

1.

File off the moulding pips from the wheel flanges. File the ends of the tube smooth and de-bur. Assemble the wheel sets with a drop of car engine oil on the axles. Glue the wheel sets into place.



2.

Trim off the flash found on the 'W' iron and brake castings. Glue one 'W' iron per side, making sure they line up with the rivets on the side frame, and they overhang the side frame 1mm or so.



2a.

There are a number of half etched dots on each sheet brass parts. These are rivet marks and will need to be punched or pressed out with a rivet press, or other. The picture below is of our Midland Railway Centre rivet press being used on a Tin Turtle roof. This press is available from (www.midrailcentre.com)



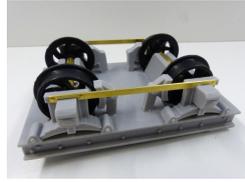
3.

Trim down the piece of casting being pointed to with the tip of the pencil in the first picture. It is only the 'inboard' casting that needs to be trimmed. On the opposite 'W' iron to be fitted, trim off the same part so you have a handed pair. Cut out a bogie bar from the etch, press the rivets and glue it to the 'W' iron that is not yet glued to the bogie. Once dry, glue the 'W' iron assembly onto the bogie. We have found it much easier to assemble this way as you have 3 points of contact for alignment.



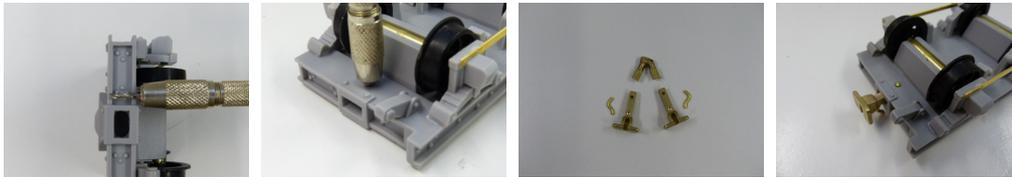
4.

Glue on the brake blocks as per the picture.



5.

Set a 1.6mm drill in a mini drill, so that it cannot brake through to the top side of the bogie casting. Drill the dot on the underside of the coupling pocket. Cut off the buffers and drill a 1.7mm hole all the way through the rear dot and half way through the front dot. Bend up two hooks from the brass rod and solder into position. Fix the buffers using a short length of brass wire with a spot of glue to hold in place.



6.

Cut out the brake handle etchings and press the rivets. Bend up the triangle part to 90 degrees. We have found that the best way to bend the long vertical, is to place it in a vice with FLAT SMOOTH jaws with tweezers, and simply close up until square. Line up the three rivets, make sure that the assembly is square and solder.



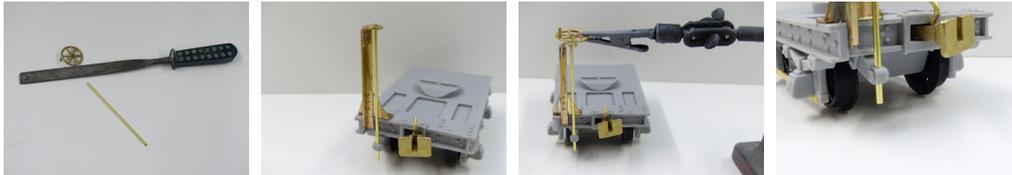
7.

Run a 2mm drill through the cast hole in the wheel bracket casting to clean it up. Solder the bracket to the top of the post. Drill a 1.6mm hole in the bogie brake arm casting. Glue the assembly onto the bogie with epoxy or strong super glue, make sure the surfaces are roughed up so that the glue can grab.



8.

File up the end of the brass rod and the hand wheel rod, so that the wheel rod fits the hole well. Fit the brass rod and hand wheel into position and solder. We have found that holding the wheel in a 'handy hand' (as we call it) makes lining up and soldering much easier. Trim the brass rod at the bottom to about 6mm.



9.

Mark up a 2.6mm drill to 11mm and drill for the pivot screw, fit screw. That's the bogies finished.



10

Remove the flash from around the base of the wagon body. We find it best to scribe with the back of a scalpel and snap off, but any way you find easiest is fine. A Dremel with a sanding drum or slitting disc could also work well.

Cut off the feed spru from the end with a fine tooth saw, eg hacksaw or coping saw etc. The underside can be quickly cleaned up with a sharp file, but we find scraping with a sharp rounded scalpel blade, is best for removing the last bit of the feed spru. You could also use a Dremel with a fine sanding drum. Do not catch the main body, as that detail will not be covered by the brass 'U' channel to be added in step 12.



11.

Press the rivets and bend up the brass 'L' and 'U' channel. The 'L' can simply be placed in the vice with tweezers and pinched up to fold. The brass will want to bend the correct way on the 'L'. The 'U' needs a little help to get started, so make a pre-bend on both sides first. Using the vice is a good controlled tool for getting the bends 90 degrees.



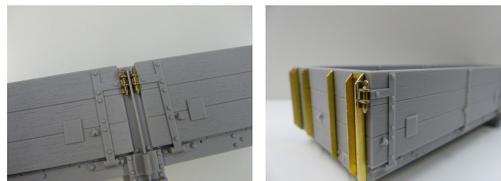
12.

Once all bent up, rough up the rear face that has the rivet dots. Glue the brass onto the ends of the wagon with epoxy or thick super glue. These are handed and do have a top and bottom, so please look closely at the pictures to see where the rivets go !!



13.

Cut off and glue on the 'keep pins'. You can solder the ones on the ends if you wish, just be careful not to dwell too long, as the glue may become unstuck !!



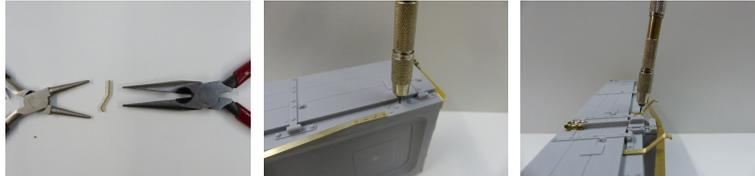
14.

Drill the dot found in the middle of the wagon body with a 1mm drill to about 6mm deep. Place a rivet in it half way. Cut out and glue into place the long wagon bars using the middle pin as a guide. Once the bars are glued in place, drill all the holes, (now marked by the brass) and put a glued rivet in each hole.



15.

Cut out the door stops and bend up using straight and rounded pliers. Drill the top hole as marked with a 1mm drill. Fit the door stops using the same method as the long bars. A quick tip here is to drill the lower holes at a slight angle to avoid breaking through the bottom of the wagon.



16.

Drill the two body bogie holes at 3.2mm. Screw the bogies onto the body making sure they can move correctly. The bar top bogie must not have any 'roll' movement, but be free to pivot and 'pitch'. Sand up the pivot covers and ether press into place or glue. You could even 'Blu Tack' them if you feel they may need removing at some point? Please take note that the 'hinge' end points to the ends with the flats pointing towards the middle of the wagon.

This is the original orientation of the real wagon.



17.

Finished, paint as you want.

