

Dream table



PHOTOGRAPHS BY GEOFFREY ROWE

Geoffrey Rowe takes on the tricky challenge of making an extended glass-topped dining table

Since turning from amateur to professional not so long ago, I have made a few observations with regard to furniture making:

- The average person has no idea how stressful it can be to glue a few carefully shaped pieces of wood together.
- Clients are, generally speaking, friendly, happy, helpful souls who will work with you to achieve your collective goal, but not all of them! Those who look like they might be troublesome should be dropped at the first available opportunity.
- Many furniture makers dream about their latest project. This is quite sad but it can't be helped. What is curious, though, is that many of the answers to current problems

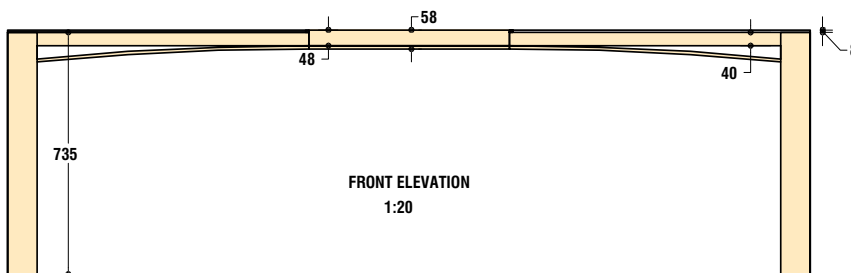
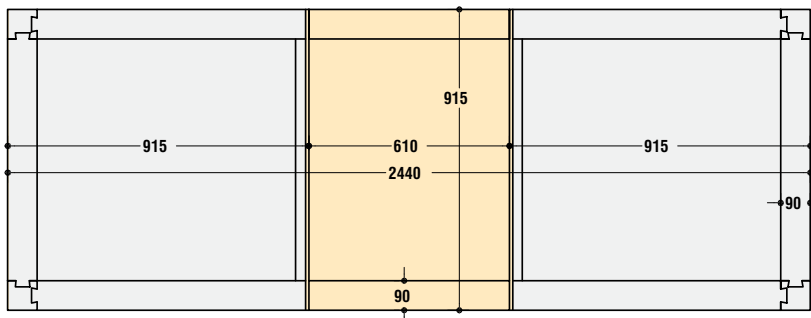
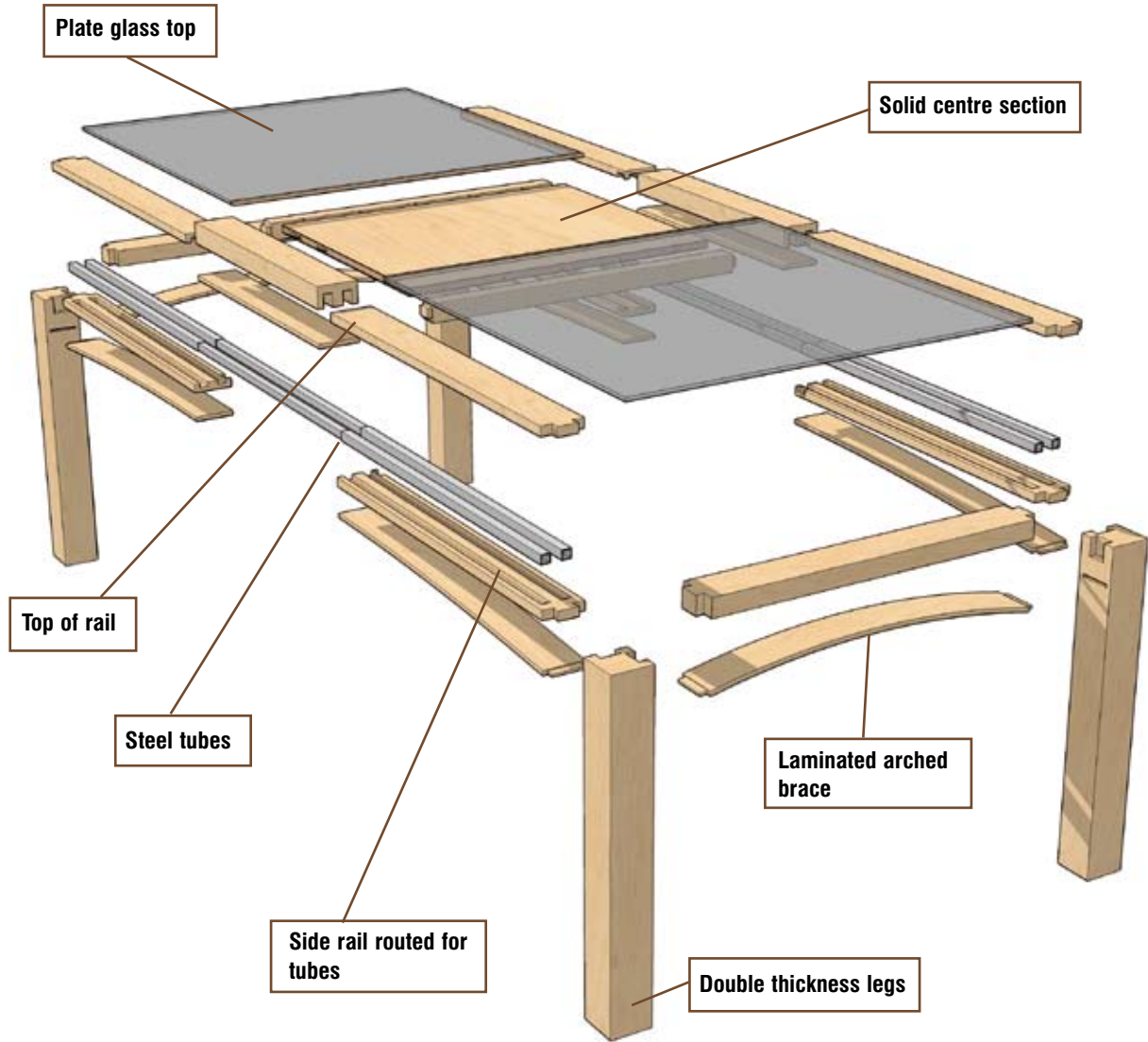
resolve themselves during the hours of sleep. I often wake up in the middle of the night with the answer to a problem that might have had me troubled for days. It cannot, however, be relied upon. I am not suggesting that you send yourself off to bed at the first sign of difficulty, in the hope that a problem-solving dream might occur! But it has helped me out several times and it happened recently during a project I was working on.

MECHANISM

It started with an enquiry about a glass-topped coffee table which is displayed on my website and whether the design might work as a dining table. My immediate

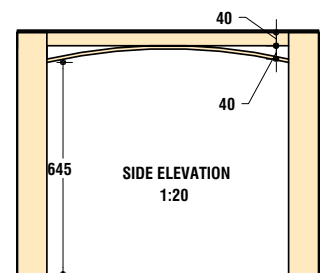
reaction was that it would. In fact I had often thought about making one as an exhibition piece, but had come to the conclusion that continually transporting a large sheet of glass around would be asking for trouble. I arranged a meeting with the client, a charming gentleman, during which came the bombshell; could the table be extendable with its workings concealed? The glass would have to be in two halves but how could the centre be supported, especially when extended?

My client had given this some thought too. Perhaps we could conceal some form of mechanism within the side rails? Two pieces of square section tubing hidden in each rail might work – a larger section of tubing permanently attached within the rails and a longer smaller section running freely inside, linking both ends of the table together. Unlike the coffee



PLAN
1:20

FRONT ELEVATION
1:20



SIDE ELEVATION
1:20



The rails with heavy-duty dovetails



Curved rails join the legs

< table, the dining table would have to have a centre cross rail, both for strength and for holding, aligning and pulling the two halves together.

GETTING STARTED

After a few weeks thinking, drawing and, sadly, dreaming about it, a meeting was arranged where plans and price were approved, and oak was selected as the timber of choice to match my client's existing chairs.

A large, single dovetail joins the rails to the legs on this table, and a narrow laminated curved rail sits underneath. I always make a full-size rod when doing this kind of joinery – I have found from experience that it helps enormously.

LEGS & RAILS

Making the legs was the first operation. Two pieces of 100 x 50mm (4 x 2in) were glued together and then planed until they

were 90mm (3½in) in size and square. The side rails from each end would have to meet in the middle and it would be unacceptable for them to be misaligned. After cutting to length, the dovetail sockets were cut into the top of the legs. I made a jig and used a dovetail cutter in the router for this operation, and then finished the joint off by hand with a sharp chisel.

All the rails would eventually be finished to a thickness of 40mm (1½in). The end rails were made to this dimension and put

to one side. The side rails, however, were left much thicker at this stage.

FINE TUNING

Now for the interesting part. There is a small clearance between the inside of the large section of tubing and the outside of the smaller section of tubing. So when one is placed inside the other, there is a small gap. There is also a small clearance all around the large section tubing when placed inside its housing to allow for

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Oak rails carefully marked



Glued up legs with dovetail sockets



Two sizes of tubing



Routing the housings for the tubes



Gluing-up rails

< wood movement. In addition, when you take into account the combined weight of the timber and the glass tops, a sagging would naturally occur as the two halves of the table come together. This was a critical factor that had to be addressed. So with some fine tuning from my father-in-law, a retired engineer, we established that if the larger square tubing were to run downhill slightly from the leg ends to the centre of the table when the smaller section square tubing was inserted, it would have the effect of raising the centre section of the table where the two halves meet. This would compensate for the tubing clearances and the weight of the timber and glass.

JIGS

So the side rails were first ripped down the centre. The housings were cut in each half with a router, slightly oversize to accommodate the large tubing, and stopping 50mm (2in) short at the ends where the dovetail would be made later. The large square tubing was then placed



Rails with captive tubes

“...when you take into account the combined weight of the timber and the glass tops, a sagging would naturally occur as the two halves of the table come together. This was a critical factor that had to be addressed.”

into the housing and secured with a screw at the leg end of the side rail from the underneath, and the two halves of the side rails were glued back together.

I then made a simple jig that would raise the leg end by 3mm (1/8in), which would give me the established gradient. This was placed through the thicknesser several times until the whole of the top surface was fully tapered. The underside of the rail was then thickened without the jig until it was parallel and a final thickness of 40mm (1 5/8in) was reached. The end faces were then squared up.

The dovetails were cut next. I used the tablesaw to cut the shoulders and then finished by hand, creeping up slowly with a chisel to ensure a perfectly fitting joint.

thickness on the bandsaw and, making sure to keep them in sequence, cleaned them up on the planer. I use Cascamite in between each layer due to its proven track record, and placed them onto the former inside the vacuum press for six hours.

MORTISES & TENONS

The mortises to receive the curved rails were cut using the mortiser and with the help of the rod to accurately place the shoulders, the tenons were cut into the rails. The mortise and tenons were cut for the cross-centre rails and it was time for a two-stage glue-up in order to keep the stress levels to a minimum. The end sections would be first, and then the side and cross rails.

LAMINATING

Laminating the decorative curved rails required two formers – one for the ends and one for the sides. I used extruded polystyrene, which can be shaped on a bandsaw and sanded smoothly to shape. I cut four slices of wood to 2.5mm (3/32in)



Jig with spacer to give taper



The rail dry fitted to the leg



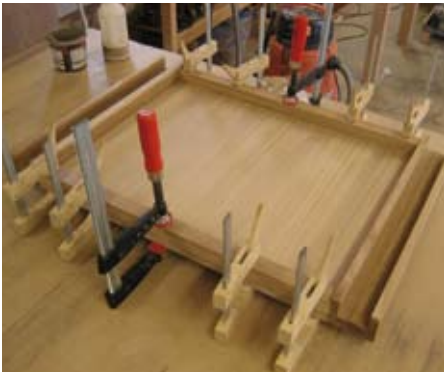
Gluing-up end assembly – note the spacer bar and diagonal clamp to maintain square



Gluing-up the side rails



The two ends joined by sliding tubes, open



The centre section being glued-up



The two ends joined by sliding tubes, closed



The centre section in position



Neat central joint



The finished table before extending

GLASS TOP

Two small strips were added to the top of the centre rails to prevent the two pieces of glass from touching, and the centre section drop-in-leaf was made. This was to be 8mm (5/16in) thicker than the side rails to match the surface height of the glass top. At this point, the glass was ordered.

Some dowels and locator pins were installed along with the brass table catches and after fitting, they drew the two halves of the table together beautifully.

FINISHING

The table needed to be stained to match my client's dining chairs, which had started their life on board the SS Mauritania. With a little help from Steve Noon at Morrells in Welwyn Garden City, a perfect match was achieved using their light fast stains. Several coats of Osmo satin wax finished the piece and it was delivered to my very happy client.

I am currently dreaming about a side chair! **F&C**

For more information on Geoffrey Rowe, visit his website at: www.geoffreyrowe.co.uk