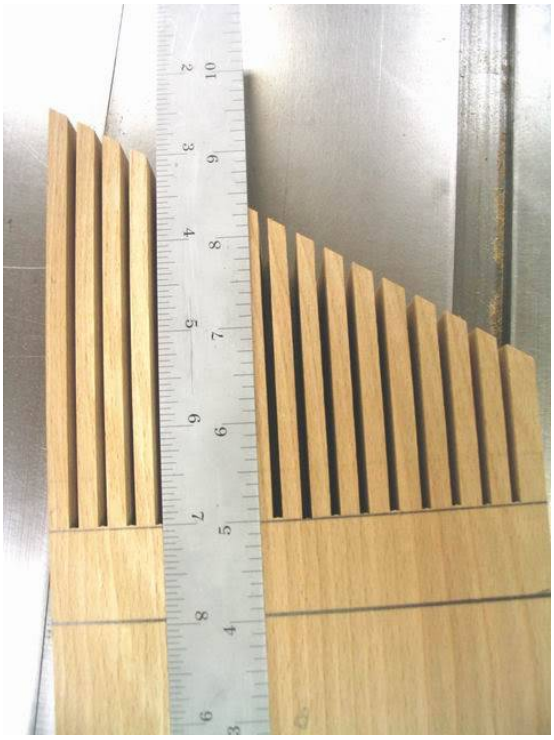
Feather Boards

The feather board below is typical of what you'll find in your local woodworking store, it does the job but we can improve on it greatly.

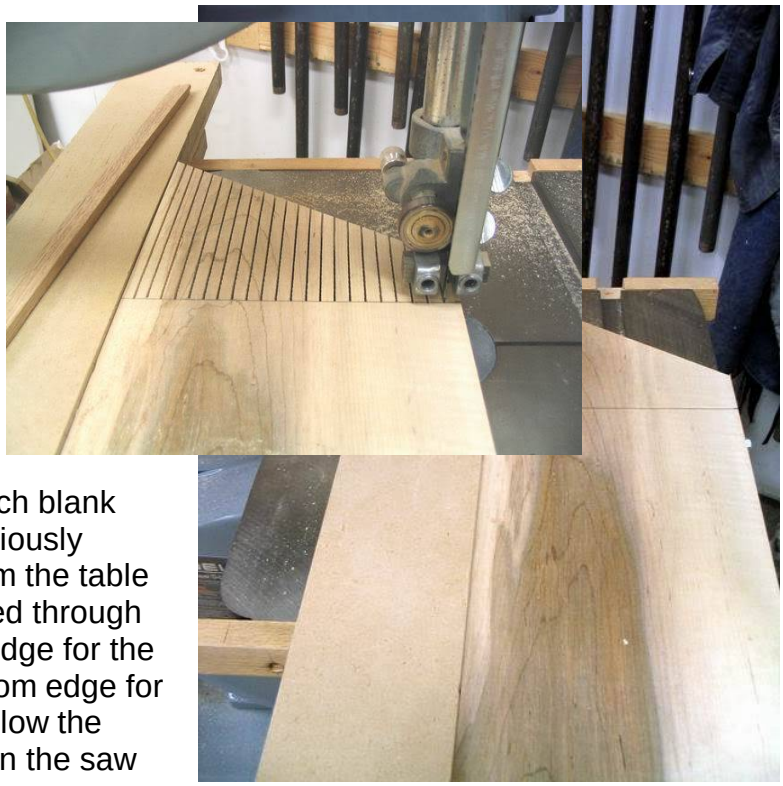
First, I start with a pair of "blanks" that will eventually be made into feather boards. The first blank is a piece of Maple, ¾"X 7 ½"X 28", I'll use this blank to cut a feather board on the band saw. The second blank is a piece of Beech 1 ½"X 5 ½"X 22" and I'll use the table saw method to cut the fingers for this one.

Start by cutting the ends of the blanks at a **30 degree** angle on the table saw or the miter saw.



A square line is drawn across the blanks 1 ½" in from the shortest leg of the blank. This tells where to stop the saw blade on either the band saw or the table saw. This line indicates the length of the "fingers" of the feather board. The next thing I need is a gauge stick, the one I'm using is a ¾"X 5/16"X 24" and can be made from any scrap lying around the shop. Using this thickness of gauge stick will create a 3/16" thick finger with the thin kerf saw blade that's in the saw. When used on the band saw, this gauge stick will create a ¼" finger. Different thicknesses of this gauge stick will produce different thicknesses of fingers.

The Bandsaw Method



The band saw method of cutting the fingers is almost the same as the table saw method except I prefer to start with the longest finger first. The rest is pretty much straight forward and the following photos show that.
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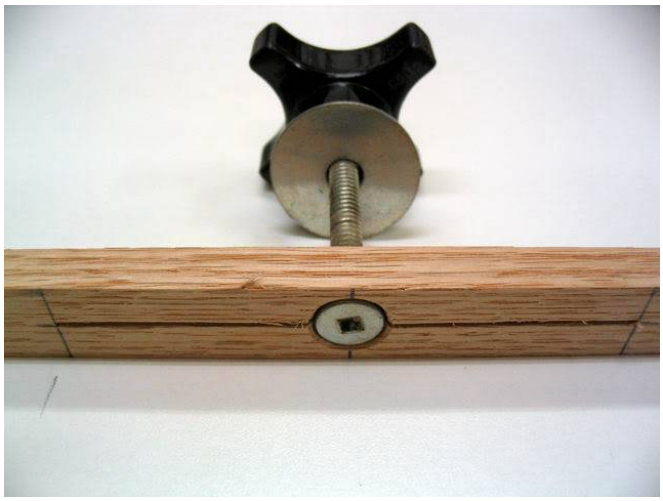
Mark both the blanks with a straight line across the width, the Maple blank needs a line ¾" from the base of the fingers and the Beech blank requires a line ¾" past the line previously marked, indicating the undercut from the table saw blade. A ¼"X 4" groove is routed through both blanks, 2 ½" from the bottom edge for the Maple blank and 1 ¼" from the bottom edge for the Beech blank. This groove will allow the completed feather board to adjust on the saw by means of a ¼"X20 machine screw, more on that later.

To secure the feather board in the miter slot of the table saw, a hardwood runner must be made. Here I've used Oak to produce the 12" hardwood runner that's been milled to a thickness of 3/8" and a width of ¾", a perfect fit for the table saw's miter slot. The runner is drilled with a ¼" brad point bit in the center of the runner, marked with a line through the center 2" on either side of the center hole and counter sunk with an appropriate bit. A narrow jig saw blade is then used to cut the line through the runner to a length of 4". The accompanying photos show the stages that the runner goes through, the top runner in the photo being the first step and followed by the next and so on.

The following photo show what the completed hardwood runner should look like. When the large **jig nut** is tightened down on the feather board, the head of the ¼”X 20 machine screw is forced up into the runner spreading the runner against the sides of the miter slot, locking it in place.



Looking at the completed feather board you can see that not only does it have the same adjustability as the store bought feather board but the shop made feather board has the ability to be clamped to the saw, something missing in the store bought one. Two points of fixation are a lot more desirable than the single point that the store bought feather board offers.