

We Learn

TO MAKE A LEATHER BELT

Keeping our trousers up the hacker way

By Ben Everard

The M5 runs straight up the Severn Valley while the river snakes around on the left. The hills of the Forest of Dean rise up on the west side while the Cotswold's escarpment dominates the skyline on the other. There's just


time to stop to pick up some cave-aged cheddar at Gloucester services before my evening appointment.

My satnav takes me safely through Cheltenham's infamous one-way system to an inauspicious industrial estate on the outskirts of town, and a Hackspace 'H' identifies the Cheltenham Hackspace.

Inside, the members' storage in the porch is dominated by 3D printers, and this leads into the electronics section of the Hackspace where a few members are busy at work on a LED cube. Upstairs, there's space for textiles and computer work. I meet Tim, Cheltenham's leather work guru and my instructor for the evening.

Tim explains that quality leather work starts with quality leather, and a significant part of that comes from the treatment that the material has received. Much consumer leather is made with low-quality and cheaper leathers such as chrome tan. When



Right  A glowing H just to remind everyone what sort of building they're in

// Tim opens a box of leather tools, and the **contents looks disturbingly like** they might have been designed for a Victorian dentist. //



Above ♦ Keeping all the dust-generating tools in one room helps keep the rest of Cheltenham HackSpace clean and tidy

you're making your own leather goods, you can use whatever quality you like (or can afford) and we're working with veg tan, which feels much thicker and sturdier than leather goods I've bought previously. This ability to bring the quality of leather you want with the design you want gives the maker a far greater range of leather options than someone buying off-the-shelf options.

As a brewer, Tim's particularly interested in tankards – mugs for drinking beer. These are first cut and sewn together, then dipped in molten wax which makes them waterproof and strong.

After showing off what's possible with the skills of an experienced craftsman, it's time for me to find out what's possible in the hands of an inexperienced journalist.

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Belts are fundamentally a fashion item (otherwise we'd just hold our trousers up with string), and

as such, much of the evening is taken up with decorating. Including a stitched effect around the edge of the belt and some embossing – I opted for a rather (in my opinion) tasteful oak leaf and acorn motif. You can see the complete process overleaf. Nothing is fundamentally difficult, but it does require a few specialist tools and a knowledge of how to handle the leather, including treatments,

The pay-off/difficulty ratio for belt making is quite high. In a few hours (with instruction) I was able to make an item of clothing I'm proud to wear despite having no experience in the field. This alone makes it a great area for makers. →

Below ■ Our finished belt is strong enough to hold our trousers up despite the Christmas indulgences...



MAKING A LEATHER BELT

STEP 1 CUTTING THE SHAPE

Using a strap cutter, create a strip of leather the right width for your belt buckle



STEP 3 SHAPING THE LOOSE END

Cut the loose end of the belt into whatever shape you want, such as a rounded point



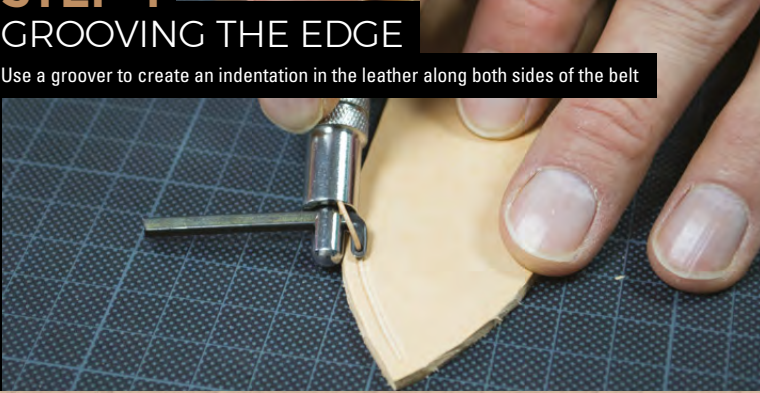
STEP 2 MEASURE THE LENGTH

Ensure your strip is long enough to fit once it's been turned into a belt



STEP 4 GROOVING THE EDGE

Use a groover to create an indentation in the leather along both sides of the belt



SADDLE STITCHING

While most of belt making is cutting and designing the leather, there is one skill that you'll need: saddle stitching.

The first thing to do is punch holes in the leather that the needle will go through. As this is done before the needles get anywhere near the leather, there's no need for the needles to be sharp, so leather needles are blunt. Ensure that your leather is lined up properly before starting or it'll end up wonky.

Perhaps the most unusual thing for someone who sews is that you'll need two needles threaded on the same thread. We'll name our needles 1 and 2. Start at one end of the row of stitches and push needle 1 through the first hole and needle 2 through the second (both from the same side). You should now have a single stitch on one side of the leather with the thread coming out of two holes on the other.

Now, push needle 1 through the hole that needle 2 just came out of – this should complete a loop of thread and you can pull it tight. Push needle 2 through the next hole up and you should once again have both ends of the thread coming out of the same side of the leather. You can now repeat this pattern until you have completed the row of stitches.

You'll need to stitch back over the row a few times to make sure that the join is secure. Each time, you should find that it gets a bit tighter as the thread fills in the hole. Once it's strong and secure, you can simply trim off the ends of the thread and the join is complete.



STEP 5 'STITCHING' THE EDGE

Run an over stitching tool along the groove to create the impression of a sewn edge



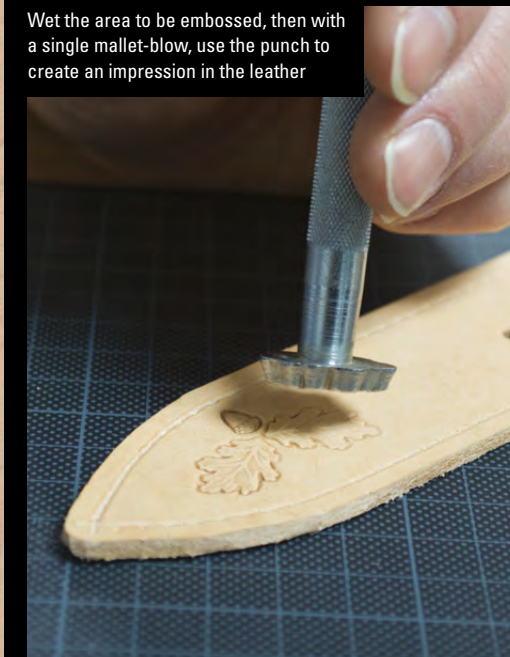
STEP 6 PUNCHING THE HOLES

Punch holes at 3 cm intervals along the tail end of the belt. You also need a larger hole in the other end to fit the buckle through



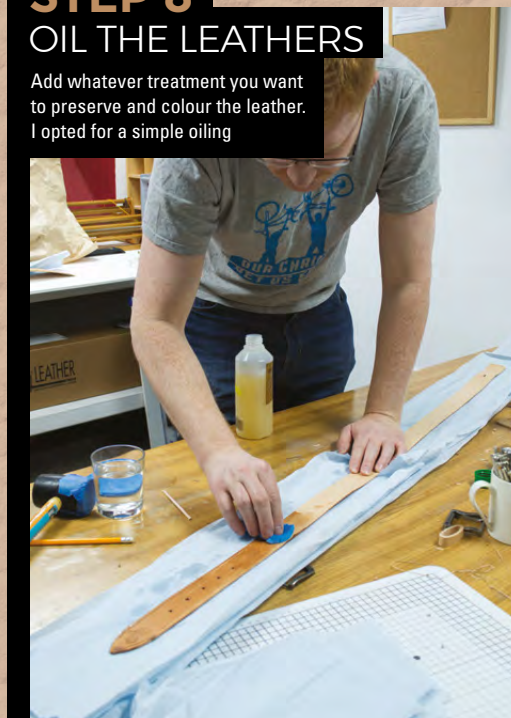
STEP 7 EMBOSSING THE LEATHER

Wet the area to be embossed, then with a single mallet-blow, use the punch to create an impression in the leather



STEP 8 OIL THE LEATHERS

Add whatever treatment you want to preserve and colour the leather. I opted for a simple oiling



STEP 9 CREATE A LOOP

Cut a rectangle of leather about 5mm wide and long enough to wrap around the belt (including the tail of the belt)



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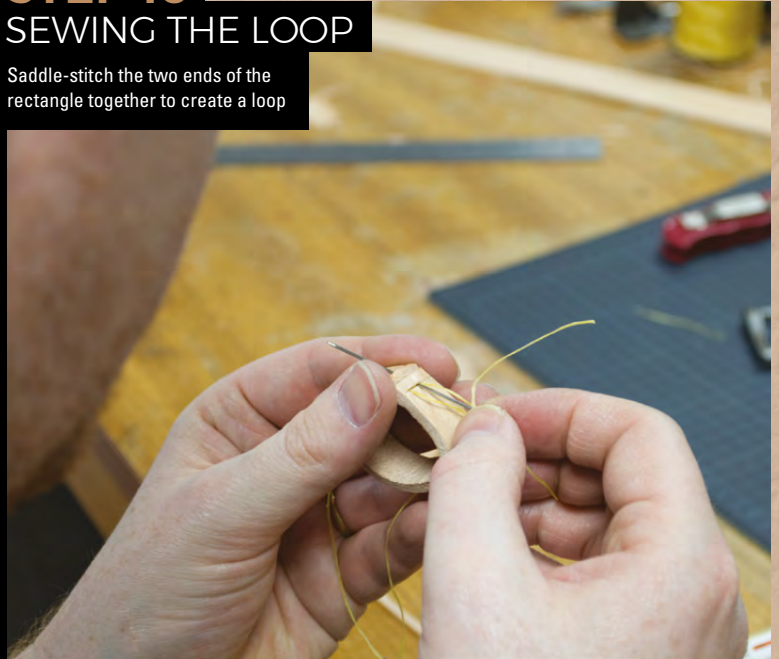
STEP 11 BURNISHING THE EDGE

Add burnishing compound and rub using a rounded wooden tool to hold the fibres in the edge together and give it a sleek appearance



STEP 10 SEWING THE LOOP

Saddle-stitch the two ends of the rectangle together to create a loop



STEP 12 ATTACHING THE BUCKLE AND LOOP

Place the buckle in place and fold the leather round. Then punch holes to stitch the two layers of the folded leather to hold the buckle and loop in place. Saddle-stitch through these holes to hold everything together. You've now finished your belt

