Miter Jack

By Neil Searle

At the September meeting David Chandler bought along a Miter Jack for the "An all wooden Tool" in the "Tool of the evening" category. David referred to the Miter Jack as Donkey's Ear. The most basic form of donkey's ear is simply a fence/stop fixed at the end of a board for the work-piece to rest against. Then they become as complicated as you want to make them.

The Miter Jack is a fixture that is a combination of a vise and shooting board, and is used to precisely trim work pieces to 90, 45 and 22.5 degrees. The 22.5 degree option is only on some miter jacks as there is a small secondary jaw that travels along with the main jaw and this smaller jaw is otherwise recessed and flush with the main jaw. Being retained by a small hook when not being used.

The work piece is clamped in the vise jaws and the large jaws become the reference surfaces for either a plane or chisel. The miter jack can be mounted with either side facing up; one side for square cuts and the other for miter cuts. The large mounting bracket will accept a holdfast in both positions, and when cutting miters, also needs to be pinched between bench dogs of a workbench. The advantage of the miter jack when shooting is that a conventional plane can be used in the normal fashion. This makes it easier to plane and to monitor progress. It is also easy to tweak angles by shifting the work piece in the jaws. It will stay put regardless of whether it is sitting flat on the ramps. Planing can also be pre-formed in any direction, a big plus if working with molding to avoid fibers tearing out.

Fig.1. Sold by Tool Merchants "Buck, Euston Road, London" (stamped on one end) George Henry Buck bought the business from Mr R. Nelson in 1852 and so this Miter Jack may have been sold before George Ryan joined the firm in 1870.

My example in Fig.1. is designed to be held by a bench vice, therefore working a job is done on the 45 degree angle. On occassion, planing down on an angle is sometimes preferred. The blade on a mitre plane (and most others) is not full width. So, it will ride on the 45° jacks, and if you keep the mouth and

iron of your plane cutting just the stock in the miter jack/vise, you won't trim away the jig, just the piece of stock you're trueing.

The user should stop planning when the work piece is still slightly proud of the jaws by a shaving or so. Another technique that is safer is to use a wide, long chisel and pare flush to the jaws after getting close with a plane. By keeping the chisel flat against the jaws, there is little risk of cutting into them.

Fig.2. A different method of holding the Miter Jack by using a hold fast. However, I don't think this method would withstand the rotational forces encountered in use. Early Miter Jacks incorporated wooden screws and handles.

The Miter Jack in Fig.2. made of beech was made by the La Forge Royale company, run by two men, a A Mr. Lemainque, and later, Mr. Feron.

Fig.3. A miter jack saw, a tool meant to be used in conjunction with the miter jack vise.

The saw are usually around 14” long and double sided, with one side having a shallow cutting depth of 1/2”, and the other side cutting 1 1/2” deep. For tenon shoulders, being shallow in most cases, the 1/2” depth can be used for maximum blade rigidity. The saw blade would have set to one side only and often a little wax was used to help with the sawing process.

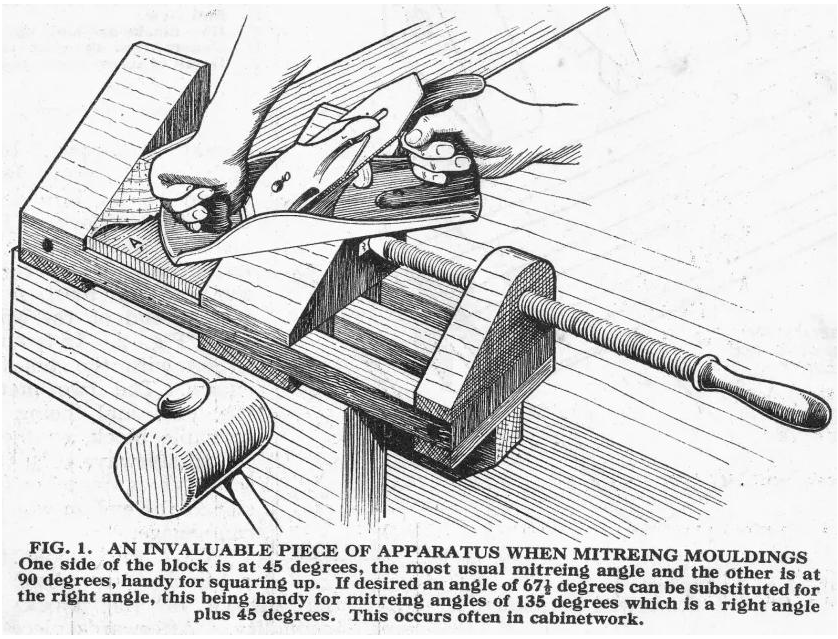

FIG. 1. AN INVALUABLE PIECE OF APPARATUS WHEN MITREING MOULDINGS
One side of the block is at 45 degrees, the most usual mitreing angle and the other is at 90 degrees, handy for squaring up. If desired an angle of 67½ degrees can be substituted for the right angle, this being handy for mitreing angles of 135 degrees which is a right angle plus 45 degrees. This occurs often in cabinetwork.

Fig.4. American advert showing “La Forge Royale Miter Jack” This also shows the direction of the plane when planning. Miter planes can be used for a wide variety of chores , not just for trimming the short

grain of a miter. The block-like shape of the tool and its weight, allows it to be used on a Miter Jack with ease.

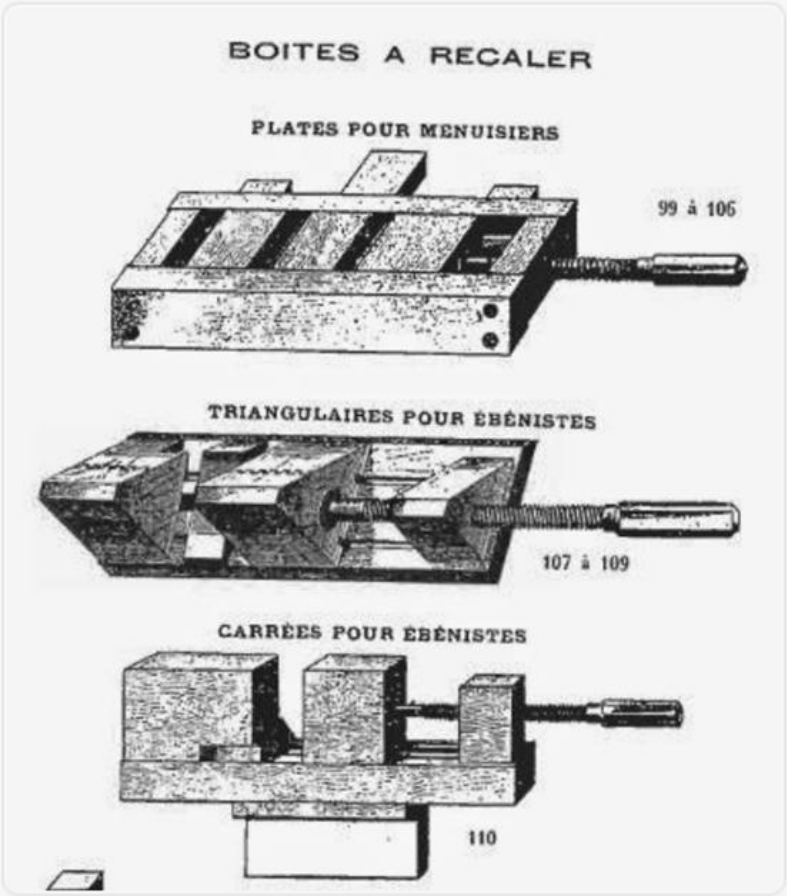

Fig.5. A La Forge Royale, Paris. From their 1927 catalogue headed Shooting Jacks, from the top, “Flat (Jacks) for joiners, Miter Jacks for cabinet makers and square (Jacks) for cabinet makers.

Fig.6. The majority of Miter Jacks found today are made by Forge Royale Paris.

Christopher Gabriel, in 1791 was manufacturing mitre planes as part of his regular inventory. And mitre planes appeared in tool catalogs for about 100 years, starting in 1826. Is the term Mitre plane synonymous with the need for a low angle plane to use on a Miter Jack? I have found no earlier miter jacks than the one shown made by Forge Royale, so possibly "Mitre Plane" came to pass with the use of miter shooting boards and the need of a low angle plane.. Many people ask where the name mitre plane originated and it seems it was continental Europe although only in Britain was the spelling, Mitre and not Miter when referring to a Mitre plane. While on the subject of Mitre planes , this is the only plane I know of that the iron is installed with the bevel up.

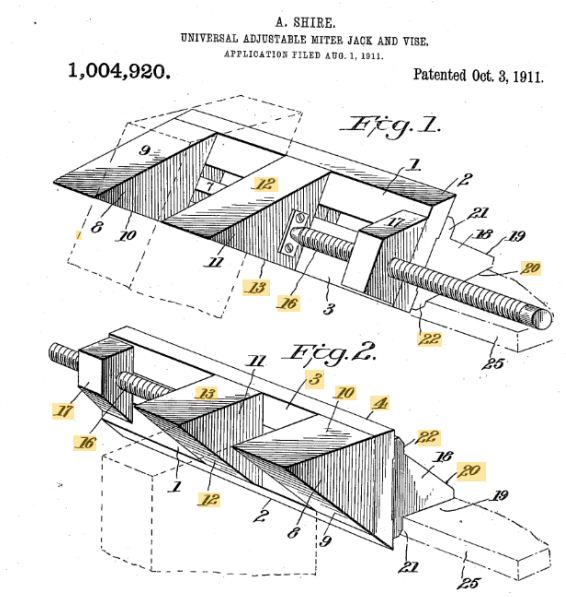

Fig.7. The patent drawing of Anton Shires "The Adjustable Miter Jack and Vice" 1911.

To all whom it may concern:

Be it known that I, ANTON SHIRE, a subject of the Czar of Russia, but having declared my intention of becoming a citizen of the United States, residing at Harriman, in the county of Orange and State of New York, have invented a certain new and useful Improvement in Universal Adjustable Miter -Jacks and Vises, of which the following is a full, clear, and exact description.

Ref: Fine Woodworking. Benchcrafted Blog. Pinterest. Forge Royale Catalogue. USPTO.