

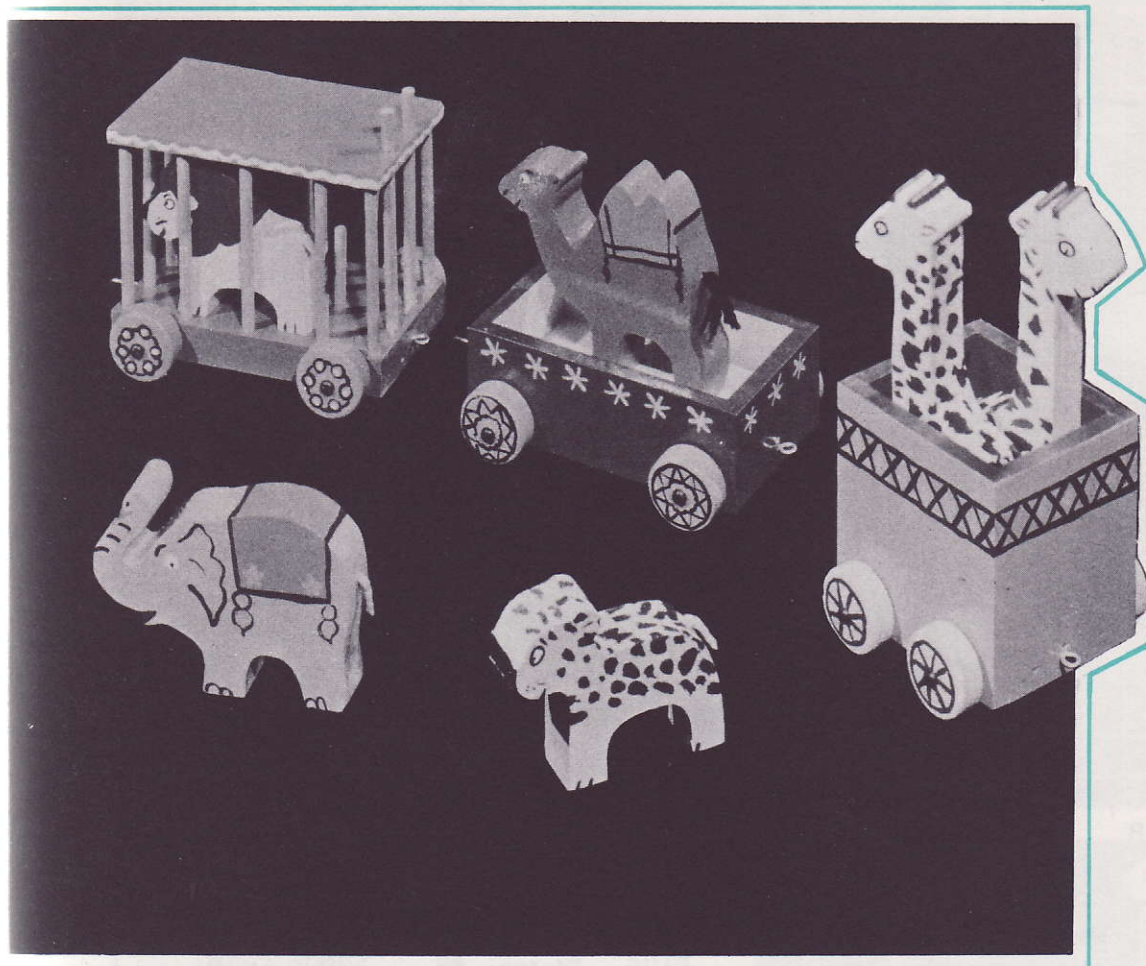
A pull-toy circus train

BY ELMA and WILLARD WALTNER

This circus train,
built from scraps, will
be the pride of any
young ringmaster

■ **CHUGGING ALONG** at the end of a string, this colorful little circus train will bring shrieks of delight from any two or three-year-old. All you'll need to buy to make the train are a few screws, screw eyes, L-hooks, a couple dowels and some *nontoxic* paint. The wood should be available in your workshop scrap box.

If you make it five cars long, the train will carry the 10 animals, each car holding two. If you own a lathe, you can quickly turn such parts as the engine's smokestack and boiler, as well as the wheels. However, if you don't have a lathe, the smokestack can be turned with your electric drill. Drill a wood block lengthwise, slip it over a bolt, tighten with a nut and chuck the end of the bolt in the drill. Cradle the drill in a vise and rig up a second block as a rest for your chisel. You



turn page

can "turn" the wheels without a lathe by using a hole cutter in your drill or drill press.

Use glue and small finishing nails to assemble the cars and sand the edges smooth. In the case of the cage car, the two holes for the $\frac{1}{2}$ -in. "gate bars" go all the way through the roof and are $\frac{5}{16}$ in. for a loose fit. The ends of the gate bars are pointed so they seat automatically in the holes, and $\frac{1}{2}$ -in. lengths of small dowel are inserted crosswise to prevent the bars from being pulled all the way out. The holes for the three center dowels, which provide stalls, are drilled in the base only. All other matching holes are spaced and drilled the same in both base and roof.

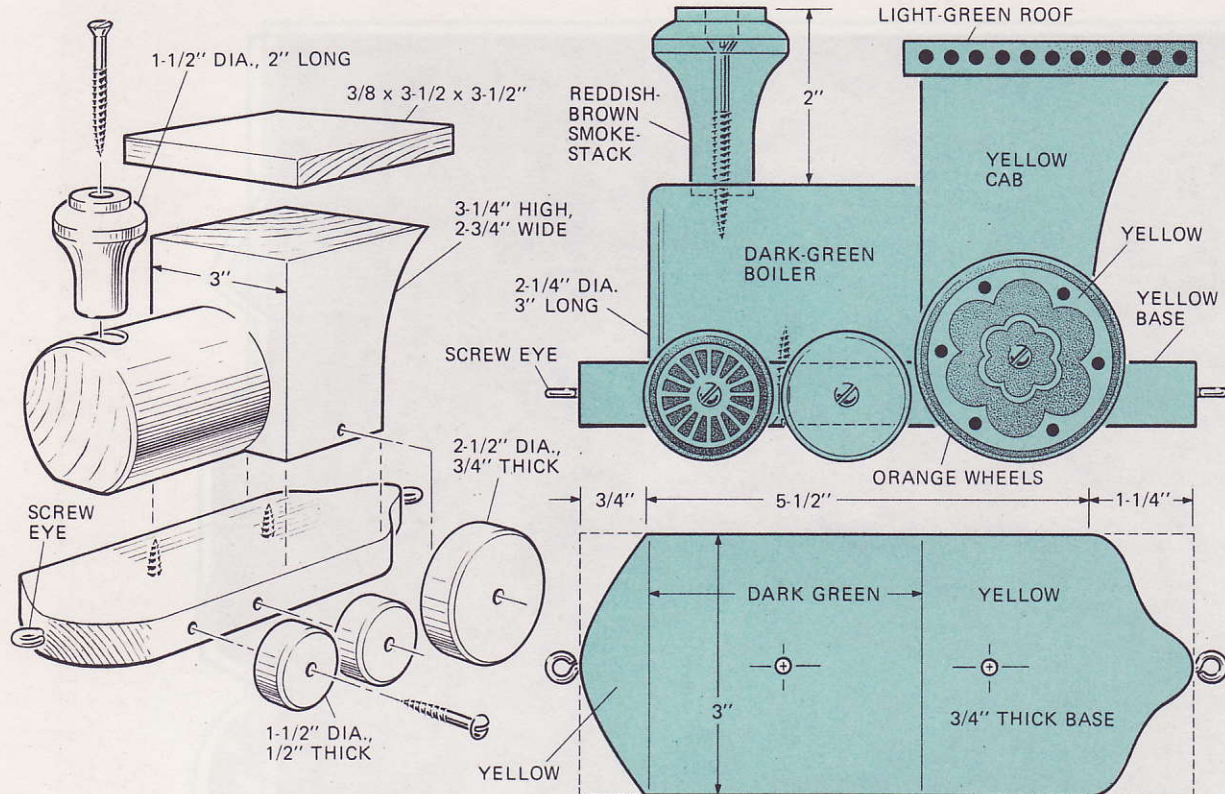
To simplify things, it's best to paint the roof and base before gluing the dowels in place. The

dowels are left unpainted. Round the outer edges of the wheels with sandpaper, paint the designs on them and attach them to the wagons with roundhead wood screws so they will turn freely. The photo will serve as a guide when you paint the wagons and add the fancy designs on their roofs, sides and wheels in bright colors.

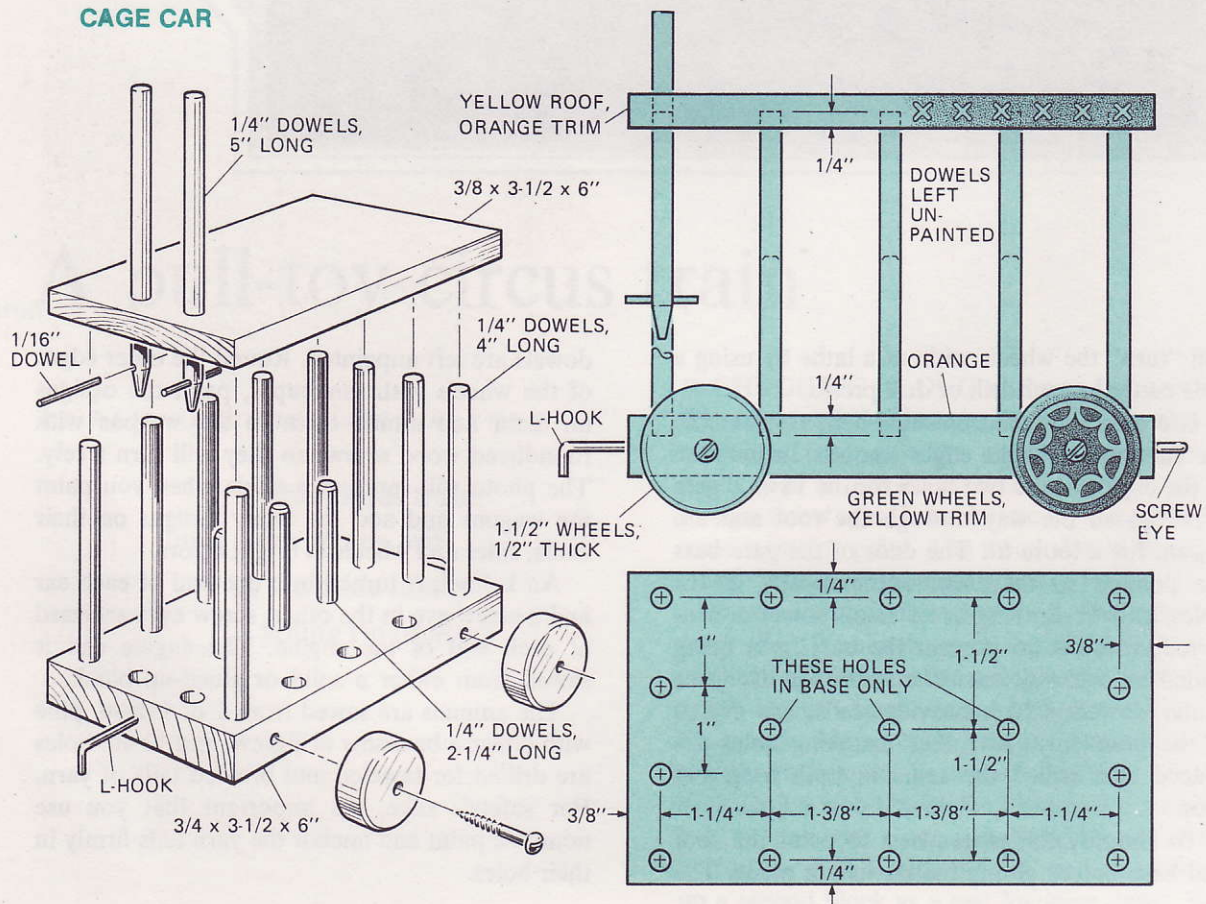
An L-hook is turned into one end of each car and a screw eye in the other; screw eyes are used at each end of the engine. The engine cab is sawed from either a solid or glued-up block.

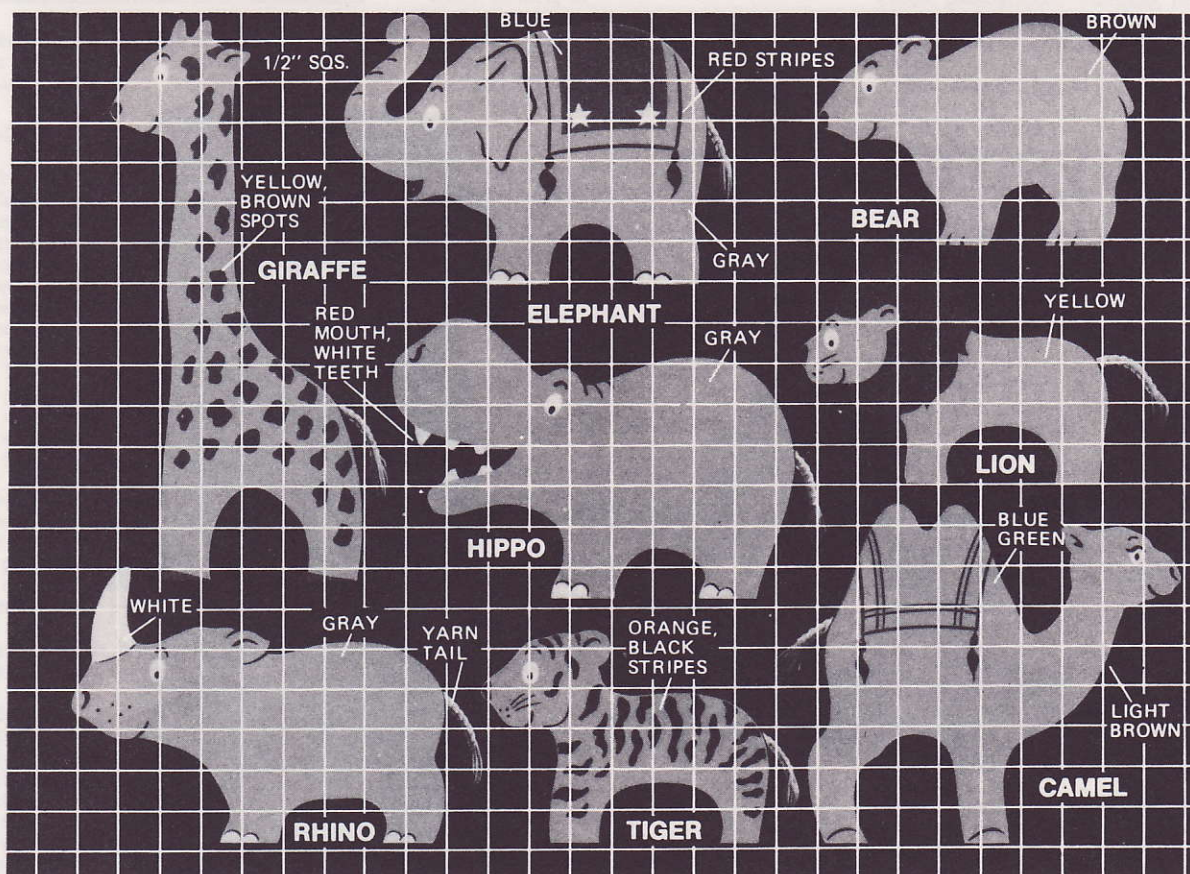
The animals are sawed from 1 or $1\frac{1}{8}$ -in. pine with either a bandsaw or jigsaw, and $\frac{1}{8}$ -in. holes are drilled for tasseled and braided tails of yarn. For safety's sake, it's important that you use nontoxic paint and anchor the yarn tails firmly in their holes.

ENGINE

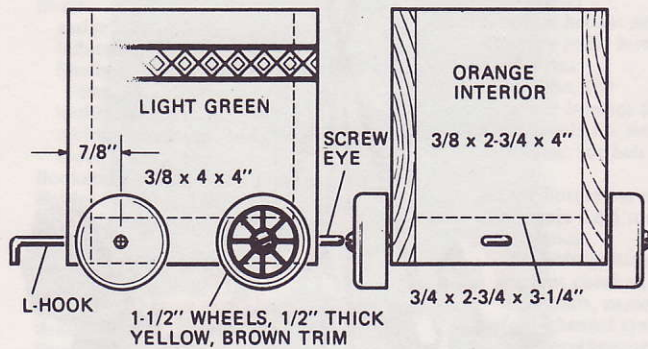


CAGE CAR





GIRAFFE CAR



BOXCAR

