

How to Turn Your Lathe into a Horizontal Boring Machine

I'm making a bed with 8 ft post which will be made of three parts. The bottom section (pictured here) which is 48" long. The middle section which will be turned and fluted and is 42" long and then the finial on top which is 6" long. I've had to do this many times before and have long intended to make a similar fixture with adjustments to accommodate different sizes of posts. But always seeming to be in a situation where I just need to get it done I've never made it and frankly it's too easy to just quickly cobble up a temporary fixture out of scraps on hand and be done with it.

The fixture simply elevates the bed post above the lathe bed at the appropriate height in order to get the center of the post in line with the lathe centers. It's all really a pretty simple arrangement and easily done.



In the above two views you can see that the fixture is a simple box just nailed together. The end piece just keeps it square and notice the strip of wood attached to the bottom which fits between the ways of the lathe. That strip keeps the whole thing centered, it doesn't need to be dead on accurate (that comes later) but the height of the box must be exact. To determine how tall the fixture must be is pretty straight forward. In my case it was distance from lathe bed to lathe center (which is 12") minus one half of the post thickness (which is 2" for a 4" square post) which means the fixture must be 10" high.



Now with the fixture in place (here's where the accuracy and simplicity come into action) mount the bedpost between centers while it sets on the fixture. If the fixture isn't the right height you'll find out right about now. Assuming everything is OK, you can now attach a strip of wood to the fixture while keeping it along one side of the bedpost. This "fence" will help in keeping each bedpost lined up and stationary as you drill.

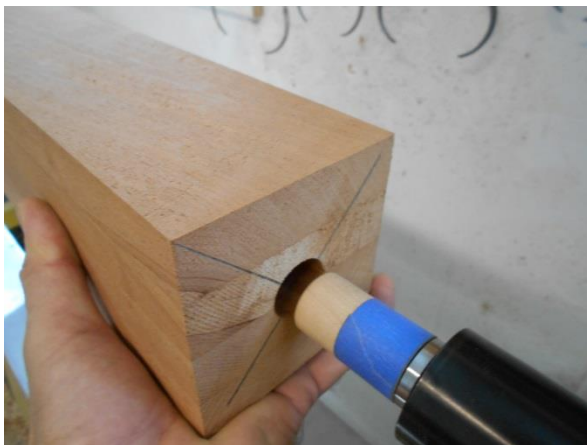


Above are views of the fixture and drill chuck in place and the post being bored. The post is pushed into the spinning bit using the quill on the tailstock. The hole is drilled 2" deep. I'll show more on the complete bedposts at a later date.

The middle section of the post is turned on the lathe and is also bored on the top end to receive the tenon of the finial. I find it much easier to bore that hole while the work piece is still square in cross section. A plug is then inserted into the bored hole to accept the tailstock center. Oops... I turned the plug a tad too small, no problem.... a little bit of masking tape takes care of the situation.



Once mounted on the lathe, the blank is roughed to round and beads and tenon are turned on the bottom end. Corners were ripped off before turning to make this part go much faster and also greatly reducing the chances of corners breaking off while turning.



A full length tool rest would make turning the long tapered section much easier. I don't have a tool rest that long... but Hey! I don't have a horizontal boring machine either.

Recognize the box? That's right, some minor alterations and it becomes a tool rest. It will be "altered" one more time before this bed is done in order to make the posts fluted. That'll be done on the lathe with a router.



With lathe work done, the turned section can be fitted to the lower section. Now I've got four partially completed bedposts.



Final Alteration

With the upper section of each bedpost having been turned, attention is now given to fluting each of them. Each post gets 8 flutes. It really should be 12 or even 16 (the space between them could be a little smaller) but I'm duplicating an existing bed so it's 8. Below you can see that 2 rails have been added to the same box and the tape wrapped around the spindle is appropriately marked to make certain that I index the spindle at the correct intervals. Notice that the lathe is unplugged. Accidentally turning the lathe on during this operation could ruin everything.



The router is attached to an auxiliary base which will guide it along the rails on either side of the turning while keeping it centered. The little blocks screwed to the top of the rails on each end serve as stops to limit travel of the router.



The next two views show the whole set up in use and flutes partially cut. I'll bring this fixture to the next meeting for "Show and Tell". Maybe some of you will have ideas on how to make improvements to the whole operation.

This same basic set up served me well once with a scratch stock instead of a router, when I was duplicating a fireplace mantel. The original was built in 1820 and had four small columns which were reeded. The copy went into the same house where the original stood. They were in adjacent rooms but it had to look as though it had been there since 1820, just like the original. Using the scratch stock as well as assorted molding planes got the job done.

