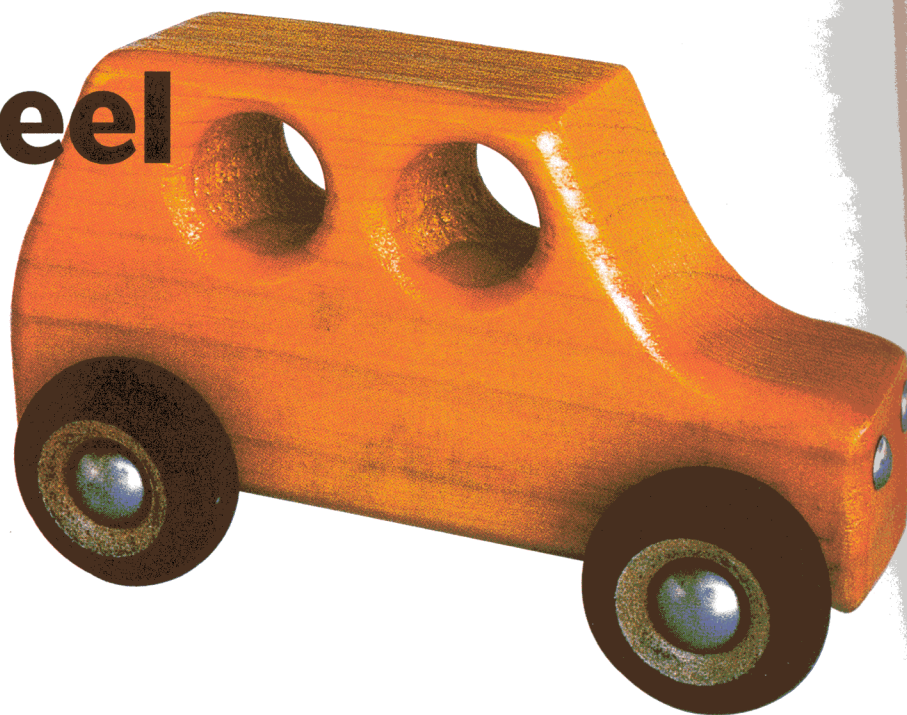


Four-wheel drive action



Top toy-making expert, Don Jordaen, offers a step-by-step guide on how to make a sturdy and practical toy for toddlers.

For the craftsman who wants to make a practical and simple toy in a very short time, this one fits the bill perfectly. Youngsters, especially in their crawling stages, will love playing with this appealing four-wheel drive jeep, as it is ideal to grip in their tiny hands and push along. Don't be surprised if you end up making a few more of these for your neighbours – it's also a top-seller at any flea market.

Preparation

- Mark the rear window off-cut, the two window holes and windscreen off-cut as indicated on the plan.
- Remove the rear and front off-cut pieces with a bandsaw or fretsaw.
- Clamp the article onto a wooden facing on the worktable of a drill press and carefully drill the two window holes using a 25mm spade or Forstner bit.
- Use a 7mm drill bit to drill the two axle holes as indicated on the plan.
- Sand the article to a smooth finish, paying special attention to the edges.
- If you own a router, you can trim the sides as well as the two windows by using a 4,8mm rounding-over cutter.

Making the wheels

The wheels are the most important part of any wheeled toy. You could buy 40mm wheels at many hardware shops, but that will take the joy out of toy-making. The following method will produce very strong wooden wheels that will even resist breaking under the weight of any adult riding on the little jeep:

- Use a pencil to divide the 240mm x 60mm piece of Supawood into four equal squares of 60mm x 60mm.
- Now mark the exact centre of each square, as this is where the axle hole will be drilled.
- Insert a 16mm spade bit into the drill press and drill each wheel to a depth of only 3mm, ensuring that the point of the spade bit enters exactly on the centre mark.
- Insert an adjustable circle-cutter into the drill press and adjust its setting to the exact radius of 20mm. It is important to make sure that the long edge is pointing inwards, so that the bevelled scrap is not left on the edge of the wheel.
- Clamp the Supawood onto a wooden facing on the worktable of the drill press and adjust it so that the pilot bit of the

cutter is exactly in line with the pilot hole made by the spade bit.

- Set the drill press to a slow speed and carefully cut all four wheels to a depth of about 12mm. Do not try to lower the cutter too quickly.
- Turn the Supawood over, adjust the pilot bit of the cutter to fit the pilot hole, clamp it in position and drill the rest of the way through.
- Sand the wheels to a smooth finish, giving special attention to the outer edges.

Finishing

- Apply two coats of sanding sealer to the jeep.
- When this has dried, sand the jeep slightly, before applying one or two coats of non-toxic, brightly coloured paint.
- Allow the paint to dry.
- Apply two coats of sanding sealer to the four wheels.
- Give the sealer sufficient time to dry, before sanding the wheels slightly.
- Apply one or two coats of non-toxic black paint and allow it to dry thoroughly.

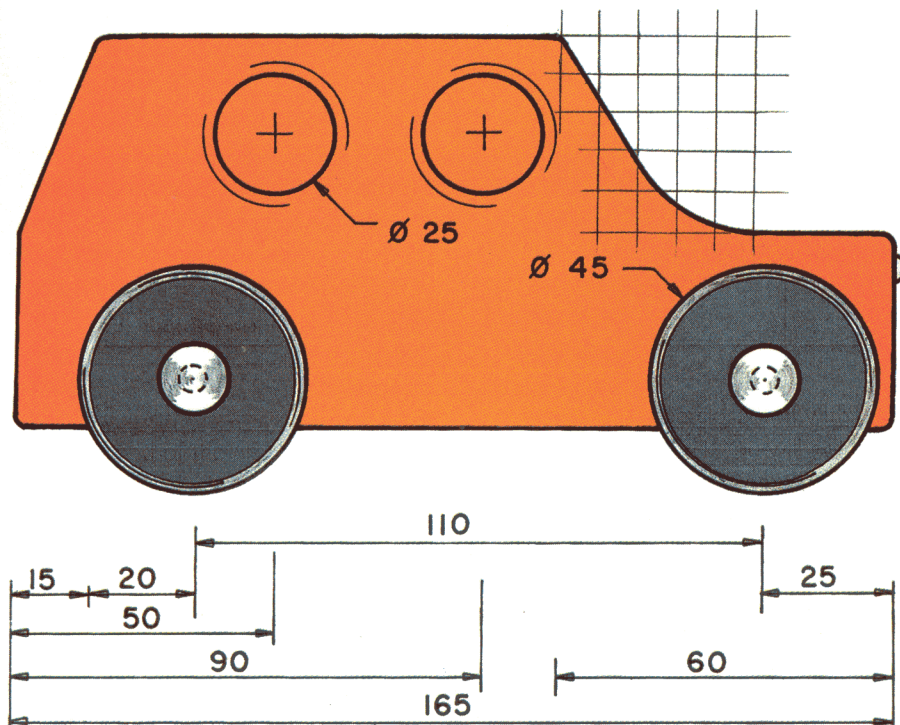
Assembly

Insert one end of the 6mm rod into a Domed cap star lock, followed by a wheel and a washer, which must be pushed through the axle hole of the jeep. Insert another washer followed by a wheel,

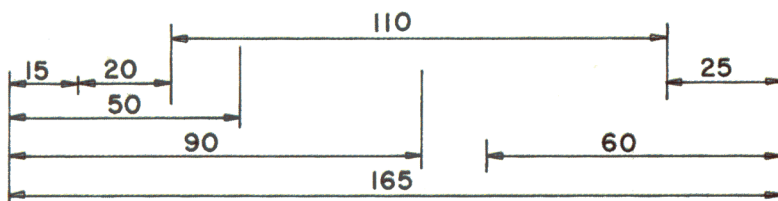
which can then be closed off with a Domed cap star lock. You will notice that the dome of the Domed cap star lock fits exactly into the recess made by the spade bit, thus giving it the appearance of a hubcap. Repeat this

procedure for the other set of wheels. Insert the upholstery nails according to the plan.

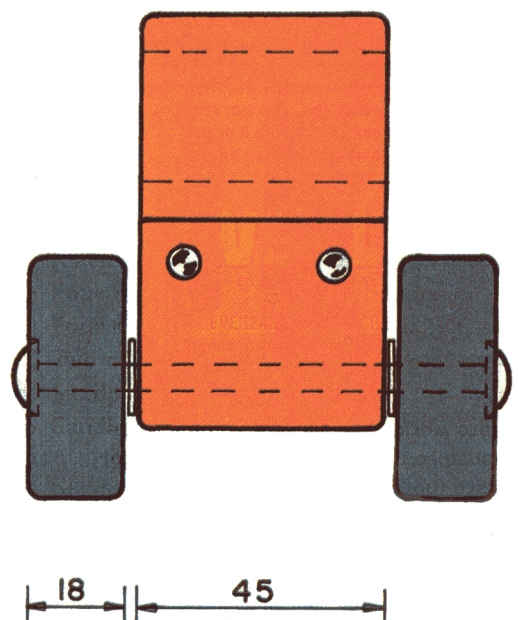
You now have one of the strongest toys available. I hope the children or grandchildren enjoy it! **T**



Side view.



Top view.



Front view.

Tools and materials

Bandsaw or fretsaw

25mm spade or Forstner bit

7mm drill bit

Drill

Clamps

Router

4,8mm rounding-over cutter

One piece of SA pine, cut and planed to 165mm x 80mm x 45mm

One piece of 18mm-thick Supawood (240mm x 60mm) for the four wheels

Two pieces of 6mm round mild steel (each 90mm in length)

Four M6 'Dome capped star locks'

Four small M6 washers

Two chromed upholstery nails

Sandpaper

Sanding sealer

A brightly coloured, non-toxic paint

Black non-toxic paint