Toddler's trolley

Michael Engels shows you how to make a wooden trolley to keep the children occupied for hours.

This handy little toy for the kids is an ideal project to test your woodworking skills. Hours of fun can be had by the children with their own trolley. For younger children, the wooden blocks painted in different colours will offer hours of fun. Once they are older, the trolley can be used as storage for toys.

Use the measurements in the graphic to mark out the position of the holes for the wheel axle and the position of the handle. The two lengths of 500mm x 100mm x 18mm timber can be placed on top of each other to ensure that the holes drilled are in the same position. From the blade, set the rip fence 60mm and cut across the piece of wood. Do this on both pieces, but only on the side that will be on the inside of the trolley. Set the rip fence to approximately 78mm and again cut across the planks. This must be checked before cutting because the wood might be slightly thinner and then the joint will look unsightly. These will form the sides of the joint and it should be a nice snug fit.

The idea is to now clear the wood from between the two cut lines to make your joint. A depth of about 6mm should be sufficient. Set the rip fence to 10mm and make a groove along the length of the wood on all four of the sides. Adjust the rip fence again by another millimetre in order to fit the masonite and round off the sides of the two longer planks. With all of these pieces prepared, the wood can now be sanded and the box part of the trolley assembled. I would recommend that the Tee nuts be driven into the sides where the handles are going to be tightened onto, making sure that they are located on the inside of the trolley.

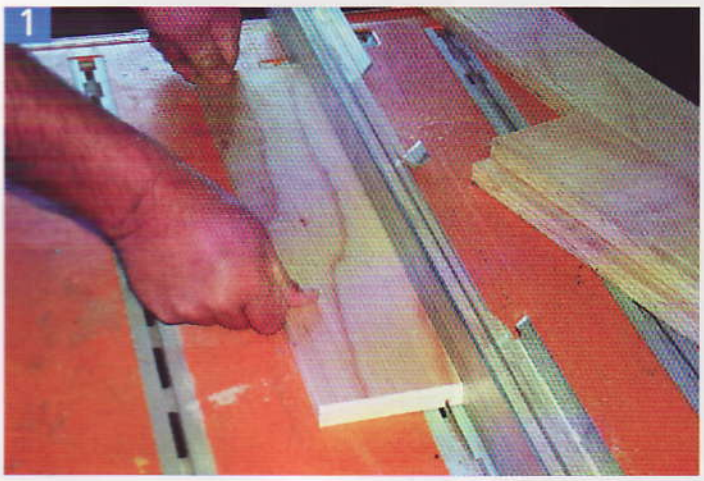
You will need to start with the one long length flat on the workbench with the grooves facing upwards. Insert the masonite and then the two sides. First check that the masonite is the correct length as the length varies depending on the depth of the groove. Once you are happy that it all fits together you can glue the joints and insert the top piece. Glue and clamp the box and allow to dry.

Materials

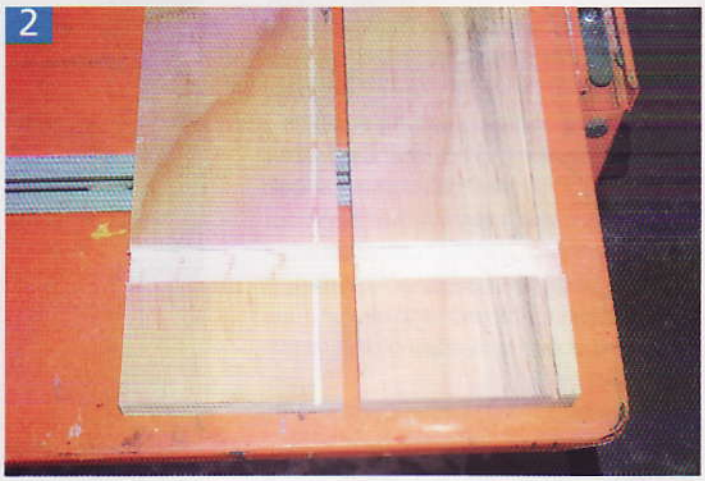
- 500mm x 100mm x 18mm (2) – sides
- 290mm x 100mm x 18mm (2) – front and back
- 500mm x 45mm x 18mm (2) – handle uprights
- 19mm dowel x 350mm – handle
- 2 x 6mm round bar 385mm
- 114mm diameter x 32mm (4) – wheels
- 290mm x 360mm masonite
- 8 x fender washers 48mm x 1,5mm
- 4 x 6mm Tee nuts
- 4 x 6mm push on end caps
- 4 x 36mm countersink head screws

Making the handle

Mark the centre of the two pieces of wood that are going to be used for the uprights of the handle. The dimension of the two holes can be marked off from the template, but make sure that the pieces are going to be flush at the bottom of the trolley. At the top of the handle, and about 20mm from the top, mark the centre point of where the handle is going to be situated and drill the hole with a 19mm drill bit. It will look better if you do not drill right through the workpiece but rather stop short of going through. With the holes now correctly drilled you can now use a router to round off the edges.



The groove being cut about 6mm deep into the sides for the base to slide into. Relace the rip fence once finished.



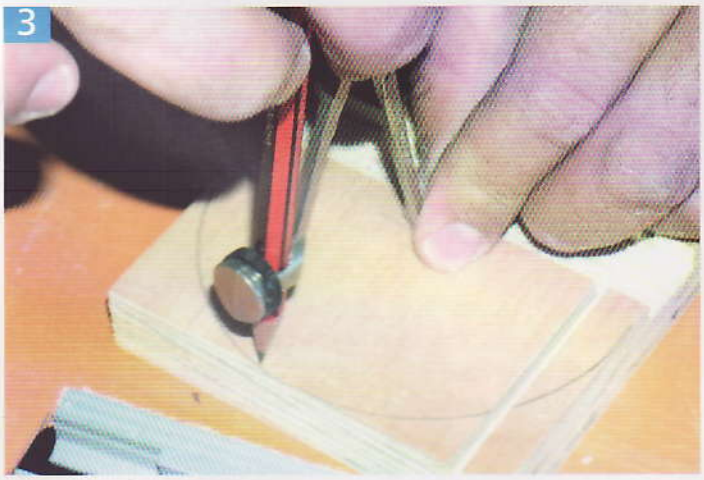
The wood cleared from between the two cut lines to make the joint – a depth of about 6mm will be sufficient.

Tools

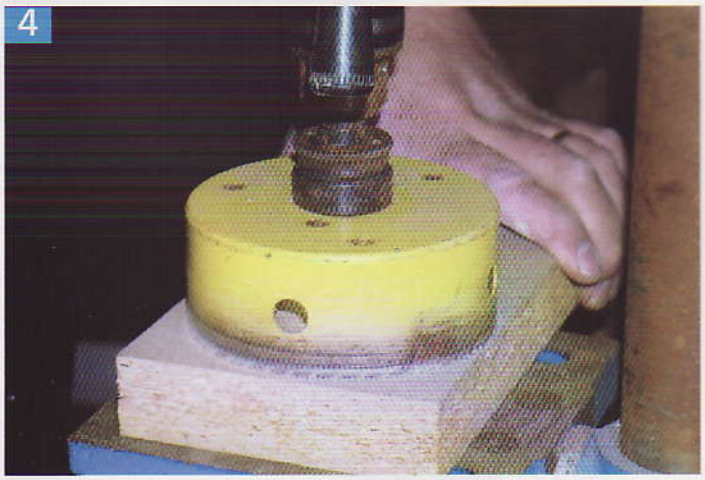
- Table saw
- Jigsaw
- Drill press
- Router and rounding bit
- Countersink drill bit
- Hack saw
- 114mm hole saw
- 7mm drill bit
- 6mm drill bit
- 19mm drill bit

I used a router table but you can just use a sanding block if you want to. The length of the dowel will be determined by the width of the workpiece and the depth you have drilled into the handle uprights.

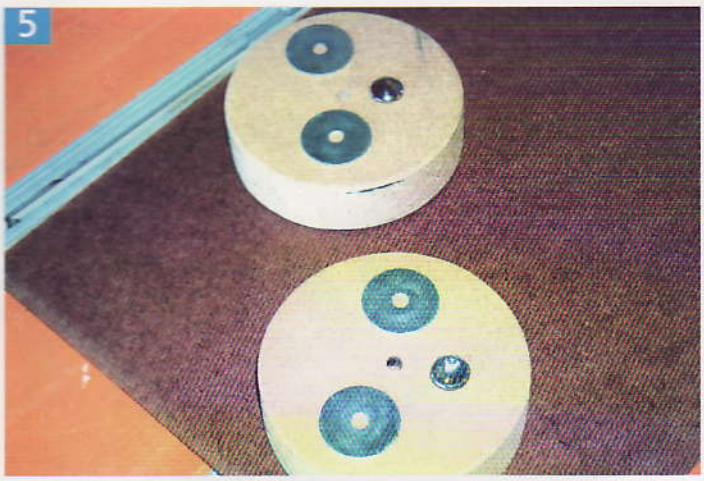
The handle uprights and the dowel can now be glued and assembled but I would suggest that they get secured onto the box together to ensure that the distance is the same at the top by the dowel as well as where you connect it to the box. I used a piece of off-cut chipboard which was big enough for the four wheels of 114mm diameter. I placed the hole saw into the drill press, held the wood securely, and drilled half way through and then through the other side. Be doing this you get to keep your wheel. If you drill right through you will find it very difficult to push the wheel out of the hole saw. The edges can then be sanded before proceeding to the assembly.



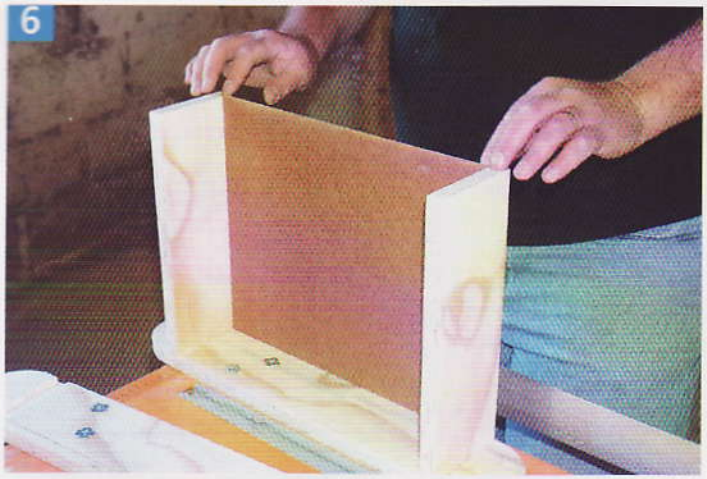
Mark out the edges of the base and cut out with a jigsaw.



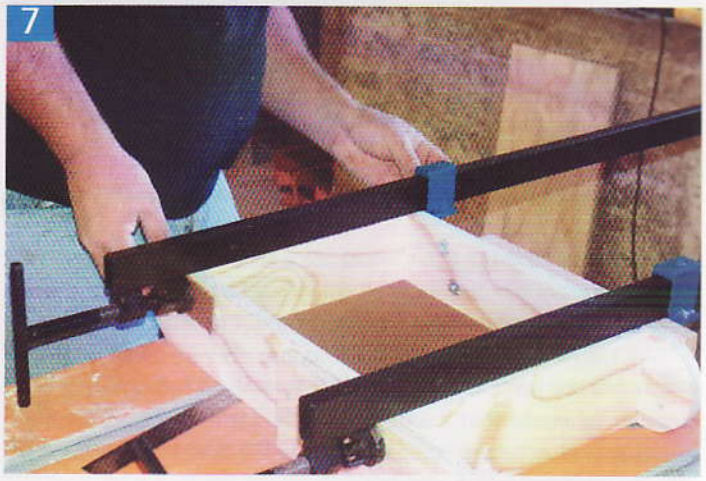
The wheels being cut with the hole saw.



The wheels once they have been cut showing a washer on either side of the wheels.



Assembling the box of the trolley.



Use sash clamps to clamp the box while the glue dries.

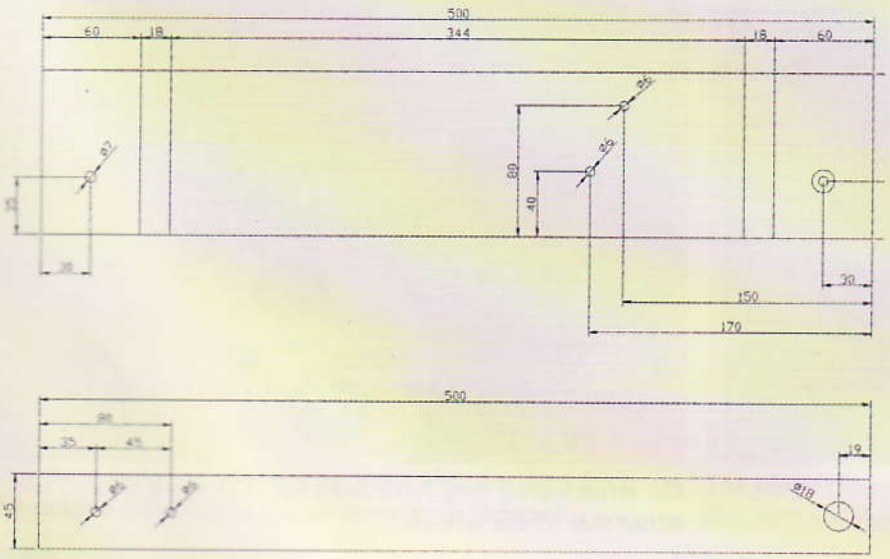
Routing the edges of the handles.

The handle uprights fixed and in position.

A close-up of installing the wheels, note the fender washer between the wheel and the box.

If you are going to paint the trolley, this would be the time to do it, as once the wheels are on you will not be able to paint it properly. On the one side of the round bar, tap on one of the push-on end caps, followed by a fender washer, then a wheel and then the next fender washer. Once this is done, push the rod through the holes which were made for the axle to go through, and repeat the process on the other side. Try to ensure that you do not cut the round bar too short as this results in the wheels not being able to move freely.

Make up a few blocks from off-cuts of wood in different shapes and sizes, but make sure that the pieces are of such a size that a child will not be able to get them stuck in their mouth.



The completed wooden trolley – a few coats of paint and it will be ready for action.