

Having determined the axle centres from my trials with a simple mock-up it was time to start on the model in earnest.

The drawing and 'photos show the general arrangement of the bogie unit, the dimensions shown can be modified to suit whatever wheel spacing arrangement you choose and only the main stages are described.

Each side frame is made up of two pieces of 0.080" styrene sheet which provides sufficient thickness for the axle bearing tubes (See later) and the cosmetic leaf springs. The two side frames were cut from the styrene sheet, with the oval openings and axle bearing slide spaces drilled and filed to shape. 0.080" square inner side frame plate strips were glued along the upper and lower outer edges. The truck beam end caps were fashioned from 1/4" x 3/8" Bass wood strip and glued in place. Framing strips measuring 0.12" were cut from .040" styrene sheet and cemented in place around the inner edges of the frame spaces.

The slide guides were cut from 0.080" square strip and cemented in place as were the 0.080" inner frame plates. The journal boxes were then fashioned from 5/16" strip and cemented in place.

The two side frames were secured back to back with masking tape and holes drilled to accommodate the brass rod that would act as the journal bearing. (The diameter of the holes being dependant on the axle and tube thickness – I used 5/64" diameter tube). A small dab of CA adhesive ensures the bearings stay in place within their housings.

In order to be able to insert or replace the wheel and axle units it was necessary to devise a method of allowing the two side frames to be separated from each other after assembly. This was achieved by initially producing two transverse truck beams from 5/16" square bar of a length that permitted free running of the wheel sets, each beam being supported by a curved beam support that acted as a filler in the beam side frame and gave additional support to the beam.

The beams were then cut in half and cemented into place inside the side frames. A piece of square styrene tubing was slipped over one end of each beam to act as a joining sleeve, the wheel and axle units put in place and the other side frame and half beams offered up and the square tubing slipped into a central position.

A rectangular journal support plate, cut from 0.080" styrene, was placed centrally over the support beams. Two holes were drilled down through each beam and 8BA screws put in place and secured with nuts and washers. Thus by releasing the screws and pulling the two sides apart the wheel units can be easily .

To secure the bogie to the underside of the tender a 1/4" hole was drilled in the centre of the support plate and a round head bolt fed upwards and held captive with a nut on the upper side of the support plate. A washer over the nut forms the base for the spring which supplies a downward pressure to the tender wheels. An upper washer forms the rubbing face against the slider housing beneath the tender. The exact length of the bolt was established once the tender base was in place.

Purely for cosmetic purposes a circular plastic sleeve, representing the journal support was cemented in place to shroud the lower nut, washer and spring. Six support plates were then cemented in place to represent journal support braces. Holes for small diameter cottar or split

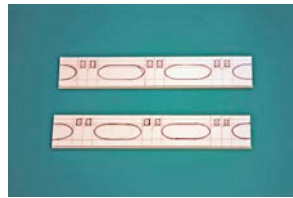
pins were drilled on the upper end surface of each side beam, the pins representing truck lifting points.

The next task was to construct the spring suspension units. The springs were made from 0.080" strip cemented in place and held with rubber bands whilst the glue dried. Thin strips of styrene cemented in place centrally on the springs represent the spring holding braces.

Just to reassure you – it took me about fifteen hours to produce the six wheel bogie – this was not going to be a quick kit bash!!



Typical drawing tools



Two pieces for one side Frame.



Liquid cement etc



Using rubbing board



Side frame exterior



Half beams added



Both sides slipped together



Journal support plate



Bolt components



Temporary nut holding spring etc in place



Assembled bogie



Assembled bogie



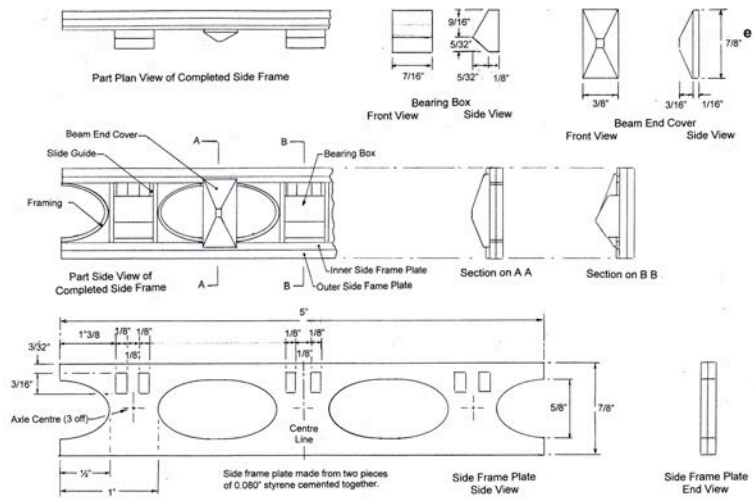
Wheels fitted



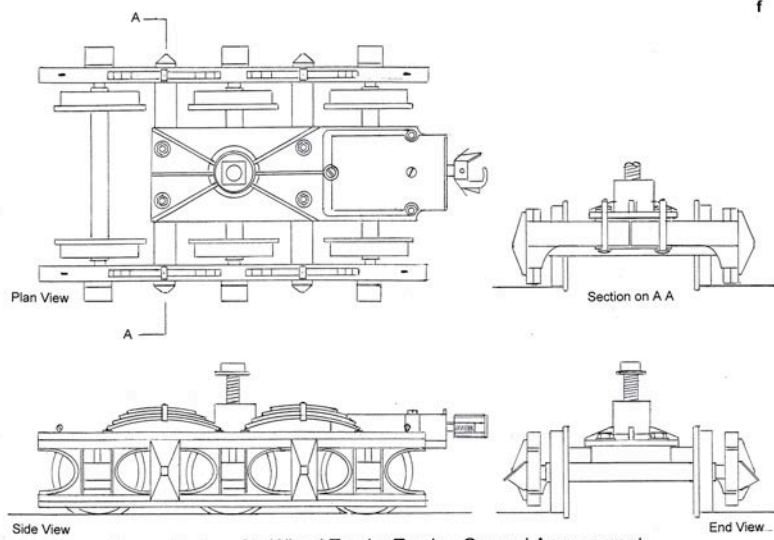
Bogie with wheels in place



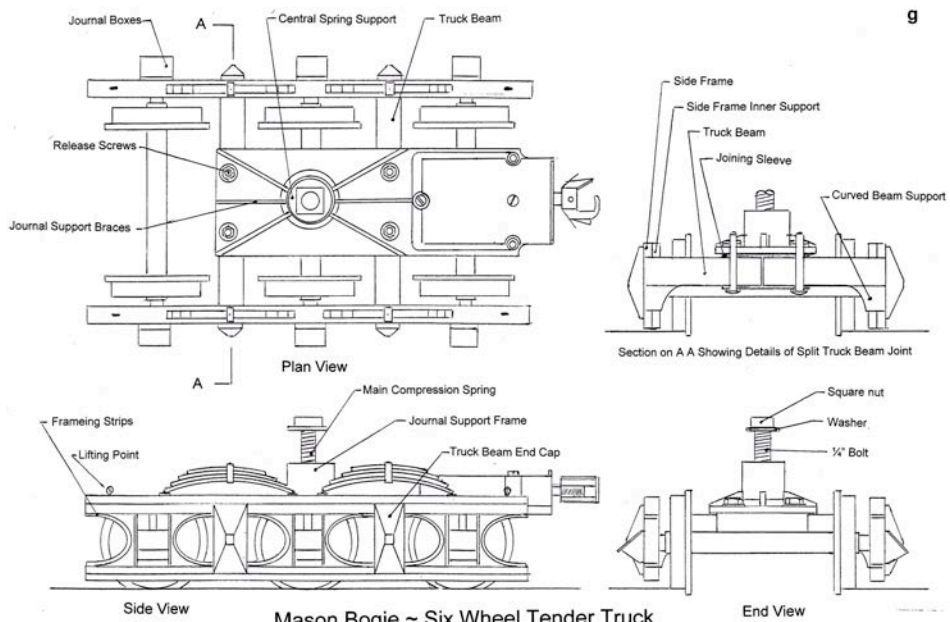
Component parts of bogie



Details of Tender Truck Bogie Side Frame and Associated Components



Mason Bogie ~ Six Wheel Tender Truck ~ General Arrangement



Mason Bogie ~ Six Wheel Tender Truck
Itemised General Arrangement