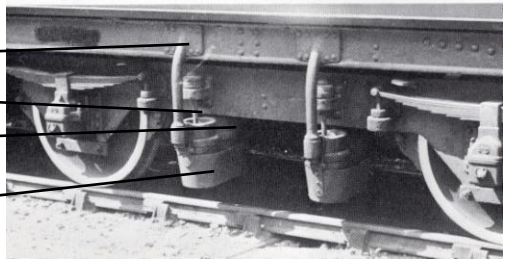
MJT
scale components

2427 – 2428 GWR Dean 10’0” and 8’6” Cosmetic Bogie Sides
Instructions

To allow running on curved track, there are some compromises in the design of these sides which lead to options for the modeller. Please read the instructions and familiarise yourself with the parts and options before bending, gluing or soldering them. These sides are designed to fit on MJT CCUs (MJT 2221 - 10’0” and 2223 -8’6”) or on MJT rigid bogie frames (MJT 2562 - 10’0” and MJT 2556 - 8’6”).

The Dean bogies are a bolsterless design featuring volute springs mounted outboard of the bogie frame. A volute spring is a spiral - like a clockwork motor spring on its side; they are sometimes used on gardening secateurs.



The vehicle body is mounted on the bogies by means of 8 (4 for each bogie) ‘scroll irons’. These are attached to transverse planks (just visible in the photograph) the ends of which rest on top of the volute springs, which are themselves in cylindrical casings. The springs are supported on ‘pins’ or swing links which are attached to the bogie sides. Lateral compliance in the springs and pins offers sufficient flexibility to allow the bogie to rotate relative to the vehicle body when cornering. While this works with full size vehicles on prototypical curves, it would be very difficult to build this flexibility into a 1:76 scale model especially if it had to negotiate the much tighter curves typically found on a model layout. Some compromise is therefore necessary unless the model is static or only expected to run on straight track; the solid link between the bogie side and the scroll iron / bogie side must be broken somewhere.

The bogie sides, scroll irons, volute assembly and pin (a length of 0.7 mm brass wire) are provided separately to allow the modeller some discretion in how to put the bogie together. Our suggestion would be that the ‘break’ is made at the bottom of the scroll iron; i.e. the bottom of the scroll iron is not attached to the volute assembly. The volute assemblies are themselves attached to the bogie side by means of the pin and the scroll irons attached to the solebars. Consideration might be given also to attaching the volute assembly to the bottom of the bogie frame for additional strength. This would, however, leave it a fraction too high. To run smoothly, there would need to be a small gap between the scroll iron and the volute assembly and while cornering there would also be a slight longitudinal mis-alignment.

A literature search suggests that the maximum (‘worst case’) distance between the bogie centres on any coach riding on Dean bogies is 40’; 160mm in 1:76 scale. For such a coach sitting on a second radius (438 mm / 17¼”) curve the angle between the bogie and the body will be 10.5°. This equates to a clearance of a little over 1 mm between the scroll iron and the nearest projection on the bogie side. This should be ‘comfortable’ although it will depend on the distance between the solebars on the chosen body. If necessary, the scroll irons can be stood off the solebars with suitable spacers. Two designs of scroll iron are included and the modeller should refer to the prototype to decide which to use.

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