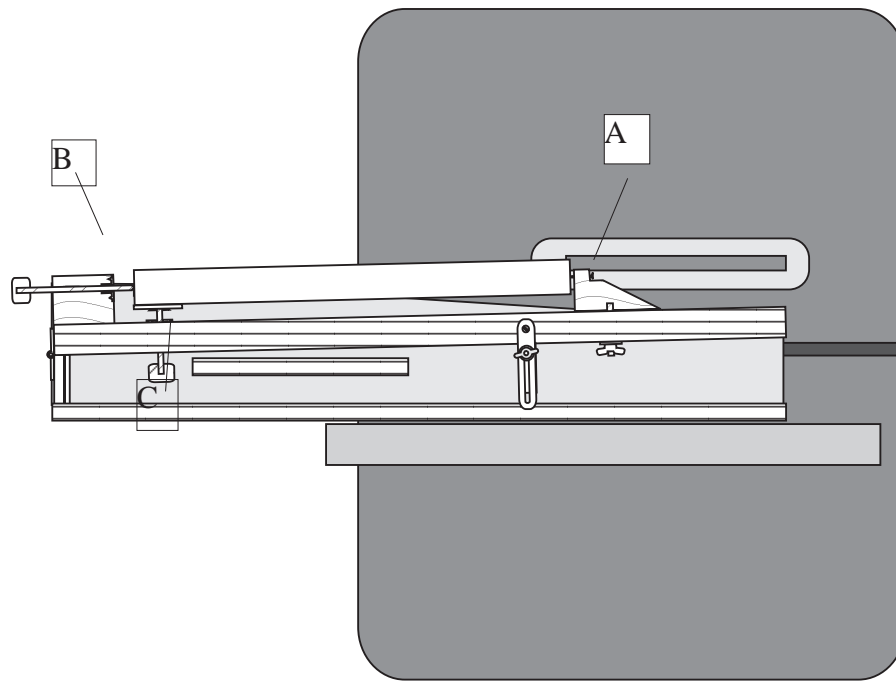


WhippleJig for Tapered Legs on a Table Saw



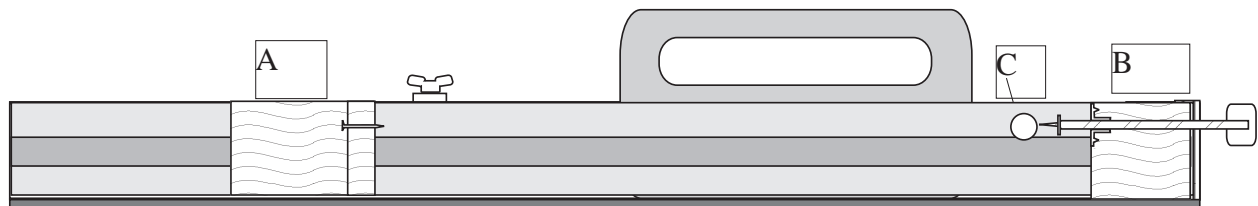
Originally designed for making octagonal tapered legs, this jig has become the only one I use for all tapers.

The main benefit is that it adopts features like head and tail stocks (A & B) with centering pins like a lathe with a side indexing device (C).

My original design is 36" in length and will accommodate up to a 30" maximum length on the leg, down to a minimum of about 14".

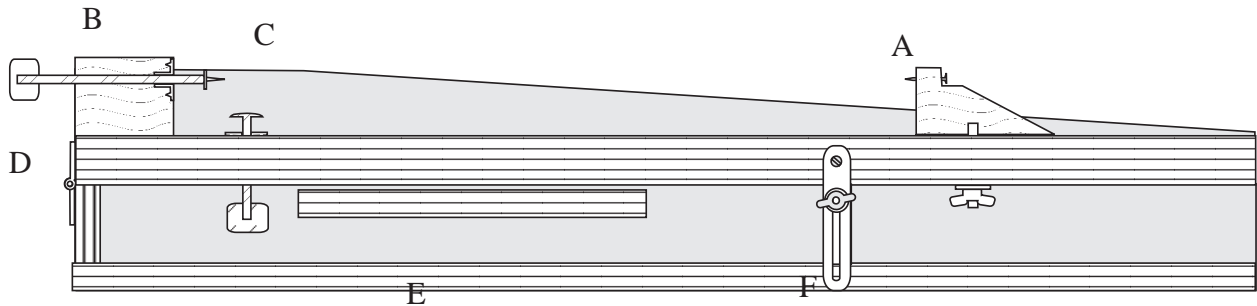
These drawings represent improvements made to my original jig over the years and what it would look like if I made a new one from scratch. All the material, with the exception of the base which is 1/4" masonite, is 3/4" plywood which has been stacked and glued for thickness.

I have expressly omitted dimensions since these would be determined by the users' tablesaw design.



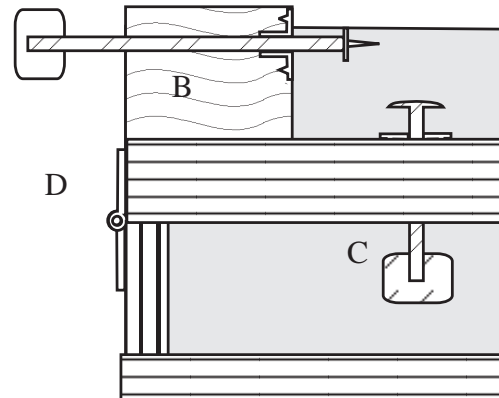
The above illustration shows the support arm with the tail stock (A), head stock (B), and index pin (C). The support arm has a rabbit cut the full length and a series of 1/4" holes drilled through the center of the rabbit (not shown) to allow adjustment of the tail stock (A).

The height setting for the centering pins on the head and tail stocks and the height for the indexing pin (C) must all be exactly the same. This height above the saw table is determined by using 1/8" less than half the maximum cutting height of your table saw (i.e.. if you can raise your blade to 4" then set your pins at 1-7/8").



A. The tail stock slides in the rabbit with a tenon and has a 3/8" threaded rod tapped and epoxied into the base. It is secured with a wingnut and washer. The tail stock pin is a drywall screw with approximately a 1/4" exposure of the point.

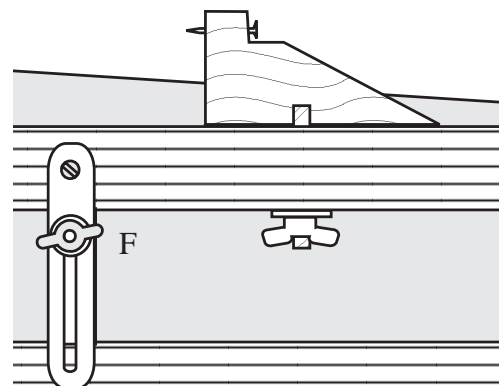
B. The head stock is permanently attached to the swing arm rabbit with a tenon and screws. The pin is also made from 3/8" threaded rod with a point ground on one end and a flat washer epoxied in place to act as a stop. The knob is shop made into which the rod has been threaded and epoxied. A "T" nut has been added for additional strength.



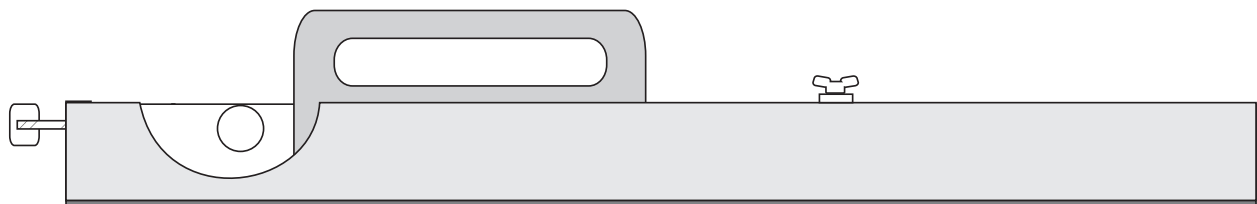
C. The indexing pin goes through the swing arm and is made from a 3/8" bolt with the head ground down and a shop made knob. It is also reinforced with a "T" nut. The indexing pin is used with a spacer or indexing block.

D. The hinge must be very heavy duty and allow zero angular deflection. I had a couple lying around.

E. The back fence is cut away to allow easy access to the indexing pin.



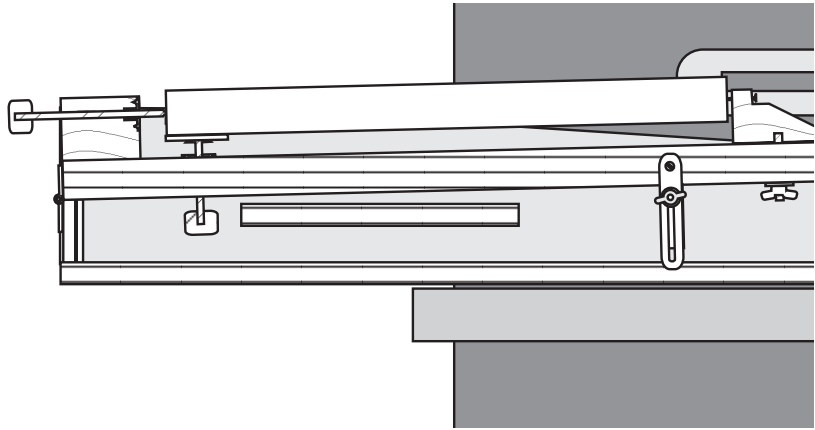
F. The angle adjuster is made from some aluminum scrap which I milled on the router table. The lock is a 1/4" threaded rod, tapped and epoxied into a block and secured with a wing nut.



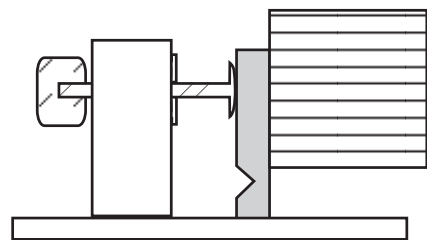
How to use it.

Once you square off your stock for the legs, you will need to mark the centers on both ends just as you would for a turning. I usually poke a hole at each center with an awl.

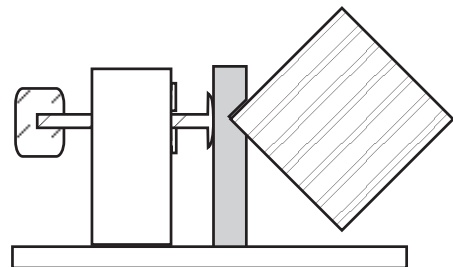
Next, back off the pin in the head stock, set the tail stock length, put the workpiece in place, tighten the head stock pin until both pins are firmly set. This means that the piece is in contact with both the face of the tail stock and the washer on the head stock pin.



When the workpiece is firmly mounted, insert the indexing block and tighten up the indexing pin. Now you are ready to set your angle, using the angle adjustment on the jig and the distance from the blade using the fence on your saw table. On shorter lengths make certain the end of the swing bar does not interfere with the saw blade. I would recommend making up a few test pieces to check the taper before cutting into the actual workpiece.



After each cut, ease off on the index pin, remove the index block, and rotate the piece for the next cut. You will note in the drawing at left that I have a notch in my indexing block. This allows you to make octagonal tapers.



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