Holding small parts secure

PHOTOGRAPHS BY MICHAEL T COLLINS

The humble bench hook

Michael T Collins works his way through cutting a simple, but effective bench hook

In the 1970s I attended what was then called a 'building school' and learned all the finer points of woodworking and hand tool usage. To this day, the most useful and most used tool in my toolbox isn't what you might expect. In fact, it's more of an accessory than a tool. The bench hook. An implement that has remained unchanged in its design for hundreds of years. No workbench would be complete without at least one bench hook, which is essentially a stop that is held perpendicular to the bench's length. The purpose of a bench hook is to provide a surface against which a work piece can be held firmly without the need of a vice or other mechanical means. The simple three-piece construction helps guide the saw, keeping the cuts straight and true. Many of my projects have small parts and trying to cut these on a table or mitre saw would be asking for trouble, which is why this accessory has been a favourite since my days at building school.

My go-to accessory

Cut list

One board – 180 x 305 x 25mm
One block – 150 x 38 x 25mm
One block – 180 x 38 x 16mm
Note: use a hard wood – in this article I am using hard maple (*Acer saccharum*)

Things you will need

- Block plane
- Brace and 3mm twist bit
- Try or combination square
- Cross cut saw

MAKING THE BENCH HOOK

Construction

Early bench hooks were made from a single piece of wood, with more modern constructions composed of three pieces of wood – mainly because of the simplicity of construction.

The development and design of the bench hook has evolved over the last several centuries and so, for the modern hand tool woodworker, there is little to change in the basic design and functionality of the accessory. However, when I make bench hooks I make two small changes to the traditional design. The first is to add a 3mm chamfer to the bottom edge of the shorter stop, so that sawdust has a place to go preventing it from interfering with the positioning of the work piece. The second change is to the stop on the other side, I make this a full width stop as this allows me to use the hook as a shooting board when squaring ends. We'll look at this in more detail later on. Cut all the pieces to their final dimension, making sure that the ends are square.

In a traditional bench hook the stops are about 25mm shorter than the width of the board and depending on whether you are left or right handed you'll want to off-set the stops towards your non-dominant hand. The purpose of this is to allow a cut to be made without marking the bench surface. Use a block plane to add a chamfer to the short stop's lower front edge and ease all other edges with the exception of the right hand end of the full width stop and the right-hand edge of the board. Since this is going to be used for shooting pieces we want full contact

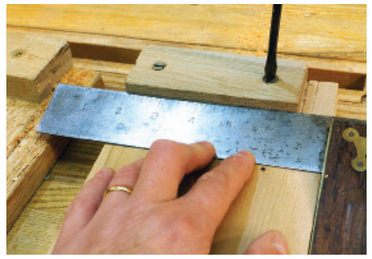
A 200mm chamfer

Cutting the parts to size

The three components

between the work piece and the bench hook. Drill two holes through each of the blocks that is slightly larger than the screw used to secure it – we want the blocks to be pulled onto the board tightly. Use a square to align the blocks and drill pilot holes into the board. Then screw the stops in place, this way the base can be replaced while keeping the stops. If you want to make these stops more permanent you can go ahead and glue them.

Easing the edges and adding a chamfer



Squaring the stops

IN USE

Sawing on a bench hook

Planing small pieces

Using the bench hook for shooting ends

When used for sawing, the bench hook is positioned with the lower hook against the edge of the bench. The work piece is held firm against the stop between the thumb and fingers of the non-dominant hand. After all the necessary scribing is done, it is then a simple matter of sawing the joint. Typically you will want to use a cross cut backsaw when working with a bench hook as most of the time you will be cutting across the grain.

As a shooting board

Planing end grain is also easily done using a bench hook. The side with the full width stop is used to position the work piece so that it protrudes a fraction of an inch beyond the edge and with a heavy plane (I use a jack plane with a finely honed iron).

Planing small parts

The shorter stop on the bench hook makes a great surface to plane small parts against. Most of my stock is 19mm thick, so I make this stop 16mm. Using a downward forward pressure the piece will stay in place as you plane.

Holding small parts secure

If working with long boards you will want to make several bench hooks and support the free end of your project with a single narrow bench hook. Take care to make these using the exact same dimensions as the larger bench hooks. There is no need to apply a finish to the bench hook. I use my bench hooks for just about any task where a small piece of work needs to be held, cut, chiseled or drilled. For example, chamfering ends of table legs. Bench hooks will make your hand tool work safer, more accurate and your rate of production will vastly improve. My trusty bench hook has undergone a lot of abuse over the years! But as they are so easy to make they are easily replaced. If you have never used a bench hook, make one and try it out for a few days. You'll wonder how you ever managed without it! ■

Variation on a theme

By adding a 45° saw kerf you have made yourself a small but effective mitre block. Simply make the stops as per the instructions above, but cut it at 45°. Then secure the two parts with two screws either side of the kerf.

Right: Creating a mitre box