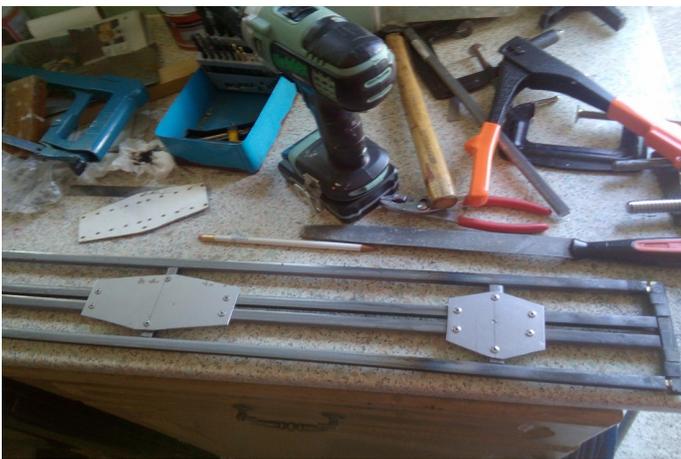


## Not Only Kermit or Rosey....

One of the most common problems in carriage building is making the underframe. If you follow the Chris Barron principle that means that you have U channel lengths with a central tie piece and two bogie saddle pieces. All of these (according to the plans) are unified with 14BA nuts and bolts. These are becoming both rare and expensive. What is required is a more common and cheaper -but stronger alternative. This can be found in the humble pop rivet. This is normally Aluminium, but is available in mild Steel and "A2" Stainless Steel.

The advantage of the A2 and mild Steel versions is of course that you can use them to hold the part that you are going to braze -in place. In the shot below you can see the 3mm A2 rivets being used to fasten the bogie saddles and centre tie piece to the longitudinal U channels. The lateral sections have been riveted to the saddle and tie section. Then the pieces brazed to the channels. There are "keeper" pieces inserted and brazed. This produces a VERY strong underframe for the coach.



The problem of producing a pivot and bogie frame can be easily solved using the same techniques. The next shot shows the saddle drilled to take a “lazy susan” ball bearing plate. On to this are then riveted two U sections of Aluminium, L shaped brackets are then riveted to them. This gives a double beam cross piece -then you can rivet the bogie plate to it. Reversing the system gives a movable bogie plate for a fully compensated bogie.



To make a simple removable fixing for the lazy susan you can use a “rivnut” that will insert a threaded length into a sheet section. The ones shown here are M4. So, as you can see the modern rivet gun is not to be disparaged as a butchers tool and can rapidly produce parts and assemblies for the railway.