWO REQUIRED TO SUPPORT DASHBOARD\*\*
48. HEAD LAMP BRACKET
49. HEAD LAMP, DRY-CELL POWERED, TWO REQUIRED
50. PEDAL. ACTUATES START-STOP SWITCH
51. FRONT FENDER, TWO REQUIRED. EACH CUT FROM 3/8-IN. PLYWOOD, 4 IN. WIDE, 12 IN. LONG WITH UPPER CORNERS ROUNDED TO 1-IN. RADIUS, LOWER OUTSIDE CORNER TO 2-IN. RADIUS
52. DASHBOARD, 3/4-IN. PLYWOOD
53. SOFT-IRON RIVETS, 1/8 x 3/4 IN. EXACT LENGTH DEPENDS ON WIDTH OF SHAFT COLLAR USED
54. STEERING CRANK
55. SHAFT COLLAR, 1/2 IN. NOTE THAT PARTS NO. 54 AND 55 ARE JOINED WITH RIVETS, PART NO. 53
56. NO. 8 WOOD SCREW 1 1/2-IN. LONG
57. STEERING COLUMN, 1/2 IN. DIA., 18 IN. LONG, STEEL SHAFITING
58. STEERING-COLUMN SUPPORT, 3/4-IN. PLYWOOD
59. STEERING-COLUMN BRACE
60. SCREWEYE, 1/2 IN. TWO REQUIRED. TAKES SWIVEL SNAP ON TOP STRAP
61. FRONT PIECE, BODY
62. SHEET-METAL SCREW, SIZE 1/2-8 (OR 10), BINDER HEAD, FIVE REQUIRED
63. CORNER IRON, 1 IN., FIVE REQUIRED TO ATTACH BODY TO FRAME. EIGHT REQUIRED FOR JOINING THE FOUR PARTS OF BODY
64. DRIVING AND DRIVEN V-PULLEYS, DRIVING PULLEY, 2 IN. DIA., 5/8-IN. BORE. DRIVEN PULLEY, 10 IN. DIA., 1/2-BORE. USE 1/2-IN. V-BELT, 34 IN. LONG
65. TURNBUCKLE, SIZE (CLOSED) 5 1/4 N HOLDS MOTOR IN FIXED POSITION
66. AUTO GENERATOR, 12-VOLT. SERVES AS MOTOR WITHOUT ANY ALTERATION
67. CARRIAGE BOLTS, VA X 1/2 IN. FOUR REQUIRED WITH HEX NUTS AND WASHERS
68. CHARGER, 12-VOLT
69. TURNBUCKLE, PART NO. 65, IS FITTED WITH NUTS AND LOCK WASHERS TO PREVENT IT FROM LOOSENING
70. BACK PIECE, BODY, 3/8x 6 5/16 x 15 3/16-IN. PLYWOOD
71. SIDE PIECE, BODY. TWO REQUIRED. ONLY OWE HAS OPENING FOR BELT ADJUSTMENT
72. BUTT HINGE, 1 1/2-IN., TWO REQUIRED
73. BEARING, TOP END OF STEERING COLUMN
74. SCREW, 10-24, 1 IN. LONG
75. CORNER IRONS, 1-IN. AND 3-IN. SIZES, TWO REQUIRED OF EACH
76. REAR FENDER, 3/8 x 4 x 12-IN. PLYWOOD WITH THREE CORNERS ROUNDED TO 1-IN. RADIUS
77. RUBBER HOSE, 5/8-IN. O.D.
78. STEERING WHEEL, 1/2-IN. BORE, 10 1/4-IN., DIA., CAST-IRON V-PULLEY
79. SHAFT COLLAR, 1/2-IN.
80. ELECTRICIAN'S BLACK PLASTIC TAPE
81. SIDE OF SEAT, TWO REQUIRED
82. SEAT BOTTOM, 3/8-IN. PLYWOOD. MEASURES 8 1/4-IN. WIDE, 21 7/8-IN. ON LONG SIDE, 20 IN. ON SHORT SIDE. PADDED WITH CORRUGATED-RUBBER STAIR TREAD
83. SEAT BACK
84. MOTOR-COMPARTMENT COVER, OR DECK. 3/8x 8 3/4 x 16-IN. PLYWOOD
85. DECK HANDLE
86. LEATHER STRAP, TWO REQUIRED WITH BUCKLES
87. STOPLIGHT, 12-VOLT
88. HOOK AND EYE, 3/12 IN., HOLDS HINGED SEAT IN DOWN POSITION. EYE SCREWS INTO BACK OF SEAT NEAR BOTTOM. HOOK SCREWS INTO FRAME

\* PURCHASE A 24-IN. LENGTH OF DRILL ROD AND CUT TO REQUIRED LENGTH AFTER MAKING TRIAL ASSEMBLY. LENGTH MAY VARY FROM THAT GIVEN DUE TO POSSIBLE VARIATIONS IN WIDTH THROUGH PILLOW-BLOCK BEARINGS AND WHEEL HUBS

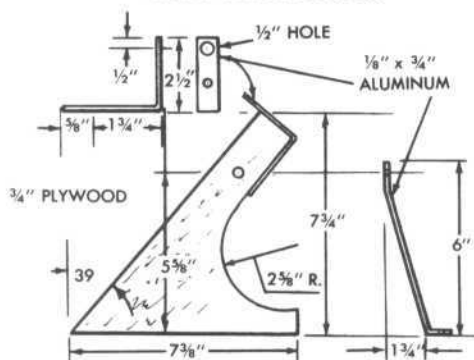
\*\* INSIDE CORNER IRONS ARE USED THROUGHOUT ASSEMBLY. ALL 1-IN. IRONS JOINING BODY PARTS ARE HELD WITH 10-24 SCREWS AND SQUARE NUTS



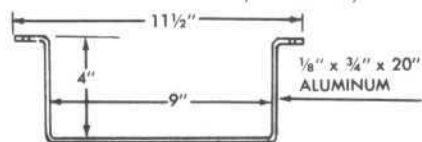
Battery-powered headlights snap onto metal brackets attached to the dashboard. The brackets come with the lamps. Note also the construction of the front axle and the steering-knuckle assembly



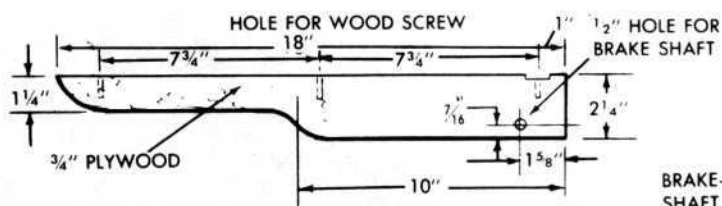
**FRONT FENDER SUPPORT**



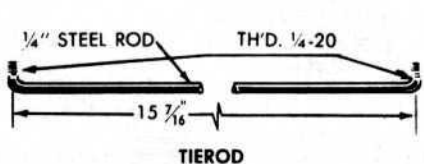
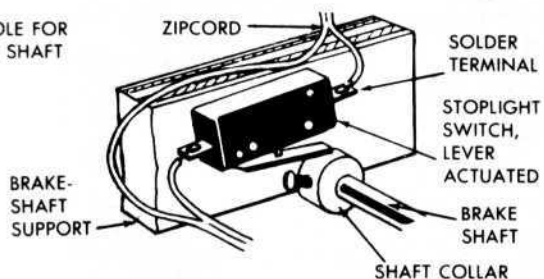
**STEERING-COLUMN SUPPORT (WITH BRACE)**



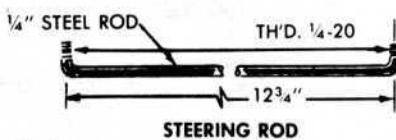
**BATTERY SUPPORT**



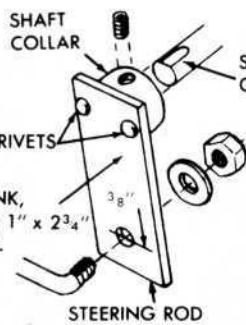
**BRAKE-SHAFT SUPPORT, 2 REQD.**



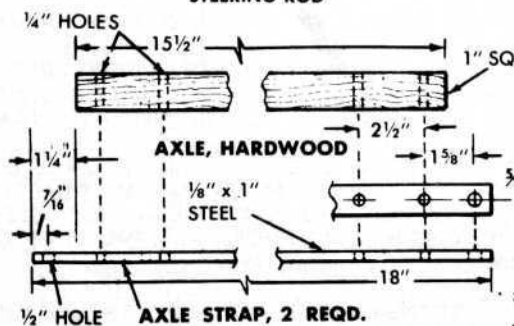
**TIEROD**



**STEERING ROD**

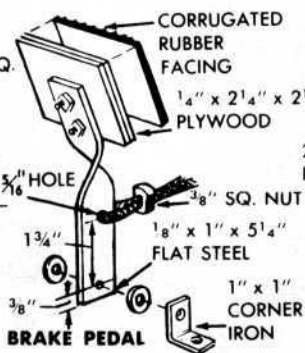


**STEERING ROD**



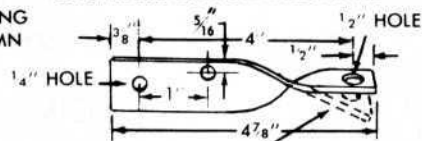
**AXLE, HARDWOOD**

**AXLE STRAP, 2 REQD.**



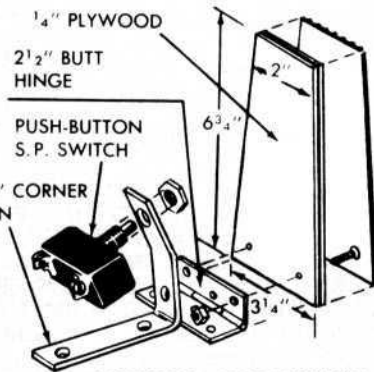
**BRAKE PEDAL**

**STOPLIGHT-SWITCH MOUNTING**

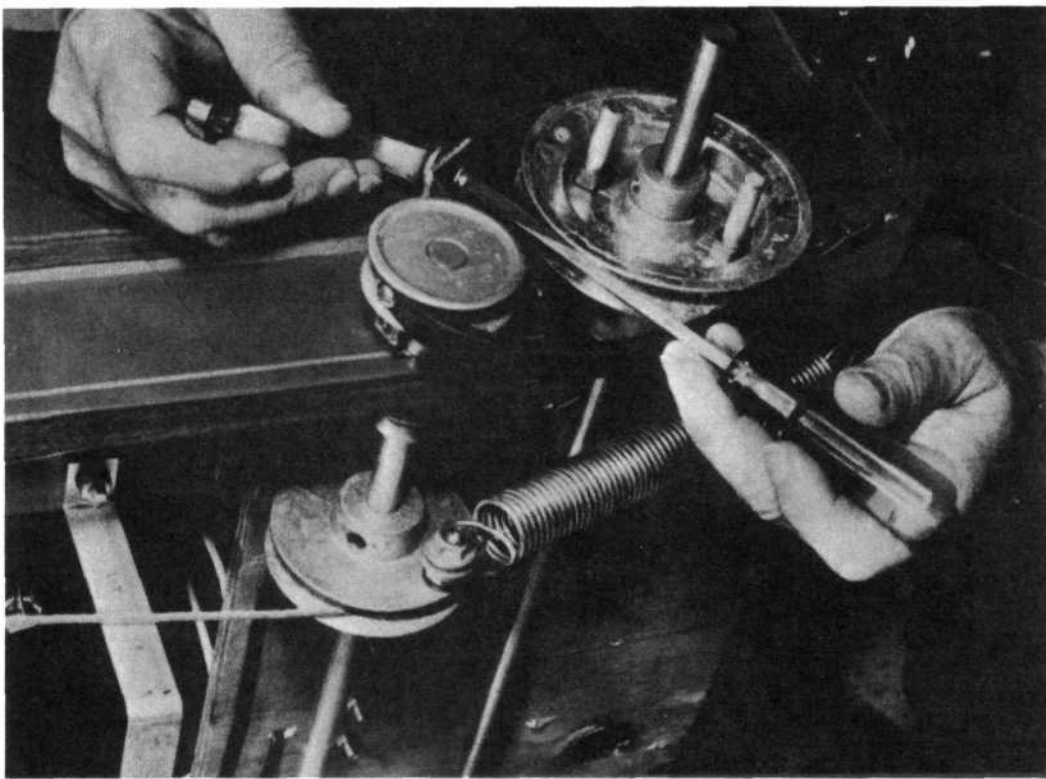


**BEND APPROX. 30**

**STEERING ARM, 2 REQD. R. AND L., 1/8" STEEL**



**ASSEMBLY, FOOT SWITCH**



The brake band is a 1/2-in. V-belt anchored to a stationary lug and a tightener, and passes around a V-pulley on the axle. Note the two studs which engage the wheel

view that there are three pairs of bolts that pass through the axle, the two kingbolts, the pair of carriage bolts holding the frame to the axle, and a pair of machine bolts that hold the three parts of the axle together. The wheel spindles swing on the kingbolts, which pivot 1/4-in. pipe tees. Threads in the body of the latter are reamed out to take the kingbolts in a close fit. A hex nut, lock washer and a steering arm are placed on each spindle before turning the latter into the threaded stem of each tee. You'll see the order of assembly in the pull-apart view. A shaft collar with setscrews holds each wheel.

Assemble the rear axle in its bearings on the frame. Then make the brake-shaft supports and screw them in place on the underside of the frame, noting that the one that is grooved for the brake-band lug goes on the right side of the frame, viewed from the front. The complete brake assembly is shown pulled apart. There are two points to note especially in this assembly. First, the brake-band lug, part No. 38, drops into the groove in the brake-shaft support. The wood screw holding it in the groove passes through the frame from the top, side, through the lug and is turned into the brake-shaft support. The inner end of the lug is held by a 10-24 screw (with nut) which passes through a hole in the frame. This hole must be drilled through the

frame after the parts are located. Second, the screw holding the forward end of the brake band in the groove in the brake-band tightener, part No. 36, passes through the band and a hole in the tightener and shaft.

Parts of the brake-eccentric assembly are shown on page 503. A 5/16 x 1 3/8-in. stud is cross-drilled near the unthreaded end to take the end of the brake cable. A nut and washer are run down on the stud and the cross-drilled end inserted in a hole drilled through one side of the pulley (eccentric) rim. The free end of the cable is passed through the hole near the end of the stud and the nut tightened, clamping the end of the cable securely in place. This arrangement provides adjustment of the brake-cable length when the assembly is complete. The return spring is attached to the stud with a second nut and washer and the opposite end of the spring attaches to an anchor on the bottom of the frame.

Note now the similarity between the ground-wheel drive, and the brake assembly. Both make use of short studs, the unthreaded ends of which enter holes drilled through the inner half of the wheel webs. Two studs are required for the brake but only one for the drive.

The steering gear is of simple construction and consists of the tie rod, steering-rod, crank,



Swivel snaps riveted to the ends of straps hook into screweyes in the top edge of the dash

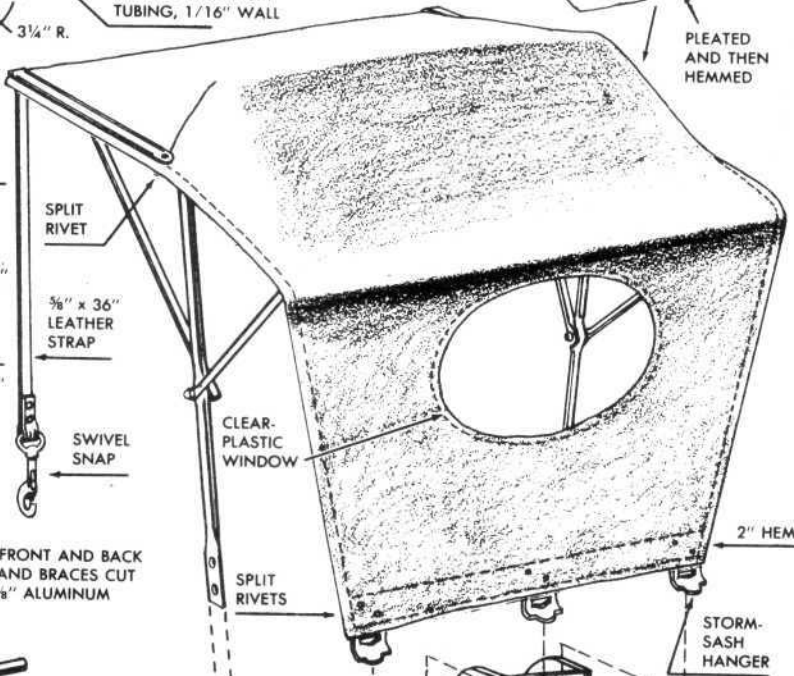
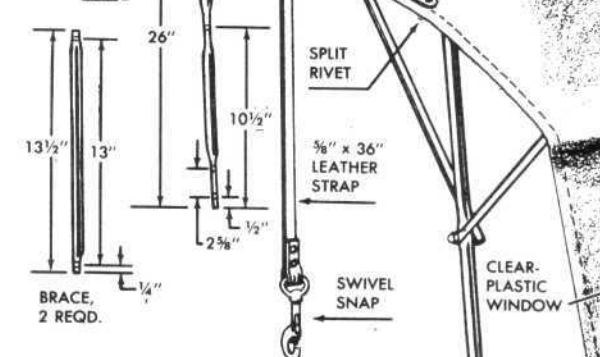
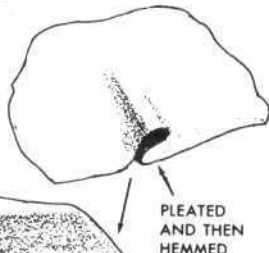
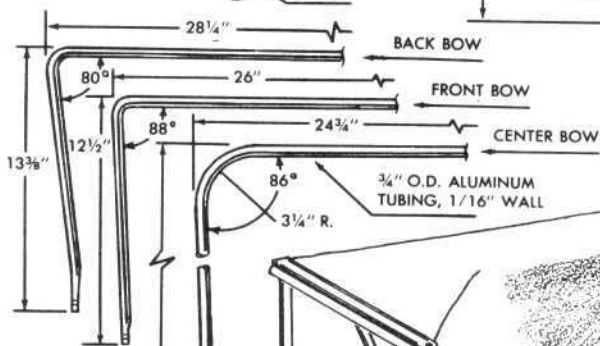
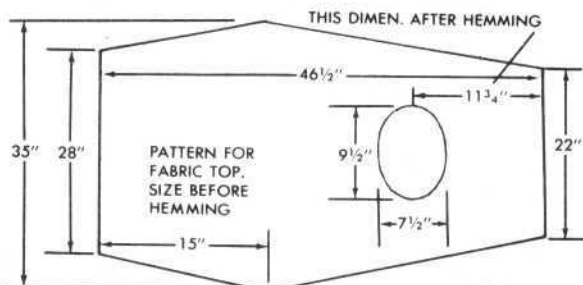
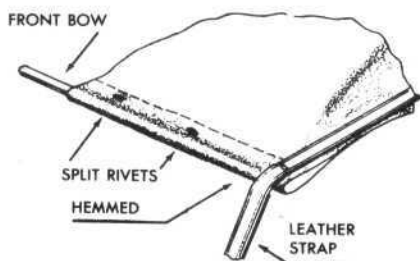
the column, column support, brace and wheel. The latter is a 10.25-in.-diameter V-pulley, the V-groove being filled with a 5/8-in.-diameter rubber hose and then wrapped with electrician's plastic tape. This makes a neat, realistic wheel rim. When assembling the steering gear you may need to make some adjustment in the "geometry" by bending the arms so that the front wheels toe correctly.

The body also is of the simplest construction, made entirely of 3/8-in. plywood and joined with 1-in. corner irons, each held in place with two 10-24 screws and square nuts. Parts for the seat are assembled in the same manner, using the same size irons and screws. The one exception

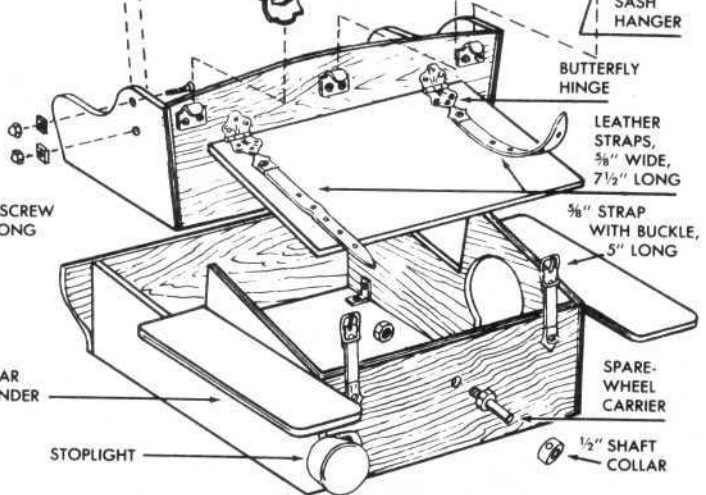
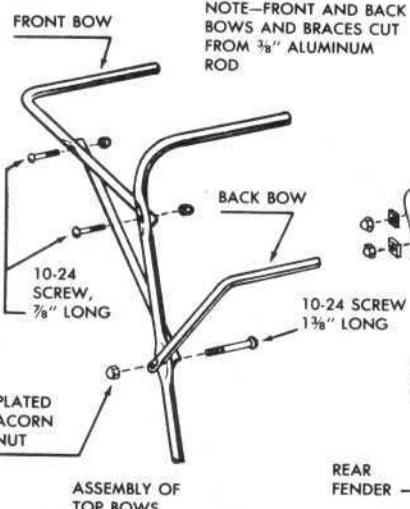
in this procedure is the method of joining one leg of each corner iron holding the body to the frame. Here a No. 8 or 10 sheet-metal screw 1/2 in. long (part No. 62) is used instead of a 10-24 screw and nut to join the leg of the iron to the frame. Dimensions of the seat bottom, fenders and hinged rear deck, or cover, will be found in the parts list. Rear fenders are joined to the body with corner irons (parts No. 75) and 10-24 screws and nuts. Front fenders are attached to dashboard and fender support with 1.5-in. No. 8 screws.

Next step is to add the top and install the wiring. The top, authentic in appearance, consists of a metal frame covered with an artificial-

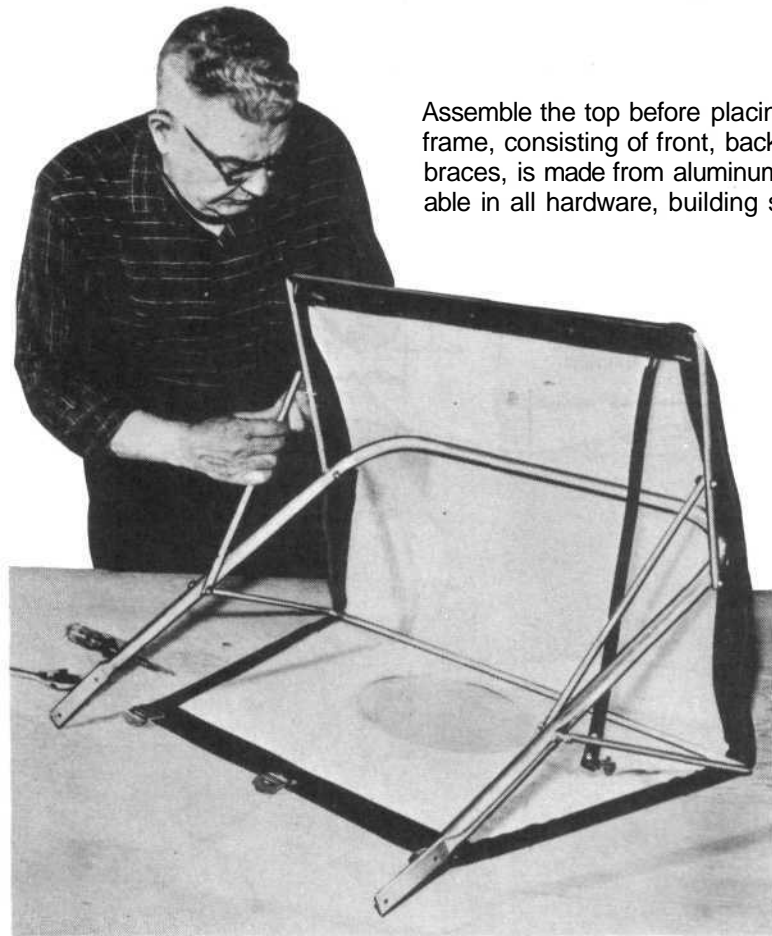




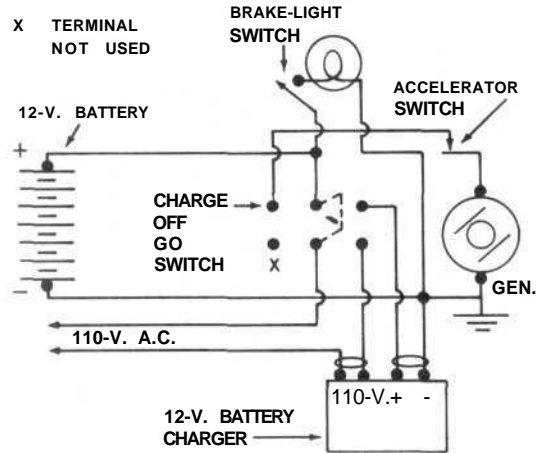
NOTE—FRONT AND BACK BOWS AND BRACES CUT FROM 3/8" ALUMINUM ROD



Assemble the top before placing it on the car. The metal frame, consisting of front, back and center bows, and braces, is made from aluminum rod and tubing that is available in all hardware, building supply, and hobby stores

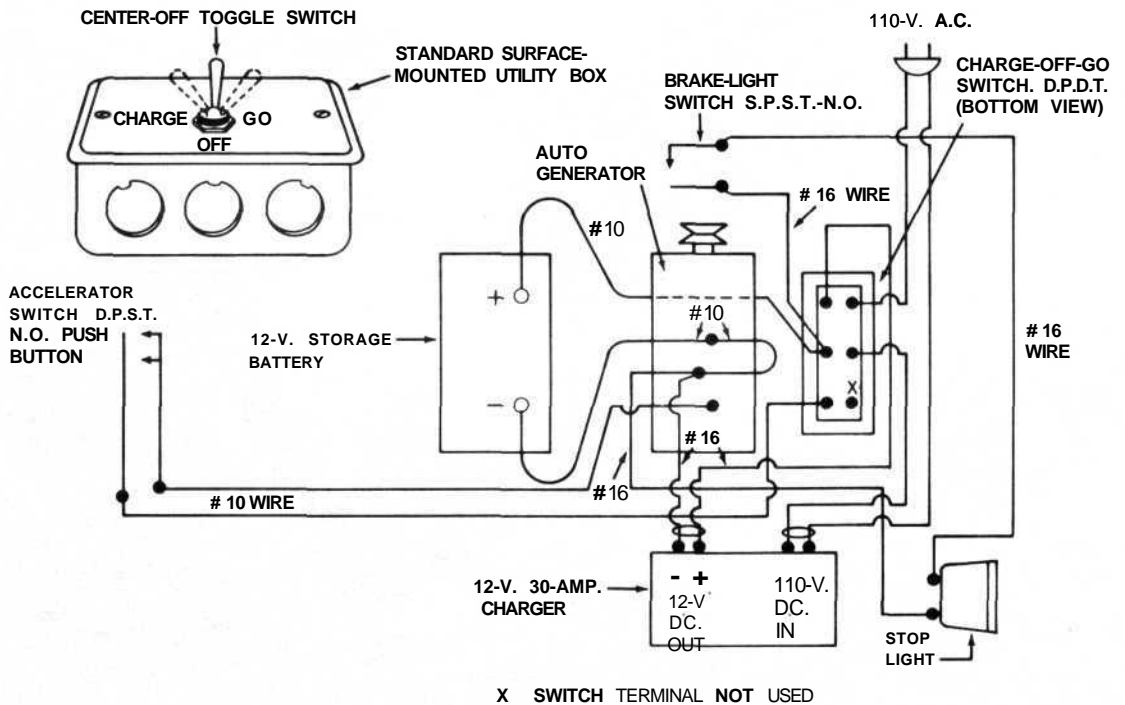


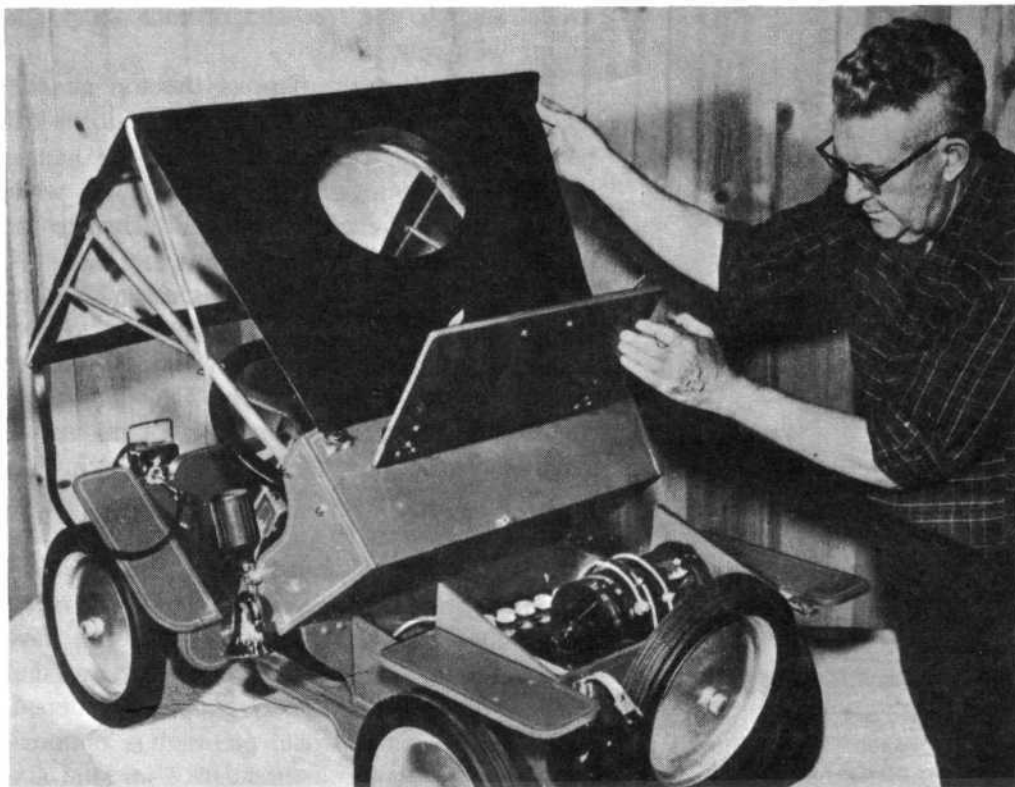
### CHARGER WIRING SCHEMATIC



*Build the sidewalk classic, continued*

### COMPLETE ELECTRICAL WIRING SCHEMATIC FOR SIDEWALK CLASSIC





Ready access to all electrical equipment—battery, motor, switch and charger—is made possible by the hinged seat, top and deck, which tilt forward. The seat is held down with a hook

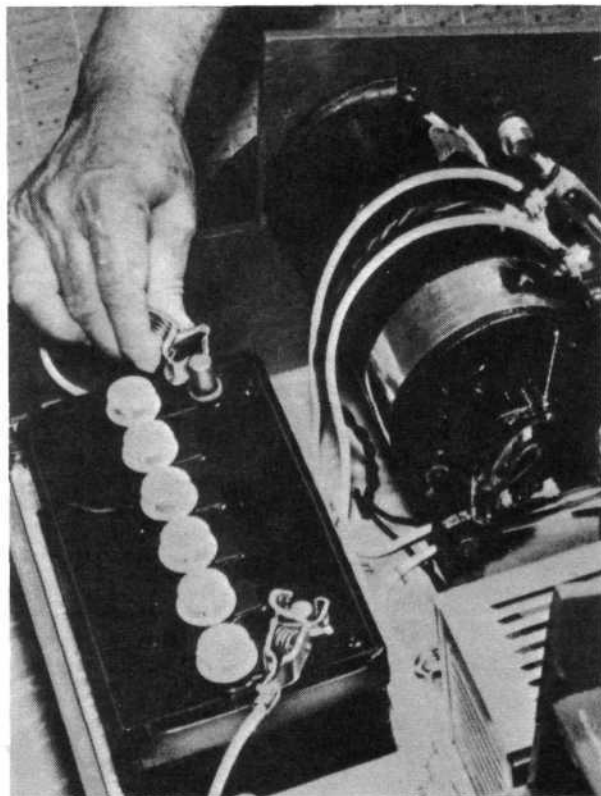
leather fabric, the pattern for which is given on page 509. Overall measurements before hemming are shown with the exception of one dimension, from the rear window opening to the bottom of the back flap, which is given after hemming.

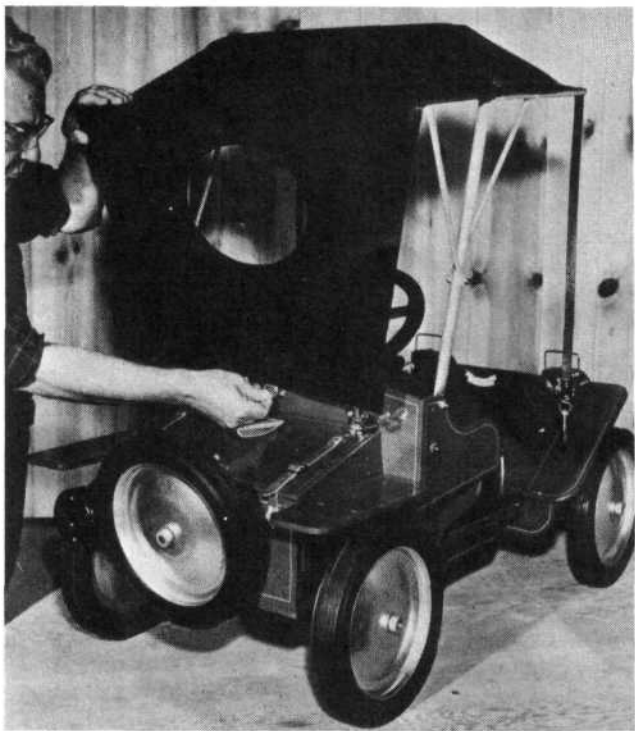
Don't cut the fabric until after you have made and assembled the bows and braces. You can bend the center bow by hand, but you run the risk of getting an uneven bend and spoiling the contour of the roof as a result. Instead, borrow an electrician's conduit bender for this job. After bending, flatten at the points indicated and drill holes for the bolts. Then bend the front and back bows, flatten the ends slightly, and also drill the holes for the bolts.

The holes in the front bow for the bolts that hold the upper end of the braces are located and drilled after a trial assembly.

Now refer to the drawing on page 509 for the location of the holes for the bolts holding the center bow to the ends of the seat. Drill these holes and mount the assembled bows temporarily so that you can more easily fit the fabric top. Lay the fabric over the bows and determine the location of the pleats, or tucks, and the amount to be turned under for the hems. This done, sew

The electricals are housed in the body, with the battery in a well under the seat. Note the position of the charger and the "off-go-charge" switch. Note also the use of snap-on terminal clamps on the battery



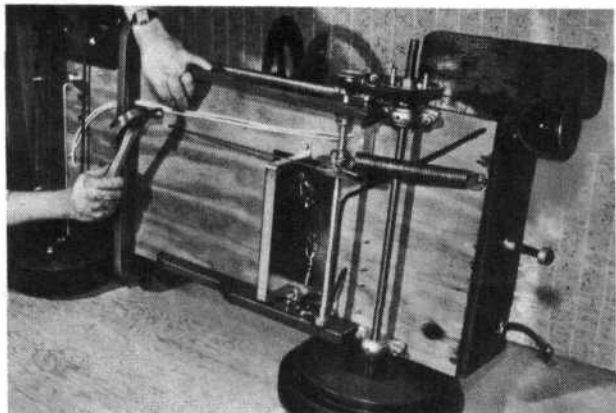


The back drop, or flap, of the fabric top is attached to the back of the seat with storm-sash hangers. The rear window is fitted with a sheet of clear plastic

*the sidewalk classic, continued*

the hems all around, making the pleats as you go. Cut the opening for the rear window. Cut thin, clear plastic about 1/2 in. larger all around than the opening and sew in place. After pleating and hemming, fold the forward end of the fabric around the front bow and fasten with split rivets. Note that the leather straps are attached to the top with split rivets at the pleats and at the front edge of the fabric. Attach a

The wiring from the foot-operated switch and the stoplight switch is stapled to the underside of the frame. Wire sizes are indicated on the schematic



swivel snap to the free end of each strap, fastening with split rivets.

The back drop, or flap, of the top attaches to the back of the seat with three storm-sash hangers. Note that the sash half of the hanger is riveted to the lower edge of the fabric, while the other half of each hanger is attached to the back of the seat with 10-24 screws and hex nuts.

Note that when everything is assembled the hinged seat, deck and top tip forward to give access to the electricals, motor, battery, charger and the off-run-charge switch. The exact location of the switch and charger is of no importance; place them so there is access to each.

When wiring, follow the wiring diagram which gives the wire sizes to use. Wires from the start-stop, foot-controlled switch and to the stoplight switch are stapled to the underside of the frame. Before making the test run, be sure you have the correct tension on the driving V-belt and that all nuts and screws have been properly tightened. The fifth, or spare, wheel pictured is optional. The carrier is simply a threaded 1/2-in. stud and shaft collar installed on the back body panel. Brackets for the headlights (the brackets come with the units) are screwed to the dashboard as shown.

#### **colors are optional**

Paint colors are optional. The original pictured was painted a bright red with a silver striping, an attractive combination. The top of the plywood frame was finished in natural color. The disk wheels were sprayed with silver paint.

There are some interesting decorative touches that you can add which will increase the authentic look and at the same time make the car more fun to own. For example, if you shop around, you should be able to find one of those old rubber-bulb operated auto horns. If you can find one with a shiny brass bell, so much the better.

The same material you used to make the top would serve very well as a covering fabric if you chose to upholster the seats. You wouldn't have to be fancy. Just cover the wooden seat and back with 1 or 1.5-in. of foam rubber, cover with the fabric, then tack to the edges of the seat. Use large-headed colored upholstery nails. For a final touch of authenticity, drive some of these nails into the back and the seat in a grid pattern, with about 6 in. between nails, to imitate the old upholstery buttons.

**See also:** bicycles; cars, midget; stage coach; train, children's; unicycle.