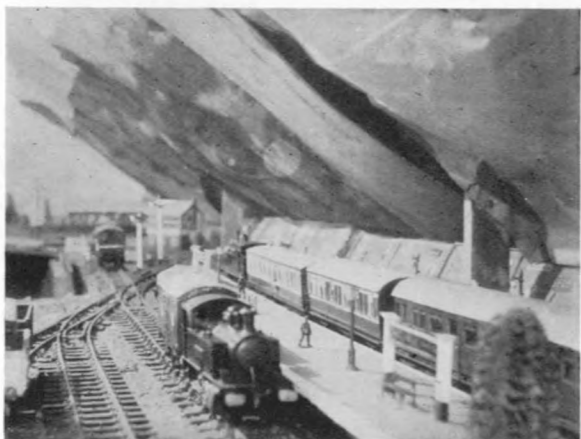


Gauge O Caledonian 45 ft. non-corridor Brake Compo coach. Built from drawings in the 'Railway Engineer.'

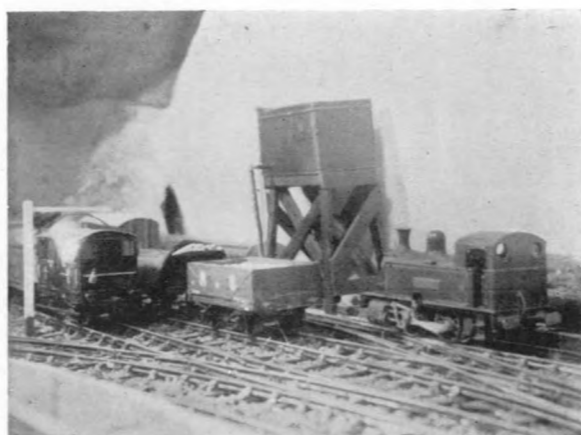
The stock is rather odd in proportion as apart from motive power mentioned I have built my first H.R. loco, a 4-4-0 small "Ben" type now No. 2 "Ben Alder" with a Walker's Romford type worm drive mechanism, which has proved quiet and powerful. A H.R. "Barney" 0-6-0 goods loco No. 18, with a Mills mechanism rebuilt from a G.N. Stirling 0-6-0, only the footplate and boiler being used in the rebuilding.

A Caledonian 45 ft. 1st/3rd brake compo coach was built from a photo copy drawing from the 'Railway Engineer.' For the time being two ex-Great Western railcars in H.R. colours are being used and the bow-ends with windows are not unlike the H.R. chariot ended coaches. Of course these are long coaches for my 3 ft radius curves but most of the stock to be built will probably not be over 48 ft. scale length, one advantage of the pre-group modelling.

A 6 wheeler in C.R. colours has been built. This was intended for the Great Western so is not quite a scale



Craigimore Junction with mixed H.R. & C.R. train in platform 2. Freelance C.R. 0-4-0 tank in bay.



Glenthorne Yard with freelance 0-4-0 tank shunting. The loco. is now in C.R. colours. Also showing H.R. type water tank.

C.R. 6 wheeler. The list of jobs to be done and stock to be built is long but the layout is getting a Scottish air about it.

Our Cover Picture

Shows the latest British Railways type engine to be built. It is the 4-6-2 Class 8 type with a tractive effort of 39,080 lbs. No. 71000, the first of the class, is named "Duke of Gloucester." (Photo: British Railways.)

G.W.R. Dean 0-6-0 Locomotive.

Mr. W. G. H. Anderson, 29, Elizabeth Street, Elsternwick, S.4, Melbourne, Victoria, Australia, is anxious to obtain a photograph of the cab fittings of a G.W.R. Dean 0-6-0 locomotive. If any reader could assist it would be greatly appreciated.



Coarse standard Gauge O Highland Railway 4-4-0 Loco. No. 12 "Ben Hope" of the small "Ben" class. Body and chassis built by the author and fitted with Walker Romford type mechanism. The loco. has since been rebuilt as "Ben Alder" No. 2. (The last of the class.)

A GAUGE O STEAM LOCO FOR BEGINNERS

Part 18.

By "1121."

Setting the Valve.

The method of "stopping" the piston is quite simply to locate it against some fixed part of the engine, the easiest way of doing this being to trap a small piece of metal packing between the cross-head and the back cylinder-cover. This bit of packing, in our case, should be about 3/8 in. wide, and the two diagrams in Fig. 89 show it "trapped" with the crank in the "up" and "down" positions respectively. While the crank is in each of these positions, a mark is made on the back of one wheel, again from some fixed point on the engine, the simplest way of producing such a point being to hold a piece of plate across the engine frames, as shown in Fig. 90. This plate is used as a guide to scribe a little line on the wheel. It will be seen that this gives two marks, one for each setting, and finding the point mid-way between these two marks round the wheel is a simple "schoolboy's geometry" process with a pair of dividers. The marking should, of course, be on some fixed radius from the wheel-centre, and if your machining has been so good there is no convenient tool-mark to give you a circle to work on it is very easy to produce one by rotating the wheel against the point of a scriber held firmly down on the frame. The bisection-point can be consolidated with a centre-pop mark so that it will not subsequently get lost sight of, and will be there for all time in case any future servicing on the engine necessitates fresh

valve-setting. When this mark is placed in position against your piece of plate, the crank will be on back dead-centre. (Fig. 91.)



MARKING PLATE

Fig. 90 How the marks are made.

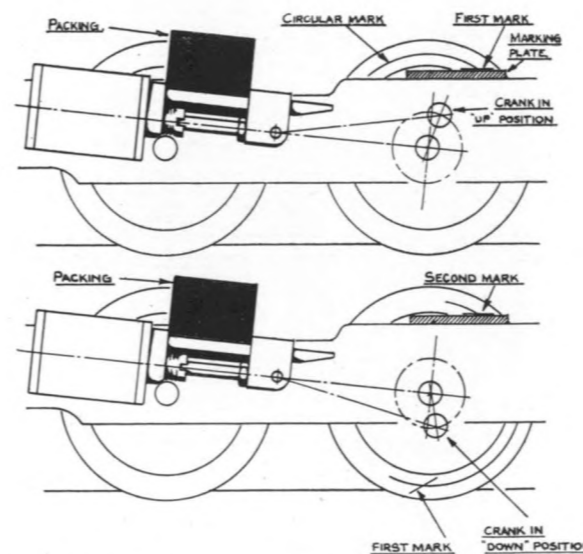


Fig. 89 Finding the back "dead centre" position of the crank. Top—making the first mark. Bottom—making the second mark.

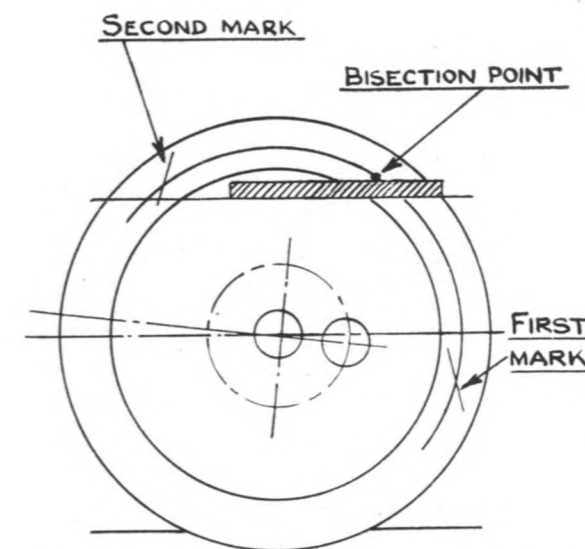


Fig. 91 When the point round the wheel mid-way between the two marks is placed against the marking plate, the crank is exactly on back "dead centre."

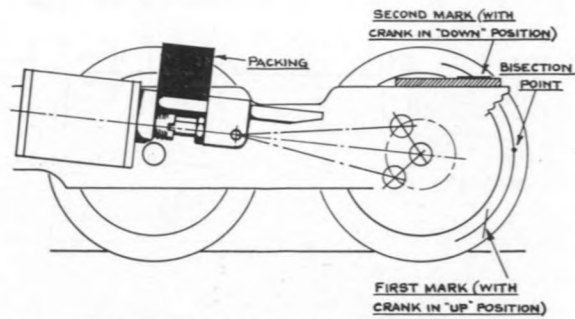


Fig. 92 The whole thing repeated to find the dead centre position.

The process is now repeated for front dead-centre, using this time $\frac{3}{8}$ in. of packing between the crosshead and cylinder-cover (Fig. 92.). Your "marking-off" plate should, of course, be preserved in your box of "Aladdin"

tools and spares, as its thickness is obviously an important factor in the calculations.

Set the stop-collar on the axle with the set-screw approximately in line with the main crank. It can be seen in this position in one of the photographs of Mr. Terry's "Aladdin" chassis reproduced in the March issue. Incidentally, how very interesting it is to see such an obviously nice job being made of our little engine, and to find the interest being shown in effecting little improvements such as Mr. Terry has done. We hope other readers with "bright ideas" will bring them forward for we know the Editor would welcome them. For our own part, of course, we are keeping the design as simple as possible, both for the benefit of the beginners who want it that way and so as not to prolong the articles beyond their already lengthy proportions. Regarding the back cover screws which Mr. Terry mentions, we cannot quite understand what must have happened to his dimensions, as there is plenty of clearance here on our original "Aladdin," and when making the drawings we actually set the cylinder-block a little further forward than on our own engine expressly to make quite sure about this.

Gauge 00 Cardboard N.E. Van.

By S. M. BANKS.

Having heard quite a lot about cardboard as a medium for modelling, I decided to try it for myself. The model I selected was that of a N.E. long wheelbase Meat Van—I do not know whether there was such a van used on British Railways, but if there isn't, it's just too bad.

The material used was $\frac{1}{2}$ mm. card and the sides drawn out as in the diagram. Planks were scribed with a pin. The sides were made up of three layers of card, the outer layer only being scribed. The doors, which are raised, are also built up of three layers.

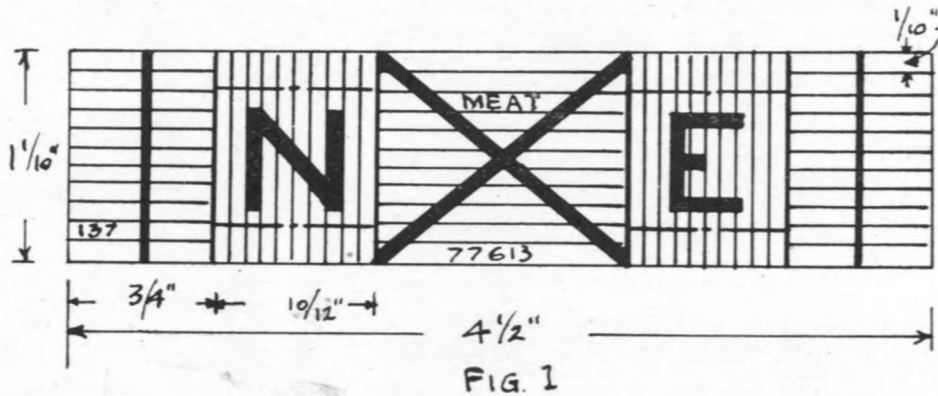
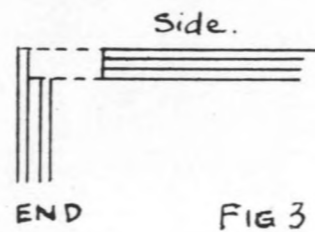


FIG. 2. Actual size 4 mm. scale. Door stuck here.



Planks are $\frac{1}{10}$ in. wide on the main sides and the door planks are $\frac{1}{12}$ in. wide. After the doors had been attached, the strapping was added as in Fig. 1.

Ends are produced in a similar manner, differing only in that the three layers of card used on the sides are equal in length, whereas the two inner layers on the ends

are not so wide. This may be seen in Fig. 3 and produces a very strong joint.

When the sides and ends are built up they are glued together and held firmly until the adhesive is hard.

For the roof a single layer of card was used. The body with roof attached is then mounted on a piece of card which forms the floor.

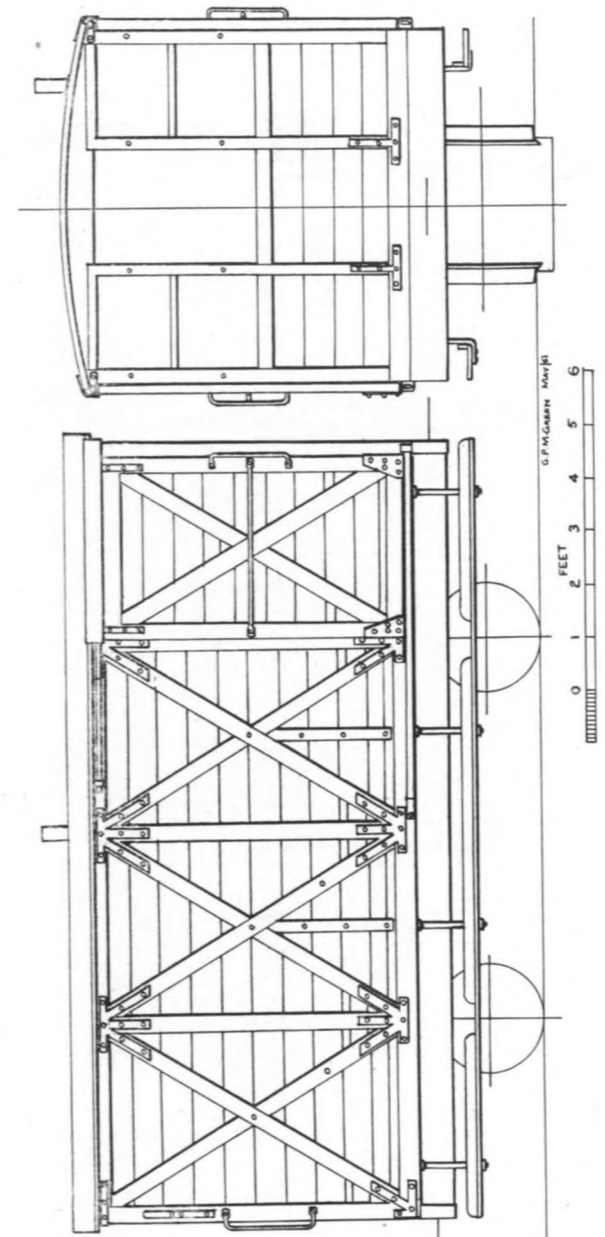
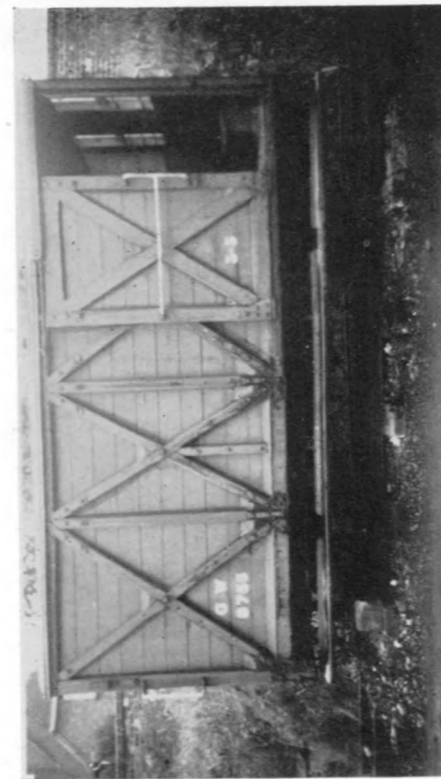
Axleguards, wheels and buffers were obtained commercially. The axle guards were glued to the floor and the wheels inserted. Buffers were attached in the same way, and although the method of fixing may cause amusement to professional modellers, I must say that both axleguards and buffers are still as firm as rocks.

Painting was in dark grey and the lettering added in white. The roof was also finished in white.

It is my first attempt at modelling rolling stock and if any of the old hands care to pass on some tips or criticism they will be gratefully received.

The drawings are actual size for 4 mm. scale

Welshpool & Llanfair Railway Rolling Stock



No. 3. Guards Van. By G. C. Green.

There are differences between the present form of the van and its condition in 1903, particularly in the pattern of outside framing for the body, and in the sliding doors. The 'Railway Magazine' photograph shows a conventional type of van with an open verandah leading to the van body through a hinged door.

Previous drawings—Part 1. Cattle Truck (June, 1953) and Sheep Truck (June, 1954).