

CONCLUDING JIM WHITTAKER'S FEATURE

CHEATING "FATHER TIME"

WITH PHOTOGRAPHS BY B. MONAGHAN

THE process of making Evostick more workable, referred to last month, is far quicker and smoother than it sounds, especially if you make your own little "hot plate" for the essential pre-heating operation. I made mine for a cost of about 4s. 6d. and just could not manage without it now, especially in winter when even fish glue needs warming up prior to use. It comprises a 75 watt lamp mounted inside a tin box $4\frac{1}{2}$ in. \times $7\frac{1}{2}$ in., the latter having a few ventilation holes punched in near the top edge. Just place the tube of Evostick on the lid of the tin box and the lamp inside just keeps the glue the right temperature for use as described above. (If convenient, the heat from a small electric fire will accelerate the process if you are really in a hurry.) The "right" temperature is when the tube of glue can just be handled comfortably with the bare hands; under these conditions, the glueing of tiny metal parts to a wooden body is quite a fast operation with maximum permanency. Looking back, I now realise that the development of this punching and glueing technique has completely changed my ideas of component making and assembly and there appears to be no end to the further application of the basic principles. For instance, the fitting of the numerous brass door handles used to be a job I dreaded.

These handles are made completely from .015 in. brass wire, soldered in batches as Fig. 15 which is self explanatory and were a push fit into No 78 holes drilled in the body. As can be imagined, by the time the handle had been "positioned" on the vehicle body, both horizontally and for correct distance projecting out, the handle occasionally broke off at the soldered joint and a tiny piece of .015 in. brass wire was then left firmly stuck in the 78 hole and often very difficult to remove. Now the handle is simply picked up with tweezers, stroked into the Evostick to obtain a tiny blob of glue and inserted into a sloppy clearance hole in the body and there is plenty of time to perfectly position the handle before the glue gets hold. It really is astounding how this simple change has speeded up the operation and there are plenty of handles to "go at" if you're building rolling stock!

The grab handles which are featured in various lengths on nearly every type of rolling stock used to be another awkward item to make, as in attempting to flatten the nickel silver wire to represent the two lugs (see Fig. 16), it was most difficult to avoid fracturing the wire and of course it was nearly impossible without proper bending tools to maintain consistency of handle length. Fig. 17 shows the new design which completely eliminates all the tedium

and scrap of former efforts. The handle is made in one simple bend and just pressed into two holes drilled in the vehicle body. The lugs (Fig. 18) which have been separately punched out in the manner already described, are then stuck on the body at both ends of the handle and it is virtually impossible to see that it is not a "one-piece" job and the whole unit really does look like the prototype.

Incidentally, reverting to the brass door handles (Fig. 15), I know one modeller who makes these items from Peco nickel plated brass track pins, by simply filing the pin head down to the shape of a handle. This is a very novel way and further illustrates the different ways of achieving the same result and what can be done by a bit of thought. On balance, it would appear a faster method than the soldering idea already outlined, except for one important factor—the filing operation introduces a "variable element" (always to be avoided if possible), whereas with the soldering method the .015 in. dia. brass wire remains .015 in. brass wire throughout. (If the handle is mounted on the vehicle so that the soldered joint is facing downwards, it is impossible to detect the joint from any normal viewpoint). In fairness to truth, of course, it must be admitted that sometimes a prospective good idea

rebounds with a vengeance and the "case of the two soldering irons" is an ideal example. To save the time and trouble of changing soldering "bits" I bought two irons—one for heavy work and one for small delicate operations. As this "heavy" iron was rarely used, it occasionally fell from the bench to the floor and was forgotten. One evening, as is my usual custom, I plugged in the bench iron to get it warm whilst having tea and subsequently discovered via the nasal organs that the wrong iron had been plugged in, i.e. the one lying on the dining room carpet!! This same carpet had only just previously been "flooded" with 4 gallons of aquarium water as a result of another so called brain wave for quickly replenishing "old" water. This "idea" utilised a long rubber tube and a bicycle pump suitably adjusted to suck instead of blow, but you can take it from me that a rubber tube resting innocently and unknowingly on the carpet can pass unlimited quantities of water without a solitary gurgle!

One idea that did come off, however, was the unusual "modus operandi" for making the slotted levers used on the vacuum brake system of all old G.W.R. vehicles (see Fig. 19). In this case, it was not a question of finding a quick way—I just couldn't make the levers at all out of the obvious choice of material—say .008 in. brass strip, due to the slot being on a curve and worse still, being only about .015 in. to .018 in. wide. Eventually, the following process was evolved, using just a length of .012 in. dia. tinned copper wire.

(1) Bend the copper wire round the five pins "P" (suitably positioned in a block of wood) and forming the bending jig (Fig. 19A).

Note.—The "start" of the wire is pushed into a tiny hole in the wood to anchor it whilst the wire is

wound round the pins and the surplus wire snipped off after completion of bending.

(2) Completely fill in the shaded portion, Fig. 19B, with solder, which, of course, really strengthens the whole component for subsequent handling.

(3) Using tweezers bend the remaining copper wire into the shape of the curved link, then hammer it flat, to look like the prototype (Fig. 19C). A 78s hole drilled through the solder (for the brak shaft) completes the job.

I have gone into fair detail with this method, as nearly all the older G.W.R. vehicles feature these levers (fitted in pairs) and as they are so conspicuous, poking out nearly down to track level, one can't very well leave them off, and then claim it's a scale model.

Incidentally, with components of this nature, I firmly believe it pays to make a batch of about a dozen "in one sitting" (for stock), as a certain amount of "knack" has to be acquired, even when using a jig and it really is important to have all standard components looking alike, whatever vehicle they may eventually be fitted to.

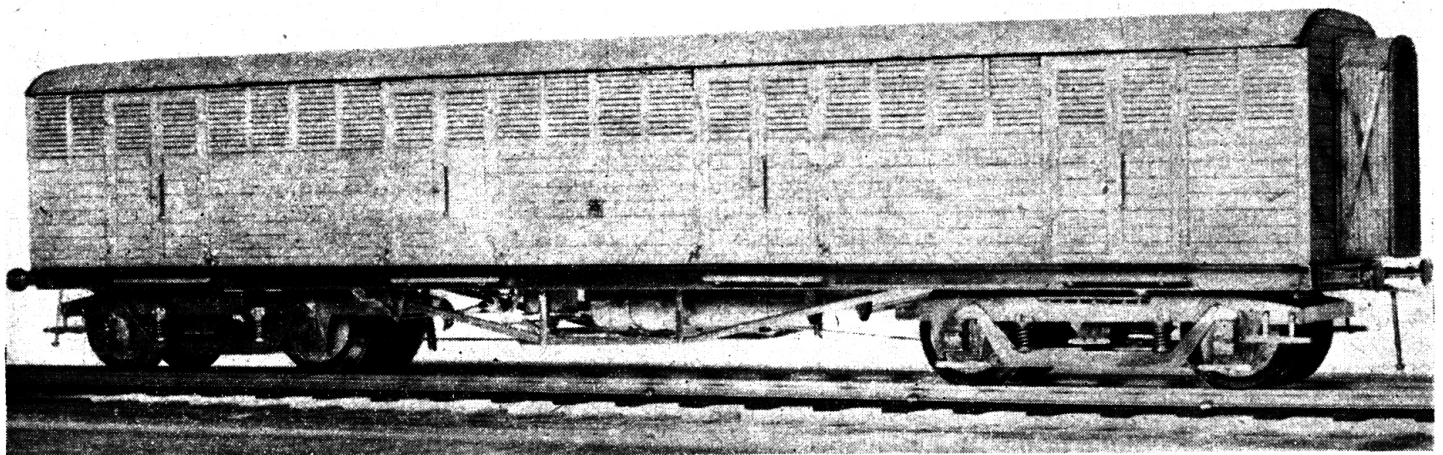
On occasions, when one is absolutely stuck for ideas, it is not a bad thing to seek help from even the most unlikely sources—even a "Napoleon." (For readers outside the Manchester M.R.S. perhaps I had better elucidate!) Some time ago, my employers engaged consultants to pep up production; and one of these consultants was busy one day outlining his theories to Sammy, our star spray painter, on how his daily output could be increased without extra effort. After 20 minutes of this, Sammy, who can safely be described as a "character," declared "Sir, you remind me of Napoleon" to which the consultant—drawing himself up another

two inches—rejoined "Why so, Sammy?"—"Because, Sir, like you he knew damn all about spray painting." One of my best "Napoleons" happened to be a dry as dust cost accountant, who had not the first idea or the slightest interest in modelling. He got me out of a complete mess with regard to sticking delicate coach beading on to wood, by suggesting a glue which I had not even considered, and which happened to be just perfect for the particular problems involved and cost only a few pence (i.e. Gum Arabic).

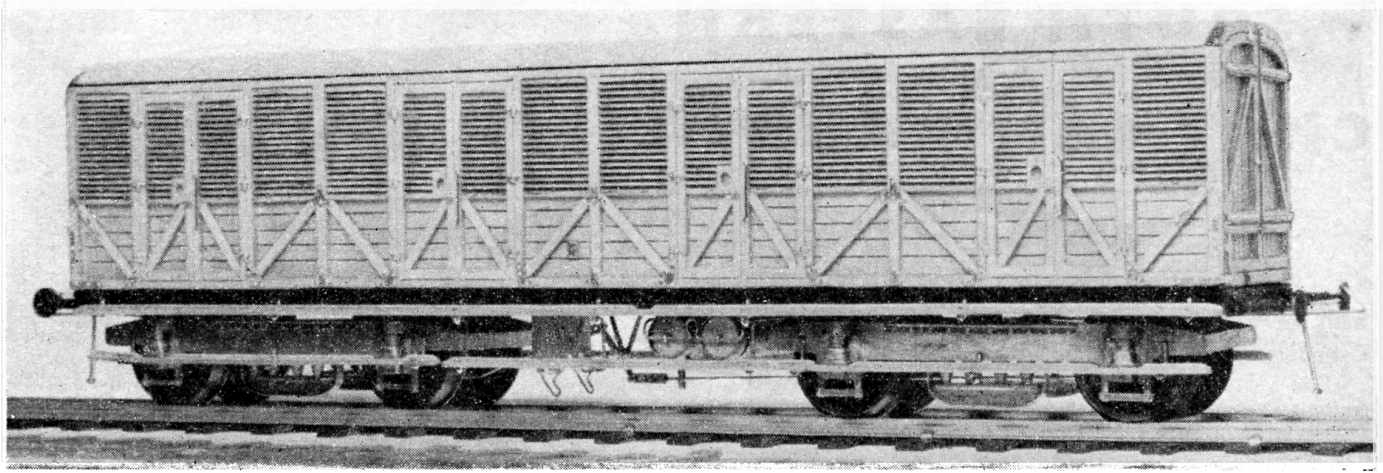
Getting back to G.W.R. Siphons, another simple illustration of how a slight change in method or design will improve results refers to vehicle roofs—one of the most difficult things to get looking just right—at least I find it so. These Siphon roofs were made from solid Obechi wood, which is easy to carve and when finished, the roof should nest down (without "play") between the vehicle's ends and sides. This, of course, is virtually a dummy roof, requiring a "finishing" process, as follows, but which offers considerable advantage over more usual methods:—

(1) The roof proper is made from approx. .008 in. thick good quality white card, which is stuck over the dummy roof and effectively hides any indentation in the wood roof due to bad carving. This operation can be performed without endangering all the good work put into the vehicle body which is not handled at all during this process. Furthermore, should any mishaps occur, you can peel off the white card before the glue sets and start again.

(2) If handled carefully, the use of white card completely eliminates the operation of painting the roof white and I suggest that the avoidance of several coats of paint is always worth striving for. Further-



50 ft 0 in. Siphon "G" (inside frames). This is the latest model just nearing completion, with 9 ft 0 in. American equalising bogies incorporating coil springs for the equalising bars (non-working) and leaf springs for the bolster. The model incorporates practically every item of prototype chassis detail



Above: 40 ft Siphon "F," circa 1905, with 9 ft 0 in. volute bogies. These feature properly wound volute springs on the bolsters and axle boxes. Heading photo, page 343: 28 ft 6 in. Siphon "C" 4-wheeler. This model is fitted with the G.W. "either-side" brake gear complete except for the last stages to the brake blocks. Individual leaf springing is fitted although non-working

more, the "finish" can be selected beforehand by choice of card and will invariably be superior to the painted finish.

(3) The rain strips can be stuck in position whilst the white card is in its flat state (i.e. before sticking to the wood roof) which enables a lovely symmetrical "line" to be obtained quite easily, particularly if Gum Arabic is used for the sticking medium, as this allows plenty of time to adjust the strip before the glue sets and leaves no stain on the

card. Any modeller who has tried to stick rainstrips on a curved roof has my heartfelt sympathy.

(4) The position of the gas lamps or ventilators can be lightly pencilled in on the white card, again whilst it is in the flat state, which considerably simplifies the main difficulty here, i.e. finding the centre line of a curved roof and getting the ventilators in a dead straight line.

It is regretted if I appear to be flogging roof problems too hard, but so many beautiful models are spoilt

by indifferently fitted and irregular shaped roofs, which really is a pity, as the roof is a key component on any vehicle. Of course, a particular problem to one person may be no problem at all to another (we all have our strong and weak points), but I do believe that the devotion of more time to really "thinking" about a problem before commencement would help most modellers to achieve a larger output of models and what is even more important, a better standard of finish and quality.