

Rumney Models BR Wooden Ended Shocopen Wagon Body “kit”

These instructions cover Rumney Models body kit C.54. It is designed to convert either the Parkside Dundas BR steel ended wooden open wagon body (kit PC02A) or Parkside Dundas BR Shocopen wagon body (kit PC28) into the wooden ended variant of the diagram 1/040 BR Shocopen.

The body “kit” will provide a frame, wooden ends and detailing parts to go with the sides from either the Parkside Dundas kit PC02A or PC28.



You may wonder why, when this is a kit for a Shocopen, the sides from Parkside kit PC28 aren't the only option. In truth I am not a fan of the sides included with kit PC28. There's something about the door that looks wrong. It is only slightly too wide but I think the position of everything combines to make it look odd. The sides in PC02A are spot on though and look exactly like the prototype. My choice is to use the PC02A sides and extend them by 0.5mm using 0.020" x 0.040" plastic strip. If you are happy with the PC28 sides then you will save yourself a little work.

Prototype Notes

The majority of BR built Shocopens were effectively shortened and slightly taller version of the LMS derived steel corrugated end wooden open. All had similar ends to their longer cousins apart from part of a lot built in 1952. There were steel shortages this year so the decision was made to build the Shocopens with wooden rather than steel ends. All had Morton 4 shoe vacuum brake underframes (Rumney Models kit B.11 with shock absorbing spring brackets B.91 are suitable) and when new were fitted with tarpaulin bars, parts are included on the fret for these.

References

“The LMS Wagon” by RJ Essery and KR Morgan has more in depth build details including lot numbers and where the lots were built.

“An illustrated History of LMS Wagons Volume 1” by R J Essery has numerous photographs of wagons in both LMS and BR periods.

“Wagons of the Middle British Railways Period” by David Larkin has some photographs of wagons in the BR period as well and details of those that were vacuum braked and given tarpaulin bars.

“Official Drawings of LMS Wagons No.2” by RJ Essery contains engineering drawings for all three diagrams covered.

Paul Bartlett has numerous photographs taken in the 1970s on his fantastic website which can be found via the url: <http://paulbartlett.zenfolio.com/>

Notes

Somewhere along the line some gremlins got into the etches. The eagle eyed will note that it has the wrong product codes on it. Ignore that and pay attention to what's on the packet and the description on the fret to avoid confusion.

Read through the instructions first and familiarise yourself with the components. Drawings and photographs taken during the construction of the test etches are included to attempt to make my waffle clearer.

Important: All fold lines are through 90° with the fold line on the inside unless stated otherwise.

Everyone has their own soldering methods. I now use a temperature controlled soldering iron with predominantly 145° solder and La-Co paste flux. For a long time I used an Antex 18W soldering iron on virtually everything with few problems.

Check all holes before removing parts from the fret. The drawing process for etching, particularly if you use a CAD program as I do, is extremely accurate but the actual etching process itself is not an exact science. If the fret is slightly over etched then there is no problem but if they are under etched the holes will need enlarging. I find that this is easiest to do before removing parts from the fret. The hole sizes will be noted at the appropriate points as we go along.

To complete the body “kit” you will need a pair of side from Parkside Dundas kit PC02A or PC28. If you ask them nicely they will supply you with just the sprues for the sides so you don't need to buy a whole kit. Their details are as follows:

Parkside Dundas
Millie Street
Kirkcaldy
Fife
Scotland
KY1 2NL
www.parksidedundas.co.uk

Materials list

In addition to the plastic sides for the body a few different sizes of wire are needed to build the tarpaulin bars. Eileen's Emporium are good source for these and they do a mixed sizes pack if you don't want to buy large quantities. You will need the following sizes:

0.31mm - Lamp irons
0.45mm - Tarpaulin bar pivot
0.8mm wire - Tarpaulin bar

Contact details are as follows:

Eileen's Emporium (brass wire)
Unit 19.12 Highnam Business Centre
Newent Road
Gloucester
GL2 8DN
UK
www.eileensemporium.com

Parts List

Body

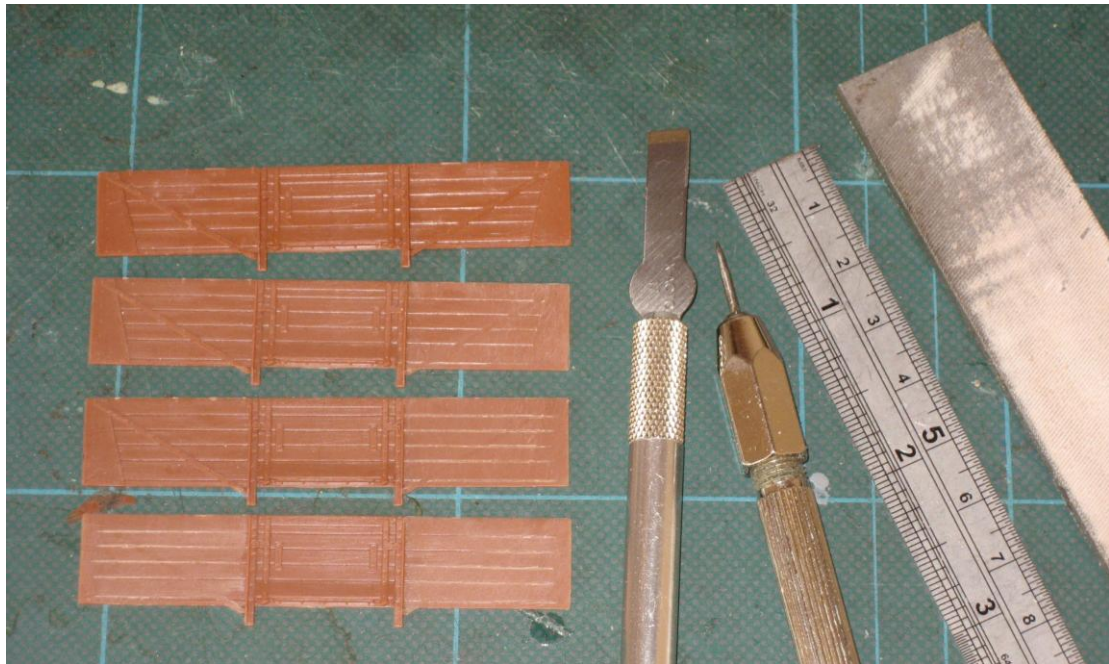
1 – End detail layer
2 – Main end layer
4 – Main frame
5 – End stanchions
6 – Inner end layer
8 – Packing pieces?
9 – Internal detailing parts for tarpaulin bars
10 – Side strapping
12 – Side capping
13 – End capping
14 – Wooden end extensions for tarpaulin bars

Tarpaulin bar

15 – Hoop
16 – Hoop angle
17 – Trapezoidal board
18 – Bar extension
19 – Trapezoidal board fixing straps
20 – Fixing bracket
21 – Lamp irons

Side Preparation

The sides from Parkside Dundas kit PC02A will need a small amount of work to make them suitable for use with the etched frame.

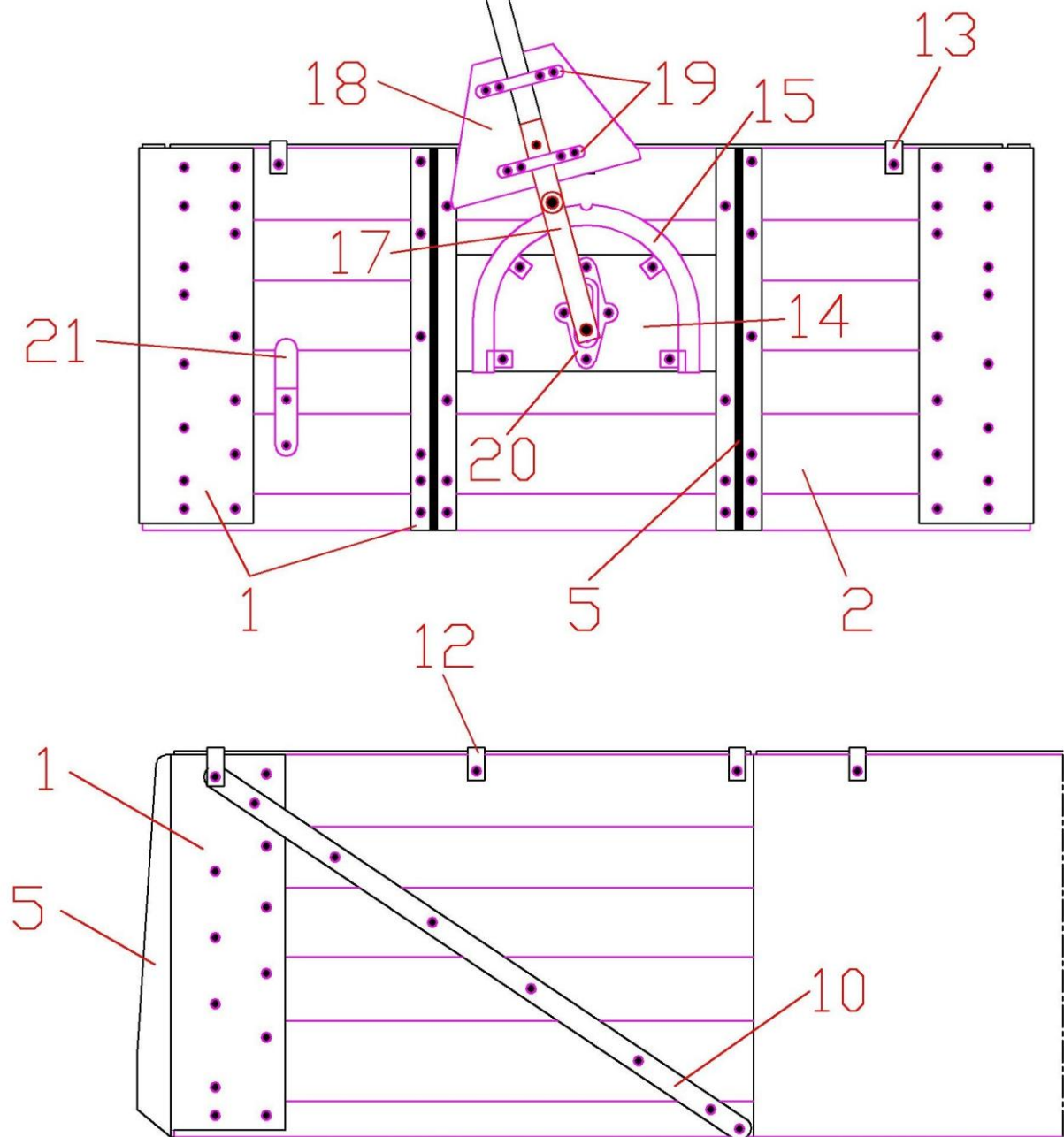


Firstly remove all the detail either side of the door. I use a big file of the type illustrated to remove the sides of the wrap around corrugated ends, the strapping and the representation of the capping. The planking will then need to be scored where the strapping was and extended for the bottom planks so that they are the same as the top one. I use a pin held in a pin vice to do this. The sides will need shortening but this is probably best left until the etches are assembled.

The Parkside kit as supplied has a chamfered top plank on the doors which is plated with a thin metal sheet. This is suitable for all wagons as built. Over time a number of wagons had this top plank replaced with an ordinary piece of timber. Those planks so treated were fitted with capping strips. I have modified a couple of my Parkside bodies by grafting on a thin piece of plasticard and fettling it to remove the chamfer.

0.8mm
Wire

Fig. 1

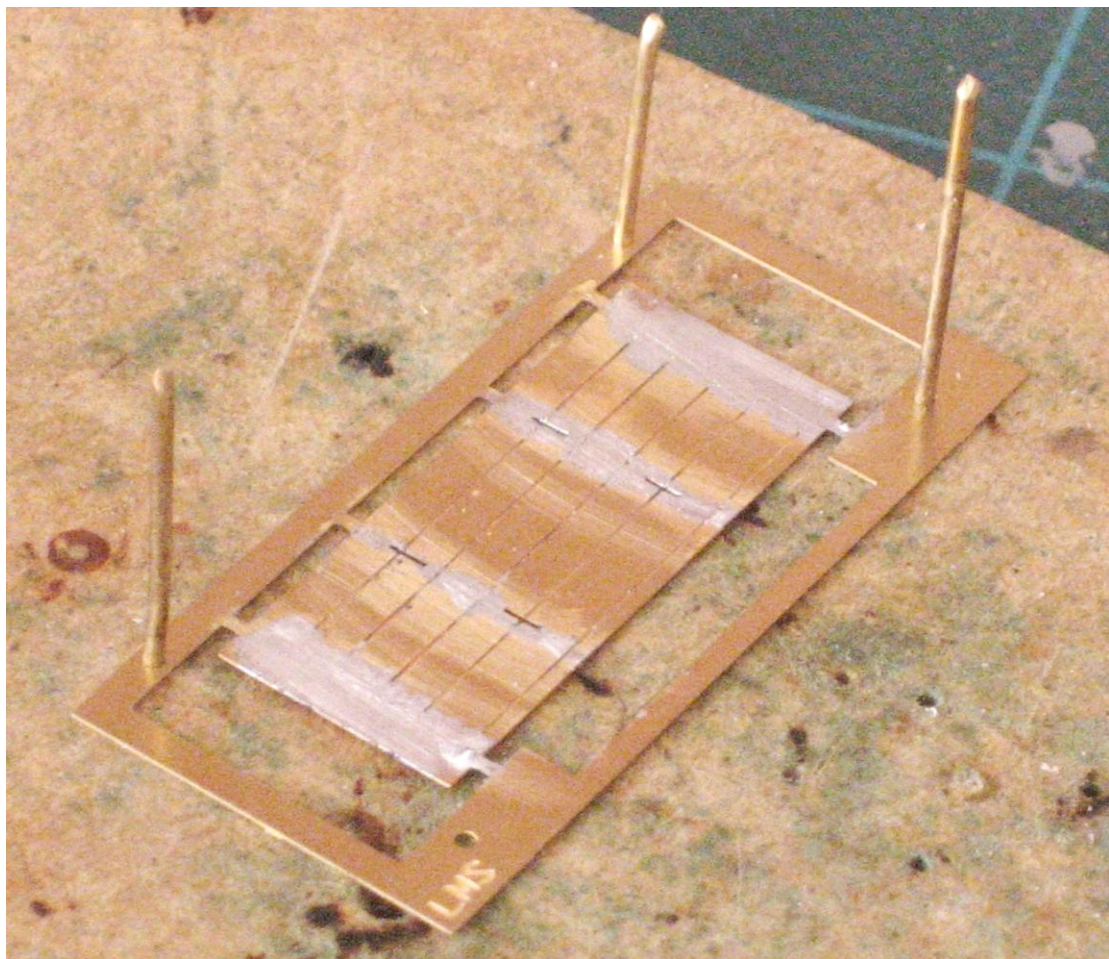


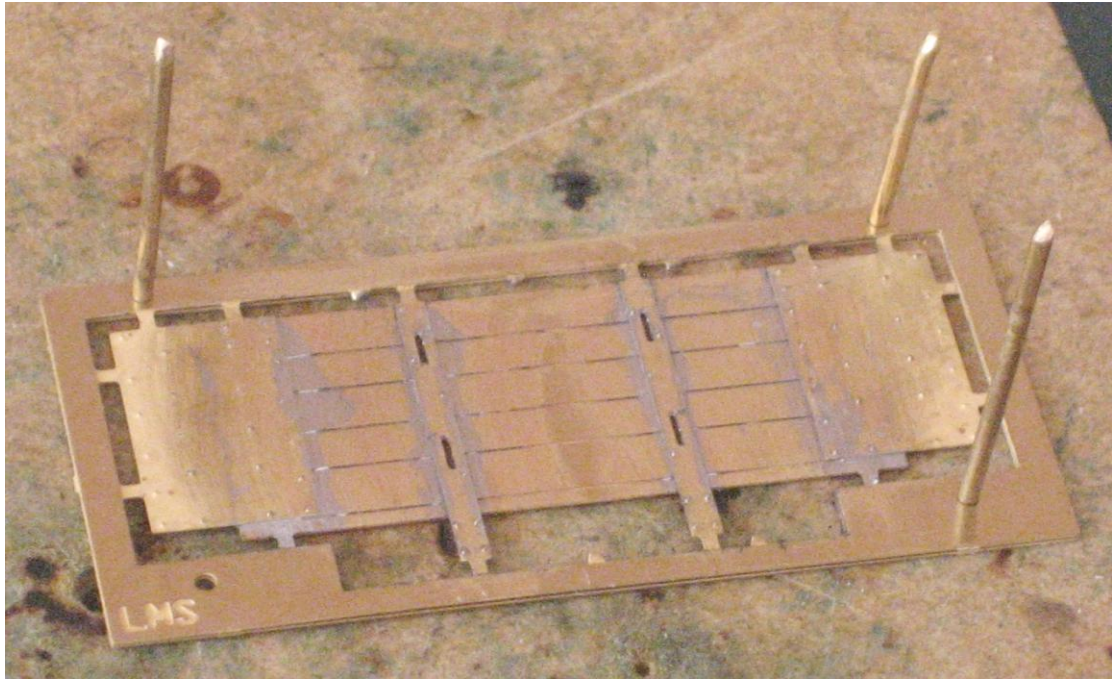
Construction

The main components of the etched part of the body are all on their own little frame with locating holes. The idea is that the components are assembled whilst still in their frame using the locating holes to align everything. Do **not** remove the frames until the end layers are soldered together.

Start the assembly with the end detail layer (1) and the main end layer (2). Using the four holes around the frame of one of the layers as a guide drill four 1mm holes into a piece of scrap softwood or mdf. Use four pins made from short lengths of 1mm brass or nickel silver rod to locate the main end layer onto the piece of wood with the planking facing upwards. Tin the areas of the main end layer where the ironwork will be. Place the end detail layer onto the pins and hard up against the main end layer. Solder the two parts firmly together.

Repeat for the other end.

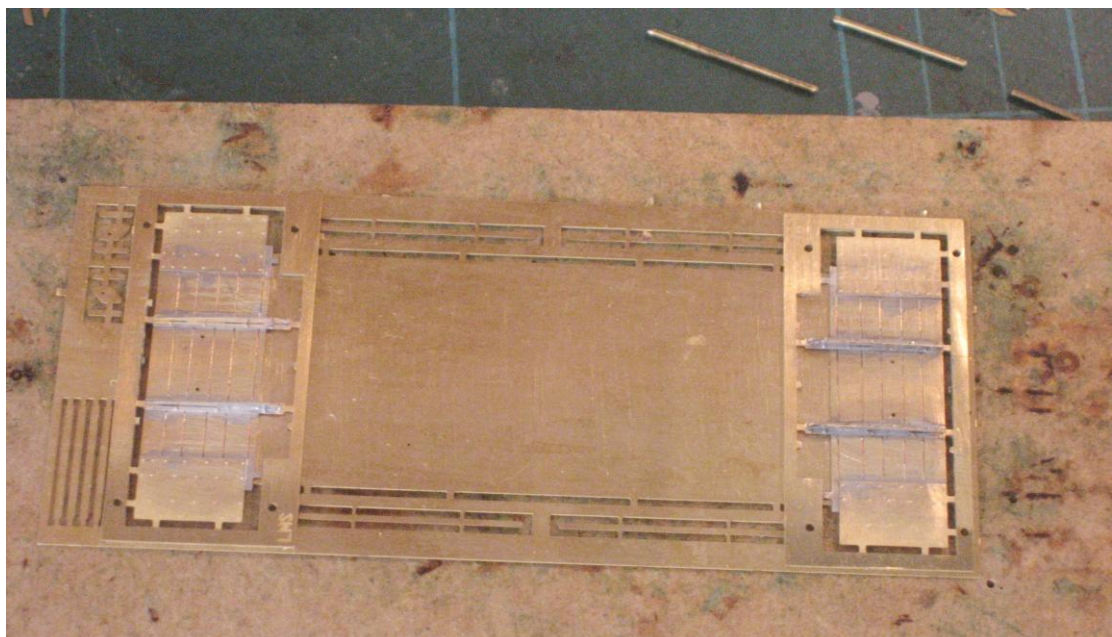




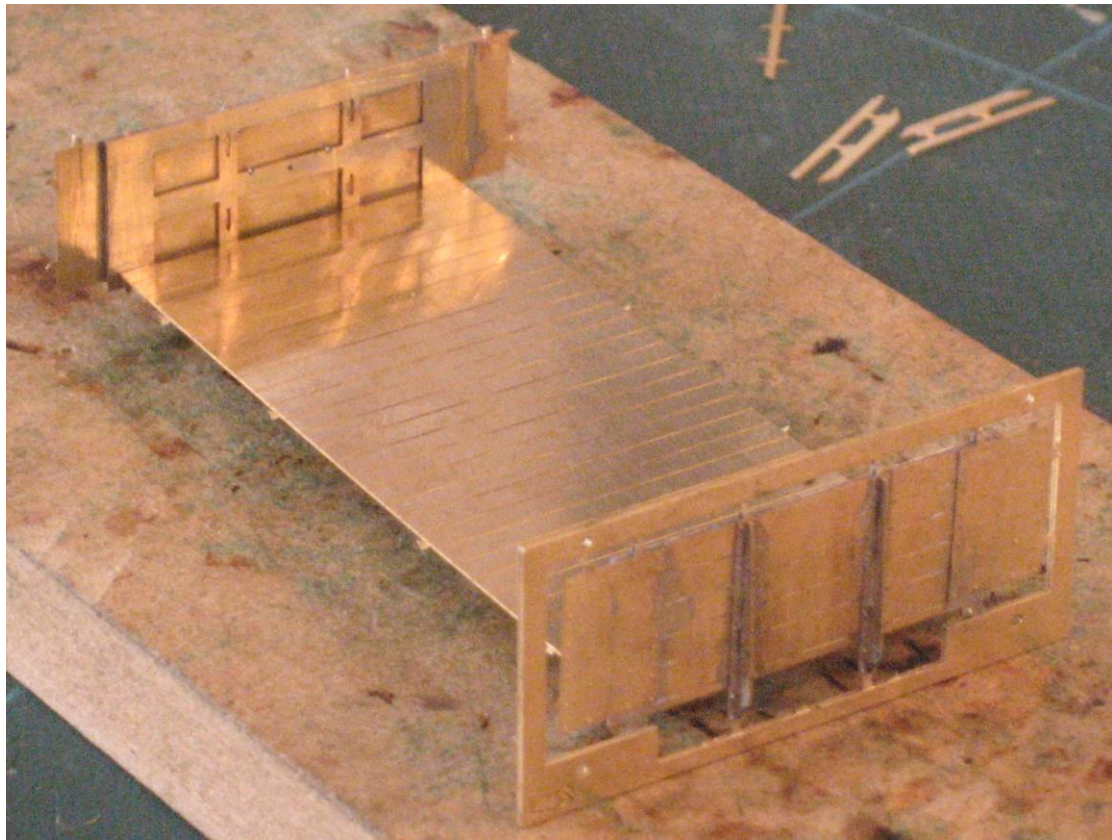
The two end assemblies need to be soldered to the main frame (4). Use the same process as before; placing the ends detail side down and then soldering the main frame to the back using the pins to locate everything. Make sure that the fold lines at the ends of the main frame are facing upwards when you do this. Once everything is soldered together remove the pins and turn everything up the other way so that the detail on the ends is visible again.

Remove the end stanchions (5) from the fret and solder in place using the tabs and slots provided.

At each end were wooden boards which were designed to set the tarpaulin bars so that they missed the end stanchions. Wooden end extensions for tarpaulin bars (14) are provided on the fret to replicate this. Remove from the fret and fold double with the fold lines on the outside. On the etched part there are three holes vertically through the centre line in the shortest direction. 0.45mm wire can be used to align the wooden end extensions onto the wagon end. Solder in place.



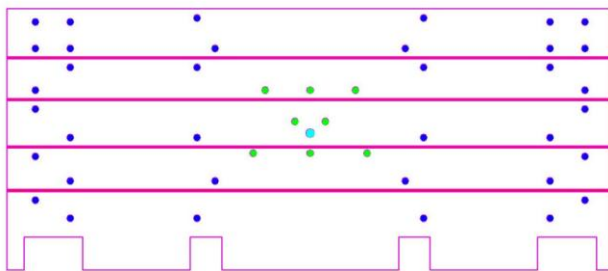
Remove the frames around everything and clean up the connecting tabs. Fold up the ends and reinforce the fold lines with solder.



Press out the rivets for the ironwork detail on the inner end layer (6). See Fig. 2 below.

Solder the internal detailing parts for tarpaulin bars (9) in place. Use the holes as a guide. They will coincide with the rivets on the detailing parts. See Fig. 2 below.

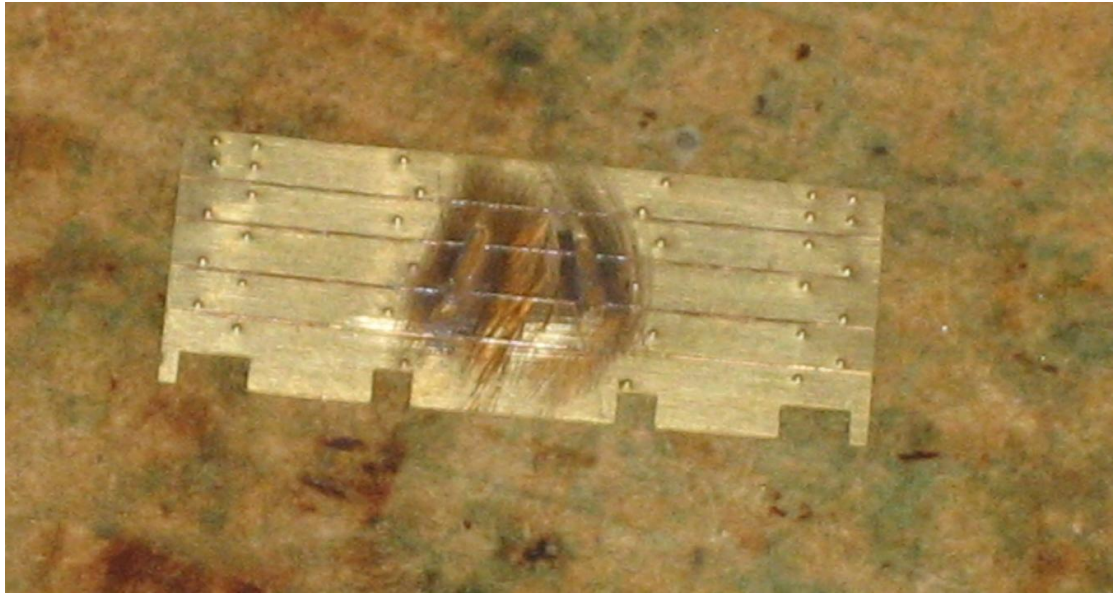
Fig. 2



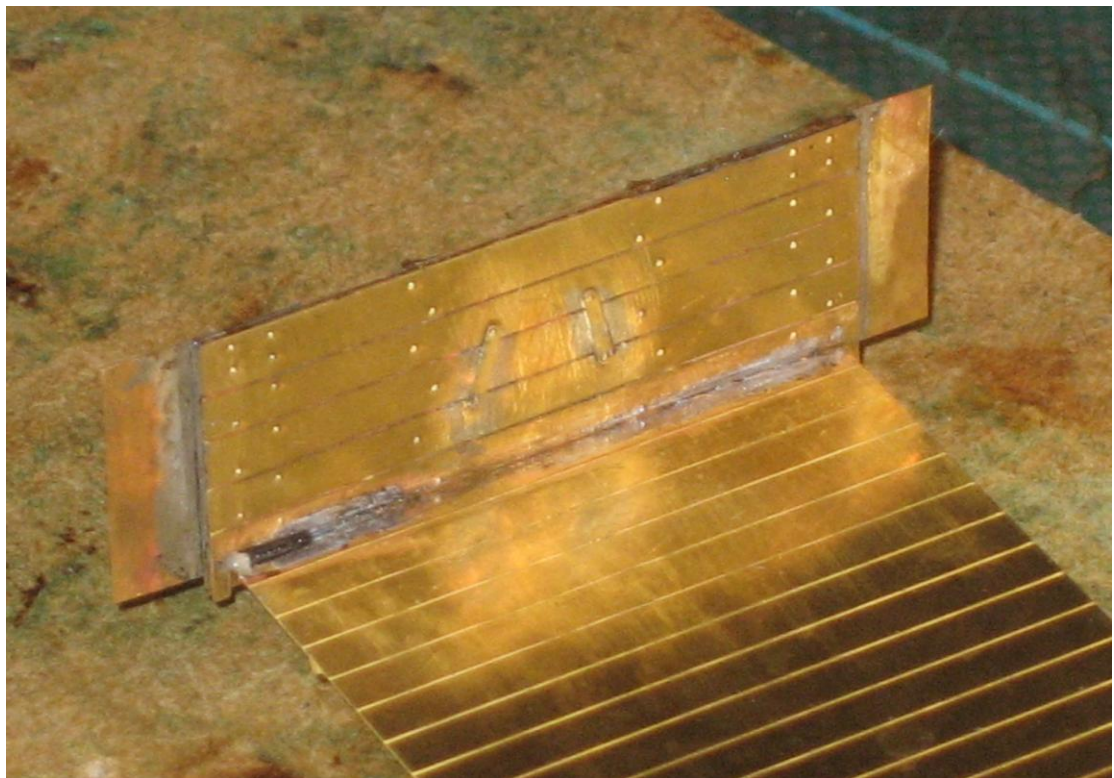
Push out rivets

Tarpaulin Bar Pivot

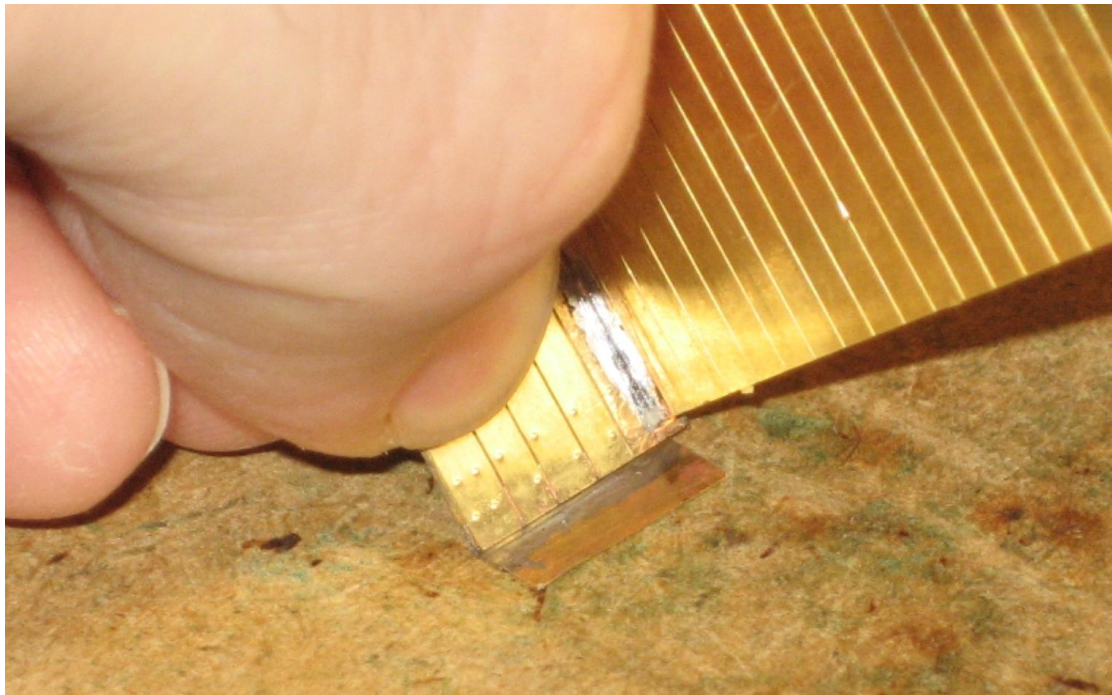
Guide holes for
Tarpaulin Bar detailing



Locate the inner end layer in place on the inside of the ends using the slots and tabs provided and solder in place.

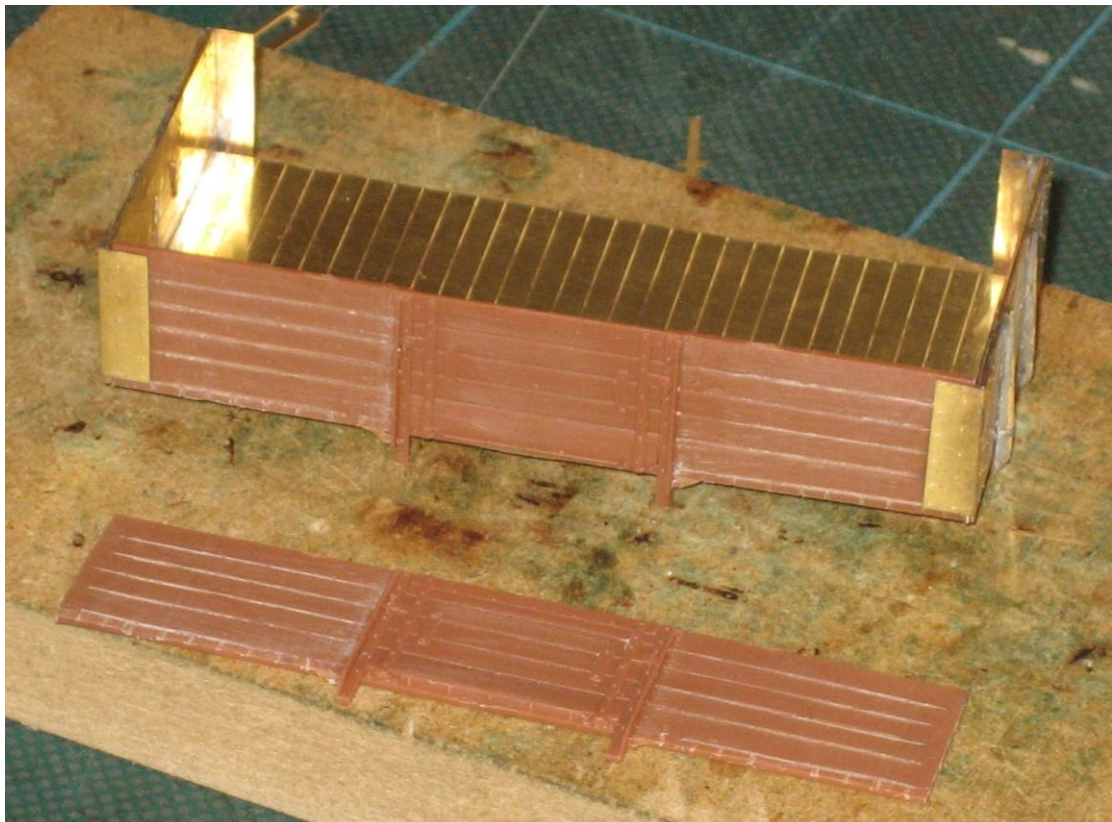


Fold up the corner ironwork pieces. Simply hold the ends and fold through 90°.



Now is the time to add the sides. First glue two thin lengths of plastic section 1.5mm deep along the underside edges of the floor to aid gluing the sides in place. I used evergreen 0.060" (1.5mm) x 0.080" (2mm) rectangular section as that's what I had handy.

Carefully shorten the sides to fit neatly between the ends. Glue the sides one at a time to the metal frame and the plastic on the underside of the floor. Make sure the ends are vertical and that the floor is flat. I used two part Epoxy for this and clamped the sides in place using aluminium soldering clips to hold everything in place.



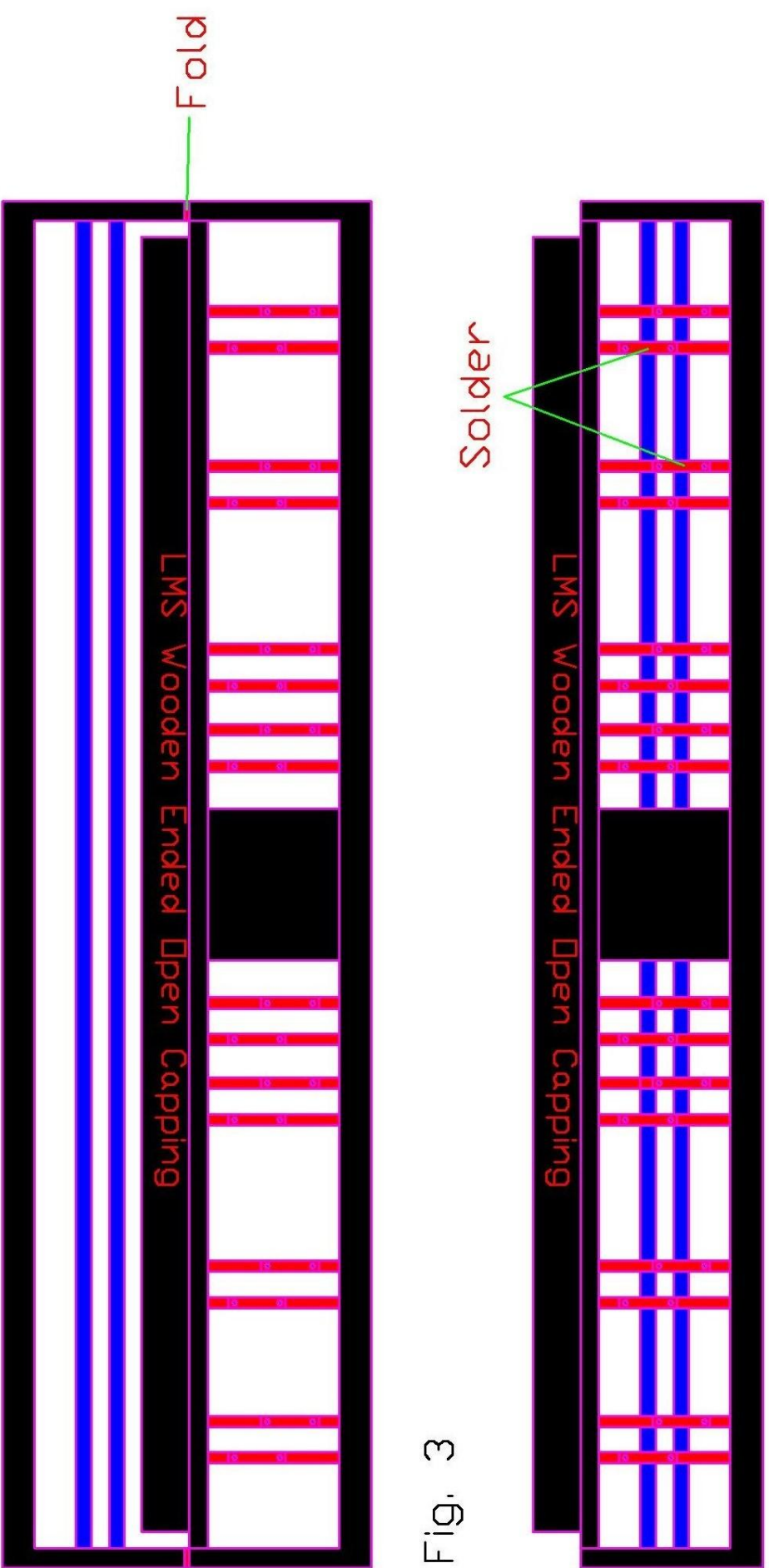


Fig. 3

Once the sides are firmly in place the detailing work can be finished.

The side strapping (10) can be removed from the fret, tidied up and glued in place. See Fig. 1. I used superglue to fix them in place.

The capping also needs to be fitted in place if required. There is a set for the side (12) and a set for the end (13). Both follow the same principal. The fret is folded through 180° with the fold line on the outside about the lines in the centre of the sides. This will position the long sections in the right place respective to the short perpendicular strips. The short strips have rivets on them. The idea is to solder each point where the long strip sits in between a pair of rivets. I used a tiny amount of solder and a paste flux to stop everything getting soldered solid. Once all the necessary points have been soldered in place the capping pieces can be removed from the fret around the edges and separated. See Fig. 3 above. You should have two near identical parts. The short perpendicular strips can be trimmed on the outside of each rivet. Fold over the short perpendiculars at the point where they meet the long section with a pair of pliers. This can be less than 90°. Fit the capping pieces over the sides and clamp the short perpendiculars to the sides using a pair of pliers to finish the folds. Mark the points where the edges of the centre door are and then cut the capping about these points as well as trimming the ends. If you have left the doors as they are discard the centre section. Glue the capping parts in place. I used superglue. Repeat for the end capping.

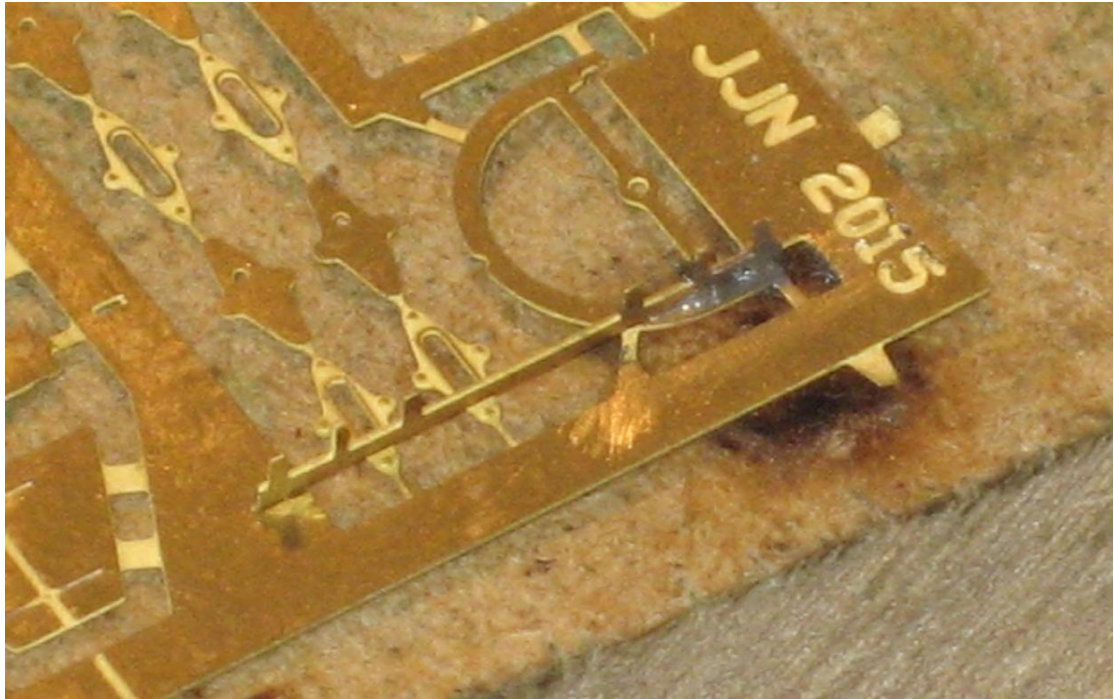
Tarpaulin Bar

Hoops

The distinctive hoops that form part of the tarpaulin bar assembly are etched in two parts. There is the semi-circular hoop (15) itself and the hoop angle (16). This part is designed to be assembled with the semi-circular hoop still attached to the fret.

Remove the hoop angle from the fret and tidy up and connecting tags. Note that there are six tongues coming off one side of the hoop angle. Four of these little tongues are half etched and each has a rivet on them. These will represent the fixings for the hoop on the wagon end. The two other tongues are full thickness and will help locate the hoop onto the wagon end.

The hoop angle needs to be attached to the hoop itself. There are two small tabs at each end of the hoop angle on the opposite side to the tongues. One of these locates into a notch in the hoop and the other into a slot in the fret. The hoop angle can be tack soldered in place and then bent around the inside of the hoop until the tab on the other end locates into the notch on the other side of the hoop. Note that the rivets on the half etched tongues should be on the inside of the hoop. Make sure that the hoop angle isn't exerting any outward pressure on the hoop and solder in place. The following two photographs should make this paragraph a lot clearer!



Once the angle is soldered in place remove from the fret and clean up any connecting tags.

Fold over the four tongues that represent the fixing points for the hoop.

Bar

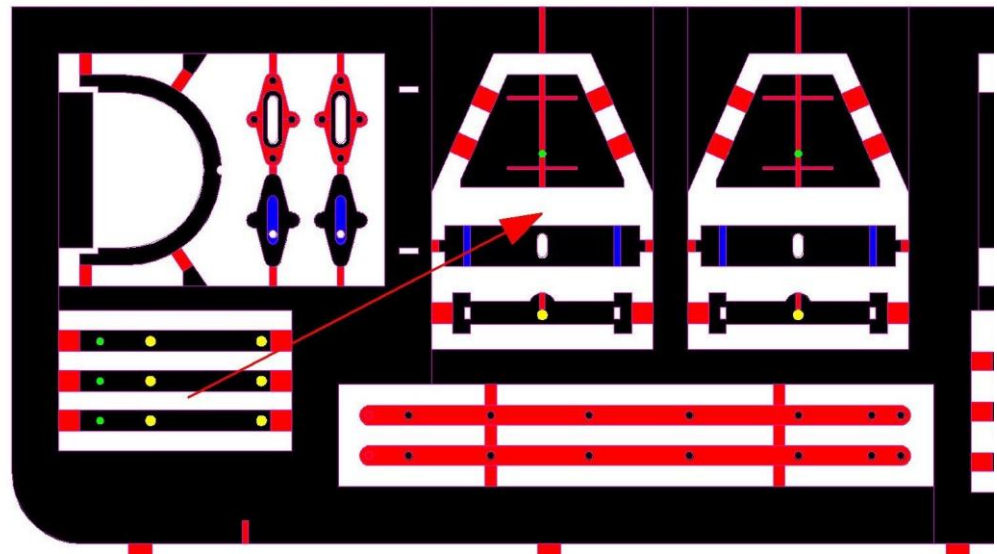
The first thing that needs to be done is to form the bar itself. This is made from a length of 0.8mm wire. The wire should measure 83mm long once the ends are tidied up.

The ends will need to be carefully curved. There is a curved template on one corner of the fret containing the Tarpaulin bar bits. On the longest edge that joins this curve there is a half etched markers. The end of the wire should correspond with this marker. Repeat for the other end.

The basic idea for attaching the ends to the bar is to place the fret on a piece of wood so that one of the longer edges of the fret is near the edge of the wood, drill appropriate holes through the trapezoidal board (17) and the later type hoop bracket (the part with the yellow hole in below the trapezoidal board) (see Fig. 4), solder the Bar extension (18) to the trapezoidal board along with the tarpaulin bar and finally add the fiendish trapezoidal board fixing straps (19). The whole thing can then be removed from the fret and cleaned up.

Fig. 4

0.31mm
0.45mm



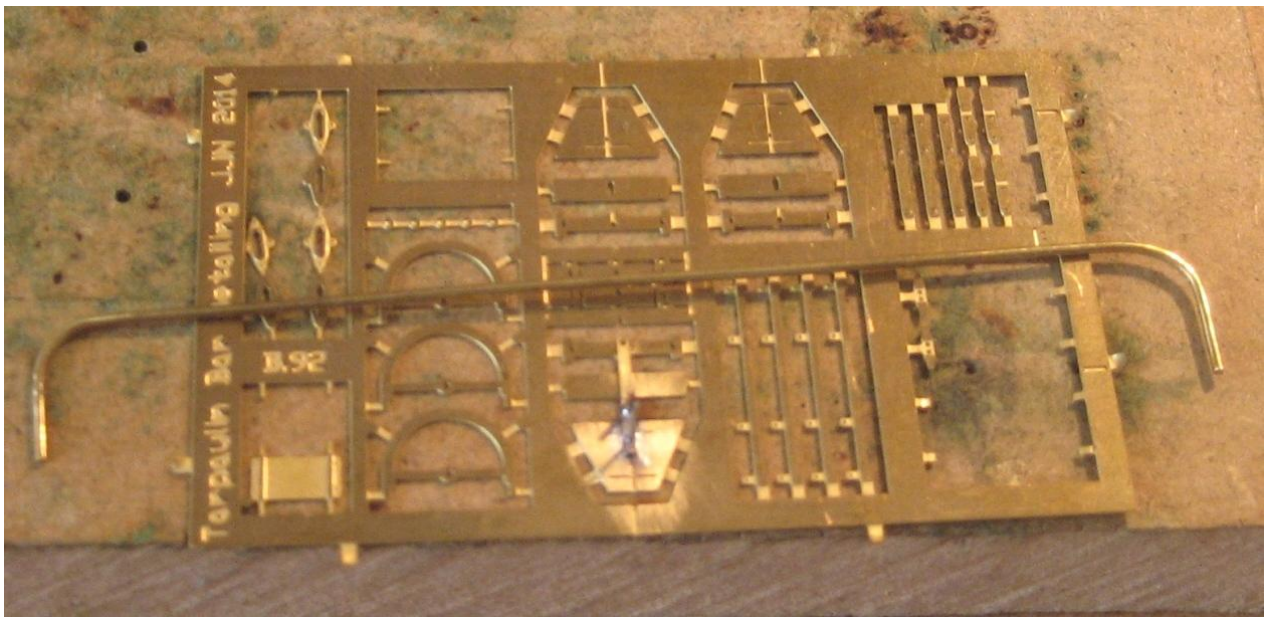
Make sure the bar extension (18) can accept the wire sizes shown in Fig. 4 then remove from the fret and clean up the connecting tags.

Place the fret near the edge of a piece of wood and drill 0.3mm and 0.45mm holes into the wood using the trapezoidal board and later type hoop bracket (the part with the yellow hole in below the trapezoidal board) as a drilling jig as shown (see Fig. 3).

Use short lengths of 0.31mm and 0.45mm wire and the holes just drilled to pin the Bar extension to the trapezoidal board. Solder together as per the photo below.

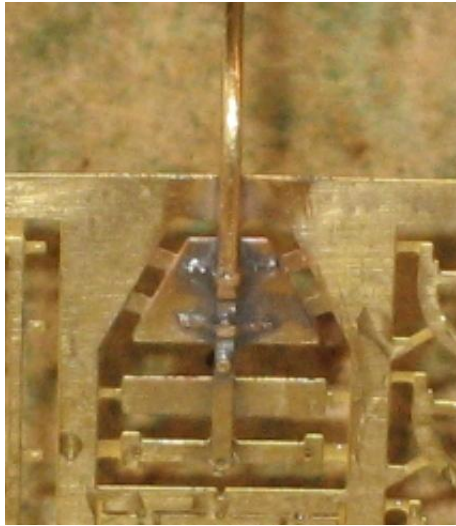


Trim the wire back so that it protrudes approximately 0.25mm from the bar.



Solder the tarpaulin bar to the trapezoidal board using the half etched lines to locate it. Make sure that the bar is at right angles to the etchings. Time taken to make sure this is the case now will easily be saved later trying to adjust it when the two are firmly attached.

The trapezoidal board fixing straps (19) can now be soldered in place. You should use one short and one long on each of the trapezoidal boards. The long strap goes over the wire bar and the short over the etched bar extension. There are half etched lines on the trapezoidal board to aid alignment. I found using a paste flux useful here. It would hold the strap in place sufficiently while forming it around the wire and etched bar. Use the tiniest amount of solder.



Once everything is soldered in place the whole affair can be removed from the fret and any connecting tags tidied up. Repeat for the other end.

The fixing brackets (9) need to be assembled. There are two parts to this with two brackets in each 'strip' on the fret. Fold them double so that the half etched side with the raised detail on is on the outside. Make sure that the hole through the centre of each end can accept a length of 0.45mm wire. Solder a length of 0.45mm wire through the hole so that it just protrudes the inside of the ends and extends about 3-4mm on the outside of the end. The fixing brackets can then be soldered onto the ends using the central hole to align them.

The hoops can now be fixed onto the ends. Use the two long tongues to locate them into the two holes either side of the central bracket. It may be easier to glue them in place rather than solder.

The tarpaulin bars can then be fitted onto the brackets. They may well need tweaking to get a good fit against the hoops. I found a pair of round jawed pliers helpful for this. If you want to be prototypical put a couple of bends into the tarpaulin bar! Trim the pivoting wire back so that it extends 0.5mm or so beyond the tarpaulin bar.

Notes on weighting the wagons

The Rumney Models underframes are designed to work under an optimal 50g load. It is very difficult to bring a model up to this weight simply by fitting lead between the solebars, especially on wagons fitted with clasp brakes. It is my practise to raise the height of the floor in open wagons and minerals to allow a piece of thin lead sheet to be fitted in a cavity under the floor. This is why the floor is arranged as it is.

Painting

I use Halfords grey primer in a tin through an airbrush with cellulose thinners to prime just about everything, including plastic bodies. The primer is synthetic and has no adverse effects on the types of plastics used on RTR railway models and kits. The cellulose thinners used evaporate so quickly that they don't have time to attack the plastic. You can then put your choice of paint over the top including cellulose. Don't use the red oxide in a tin on plastic though as it won't adhere and the paint will just come off.

Justin Newitt 2016