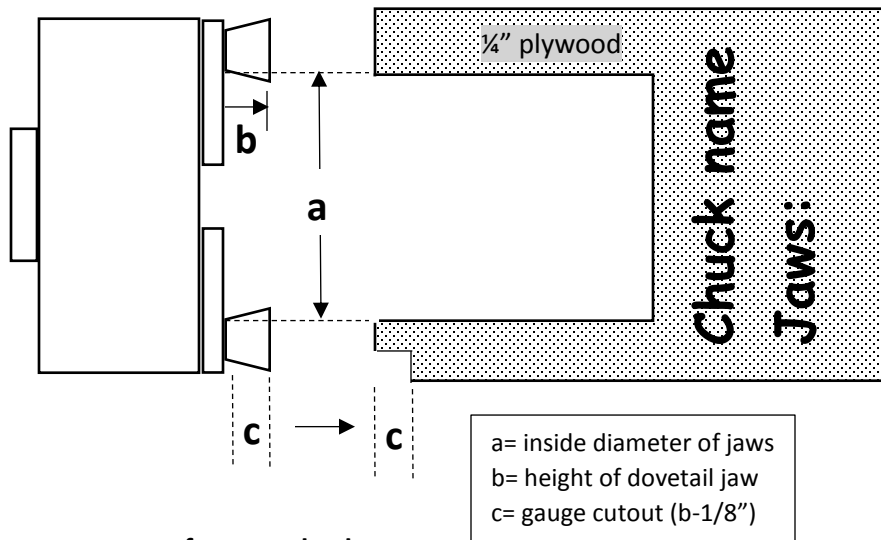


Making a Tenon Gauge and Producing an Accurate Tenon

By: Don Geiger



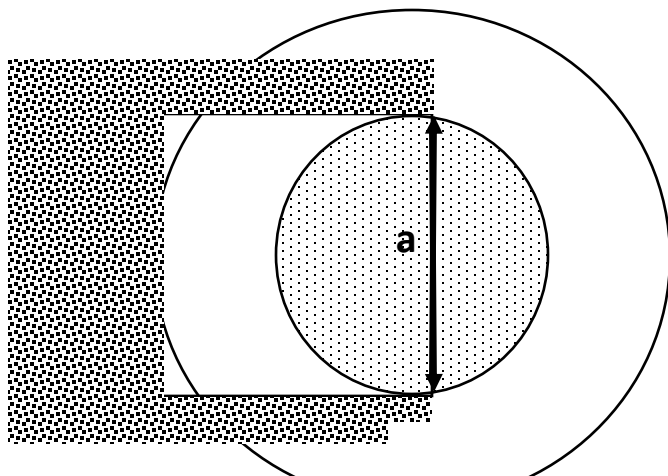
A gauge can be added to this end for marking and testing the ideal diameter and depth required to accommodate expansion dovetail jaws. This doubles the usefulness of the gauge.

Make a tenon gauge for your chuck:

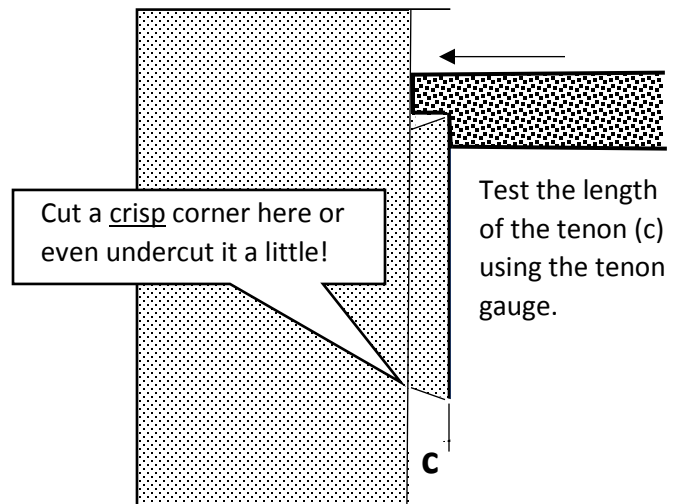
- 1) Jaws need to be positioned within 1/4" from their fully closed position. For a larger tenon- mount larger jaws!
- 2) Make a cut out in 1/4" plywood equivalent to the widest distance between the inside edges of the jaws (a), closest to the base, as shown by the dashed lines.
- 3) To calculate the length of the tenon (c): measure the total depth of the jaws (b) and subtract 1/8" (c = b - 1/8"). This measurement equals the final length of the tenon "c" which ensures the wood does not rest on the lower surfaces of the jaws!!!
Make a cutout equivalent to "c" in the edge of the tenon gauge as shown to use as a gauge.

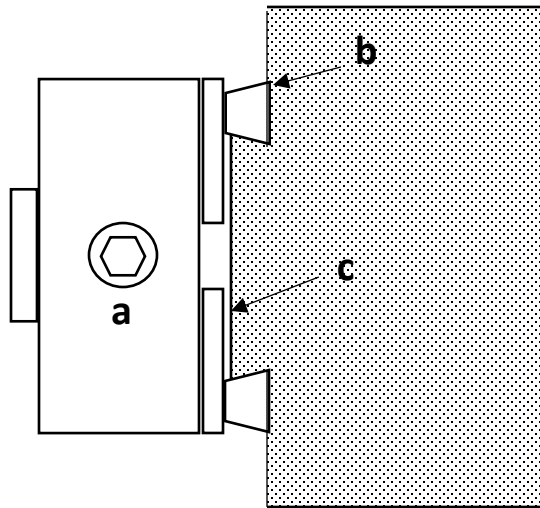
Create a tenon:

- 1) Mount the wood blank between centers and, at the end facing the tail stock, smooth the surface and flatten it using a bowl gouge in the roughing cut position, using the tip of the tool as much as possible.
- 2) Once the surface is smooth and flat, use a tenon gauge and pencil to mark the largest diameter of the tenon (a).
- 3) Reduce the surface outside of the mark to a depth equivalent to "c". Use the cutout "c" in the tenon gauge to test the depth. If you accidentally go too far, adjust the length of the tenon accordingly.
- 4) Use a detail spindle gouge with a convex bevel to cut the profile of the edge of the tenon to match the dovetail shape of your chuck jaws.



Use the tenon gauge to mark and test the diameter of the tenon (a).



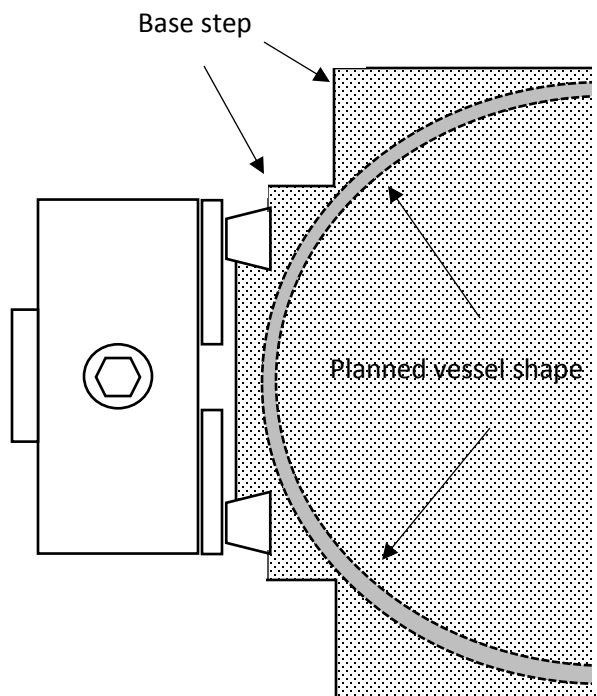


When mounting a wooden blank with a tenon on a chuck:

- 1) Tighten all adjustment points (a) repeatedly!
- 2) Ensure there are no gaps where the blank rests on the ends of the jaws (b).
- 3) Ensure there is a gap between the bottom support surfaces of the jaws and the bottom of the wooden tenon (c).

Increase your design opportunities:

Once the blank is securely fastened to the chuck, I recommend creating a base step, as described below, on the blank before proceeding to turning the blank into a bowl or hollow form.



By creating a base step as shown, the size and shape of your vessel is not dictated by the outside diameter of the chuck jaws.

The curve of the vessel can be extrapolated without interference from the jaws.

The diameter of the foot of the vessel can range from the inside diameter of the chuck jaws all the way to not having a foot at all!

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