

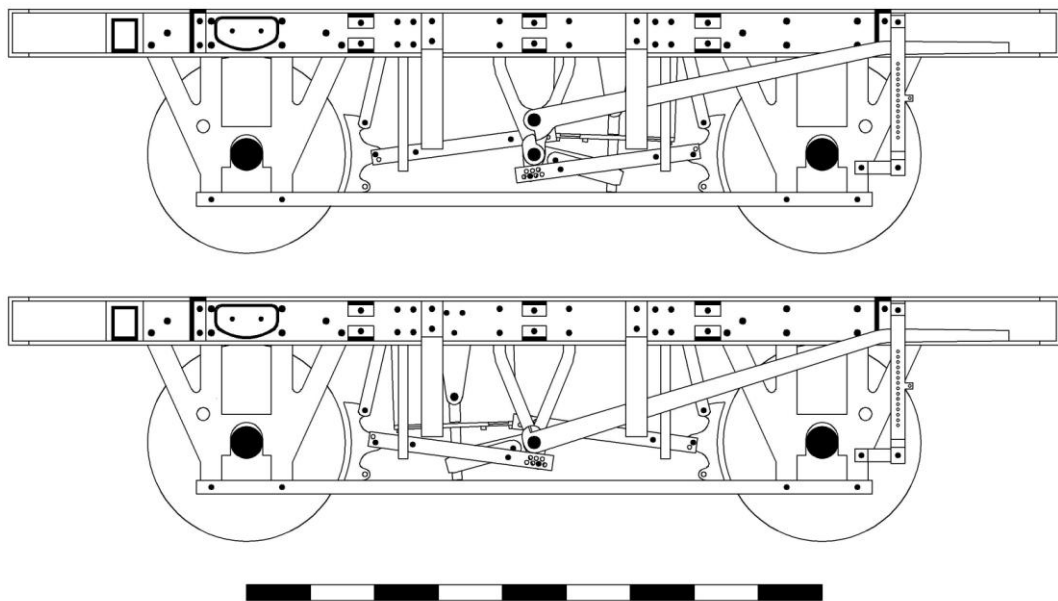
## Rumney Models – BR 13T China Clay Open Chassis Instructions

### Notes

This set of instructions covers the BR 13T china clay open wagon chassis kit B.30. It is designed to provide an accurate underframe for diagram 1/051 wagons and is designed with the Ratio kit in mind. It can also be used for the Bachmann model of the same prototype though a little additional work will be required as the Bachmann model is 0.5mm too long.

The prototypes were built between 1955 and 1960 to replace aging GWR wagons for conveying china clay. The bodies were unusually short at 16' over headstocks with a 9' wheelbase. 875 were built in total over 7 lots. The first and possibly the second lots were built unfitted but all later lots were vacuum braked from new. Those early wagons without continuous brakes were retrofitted.

Given the nature of the chassis it will be necessary to remove the plastic headstock from the Ratio model. This is not necessarily the easiest thing to do and leave the end stanchions in place on the non door end. To make life a little easier in this regard an etched kit to replace the end stanchions is available (Rumney Models kit B.107).



The prototype wagons were built at Swindon and the first four lots followed that works practise of fitting wagons with GWR ratchet type brake lever guards. The last three lots were built with conventional pin type lever guards. I somehow managed to overlook this when drawing up the fret and as such the ratchet type are missing from the fret. I have done a small etch with the GWR type brake lever guards on and if this is not included with your kit and you want it then please contact me.

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. Note that not all the photos are of these particular chassis but suitably illustrate the item in question.

**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.

Check all holes before removing parts from the fret. The drawing process for etching if you use a CAD program as I do is extremely accurate but the actual etching process itself 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.

## **Technical**

The suspension is individual springs made from 0.008" steel guitar wire soldered to the etched spring/bearing carriers. For this you will need a suitable flux. I use Carr's Black label. If the finished vehicle is weighted to 50g with the weight evenly distributed then this will produce a spring deflection of 0.5mm. Don't be tempted to up the gauge of spring wire. Even moving up to 0.009" springs will have a significant effect on the spring deflection. Also don't over weight the wagon or the springs will not have enough upwards movement before they hit the axleguards. Think of the 50g total as an ideal weight but also a maximum. There are notes on weighting the wagon at the end of the instructions.

The chassis is designed to produce a buffer centre height, when the kit is completed and weighted to 50g of 13.8mm when using Exactoscale wheels. The Exactoscale wheels are 13.4mm (3'1½") in diameter. Different makes of wheel may slightly affect the ride height depending on their diameter.

## **Materials list**

Several sizes of wire are needed to build the chassis. Eileen's Emporium are good source for these and they do a mixed sizes pack if you don't want to buy large quantities.

0.31mm - Most of the brakegear, tie bars, brake lever guards, safety loops

0.8mm - Main brake cross shaft

1.0mm - Alignment pins for the axleguard assemblies and brakegear frets

You will also require items such as buffers, vacuum pipes and vacuum cylinder (if building fitted), axleboxes and springs as well as couplings to complete.

For buffers I would recommend those produced by Lanarkshire Model Supplies. They are by far the best around and a lot of types of buffers are available pre drilled for fitting sprung buffer heads. This service is particularly useful for some of the heavy duty buffers with their large 2.5mm shanks. The quality is excellent. Early lots had 1'6" GWR type 2 rib self contained buffers (Lanarkshire Models code B031) and later lots had 1'6" BR self contained buffers (B011).

Metal buffer heads and springs with 2.5mm shanks are available from MJT.

Lanarkshire Models also does BR swan neck cast vacuum pipes but I find these quite vulnerable and prone to being broken. I find that much better method is to fashion them from 0.7mm (ish) soft brass or copper wire with something like 41 SWG wrapped around it.

These wagons were fitted with 5 leaf springs and mostly oil axleboxes though some got given roller bearings. Rumney Models produces suitable 5 leaf spring castings with BR 2 part (FA.05), BR 2 part square (FB.05), BR welded (FC.05), BR Platefront (FD.05) and roller bearing (FE.05) axleboxes. See the Rumney Models website for further details, including illustrations. They are listed under Wagon Castings in the 4mm scale section.

If you are constructing a fitted wagon then a vacuum cylinder will be needed. They were the 18" type on these underframes and are available from Rumney Models (F.01). These can be found in the same place as the spring and axlebox castings.

Rumney models produces coupling hooks suitable for these (B.94) and also BR Instantan links (B.95A). These can be found in the 4mm section of the Rumney models website under Wagon Detailing. Exactoscale supply links and these are available through C&L. If you need screw couplings Masokits supply them and something is in preparation from Rumney Models.

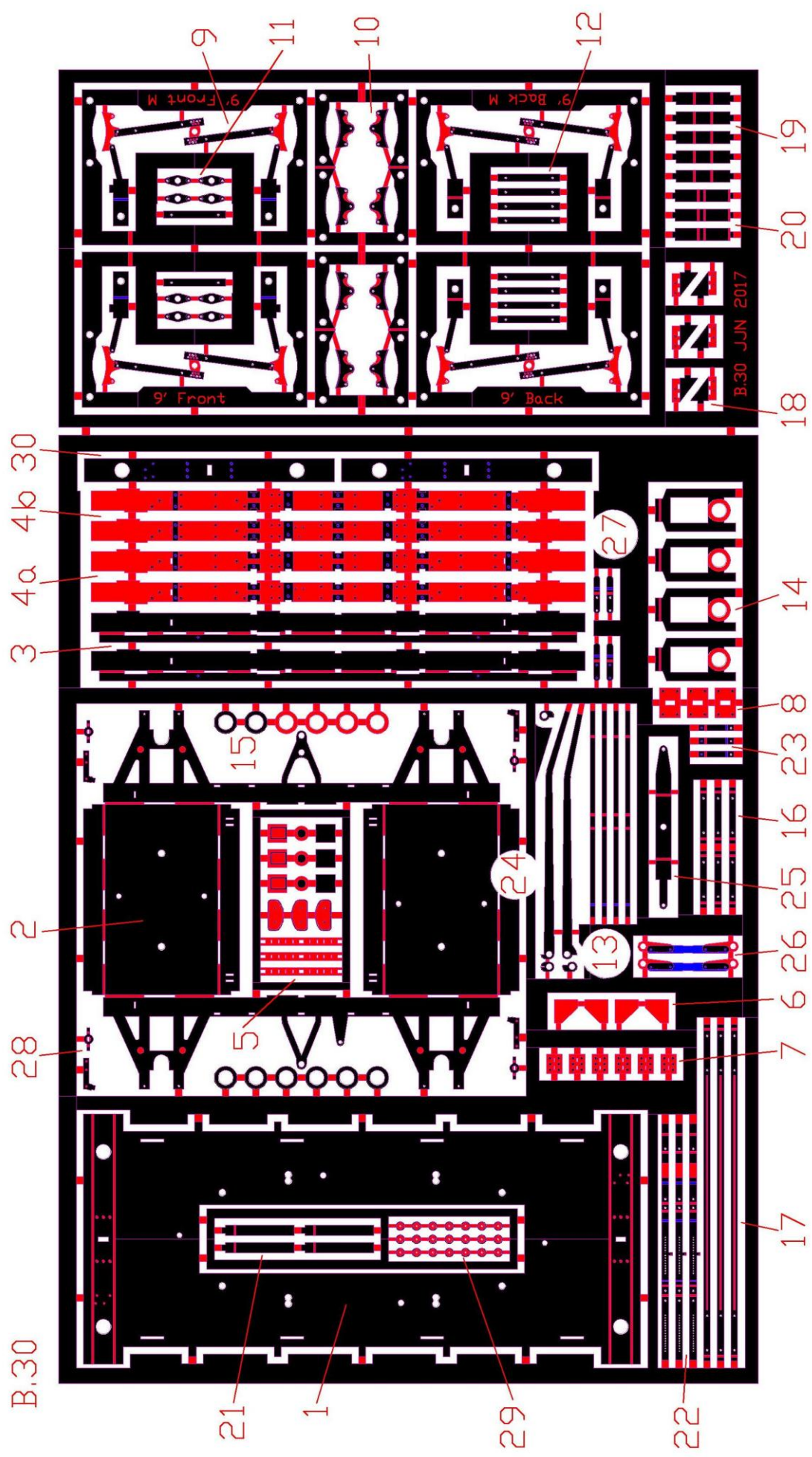
Contact details for the above suppliers can be found at the end of these instructions.

### **Component List**

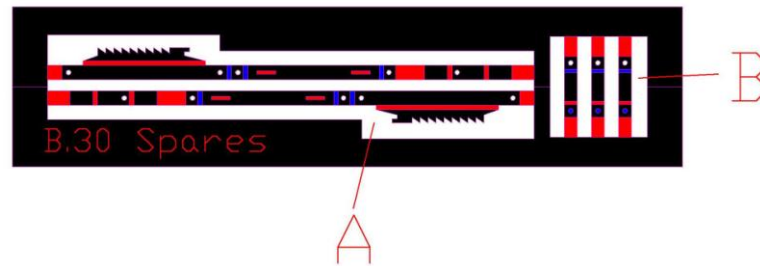
1 - Chassis top plate	17 - Axle tiebars
2 - Axleguard assembly	
3 - Solebars	18 - Solebar brackets - Outer
4a - Solebar detailing overlays - for use <u>with</u> solebar brackets	19 - Solebar brackets - Inner (side stanchions)
4b - Solebar detailing overlays - for use <u>without</u> solebar brackets	20 - Solebar brackets - Central (door)
5 - Solebar detailing	21 - Door springs
	22 - Pin type brake lever guards/brackets
6 - Solebar/Headstock corner plates	23 - Pin type brake lever guard stays
7 - Solebar/Headstock bracing	24 - Brake levers
8 - Coupling pocket detail	
	25 - Vacuum cylinder brackets
9 - Main brakegear	26 - Vacuum cylinder actuators
10 - Brake shoe infill	27 - Lamp Irons
11 - Push rod cranks	28 - BR swan neck vacuum pipe brackets
12 - Push rod infill	29 - Cleats
13 - Push rod safety loops	
	30 - Headstock extensions for Bachmann model
14 - Spring Carriers	
15 - Bearing washers	
16 - Axle keeps	

### **Additional Ratchet type brake lever guard etc**

A - Racket type brake lever guards/brackets	B - Ratchet type brake lever guard stays
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# B.30 Spares



## Construction

### Main Chassis

Firstly check the fit of your buffers in their holes in the headstocks. It may sound a bit odd starting with something that usually goes on at the end but it will be much easier to open out the holes now rather than later.

Start with the chassis top plate (1). Push out the half etched rivets on the headstocks if required. I find the easiest way to do this is to use a drop head rivet press with the fret placed over one of those ubiquitous green cutting mats. Remove from the fret.

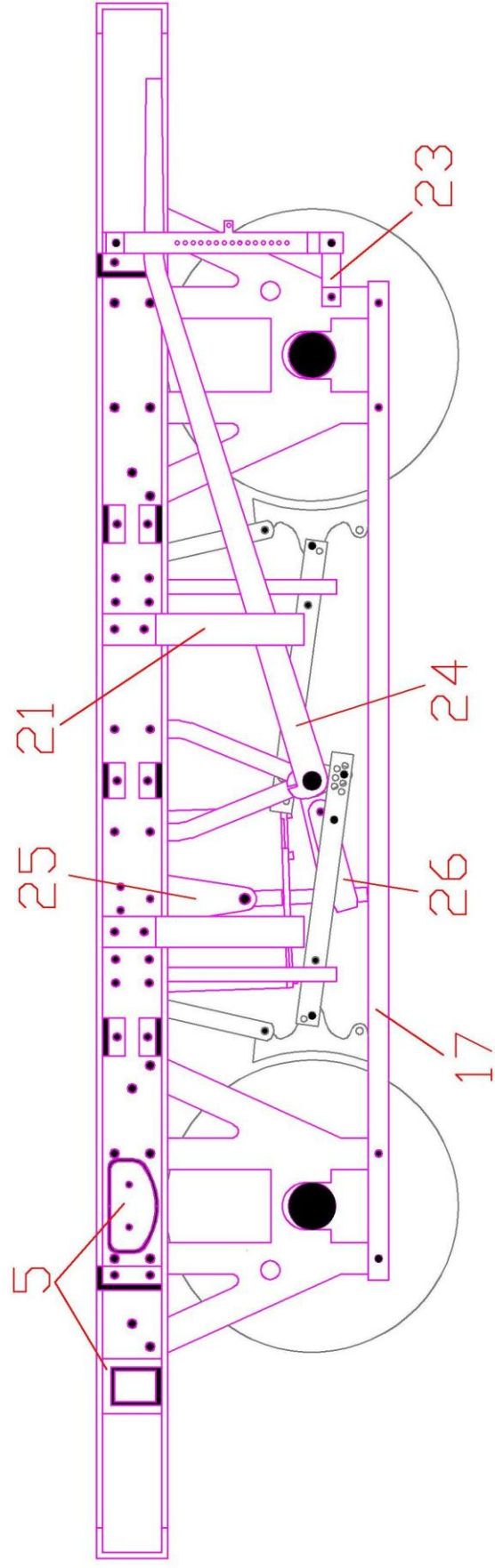
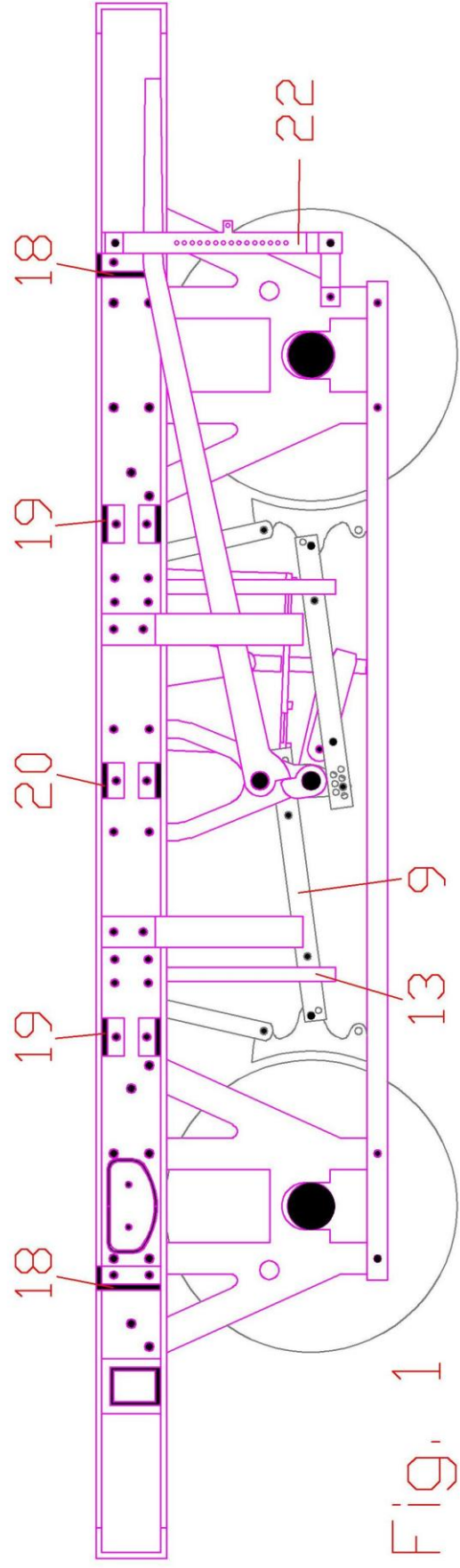
The headstocks need to be folded up. This is best done with the chassis top plate clamped to something or held in a vice to avoid distortion. There are two sets of fold lines as the headstocks need to be folded into a channel. Starting with the outermost parts of the chassis, fold the top plate fold through 90°. You can reinforce this fold line if you wish but I haven't found need to do this. Next fold the headstocks through 90° to form a channel. Do not reinforce with solder yet.

Check that all the holes in the in the vees on the axleguard assembly (2) will accept 0.8mm wire. Drill out the holes on the backs of the axleguards as per your particular prototype (they did vary) using a 0.85mm drill then remove from the fret. Remove the detailing from the middle of the axleguard assembly and clean up connecting tags.

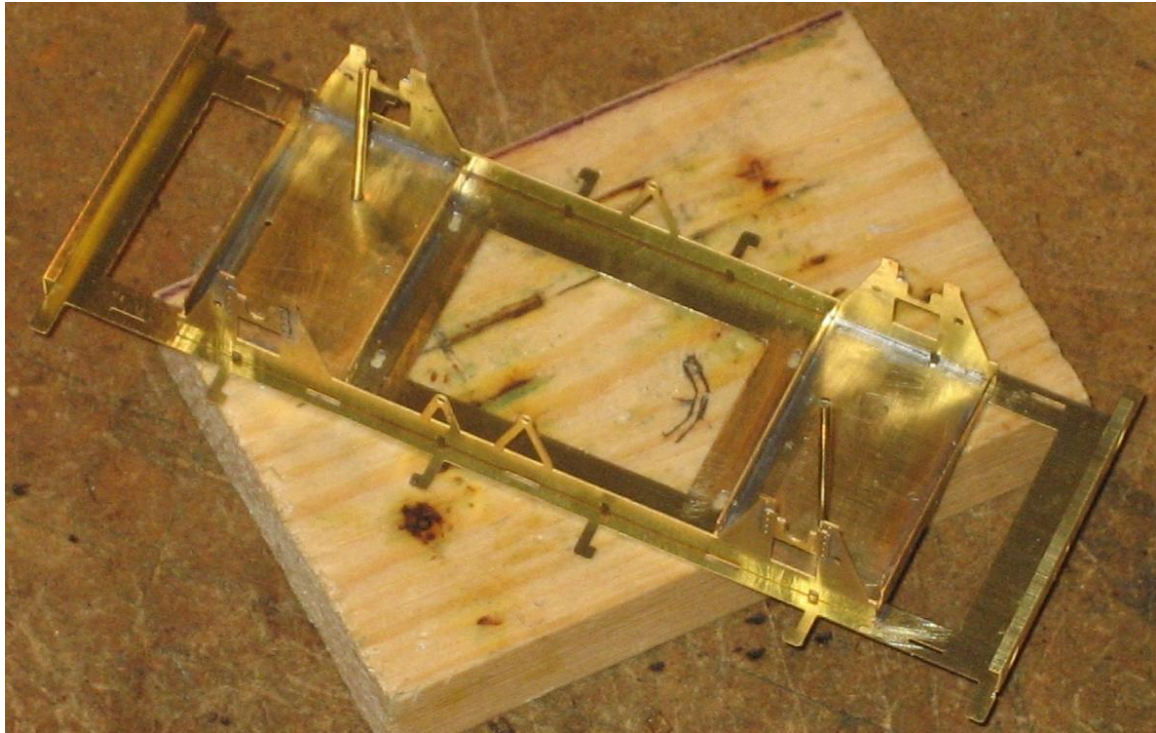
If you wish to model any of these chassis in their unfitted form then you will need to remove the vacuum cylinder bracket from the axleguard assembly. A few seconds work with a piercing saw will take care of this.

Carefully fold up the sides and the four spring supports. Make sure that the sides are at 90° and adjust if necessary. Reinforce the fold lines with solder.

The chassis top plate and the axleguard assembly then need to be soldered together. There are 1mm diameter holes on both the top plate and axleguard assembly to aid location. Using short lengths of 1mm wire with the ends tapered slightly pin the two parts together. You may need to open out the holes slightly but make sure the wire is a tight fit. Solder the two parts together and then remove the locating pins. I have noticed a tendency for the top plate to lift in the centre when the solebars are fitted so make sure area around the vees on the axleguard assembly are soldered to the top plate.







Next remove the solebars (3) from the fret and fold into an L shape. I find the best way to do this is in a vice. Remove your chosen solebar overlays (4) from the fret.

There are two sets of solebar overlays 4a and 4b. There are fiddly little brackets included on the fret to model those fitted to the solebar on the prototypes. If you wish to add them then use set 4a and if not use set 4b. If you wish to model an unfitted chassis then you will need to remove the rivets for the vacuum cylinder. Press out the half etched rivets, remove from the fret and tidy up any connecting tags.

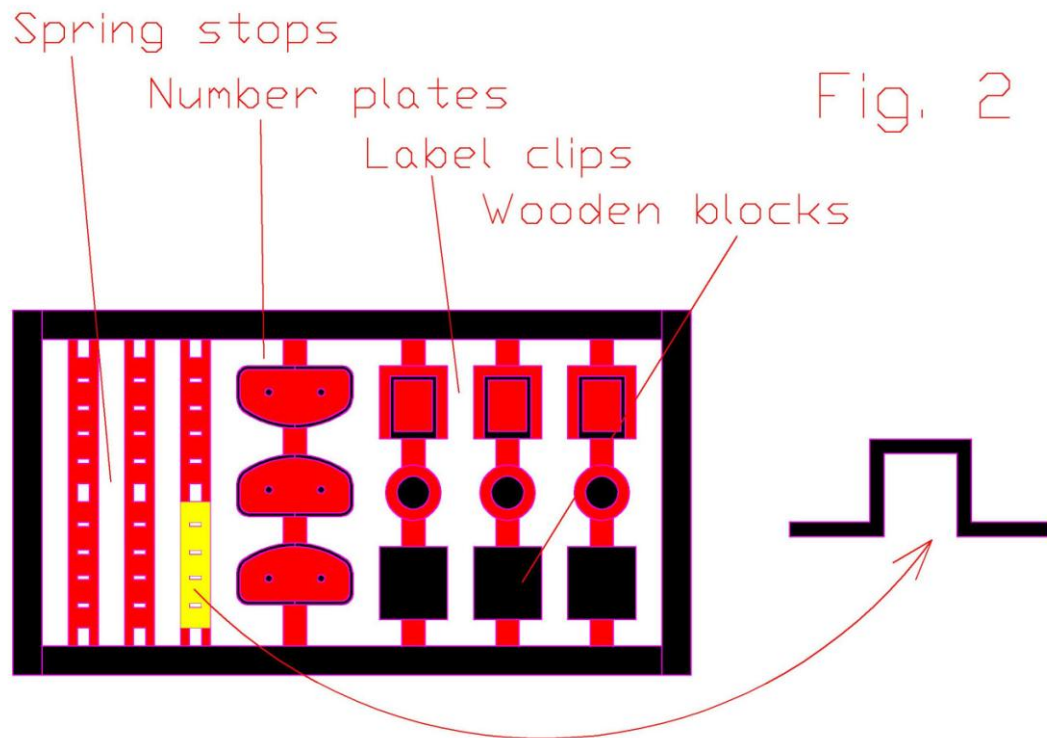
As a result of the etching process there should be a curve through them with the ends closer to you if looking at the rivet detail side. Carefully bend them so that the curve is reversed slightly and that the ends are further away when looking at the rivet detail. This can easily be done between thumb and forefinger but take care not to put any folds into it.

The solebar overlays are designed to fit into the slots in the solebars. The completed solebar then locates into the slots in the chassis top plate. Locate the solebar detailing overlay in the solebar and tack solder in place. Note that there is a right way up for all the overlays (note that the notches for the brake lever guard should match those in the solebar).

Now is probably the easiest time to attach the solebar detailing to the solebars so I shall cover this now before returning to the business of assembling the chassis.

## Solebar detailing

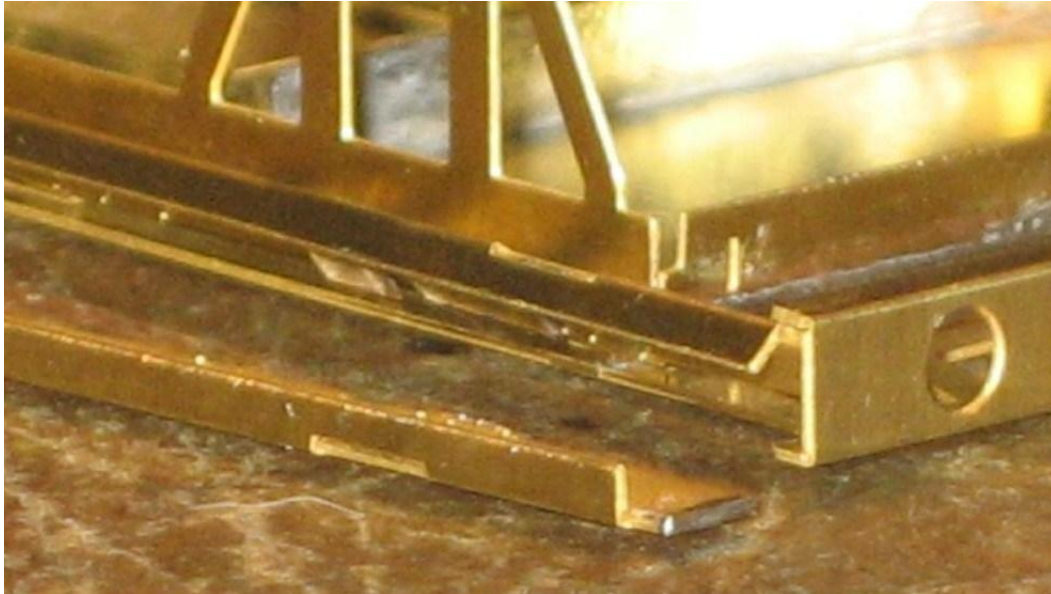
The solebar detailing (5) comes contained in its own little fret. See Fig.2 below. On it you will find fabricated axle spring stops, number plates, label clips, a rectangle that is actually a block of wood on the real thing and some small round dual depth plates. I have no idea what the purpose of the last two items is but the rectangular block of wood was quite common and the round plates could be found on shock absorbing vans where the springs were mounted inside the solebars. The positions of all this stuff varied so check your prototype. The details can be soldered on or glued. If you wish to glue the detail on its best left until the chassis is assembled.





## Main Chassis Continued...

The solebars can now be fitted to the chassis. Note that there is a correct side for the solebars on all vacuum fitted wagons. The vacuum cylinder and hence the rivets on the solebar go on the non-Morton cam side. See Fig. 1. There are slots and tabs to aid location and the ends go into the channel that is the headstock. Fit the solebars at an angle and then straighten locating the slots and tabs at the same time. Once in place then the solebar can be soldered in place. If you have problems locating the solebar in place then you can gently bend the headstock back to allow the solebar to slot in. It is difficult to get the headstocks at 90° though if you do this though and it shouldn't be necessary. The accessible fold line on the headstock can now be reinforced with solder if you wish.



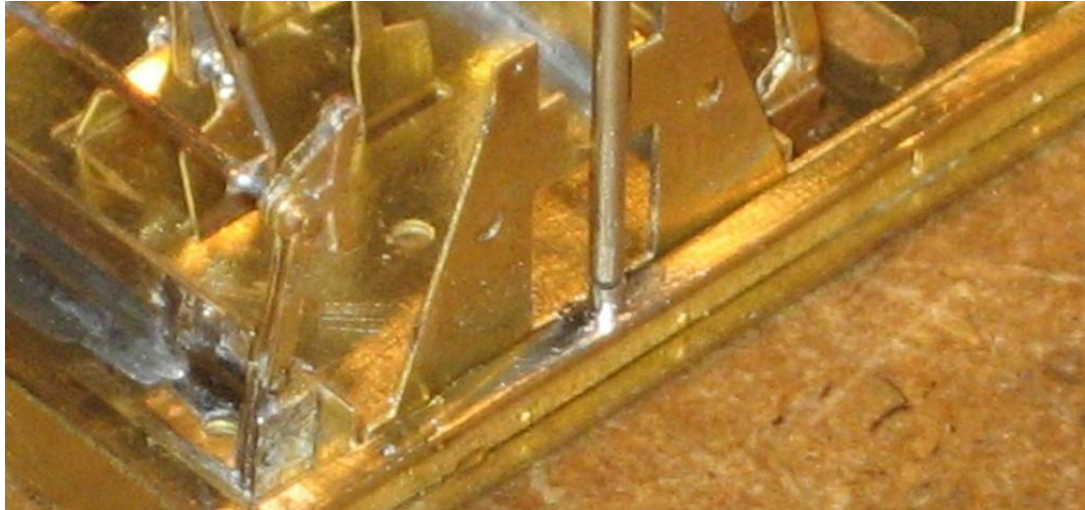
I have noticed a tendency for the top plate to lift in the centre after the solebars are fitted. There is a tab on the axleguard assembly beneath the vees that butts up against the top plate. If you solder this tab and the top plate together this will prevent the top plate from lifting.

If you are intending to fit the chassis under a Bachmann body you will need to add the Headstock extensions (30). Push out the half etched rivets, locate onto the headstock using the holes for the buffers and solder in place.

Add the Solebar/Headstock corner plates (6). These should be arranged so that the two straight sides go along the outer edge of the headstock and the inside of the Solebar. Note that there are two sizes. The narrower ones are for Shock absorbing wagons with the larger ones for everything else.

You can also now add the solebar/headstock bracing (7). These fold into an L and fit into the solebar/headstock channels. There are small half etched slots to aid you locating the bend point.

## Spring Stops



There were two different pattern of spring stops fitted depending on when they were built. There are 6 fabricated spring stops for early builds on the solebar detailing (5) fret (see Fig.2) which can be folded up and then soldered in place. I find a small pair of self closing tweezers good for this. Later wagons had round pattern spring stops. I use 1mm wire for these. I cut almost all the way through the wire with a piercing saw and then solder in place. The cut can then be completed without the joint breaking.

## Headstock detailing

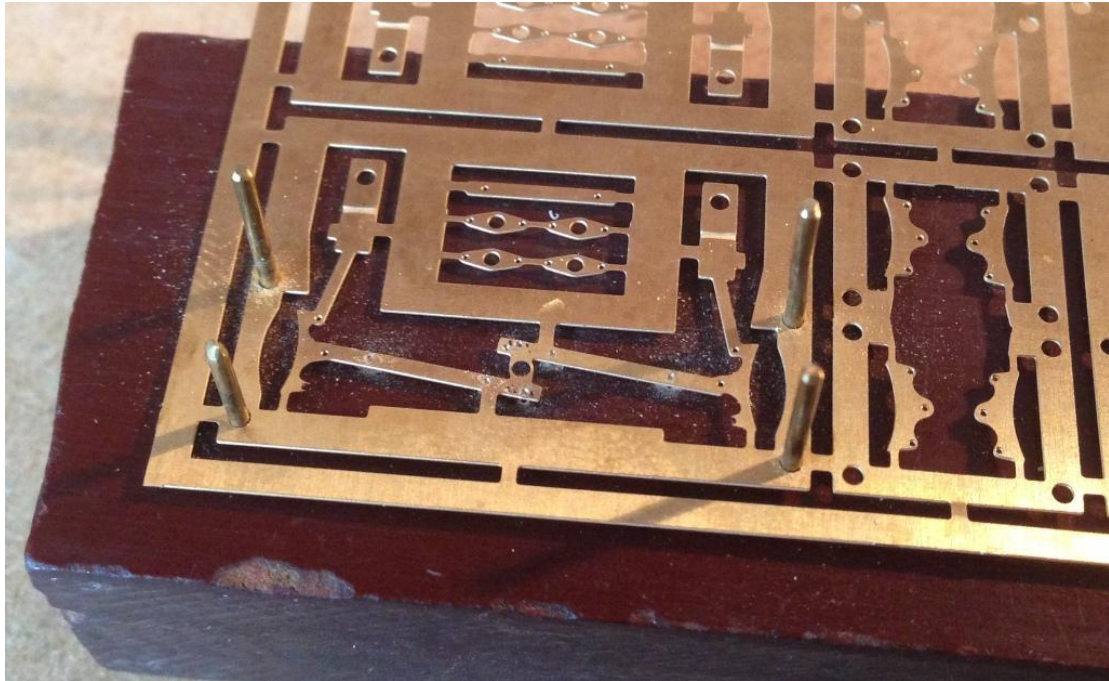
Now is as good a time as any to fit the coupling pocket detail (8). Solder in place using the hole for the coupling as a guide. I find the easiest way of doing this is to shape the end of a cocktail stick to fit in the slot. This can be used to align the detail on the headstock and hold it in place while you solder them together.





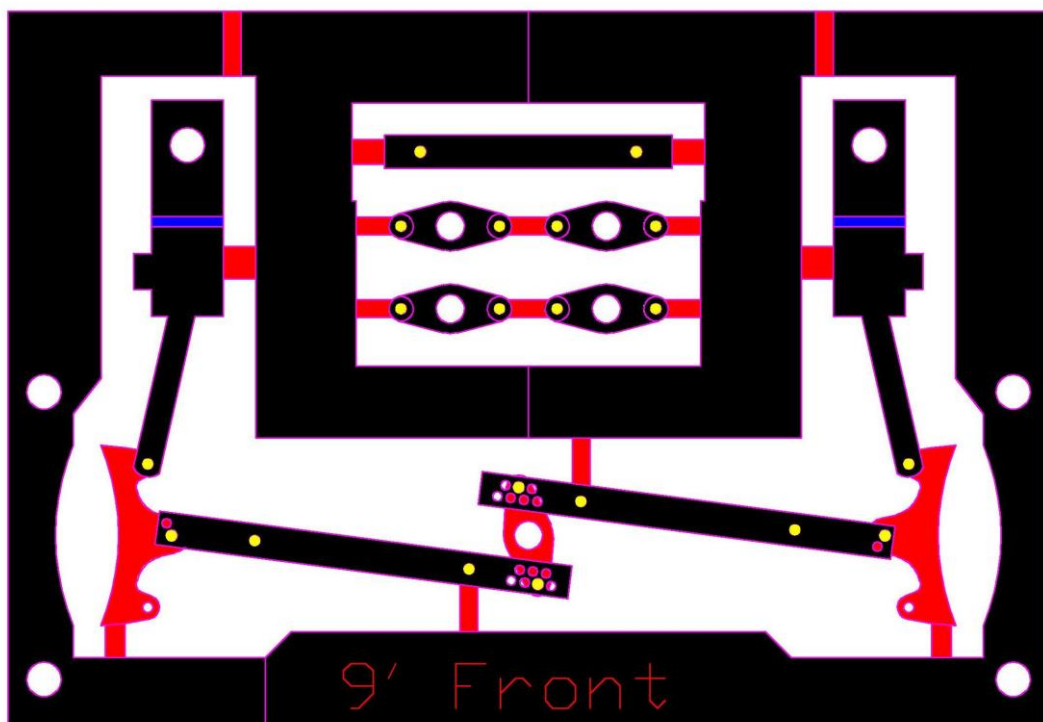
## Brakegear

The first step is to create a jig to aid assembling everything. Use a suitable piece of wood or mdf. Use the etch as a guide. Drill through the main brakegear (9) parts labelled **front** with the writing **facing** towards the wood. The larger holes are 1mm diameter and the smaller ones 0.3mm. If you are unsure which holes you should be drilling through see Fig. 4 below. If you are making a 4 shoe Morton chassis you will need two jigs, one for each side.

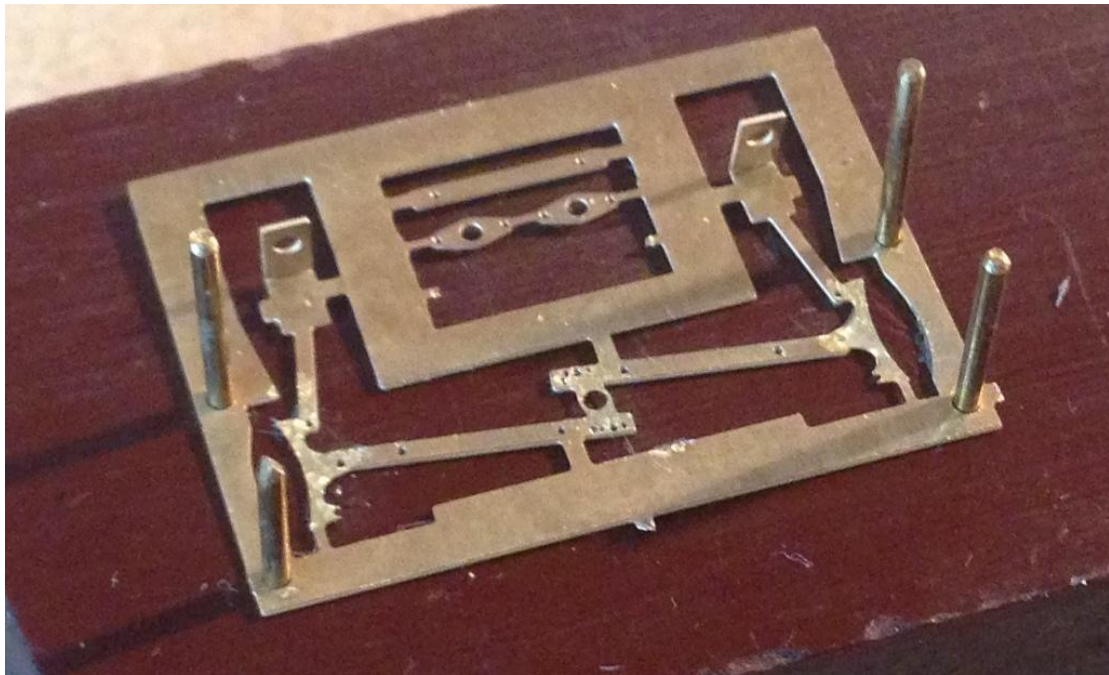


Check that the small holes in the fret can accept 0.31mm wire. These are marked in yellow on Fig. 3 below. I find it easier to locate the hole from the side with no writing.

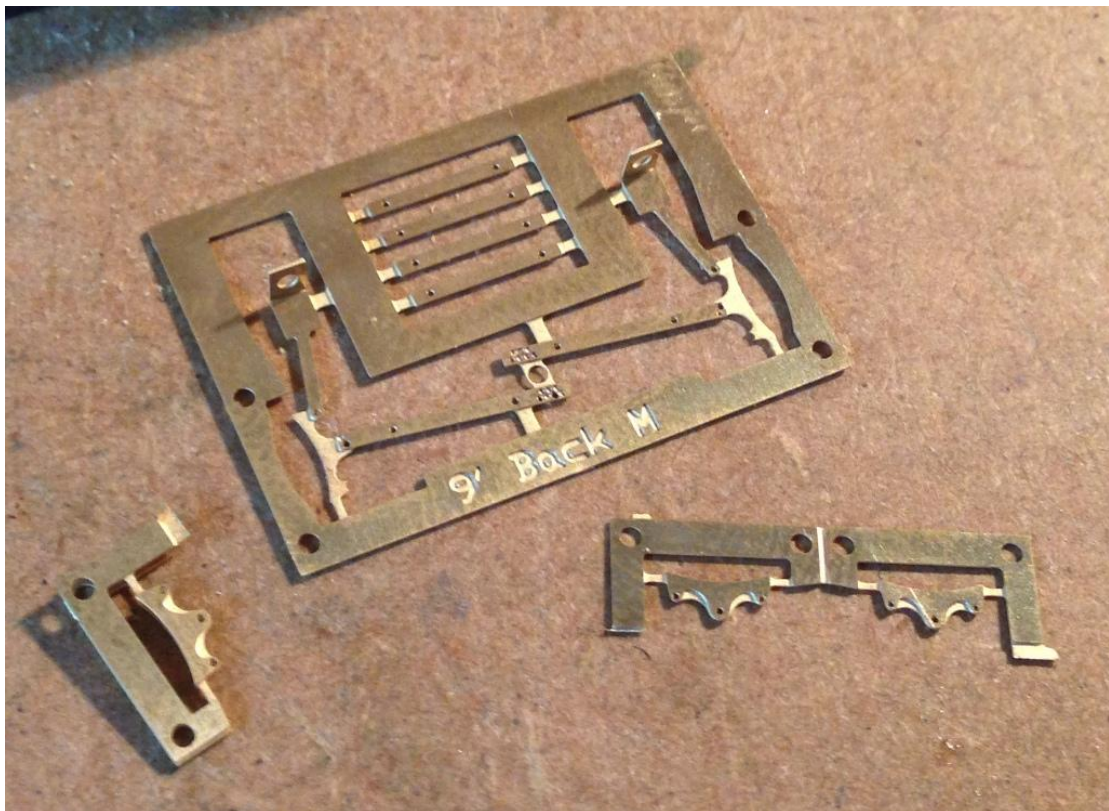
Fig. 3



Remove the push rod cranks (11) and push rod infill (12) (if required). Carefully fold up the feet on the part labelled **front** and pin to the jig using short lengths of 1mm wire, writing side facing down.

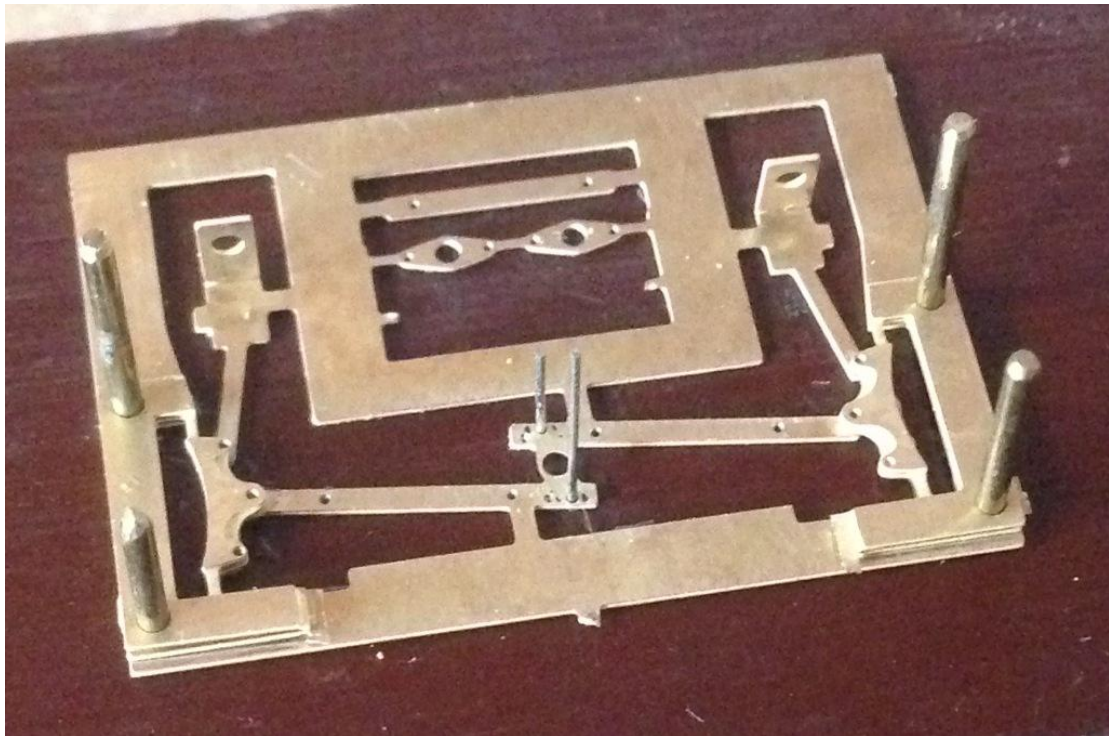


Take the brake shoe infills (10) and fold double with the fold line on the outside.





Place the brake shoe infill over the front using the 1mm wire rods to align everything. Insert two short lengths of 0.31mm wire onto the holes where the push rods join the brake shaft cranks.



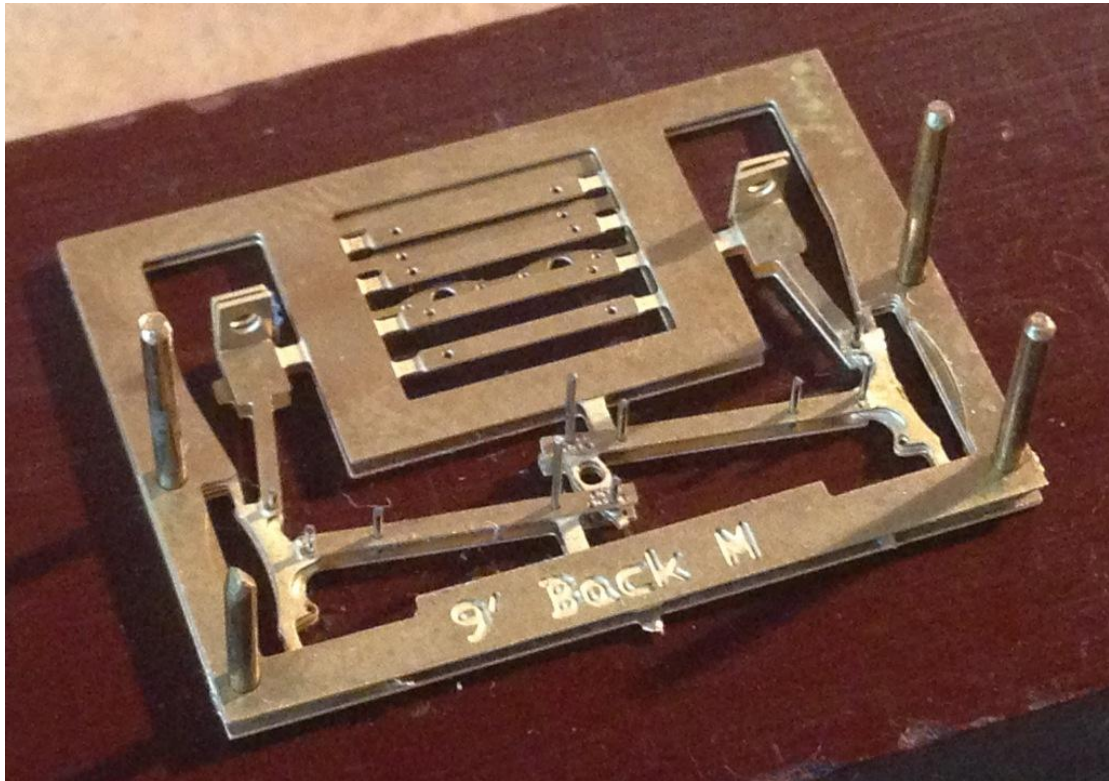
Fold up one set of push rod cranks and place onto the two lengths of 0.31mm wire.



If you wish to use the push rod infill pieces provided then repeat the process for the cranks with these parts.



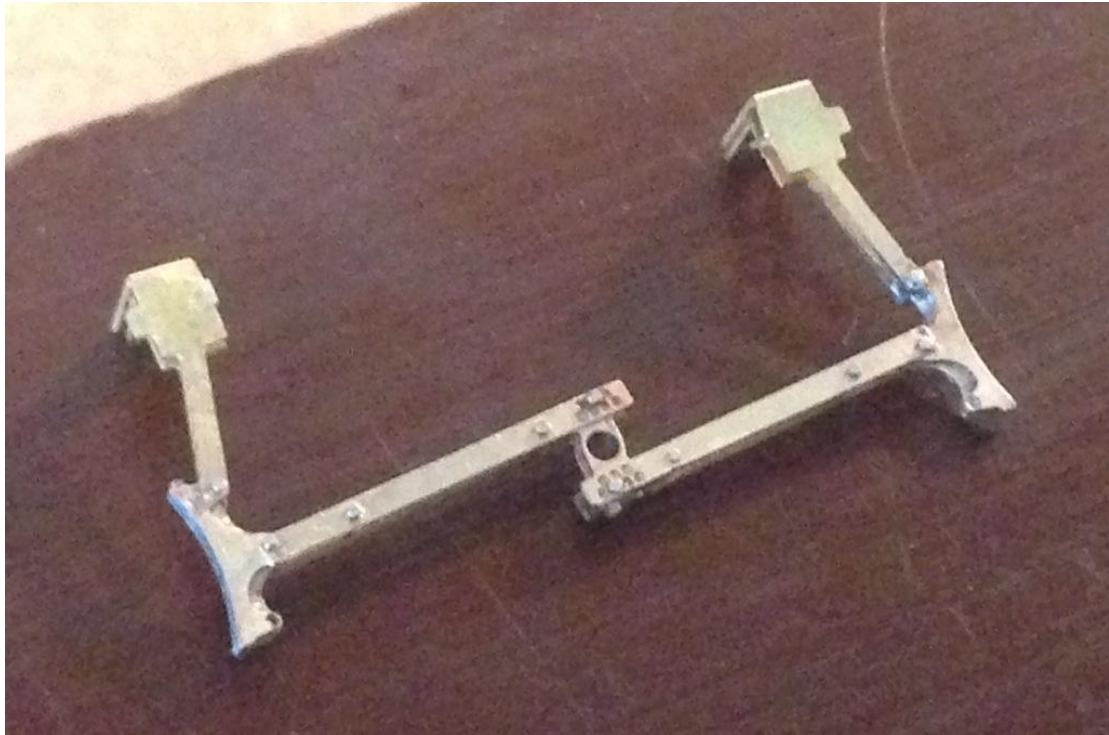
Carefully fold up the feet on the **back** part of the brakegear and pin onto the assembled layers with the writing visible and facing away from everything else. Make sure all the bits of wire go where they should. Fill the remaining holes with 0.31mm wire making sure it goes all the way through.



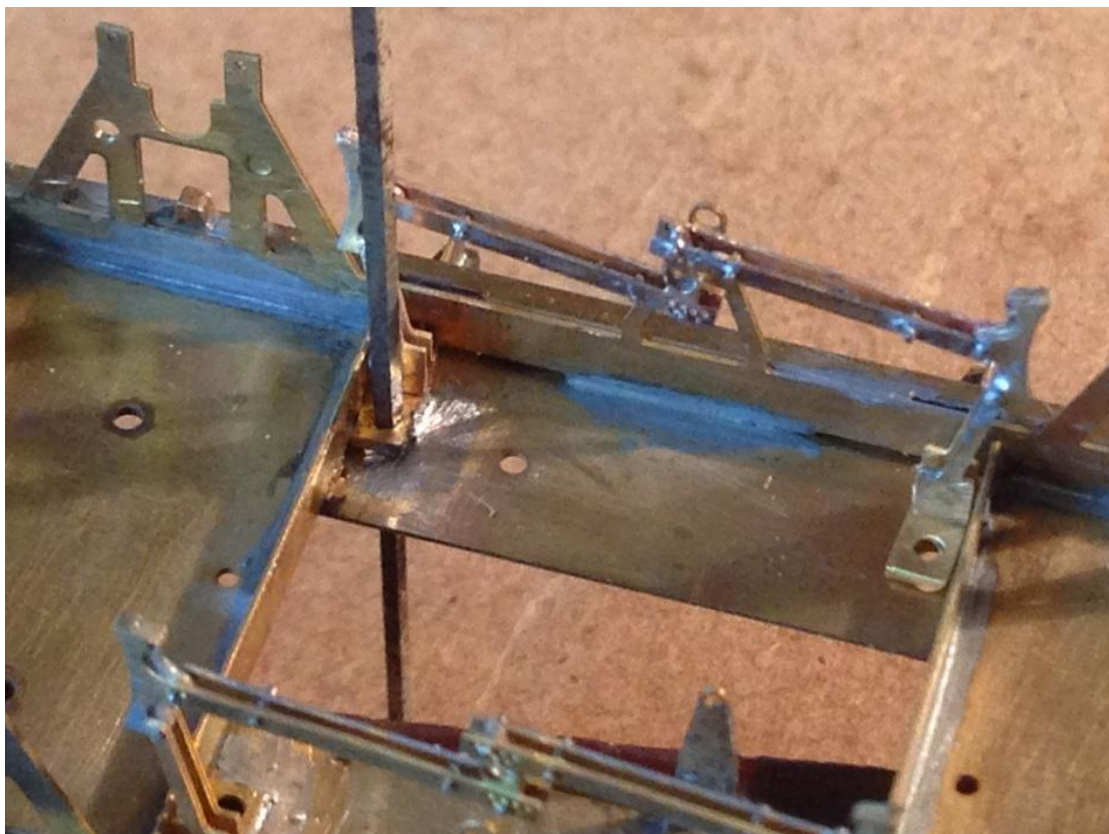
Solder the layers together paying particular attention to the brake shoes (I found it best to apply solder to the long curved edge) and the joints where the wire meet the etch.



Carefully remove the brakegear from the fret; I used a piercing saw. Clean up any tags that are left and also the wire to represent bolt heads.



The brakegear can be fitted to the wagon using the tabs and slots as before. Gently bend the shoes to get the tabs into the slots. Use something suitable to pin the brakegear to the chassis through the holes in the feet while you solder them in place.



Finally the push rod safety loops (13) can be fitted. These fold up and once wrapped around the push rods can be soldered in place hard up against the base of the brake shoes.



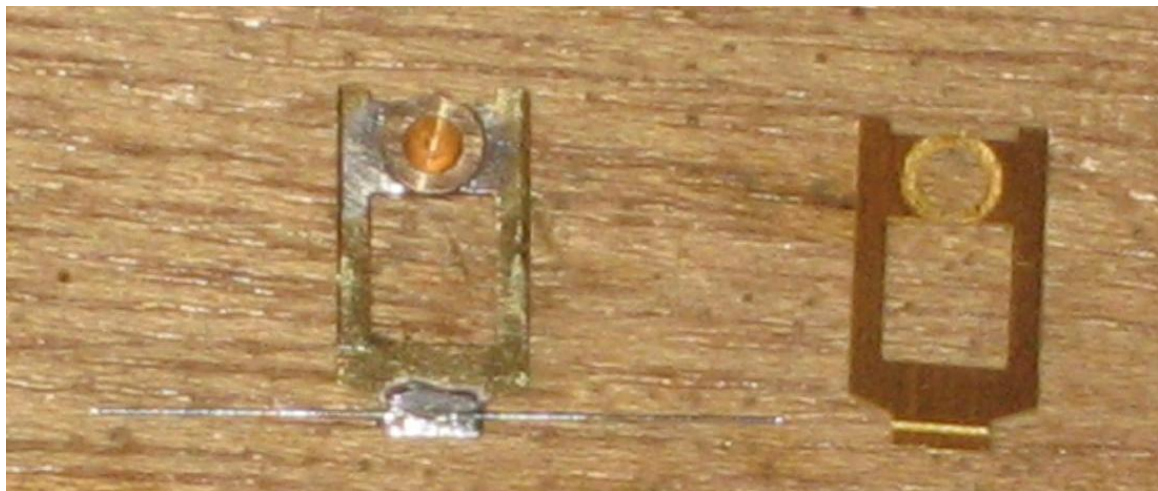
## Spring Carriers

The spring carriers (14) can now be assembled. They are designed so that the springing wire is soldered to the carrier using the half etched slot as a guide.

The distance between the backs of the axleguards is a bit larger when compared with other systems and works out at 24.5mm. The advantage of this measurement is that if using pin point axles you don't have to hunt around for bearings that are deep enough but you may find that the carriers need packing out a little to take up any slop. Bearing washers (15) are included for this purpose. There should be a good fit between the axles and the bearings with ideally no sideways movement at all. If using pinpoint axles use a waisted type of bearing to avoid having to remove any more material from the cast axleboxes than is necessary. I have used Exactoscale waisted pin point bearings which are just about perfect for the job with only occasional ones that require packing out.

Due to the removable nature of the axle guards you can easily use Exactoscale parallel axles and bearings. If doing so then you will need to pack the bearings out on the back of the spring carriers before soldering them in place due to the length of the axle. Use the bearing washers provided. I have built chassis with Exactoscale parallel axles and used one half etched washer and one full width washer to pack the bearing out. This leaves the outer edge of the bearing 0.25mm beyond the axleguard and provides 1mm of bearing surface for the axle.

I find the easiest way to assemble the spring carriers is to make a small jig consisting of an off cut of wood with a 2mm hole drilled into it. The spring carrier can then be placed so that the bearing locates through the hole in the carrier and into the wood. The bearing can then be soldered in place. The spring wire can be located in its half etched guide slot and soldered in place using a suitable flux. I use Carr's black label. The spring wire needs to extend at least 7mm either side of the point where it is attached to the carrier.

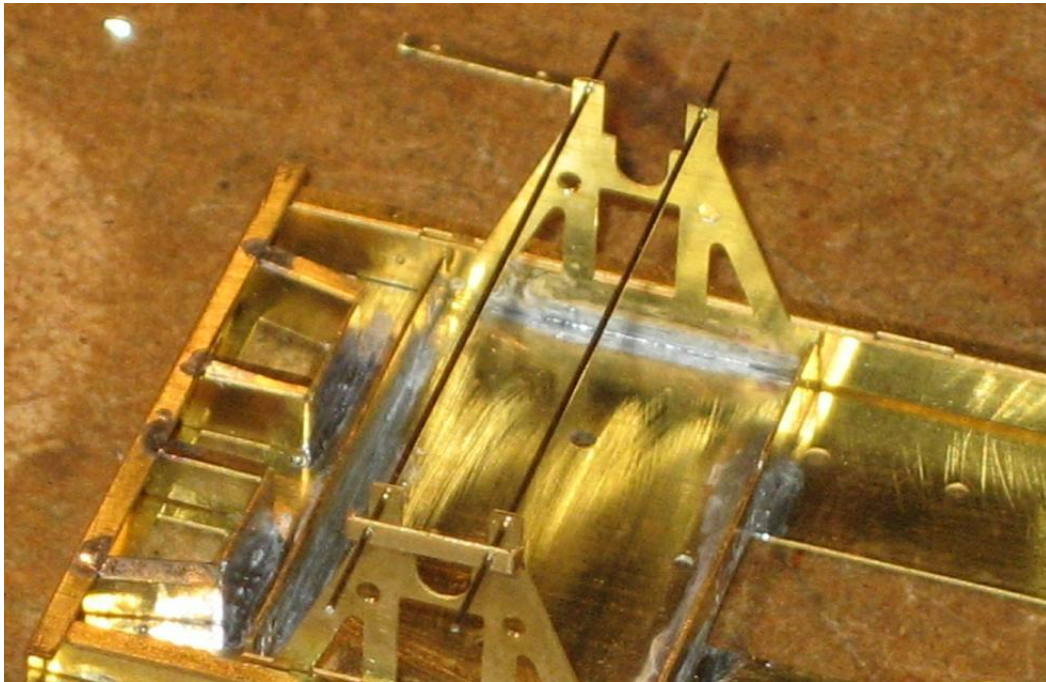


## Axle keeps and tiebars

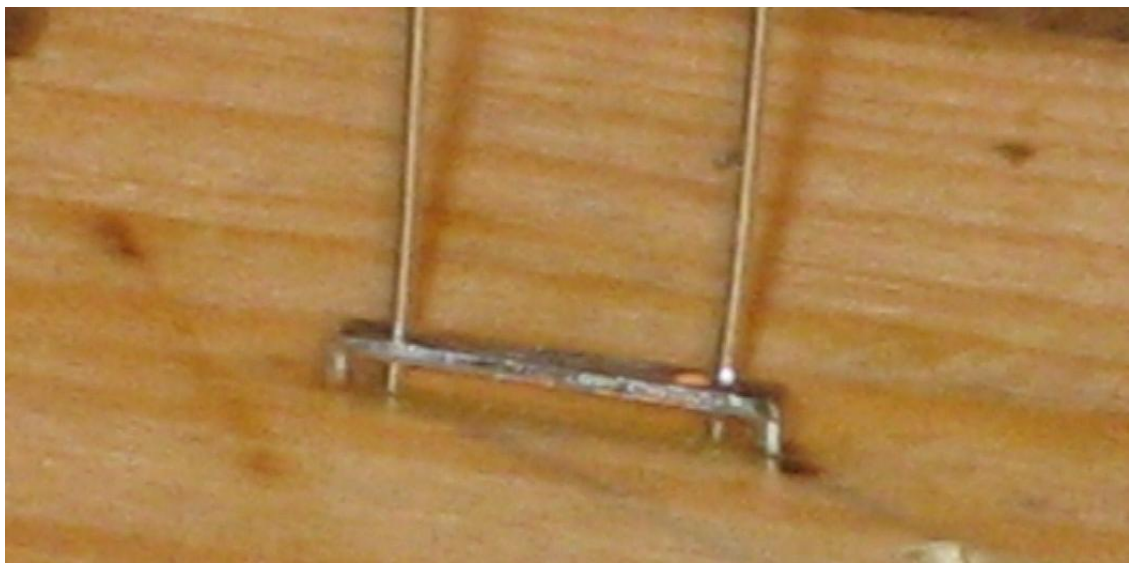
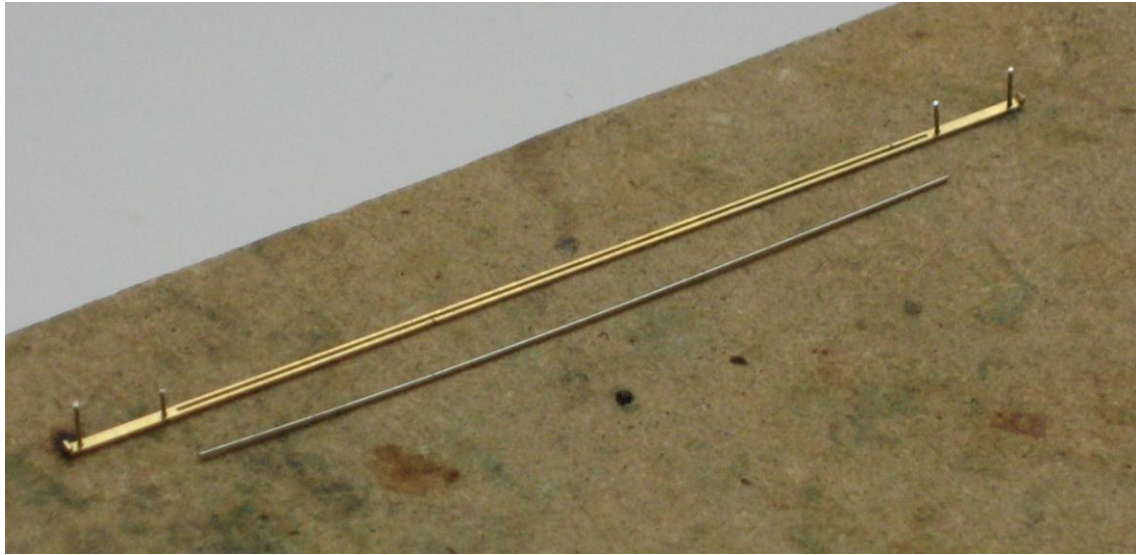
There are both individual axle keeps (16) and tie bars (17) included. Anything fitted would have had full length tie bars. Unfitted chassis generally had individual keeps but check your prototype. They are both assembled in the same way and are designed to be removable if you wish in order to allow the wheel sets to be easily dropped out. They can of course be soldered permanently in place but either way you will need to make sure the holes will accept 0.31mm wire before removing them from the fret.

Tie bars are fairly vulnerable so in order to strengthen them I have included a slot on the back into which you can solder a length of 0.31mm wire. This will make them a lot more robust.

If you are not planning on making them removable then they can be pinned and soldered to the axleguards. Remove from the fret and fold the ends up. Thread lengths of 0.31mm wire through an axle keep/tiebar and holes in an axleguard and then the corresponding holes on the opposite axleguard. Solder in place. Fit the other axle keep/tiebar and solder in place. Trim the wire so that it represents bolt heads on the tie bars but extends approximately 0.5mm from the back of the axleguard. These pins will prevent the springs from becoming disengaged from their slots.



If you want to make them removable to allow the axles to be dropped out then you will need to solder 0.31mm pins through the holes in the axle keeps/tiebars. I find the easiest way of doing this is to use one pair of holes as a jig and drill a pair of 0.3mm holes into a piece of scrap wood. Short lengths of 0.31mm wire can then be threaded through the axle guards locating into the holes in the wood. These can then be soldered in place and filed back to represent bolt heads before folding up the ends. Fold the ends of the axle keeps/tiebars and locate two short lengths of 0.31mm wire through the holes and into the holes drilled into the wood. Solder the wire in place and whilst still pinned to the wood file the wire back to represent bolt heads. Remove and trim the other end of the wire. You will need to make sure there is at least 0.75mm of wire projecting from the back of the axleguards otherwise the spring carriers will be able to fall out of place when everything is assembled. It is also a good idea to leave at least one of the pins in the axle guard as long as possible to give you somewhere to hold them when painting. Once the axle keeps/tiebars and the chassis are painted they can be tack glued together on final assembly. The glued joint can be broken and the tie bars removed if you find it necessary to remove the wheels at any point.

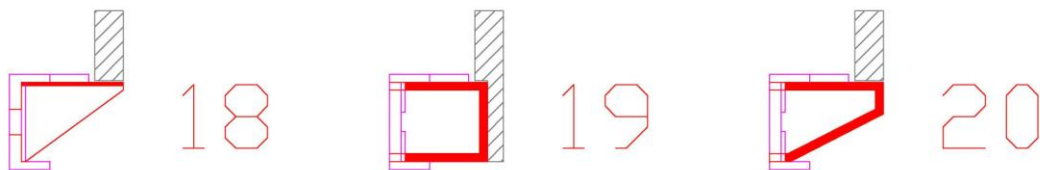


### Solebar Brackets

These are included if you want to go the whole hog and include everything. You will need to have used solebar overlays 4a if you want to use them. All of them need to be folded up, the tab inserted into the slot in the solebars and then soldered in place.

There are tongues on the chassis top plate to assist with this. See Fig. 1 for the position of the brackets and Fig. 4 below for how to fold them up. Basically the outer solebar brackets (18) fold into an L, the inner solebar brackets into a C and the central solebar bracket into a sort of triangular shape.

Fig. 4 -Solebar Brackets





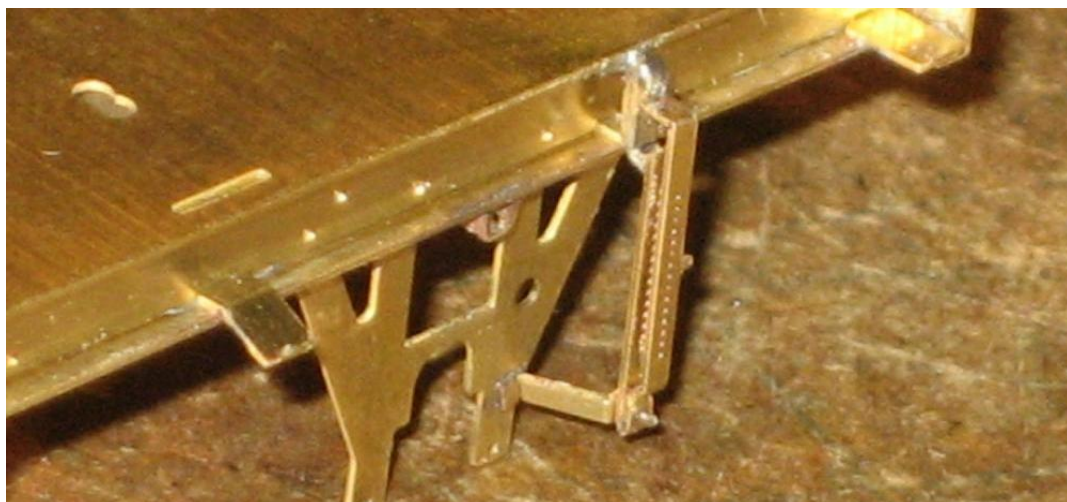
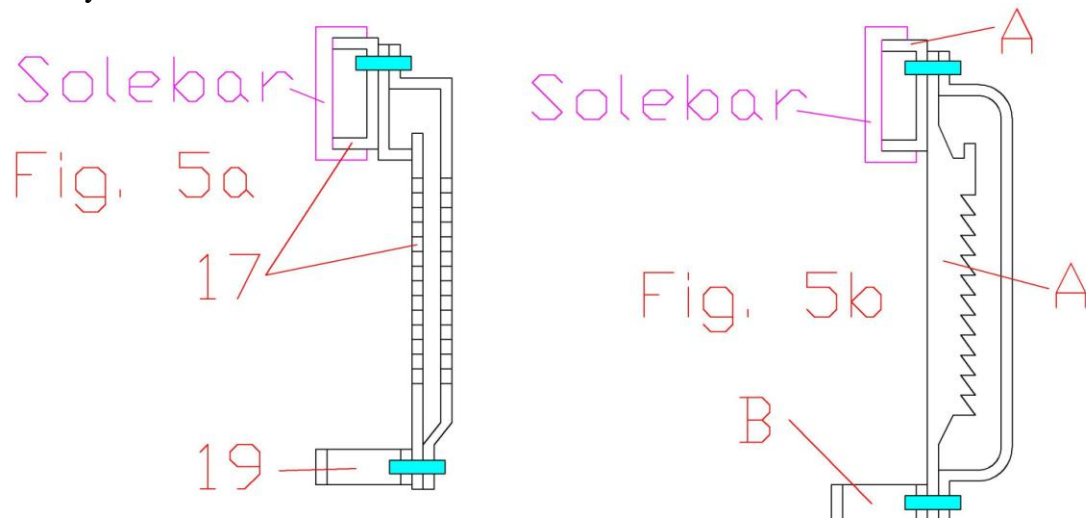
## Door springs

The door springs (21) need to be folded into an L shape where the longer end is curved. There is a fold line to mark the bend point and then the short end fits into the slot in the solebar.

## Brake Lever Guards

As was mentioned in the preamble these wagons either had GWR ratchet type or the pin type depending on when they were built. I managed to leave the ratchet type off the fret but have done a spares fret with them on. If you do not have this spares fret and want it just let me know.

Make sure that the holes in your chosen brake lever guards and brackets (22 or A) and the appropriate lever guard stays (23 or B) can accept 0.31mm wire and remove from the fret. Separate the lever guard from the lever guard bracket. Fold the lever guard along with the lever guard bracket referring to Fig. 5a for the pin type or Fig. 5b for the GWR type. There are half etched slots on the ratchet type lever guard which pinpoint and aid the forming of the curved bends that are on the prototype. Solder the lever guard and bracket together using 0.31mm wire to align them. Trim the wire on both the front and back to represent a bolt. The whole assembly can then be located in the solebar and soldered in place. There are slots in the solebar to receive the lever guard brackets. Press out the half etched rivet on the brake lever guard stays and fold both ends through about 30°. The stay can then be pinned to the bottom of the lever guard using 0.31mm wire and then soldered to both the lever guard and the axleguard and any excess wire trimmed off.



## **Vacuum Cylinder Bracket**

There is a representation of the outer spring bracket on the axleguard assembly but you will need to fix in place the vacuum cylinder bracket (25) to provide the inner mounting point for the vacuum cylinder (Rumney Model F.01). You will need to make sure the holes can accept 0.5mm wire then remove from the fret and fold into a C shape. Solder in place using the bracket on the axleguard assembly as a guide.

## **Axleboxes and springs**

Now is a good time to fit the cast axle boxes and springs (Rumney Models FA.05, FB.05, FC.05, FD.05 or FE.05). It will make life easier when bending up the brake levers as they should be bent, like the prototype, to clear the axleboxes and springs.

## **Brake shaft**

Cut a length of 0.8mm wire to form the main brake shaft.

If constructing a fitted chassis check that the vacuum cylinder actuators (26) can accept 0.8mm wire. The actuators need to have their half etched rivets pressed out and then folded over. They are designed for the ends to wrap around a 0.6mm piece of wire extending from the vacuum cylinder. These can be fitted along with the brake shaft (0.8mm wire) through the vees. Leave soldering of the actuator until the vacuum cylinder is in place.



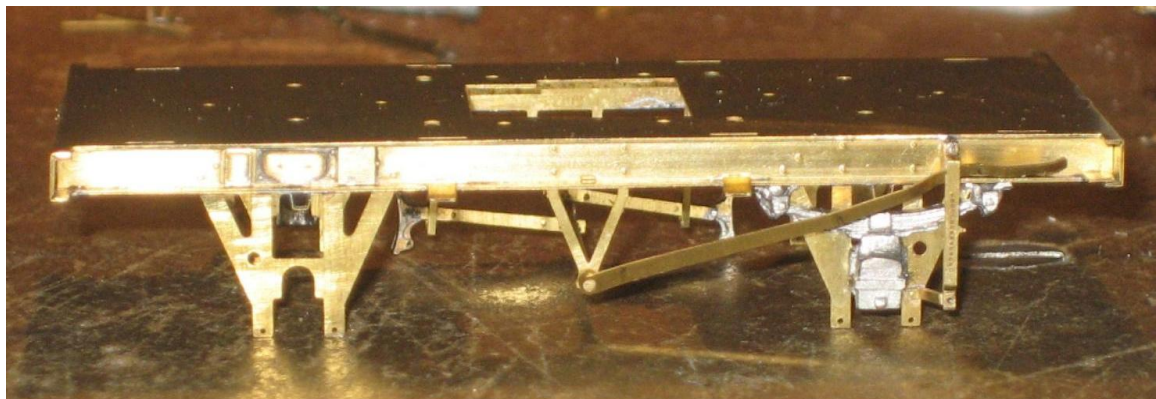
Solder the brake shaft in place and trim the ends if necessary.

The vacuum cylinder can be added now or later and then the two halves of the vacuum cylinder actuator soldered together and to the brake shaft.

## Brake Levers

Make sure the holes in the brake levers (24) and the cams can accept 0.8mm wire. The levers and cams can then be removed from the fret but note that the connecting tab between the non-Morton lever and cam should be left intact. Once removed from the fret the connecting tab between the cam and the non-Morton brake lever can be folded through 180° with the fold line on the outside. Solder a short length of 0.8mm wire through the hole in the Morton cam brake lever. This will locate into the top hole on the vee. I use a hole drilled into a piece of scrap wood to aid doing this. Once soldered in place trim the wire and file so the end is flat.

The brake levers then need to be bent up as per the prototype clearing the axleboxes and then cranked for the handle. Check on the model and adjust until you are happy with the shape. Once you are happy with the shape the brake levers can be soldered in place. Solder the Morton cam into place in the lower hole on the appropriate vee.



## Lamp Irons

Lamp irons (27) included. These are included for fitting to the headstock if required. Note that when built these wagons did not have lamp irons fitted. They were not XP rated so there was no reason for the wagons to have them. When the unions allowed the guard of a fully fitted train to travel in the rear cab of a diesel locomotive around 1967/8, vacuum braked wagon then needed lamp irons whether they were XP rated or not. So check your prototype to see if you need them.

Press out the rivets whilst still the lamp irons are still attached to the fret, remove and fold up. Solder in place on the headstock just to the inside of the left side buffer when looking at the headstock.

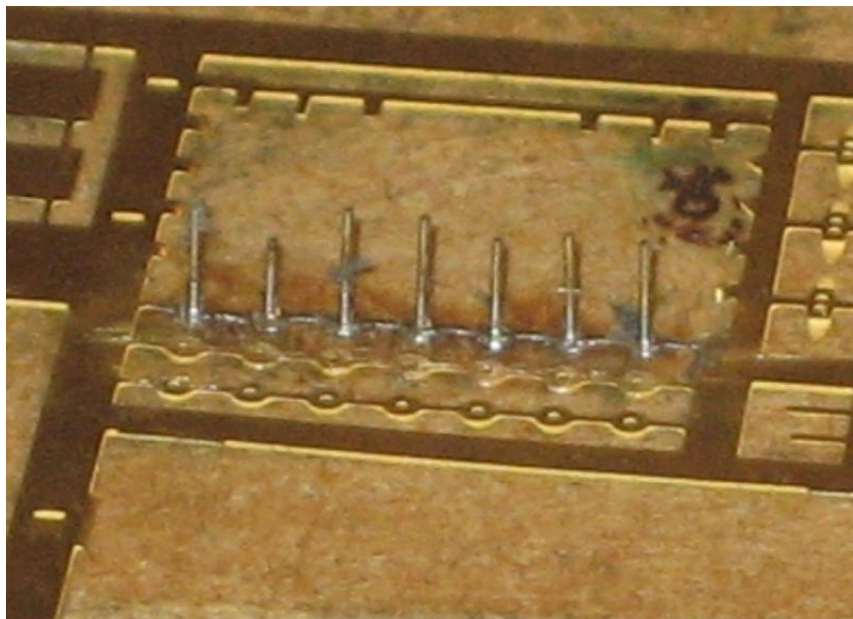
## BR swan neck vacuum pipe brackets

There are two BR swan neck vacuum pipe brackets (28) included. These are quite distinctive and were fitted to a lot of BR wagons built with vacuum brakes and also those that were fitted as part of the mid-fifties vacuum braking program. They come in two parts. There is a bracket which attaches to the solebar and a round head that has 'tails' that fold up. Press out the rivets on the bracket and remove from the fret. Twist the base of the bracket through 90° so that the interface with the head faces away from the rivets. This bracket can then be soldered to the back of the head (the side with no half etched areas). It is easiest to do this while the head is still attached to the fret. There is a small slot to help provide a positive location. Once soldered in place the assembly can be removed from the fret and the 'tails' on the head folded out.



A close-up photograph of a wooden door handle and lock mechanism. The handle is made of light-colored wood and features a small, ornate metal knob. The lock is a brass-colored metal device with a keyhole. The wood shows signs of wear and discoloration.

Round cleats (29) are included for adding to the body side. These are designed to be fixed on using 0.31mm wire. Use the parts, whilst still attached to the fret, to drill a series of 0.3mm holes into a piece of wood. Short lengths of 0.31mm wire then be fed into the holes in the wood and soldered to the rope cleats. The wire can then be tidied to represent bolt heads. Leave about 0.75mm protruding from the back. Holes can then be drilled into the wagon using a 0.3mm drill bit and the cleats glued in place



## **Painting**

One of the advantages of having the chassis as a complete unit with solebars and headstocks is that you can paint it separately from the body and then glue the two together afterwards. If using an airbrush or aerosol this means you can prime it and then paint it all black with no masking at all which makes life a little easier.

I now 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.

## **Notes on wagon bodies and weighting**

Some modifications may be necessary to the body to get it to fit the chassis. Principally this will revolve around removing the plastic headstocks from the ends of the kits. In some cases this will present no problems as a lot of BR built stock had a clear distinction between underframe and body with no stanchions extending from the body onto the headstock. Where there were such items though a little work will be needed to remove the headstocks and then thin down the backs of the stanchions to a near prototypical thickness. Careful use of a piercing saw and file will do the job. The suspension on the underframe is designed to work optimally under a 50g load. As there is limited space on the underframe due to all that brakegear the best place for it is in the wagon body. This is easy enough if the wagon is a van but if it's an open wagon then some work may be needed.

I make a new floor for open wagons and minerals and recess it from the bottom so that there is room for a piece of lead flashing to go between the new floor and the underframe. This does reduce the depth of the wagon but it isn't too noticeable on most types and saves trying to work around the brakegear. Unloaded Conflats and Lowfits are another matter. The only solution would be to try and get as much weight as possible into the underframe.

## **Finally**

Thanks must go to the staff of The Great Western Society at Didcot for letting me measure up and photograph at close quarters some of the wagons in their care which have greatly helped in the preparation of these kits.

Last but certainly not least if you haven't come across the wonderful resource for BR wagon photos that is Paul Bartlett's website then I would thoroughly recommend a visit to:

<http://paulbartlett.zenfolio.com/>

Justin Newitt - March 2017



## **Suppliers List**

Rumney Models (vacuum cylinders,  
axlebox and spring castings)  
[www.rumneymodels.co.uk](http://www.rumneymodels.co.uk)

Eileen's Emporium (brass wire)  
Unit 19.12 Highnam Business Centre  
Newent Road  
Gloucester  
GL2 8DN  
UK  
[www.eileensemposium.com](http://www.eileensemposium.com)

Lanarkshire Models and Supplies  
(buffers and vacuum pipes)  
9 Nairn Avenue  
Blantyre  
G72 9NF  
[www.lanarkshiremodels.com](http://www.lanarkshiremodels.com)

C&L Finescale (Exactoscale wheels,  
bearings and couplings)  
Aran Lodge  
Severn Road  
Hallen  
Bristol  
BS10 7RZ  
<http://www.finescale.org.uk>

Masokits (Screw couplings)  
Michael Clark  
c/o 27 Crotch Crescent  
New Marston  
Oxford  
OX3 0JL  
[www.scalefour.org/masokits](http://www.scalefour.org/masokits)

MJT (buffer heads)  
Dart Castings  
17 Hurst Close  
Staplehurst  
Tonbridge  
Kent  
TN12 0BX  
[www.dartcastings.co.uk](http://www.dartcastings.co.uk)