

U n d e r g r o u n d
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THE CHANNEL TUNNEL ASSOCIATION

The formation is reported, elsewhere in this issue, of a Channel Tunnel Association; to an Underground enthusiast, it seems strangely appropriate that the Convenor of the formation meeting should be a member of this Society - for at one time it seemed possible that such a tunnel would be of very great, and very direct, interest to the Underground.

From 1872 to 1894, the Chairman of the Metropolitan Railway Company was Sir Edward Watkin; this worthy, but somewhat aggressive, gentleman was also Chairman of the Manchester, Sheffield and Lincolnshire Railway (later to become the Great Central), the East London Railway, and the South Eastern Railway - all at the same time as he graced the Metropolitan chair. More significant still, Watkin was Chairman of the Submarine Continental Railway Company, incorporated in 1881 to build a railway tunnel under the English Channel; this company merged, in 1887, with the English Channel Tunnel Company to form the Channel Tunnel Company Limited.

It was no accident that made Sir Edward the guiding light of such a convenient chain of railways; he it was who was responsible for the Metropolitan drive northward to Aylesbury and Verney Junction; he again drove the Great Central south toward London to join the Met, and he had visions of the future when, the tunnel built, his trains could not only run from Manchester through London to Dover, but on from there under the sea to France - bound for Paris and beyond.

Political and military opposition brought this scheme to nought in Watkin's day, but better communications in general, and Common Market prospects in particular, have rekindled interest in the plans of eighty years ago; once again, it begins to look as if 'Met to Metro' might become a reality instead of a mere pipe-dream. If this does come about, no doubt the new Association will play a prominent part in the realization of the plans, and we wish it every success.

CASING THE 'JOINT'
A Puzzle.

John Reed

It has been stated more than once in print that responsibility for the Metropolitan and Great Central Joint Line was assumed by the two partners (Met/LPTB and GCR/LNER) for alternate five-year periods, but a close inspection of the line at the time of nationalisation did not seem to confirm this theory.

At a point twenty-eight and a half miles from Baker Street, just south of Great Missenden station, there was at the lineside a diamond-shaped wooden board lettered 'Division of Maintenance Met. & GC Ry.' It appeared to be of some antiquity and survived until about 1953; it was probably replaced by the new LITE/LMR post erected opposite Stoke Mandeville Hospital. The accompanying milepost was numbered '28 $\frac{1}{2}$ ' in full, instead of the usual ' $\frac{1}{2}$ '. The choice of this location seems to have borne some relation to the total track mileage between Harrow and Verney Junction, although it does not appear to be an exact halfway point, even allowing for the various branches and single-track sections.

As far as the observer was concerned, nearly all the equipment south of the old sign was of Met origin and maintained by the LPTB, while that to the north had GC/LNER parentage and maintenance. As an example, Great Missenden and stations north (but excluding Aylesbury) were painted in the LNER wartime grey-and-stone scheme applied c.1943, and signalboxes had LNER nameboards, with screwed-on letters, on their endings. Buildings to the south were in LPTB colours and signal boxes had Metropolitan-style boards, with rounded ends and painted lettering, facing the track. Station nameboards on this section included examples of several generations of Met signs, indicating a Met responsibility of many years' standing.

The few Met items on the Great Missenden - Verney Junction section appeared to be very old, probably dating from the period between the original arrival of the Met and the formation of the Joint Committee. The only modern LT feature was the provision of paper 'bull's eye' nameboards between Great Missenden and Stoke Mandeville, which did duty until September 1961.

Can any member throw any light on this matter; was it time, or territory, that was shared by the two partners?

P.W.Bradley

In reproducing panelled wooden coaches, the modeller in 4mm (or any other) scale is largely thrown back on his own resources, especially so the 'Met' enthusiast, as nothing is commercially available which lends itself to adaptation.

When embarking on some OO 'Steam Stock', with effect rather than pedantic accuracy as the aim, I decided at the outset that:-

- (a) At normal viewing range the 'panelling out' shows little, BUT the shadows cast by it are so conspicuous that any kind of 'flat' representation (e.g. drawing in black ink) would not pass muster.
- (b) The windows are so small that 'seeing into' (and through the compartments could be forgone. But the 'litho' effects of pre-war days, with the 'windows' having the same surface texture as the bodywork, could not be tolerated at any price.
- (c) Use of stained or dyed wooden veneers would demand the most exact workmanship, and the grain would be grossly overscale in any event.
- (d) Small detail could and (for handling) should be omitted, but outline and proportions must be reasonably accurate.

With these thoughts in mind, the coaches were constructed as follows:-

A carcase, complete with roof, was prepared accurately to outline. I found some discarded Triang corridor compo. bodies useful here. The roof was first cemented into place, and equal amounts were sawn off each end of the structure to reduce it to scale length. New 3/16" plywood ends were cut to a good internal fit, and secured with Evostick. All 'raised' detail on the moulding was then sandpapered away, the ventilators included; but the roof gutter strips and solebar footsteps were left intact. Sanding was then continued to provide the correct inward curvature of the sides, and, most importantly, of the ends. New buffer beams were then fitted, the solebars being cut back to suit.

The 'window glass' layers were next added to the sides, and (if a brake-end vehicle) one end. For these, the 'blackened'

40 leading ends from used 35mm 'black and white' camera film were employed; affixed with Evostick, shiny side outwards. Half-inch wide strips sufficed, and the joints were arranged to fall behind mullions. This material is so opaque that there was no need to fill in the original window openings in the plastic. Pre-curved sides and ends of good quality thin white card were then added, all window and door-light openings having first been cut out, and these internal cut edges were painted before the card was glued into place. 'Panelling' followed. This was carried out in the same card; over-thickness (within reason) emphasises the cast shadows and is a good fault. Over-width in these slender strips is inevitable, but seems to matter little. The door ventilator plates were then cut from thicker card, and glued into place. These outline the very characteristic 'Met' curved-top door outline, and repay careful shaping and fitting. For attaching these, and the panelling strips, Seccotine (warmed) or another of the less water-soluble glues should be employed.

This is because poster colours were found to be an easy and effective means of getting the 'teak' effect. An overall coat of chrome yellow was given first; followed by haphazard dry and semi-dry brushwork with burnt sienna and touches of a medium brown. The sides were then lined in chrome yellow, using a bow-pen. Other colours would no doubt serve as well, or better; it is a matter of experimenting beforehand on waste material. This 'teak' work must be varnished before being subjected to handling.

Most of the rest of the work followed conventional lines. I found it best to overlay the plastic roof with two layers of cartridge paper cut to the exact width between the gutters. Card rain trips and carefully 'lined-up' ventilators (fashioned from small copper rivets) were added before painting with a mixture of Humbrol 'B.R. freight stock grey' and 'roof lead colour'. The latter used alone gives a drab effect not quite to my liking. The full-length footboards were painted a greyish brown, and the original short plastic steps from 'corridor compo' days afford useful support brackets for these.

On brake-ends, the more conspicuous fittings were represented. Most can be added after painting and before varnishing, but the little footsteps are best made of thin brass bent at right angles and pushed through slots in the card end before glueing it to the plywood false end.

I have so far completed two coaches according to the method outlined in these notes; a first, and an earlier-type (7 passen-

ger compartment) brake-third; so representing a typical Chesham 41 set of 30 years ago. The method would apply equally for 'bogies' stock (Ashbury and similar). It could also be used for earlier 'T' stock and the 'single-coach electrics', given a motor-bogie of appropriate wheelbase.

NOTE: I should perhaps mention that Messrs Skinley's drawing No P.270, of 'Steam Stock' No 487, omits the dynamo and accumulator boxes.

LONDON TRANSPORT TO BUY A COMPUTER SYSTEM

LT has placed a £150,000 order with International Computers and Tabulators Limited for a multi-purpose computer system to handle the payroll for the Board's 76,000 employees and also work of other departments.

London Transport has the largest centralised payroll organisation in the country, and for the last eight years the work of producing the payrolls has been done by a battery of I.C.T. punched card machines, including five electronic calculators, which take 25 hours each week to work out the pay details for the Board's staff.

The new computer, in one operation, is expected to cut the payroll production time to between 9-10 hours - a 60% speedup. In this time, from information fed into it, it will make more than a million calculations and will print individual payroll slips for each employee, sorted into groups for the various garages, rail depots, stations, workshops and offices where the men and women work.

It will also deal with the recording of receipts and issues of the 120,000 different items of stores and spare parts held by LT for its bus and Underground services, and will be able to print at any time a list of items which have reached re-order or minimum stock level. These stores, which range from a split pin to a 60-ft length of steel rail weighing three-quarters of a ton, have a turnover of 30,000 items a week.

Eventually, the computer will be used for additional functions, probably in particular for costing & materials control for LT road and rail workshops and for the accounting of bus and Underground cash takings.

Features of the computer, which is fully transistorised, include magnetic tape units which can deal with 40,000 characters a second, and immediate access 'memory' which can store 4,000 facts and figures, and the ability to print answers to problems fed into it at the rate of 1,000 lines a minute. The computer, an ICT/EMULEC 1101, will be installed at Baker Street by mid-1964

- NF 127 Three men, found travelling on the Central Line without trousers on 10-12-1962, explained that they were students debagged in a prank. Sacks were provided to cover the emergency!
- NF 128 During a case at North London Magistrates' Court on 18-12-1962, a London Transport inspector stated that if the Archbishop of Canterbury lost his ticket while travelling on the Underground, he would be asked to pay again - even if he produced three other bishops who could all say that he had paid his fare!
- NF 129 L46 has been cut up at Neasden; most of the work was done during the week to 21-12-1962, but it was delayed by bad weather.
- NF 130 On 30-12-1962, Watford and Chesham branches were closed by the snow, and all trains ran to Amersham instead.
- NF 131 Also on 30-12-1962, an A60 train caught fire on the slow line at Preston Road at about 11.30 am. Services were delayed.
- NF 132 During the wintry weather, L95 was reported fitted with a large snowplough, which bore a large number 1; it is said that the plough was used on several clearing jobs, but was not entirely successful - due to the plough having to be kept too high above the running rails, so that it would clear the conductors. The plough was at Neasden all through the cold.
- NF 133 At least two A stock sets have had their emergency lighting converted from fluorescent to 50v. tungsten bulbs. The numbers of the vehicles concerned are 5060-5061-6060-6061 & 5076-6076-6077-5077. The E for emergency lights has been blackened over.
- NF 134 It seems that BR are dieselising the coal trains over the Met to Willesden and Uxbridge; the usual BR 2-6-0 locos were noted on both 3 & 6-1-1963 on these duties, but on 7-1-1963 and four subsequent dates, Bo-Bo diesels were hauling the trains. The changeover is not yet complete, however, as steam locos were used on occasions up to 13-13-1963 at least.
- NF 135 During the cold spell, there was a very considerable increase in the coal traffic mentioned in NF 134. Willesden Green had to handle almost double the normal number of coal wagons. One morning early in January 1963, a steam loco was seen carrying out shunting duties at Willesden Green, and at the same time and place a few days before, a whole coal train was seen awaiting the right of way of LT tracks. As this was during the morning rush, it can be considered unusual.
- NF 136 Ref NF 118; correction; fifth word, line 3 p.22, should read 'snow', not 'breakdown'.

- NF 137 Services were interrupted on the Northern Line between 10.30 and 11.30 pm on 25-1-1963, after a report that a man had fallen from a train between Morden and South Wimbledon stations on the northbound track. When the tunnel was searched, a body was found.
- NF 138 Another reporter re coal traffic states that a BR standard Mogul of 76xx class was shunting coal waggons at Willesden Green on 24-12-1962, and indicates that it is the first time he has seen anything other than a London Transport tank on this duty.
- NF 139 A BR Diesel Loco of D53xx type was seen in the yard at Willesden Green on Sunday 13-1-1963.
- NF 140 It is reported that Wolverton Works made the mockups for the BR-built tube stock, and that everything disappeared over one night, next appearing at Derby, where the cars are being built.
- NF 141 A Channel Tunnel Association was formed at a meeting in London on 23-2-1963; our member John Bates was convenor of the meeting, and the provisional committee includes Viscount Stonehaven.
- NF 142 Underground drivers have been refused extra stand-by duty after the attempt by a passenger to commit suicide. The present allowance is three days stand-by duty, and the claim was for three clear days - with rest days excluded.
- NF 143 Trains on the District Line were delayed for periods of up to an hour on the 20-3-1963, when a train broke down at Aldgate East during the evening.
- NF 144 Ref NF 121; correction; due to an editorial error, the number of one of the coaches in the Watford crash was wrongly reported. BR M61185 ran into 1938 motor car 10109, which in turn concertinaed into 70550, a pre-1938 trailer converted to run with 38 stock. The two people seriously injured were in 70550. It is reported that 10109 and 70550 have both been cut up as a result of this collision.
- NF 145 Chelsea council are already asking for an extension of the Victoria Line, to ease congestion on the roads of the borough. It points out that the original proposal was for a line from Walthamstow to East Croydon, and are asking for an immediate extension in the direction of Roehampton with a station in King's Road, Chelsea.
- NF 146 Met Loco 23 has been taken from the Museum of British Transport at Clapham, and on the evening of Tuesday, 12-3-1963, was taken by road back to Neasden LT Depot, by a Pickfords heavy transporter. She is being loaned back to LT for the Met Centenary Exhibition at Neasden in May 1963.

Good News - the Society has been allocated space at the Model Railway Club Exhibition, Central Hall. April 16-20. Our showcase will again be the main feature of our exhibit, and it is hoped to show a varied selection of models, including an O Gauge Met Rly Class A loco No 7 which the Society has recently acquired. We still have room for one or two models, so if you would like to loan something for the exhibition, please contact the Modelling Secretary not later than April 5th.

Stewarding our stand for long periods without a break is very tiring, and any assistance offered by visiting members is most welcome. Don't forget to wear your badge; it's an introduction to fellow enthusiasts and a silent advert for the Society.

Skinley Drawings of LT locos and stock will be on sale at Messrs Hambling's stand at the show. Incidentally, they were very pleased with the boost given to their Metadyne Litho Sheets as a result of our publicity last year - so much so that the sheets are now out of stock awaiting a reprinting.

THE ASSISTANCE BOARD

The Model Trade is beginning to take interest in us, and we have had an offer of help with components, such as bogies etc. To assess the types most sought after, kindly write to the Modelling Secretary, J.S. Brook Smith, 34 Barnehurst Road, Barnehurst, Kent, mentioning -

Prototype you are modelling, or would like to model, in what scale, and components which are most needed.

Good drawings are essential for good models, and whilst we hope to help members in this respect, we would like to compile a list of official LT, or makers', drawings which are held by members. Please quote Dwg. No. and original date.

Frank Briggs, a member, and editor of the 'Electric Traction' feature in the Model Railway News, has several Underground items lined up for publication, so watch the MRN for these.

Notes on the fitting of the 3rd and 4th (conductor) rails, with representative 'insulators' are being compiled for publication. Apart from commercial methods, has anyone got a pet method to impart?

Finally this month, have you had any brainwave on converting proprietary models or parts; scratch built any locos or rolling stock; want any modelling information on what to do or how to do it? Let's hear from you - it's your page.

London Transport have announced that, subject to Ministry of Transport approval, their first train with Automatic Driver will go into service on the 8th April 1963. This will be on the District Line between Stamford Brook and Ravenscourt Park, where the half-mile of track has been fitted with automatic control equipment; over this section, the drivers of trains fitted for automatic control will switch to auto when entering the section and let the train drive itself.

This is the next step in the study of auto control, which has been going on over a stretch of track east of South Ealing station since December 1962, and which culminated in a demonstration run with journalists on board on the 21st March 1963. This was a success, so the next stage will be to carry passengers in normal service; subsequent steps planned are a full-scale trial during 1964 on the Central Line Hainault-Woodford service, and then introduction of the system on the Victoria Line when it opens - though LT say that this line is not likely to be fully equipped for all-automatic operation by the opening date.

A correspondent who has been watching the experiments at South Ealing since they started, reports that some of the tests were with a vehicle comprising a bogie with equipment mounted on it, and this was controlled from the trackside by means of portable apparatus fitted with an aerial. This vehicle is still (at the time our correspondent writes) on the trackside just east of South Ealing.

The first tests of all were with a tube train of 1935 stock, fitted with an aerial, then came the bogie vehicle, and this was replaced by an 8-car R stock train, with an eastbound R49 DM at the east end, full of equipment and LT staff, the other cars of this train are reported to have 80 $2\frac{1}{2}$ cwt weights in each of them, corresponding to 70 tons of passengers in the last 7 cars, and the weights are said to be placed carefully in all the places which passengers would normally occupy - especially round the doors.

This R stock train is said to have an aerial fitted to the front off side, and to be controlled from inside the passenger saloon on at least some of its runs - this saloon being the one containing the control equipment.

On the test trips, a motorman is said to occupy the normal driving position, and LT have announced that, in any case, it is not their intention to go over to completely unmanned trains - a driver will be carried to take over in an emergency, and to operate the doors; future crews will therefore comprise one driver-guard.

Our correspondent reports - without having detailed information, that the trains are controlled by some form of track circuiting, in conjunction with the signals, and that the men carried on the train control the relay boxes beside the track, which in turn control the track circuits. It seems that the tube stock train was operated so as to slow down to about 1 mph at a 'station' position, instead of actually stopping.

By the side of the track between South Ealing station and the hill approaching Acton West Siding, there are several relay boxes resembling green painted cupboards at fairly regular intervals; early in March, certain groups of ~~four sleepers~~ - usually near the boxes - were painted bright yellow, nine groups being painted altogether; there is also a new wooden hut beside the track. The test train has used the eastbound fast road mostly, though both fast roads are said to be available to it; two of the signals are said to show red and green aspects simultaneously, with trip-arm up.

REVIEWS

ABC London Transport Railways, 1963 Edition; London; Ian Allan Limited; 72 pp. illustrated and with map; price 2/6d.

The new edition, expanded from the 64 pp of the one issued in 1960, has some pleasing features. A route diagram of the Underground is included, the illustrations are exceptionally good, and - most important of all - this new issue contains all the service stock, which the previous edition did not. Electric train headlight codes are included, but codes for British Railways trains on LT metals are omitted this time, readers being referred to the ABC British Railways Headcodes (also published by Ian Allan at 3/6d).

Electric Railway Society Photographic Service; List No.1 - 1/3/63 to 31/10/63. E.R.S. Photographic Service, 68 Tolcarne Avenue, Pinner, Middlesex.

This four-page duplicated list introduces an interesting new service for the railway enthusiast; the ERS are starting this service for their members and others, with the intention of publishing two lists each year; photographs are supplied in postcard size on double-weight paper.

No 1 includes 6 sets, 5 being of 6 photos, and one of 12. Underground enthusiasts will find much to interest them, the Piccadilly and Metropolitan being featured, and such well-known names as Alan Jackson and F.G.B. Atkinson appear among photographers. Copies may be obtained by sending a stamped addressed envelope to the Editor at 62 Billet Lane, Hornchurch, Essex.

Obituary It is with deep regret that the Committee report the recent death of our member, Harold W. Mitchell, of Finchley. Mr Mitchell was not very well known to many of the Society, as he had been in bad health for some time, but he will be missed by those fortunate enough to have made his acquaintance. The sympathy of Members and Committee is extended to his widow.

Correction It is regretted that locomotive L44 was omitted from the recent list of current steam stock; it is hoped to publish something on this loco shortly.

Library List The first list, dated January 1963, is now available to members only, and may be obtained for 1/- post free, from the Librarian, J.P. Wirth, 43 Crestway, Roehampton, London, S.W.15. It must be pointed out that much of the material in the library is available for reference only, and the Librarian is the sole arbiter in deciding which items may be borrowed by members.

Photographic Competition The Society is running a competition during the summer, open to all Members, and prizes will be awarded. The Rules are as follows:-

1. Subject may be anything of Underground interest.
2. Photographs must be in black and white, and must have been taken between 1st April 1963 and 31st October 1963.
3. Prints submitted should be postcard size with glossy finish.
4. Entries should have written clearly on the back of the print, the name and address of the competitor, together with brief details of the subject matter of the picture, and the exact date it was taken, also the place.
5. Entry Fees will not be charged, but the prints submitted will become the property of the Society; copyright will remain the photographer's own property.
6. Closing Date will be 7th November 1963, by which day all entries should have reached the Editor at 62 Billet Lane, Hornchurch, Essex.
7. Judging will be by an experienced railway photographer who is not a member of the Society.
8. Winners will be announced in the December 1963 issue of Underground.
9. No Limit is placed on the number of prints submitted by a member, but the number of prizes which may be won by any member will be limited.

Committee With effect from the Annual General Meeting held on 23rd March 1963, David L. Waddingham joins the Committee, filling

48 the vacancy caused by the retirement of Philip W. Bradley, who did not seek re-election because of other commitments. We are pleased to welcome Mr Waddingham, and thank Mr Bradley for his valuable service during the past year. The three other retiring committee members - Kenneth R. Benest, Joe Brook Smith and George P. Jasieniecki - were all re-elected.

Officers The Committee are considering the creation of some new offices in the Society, to relieve the work falling on the present Officers. If you are prepared to help, and did not hand your name in at the Annual General Meeting, will you please let the Secretary know as soon as possible, giving any preference you may have as to type of work.

THE TIMETABLE

Friday 5th April 7.30 pm. Members' Colour Slide Evening in the Meeting Room, Kensington Central Library, Campden Hill Road (from Kensington High Street station, cross road, turn left, take second on right). Will members who have promised to bring slides to show, bring them along this evening, or if unable to come, let the Secretary know at 4 Southcombe Street, London, W.14.

Tuesday to Saturday, 16th-20th April, 10.30 am to 9 pm daily. Stand at the Model Railway Exhibition, Central Hall, Westminster. We are pleased to have been invited to exhibit again at this, the largest annual show in the south, and are grateful to The Model Railway Club for asking us. Come along and see us, and all the other friends will be there.

Saturday 20th April 10 am. Visit to Neasden LT: fully booked.

Saturday 27th April 2.30 pm. Walk "Over the Top" from Aldgate to Ray Street. This walk is open to all, visitors welcomed; meet in the booking hall, Aldgate station; the party leader and guide will be Dr J.G. Thomson.

Friday 3rd May 7.45 pm. Tape, Slide and Talk Evening at the Old Oak Tearooms, High Street, Pinner. An excellent evening is promised and transport arranged for members north of Pinner to catch the 10.26 pm from Harrow at the end of the meeting.

Sundays 5th and 12th May. Visits to Wendeville Road, the Model Layout of Philip W. Bradley at Ewell, Surrey. Numbers on these visits are strictly limited by the space available round the layout, but associates as well as full members are eligible. Names as soon as possible, please, to J. Brook Smith, 34 Barnehurst Road, Barnehurst, Kent. The visits will be in the afternoon of the above days. Please enclose a s.a.e. with your application.