MORE ON GARDEN TRAMWAYS

by
G. OAKLEY

IT is now almost exactly five years since my original article, "History of a Tramway," appeared at a time when the line then described had recently been dismantled, prior to moving to its present location.

The move was actually made in March, 1958, and I am bound to say that when I saw what was to be my back garden and site of the new tramway I was more than a little discouraged. The whole 700 or so square yards of it was a sea of mud into which one sank ankle deep, and the area was criss-crossed by bulldozer tracks which were full of water and anything up to two feet in depth.

As the weather became warmer, so this morass gradually turned into a concrete-hard surface which required strenuous work with a pick to break it and loosen the hundreds of bricks and stones left by the builder. I wonder why builders are so generous in the distribution of their raw materials over the landscape, instead of confining them to the building of the house ?

The entire spring, summer and autumn of 1958 were spent in digging, draining and levelling; some 15 tons of topsoil and about 10 tons of clinker being barrowed in and distributed over the area, in addition to dozens of field drain pipes for which trenches up to 3 ft in depth had to be dug. All the rubble was removed to one side of the "garden" to form a basis for the embankment which was to carry the tramway, and this was allowed to settle throughout the winter of 1958-59.

Operations in the garden ceased about November, but work went on indoors. Considerably more track was required than had been used on the Burnage tramway, and all the overhead standards had to be renovated with improved scroll work and top bracket arms. There were close on fifty of these and it proved a long and, in the end, a rather tedious operation.

I acquired a garden shed in January, 1959, and this was to serve as terminus-cum-tram depot. The controller also was housed in here and a low bench was constructed along one wall about 18 in. above floor level on which the first piece of track was laid. A small door was cut at one end, through which the cars would eventually depart on their journeys round the garden, but until track was laid outside, this door was kept carefully closed, as any car going through at that stage would have disappeared over a 2 ft drop outside !

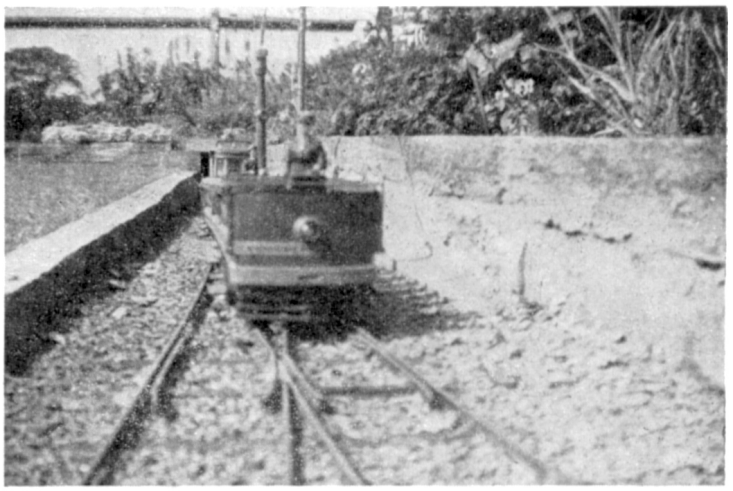
Outdoor work was resumed in March, 1959, when several tons of stone and broken paving flags were acquired for the purpose of laying paths and also for facing the now settled embankment. My son and I worked on this rather back-breaking task throughout that extremely hot summer, and during his mid-summer holiday Rodney and a school friend commenced laying the concrete road bed on top of the embankment.

Portable shuttering in the form of a rectangular frame was used and as each section of concrete was laid, the frame was lifted off and used for the next section. Each section was about 4 ft in length, the width varying according to whether the road-bed was to take single or double track.

The overhead standards were placed in position whilst the concrete was still soft and plugs of wooden dowelling inserted at 1 ft intervals to form anchor points for the track.

The track itself was built up of O gauge, coarse scale brass rail laid to a gauge of $2\frac{7}{16}$ in. on $\frac{1}{2}$ in. by $\frac{3}{8}$ in. cedar wood sleepers, 4 in. in length. The track was screwed at intervals to the wooden plugs and then ballasted in with $\frac{1}{8}$ in. screened Welsh granite chippings.

As originally laid, the line began as double track in the shed, becoming single over the bridge to the embankment outside and then double again for about 18 ft on a falling gradient of about 1 in 30. It then became single line until it reached the south-east corner of the garden where there was a passing loop actually on the curve.



Heading photo shows two Manchester Corpn. tramcars No 1007 foreground and No 1035 in the background. Photo above shows L. & C.B.E.R. Toastrack car No 21

This then was as far as we got in 1959 as further progress could not be made until a means of crossing a flower bed had been decided upon. In any case we were now at the end of October and concrete work was becoming hazardous because of the possibility of frost.

After some deliberation, it was decided that the best way of overcoming the obstacle of the flower bed was to tunnel under it, and a deep cutting was made through it some 6 ft in length, with approach ramps at either end. The track bed was laid with a 2 in. thickness of concrete and then shuttering was put in for the side-walls of the tunnel and cuttings. Strong wire mesh was inserted

behind the shuttering and then the concrete was poured in. This gave good thick side walls of exceptional strength, and the problem now was to span the space between the walls with a 2 in. thick concrete roof at exactly 13 in. above the floor all the way through. An added difficulty was that of extricating the shuttering after the concrete had set.

A satisfactory solution was found by constructing the roof shuttering as a platform on six legs rather like a six-legged stool, which fitted exactly between the side walls and which was 2 ft only in length.

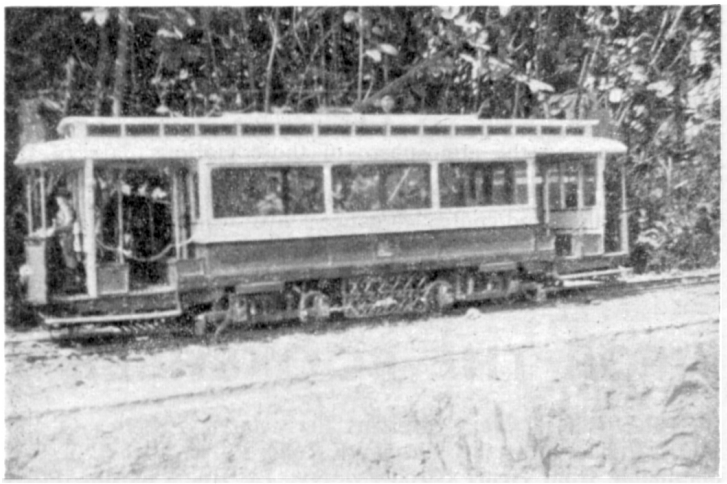
The middle 2 ft of roof was done first, and when the concrete had set, the six legs were knocked away and the shuttering fell away easily. This operation was repeated either side of the centre section, so that in all there was 6 ft of roof, all of it exactly the same height above the tunnel floor. I should mention that before pouring the concrete for the roof, wooden fillets of wood were placed in position to provide anchor points for the overhead assembly as it passed through the tunnel. Earth was then shovelled back on top of the concrete and rock plants now grow in abundance on it.

We were now at the start of summer 1960 and work pressed on rapidly, the end of the line being reached in July, some 220 ft from the starting point, about 70 ft of which was double tracked.

As very often happens, however, when running actually commenced it soon became apparent that the line had many shortcomings. For one thing the shed, which was only 8 ft by 6 ft, was too small and did not have sufficient all round visibility. Also the track layout in the shed did not permit cars at the back to be moved, unless all the cars in the front were run out first, and the single line over the bridge was a serious bottleneck.

There was only one thing for it—a new and larger shed with bigger windows, and this was duly acquired in part exchange for the original. The shed track now began with a short length of single line, branching out into double track which continued over a widened bridge on to the embankment. A trailing crossover was inserted here so that cars could not be reversed outside the shed and could all change tracks on the short single stub inside. The track remained in this form until the spring of 1962 when 42 ft of double track was laid in down the east side of the garden as far as the passing loop and a facing crossover put in so that cars could now enter the shed on either track. This is the only power-operated point on the system, all the others being spring actuated in the trailing direction.

There were now about 115 ft of double track out of a total route "mileage" of 220 ft and the line was subdivided electrically into eleven sections out of doors and seven in the shed. Two controllers each with its own transformer/rectifier were now provided and with a driver on each controller six cars could be in motion at any one time.

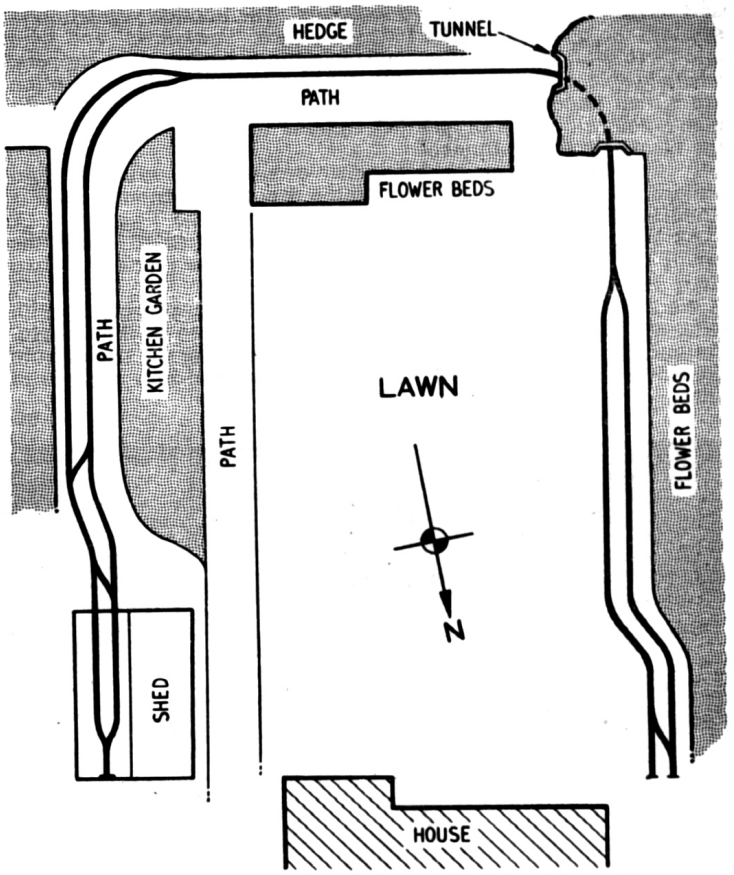


Above: Manchester Corpn. California Car No 841. Right: another photo of No 841 (left) with Manchester last car No 1007 (right)

The single-line section at the bottom of the garden and through the tunnel is now controlled by colour light signals at each end, which are duplicated on the switch panel in the shed. Until a car receives the "green" it cannot enter the single line section and the switching is so arranged that no car can approach from the opposite end whilst a car is in this section. This system was installed by G.M.T.* (Signalling Division) under the auspices of their electrical genius S. V. Thompson, A.M.I.E.S.†

It will be remembered that when the Burnage Tramway closed in 1958, the fleet consisted of seven trams, made up of three Llandudno, three Manchester and one works car.

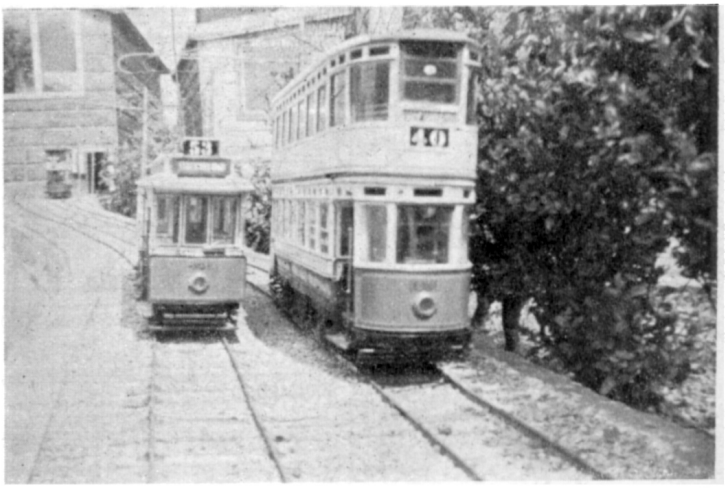
By 1960 it was pretty obvious that the Manchester cars were



approaching the end of their useful life for although quite sound mechanically, their bodies, like those of their prototypes twelve years previously, were literally falling apart.

A long term programme of replacement was therefore embarked upon, beginning with a new "53" California car No 841. Despite my original intention that this should be a long term project, the car was completed in seven months, running for the first time in July, 1961.

Work commenced in August 1962 on a replacement for double-deck bogie car 1035 and the new car No 1007 was finished in January 1963. This car, as well as being a model of Manchester's last tram, is actually constructed in part in wood from the top deck decency panel of the prototype car. Needless to say, after spending



so much time and labour on replacement cars, I now find myself quite unable to scrap the originals which are now between eleven and fourteen years old. They continue to "potter" round the garden and have now travelled several hundred actual miles both out of doors and at M.M.R.S. exhibitions.

I hope to build a new balcony car before long, so that if the veterans continue to survive we shall then have a fleet strength of ten cars.

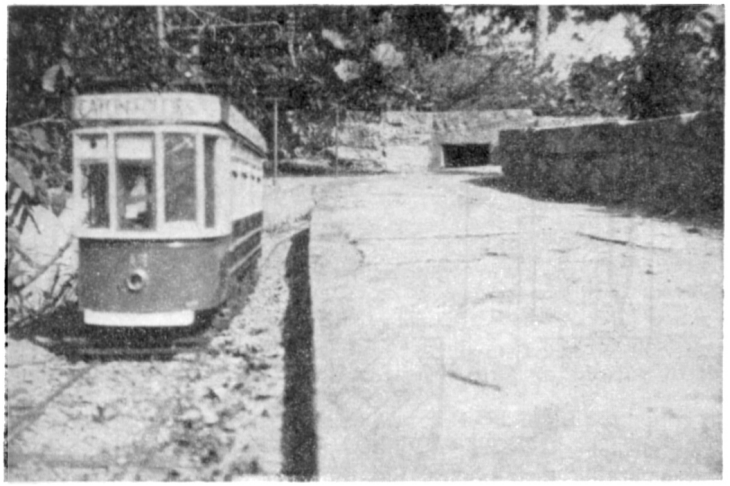
And so we reach the present day; nothing has changed on the line for over a year except that it is now taking on a mellower look

and seems as if it's been there for years. The lineside vegetation is thicker, the concrete works have lost their "newness" and here and there is an occasional rash of moss in the ballast. The sleepers, where visible, are now black with age and creosote, but more often are buried under the ballast. If you go out there on a moonlit night, you will see four parallel ribbons stretching away towards the blackness of the tunnel.

It is in fact 11 p.m. on a summer evening as I write this and almost time for the last car back to the depot. Sure enough, 1007 is standing there so perhaps you may care to join me ?

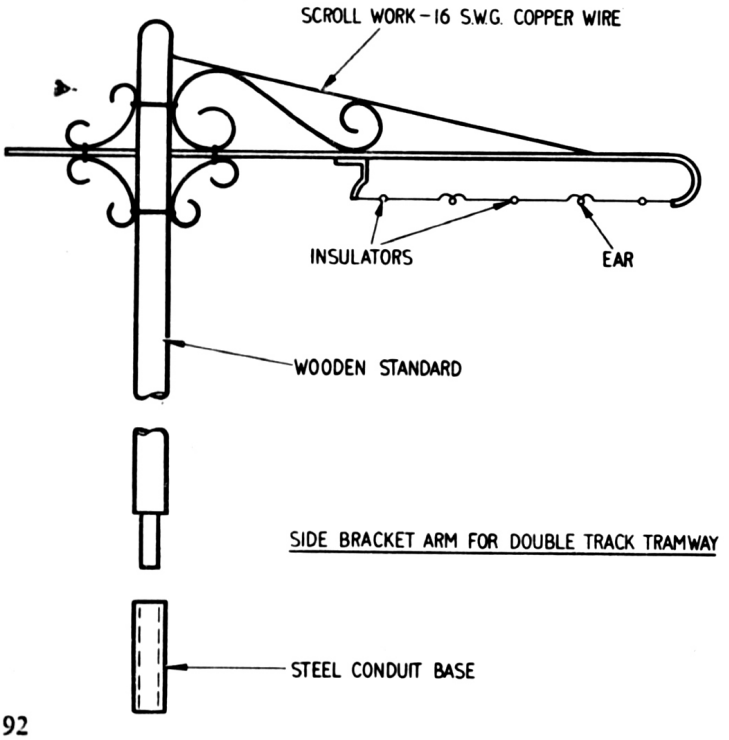
As the driver is a close friend, we are permitted to board the car at the front end, and ride behind him on the platform. Two sharp clangs on the gong and we are off !

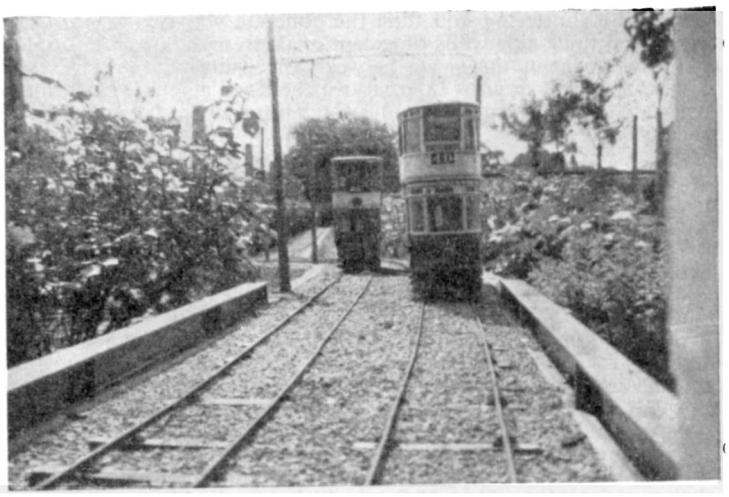
We move cautiously over the crossover and, still proceeding with care, we take the "S" bend which leads us out on to the straight. On our right we have the low stone wall separating the tracks from the flower bed, to our left we look out over the dim expanse of lawn.



L. & C.B.E.R. (ex Bournemouth) No 15 Tunnel in background.

The tracks stretch away in front and are now disappearing under our dash at an increasing speed. The colour light signal glows redly in the distance, but as we approach it changes to green. Our driver eases back the controller and starts to wind on the brake, as the line becomes single here. We clatter over the trailing point and more brake goes on now as we descend 1 : 25 towards the tunnel. Soon our headlight is lighting up the tunnel walls and our wheels grind a little as we go into the curve. Suddenly an enormous black shape looms in view and four white feet can be seen crossing





View from shed doorway. Manchester's last car No 1007 and the balcony car No 719

the rails in a leisurely manner.‡ With an oath, our driver applies his magnetic brake and stamps on his gong and just in time the shape merges into the surrounding blackness, but as we clear the tunnel we see a pair of luminous green eyes watching us from the undergrowth. With an involuntary shiver at the thought of our narrow escape, we again concentrate on the road ahead. We are accelerating up the bank—now about 1 in 30—and in no time at all we swing over the facing point on to the double line and draw to a standstill at the intermediate stopping station. There is no one to board the car here, but one or two dim figures disembark and disappear into the gloom.

To our surprise another headlight approaches swaying merrily on the down track, but as we move away we see that this is a works car. It has to stop and wait for the green, before proceeding on its mysterious nocturnal mission. Our driver eases back and we cross the section breaker and the lights go a shade brighter.

We are now gaining speed as our driver notches up to full parallel. We are on one of the best laid sections of the line and, as her motors start to give out that characteristic high pitched whine, 1007 really shows her paces. Facing points flash beneath our wheels, a slight left and then a right-hand curve, a rat-tat, rat-tat as we go over the trailing cross-over and into the dimly lit depot. The wheels rumble to a halt, the old familiar clicks of the handbrake being wound on signify the end of the line and we leave our tram. Just 3 min. 20 sec. after our departure, but over a decade away from reality.

Where have we been during those three glorious minutes ? Kingsway, Manchester, or Penrhyn Side, North Wales ? Middleton Woods, Leeds or Bristol Road, Birmingham ? Would that these were still possibilities. However, I hope you enjoyed riding 1007 and recapturing as I do when I drive my trams a little of the feel, the motion and the atmosphere of those glorious days of the tramcar.

* G.M.T.: Getgood, Mills, Thompson: the team developing electrically-fired and controlled gauge 1 live steamers.

† Assoc. Member Institute of Electric Steamers.

‡ The family cat—Mr Jinks.

FOR THE BOOKSHELF

SCRAPBOOK No 1 (Dessins Ferroviares, Echelles O and HO). Published by the Museon di Rodo, Paris, price 5NF, and obtainable from Henri Girod-Eymery, 13, Rue Chardin, Paris (XVI^{e}).

THE Museon di Rodo has been mentioned before in the pages of the MODEL RAILWAY NEWS, and in this 16-page booklet a number of French modellers have taken the trouble to reproduce some of the more historic locos and coaches as scale drawings for O gauge. Among the loco plans are a "North Star" type for the Paris-Orleans Railway, an 1868 PLM of 2-4-0 wheel arrangement and *La Gironde*, a 2-2-2 built by Creusot in 1838. Rolling stock drawings include coaches, both 4- and 6-wheeled, and a 4-wheeled breakdown wagon showing the position of every rope and tool, which would make a magnificent addition to almost any historical layout. Recommended for the historical enthusiast.