

# FRET SAW MACHINE DESIGN

*by Frank Harris*

All the homemade machine mounted fret saws that I have seen and also the designs shown in marquetry manuals have a throat-piece inserted from the front. This requires you to cut into the throat-piece the first time you use it and perhaps to have two or three throat-pieces if you wish to change the angle or size of the blade. Finally the throat-piece will eventually wear to the point you start losing tiny pieces through the hole and you have to make a new one.

I believe there is a better way to design the throat-piece and it is very simple and could easily be done as a modification.

Instead of inserting it from the front, cut your dovetail groove from side to side right across the table and use two square-ended throat-pieces inserted one from each side. Where they meet is a slot no wider than the thickness of the blade and you didn't have to cut it. You don't need different throat-pieces for different angles or blades and when the inserts begin to wear just trim the ends. You will never again lose any small pieces. In order to have the slot no wider than the width of the blade when you are bevel cutting you must, of course, trim the end of one of the inserts to a slightly greater angle than you might use on the saw.

You might also consider changing the top surface of your table from wood to polyethylene. I did and am no longer bothered by the masking tape (used to hold the veneers together) sticking to the table.

You might also try the following suggestions:

1. Melamine coated particle board is probably as good as the polyethylene and considerably cheaper.
2. Round over the edges of the table surface. This helps to prevent your work from snagging on the edge as you rotate in the sawing process.
3. Circles of various diameters can be cut by mounting a small diameter pin in either of the throat-pieces for use as a pivot point.