

**LINES  
FROM  
PADDINGTON  
TO PORTMADOC**

KEITH LADBURY DESCRIBES HIS

**GWR AND LMS LINES**

NOT long ago, I read in the Model press a comforting remark to the effect that the joy of model railway work was in the development of a layout to suit one's particular interest. How true that is. With me, it is mainly the traffic side, but traffic on a line that endeavours to look the part.

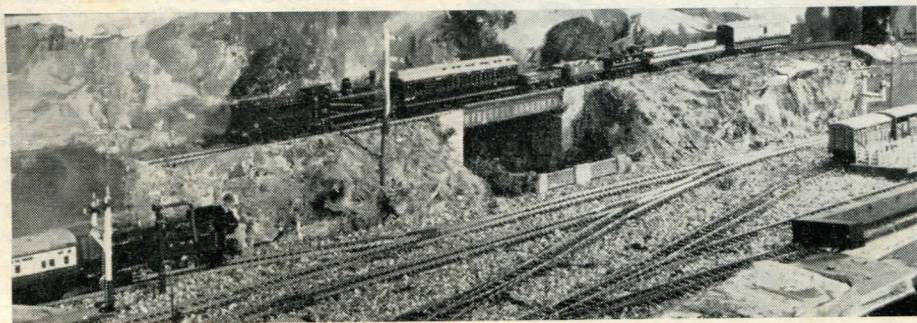
Being of vintage fortunate enough to know the pre-grouping railways, I decided that in building my first OO line I would have the period around 1926-30. This, with a little latitude, allowed for a fairly wide range of locomotives and stock and a certain amount of overlapping of one system's stock to another. With so many railway loves, it was not easy to decide which line or lines to follow. Though living on the G.N.R. at the time, and an ardent supporter of it, there were also memories of early boyhood holidays spent in Wales, with gallant Cambrian 4-4-0's—usually running late—toiling

through rock cuttings with heavy trains from Paddington or Manchester, G.W.R. "Dean" goods "piffing" round the curve into the bay at Aberystwyth on a somewhat indifferent set of brown G.W.R. coaches from Strata Florida, Webb coal tanks at Festiniog, shunting slate in the rain or a "Bill Bailey" on an excursion at Llandudno Junction. These, and many other delightful memories, made me decide on the Cambrian between Aberystwyth and Shrewsbury, together with some G.W.R. and L.M.S. connections, as they say in "Twenty Questions." A further advantage was that most of the Cambrian line was single, which cleared one's conscience over the problem of up and down roads. However, this comfort was of short duration, as the line developed (as model lines have a habit of doing) and penetrated areas where single line working was anything but. The general plan will

explain, but the line now runs from Aberystwyth to Dovey Junction, where the Coast line from Portmadoc and Aberdovey joins it. From there, through Machynlleth and Welshpool to Buttington, with a line going off to Whitchurch while the former continues to Shrewsbury. Then, still emulating the late Sir Edward Watkin and still pushing south, on to Birmingham and eventually to Paddington. A very modest Paddington I fear, but sufficient to provide a logical start to many of the services. Now there is an end-to-end run of some 289 ft with 21 stations, and so it is possible to run a fairly complete and interesting service covering the main aspects of the original companies.

**Constructional details**

The line is contained in a room 20 ft by 14 ft. Starting at the usual height of 2 ft 6 in. it goes round the room several times, climbing finally to 5 ft above floor level. Incidentally, at this or slightly less height one gets a much better view of a station, being nearer eye level and so creating an impression of being "with it." Photographs, too, are easier to take and, it would seem, give more convincing results.



Top: Aberdovey dock and timber yard.

Left: A Cambrian locomotive on an engineers' train. The station mouth of Machynlleth is in the foreground.



In climbing from one level to another, the gradients have (as far as possible and most conveniently) been arranged on the longer sides, thus avoiding an elementary mistake in my first layout. Here I had sharp grades on curves and, combined with the then poor power supply and indifferent motors, caused despair in the operating department.

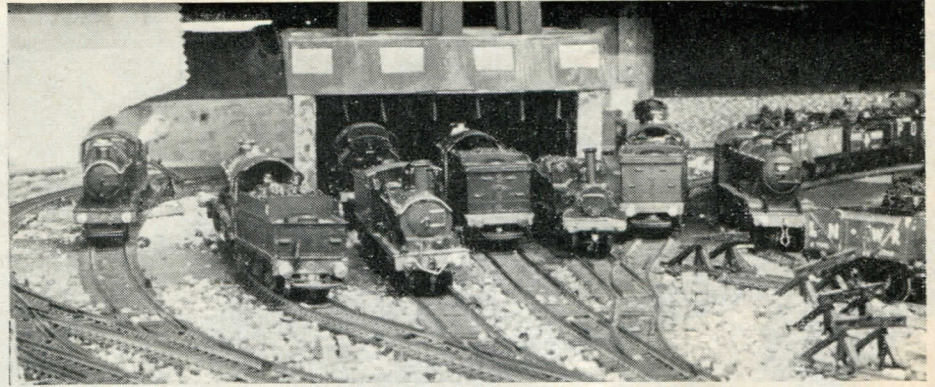
At first sight, a line circling round and round a room, layer upon layer, would seem somewhat foolish, and scenic detail would be lost in a confusion of levels. However, by a policy of bringing forward individual stations and screening any running tracks passing immediately behind, the effect is quite satisfactory, and it does provide the length of run which adds so to traffic working.

The actual foundation of the line is partly six-ply (magnificent stuff), partly hardboard and partly  $\frac{3}{4}$  in. planed wood. The hardboard needs sufficient cross bearers or else, after a time, I find it tends to settle, and though slight, is sufficient to make contact between locomotive and track uneven. Another mistake I made in my earlier days was to cover my baseboards with thick roofing felt. This looked quite well, and provided silent running, but changes in temperature made it swell, again with detrimental effect to running.

Each main station has a controller with a suitable length of section on either side. The usual cut-out switches provide dead sections at strategic points. There is also a link-up between Paddington and Shrewsbury so that one operator can control a through train for the entire length of its run.

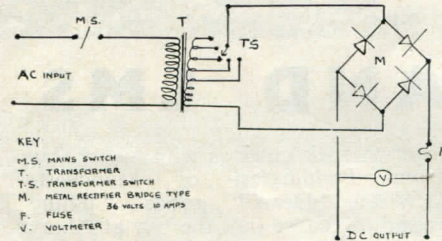
**Power supply**

This unit consists of a transformer, together with the necessary fuses and switchgear, and was designed specially by a friend to overcome two faults after experience with the then standard power units, i.e. voltage drop over long distances and lack of power (wattage) when using two or more locomotives at any given time. The transformer has a tapped secondary thus enabling the correct voltage to be obtained while allowing for voltage drop over distances. The rectifier and transformer



Shrewsbury M.P.D. with G.W.R., L.M.S., Cambrian and L.N.W.R. locomotives.

together will deliver up to 10 amperes. This would allow up to 15 locomotives to be running at any one time without voltage drop. A voltmeter is connected across the DC output by means of a telephone type plug and jack. When plugged to the unit it provides an output check or, alternatively when withdrawn, can be used to check voltage at the track. The basic circuit is as set out below.



- KEY
- M.S. MAINS SWITCH
- T. TRANSFORMER
- T.S. TRANSFORMER SWITCH
- M. BRIDGE RECTIFIER (DIODE TYPE)
- F. FUSE 36 VOLTS 10 AMPS
- V. VOLTMETER

**Description of the line**

It is hoped that the accompanying plan will enable a reasonably clear idea of the lay-out to be obtained. Joining the line at the rather modest Paddington, here we have three platforms under an overall roof with two goods sidings alongside. Old Oak is represented by a two-road locomotive shed, with two long carriage sidings (an additional one laid since the plan was drawn) to provide storage for some of the set trains. These sidings are in the form of loops to enable the tanks on empty stock workings to be released at either end. High Wycombe is very much a "token" station and only comes into

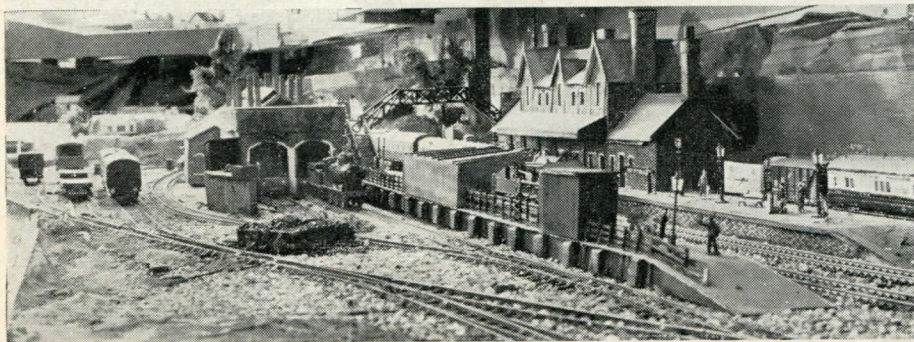
its own when the up and down "City to City" trains stop. Bicester, also on the small side, has a siding and a passing loop usually occupied by an up goods awaiting a "path."

On now to Banbury, with up and down roads, four sidings and a small locomotive shed housing the 0-6-0T used on the Banbury-Bicester rail car. There has been some talk recently of a line off from Banbury to Woodford and Hinton (with visions of LNER) but not all the managerial staff are in favour.

Leaving Banbury, the line passes Small Heath. We run past Tydesley locomotive yards (two roads) and then into Snow Hill with its up and down roads under an overall span roof modelled after the original, with access to the platforms down flights of steps from the booking hall. At the south end of the station are two long roads, one being used during the middle of the day for stabling a couple of bogie clerestory sets which come into their own during the morning and evening rush hours. Two further sidings at the north end complete the layout.

Passing Swan Village, the line goes over a typical GWR span bridge to enter the Wolverhampton section. On the down side, a line comes in—from a convenient tunnel—providing an LMS (Midland) approach for through mineral traffic and the occasional excursion on a summer Saturday. An adjoining line between the two main lines was at one time used as a small LMS locomotive depot, with shed. But by a friendly arrangement LMS engines now use Stafford Road Depot and the line given over to a siding—usually holding the "City" stock during its stay at Wolverhampton.

Wolverhampton has its up and down roads with a road between. This, while officially a down relief road, is often occupied by engines waiting to take over on the Birkenhead trains, plus the odd van, horsebox, etc., such roads seem to invite. On Saturdays in the



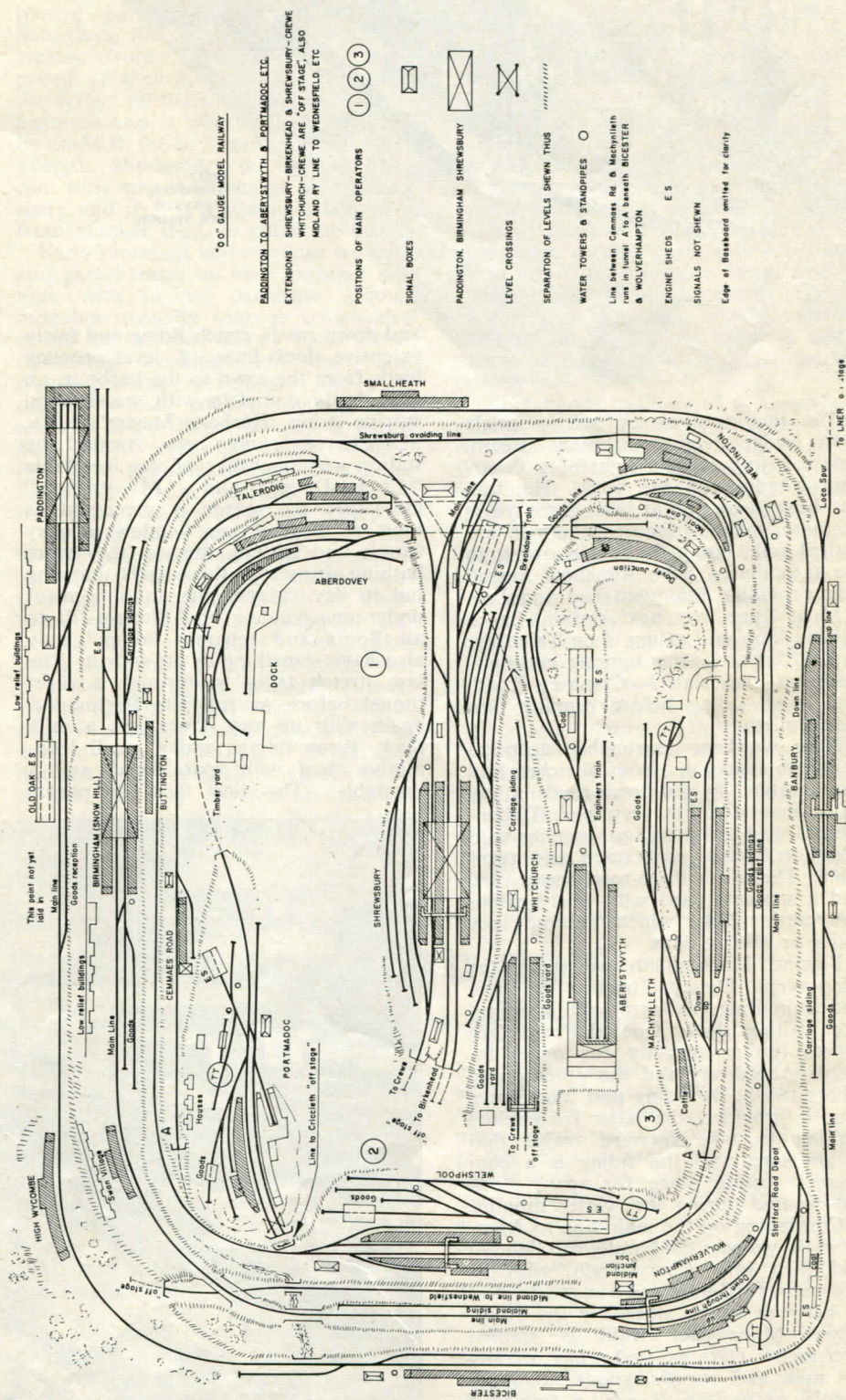
Left: Machynlleth station and goods yard. Photos: M.R.N.



summer, the road is kept clear since it is used by relief trains not booked to stop. Stafford Road has a two-road shed with five other locomotive roads plus turntable, coal stage, etc. The goods yards are on the Shrewsbury side and have four long roads, one of which is also a down slow (goods only) as required. There is also a long shunt spur.

Wellington (Salop) has station buildings and approach road reasonably like the original. Originally provided with a bay and small locomotive shed, the bay has now been extended on to Shrewsbury goods yards, thus forming a further down goods road worked on the permissive system. We are now on joint GWR and LMS metals—pass a permanent way gang (who have been at the side of the track for at least eighteen months) and round a curve into Shrewsbury. A junction just before the curve takes the line along the base of the Shrewsbury triangle to join up again with the track, from the station and on to Welshpool. The triangle, complete with lofty LNWR signal box, is used for engine turning, and, again, through trains during the summer which are not booked to call, though stopping maybe to change engines or to take on a pilot man. Shrewsbury has a correct, or what was correct, span roof with signal gantry. (LNWR signals at the south end and GWR at the north). Four platforms, four coach sidings and a six-road goods yard with a reception road. The locomotive yard is fairly extensive, having a three-road shed and four other roads including space for the breakdown crane and a spur available for spare tenders, engines waiting to go to the Works, etc. The shed is used jointly by both companies and "locomotive spotters" can glean a rich harvest. Until recently, an ex-Cambrian 4-4-0 of the "98" Class used to work through on the Cambrian Coast, returning to Aberystwyth on the down train, but this turn has recently been taken over by a "Hall."

From Shrewsbury, still GWR and LMS joint, we pass Buttington, a rather decrepid station, with its junction to Whitchurch, and so on to Welshpool. Here, such LMS engines as work to Welshpool come off and the line becomes more Cambrian in spirit though GWR influence is fast making itself felt. Welshpool, again with buildings and lay-out as near the prototype as possible, has up and down roads, with a down loop and a bay at the Buttington end, three goods roads, locomotive shed, yards and turntable.



Right: The layout plan shows the length of the run.





Left:  
Aberdovey  
dockyard  
and station.

The line now passes over a single span bridge over a turbulent stream. One can just catch a sight of a fisherman standing on the bank. He, too, has been there for at least three years or more, maybe because fishermen are patient folk, but perhaps it is owing to the fact that I have somehow missed ever providing him with rod and line.

Moat Lane, our next station, has a passing loop and siding, then Talerddig and, afterwards, the famous cutting—made of real slate!—Cemmes Road, with short siding before running into Machynlleth.

Here we have reasonably accurate buildings made up from sketches and photographs, up and down roads, a bay (quite incorrect, but very useful), locomotive shed to house four engines with additional road, coal stage and turntable. There is a three-road goods yard and a separate yard with fairly extensive cattle docks which become very active on market days.

Beyond Machynlleth we reach the wind-swept Dovey Junction—a bare and uninviting platform with a primitive waiting shed. One platform face curves (quite correctly for once) towards Aberdovey and the other on to Aberystwyth. A siding and locomotive spur is provided, the latter for engines waiting to take forward trains that divide here, and the siding is a convenient resting place for spare stock not wanted during the winter months.

Continuing on the main line to Aberystwyth, we pass the hamlet of Glandyfi and then into Aberystwyth, with its two main platforms and a carriage road in between where stock for the Aberystwyth-Manchester train is stabled over-night. Here we find a bay, mainly for milk and parcels, goods sidings, a couple of carriage roads, a two-road locomotive shed, a spare line and a small yard housing a p.w. train.

Returning to Dovey Junction to continue along the coast line, we next have Aberdovey and its harbour, with up

and down roads, coach siding and fairly extensive dock lines. A level crossing leads from the town to the harbour, an area fairly complete with warehouses, marine stores, Harbour Master's office, Missions to Seamen, etc. Around the station are the backs of the inevitable "Crag-y-Dons" and "Min-y-Murs." Obviously the season is successful as most of the bedroom windows display towels and bathing dresses (they wore bathing dresses in those days) hanging out to dry. Maybe the announcement under one window of "Electric lift to all floors and separate tables" may also have something to do with it. The last stretch takes us through a short tunnel before we run into Portmadoc, again with up and down line, a milk dock, three sidings and a small locomotive shed with spare road, and a turntable. The line then disappears

conveniently into a tunnel and towards a mythical Pwllheli.

Birmingham and Wolverhampton receive a daily fish from Aberdovey with a corresponding return empty working. The Southern Railway is in evidence with their through train between Birkenhead (which performe has to "appear" at Shrewsbury) to Dover and Deal. This goes via Banbury (where it again has to disappear).

### Signals

These are correct for the particular sections, with GWR or LNWR in accordance with the period and with a mixture of GWR or Cambrian on the latter section. Banbury boasts a lever frame which controls all the points of that station, but let us confess that it has not yet been possible to work the signals. With some 204 in all, the task of connecting up to their respective lever frames would be too much to expect at present. Some day—perhaps.

### Locomotives

There are 53 engines in the capital stock including both privately built as well as some of the excellent commercial productions now available. As far as possible, correct turns are worked from each shed with additional spare workings being necessary at holiday times, with trains running in two parts, double heading, etc.

Below: A general view of the layout. In the foreground are Aberystwyth, Whitchurch and Shrewsbury. In the background are Birmingham and Paddington.





Rolling stock is varied and the last return made 31st December, 1964, gave a combined total of 92 passenger vehicles (58 GWR, 23 LMS, 4 LNER and 7 SR) including eight dining cars, two rail cars, a slip coach, three sleeping cars, goods vehicles number 176, including 18 goods brakes, 35 covered vans, 83 open wagons (private and companies), 14 cattle trucks, nine service vehicles, etc.

#### General

Buildings and scenery and mainly Abern-inspired and as far as possible true to prototype where actual stations are concerned.

And so, "Forward," as the Great Central used to say on its coat of arms. There is still much that could and must be done, but no small measure of enjoyment is derived in this fascinating hobby from the fact that there are always tasks to be done and improvement to make.

The only remaining section is that from Buttington to Whitchurch where the station has a decided LNWR flavour in its architecture, and having up and down roads, sidings and small locomotive shed.

#### Traffic

The line is worked to a time-table run on a sequence basis. In the main, the services are the same both summer and winter apart from certain through trains which, running separately in summer, are combined in winter. In winter, the set Cambrian trains combine or divide at Dovey Junction, except when one portion is running late, to the confusion of Machynlleth shed who have to provide a suitable locomotive to work it forward. On summer Saturdays, the GWR also put on a relief

in each direction between Paddington and Aberystwyth. These trains take the through (middle) road at Wolverhampton and the avoiding loop at Shrewsbury, stopping at the latter for locomotive purposes only. On summer Saturdays, too, the LMS have an excursion from "the Midlands" comprised of their own stock. This joins the system off the LMS spur at Wolverhampton and is worked to Shrewsbury by an M.R. 0-6-0. From there to Aberystwyth, Shrewsbury do the best they can with whatever engine is standing spare and if it is a visiting locomotive from another shed, so much the better.

Early mornings and evenings see milk and parcel trains on the Cambrian section, with limited passenger accommodation (usually four or six-wheeled stock) for the slate quarry men. Other interesting workings are the night trains between Birkenhead and Paddington which convey sleeping cars and the down sleeper conveys a Royal Mail which comes off at Shrewsbury. For some unknown reason there is no return working so the R.M. returns on the back of an up afternoon semi-fast.

Stopping trains between Birmingham-Wolverhampton-Shrewsbury are hauled by 2-6-2T. Those on the Cambrian section are non-corridor GWR or Cambrian stock (with an occasional six-wheeler to "strengthen" on market days) and hauled by ex-Cambrian 4-4-0 or 0-6-0. The LMS maintain a local service between Shrewsbury and Welshpool of a close-coupled six-wheeled set worked by a Webb 0-6-2T, though it is not unknown for a 19 in. Goods to be seen on this duty. Services on the main line between Paddington, Birmingham, Shrewsbury are worked by "Castles" with goods traffic in the charge of a 2-8-0 or 2-6-0.

At one period, there was a twice-weekly sailing (wind and tide permitting) from Aberdovey Harbour to Ireland, but the service was poorly patronised and did not continue. On the other hand, a fair amount of general cargo is dealt with at the harbour as several coasters come in regularly. Slate is exported while cattle are brought in. Messrs Essau Wood & Co. own a timber wharf and yard which provides employment and activity. Livestock generally is quite a business on the Cambrian section and particularly at Machynlleth where large cattle docks (suitably filled with Herefords) are provided. On market days, most stopping trains have one or more cattle trucks attached, and if the despatching station masters can manage it, at the end of the train likely to cause the most confusion as possible to the Machynlleth station staff.

Other goods traffic is of a somewhat general nature. An early morning coal works each day off the LMS spur at Wolverhampton to Shrewsbury. This is brought in by an LMS 2-8-0 which spends the day sitting about in Shrewsbury locomotive yard until the return empties working in the afternoon. When a 2-8-0 is not available, the train is worked by a Midland Class 3 or 4, accompanied by much slipping in the former case. Main line trains on the Cambrian are given over to a GWR Hall, Collett 0-6-0 or, occasionally, two Cambrian 0-6-0s running together. A rail motor between Portmadoc and Machynlleth is worked by an ex-Cambrian 0-4-4T (of strange vintage) but it is proposed to replace this with a GWR 0-6-0T. A newcomer to Machynlleth is a 2-6-2T of the 44XX Class which takes charge of the through Pwllheli portions.

## WHAT ARE WE GOING TO DO?

*Barry Harper takes a look at what's afoot with the metric system*

FOR the first time ever a government has interfered with model railways. Not by changing purchase tax on items bought, which might make one's funds go farther or the reverse, but in a fundamental way. They have announced that Britain is to change over to the metric system for measurements.

What of it? you might say, a foot even if out of date will still be a foot. This is true, of course, and it won't matter until you make a model of some locomotive, or coach built to the metric measurements. Four millimetres divides nicely into a scale foot giving three inches to each of the four millimetres, now a metre is to all intents and purposes 3 ft 3 $\frac{3}{8}$  in., and therefore our scale measurement for this will be 13.158. Not a very con-

venient figure to work with, and perhaps we will be tempted to use an approximation of 13 mm to one metre. This, however, I do not feel is tolerable when, say the length of a coach is concerned, as each metre of length will multiply the error. On a vehicle 65 ft 7 $\frac{1}{2}$  in. long or 20 metres in our 4 mm to foot scale, this would be 262.5 mm long or in 13 mm to metre the length would be reduced to 260 mm, i.e. a scale 7 $\frac{1}{2}$  in. short. This accuracy would be a pity after putting hours of work into a model, so let us consider the problems another way.

OO scale, 4 mm scale, call it what you will, is 1/76 scale. This you can prove easily by multiplying our old friend 4 millimetres by 76 and the answer you get is 304. 304 mm is 12

inches. So in future we could divide all our new metric measurements by this amount. However, 13 mm to 1 metre might seem easier to work to. If this course is taken then our models to this scale 1/77 will be slightly smaller than our present OO scale. Now this is all very confusing, and thankfully it does not effect O gauge as our 7 mm brothers work to 1/45 scale which is a nice easy figure to work to and has 23 mm to the metre.

One could scrap everything and start again in HO. But beware, HO as the Continentals know it, is not Half O or 1/90 but 1/82 in most cases, therefore it does not work out to 3.5 mm to the foot! What a headache the government has caused us modellers (quite unwittingly, I hope).

*Continued on page 327*