

LSWR State Saloon of 1877

Manufactured by: Southwark Bridge Models, 7 Came Close, Chandler's Ford, EASTLEIGH, SO53 1HH. Tel: 023 8026 2414 07890 471158.

ivansmith@talktalk.net <http://www.sbmodels.org/>



For those of you not "in the know", this company grew out of a 4mm private layout based upon the abortive Southwark Bridge station planned by the LSWR as the ultimate city terminus beyond Waterloo.

It has been built by a band of enthusiasts who make no concession at all to "compromise" and include among its number such luminaries as Henry Bousher. Absolute fidelity to prototype is the order of the day for this group. Since there were few, if any, suitable kits for some of their stock needs, Ivan Smith produced kits for the group. He, in the fullness of time, made some of them available for 7mm. This odd vehicle is a result and is being built for Ian Hopkins.



The kit arrived as an etched sheet about 550mm x 300mm bound in a couple of sheets of hardboard, together with comprehensive instructions, drawings, historical background, list of parts, a couple of bags of bits and castings and map of the etches.

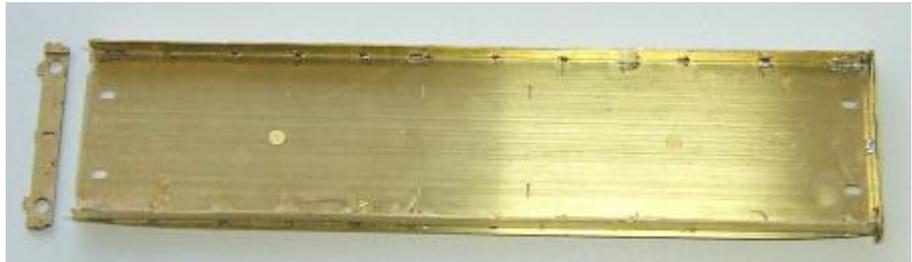
Do make sure you have the latest issue of the instructions; Ivan will provide them for you on request. Study of the provided information is highly recommended since this is decidedly NOT a kit for the beginner.

One does not need to start where Ivan suggests either, so, just for the hell of it; I started with the springs, which are a very neat set of etched laminates producing elegant and strong replicas of the real thing. These were provided instead of white metal castings on the basis that they would be more accurate, much thinner and far stronger. I completely concur with this having built a couple of other kits similarly designed. I soldered each set of four laminates together clamping them with cut down aluminium hairgrips and lining them up with some 0.5mm wire in the centre and outer etched holes, making sure that all the wires were parallel before soldering. Ivan suggests a slightly different method, equally valid.

I later discovered an extra, undocumented; layer of spring etches at the edge of the sheet. Ivan thought that the springs were a little too thin and provided an extra layer to go behind the four you see above. I went back and added them and they are much improved.

The floor/solebar

assembly. The next job was to sweat the solebar bases to their overlays and build up the headstocks. Both the solebars and headstocks stood proud of the floor



of this vehicle so that one could see a distinct gap. Some care is called for in



assembling the parts. Normal seaming is not an option here and so I soldered both the tabs in slots (4 each side and very accurate) and the spacing tabs. The floor itself also curves in at the ends. It is essential for this kit to file of the cusps for most joints. On occasion too it is necessary to open out the slots a little with a scalpel blade. All good signs of a well-designed kit in my view.

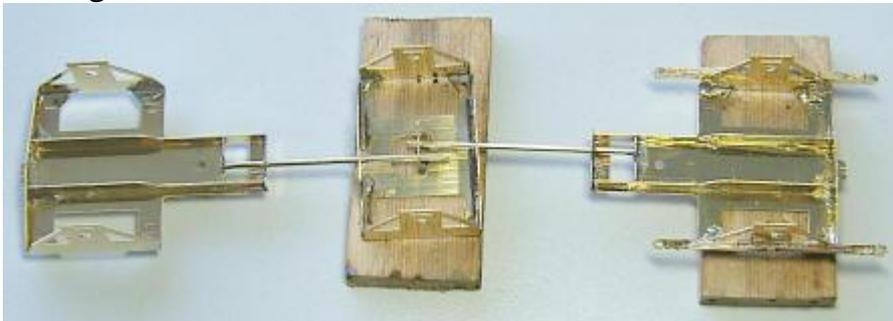
This shot clearly shews how visible is the gap. Some care is needed to ensure that strong soldered joints result, combined with a square and flat floor on which to build the body. The headstock, already two laminates thick, requires two further thicknesses of brass ogee moulding to give the proper depth. These are fiddly but well worth the effort once they have been carefully filed to match the complex curves used in these early vehicles. Soldering the headstock in place requires a high level of cleanliness since there is not a lot of surface area to join

together.

One is left believing that the Southwark Bridge Group do not take prisoners! Here is the floor with solebars, headstocks, buffers, coupling hooks; centre wheel set guides and pivot bolts fitted.



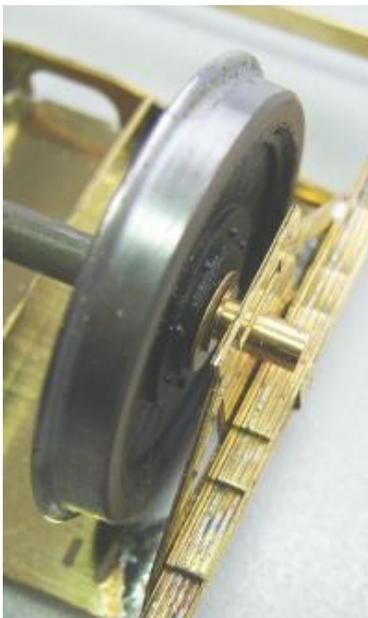
The coupling hooks are made from three layers of laminate that, once filed to shape, make up into excellent representations of the LSWR's version of the gedge hook. There are etched holes in the extension under the floor to take the buffer springs, most of which got cut off when fitting the Cleminson trucks to prevent fouling.



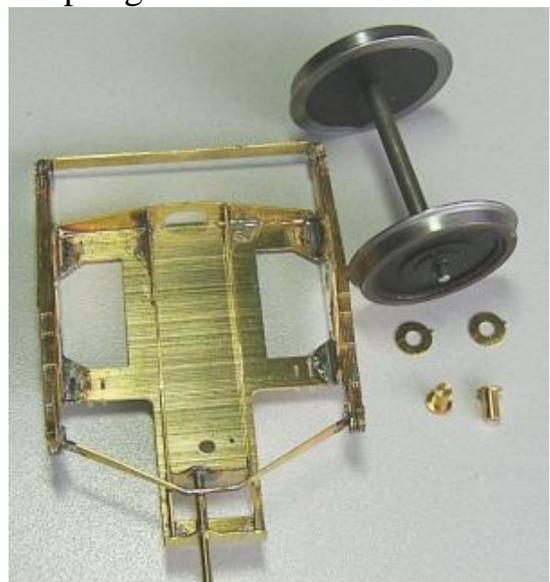
Here is the part completed set of three units for the Cleminson 6 wheeled suspension. One set has the springs fitted prior to them being modified with the extra layer. Provided one

follows the excellent instructions, these units are not difficult to produce. The slide rods call for 1.4mm brass rod. There was none provided in my kit (an oversight that I am sure Ivan would have rectified rapidly had I taken the trouble to call him) so I used some 1.5mm rod I had on hand and opened out the holes and slots accordingly, very carefully.

The wheels. Like many 7mm kits, the wheels, if installed as suggested, will be trapped in permanently due to the very long bearings provided with Slater's wheel sets. I wanted to be able to spring the wheel sets out to

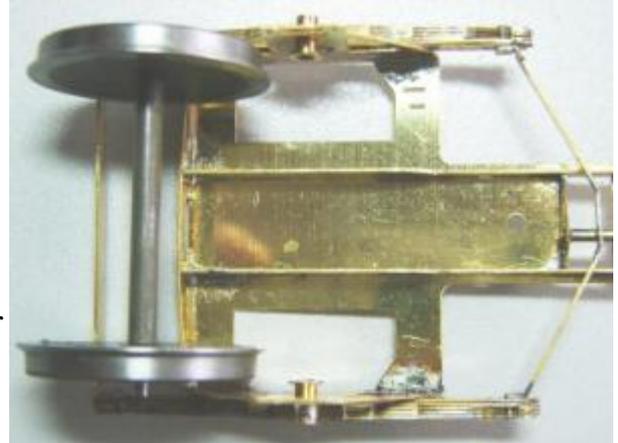


make painting easier. Here is how I did it. The parts needed, wheel set, top hat bearings and two washers 0.2mm thick from the kit etc. First, cut the ends off the axles, file the end square and de-burr so that they extend only 2mm each side. Insert the top hat bearings into the holes in the W iron and then insert the wheel set with a washer between the wheel and the



bearing thus:

Centre the wheel set and, holding the bearings tight against the wheel, solder one bearing in place. Turn the unit round and solder the other bearing keeping both bearings tight against the wheels. Spring the wheel set out and remove the washers. When they are put back there will be about 0.5 to .075mm side play. The bearings will look like this with the wheels removed.



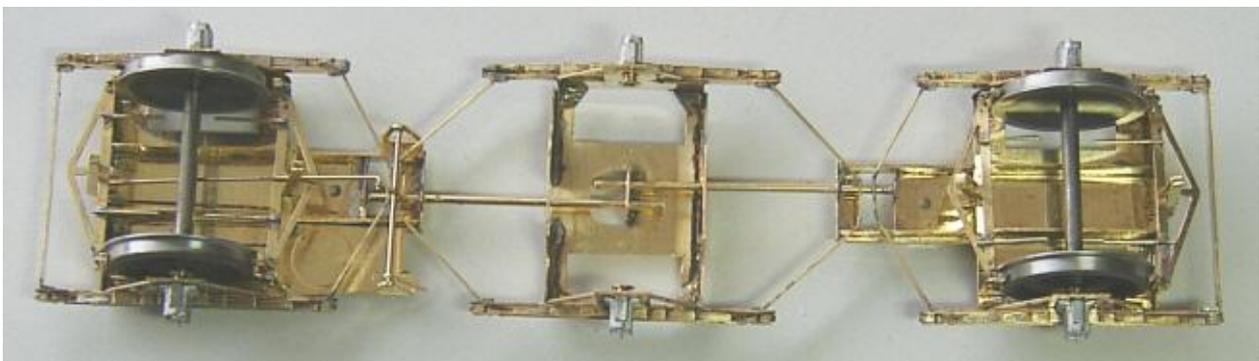
Brakes. There are two options for brakes, either skew or straight. Here are the parts for the straight version, which is what Ian wanted fitting. Each brake shoe unit has a shoe etch soldered to either side and all the cusps have been cleaned up so that edges shew as a flat surface. The outer Cleminson units have the thicker springs fitted and the bearings have been fitted prior to putting brakes in.

The components are quite straightforward to construct but some care will be needed to ensure that the wheels do not foul the brakes.

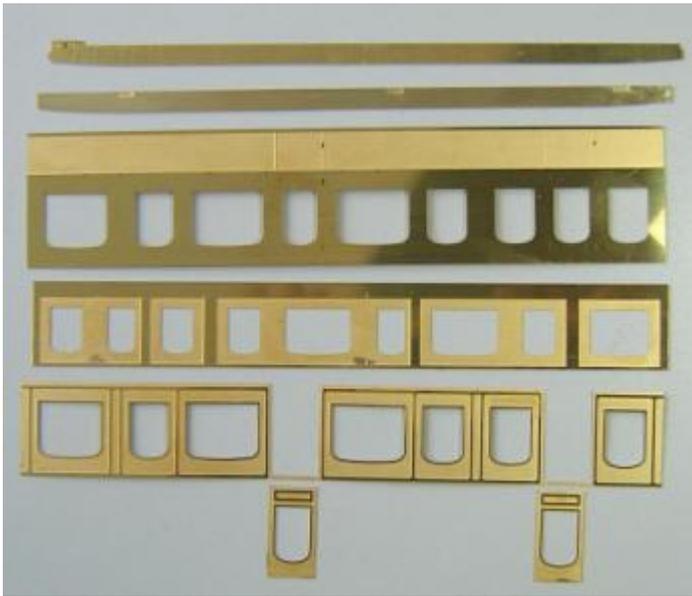


The axle boxes need some modification to ensure they fit correctly. File off the back until one has a flat face and then drill out 1.6mm. Though there is a goodly thickness of material, it is still possible to drill right through. Yes, I did, but got round it by gluing a small portion of a spare Slater's bearing in the whole. The top will need some cleaning up too and it will probably be necessary to file the top lip back a little to get a tight fit against the spring. The axle boxes were then fixed with Loctite 480.

The almost complete set of Cleminson trucks. Needed to complete are a vacuum cylinder (not provided in the kit) and another set of Maunsell wheel.



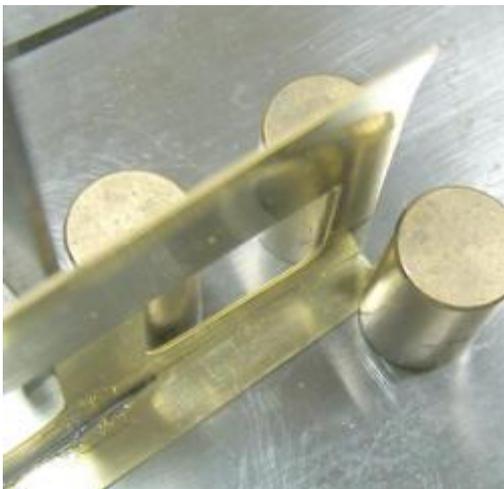
The body. These are the parts that go to make up one side. It has both a



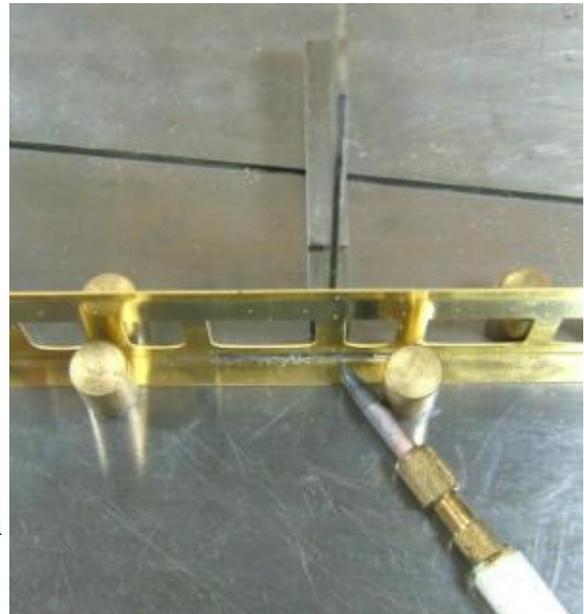
tumblehome (fairly shallow) and turned in ends, see the floor plate above, so ensuring that the compound curves meet correctly means taking some care. Forming these curves looks daunting but I found it no more difficult than forming a tumblehome on the sides and ends of early Great Western stock. Take time, use gentle pressure and keep checking for fit. The instructions have a small diagram illustrating the use of an engineer's square when soldering the rails to the sides. When combined with a steel RSU plate and magnets, the job

becomes relatively easy. Most of the construction is edge soldering, no tabs, so cleaning up the cusps is essential. Once the main sidepiece had had the tumblehome formed, the inner top rail was soldered in place. Turning the side upside-down and clamping it and the rail to the steel plate did this.

Then, using the engineers square and lining up the witness marks, the centre was tack soldered. Before continuing, it was taken down and checked carefully that all was square.



The curved end was simply clamped with the magnets as shown and



the joint seamed up. The top rail has to be at right angles to the side but the bottom rail needs a rather more complex solution.

It needs to be parallel to the top rail but is soldered 0.45mm from the bottom edge of the side. The instructions suggest some card to support the rail and three layers of a label from one of Big Jim's kits turned out to be just right. So, with the rail clamped to the card and the plate, the side was offered up. I used a piece of scrap etch pushed up tight against the side, clamped to the plate. The engineer's square was used, levelled with another piece of scrap, to ensure the straight portion of the side was at right angles to the plate. There is a witness mark but it is quite small so use the square to extend it first. You can see the set-up in this picture.



Here is the side with both rails firmly soldered in place with both the tumblehome and end curve in place. It was necessary to tweak them a little after soldering but



using the partitions and ends make it easy to ensure



the curves are correct. The overlays can now be soldered in place as shown here.

The inner overlay goes first, the instructions are clear about using two holes, drilled out 0.7mm, to align the parts correctly. I then drilled out the remaining holes 0.5mm. The outer overlays were then offered up using four pieces of 0.5mm wire to ensure they were correctly aligned.

However, when it came time to fit the overlays on the window end I fitted the outside one first. This meant that I could file the cusps off the inside of the window frames, which makes them much neater, and then fit the inner overlay. One can still use the holes for the handrails to line the parts up. I would recommend that the same procedure be used for the sides.

Here are the sides and ends as complete as possible waiting to be fitted together. As



usual, I fitted as much as possible "in the flat". The only parts not fitted at this stage are the door handles. Ian and I are trying to source a lost wax handle to use.

The window end has several layers and so is a relatively easy fit to the sides there being some thickness of brass to work with.



The non-window end though is a single thickness of etch. As you can see, I added some strengthening angle strip in the corners, which will be invisible through the opaque lavatory windows at this end.

The ventilator bonnets need to be beefed up and there are extra, undocumented, etched backing pieces at the edge of the sheet. Solder the bonnets to these before starting to shape them. The long one over the lavatory window will need a slight bend in it to cope with the bend in the side. There are no guide marks but there are two ways to get them levelled correctly. I very lightly scribed a line 2mm from the *top* of the etched moulding and used that as a datum for the tops of the bonnets. The other (Ivan's) way is to line up the bases on a line 3.5mm from the *bottom* of etched moulding. Either way, the bonnets will be in

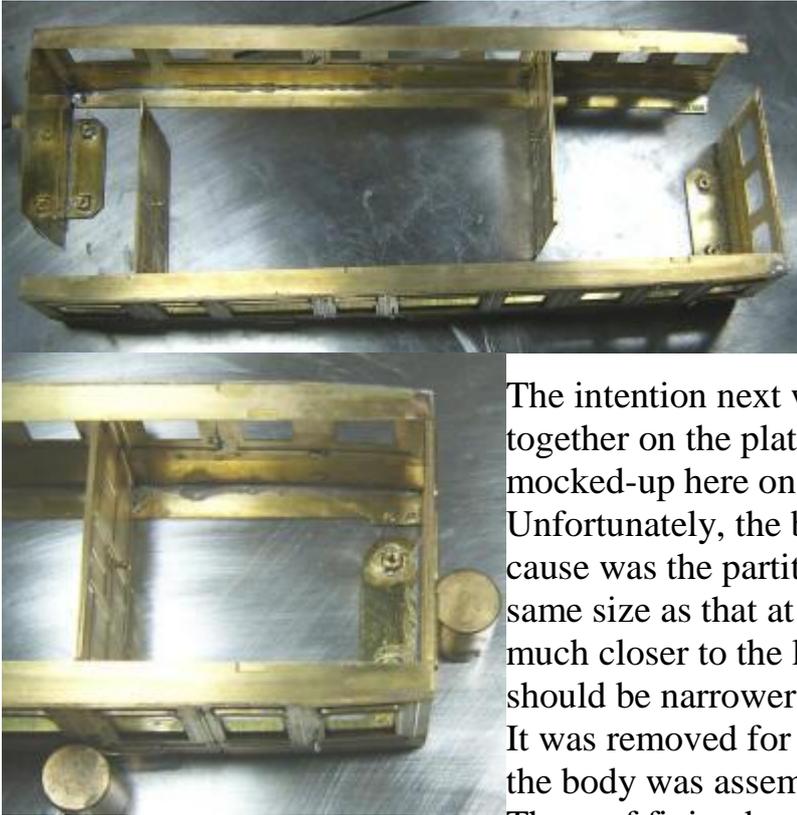
the right position.

I started by fitting the internal partitions after having fitted the door handles. Since



the vehicle is to have lost wax outer door handles, I used the etched ones doubled up, carefully filed to shape. One point to watch for. All three internal partitions are exactly alike so once one has sweated two of them back-to-back, the position for the

doorknobs will be diagonally opposed.



Drill the hole in one side in the square indentation for the knob but fill the square on the other side with solder and file flat. I put that side to face away from the end windows on the basis that it will be less noticeable. Next, I soldered the ends to opposite sides as here.

The intention next was simply to clamp the parts together on the plate and tack solder as shewn mocked-up here on the window end.

Unfortunately, the body was now out of true. The cause was the partition at the lavatory end. It is the same size as that at the other end but is placed much closer to the lavatory end. Naturally, it should be narrower to account for the curving sides. It was removed for attention and to be refitted after the body was assembled.

The roof fixing beams are a neat fold-up that then fit into half etched fixing points. Another piece has to be fitted inside the fold-up to strengthen the beam. The instructions suggest fitting this before fitting the beam to the roof rails. I thought this would be quite difficult and so fitted the beams and then the strengthening piece from the inside afterward. Be sure to get them the right way round so that the half-etched holes face into the vehicle. The roof will be held in

place with half a dozen self-tapping screws.



Here is the body virtually complete except for the outer door handles. The step boards need very careful handling and reinforcing with wire stays behind the fixing stanchions. There is also very little clearance for the Cleminson trucks so I would advise filing the cut-outs for the axle boxed a good deal deeper *before* fixing.

Needless to say, I did not and now have the delicate job of

filing them in-situ.

Now it goes to Ian to construct the roof in plasticard, fit a suitable interior and paint it in LSWR livery.

Ian's notes:



Now is the time to deal with the roof of the saloon. I used "Spraymount" adhesive spray glue to attach the roof profiles to a piece of 40 thou. plasticard, from the same sheet used for one of the roof layers. Label each profile with its use. Since the instructions are written under each profile, once cut out they can be confused if not named.



Cut out the profile pieces and set aside. Next, cut the sections of plasticard for the roof as mentioned in the instructions. It is difficult to measure the sections to the sizes in the instructions. They were originally worked out on a computer by Ivan. I found it difficult to cut sizes such as 55.51mm or 44.35mm and simply cut them to the nearest half millimetre over the size indicated.

later identification easier. Starting with the base, mark a centre line on each piece. Carefully spread superglue as instructed. Beware; the fumes given off on a piece of 0 gauge roof can be quite eye-watering! Being superglue you only get one change when sticking it down, so take extra care when positioning it. Watch point; if the



Once cut out lay the pieces in a line or order of use and number or letter them to make later identification easier. Starting with the base, mark a centre line on each piece. Carefully spread superglue as instructed. Beware; the fumes given off on a piece of 0 gauge roof can be quite eye-watering! Being superglue you only get one change when sticking it down, so take extra care when positioning it. Watch point; if the glue is spread too thinly, it dries out before it can stick the parts together. I found that the edges needed to be sealed with plastic solvent. Weight the layers if using plastic solvent and leave overnight to set.

You will need a very coarse file or a rasp to attack the roof when shaping it. Wear an apron as filed plastic gets everywhere. The apron will help contain it somewhat. While profiling the roof sides take care not to re-profile your bench top too! You will be appalled at how much mess it makes but take time constantly to check with the profile shapes.



Spread car-body filler or knifing putty to smooth out the curve. I found I had a nice series of steps down the sides due to my imperfect measurement. When dry, in about an hour, use a coarse file finish of the profile to correct shape.

Place the roof on the coach body, then draw round the body sides to get the taper of the ends. Carefully file to shape, keeping the file 45° and try to keep the edge of the plastic running in a straight line along centre of the roof to the corners. If the line along the ridge of the roof end appears to be curved

left or right, the roof needs more work to get the shape correct.

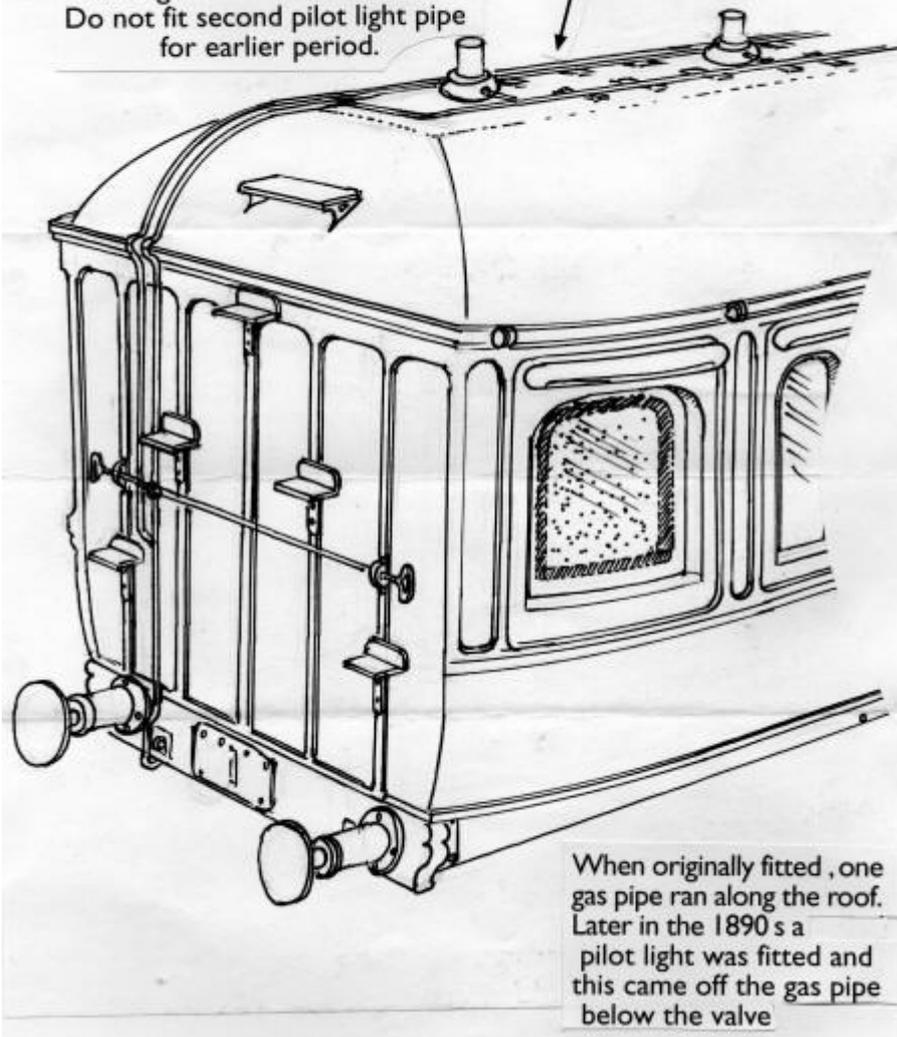
The next job is the final fitting and making the roof cornices....

Rough sketch shewing possible layout of gas piping and valve switch position on step end.

Pilot light version shewn here. Do not fit second pilot light pipe for earlier period.

Gas pipes supported by small wooden blocks.

Meantime, think about the roof fittings as shewn in this diagram.



When originally fitted, one gas pipe ran along the roof. Later in the 1890's a pilot light was fitted and this came off the gas pipe below the valve

FINISHED AT LAST.



The windows are etched with a pattern and behind them are curtains. There is also a fully fitted interior, there are no pictures of it yet but it is just possible to make some of it out through the window in the picture below.

