Some things that are not necessarily in the instructions.

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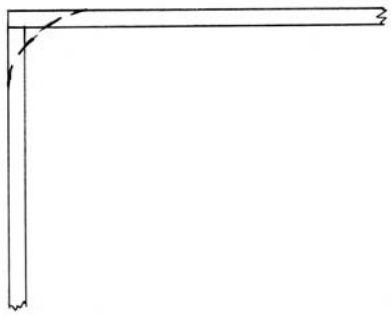
I was working recently on one of the loco kits I am circulating through when I had to do some somewhat dramatic shaping to etched parts.

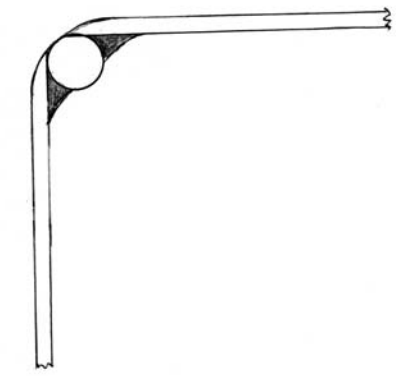
Belpaire fireboxes, in particular, have quite a pronounced shoulder at the front tube plate. If the model does not have a cast firebox or castings for the shoulders then there are potential problems. This was apparent on the one I was making and I have a solution that perhaps should be more widely known.

The sketch shows that when there are only single etches to make up the front and the wrapper then filing a shoulder will create a gap.



Indeed filing this shape without any backing can tear at the component edges.

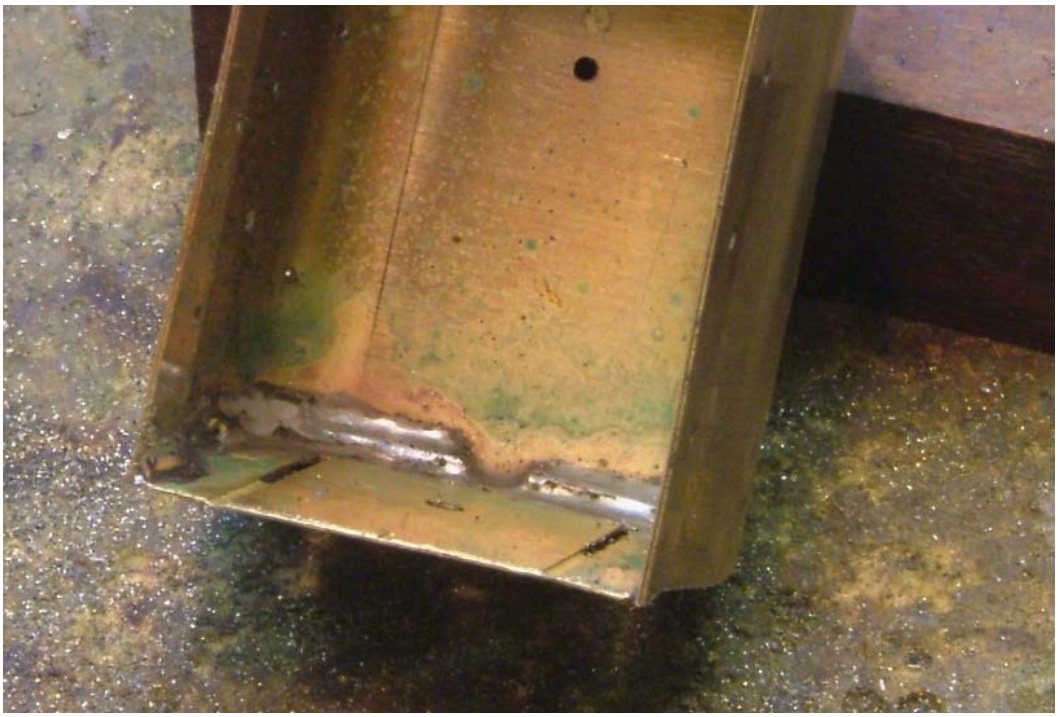
I insert a filler inside the radii. This is usually some brass rod around 3/32 inch diameter. Bend it through 90° to match the profile radius and cut it so there is about 4mm of straight either side of the radius. Fit this inside the firebox and solder with a very generous fillet of solder. I find that in this instance 188 solder is better than 145 as it is harder and is less likely to re-melt after shaping when soldering other bits nearby.



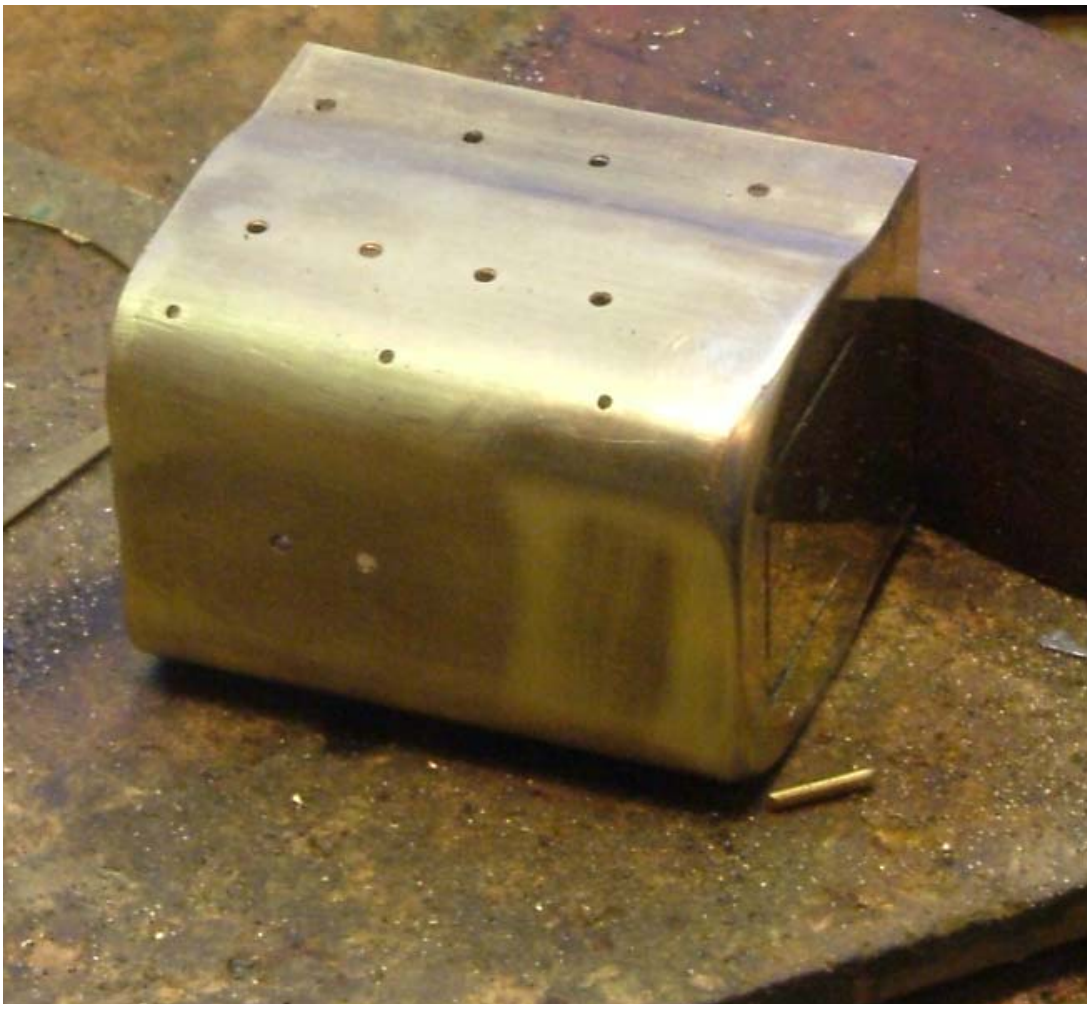
With the filler inside the corner the full extent of the radius can be created safely. Initial filing was with a 6 inch flat file, finishing cuts were with a flat Swiss file. Final smoothing

and polishing was done with a blue Garryflex block, though wet and dry would have done also, but the block has the advantage of conforming to the profile.

The photo illustrates the extent of the filed shoulder.



The filler soldered inside the corner. I have used two pieces, one for each corner, as this make fitting easier. The brass is showing slight distress from flux residues. I should have washed it before photographing!

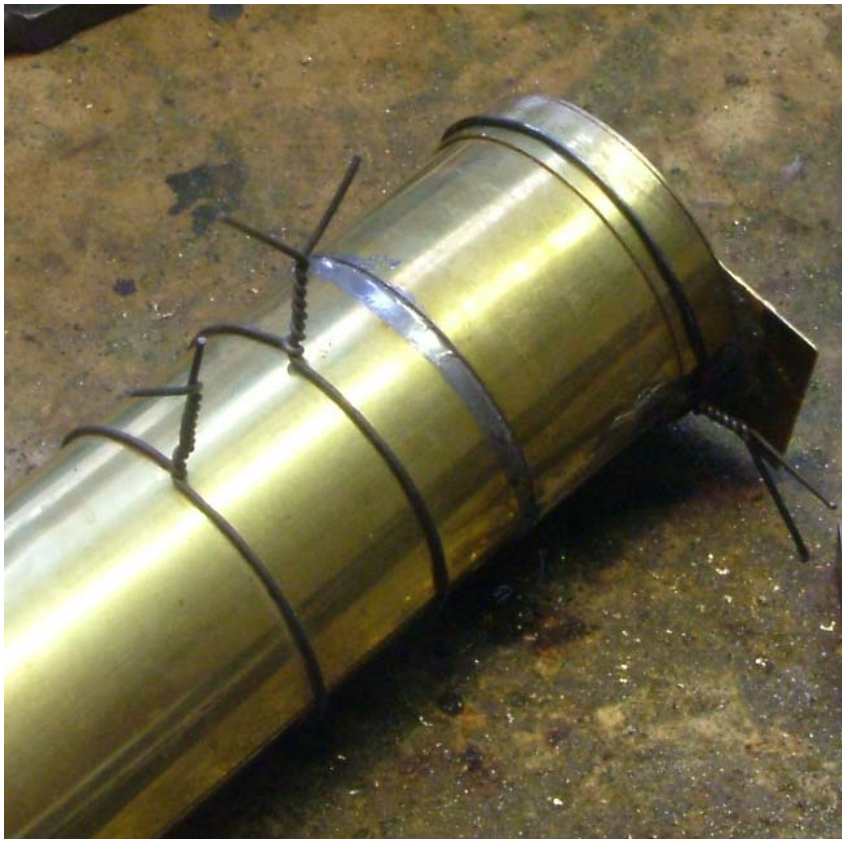


The shoulder completed. The filler can almost be made out in the radius.

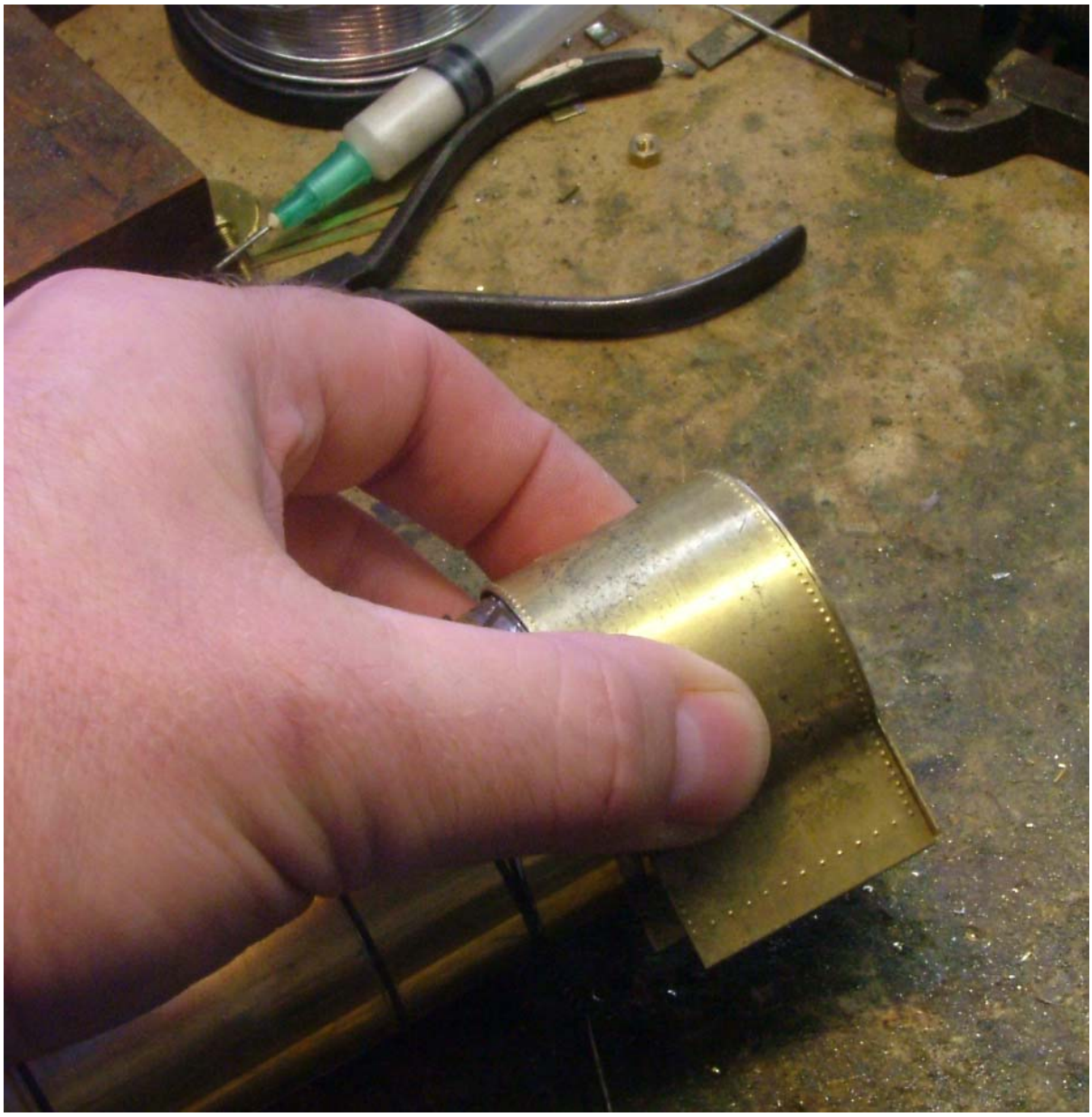
The same loco also had a small problem at the front of the boiler. The smoke box wrapper was inside the etched edge of the front profile plate. The photo just shows this. The wrapper was full thickness with rivets embossed into it. When forming a wrapper I find it useful, where possible, to locate it with a self tapping screw through the chimney hole. This eases the problems of achieving symmetry when the wrapper has to re-curve at the base. It helps too have the hole in the boiler on the centreline, which in this case it is not, my drilling not the kit! The soft iron wire (from a florist) was used to hold the boiler circular whilst fitting formers and the end profile.

It is not possible to fit the wrapper and file the profile plate to match without destroying the rivet detail. Perhaps the wrapper could have been temporarily fitted before the rivets were embossed but this would mean unwrapping to access the half etch rivets. The possibility of losing the profile then exists.

I used some scrap etch from the same fret as the wrapper and fixed it with iron wire to the boiler behind the profile plate



This enabled me to get the size for the profile and file it back without fear of losing detail as I had a sacrificial part in place. In fact rather than filing I used a small sanding drum in the modelling drill.



Here the wrapper can be seen held in place with front edge matching the circular profile. All that remained was to clamp it in position whilst soldering it to the boiler barrel. And that's another story.

(The hypodermic syringe showing in the picture contains paste flux. I use it as a means of dispensing the flux in small quantities without too much mess.)