

Train

Tools required

Tenon saw; hand or electric drill with bits; screwdriver; paintbrushes; sanding block.

Techniques involved

Sawing; drilling; sanding; painting.

Materials

offcuts of wood and dowel
PVA woodworking adhesive
screweye
screwhook

4 woodscrews at least 25mm (1in)
long, No. 8 (4.2mm) or No. 6
(3.6mm)

8 cup washers to fit screws
fine glasspaper
enamel paints
polyurethane lacquer
length of cord

Making the engine

Select suitable offcuts of wood and dowel. The base should be about 7.5cm (3in) wide and from 17.5cm to 20cm (7–8in) long. Make it from 12mm ($\frac{1}{2}$ in) plywood or soft wood between 16 and 25mm ($\frac{5}{8}$ in and 1in) thick. The cab needs a block of 5cm \times 5cm (2 \times 2in) about 7.5cm (3in) long. The boiler and wheels are made from 3.8cm (1½in) diameter hardwood dowel, and the chimney from thinner dowel such as 19mm ($\frac{3}{4}$ in).

Cut the base to size and smooth all around with glasspaper. Drill pilot holes to suit the screws you are using at two points on each side to mount the wheels.

Cut the cab to size and sand the top corners to a curve as illustrated.

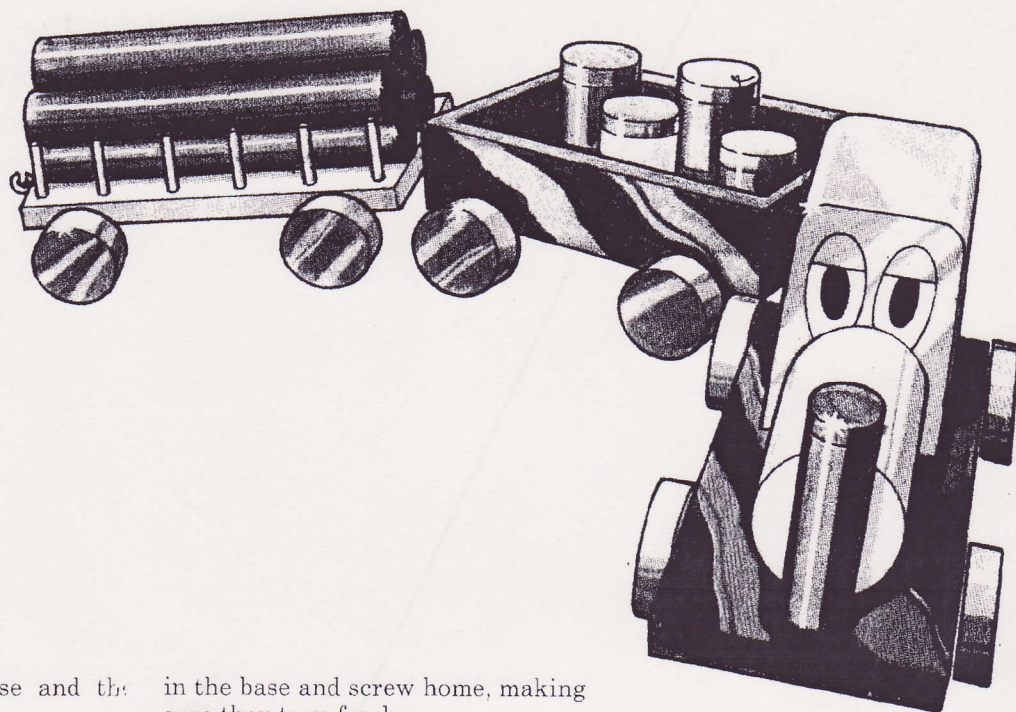
Cut the chimney to length.

Cut a length of dowel for the boiler, about 10cm (4in) less than the length of the base. Flatten one side using glasspaper or a plane if available.

Also from 3.8cm (1½in) dowel, cut four slices 12mm ($\frac{1}{2}$ in) thick to form the wheels. Mark the centres and drill clearance holes for the screws you are using.

Sand and varnish or paint all parts.

Assemble as illustrated. Glue the cab to the base, about 15mm ($\frac{5}{8}$ in) from one end. Glue the boiler flat side down in front of the cab. Glue



the chimney to the base and the front of the boiler.

Fit a cup washer to each screw and pass through the holes in the wheels. Place another washer over the screw, then insert into the holes

in the base and screw home, making sure they turn freely.

Fix a screweye to the front of the base and a screwhook to the rear. Tie on a length of cord for pulling along.

Make a colourful train like this one from scraps of leftover timber.

ASSEMBLING THE TRAIN

