## Drop-leaf oak kitchen table

By Michael T Collins

Table: from the Latin 'tabula' - a board or flat surface

$$
\begin{aligned}
& \text { hen I was growing up, } \\
& \text { we always ate our meals } \\
& \text { at the Ercol trestle table. } \\
& \text { It was where the family gathered, }
\end{aligned}
$$ conversations were had and the hot topic of the day discussed, stories and jokes were told, meals were eaten, and my mother could keep an eye on us while we were doing our homework. Clothes were made on that table, and over Everything revolved around that kitchen table.

The history of the kitchen table can e traced back millennia - the ancient Egyptians first used them, although hey were probably little more than a raised stone platform. By the Middle Ages, the easily transportable trestle table was used.

I was commissioned recently to make a kitchen table/island that would be an extension to a kitchen counter. The only criteria: it had to be the same height and thickness as the existing counter -508 mm wide and 1700 mm long, with two offset drawers, a lower shelf and it needed a drop leaf. Other than that I had free rein to make this ow and out of whatever I wanted.

## Table top

1 I had one large board about 13600 mm long that was perfect manageable lengths, about 1270 mm long and almost 80 mm thick, and

proceeded to re-saw the board and then plane the sawn surfaces flat.There were a few areas where the saw marks still showed, but this would be on the underside
$2^{\text {The boards were jointed with }}$ 2 dominoes used for alignment and clamped. Note: Always apply clamps on both sides to keep wide boards flat. Be sure to keep the metal clear of the glue or you will have to deal with black marks caused by the reaction of the water, iron and tannins in the oak. Once the glue was dry any excess glue was removed with a card scraper. At this point I noticed there were two checks (cracks) in the boards that I wanted to secure with an inlaid piece of contrasting wood.
3 First, a 20 mm thick dovetail key (bow tie) was made out of walnut and secured to the board in the desired couple of dabs of CA adhesive.
$4^{\text {Then the edges were traced with a }}$ 4 marking knife.
$5^{\text {It was then a matter of chopping }}$ out the waste and cleaning up the recess with a router plane. Adding a key chamfer on the lower edge of the key was then glued into place.
$\sigma_{\text {tight as it edges was not quite as }}^{\text {One the }}$ Otight as it should be so, with a ballpeen hammer, I was able to 'squash' the wood fibres and close the gap. The same repair method was used on a smaller check in the drop-leaf board and a knot hole filled with resin.


The legs
71 had a hard time getting 90 mm square stock for the legs, so to give the ilusion of solit oak legs, some maple, poplar and other boards were
laminated together You can see from the image that the legs can be made fro ieces of varying sizes Then a custom 10 mm ripped oak veneer was applied to the outside. By using this method, the seams were almost invisible

8 Once the glue had dried the legs $\mathrm{O}_{\text {were planed to }} 90 \mathrm{~mm}$ square and cut to final length.
The rails
The rails were all planed on one face and an edge.
To create a seamless flow of grain through the upper front drawer rail, 20 mm was ripped off the top and he drawers out and glued the parts he together The drawer fit would e fine-tuned later. This method means that the front rail would be pproximately 6 mm less than the other rails The other rails were all planed to final dimension. All layout measurements were taken from the ace side. This way any errors would be to the back or inside.
$10_{\text {measurements from the actual }}^{1 \text { am a firm believer in taking }}$ measurements from the actual pices, so, I mark the locations of the tenon shoulders on all the rails. (The otal length of the rails was the distanc between the legs plus 100 mm for the wo 50 mm tenons.)

11 Once the shoulders were 1 scribed, the mortise gauge wa tol entred on the rails.

Orienting the legs
12 It's always nice to show your s no different. I imagined the
location of the table in the kitchen and positioned the legs to present he best faces on first encountering he table. Once I had the orientation, the legs were held together and a cabinetmaker's triangle used to fix the eg positions with the V-point of the triangle facing the viewer.

13 Now they were in the correct osition, the location of all the

mortises was marked with a pencil. Over the years I have found this to be a crucial step and one that will avoid having to deal with mortises chopped in the wrong sides. To create the 3 mm reveal, I moved the mortise gauge fence 3 mm farther away from the spur closest to the fence. While it is relatively easy to get legs flush with the rails, if there is any errors a reveal hides this. Y gauged the lengh of the mortises -20 mm down from the top of

each leg, 90 mm long. The lower rails were 70 mm up from the bottom and 50 mm long. All the tenons in this table will be pegged (known as drawboring).

## Chopping the mortises

 14 first the mortises were chopped 1 first. I started approximately 2 mm from one end and, with the bevel facing the direction of travel, chopped out the waste. Once getting to the endit was 'about face' and I walked the
chisel back - I marked the required depth on the chisel.

## The tenons

15 Next the tenons were cut, waste side of the gauge lines first then the cheeks.

16 I used a shoulder plane to tweak
$17_{\text {and all the mating mortises }}^{\text {The tenons were }}$ 1 and all the mating mortises and tenons labelled.

18 fited and clamped firmly toge 18 fited and clamped firmly together - this allowed me to see any issues. I had a couple of shoulders that were not seating just right. A simple trick is to kerf in the shoulder on the inside. This way when it is pegged it will create

## The base

$19^{\text {The base was }}$ then disassembled 1 and a small chamfer planed on follo visible edges of the legs and rails. followed this by sanding all parts with 180,220 and 320 grit, especially the urfaces that would be harder to get to once the base was assembled. Note: Red oak is a very porous-grained wood and the finer grit sanding helps prevent the oak blotching when stain is applied.

## Drawboring

20 was determined and, using a 9 mm brad point bit, holes were drilled hrough the mortises. I wes were drilled through the mortises. I used a piece
of scrap wood sitting in the mortise to stop tear-out.

21 Once all the holes were drilled 2 - the table was dry-fitted once mark the location on the tenons.

## $22^{\text {The holes on the tenons }}$ were offset 1 mm closer to the

 oulder. When the peg is driven hrough this offset, the joint would get pulled tighter together.
## Glue-up

$3^{\text {The short rails and legs were }}$ 2 glued together with plenty of glue in the mortises and the tenons. There was no need to add glue to the shoulders as these are very small and end grain to long grain does not have good holding power.

$24 \begin{aligned} & \text { I made my own pegs using a } \\ & \text { dowel plate You can se the }\end{aligned}$ 24 dowel plate. You can see the full method for creating pegs on m
website and Instagram feed website and Instagram feed
@ sawdustandwoodchips.

25 I tapered the pegs, drove them clamped and peened them joints were clamped and peened them. It is easy
to tell if they 'bottom out' because of the change in note as you drive them in. Once the ends were assembled, it was time to glue the long rails into place. But first I had to install drawer runners.
The drawer runners
$26^{\text {For the drawers' runners three }}$ 2 pieces of wood were dominoed into the lower edge of the top rails. An additional piece of wood was secured in the top centre. Once the three unners were installed, i was then able to glue and peg the entire top assembly

## The drawers

27 For the drawer construction I - chose a very simple lap joint. This joint can be seen in many examples of old utilitarian kitchen furniture.

28 For the base of each drawer I used a piece of old 6 mm poplar p from the bottom. The back of the drawer rests on this ply and is held in place with nails.
29 The sides of the drawers were 2 planed to give a two-business card ( 1 mm ) gap on each side

30 once the fit was perfect, I drilled ails to provide additional strength nails to provide additional strength. rail. These were sized to allow the drawers to close flush with the front

31 The glides for the drawers were into place, leaving about 1 mm side to side movement.

Lower rail treatment 32 The lower rails needed to support a shelf, so two ledges ere screwed on to the back of each lower rail, creating a 10 mm ledge. As you can see from the image, at this point I had already given the base a coat of stain.

$33^{\text {i re-sawed some offcuts to } 10 \mathrm{~mm}}$ thick and added a shiplap to each edge. These were positioned on will allow the boards to move with the seasons but not show any through gaps.

## Finishing the table top

 34 With the base complete, it was 34 time to size the top. The top was ripped to 508 mm wide and cut to 1170 mm long on the tablesaw crosscut sled. The drop-leaf section was ripped to 254 mm . The top was sanded with 180 grit then water applied to aise the grain This was followed with 220 and 320 grit paper and the end grain with 600. Any lower areas where he sandpaper did not reach I used a card scraper and repeated the sanding. A small chamfer was planed on all edges.35 After many sample stains, the chent settled on a red oak oil based stain. The surface was flooded before wiping off the excess. With oak, is important to go back over with a dry cloth as the pores tend to weep a little. I applied the same finish to the base and left it to dry overnight.

36 whole table a coat of wipe on satin polyure a coat of wipeto soak into the wood, then wiped off the excess. When dry the surface was scuffed with 320 sandpaper and applied another coat. This was ollowed by one further coat which I applied with 600 grit sand paper. This created a very smooth surface to whic added four additional, thin coats of polyurethane. The legs had only two dditional coats.

Securing the top to the base 37 A piano hinge was used to hold pring-loaded drop leaf supports wer fitted.
$38^{1}$ used figure-of-eight table top 30 fasteners to secure the table to the base, which allows the top to move with he seasons. The top was permanently ecured to the top of the legs at the hinge side with pocket screws
Like my family's old kitchen table, I like to think this one will be a similar fixture for a modern family - a centre for the home to congregate around.


