

5 Outside framed bogie Siphon G.

## Looking back 3

continued from page 41, February 1972, *Railway Modeller*

# Siphons and monsters

Jim Whittaker shows you how he makes his prizewinning models

Photographs by Brian Monaghan

A COMPLETELY different type of milk traffic van is the 18ft. long 4-wheel open-planked type Siphon "B" shown in photograph 7. The prototype was first built in 1873 and a total of 70 such vehicles were built by 1878. It is almost certainly the originator of this particular design and formed the basis of the subsequent 6-wheel versions which were built in their hundreds with variations in height, wheelbase and number of doors, but confined to lengths of 27ft. and 27½ft. My attempts to accurately model the 4-wheel Siphon "B" were handicapped initially by the fact that the last prototype was extinct by 1914 and no official photograph survived, but eventually, after a 3-year delay, someone produced an old photograph of a goods train which had been involved in a collision and there was the elusive "B"! balanced precariously at about 20° from the horizontal.

It is surprising what can be achieved with a magnifying glass and a good light and I was soon able to proceed with the model with a firm

conviction of reasonable authenticity. The model depicts the vehicle with the subsequently fitted double-clasp brakes, operated with forked rods virtually encircling each wheel. They were very fiddly things to fit and I seriously question whether they were worth the effort in 4mm. scale, as they cannot be seen properly without an artificial aid. Even the body had its problems, as it is a completely open "see through" type which prohibits the use of re-assuring internal body spacers. To surmount this problem, it was necessary to join the sides and ends at each of the four corners with a miniature inter-slotted joint, plus glue to obtain the strength required. On reflection, it was stupid to have fitted the pin and hook couplings (so obvious in the photograph) after trying so hard to make the model look like the prototype, but at the time I had ideas of operating with automatic coupling and uncoupling.

The 6-wheeled Siphon (photograph 8) is obviously a lengthened version of the 4-wheel

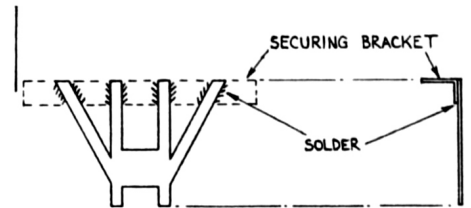
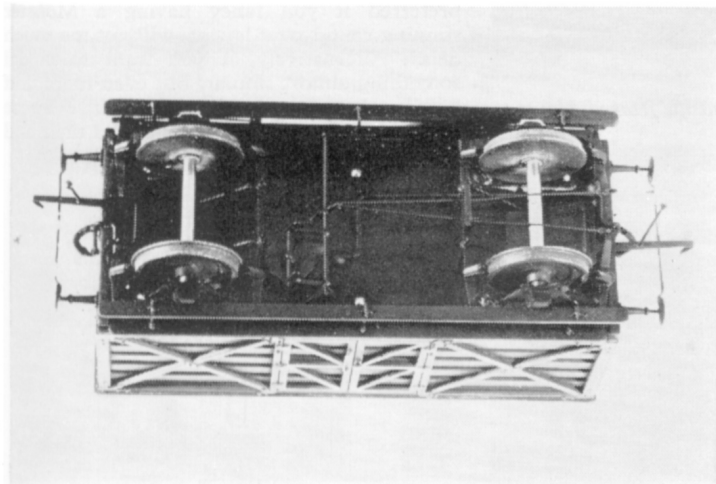


FIG. 3

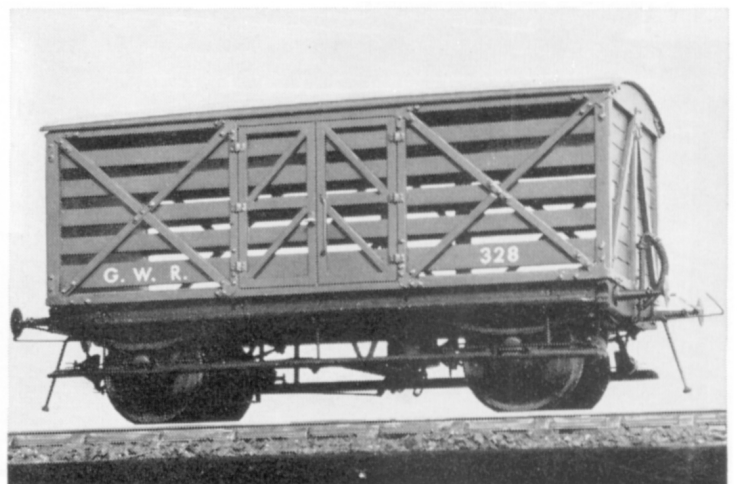
FIG. 3A

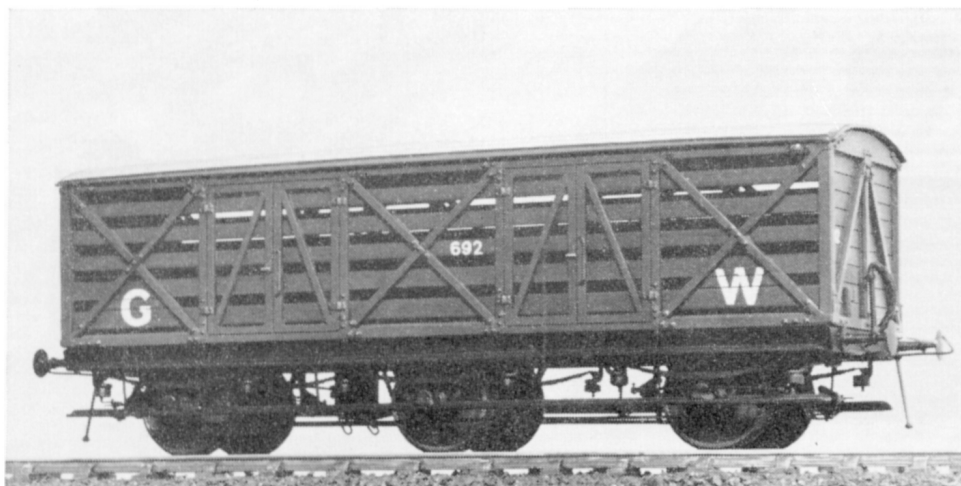
"B" though it features metal instead of the wooden underframes and headstocks of the latter. The one chosen to model was the low arc-roofed version (only 6ft. 4½in. high body) to Swindon Diagram 0.2 and its construction was identical to the 4-wheeler except for the "W" irons. It may not be obvious from the photographs, but these are home-made soft metal castings via a plaster mould on the 6-wheeler, which are weak and clumsy looking, but the "B" features properly made "W" irons cut from 0.012in. thick nickel silver sheet (see Fig. 3). The latter's scale appearance amply compensates for the slightly longer time involved and this method has been standardised on all subsequent 4- and 6-wheeled vehicles. To permit easy access and use of the file when finishing the internal profile of the "W" iron, the securing bracket is made as a separate unit and only soldered to the "W" iron as a last operation (see Fig. 3A). Another advantage of using nickel silver is the facility with which wheels can be removed from the vehicles for

6 Underframe of 4-wheel Siphon B.

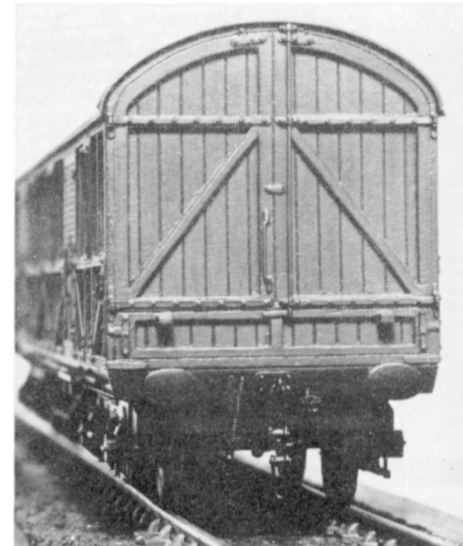


7 4-wheeled Siphon B.





8 6-wheeled, low roofed Siphon.



9 End view of Monster.

cleaning, or for interchanging EM to 16.5mm. gauge, according to whose layout one is visiting. Opposing "W" irons are simply squeezed gently apart with the fingers and the whole axle unit drops out. Although the prototype 4- and 6-wheeler Siphons are generally similar except for length, there is a noticeable difference on certain gusset designs and for no apparent reason—can you spot this on the models?

Returning to bogie freight stock, the outside-framed 50ft. Monster (i.e. covered scenery van) shown in photographs 10 and 11, is another now extinct species, three only having been built circa 1910. I have a great personal affection for this vehicle and it scarcely needs the G. and W. to tell you where it was designed and built. To me it represents the solidarity and character of its era, when standards and price of workmanship were high, and judging by the detailed enquiries following my earlier modelling articles on Monsters, a number of readers were similarly attracted to it (December 1967 and January 1968, RAILWAY MODELLER). These issues described the general constructional methods, so there is no point in repeating them, though a few words about the finishing might be useful.

Like many modellers, my main weakness

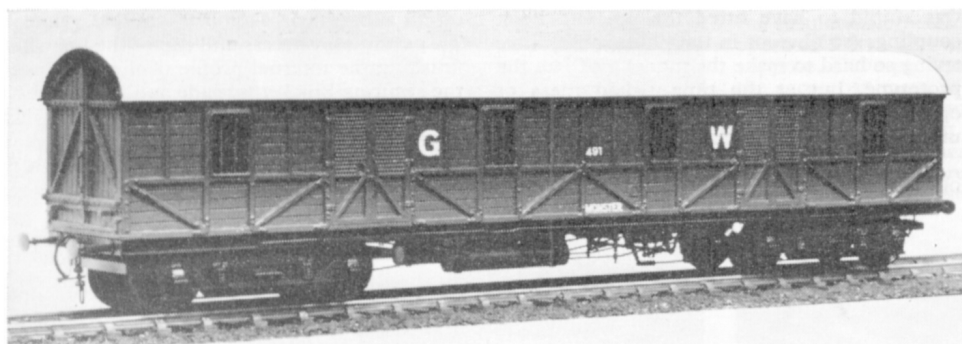
and source of apprehension is painting, especially when a mistake could bring disaster—e.g. one could not "rub down" a vehicle such as this to rectify mistakes when the body sides are literally all planks and frames, sprinkled with small gussets and hinges, not to mention a few louvres. As a result, a technique has had to be developed which eliminates most of the skill required and, equally important, the risk of a botched job. Some modellers could undoubtedly apply two or three coats of paint to this vehicle and get a superb job—unfortunately I have not the nerve or skill. My method is to apply 10 to 12 coats of very thin paint (approximately 80% turps and 20% paint from the tin—Humbrol). Do not be alarmed at the high number of coats, as the method of application ensures just as quick a job as three carefully applied thicker coats. The mixture is so thin, one can virtually "splodge" it on any small area such as that contained between the frames with scarcely any brushing—it sort of spreads and finds its own level and runs evenly into the plank grooves and louvres, etc. It dries out dead flat without any sign of a brush mark in a matter of minutes, especially if one adds a paint flattening agent to eliminate any chance of a gloss finish (I prefer a matt finish on all models). By avoiding thick paint, there is also less risk of blotting out much

of the fine body detail. The chassis painting is a different proposition. With so much fine detail and spidery wires, spraying was essential and matt black paint was used (one coat). There is little or no risk here, as the chassis and bogies, being all metal, can be soaked in paint thinners and the paint removed with ease should the standard of finish be disappointing.

An end view of the same vehicle is shown in photograph 9. On the left-hand door can be seen the usual door handle featured on most freight stock (in various lengths) which, although simple to make, is not easy to secure firmly to the body. Figure 4 shows how this was surmounted in a very simple fashion which guarantees the handle and body being partners for life, unless savagely handled.

Using brass or nickel silver wire, the handle is bent to the required length and shape, but with "extensions" as shown with the dotted line. The two lugs, punched from 0.004in. thick copper strip, are soldered to the handle and the whole unit secured to the body by pressing the extension wires into two holes drilled into the body, having previously applied Evo-Stik to the wires and the rear face of the lugs. For even further security the two extension wires can be bent slightly inwards, so that when meeting their body holes they have to be sprung outwards, thus providing a pincher action when inside the body. Wherever possible, I try to work on the theory that if a component is worth making and fitting, it is worth fitting permanently.

Another type of Monster, the inside-framed version, is shown in photograph 12. You might think this vehicle carries a certain dignity, if such a phrase can be applied to freight stock? The body involves considerably less work than its outside-framed companion and this may be preferred if you fancy having a Monster running round your layout, without too much delay. Alternatively, if you want to model something almost similar, but even more "off beat", why not consider a "Giant"? These were originally Monsters which had their end



10 Outside framed Monster.

11 Outside framed Monster.

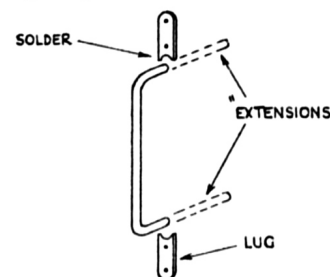
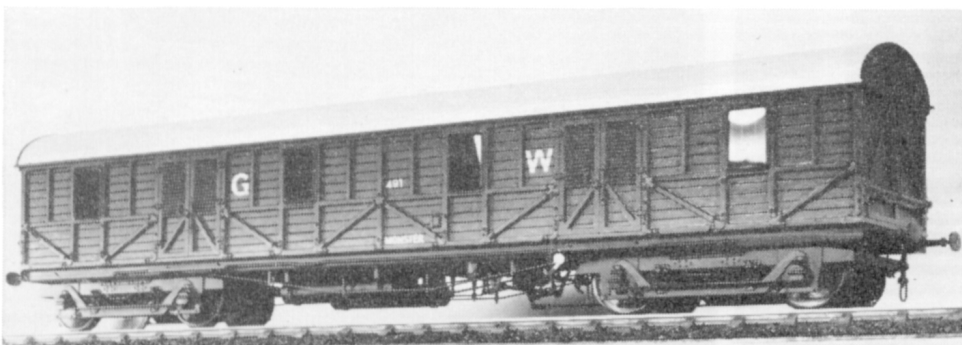


FIG. 4

doors replaced with corridor connectors and re-coded Giant, though it is believed they retained the same Swindon Diagram No.—i.e. P.18. Vehicles numbered 587 and 591 were so treated, though the precise appearance of the modified ends is not known, nor is the correct lettering on the body side. (Can any reader help?) As a change from freight stock, current efforts are confined to a rake of panelled G.W.R. coaches, mostly with clerestory roofs and finished in the so-called chocolate and cream livery in vogue at the turn of the century. Photograph 13 shows one of them. The prototype was a 28ft.  $\frac{3}{4}$ in. long, 4-wheel passenger brake van with the guard's look-out at the extreme end of the vehicle and inset sliding doors at the opposite end. It started life as a Post Office van fitted with the usual posting box, but the model shows it in its converted state. Its construction is similar to that of freight stock, i.e. an all-wood body cut from 0.035in. thick 3-ply sheet and a separate metal chassis, mainly from nickel silver and brass. The body mouldings are cut from approximately 0.007in. thick good quality card, thoroughly shellac-ed on one side before cutting out. A complete set of finished mouldings for this vehicle is shown in photograph 14 and although it appears a laborious task, it is surprising how quickly they are produced once you have done a few. Photograph 15 shows the intermediate stage and basic principle of producing body mouldings, though this photograph is in fact for a different vehicle currently being made. It will be seen that the position, of all the mouldings and window clearances are entered in pencil and the appropriate corners then punched out to produce a corner radius. To complete, a sharp-pointed blade is used to cut along the pencil lines between each punched hole and all the surplus card drops out, leaving a complete "one piece" moulding ready for gluing to the body side. Initially, the gluing operation appeared impossible to solve. Every known glue was tried without real satisfaction, though, in fairness to the manufacturers, the requirements were rather unusual—e.g.:

- (1) It should be transparent and very thin, allowing it to be brushed rapidly and copiously on to both the mouldings and the body and virtually disappear on drying out by being absorbed in the wood and card.
- (2) It must allow about 5min. before drying out to permit slight adjustment of the mouldings to the body as they are very delicate and can easily be bent. This ruled out all impact glues.

13 4-wheel passenger brake, ex T.P.O. van.

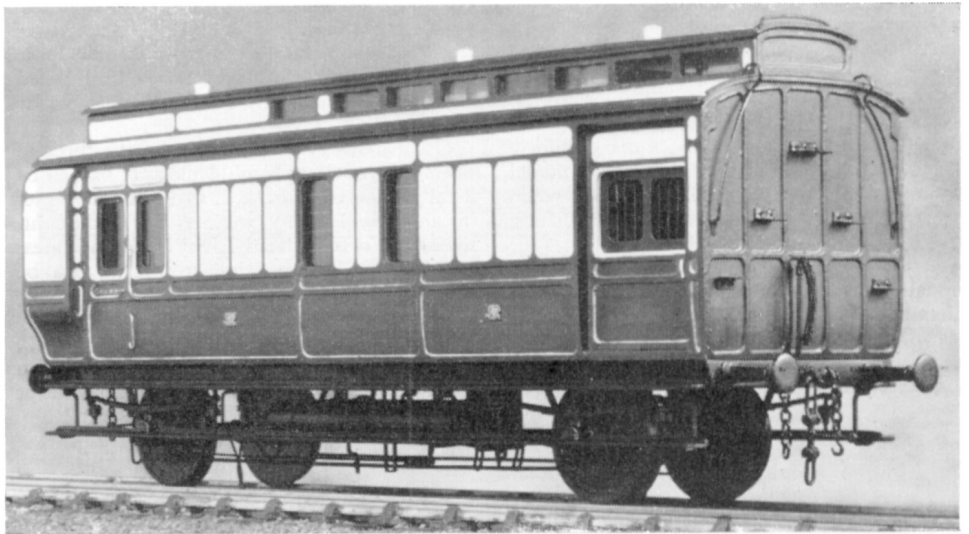
14 Finished mouldings for 4-wheel passenger brake.



Whilst the glue is setting, the mouldings are also pressed into the wood by tapping them rapidly with the end of a piece of  $\frac{1}{4}$ in. dia. metal rod (sort of hammer action) and this process continues until the glue is set, so obviously one does not want a glue that takes a long time to harden. Eventually, however, a friend (non-modeller!) suggested a glue not previously thought of—i.e. Gum Arabic, and it proved the ideal solution. It is available from most chemists in crystal or powder form for about 4p a bag and is dissolved in water to a mixture by volume of approximately 40/60 respectively, though it is essential to have a trial run on a few strips of 0.025in. wide scrap card before risking your completed moulded side to possible disintegration.

Incidentally, many coaches have the edges of the waist and lower mouldings lined out in a contrasting colour to that of the body. It is far easier to apply this paint to the edges before the complete moulded unit is stuck to the body. When painting the upper cream panels, it is essential to obtain a clean, sharp edge between all the panels and the mouldings and a method has been developed to achieve this without

much skill. The mouldings are tackled first and given three or four coats of paint, without particular concern whether the paint wanders on to the panels or not. The panels are then given about 9 or 10 coats of cream paint, using the quick "splodged" on method already described on the Monsters, though in this case the benefits are even more substantial. The "loaded" brush is placed in the centre of the panel and with slight help from the brush, the very thin paint creeps or spreads evenly over the entire panel and when it reaches the surrounding moulding (only 0.007in. thick) runs up the edge of same, presumably by capillary attraction and stops dead at the top edge, thus producing a nice sharp line between the mouldings and panels. The operation is literally done for you if you get the correct paint/turps mix and repeated applications of this process produce a nice radius at the bottom edge of the moulding, where it meets the body, as per the prototype. The paint is so thin, of course, that it takes three or four coats before the panel starts to take on a cream appearance, so do not jump to the conclusion that you have got the wrong paint mix—it must run freely.



15 Marking out the mouldings for a bogie T.P.O.

