

# HiLo Clothes Dryer

by Wendy Neale



Inspired by a great hanging dryer, but put off by high cost and long distance shipping, I decided to make my own, low-budget version. There are components that could be higher quality, and prices are indicative only - it depends what your local suppliers have available for you. I got most of the components from Bunnings and Pete's Emporium in Porirua.

Take as much time as you want to. I made this over two weekends, not rushing, and in between other activities. But I don't have to tidy up if I don't feel like it...

## Fineprint:

All measurements are in millimetres unless otherwise stated. All attempts have been made to keep jargon to a minimum. 'Usual' in New Zealand may not be 'usual' globally. Do everything safely.



## Tools:

- handsaw: I use a dozuki japanese saw but a panel saw will do nicely
- battery drill
- 25mm forstner bit, or spade bit
- a flat/slot screwdriver
- 3mm + 8.5mm drill bits
- a driver bit for the screws (I prefer multi or square drives)
- a miniature blowtorch or a lighter
- tape measure

## Materials:

- 5 broom handles, 25mm dia x 1350mm long
- 2 lengths of plywood or wood, 8mm x 60mm x 1750mm
- 5 screw eyes
- 2 screw hooks
- 1 cleat hook with screws
- 1 single pulley - 40mm
- 1 double pulley - 40mm
- 6 stainless steel screws
- rope - 10 metres
- some sandpaper 150grit/240grit/320grit



## Steps, page one:

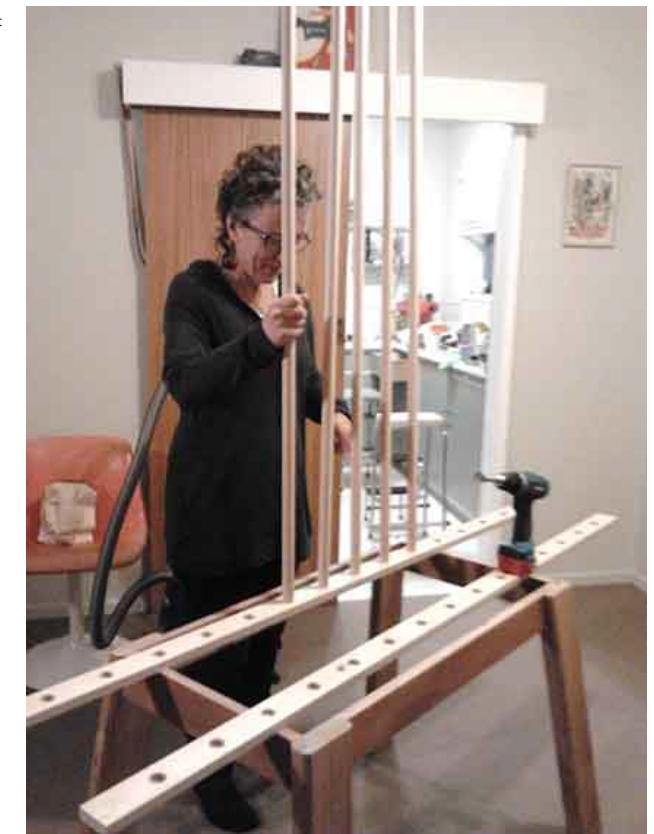
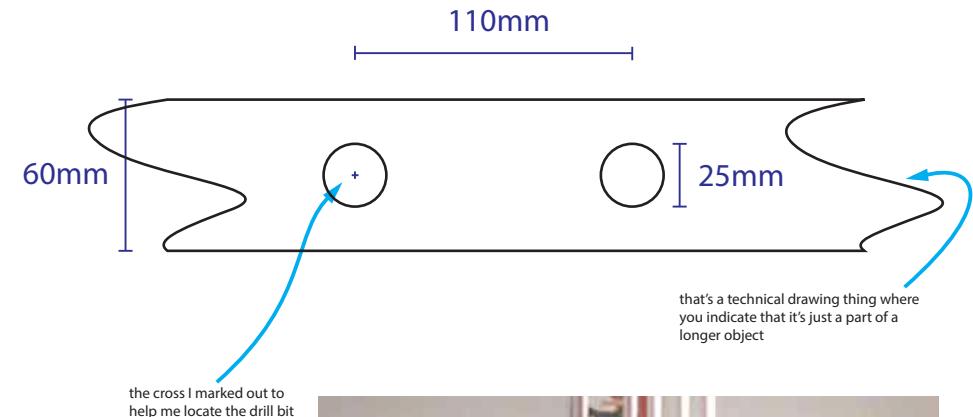
Measure and drill 15 holes in both pieces of plywood with the forstner bit or spade bit. I spaced them 110mm apart (from the centre of each hole) and in the centre of the 60mm plywood, marking the centre for each hole with a cross. That's a lot of centres. I made the holes 9mm deep.

Chamfer all edges (or get rid of the sharp edges) with the 150grit sandpaper and take the burr (scratchy bit) off the holes with the 240grit paper. Check the fit.

On the broom handles, measure 450mm and 900mm. Mark with a pencil, dividing the handles in three.

Cut with your handsaw. Don't worry too much if they aren't exactly the same length but try to get them close. They are now your dowels.

Smooth the sawcut edges with the 240grit sandpaper.



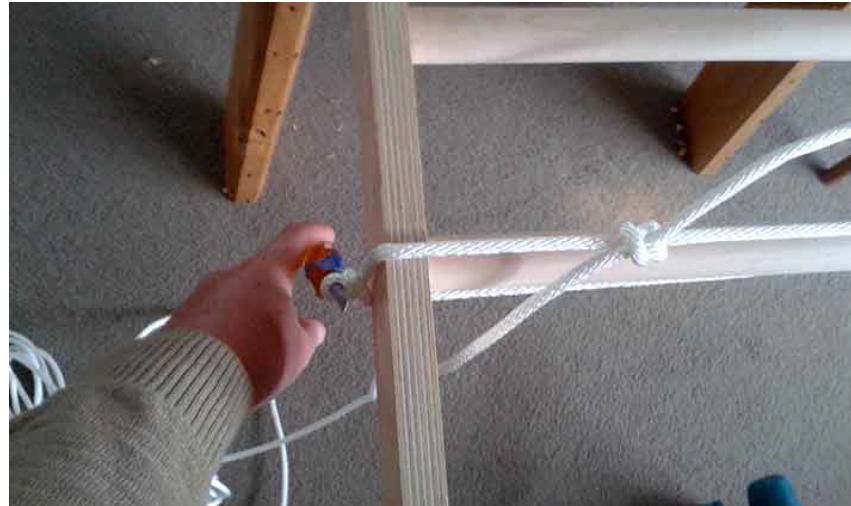
## Steps, page two:

Twist all the dowels into the holes you drilled for them.

If the fit is a little snug and it's not coming together evenly, tie a loop in the rope you have and then place it over the ply and dowels. Use the screwdriver to twist the rope so that it becomes tighter and draws the components together.

Do this all along the 'ladder'. There's no need for brute force - let the screwdriver and rope be your friends.

Now is a good time to screw it together. I put screws in both ends and in the middle but you could screw into all of your dowels if you feel like doing it. I marked out and drilled a pilot hole with a 3mm drill bit and then carefully countersunk the hole with an 8.5mm drill bit. I don't have a countersink bit - you might want to practice that step on a scrap of wood first.



Steps, page three:

Here the frame/ladder/rack is, all put together on my 'workbench'.

I used a tape measure to check (all along the width of the 'ladder') whether everything had gone together evenly.

That rope and screwdriver trick is really handy, aye?

This is when I applied a sealer. I chose to rag on a satin water-based urethane so that the wood is sealed. This means that the clothes won't be affected by the wood or the sealer and the wet clothes won't make the frame twist and warp.

Just a note, now that I've got room: a pilot hole makes it easier to drive a screw into place. It also keeps it on track so that it doesn't get distracted and go in the wrong direction.



## Steps, page four:

After the urethane dried (about 2 hours) I drilled the pilot holes for the four eye hooks. My ceiling joists/bearers are 980mm apart so I put the eye hooks about 1000mm apart, 2 on each side. When my hands got tired from hand turning the eye hooks to screw them in, I used that flat/slot screwdriver to finish them off.

You could also 'de-nib' the urethane if you feel like it. When you apply a finish, the grain of the wood is raised creating 'nibs', so then the surface is a little scratchy/lumpy. Your clothes might catch on it.

Get some fine sandpaper (240, 320 grit) and lightly go over your surface with it. You're not sanding the wood, you're just trying to take off the 'nibs' or raised lumpy bits on the surface of the wood.



## Steps, page five:

Drill two holes in your ceiling bearers/joists approx 600mm away from the wall (so you've got room for the dryer to sway a bit). Wear safety glasses so that you can look and not get dust in your eyes while you're drilling. Put in those two screw hooks. They're to hang the pulleys from.

Now comes the bit that was really quite a mental challenge for me. Threading the rope.

I got 10 metres; you might need more. My ceiling height is approx 2700mm...

Take one end of the rope, thread it through two of those eye hooks and then tie it together so that it looks like a triangle - see the image. If the end isn't sealed, this is when you might singe the end with the mini blow torch or lighter (in a well ventilated, child-free space). I tied a slip knot so that the rope triangle becomes quite small and the rack can go up as high as possible in the ceiling.



Steps, page six:

Hang the pulleys from the screw hooks in the ceiling.

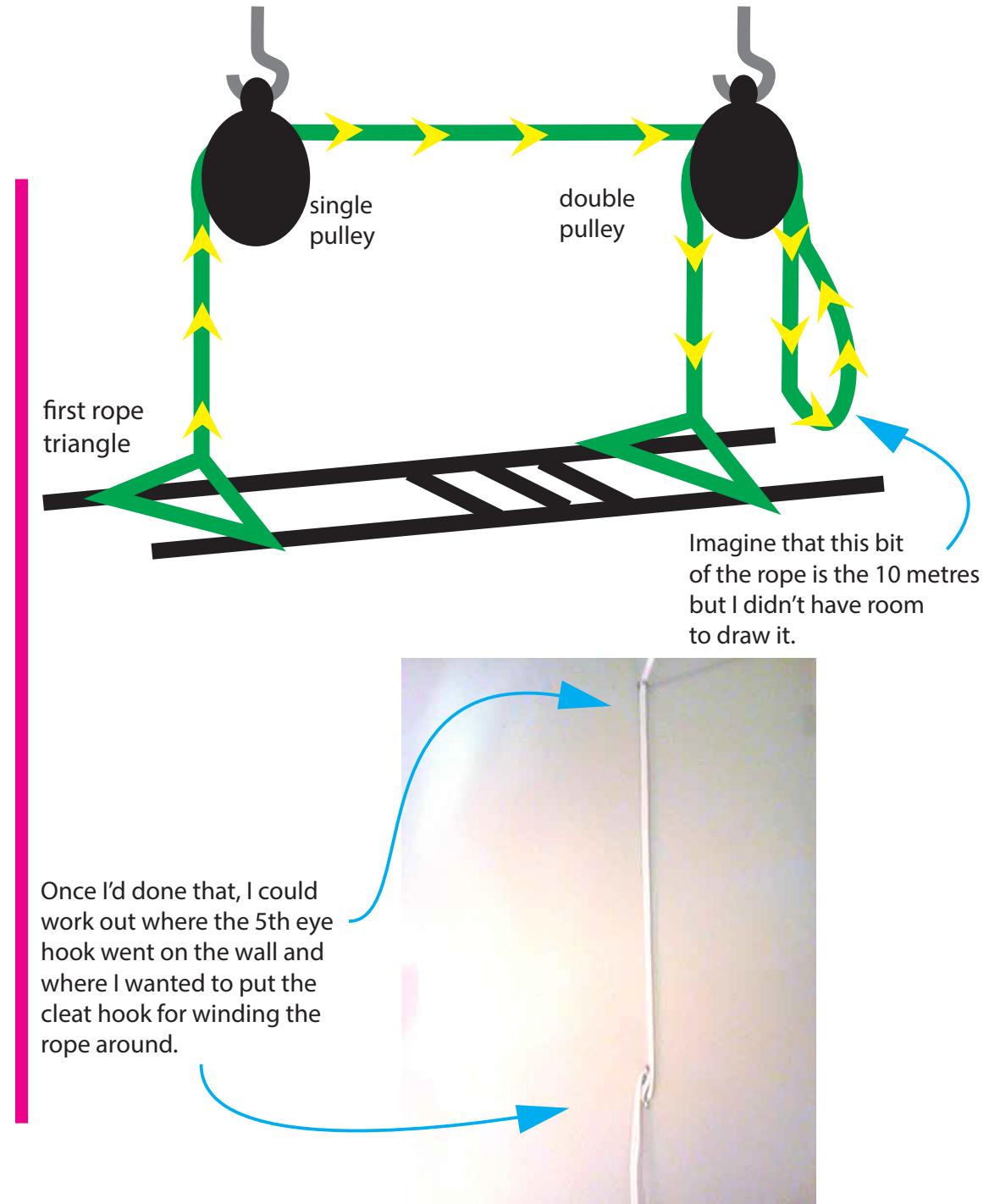
It might be quite handy to have someone else helping you with this next bit:

Pretend that I've drawn an awesome picture. Don't get distracted by bizarre scale, colour or other detail - it's the rope that is important here. It's green with yellow arrows on it.

If you follow the arrows on the drawing, you can see that the long end of your rope needs to be threaded through both pulleys and then back through the double one.

Then you can thread that end through your other two eye hooks on your ladder/frame and tie the 2nd triangle.

Make sense? If not, maybe you could talk about it with that handy someone else.



## Steps, page seven:

You can see, hopefully, in the image that the eye hook is up quite high on the wall so that the rope doesn't get caught in the 'ladder'. It takes quite a bit of the strain, so it needs to go into a stud (or other sturdy piece of wood that holds up the building).

I borrowed a stud-finder from a friend to find the studs, after knocking on the wall to hear the right sound and then drilling five useless pilot holes into just plasterboard. One day I'll fill those.

Congratulations - if you've made it this far, you've either got a handy clothes dryer for approximately \$60 instead of \$500, or you're reading all the instructions before you start.

Well done, either way...



cheers, Wendy

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