

"Glued Up" Table Legs

“Glued Up” Table Legs

- Large square stock is often not available to make table legs
- Even if available, the grain differs greatly on the four sides (edge vs. face grain)
- Jeffery Fritz donated the wood for our new club table, but large square stock for the legs was not available
- Woodsmith (#147) and Wood magazine had articles about making “glued up” table legs
- I used pine for this demonstration because the grain pattern is so pronounced
- I used maple for the stretchers because I had some short pieces in my scrap bin

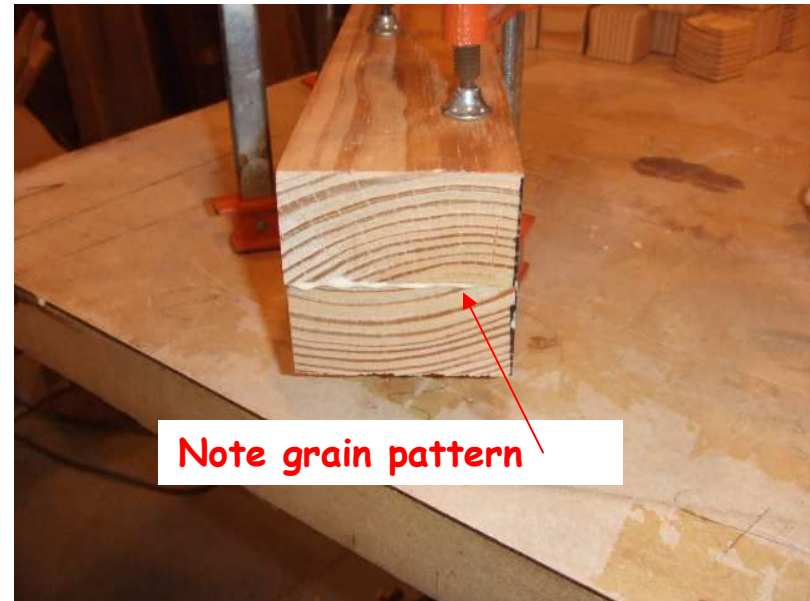
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Stock Selection:

- It works better if you use two boards and the grain is similar on both boards
- Be sure the total thickness of the boards will yield a blank large enough for your leg - more on this in a later slide

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Surface and glue:

- Surface the edge and face of each board and glue them together to form the correct grain pattern.

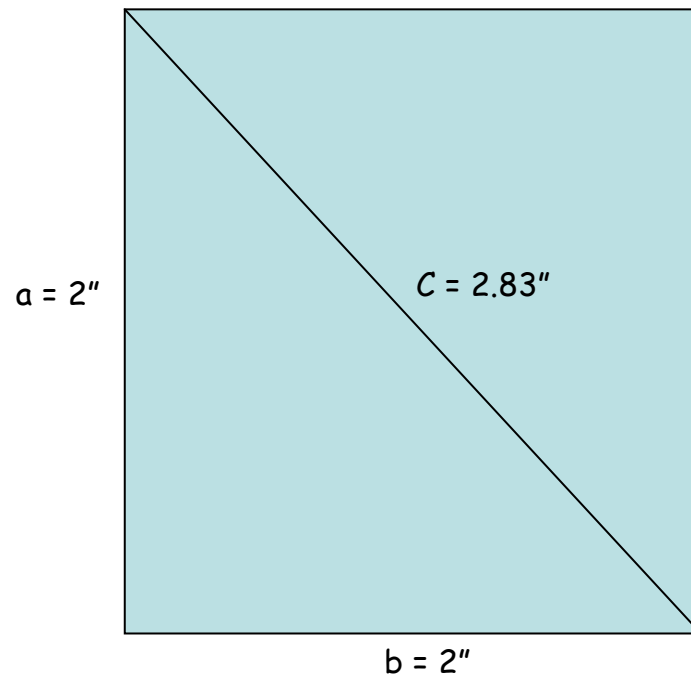
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After gluing:

This is what the blank looks like after gluing. Note the grain patterns are vastly different on the four faces.

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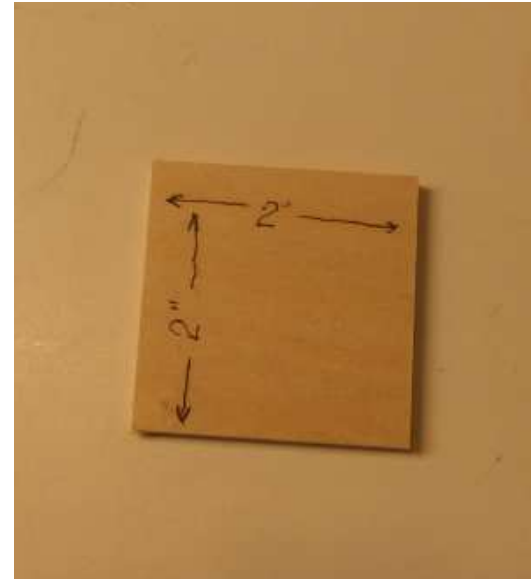
Calculating the blank size:

Assuming you are making a square leg blank (in this case 2"x2"), the calculation is the square root of the sum of the squares of the sides. Example: $(2 \times 2 + 2 \times 2) = 8$ and the square root of 8 is 2.83. So you could possibly make a $2 \frac{3}{4}''$ square leg blank from a 3"x3" blank.

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End of the glued up blank



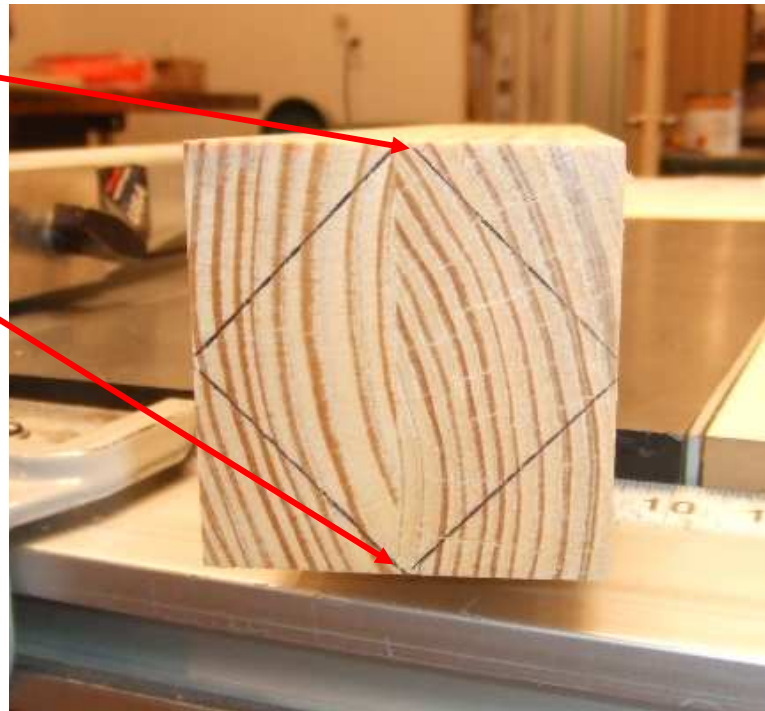
Pattern for the leg (2" x 2")

Preparing the Blank:

Make a pattern for the leg size you want (in this case it's 2" x 2").

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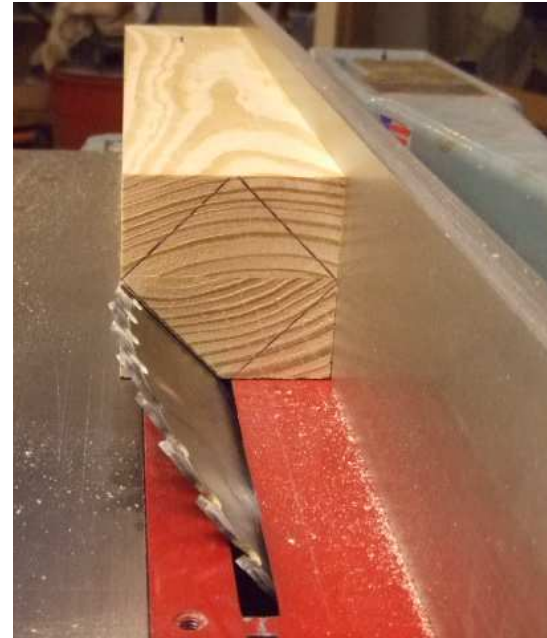
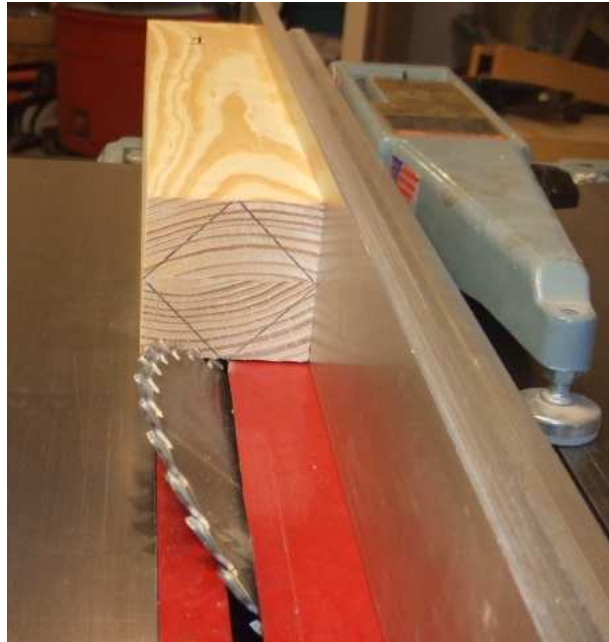
Align the corner of the pattern with the glue line of the blank.



Mark the Blank:

Transfer the pattern to the end of the blank. Be sure to align the corners of the pattern with the glue line.

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Cutting the New Blank:

Set the saw to 45 degrees and line up with the pattern mark. Make a test cut and adjust if necessary. Complete the cut.

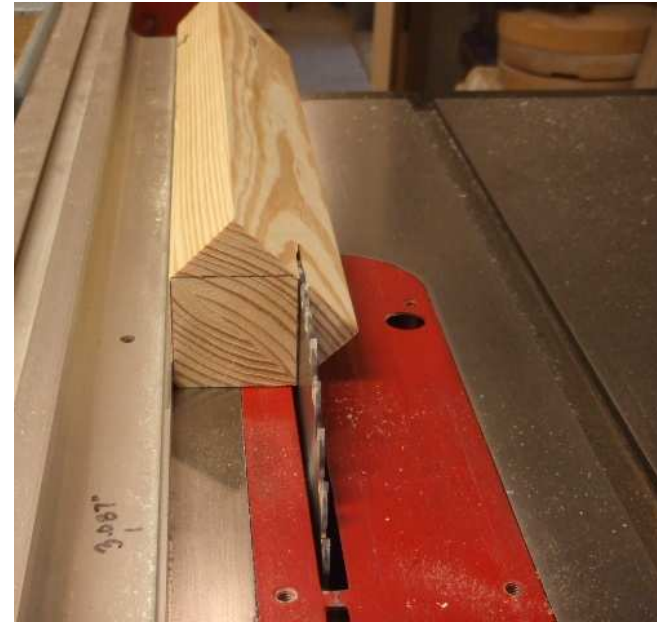
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Cutting the New Blank:

With the saw still at 45 degrees, rotate the blank 90 degrees and line up with the pattern mark. Make a test cut and adjust if necessary. Complete the cut.

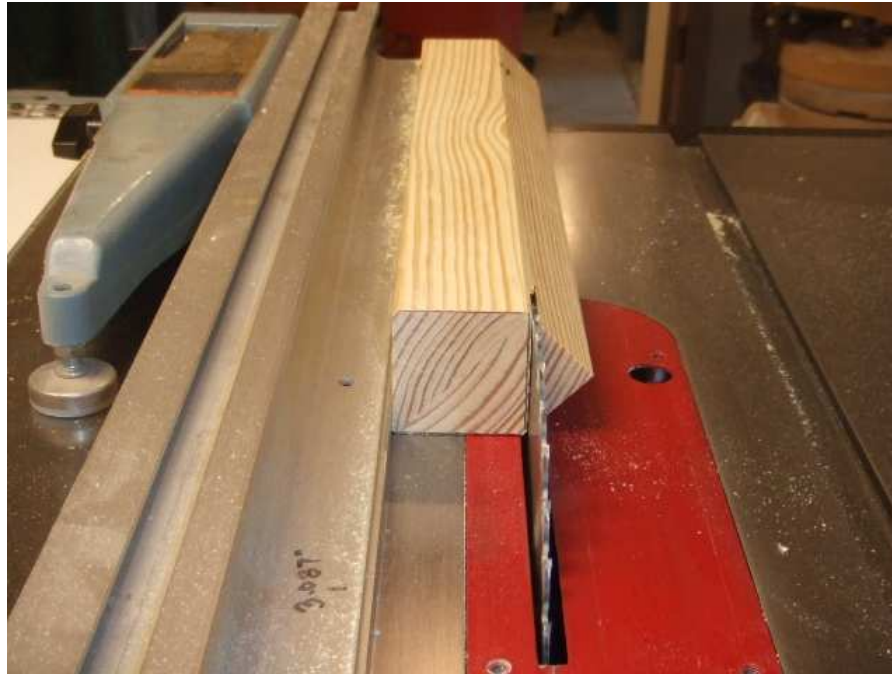
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Cutting the New Blank:

Set the blade to 90 degrees. Line up with the pattern mark, make a test cut and then complete the cut.

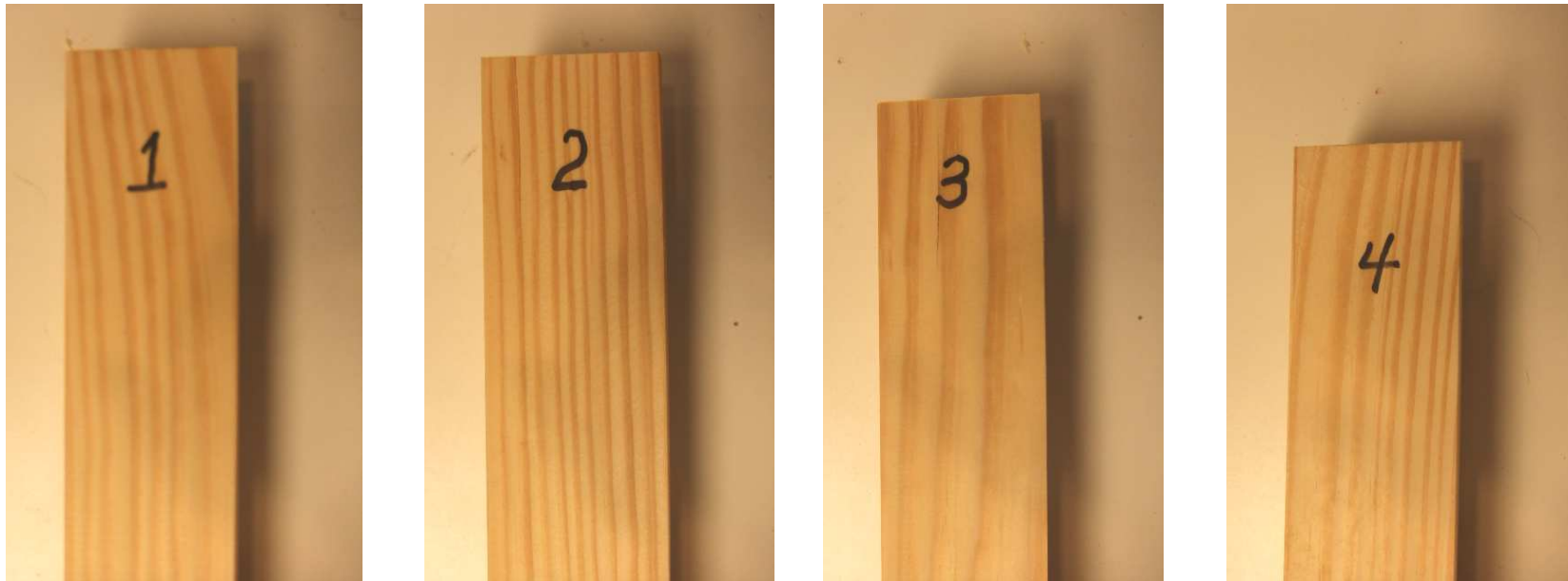
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Cutting the New Blank:

With the saw still at 90 degrees, rotate the blank 90 degrees and line up with the pattern mark. Make a test cut and adjust if necessary. Complete the cut.

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The Completed New Blank:

The result is a new leg blank, 2" x 2" with almost identical grain patterns on all four sides. The glue line is hidden on the corners.

Table Legs Drawbore Mortise & Tenons

Drawbore Mortise & Tenon Joint



After making the regular mortise and tenon joints (make the mortise first, then make the tenons to fit). Drill the holes in the legs (I used $\frac{1}{4}$ " brad point bit) and offset the holes. Do not drill the tenons!

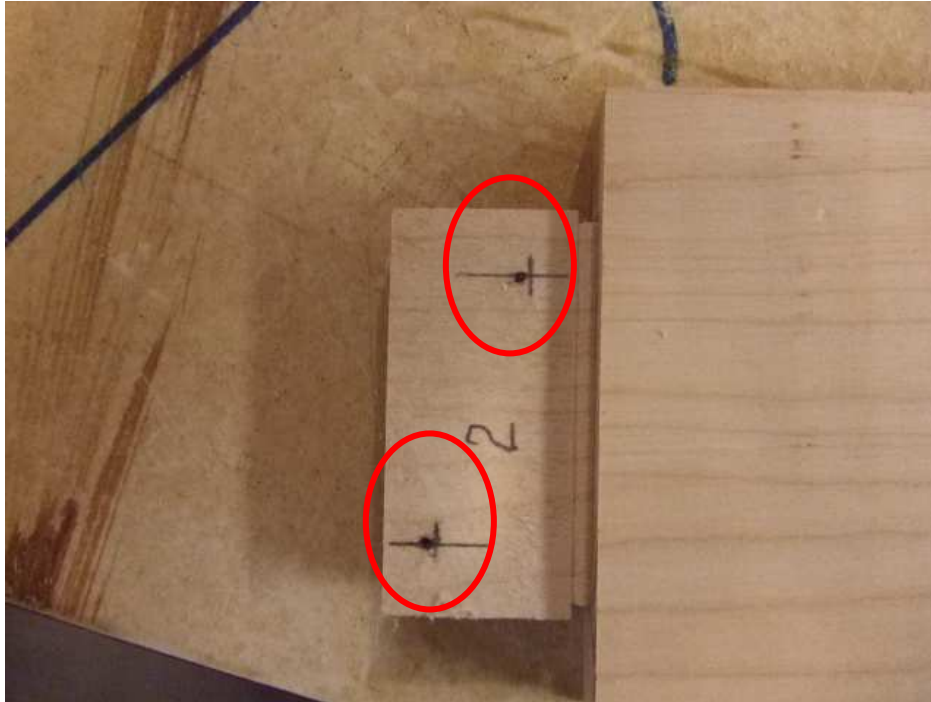
The holes can go all the way through the back of the leg (you can remove the pins after assembly if you do it this way) or they can stop before exiting the back to conceal the pin.

Drawbore Mortise & Tenon Joint



Use the same drill bit to mark the hole locations on the tenon. Use a pencil to darken the marks.

Drawbore Mortise & Tenon Joint



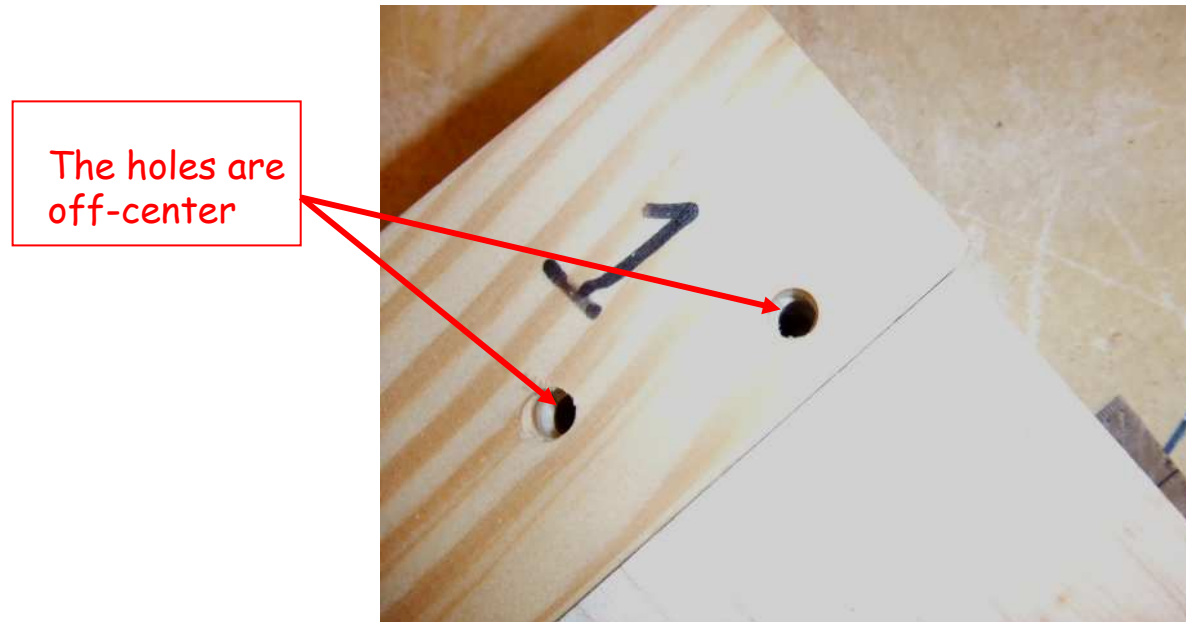
Carefully move the mark $1/32''$ to $1/16''$ closer to the shoulder of the tenon. The $1/32''$ offset works best on hardwoods and $1/16''$ works better on softwoods.

Drawbore Mortise & Tenon Joint



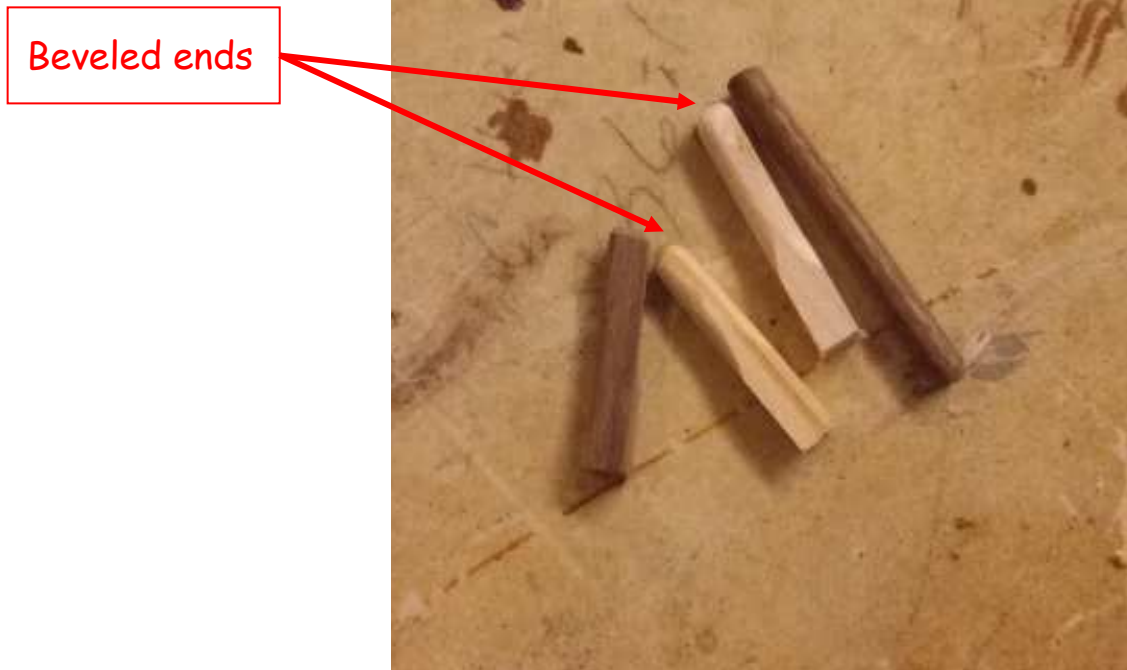
Drill the holes in the tenon using the offset marks and the same drill bit.

Drawbore Mortise & Tenon Joint



When the tenon is assembled into the mortise, the holes will be off-center. When the pins are inserted, it will draw the joint together.

Drawbore Mortise & Tenon Joint



The pins can be as simple as dowels made of the same wood or they can be made from a contrasting wood with a square head. Bevel the end of the pin that will be inserted.

Drawbore Mortise & Tenon Joint



Drive or press the pins into the holes. If the ends are square, they will enlarge the hole to fit the square shape. A pin made from a matching wood will almost disappear after sanding.

Drawbore Mortise & Tenon Joint



Example of a square head pin that's driven flush. You can also use a flush cutting saw or a chisel to trim the top of the pin flush.

The result is a strong joint that can be glued (or not). If you use the drawbore method and glue the joint, you don't need to clamp the joint while the glue dries.

Drawbore Mortise & Tenon Joint

The YouTube video by the Wood Whisperer about Drawbored Mortise & Tenons is at this address:

<https://www.youtube.com/watch?v=rhc12thf2fc>