

Work on the Table – 05 September 2020

Well the nicking of the saucepan to make a flange for the drive wheel on my bandsaw went well and I think I got away with it. So with that success behind me, it was time to do another raid on some kitchen equipment.

Did you know that those Teflon-coated roasting tins make excellent swarf catchers to sit beneath the lathe bed? Certainly on the Boxford, where there's a nice gap between the bed shears to allow swarf to drop through. It then becomes much easier to separate the different types of swarf.

Time to practice my innocent "No, I've never seen it, you must have put it somewhere" expression now....



Some while ago I acquired a Myford-fitting 4" Griptru chuck. Unfortunately it was rather well-worn and I was never very happy with it as a precision piece of equipment. The outside jaws it came with were not original, and it needed a three-foot pipe extension on the chuck key to adjust it when it arrived. By dint of careful stoning with a diamond file, I was able to achieve a reasonable fit of the jaws with the body. Good thing I didn't pay a lot for it!

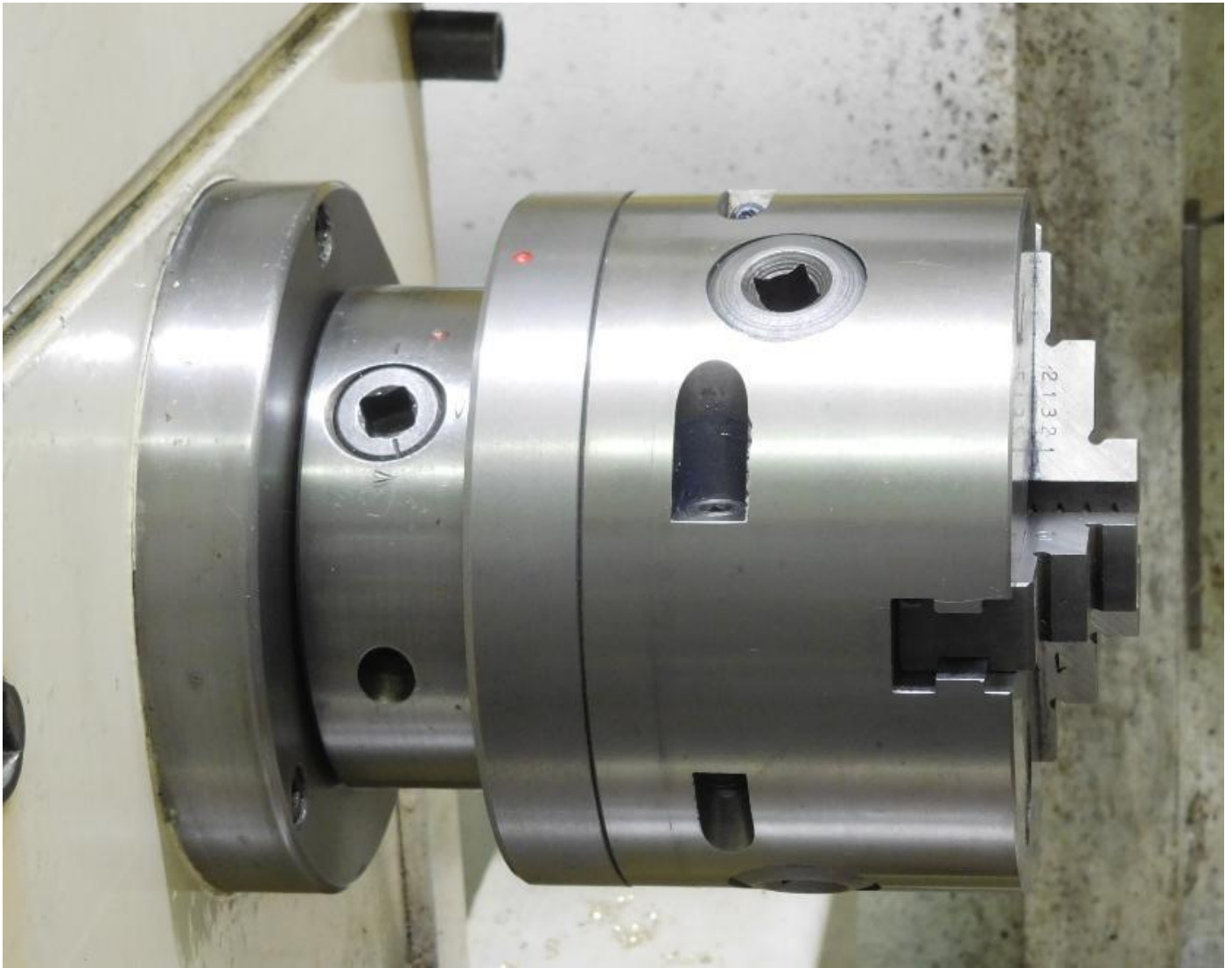
When I got my Boxford lathe, I thought it might be useful for that, so I turned up a D1-3" Camlock backplate for it and bought some camlock studs from RDG. I discovered that it was quite possible to fit the new backplate without changing anything on the Myford-fitting chuck – the only difference was the length of the cap head screws. So if I wanted to return it to Myford use, it would be simple enough.

Here it is – you can see the unaltered Myford thread in the photo:



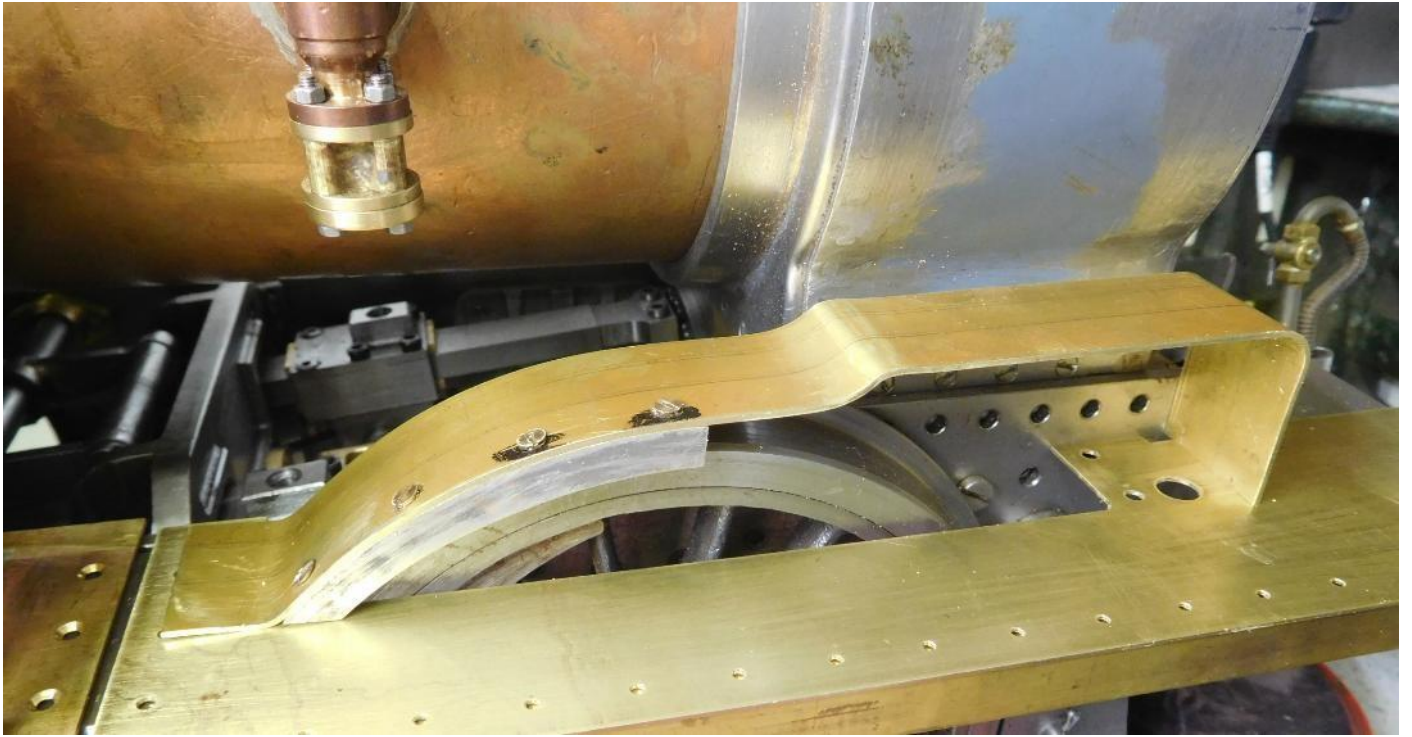
But apart from that, I got lucky the other day when I spotted a new and unused 5" Griptru chuck for sale in the *Model Engineer* magazine personal ads. Not hopeful, I phoned up for it (it was in London) and the bloke said he'd only just walked in the door from his holiday and yes, it was mine if I wanted it. Unfortunately, he admitted, it only had five of the six jaws. It was quite old, but had never been used. I phoned him to let him know it had arrived safely (in a [mostly empty] plastic paint tin,) and he could say that he'd later discovered there were some messages on his answerphone, asking to buy the chuck, but as he'd already agreed to sell it to me it was hard luck on them! When it came I had to dismantle it and clean off the appalling mess inside that might, at one time in the distant past, been grease, but now seemed to be more of an adhesive than anything else. It was also quite stiff, and I ran it in a bit by winding the jaws in and out using a suitable 9mm square in the battery drill to free it up a bit. (When did you last see those signs in the back windows of cars – "Running in, Please Pass"?)

I had to either make or buy a new backplate for it. I didn't have anything in the ferrous line of 5" diameter, and I discovered that buying the raw material would cost a significant proportion of the price of an already-machined backplate. I got one from Chronos, but they only had 8" / 160mm ones. So one bucket of cast iron swarf later:

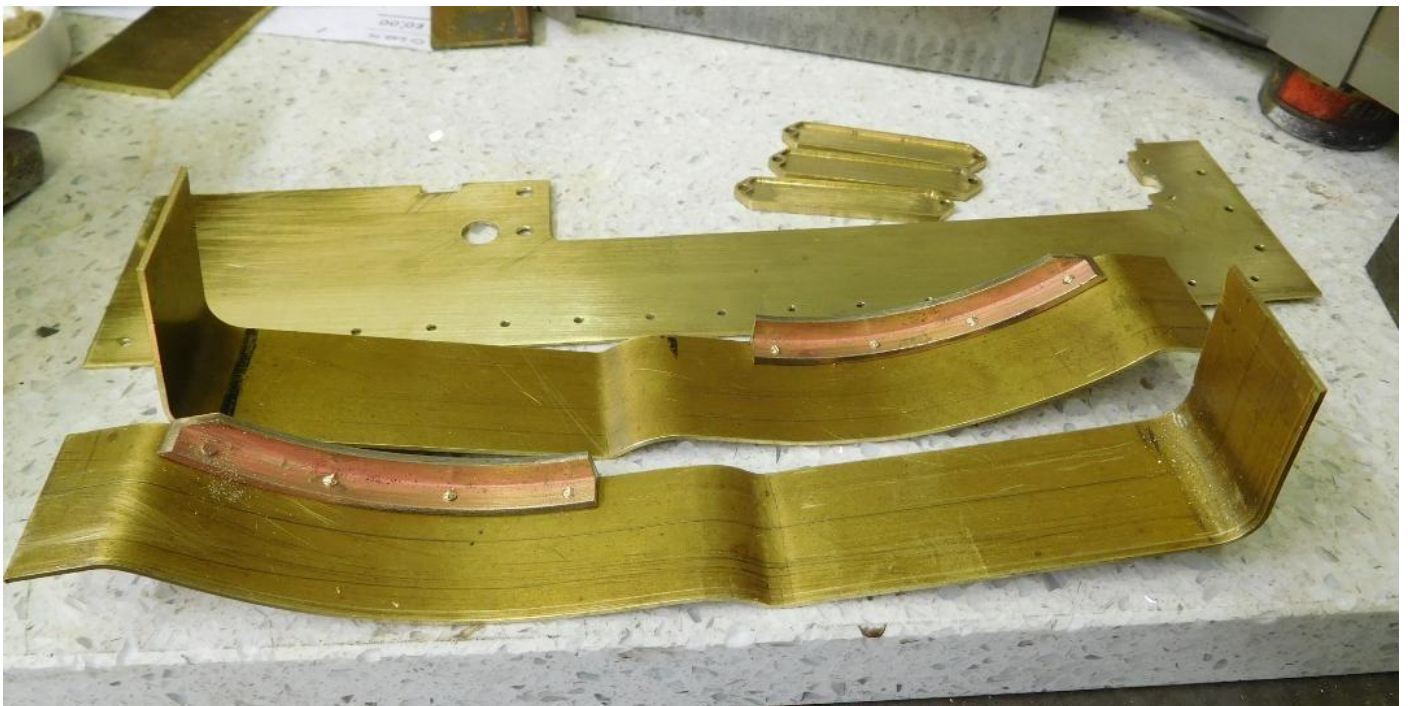


I also remembered this time to wear a face mask. Last time I machined a significant quantity of cast iron I hadn't bothered, and the disgusting mess in my handkerchief when I blew my nose later had to be seen to be believed. It also took a long time to clean the lathe!

So – back to proper model engineering and progress on *Ashey*, the LSWR O2. Current job is the front splashers/sandboxes; here's one just started.



The manufacture of those curved bits of angle was interesting. I'd previously made some curved angle for the rear bunker corners by machining from solid, but it had been a relatively tight radius and the piece of bar needed wasn't that enormous, so it didn't take long to turn a complete angle-section ring.



This time I would have needed a rather large piece of bar to turn a ring, and the ratio of swarf to finished job would be ridiculous – even if I'd had a bar of the necessary dimensions. About 6" diameter...

What I actually did was to batter a piece of $\frac{1}{4}$ " square bar into submission so that it very nearly looked like the radius on my drawing.

I then found a piece of scrap brass plate – it was actually a scrap roseplate off (I think) a Class 150 DMU driver's door - and silver-soldered it to a piece of 1" diameter brass. The outer face was skimmed flat in situ on the lathe. The bent brass bar was then soft-soldered to the "Shellac Chuck", I suppose you'd call it, and the outside face of the bar just skimmed enough to true up. The bar was removed and the solder wiped off. I returned the chuck to the lathe and then machined a tiny rebate machined in its surface at the actual radius I wanted for the angle. This enabled me to reposition and solder the bar, newly-machined face to the chuck, in the optimum position so that I could remove the minimum of material.

Slow and steady speed needed – I managed at about 250rpm with the out-of-balance. It shook a bit over that speed!

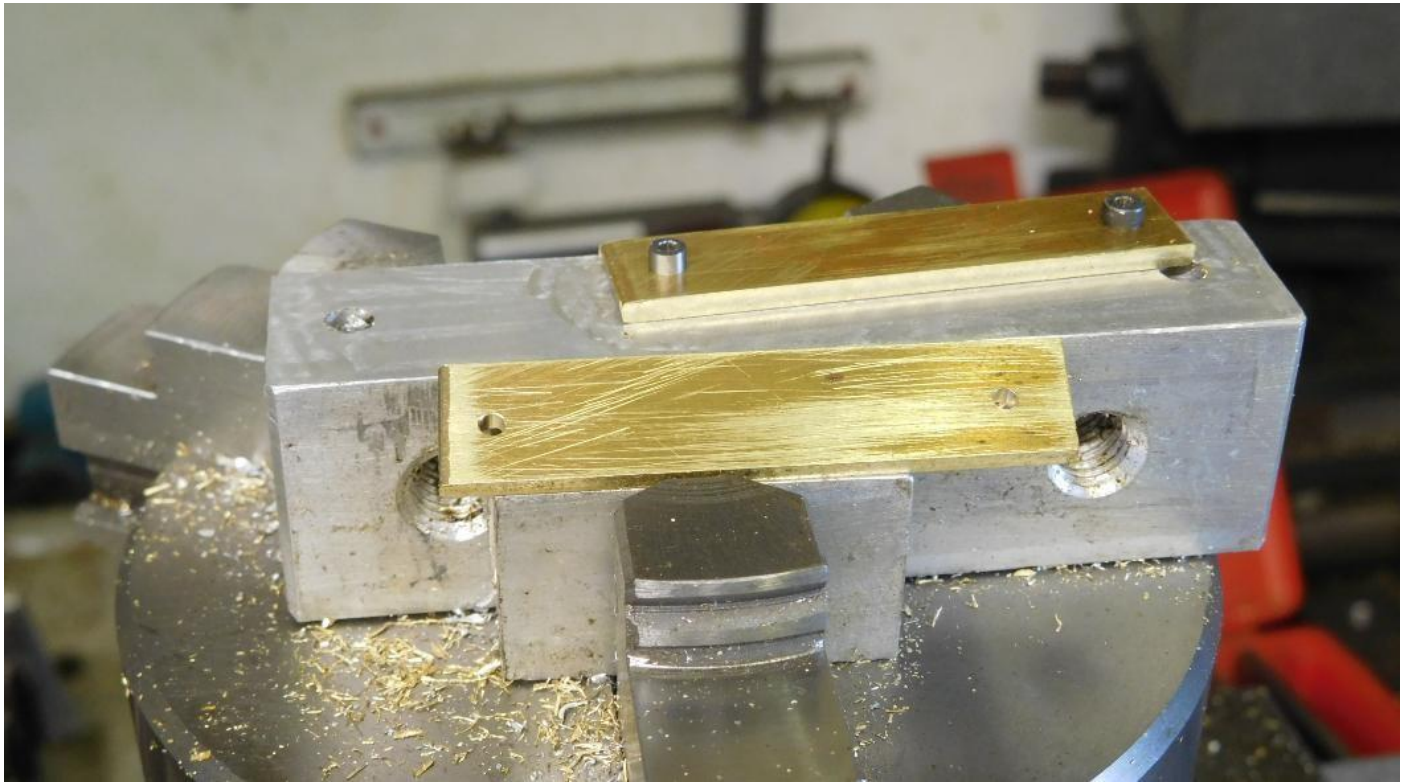


The angle was then quickly unsoldered and cut into two before carefully screwing it to the embryo splashers. And yes, I did remember not to make two left-handed ones...

You may ask why I didn't just cut the angle out of that scabby piece of old roseplate. Well I did consider that, and came to the conclusion that I'd have a real job holding it unless I soldered it to another piece of brass... and I now have a dodgy "shellac chuck" that might come in for something else!

The other job I've done is to make a start on the nameplates. I made some blanks with holes drilled at the correct centres to match the blind holes already in the side tanks, and screwed the blank to a lump of aluminium, previously drilled and tapped M2 to receive them. One of these M2 holes was carefully positioned to be at the centre of rotation

of my rotary table. It's at a funny angle because my rotary table doesn't have zero-resettable scale or a DRO and I wanted the two holes to be at a sensible position – I recall it was 70° - so that I could easily add or subtract angles from that datum.



There then followed some careful machining, accompanied by the pinging noise at intervals of my last two 1/16" diameter slot drills giving up the unequal struggle of staying in one piece.

I managed to dig out an old dental burr to finish off!

I did all the angles around one end and then switched the embryo nameplate over to attend to the other end.

I did scrap one because (according to photos of the real thing) the angle at the ends is 40°, and I managed to add up incorrectly and made one 50°. Ah, well, it was only a small piece of brass...

The letters are next, and a Leeds SMEE Member who has experience in the manufacture of such things has very kindly agreed to assist me in this endeavour.

Watch this space...



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