

A Few Ideas on Using Jigs

This month we are going to take a look at a few jigs to help you advance your turning. Most members will be familiar with the fairly straightforward homemade chucking devices such as jam and spigot chucks. These are simply turned from scraps of wood to be held in your conventional chuck but with an extension turned to be a tight fit either inside the item you want to hold or around the outside. They are most useful for turning away original chucking spigots, for holding awkward shapes such as fruit and in some cases for repetitive turning.



In the example left, I have turned a spigot chuck to hold a number of wheel blanks which have had the axle holes drilled through the middle. The blanks push onto the spigot and once the edge and one side is turned, they are simply reversed to turn the other side. The tailstock centre can be brought up for extra support if necessary. I used this method to turn the wheels for this grasshopper toy. The axles and axle pegs were turned conventionally.



A jig which I made some time ago, to extend possibilities on the lathe is a router and drill carrier. It is a very basic design which I modified in use as the side brackets obstructed access in some cases. I fully intended to make a better one with an adjustable height position but of course have never got round to it especially as the prototype serves its purpose well enough.

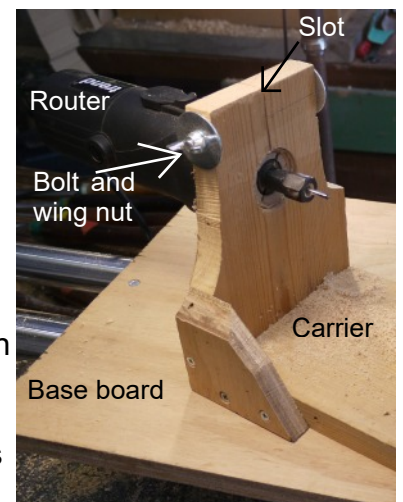


To use such a jig one must first make a support table to suit the lathe. This is simply a large piece of board to sit firmly on the lathe bed. A second piece of wood attached underneath should be a snug fit between the bed bars with a third adjustable piece at right angles to that, to tighten the support table in place. The carrier itself is basically two pieces of board fixed at right angles. The wooden brackets I made for fixing were too big in practice so I improvised by trimming the shape in use.

The upright piece needs to have a hole drilled through from one side to the other near the top. This is to accommodate a bolt for tightening around the tool collar.

With the base board in situ the jig is placed on it and brought up to the headstock drive centre to mark the centre height. A hole to match the collar of your router or drill is then drilled dead centre.

The standard collar size for my tools is 43mm. You will need a forstner bit or hole saw. A vertical slot is then cut from the top of the jig to this hole. The router or drill is mounted in the hole, a long bolt with washers and wing nut through the top section tightens the wood round the collar and you are ready to go. To maintain a fixed depth of cut a wooden bush to fit over the cutter can be turned. This makes routing on a curved profile possible as well as setting the depth of cut. Guides can also be fixed to the base table for repetitive work. The ideal router for this work is one with a removable base plate though I have used a larger one with the base attached. It was cumbersome and restricted the design possibilities. The router can be mounted from either side. This set up is also very useful in combination with an indexing system.



Router in my home made carrier



My lathe does not have a built in indexer but my chucks are indexed so I devised an indexing arm which you can see in use with the router in the photo left.

The arm is a length of square metal bar with a hole drilled through top and bottom. A nail with the point filed flat is fixed in the top hole and bent at right angles to locate in the chuck. The bottom hole has a pin through it connecting it to a swivelling window casement bar bracket. This allows it to be turned and laid flat when not in use.

This set up was used to cut a series of slots in a baby's rattle which can just be seen in the chuck. The rattle contains bells and the slots allow the jingling sound to escape. I used the same technique for cutting slots through blanks to make mother and daughter lace bobbins. I have also used it for fluting.



A plea from Peter, can you help?

You may recall that the club Nova lathe is not running true. A number of demonstrators have commented on its inaccuracy. Before the dreaded lockdown we were hoping to have a close look at it during a Hands-on session.

Although the lathe almost passed the kiss test we wondered if it was out of true when the tailstock was at the far end of the bed. Sandra came up with a good idea by suggesting we use a laser beam to check the accuracy throughout the length of the bed..... and that was as far as we got. An outstanding job when we return.

As it happens, I also have a similar problem with my lathe and wondered if I could try the same idea. So, picking up on Sandra's idea, and £3.21p later, I had a laser pen to shine through the headstock and the ability to check the tailstock.....or so I thought.

I quickly knocked out a small jig to hold the pen – a 12mm hole drilled in one end to match the diameter of the pen and the other end turned to sit inside the headstock shaft (5/16") with a 2mm hole drilled through to allow the beam to pass through (see photo).

The first attempt suffered from wobbleitis so another was made. This also had sufficient play to allow the beam to move at the business end. The third was a really tight fit but still there was movement at the other end.

Back to the drawing board for both lathes I fear unless somebody has a brainwave.. Any engineers out there in Covidland who can come up with a better idea? If so please shout. Peter Castle.



Peter's laser pen and holding jig

Rather than a pen attached to the lathe itself which would be subject to movement caused by moving the tailstock along the bed, would it be possible to set up a parallel laser beam using a laser level on a floorstand behind the headstock?

If it could be lined up to shine through a jig similar to Peter's, fixed in the headstock with the beam touching the tailstock centre then checking whether it is still true when the tailstock is moved to the other end of the bed. I am still not sure whether this would be accurate enough but please send in your ideas.

There are numerous other jigs for use on the lathe which can be made at home. If you have made any and could share ideas with other members, please send details for the next newsletter.

It has been pleasing to receive more photographs from members of their work. Given that many of our members are vulnerable and some are shielding, it looks unlikely that meetings will be resumed for some time.

Members' Work



Paul Filsell turned the pieces above and below from monkey puzzle. He also made the box below right from Panga Panga with a mother of pearl inset.



Small holly bowl with a golf ball marker in the centre by Jayne Brown.



Tim Cornwall's 10" Cedar platter with ribbon staining using Chestnut spirit stains finished with acrylic lacquer.



Maggie Wright has been busy deep hollowing. This vase is about 24" long and evolved into the sculptural form right.



Above. Two natural edge bowls in Lime with a knot and Horse chestnut with a little sea horse shaped knot inside, both by Chips Bishop.



Gary Woodhouse has joined some waste blocks to turn two sphere finials for a quilt hanging pole. He has also made a tealight holder with a captive ring.



Box by Peter Hawes, decorated with pyrography and paint.

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Thank you to those members who have been sending in photographs of their work and sharing their ideas. If you have not sent photographs maybe you have been working on other projects rather than woodturning. If you have made something interesting do send a picture for next month's newsletter. It is good to remain in touch whilst meetings are suspended and to see what everyone is doing to get through these strange times. As lockdown begins to ease, take care and stay well.