



## Wooden Toy Road Grader Plans



This toy grader is a fun project for all ages to make. It can be made with hand tools if you are going to purchase a set of wooden wheels.

### List of materials.

This toy can be made from leftover bits in your scrap box.

This is what I used to make this one.

19 x 500 x 140 clear pine for the wheels and body

9 x 60 x 200 skirting board for the blade.

6mm dowel for the axles.

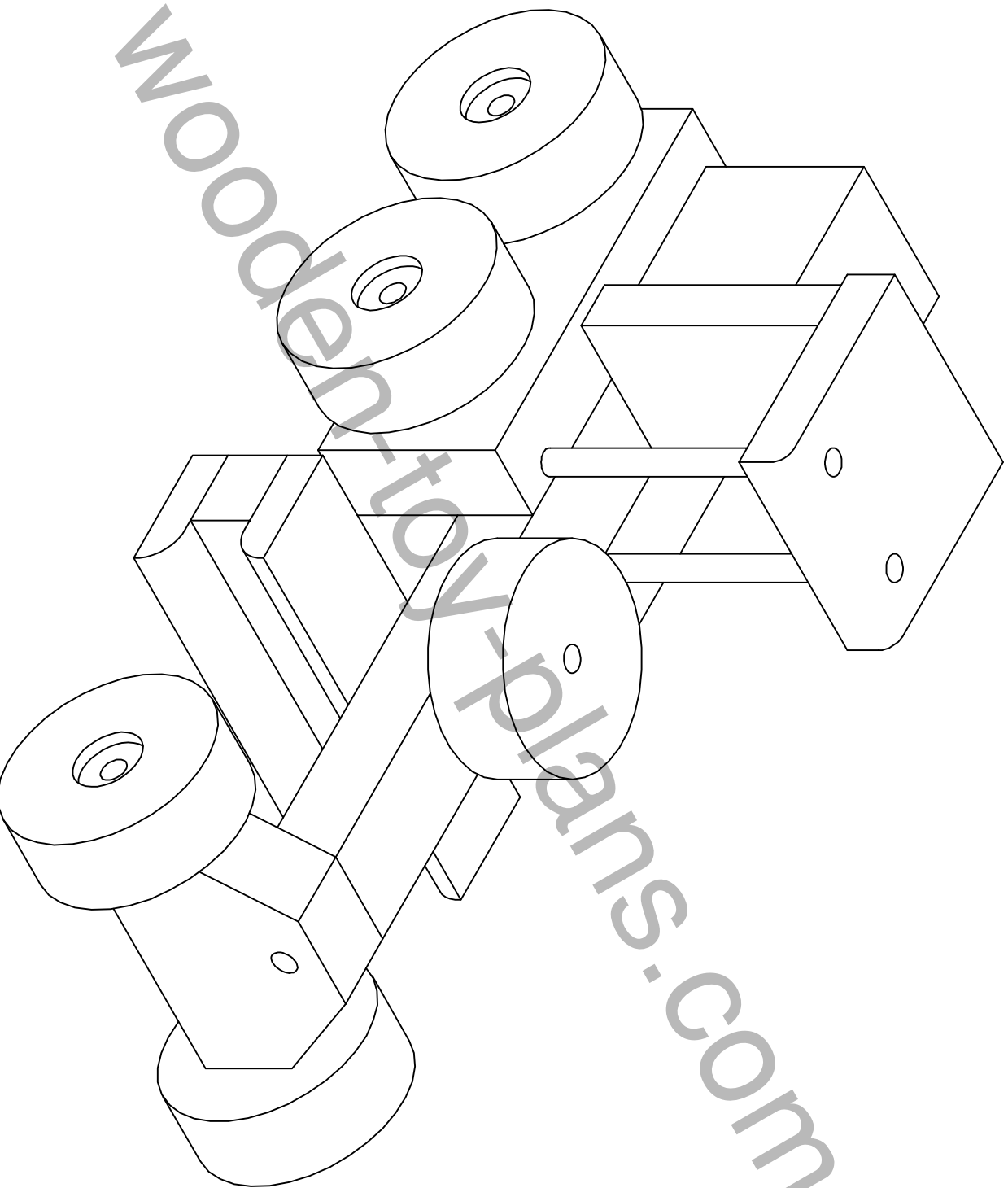
### Tools you may need.

I used a bandsaw, but only because I have one. Most of the cutting can be done with a hand saw. Anybody who has experience with a table saw will know that the parts are too small to use one safely.

I also have a 12" disc sander, and I find this indispensable for trimming end grain. Of course, a block of sandpaper or a wood file could also be used.

If you are going to make your own wheels, a drill press is an essential item when using a circle cutter.

Most if not all hobby woodworkers and handymen (or handywomen) will have a selection of tools to complete this simple project.



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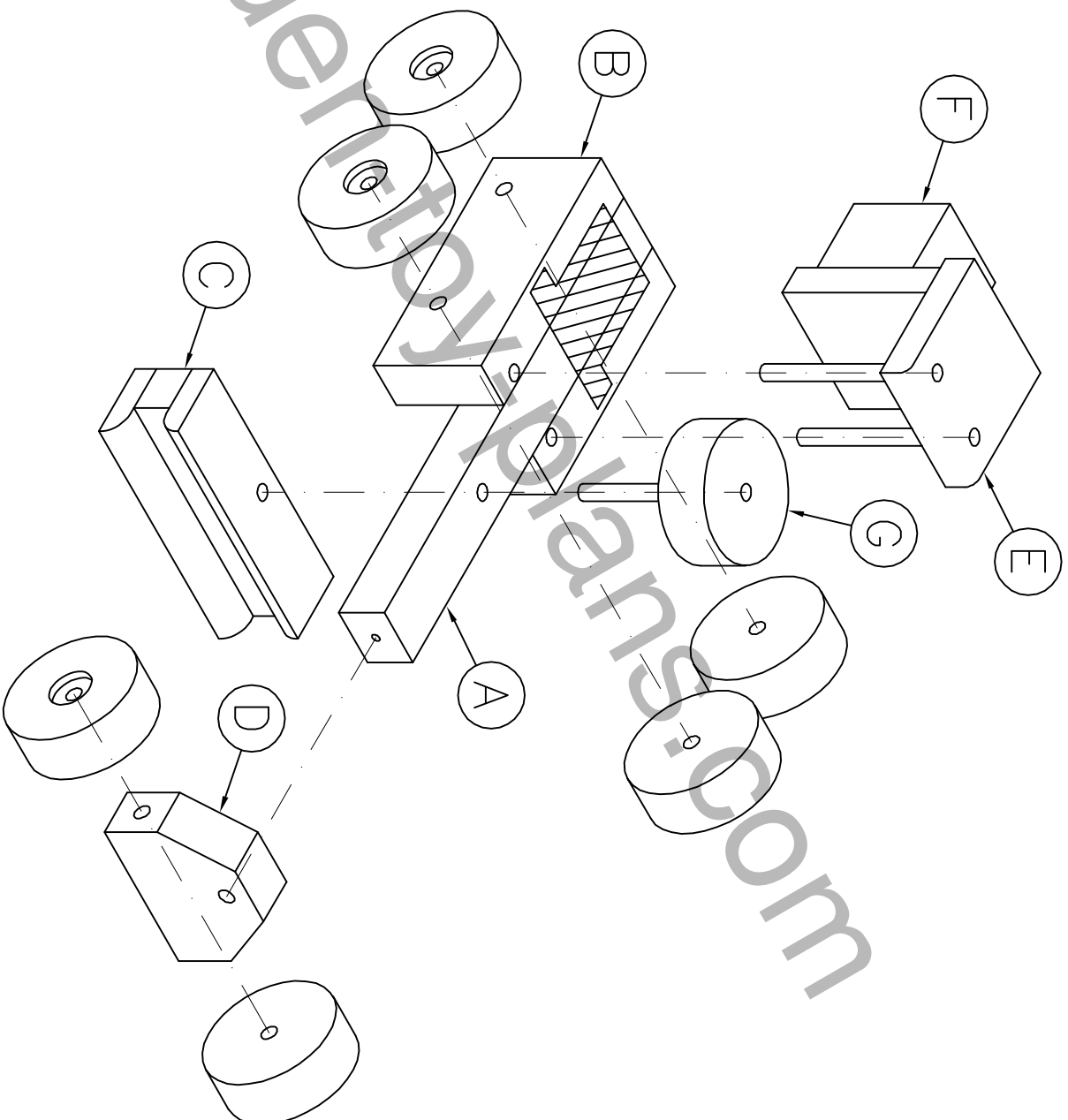
Construction Toy Road Grader

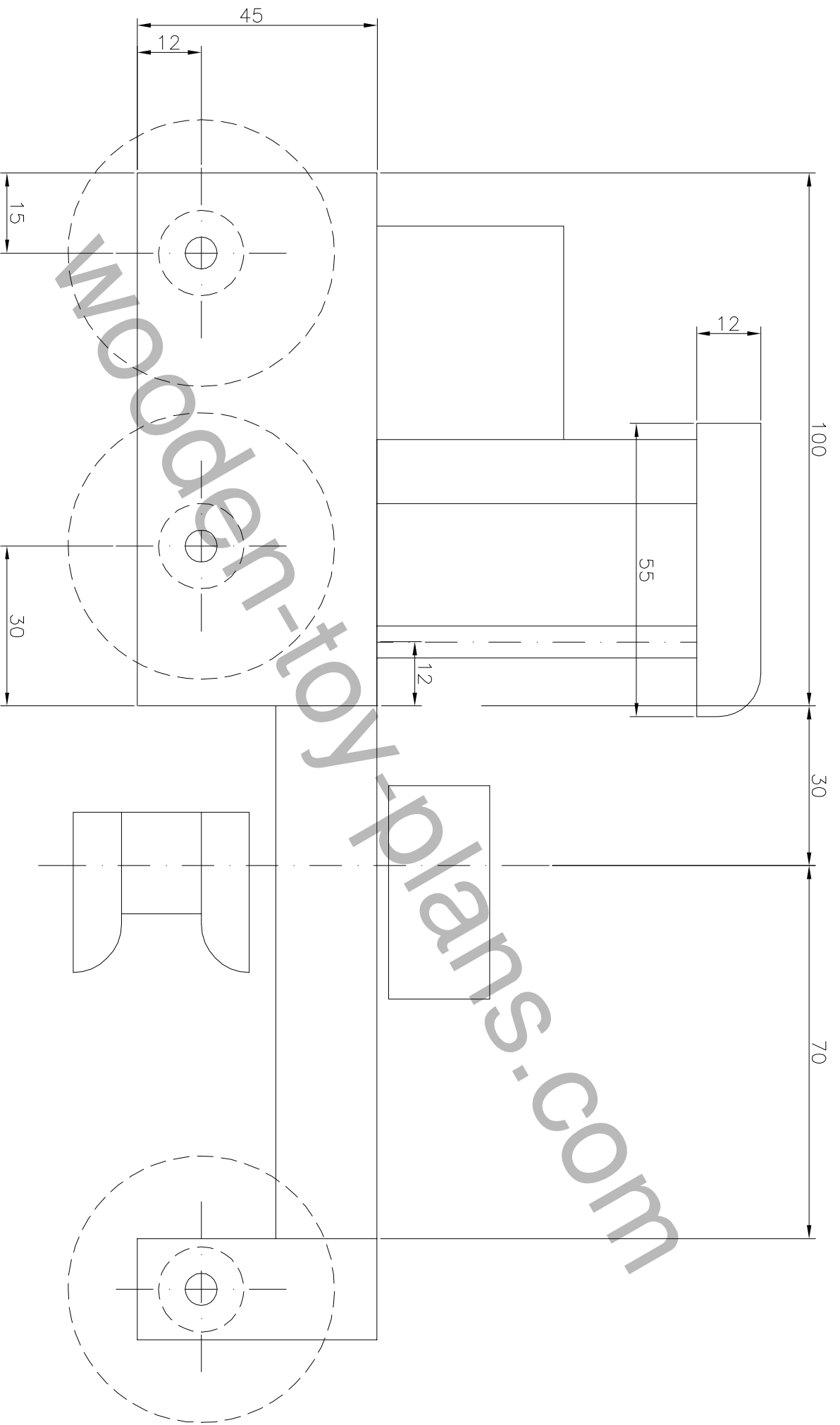
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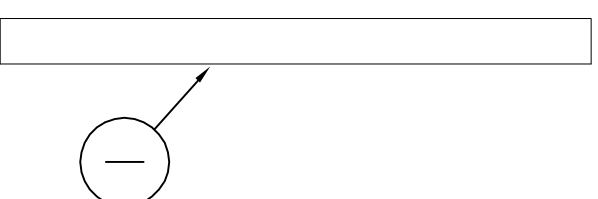
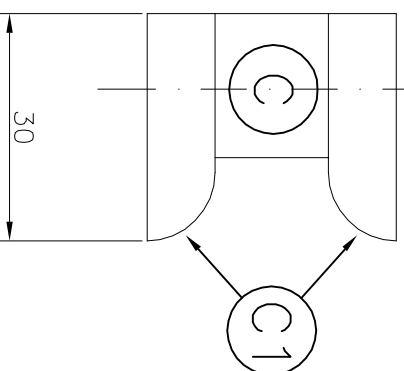
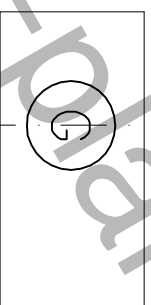
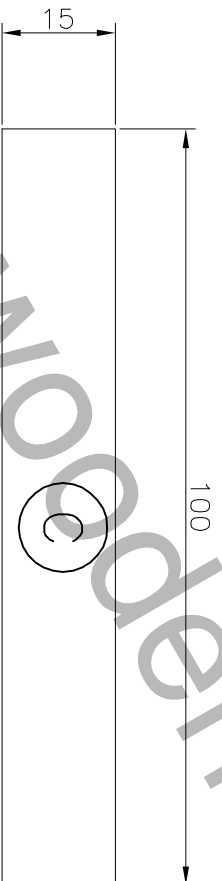
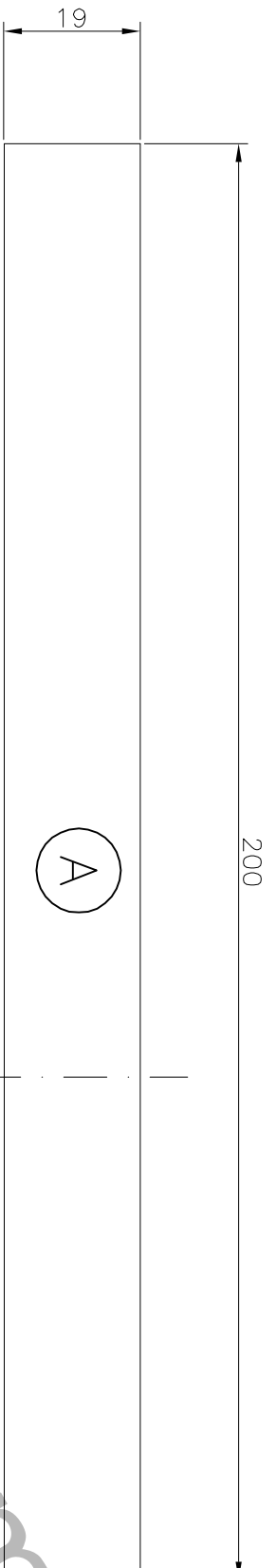
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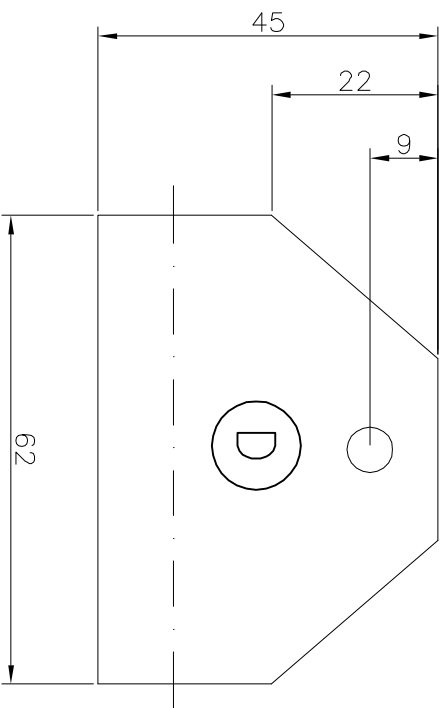
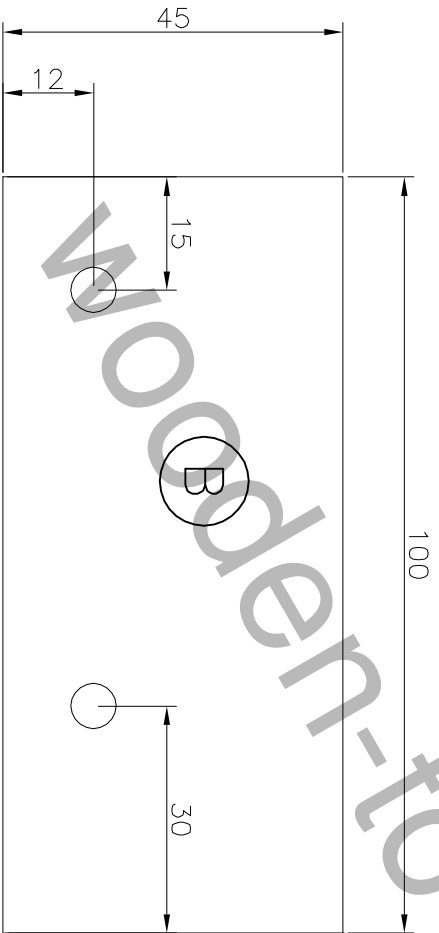
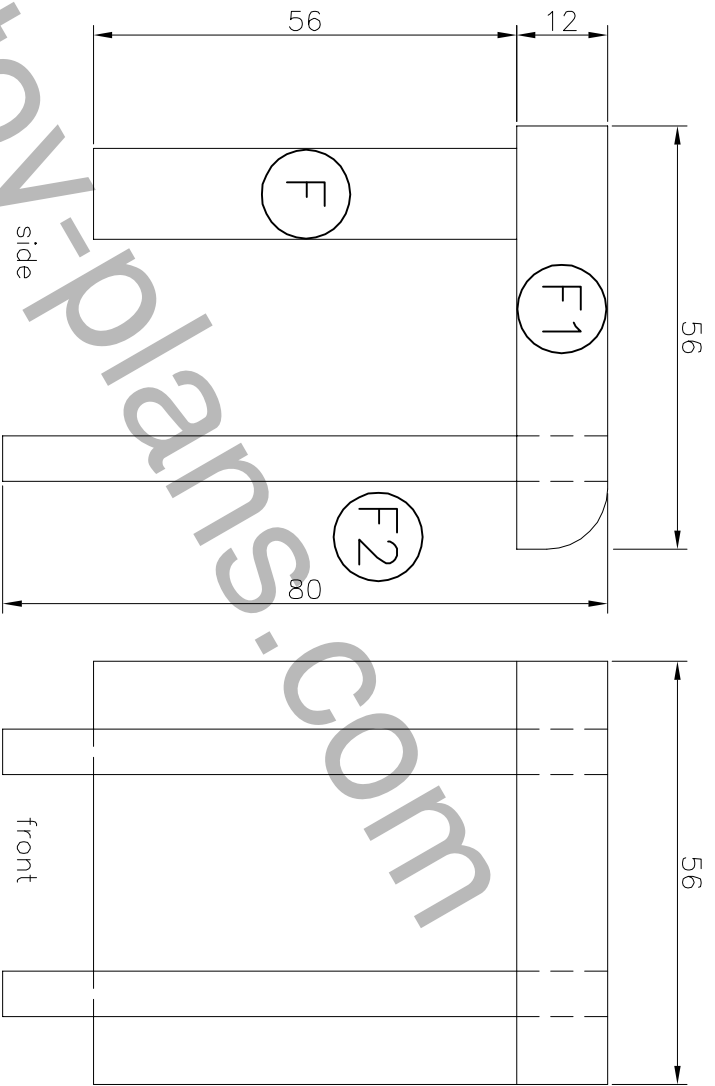
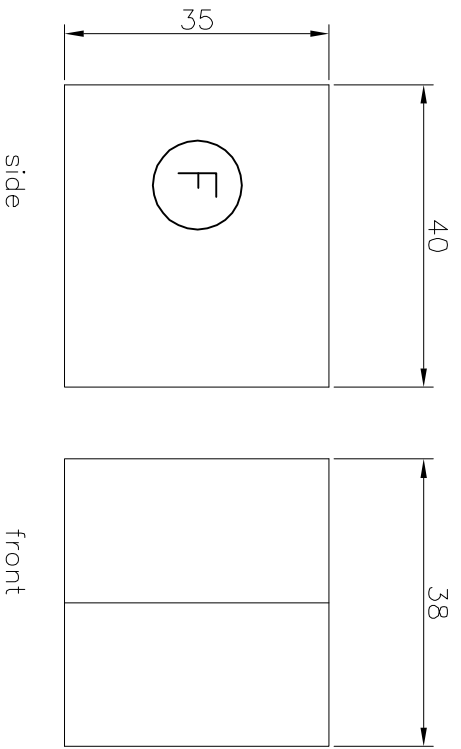
# Parts List

- A 19x24x200 Make 1
- B 19x45x100 Make 2
- C Grader Blade Assembly
- D 19x45x62 Front Axle
- E Cab Assembly
- F 38x38x40 Make 1
- G Control Knob









## Step by step instructions.

1. The first step is to read through the instructions and study the plans and photos.
2. Using a soft pencil and a ruler, mark out the component parts as shown in the drawing.
3. Cut out the parts using an electric jigsaw, a tenon saw or a scroll saw.
4. Parts A to D are trimmed back to their proper sizes. A twelve inch disc sander is useful for trimming small pieces.
5. Glue the pieces that make up part F and put to one side to set.
6. Clamp parts B together and drill the holes for the axles. At this stage, the holes are drilled for a snug fit. Do this in order to make sure things stay lined up when the parts are glued and clamped together.
7. Dry clamp parts A and B together, keeping the two parts B aligned with the axle dowels. Mark the pieces so that it will be re-assembled in the correct order. It is shown in red in the photo only to highlight the idea, so don't actually mark it in red. Apply the glue and put it to one side to set.

It is important that the axle dowels are left in place until the glue sets to minimise creep under clamping pressure. Once the glue has set, re-drill the holes to allow the axles to spin freely.



*Step 7*

8. The blade of the grader, part C, is made from a piece of skirting board cut to a width of 30mm. It may also be made from a piece of timber that is 9mm thick, just chamfer one edge to the profile shown in the drawing.



- Cut and trim part D to size, and drill the axle hole using a drill press or drill guide. Use the 6.5mm drill bit to allow the axle to spin freely.



- Drill the holes for the roof of the cab by placing it on the body as shown in the photo.



*Step 10*

- The photo shows how to fix the dowels on place by measuring the height the dowels are set so that they sit slightly above the roof. This is an idea borrowed from the Craftsman furniture movement.



*Step 11*

- Trim part F to size and fix in place.
- Final assembly.**  
Glue all the parts together, apply the wood screw to the front wheel assembly, allowing it to swivel. Round off the sharp edges and you are ready to put the grader to some serious earth moving work.



## Finishing

There are many ways to apply a finish to a wooden toy. I have used food colouring on pine to good effect.

Link to [child safe paints](#) for finding a non toxic paint that is child safe and zero volatile organic compounds in an over-toxicated world an article on non toxic paint by Deliah Jones.

## Conclusion

I certainly hope you have enjoyed making this project. Use this [contact me](#) form if you would like to submit your project to the [photo gallery](#).