



Bent Frames on an Oban Bogie

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At the recent AGM in Bedford I brought along my model of an Oban Bogie 4-4-0, the one with a 4 wheel tender, a design built by the Caledonian Railway in 1880. This caused some people to ask “Why have you kinked the frames at the front of the engine”.

The answer to the question is as follows. I believe that if one spends 100's of hours creating a large scale model (although I stress I am not a rivet counter) the finished model must in my view accurately reproduce the external visible characteristics wherever possible. I have a particular visual fault (or is it perhaps a positive peccadillo) in that I can spot if a line or a right angle is out of sync by as little as $\frac{1}{2}$ a degree, or that a curve is not quite what it should be. We sometimes need to resort to a dodge to achieve the right effect and frame kinking is one such dodge.

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Apropos frames, the scale dimension measuring between loco frames is 4 feet and three quarters of an inch plus 1 inch each side for the frame thickness, gives a model width of 57 mil. G3 standards for the width across the outside of engine frames are 2 and one eighth of an inch, or 54 mil. In some designs the difference of 3mm is

not noticed because the frames are covered or concealed by the footplate, or the discrepancy can be overcome by the valve access cover plate (see below). However in many designs the frames are a most conspicuous feature when the engine is viewed from the front and if you are finicky like me that 3mm is irritating. In the case of the Oban built by Dubs to a design by G. Brittain the frames are very conspicuous. Others that come to mind are the Adams T3 4-4-0 (on display at the NRM) and most of the Drummond 4-4-0 locos for the CR, LSWR and Highland.

In order to achieve the extra 3 mil it is necessary to kink each frame outwards by means of pressing it between two pieces of steel plate in a large vice. Hold the frame horizontally in the vice and insert two pieces of sixteenth plate approx 1 inch long by $\frac{1}{2}$ inch wide held vertically either side of the point in the frame plate where you have decided to impart the kink. The two pieces need to be positioned parallel to each other and about 6 mil apart, then apply maximum pressure by turning the vice handle and “presto” no pun intended, it is possible to end up with a neatly kinked frame.

There is another wheeze for designs where only a small portion of the frames is visible in front of the smoke box, and where the cover plate permitting access to the valves and pistons is between the two bits of visible frames. See any Stroudley engine and you will see what I mean. The wheeze is to make a little cover in brass that is 57 mm wide and slips over the frames set at 54mm thus giving the impression that the frames are set the correct width.

The Oban has taken no little time to complete, to quote Queen Victoria. I first saw the best photo of the prototype whilst visiting the NRM with Alan Headech when we were en-

gaged on researching the immense collection of photographs held there. Alan Headech made the coal fired boiler and I also used Alan's excellent wheel castings. Slip eccentric valve gear is used as these were passenger engines and tended not to run backwards. Unfortunately I get bored after a time and I started another 5 locos in between which is my excuse for the delay in finishing the loco!

The engine should put in an appearance this year at Garden Get Togethers as it is finished from an engineering viewpoint and only requires some cosmetic bits to finish it. As for painting it shall be done in CR dark blue with red buffer beams!