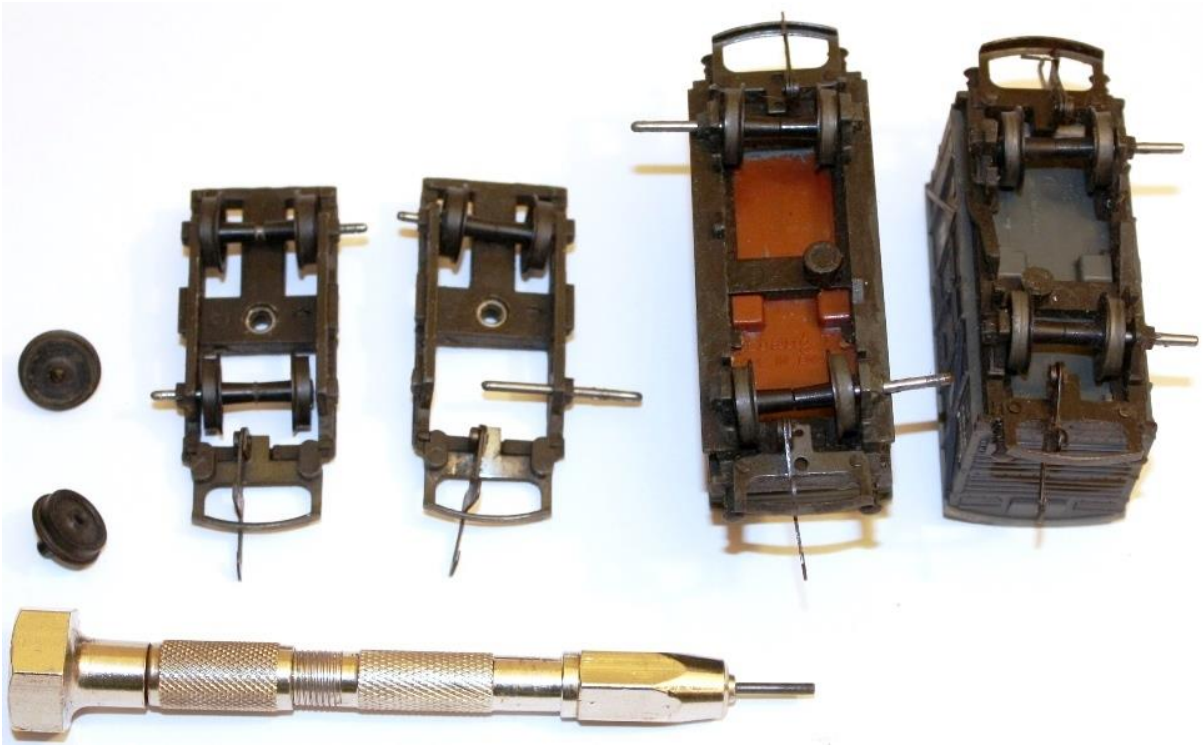
Frank asked about re-wheeling Tri-Ang stock. This is how I do it:

For this exercise I am going to re-wheel a Tri-Ang brake van, a box van and two coach bogies.

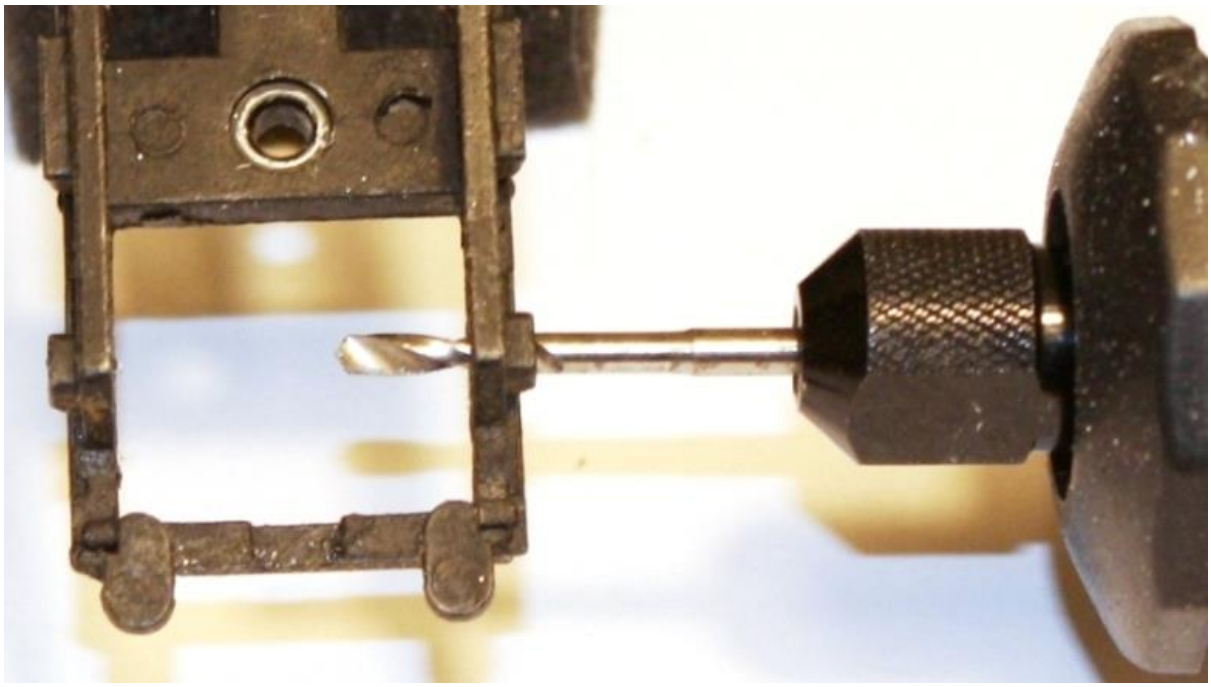
First step is to remove the original axles and wheels. For this I use a pin vice drill with a 1.8mm shank drill inserted the wrong way round so that the blunt end can be pressed (with some force) against the end of the axle to push it through the other side. The protruding end is then pulled out with pliers.



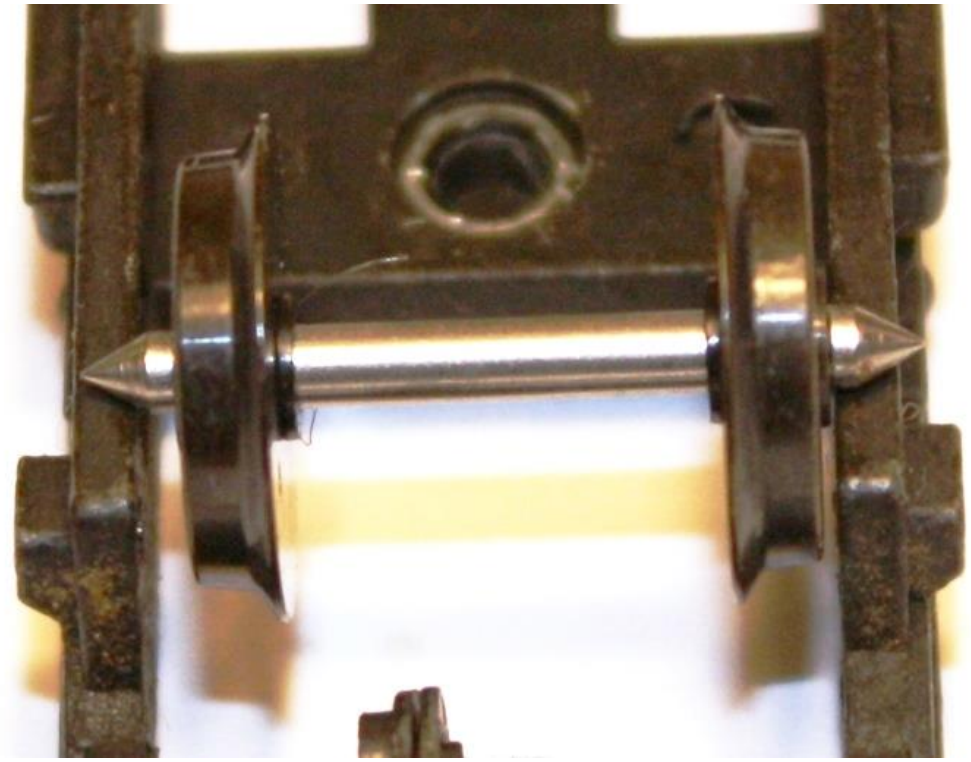
The axles are splined on one end to prevent them from falling out,

meaning that you have a 50/50 chance that they are either going to be difficult to press out in the first place, or will require a good tug with the pliers to get them out of the other end.

With the wheels and axles out all the axle holes need to be drilled out to 2mm with the Dremel so that the flangeless pinpoint bearings will drop into them:

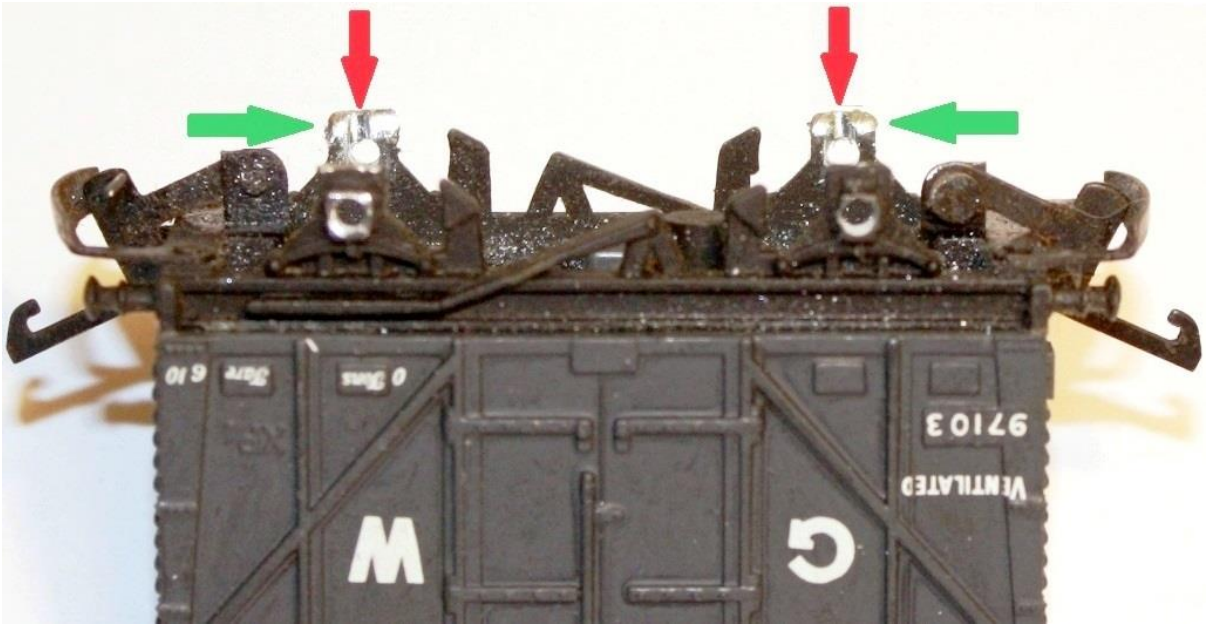


I am going to be using 12mm gauge Romford metal wheelsets as supplied by 3SMR - 9mm dia for the wagons, 10.5mm dia for the coach bogies.



This picture demonstrates the first problem to be overcome, the axles are 20mm wide from point to point and the inside chassis frame is only 17mm, so they can’t just be dropped in.

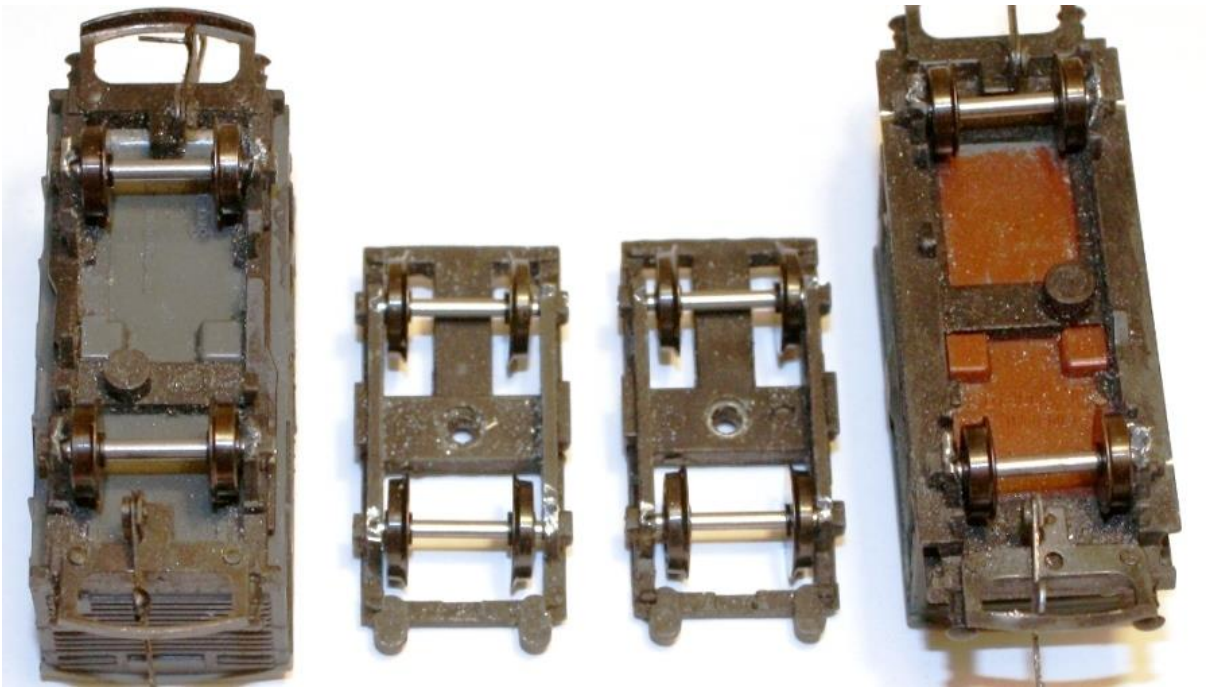
This next bit requires a lot of drilling;



Drill vertical slots (shown by the red arrows) on the inside face of the axle box and round off the leading edge using a grinding bit (green arrows).

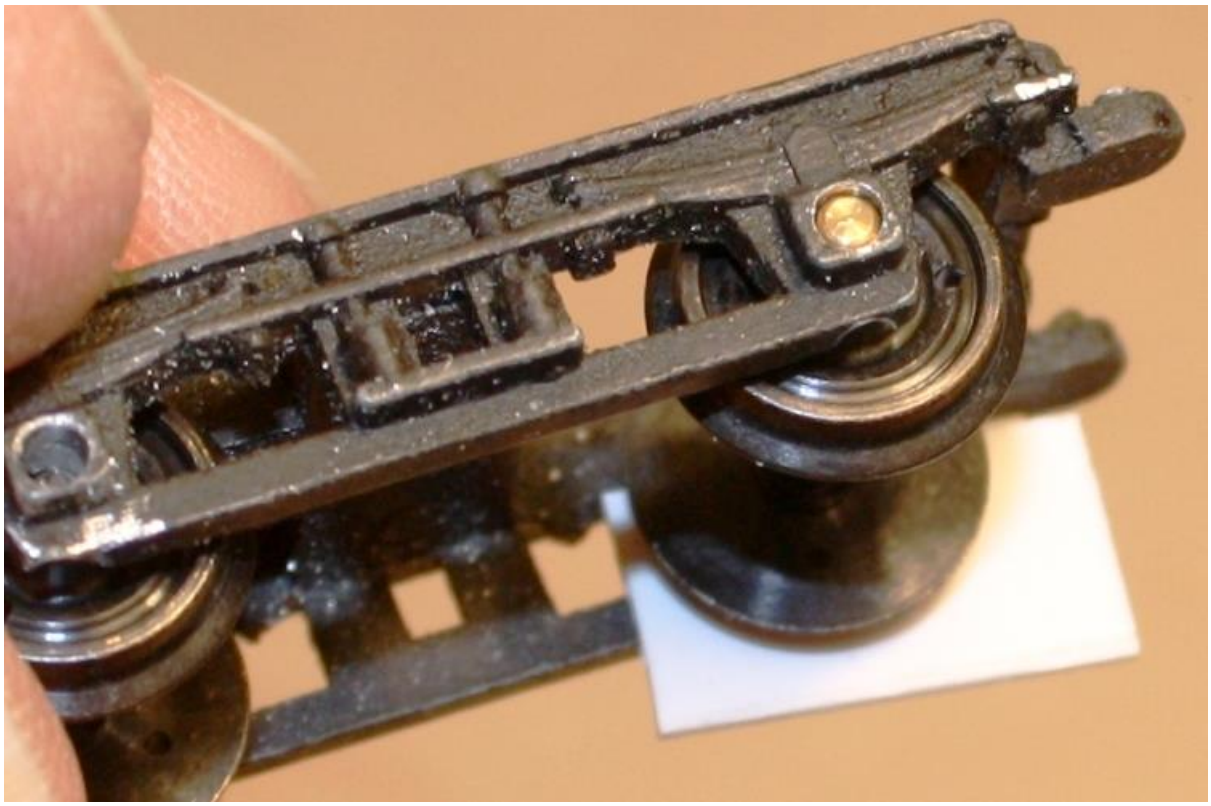
Every now and again trial-fit the wheels and continue drilling/grinding until they slot in place. This pair are very nearly there:

Eventually with a bit of pressure all the wheelsets click into place:



Now the 2mm diameter rimless bearings (also available from 3SMR) are inserted into the axleboxes

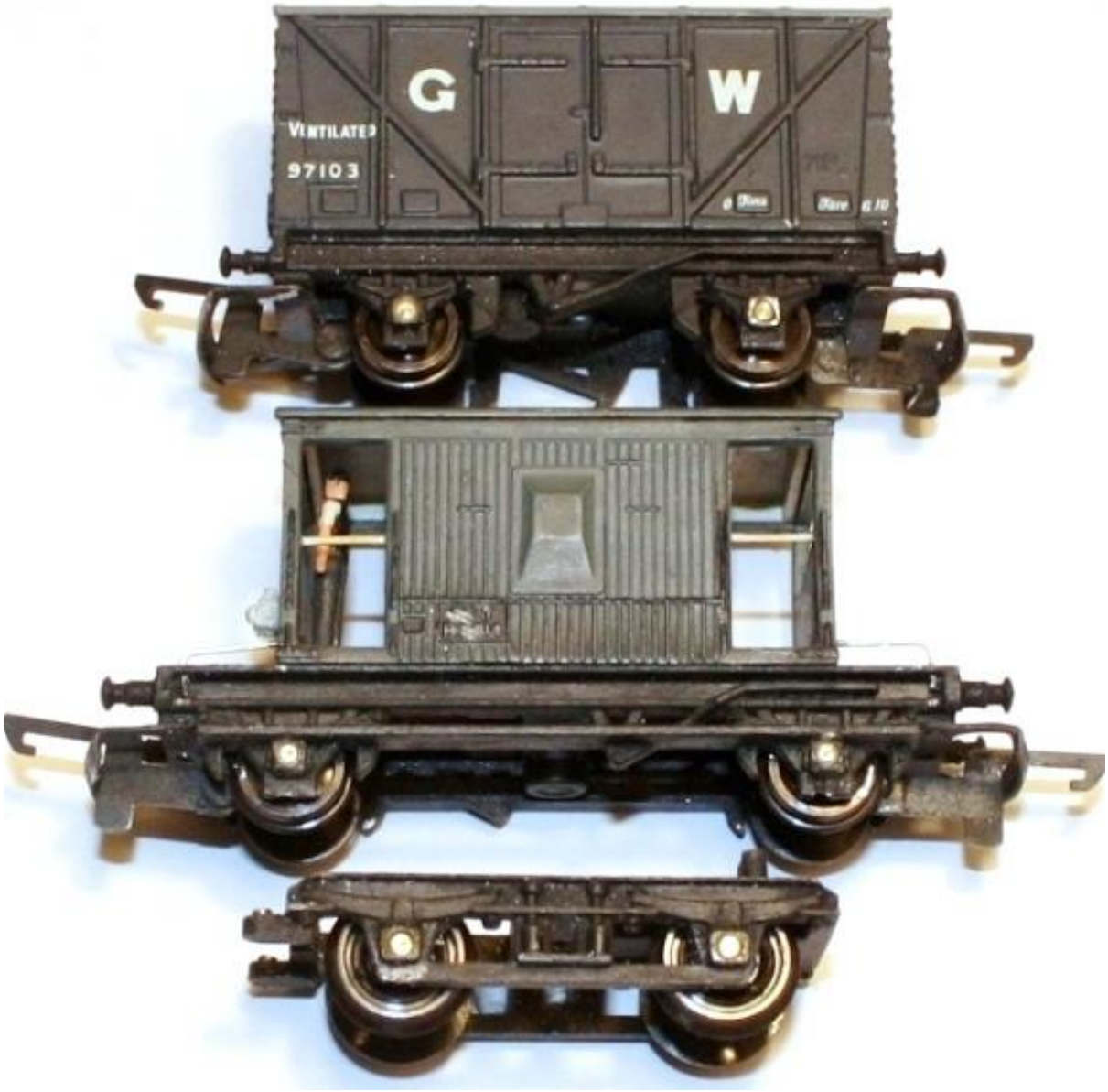
A shim of 0.5mm thickness plasticard is inserted between the wheelset and the chassis on one side to ensure that the wheelset is centred, and the bearing is inserted on the other side with tweezers:



This can be a bit fiddly; expect a good few bearings to "ping" off into space just as you think it's seated in the bore (I lost about 3 of them just in this exercise), sometimes the bore isn't as smooth as you thought, or the bearing has a slight lip on it and you have to exert a surprising amount of pressure to get it firmly pressed up against the axle pin-point.

When in place, put a dab of superglue on the bearing end, but not too much as you really *don't* want it to "creep" past the bearing and glue the whole axle solid, believe me.

When the glue is dry remove the shim, turn over and push a bearing in on the other side, glue whilst making sure that everything rotates smoothly without slop.



A lick of matt black paint covers the bearing ends and any scratches to the chassis

With a drop of oil into the bearings and some solid running-in there you have it: surefooted, smooth and free-running Tri-Ang rolling stock. :^)

3SMR for wheelsets and bearings can be found at:
http://www.3smr.co.uk/index.html