

MODELLER'S WORKSHOP



Diagram 30 Brake Third

ALBERT KIERNAN describes how he built a 7mm scale model of this carriage from a Chowbent kit...

I suspect that along with many others, I am still working my way through my stock of Chowbent etched brass coach kits, bought when John Robinson ceased trading. The instructions with these kits tend to be brief, but sufficient for my needs. My brain tends to go into 'meltdown' when confronted with lots of instructions. However in case it helps someone, or encourages you to open the box and start building, for what it's worth, here are some ways this bodger of a modeller got on with the job. This is not a treatise on how to build the kit, just some ways to overcome difficulties.

First a warning: looking at the photographs you will realise that I don't do neat, use far more solder than necessary, get it everywhere and am generally untidy. I have come to accept that this is the way I am, and always have been and always will be, so the message to myself is, get over it, and get on with it. I only hope that by showing that I get there in the end encourages others to also get on with it. Hopefully, you will be neater and better than me, but if not, does it matter? Just have a go, you may surprise yourself.

Bogies

The kit I describe here was provided with the correct 6 foot 6 inch transverse sprung bogie. Other kits I have in the Diagram 30 series have 8 foot 0 inch wide-bearing bogies in the box. Check you have the correct type before commencing. Invertrain now supply the correct type; see advert in *Magazine 252*. The Chowbent bogies are white metal and are of the screw together type. After building my bogies I found some instructions in another kit, but I'll tell you how I did it.

The bogies were taken apart and the axle boxes drilled out to accept Slaters' top hat bearings. I made two discoveries here:

1. Put saliva on the drill tip when drilling white metal. It helps to remove swarf and assists in cutting.

2. Slaters' axle bearings have changed over the years. Some have smaller shallower holes than others. I found this out when my first bogie ran smoothly and the other was tight and would not run. My answer was to drill out the holes in the bearings to a slightly wider size.

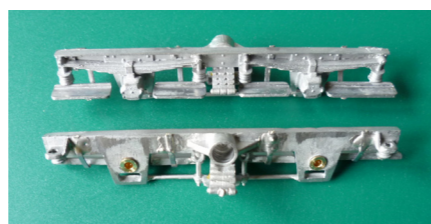
On checking my stock of bearings I found that 20% were of the smaller size. I added the steps to the bogies whilst they were apart and consider that it would be difficult to fix them onto the assembled unit. The provided steps and brackets are white metal of a low melting point. I took one look at the brackets which are very nice castings, but too fragile for me – I would melt, break or lose them – so decided to use 1mm wide brass strip off scrap etchings instead.

You have a choice of methods to fit the steps: glue or solder. I chose solder; I find glue too quick or too messy. Take the white metal steps, separate them and clean up with files or emery paper. Tin the 1mm brass strip with solder. Note that the steps are numbered 1, 2 or 3. No.1, the longest, goes on the bogie at the outward end, No.3 on the inward end and No.2 either side of the transverse spring.

I held the steps down gently in a vice; put a blob of low melt solder on the underside of the step, noting that this has to be offset on Nos.1 and 3 in order to be able to solder the step support to the space on the bogie. The brass strip is melted into this blob. (I use an 18 watt soldering iron). Be quick and brave! The



The carriage underframe.



The bogie sides

brass strip is then bent up from the step to form the bracket. I used the kit ones to get the angles and shape right.

I note that Dave Carter made a jig in order to get the steps at the same height and level on his 4mm scale model and this is sensible if you can make one. I cannot, so my solution was to solder the rear of one end of the step, using low melting point solder, to the spring hanger and when the step was level solder the step hanger to the bogie frame, cutting off the excess strip. By this method I was able to ensure that all four steps would be at the same height. It took a little bit of fiddling but worked. It is possible to gently bend the soldered white metal step and bracket in order to make minor adjustments. I've managed to make eight bogies using this method without breaking or bending anything, and believe me if it was going to bend or break I would have done it!

Underframe/chassis

Some of the Chowbent kits have vacuum cylinder ends provided, others do not. All have vacuum brake operating arms which

are in a particularly soft white metal, which I always break. My brake gear is therefore part scratchbuilt and part kit castings from which I have made a rough representation of the brake gear. (In my case dead rough!) I understand that Paul Knight sells vacuum cylinders and operating arms from a better quality white metal so this may be the route to go.

The photograph only shows one gas cylinder in place, to show the locating holes provided to assist location and construction.

Carriage sides and ends

The instructions suggest the use of solder paste and pre-cut brass or nickel silver wire placed in the etched grooves, then placing the sides in the oven and heated to 250-300°C, to finish the simulated beading on the coach side. I felt that with my luck I would probably knock or bang something and end up with beading soldered at odd angles, so I pre-tinned 6mm nickel silver wire, cut it to the required length, put solder paste in the grooves then put the wire beading on, one at once, using a resistance soldering unit, which is ideal for this type of job. I then cleaned the beading up using a fibreglass brush stick and files, rubbing quite hard. If anything falls off I want it to fall off during the build not later. I punched out the door stops as indicated on the etch and left them looking like rivets. It might have been better to drill a hole and solder in a piece of wire to give a more prominent look.

I found that the etched cover to form the front of the ducket was not quite long enough to reach the bottom of the carriage side once it had been curved to fit the ducket sides. I solved this by filing flat the bottom beading etched onto the ducket wrapper. Once the ducket was fitted to the coach side I then soldered a beading strip from spare etch into the gap at the bottom. Everything was cleaned up with fibreglass pencils and files.

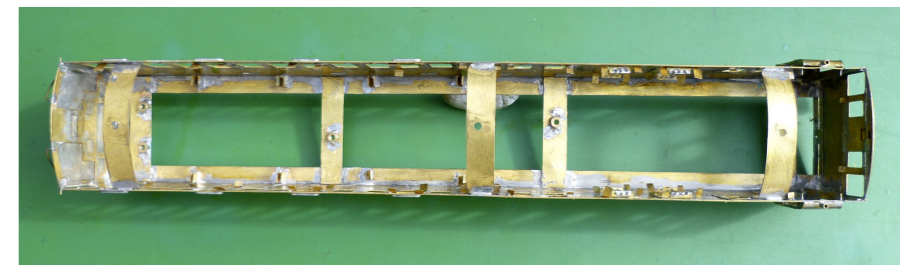
There is no mention in the instructions of the handrails on the sides of the duckets near the windows, although they are shown on the drawing accompanying the instructions. I found out about these after fitting the duckets to the coach sides. I have put them on, but it would have been much easier to drill holes and solder, before fitting to the coach.

The ventilators over the doors are white metal castings. These are provided with a lug on the back and there is a hole over the door into which it should fit, however it does not. I tried enlarging the holes but that didn't work. I tried filing down the ventilator lug to reduce its size but that didn't work either. I tried swearing at it – that didn't work, but I felt better. I decided in the end to cut the lug off and file the back of the ventilator flat, gluing them in place with Araldite, which gave me 'fiddle' time to get them all in line. I do wonder if the casting process causes a slight bulge on the back of the ventilator preventing it from lying flat.

I added two additional steps to the carriage end, one at each corner (to continue the sequence of the steps



The assembled carriage sides and ends.



The carriage inside showing fixing strips for roof and floor.

provided). These were made from scrap etch. I also added pieces of wood to the buffer ends to gain thickness, leaving enough room for the chassis to still fit. No vacuum pipes are provided. I made my own from copper wire and drive springs.

Roof

The kit is provided with a brass roof, which has roof strips and gas piping supports etched on and has to be rolled to shape. I like to cover my roofs with paper onto which I glue styrene roof strips (40 thou square) and gas pipe supports (30 thou square). Feeling that the etched parts were a little flat and wanting a single gas supply pipe I rolled the roof inside out, giving myself the option of modelling the single gas supply pipe, not two as the etched parts. I do this rolling on a pile of newspapers, using a piece of wooden broom handle. It's very good for the tummy muscles, but with thick brass I have to stand on the roller and rock it back and forth to get a bend. I also added a hole for another roof ventilator for a second Smoking compartment, the second compartment from the steps end.

The gas piping is 0.5mm copper wire salvaged from domestic wiring, straightened by fastening one end in a vice, the other in the jaws of an electric drill, holding taut and giving the drill a couple of blasts.

Painting

The model was painted using Phoenix Precision paints which come in dull (satin) and lined using a bow pen and Bob Moore lining pen. Transfers are from Barry Lane. Being lazy, instead of spraying the finished, painted coach with all over gloss varnish, for the transfers I painted on gloss varnish only where the transfers were to be applied. This prevented the silvering effect of applied transfers, but when I sprayed the coaches again with satin varnish for my final finish the gloss varnish showed through. After four coats of satin varnish I gave up and sat in a corner sulking. Also for some reason the surface of the satin varnish scratched easily when touched. The only answer was to

lightly weather the models. I used Carrs' weathering powders applied by brush, finger and rolled up cloth to disguise the gloss varnish. Here I made a discovery: the scratches could be made to disappear by getting powder (which is a paint pigment) of the same, or nearly the same, colour as the body colour and using it on a cloth rolled to a point, lightly rubbed onto the blemish. On the tan colour the scratches could no longer be seen and on the plum colour they were very much diminished. I am now a much happier person and looking forward to my next blunders.

Fixing together

The model is built in three parts to aid construction and painting. The chassis, carriage body and roof. The carriage body is provided with fold down lugs to fit into slots in the chassis for final assembly. These lugs did not line up with the slots, so the carriage body has been provided with cross members for stiffening, to which the chassis and roof can be fitted using nuts and bolts. The kit instructions suggest soldering the roof to the coach top. Goodness knows what kind of mess I would have got into trying to get it level, even and square. The nut and bolt system allows flexibility to move the roof around prior to final tightening.

Conclusion

I quite enjoyed making this model. There were no real problems and the parts fitted together quite well. I've since built another Diagram 30 and two Diagram 34 carriages using the same techniques, and am quite happy with the results. Once more can I encourage people to have a go at modelling something and doing a write up for the *Magazine*? Remember that we do this for fun and all that really matters is that one is happy with one's own standards and should not be upset if we do not reach the perfections of others. In fact, I have been more encouraged by reading of a model built by a bodger than that built by someone who produces perfect models, using tools and techniques which would be quite beyond my skills. I admire and hate them equally!