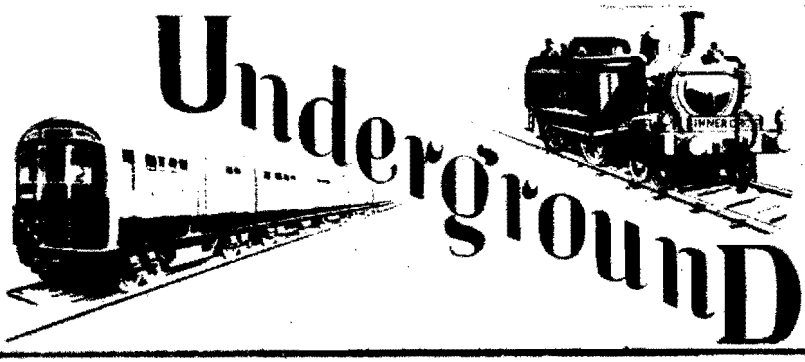

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FARES AND THE COMMUTER

On the 20th December 1963, the Transport Tribunal made an order confirming the increases in fares in the London area which came into force in London on the previous 23rd June. At the same time as the order was made, however, the Tribunal announced that it had rejected the application by the London Transport Board and the British Railways Board to reduce the discount allowed on three-monthly and longer period season tickets from 10 to 5 per cent.

As this is one of the rare occasions when the Tribunal has made a decision in favour of the passenger, it is surprising that there has been some criticism of the decision - mainly on the grounds that quarterly seasons can only be afforded by the wealthier passengers anyway, who do not need the discount. It would seem worth while to examine this contention in more detail.

It is a reasonable assumption that the majority of commuters travelling on quarterly seasons come from the outer suburbs, and therefore, on a mileage basis, contribute heavily to the revenue of the railways; generally speaking, their trains are heavily loaded at rush hours when most of them are compelled to travel, and therefore (excepting passengers on a few lines favoured with very fast services) they suffer discomfort on their journeys which is out of all proportion to the price paid for the "privilege" of using the trains. It is not at all uncommon for commuters who now pay £75 per annum and over (at quarterly rates), to be forced to travel day after day in disgracefully overcrowded conditions.

Which brings us to another point; if the quarterly commuter is wealthier than average (which is debateable), then he is the passenger who can most afford to give up the railway in favour of private transport. It will not pay British Railways or LT, in the long run, to decrease the attractions of rail travel from the outer suburbs still further, which is what they appear to have been attempting to do with their rejected application.

METADYNE MEDLEY

N.E.W. Fuller

In 1934, the London Passenger Transport Board in conjunction with Metropolitan Vickers and the inventor Mr Pestarini, carried out experiments with the Metadyne system of traction motor control on a two-car unit at Acton. Sufficient equipment was later ordered to equip a train of six cars to run trials in passenger service on the Inner Circle. The stock selected for the purpose was of Metropolitan Railway origin, six motor cars being renumbered into the Board's 2500 series with the suffix "M". Each car was fitted with one driving motor, a five light headcode, and an illuminated destination-board panel of the District type. The cars were made up into three two-car units, one car in each unit being fitted with a metadyne machine and a motor-generator set for the lighting and control circuit operation. This latter machine was probably the first application of low-voltage supply in electric stock, previously it was necessary to reduce the line voltage by resistances, and to wire the lighting lamps in series.

The operating advantages claimed for the metadyne control system were the elimination of resistances, thus saving a large amount of wasted current, and that deceleration of the train was mainly effected by enabling the motors to return current to the line, absorbing the momentum of the moving train and thus saving a large amount of brake wear. It appears that the system fell down when more trains were by coincidence returning current to the line than were using it! This probably caused difficulty in regulating the line voltage. Another slight disadvantage was that this regenerative braking was very uneven when passing over conductor rail gaps, causing the unit affected to stop generating and therefore attempt to pull away from the unit to which it was coupled; this latter unit still being in contact with the conductor rails would still be decelerating, causing a jerky movement throughout the train. (A similar effect to that sometimes experienced at the rear of long vacuum-braked trains.)

Following on the 1934 and 1935 experiments, the L.P.T.B. ordered 58 two-car metadyne units in August 1936, to replace the then 30-year old Hammersmith & City Joint stock. Before this stock commenced delivery, a further contract was placed for 19 six-car and five eight-car metadyne trains for the Uxbridge line service, these were to have two trailer cars per train as distinct from the all-motor car H & C trains. The Northern Line replacement stock was also ordered about this time, but due to the limited clearance of the tube loading gauge it could not be fitted with metadyne control equipment underfloor, and was therefore fitted with PCM

control system.

The PCM system is a modification of the PCC tramcar control equipment, and is basically a mechanism where the contactors for notching up are operated by a camshaft. An advantage of this is that the switching is so arranged that the shaft notches up to the full series position, and then "unwinds" to control the motors through the parallel notches. Therefore on reaching the full parallel position it is ready for the next full operation. This explains why, when the driver switches off the power before the full parallel position is reached, a sharp "plop" is heard, followed by the rhythmic notching to "pick up" the motors once more.

With the general change in post-war conditions, the maintenance of the metadyne became very expensive and difficult due to shortage of staff. Experience with the PCM equipment fitted to the 1938 tube stock proved to be the reverse, these mechanisms having only required major overhaul after 20 years of service. Therefore when the post-war R stock came under consideration it was decided to fit PCM equipment.

Also, in June 1955, a five-car train of metadyne stock was converted to PCM control and put to work on the Circle service. Duty for a train on the Circle very often consists of making nearly 600 station stops in about 260 miles of running, not to mention the countless signal checks. During this period, so many Uxbridge line trains were being cancelled due to failures of metadynes that the service had to be augmented with T stock trains (with the result that regulars found themselves at West instead of North Harrow). Therefore, the 5-car PCM Circle train was fitted with another trailer to make a six-car train for trials on the Uxbridge line, but the conversion of trains for this service was not proceeded with, and the trial set reverted to 5 cars and returned to the Circle.

Subsequently, the conversion of a further 16 five-car trains for the Circle service was put in hand. It was later decided to eliminate the anomaly of the five-car trains by converting Q38 trailers from the District line to make six-car Circle trains. The shortage left on the District line was made good by the addition of three further R stock trains, together with the conversion of a number of Q23 motor cars to trailers.

On completion of the conversion programme for the Circle, a start was made on the conversion of 21 trains for the Hammersmith & City service in 1960; this was completed in January 1963. The first PCM unit intended for the District Line also appeared in January, although as recorded in "UndergrounD" it was not until April that the first train appeared on the District Line for crew

 training.

The various classes of the 1937-38 surface stock may be summarised as follows:- "O" - Apart from some differences in electrical circuitry, the main feature of this stock was the placing of the guard in the rear motorman's cab and apart from the fleet number may be easily distinguished from the outside by the absence of handrails at the trailing end of the car. "CO" or "C/O" - PCM conversions of "O" (All the O stock had been converted by January 1963), the CO vehicles originally converted for the Circle service were placed in the centre of the train, hence the odd couplings of these units (e.g. C/O 53043 coupled to 013188 COP (ex-Q38), and C/P 54243).

"P" - These cars have the guard's position at the more usual inner end of the motor car. "CP" or "C/P" - PCM conversions of P type motor cars.

"O/P" - Trailer cars which are completely interchangeable between O and P stock units, the conversions being COP or CO/P.

Interesting variations in the 1937-38 stock include: 13264 to 13269 which had no guard's position at all, being intended to work only at the inner end of two-car units on 8-car trains. 13244 and 14244 were fitted with fluorescent lighting in about 1946, one car being fitted with "Natural " tubes, the other with the more "Warm White". 13268 and 14239 were fitted with experimental R stock bogies in November 1949. Trailer 013089 was fitted at some time with R stock window ventilators which it still retains. 53008 was an air raid victim and was rebuilt with P type control circuits although it still retains the unorthodox guard's position and therefore is still classified O (C/O). Lastly, was the grafting of one half of Q38 trailer 013167 on to the rear end of P motor 14233 (now 54233), both cars having lost their other ends in air raids.

Apart from the above grafting operation, the metadyne stock shares an affinity with the Q38 trailer cars (as also does the R stock). They are very similar in design, and have undergone various conversions from the time they were both ordered to the present day. The original 1937 order called for 222 Q38 trailers for the District Line and 48 trailers for P stock Metropolitan Line trains, but this was modified before delivery to 183 Q38 trailers, and 87 O/P trailer cars for both O and P stock.

The Q38 cars led a fairly uneventful life apart from war casualties until 1949, when the first of 132 were converted to R stock motor cars, followed by a further 17 cars converted to COP trailer cars for the augmented Circle service in 1959.

A further Q38 trailer 013144 was converted in 1962 to run with CP motor cars, this car is easily identified as it is the only one of its type to retain R stock door indicating lights (a legacy from an experiment of 1947, but not now operative), and also at present retains its Q38 branding on the car end! It is believed that PCM trains on the District Line will only work six-car rosters, therefore a further eleven Q38 trailer cars will be required to augment the remaining 2-car metadyne units when these are converted.

To conclude this survey, it only remains to say that, unless Acton finds another use for them, the Q38 trailer cars will not quite suffer the fate of the ten little boys. For, out of the original 222 cars ordered only 18 cars will remain, just 7 cars short to couple one for one with the 25 Q38 motor cars, which together when made up into block trains might have reduced the motley appearance of District trains after 40 years mixing them!

LONDON TRANSPORT PHOTOGRAPHIC GROUP 1964 EXHIBITION

This exhibition was held in the Exhibition Hall, Charing Cross Station, from the 6th to the 25th January, with a Private Viewing on the 4th. It was the third show to be arranged by the Group, and reflected great credit on all concerned, the layout of the hall and general organisation being very good - while the standard of the photographs shown was extremely high indeed.

Naturally, the majority of the exhibits had no connection with railways at all, being examples of the work done by LT staff who are keen amateur photographers in their spare time. But a study of good photographs on any subject is never wasted on the railway enthusiast who makes his own record on film of his railway wanderings. There were many hints to be picked up from the exhibits which could be applied equally well to railway subjects. Actually, there was one panel showing a selection of the best pictures to have appeared during recent months in the pages of the LT magazine, and these, of course, reflected railway connections.

Among the competing prints, a picture of snow-covered track, entitled "The Railway Track", by I.E.Kennedy, may be mentioned as a fine example of artistic treatment of a railway subject. It may be mentioned also that Mr Kennedy had more pictures on show than any other exhibitor - and he received no fewer than six Certificates of Merit for his work.

Prizes were presented at the Private View on the Saturday preceding the opening of the show to the public, and were presented by Mr H.F.Hutchison, LT Publicity Officer, the first prize going to W.Sinfield for his "The Sacrifice".

NEWS FLASHES

NF 239 The F stock recently standing in the sidings at Willesden Green was moved to Neasden, and was awaiting removal from there on the 9th December 1963.

NF 240 London Transport have now some standard British Railways 5-plank wagons; these are reported as being numbered SL 971 to SL 981 inclusive, and as being painted in grey with London Transport on the sides. These were first noted on 13-12-1963.

NF 241 During December, the Loco spur at Baker Street was removed, and the last of the bridge rail there was replaced by flat-bottom. This work was completed by 16-12-1963.

NF 242 On 18-12-1963, Circle Line trains were seen with internal Christmas decorations; this seems to be becoming traditional on this line.

NF 243 The replacement L 92 pannier tank, now in service, was seen at Neasden on 21-12-1963, and is reported as being fitted with deicing brushes.

NF 244 Eight cars of F stock were seen outside Neasden on the evening of 3-1-1964.

NF 245 It was announced on the 3-1-1964 that a big consortium of City and Industrial interests had been formed to pioneer new forms of fast transport in British cities - including underground railways and monorails. A company has been formed by the interested companies in the consortium, and this company is Speedover Transport Limited. Lord Mills is President and Sir Miles Thomas the Executive Chairman.

NF 246 An extension to the car park at Theydon Bois station, on the Central Line, was opened on Monday 30-12-1963. This accommodates 70 cars and has been formed from part of the goods yard by the side of the station approach.

NF 247 A Joint Committee of 20 local authorities has been formed to fight the proposed closure of the Oxford-Bletchley-Bedford-Cambridge line,

NF 248 A wage increase of 6% came into effect for the 12,000 operating staff on the Underground on 22-12-1963. This will cost the Board £500,000 a year - and other increases for salaried staff and workshop personnel have still to be negotiated.

NF 249 Ref. article in February 1963 issue, p.14, and NF 243 above. The original L 92 (WR 5786) was found unsatisfactory and was replaced by 7715. 5786 was returned to Swindon for repair, and has been repainted black.

NF 250 It is reported that the last, distorted, vestige of the Outer Circle service has gone. BR's Kensington (Olympia) to Clapham Junction service being withdrawn w.e.f.6-1-1964 - the last train running on the evening of Friday 3-1-1964.

John Reed.

One of the 'real railway' features of the Met that persisted until the recent modernisation was the goods service to Willesden Green.

I first became interested in this service during 1950, when I had passed the yard hundreds of times without seeing a train; and having at last discovered the booked times, I stationed myself at Willesden Green on 30th October in the hope that the train would appear. It was an 'RR' (runs when required) train, so its appearance was by no means certain, but I was lucky. Soon a cloud of cotton-wool steam billowed from under a distant bridge (the Met. locos' exhaust always seemed whiter-than-white) and there was L.49 storming up the gradient from Neasden Depot with a bark that was sheer music, and hauling a train of the best part of twenty wagons. An LT brake was attached.

On the occasion described, as every time I witnessed it subsequently, the procedure was as follows: the train drew into the fast (Met.) platform at Willesden Green, then reversed into the goods yard, shed its brake van and duly shunted the wagons on the two coal roads. Work finished, the loco collected the empties and its brake van and ambled down the incline alongside the p.w. depot to await a path out across the up tracks to return to Neasden on the down Bakerloo line. As it did so it uttered a magnificent crow on its distinctive contralto LT whistle (a pity these whistles have not been transferred to the ex-GWR panniers!); one wonders whether any tape-recording enthusiast ever managed to capture this joyful sound.

During the thirteen years I kept this train under periodical observation, representatives of every class of LT loco in regular use were seen to haul it (see accompanying table). Brake vans were usually LT but various BR examples were also recorded. The train was usually composed entirely of coal wagons, but the occasional Hybar wagon of builder's materials was not unknown, although only once did I see a goods van present.

Gradually the number of wagons dwindled until in 1960 the majority of the coal bays were suddenly emptied and it seemed as the train's and the Yard's days were numbered; conversion to a car-park might be lurking round the corner. From 1961 however, a rejuvenation took place in the Yard; many new high-capacity coal-bays were built, a new weighbridge was installed, and the weighbridge office partially rebuilt with a new large window. Finally in May 1962 an increased service commenced but with BR

haulage, and thus passed another part of the old Metropolitan Railway; but at least the service survives in a new nocturnal form. Loaded wagons were soon to be seen in Quainton Road sidings destined for such places as Barnet General Hospital, and labelled for dispatch to Willesden Green, Metro. Section. Current entries in the Telephone Directory describe Willesden Green as an industrial Depot; ten years ago the directory referred to it under the LT section as an LT Goods Depot; it was the sole example.

Luckily the Met. atmosphere survives in the premises; above the weighbridge office there still stands proudly a fine and surely unique "London Transport Goods and Coal Depot" sign, no doubt successor to an earlier Met. Railway sign. At the time of the renovations too, a new wooden building was erected on to the long-defunct goods platform which had lost its shed about a decade earlier. To this new building was transferred an excellent LT "Goods Office" sign previously displayed over the weighbridge office door; surely the opening of a new LT goods office as late as 1962 is remarkable, and very pleasing to a Met. enthusiast!

DATE	LOCO.	NOTES ON FORMATION, etc.
7-1-1952	L. 49	About 15 wagons, ex-LNER brake
16-8-1955	L. 53	8 wagons, ex-LMS brake.
7-9-1956	L. 46	7 wagons, B. 573
6-9-1957	L. 52	B. 553 (Wagons not noted)
4-11-1958	L. 90	4 wagons, 5 bolster wagons, ex-LMS brake
8-8-1960	L. 30	About 7 wagons, B. 554
27-12-1961	L. 46	1 wagon, BR brake
8-1-1962	L. 44	1 wagon, B. 554. Goods van in return train.
28-2-1962	L. 95	2 wagons, B. 554

THE ROLLING STOCK OF THE METROPOLITAN RAILWAY - 10

K.R.Benest

In the Company's earliest days, when coal-gas was the standard carriage illuminant, metered supplies were taken at the termini from the Imperial Gas Company (later the Gas Light and Coke Company). Due in part to the greater operating convenience, and in part to a sharp increase in the price of coal-gas in the mid-seventies, Pintsch's high-pressure oil-gas system was adopted in 1878 - after some initial experimentation. Small gas-producing plants were laid down at Liverpool Street, Baker Street and Hammersmith, but local residents took exception to the obnoxious effluvia emitted and obtained injunctions, in effect restraining the company from using their plants at these sites. Neasden carriage sheds were then approaching completion and a new gas works, incorporating the Hammersmith equipment, was laid down on or near the site of the present steam shed. As only a small proportion of the carriage stock was shedded at Neasden each night it was requisite to provide bulk transport for the gas, to service stock stabled at other locations.

In September 1881 two "carriage trucks" were supplied by Ashbury's; these were supplemented by three in July 1882 and a further eight in August 1884. The final total was made up to 14 by a single unit constructed, due to a misunderstanding, at Neasden itself; it was probably the first vehicle to be built in the new works. It was not until December 1891 that they were referred to in the half-yearly report as "gas-holder trucks". Construction was simple - a wooden underframe, floored, and with side and end planks 6" high, and carrying three transverse baulks shaped to receive a pair of "boilers" each about 18 feet long by four feet in diameter, secured by steel straps bolted through the ends of the saddles. Hand brakes only were provided, though all were "piped" for the vacuum brake. The principal dimensions were 22'0" over headstocks, 25'7" overall, width 7'2" over body, 9'0" over saddles, wheelbase 12'6", diameter of wheels 3'0".

With electrification, in 1905, user of these containers diminished, one was sold to the Cambrian Railway early in 1907; four more, after being on hire for over a twelvemonth, were sold outright to the L.B.& S.C.Rly in July of the same year. The remainder went, one in 1911, three, rebuilt as tool vans etc., in 1919, and the last five, withdrawn in 1921, were sold in 1923.

With the gradual extension of the line from Harrow to Aylesbury between 1885 and 1892 small but expanding traffics in milk and horses (the latter particularly in the hunting season) were established. Reliance on the Midland for suitable vehicles was

proving increasingly expensive by reason of the ever extending empty mileages worked from the exchange sidings at Finchley Road; the Company felt justified, therefore, in providing its own stock.

Three horse boxes were built in August 1892, four more, built at Neasden, followed in June 1898; the final three were built by G.R.Turner's in May 1904. All were of conventional design with the usual combination of swinging and drop doors for loading a maximum of three animals in divided stalls; a fodder compartment, which also provided stowage for the partitions when not required; and a small, gas-lit, grooms compartment provided with a transverse seat (bisected by the hand-brake column), and sliding hatchways to allow communion betwixt man and beast. The vacuum brake was provided on all these vehicles and at a later date some at least were provided with a through pipe for working over Westinghouse equipped lines. By Metropolitan standards they were narrow - 7'9" over the body, and rather high - 7'7" internally on the centre line, thereby showing rather more consideration for the physical characteristics of the brute creature than for those of homo sapiens. In length they were 18'0" over headstocks or 21'6" over buffers, the wheelbase being 10'9".

Nos 8 & 9 were withdrawn in 1914 - possibly for military service - but the remainder survived, little used, into L.P.T.B. days, being written off en masse in January 1938. The 1921 Appendix to the W.T.T. records that Nos 1-7 were allocated respectively to:- Finchley Road, Rickmansworth, Aylesbury, Chesham, Amersham, Willesden Green and Harrow; No 10 was stationed at Wendover.

Milk traffic, earlier conveyed in the converted first class four-wheelers of 1870, was first accorded specially built stock in 1896, when three vehicles 27'0" x 8'4½" on a 16'0" wheelbase were supplied by the Birmingham Carriage and Wagon Co.; another from the same source was added in the following year. These vans had on each side two pairs of hinged doors; these and the side and end panels were provided with slatted vents, backed by perforated zinc sheeting, above the waist. They were vacuum braked, and lit by two Pintsch lamps. In 1903 Neasden produced two more vans differing from the preceding vehicles mainly in the provision of sliding doors having additional vents in the lower panels; the body panelling also displayed minor deviations, but all six incorporated an anachronism in that they had the old style deep waist panel - abandoned on the ordinary coaching stock in 1895-6 for new work. These 1903 vans were the last vehicles with this feature to be built for the Company.

By 1914 the traffic had declined to such an extent that four vans were standing, out of use, at Neasden. The comparatively

light construction of their body framing militated against a proposal to use them for general merchandise, but in 1920, two were apparently taken into departmental service, one of them being restored to revenue stock in 1923. This information, derived from the annual reports, is at variance with a paragraph in the 1921 Appendix stating that vans Nos 1, 2 & 5 were located at Aylesbury; No 4 at Chesham; and Nos 3 & 6 at Neasden; possibly this was reprinted from earlier information without correction.

All survived into L.P.T.B. service, but Nos 1, 2 & 4 were broken up in 1936. Of those remaining, Nos 3 and 5, as BDV 700 and 701 respectively, served as tool vans on the breakdown train, while No 6, as SC 632, worked in the quarterly stores train from Ealing Common to Little Ilford (East Ham) depot. All were grey-painted; the BDV's with a red waist line, edged with black. No 701 was scrapped in June 1944 and No 632 in July 1958. No 700 was restored to its original teak livery as No 3 for the recent Centenary celebrations, and may find a place eventually in the Museum of British Transport. The association, in this vehicle, of the later, 1903, type body with a B.C.W. built underframe presents another minor mystery which at present lacks a solution.

The converted vans first used for the milk traffic were officially designated brake vans, but were so light that it was feared that one such attached to the tail of a fast train would be "wagged right off"; at some operational inconvenience they were marshalled, therefore, between the last two carriages.

With the advent of the bogie stock the opportunity was taken to replace three vans by new vehicles 27'0" x 7'10" - 8'10" over the "wings" - with 3'4$\frac{3}{8}$" diameter wheels on a 16'0" base; the six vans entered service between 1899 and 1901. The wings were centrally positioned, with the guard's door immediately to the right, balanced by plain panelling to the left; beyond, in each direction, was a pair of luggage doors. The guard's door, only, had drop lights, but natural light was augmented by two roof-lights on the longitudinal axis. Three 8" Pintsch lamps were originally contemplated, but in the event an electrical installation was made, comprising 6 8-c.p. lamps supplied by storage batteries and a 16-volt Stone's axle-driven dynamo and regulator. The usual guard's equipment was provided - hand-brake column, vacuum gauge and release valve, etc.

These vans were used, in the main, singly on the end of trains of "Bogie" and, in later days, "Dreadnought", stock. All were in service in 1933, but Nos 1-4 were scrapped in February 1936. Nos 5 and 6 became B576 and B577 respectively in January 1938, the

former lasting only until November 1939. The last survivor ran, grey-painted, with the stores train previously mentioned until its withdrawal in July 1958.

The only other passenger service vehicles were four carriage trucks, two built in 1896 by the Birmingham Carriage and Wagon Co., the others by Ashbury's in 1902. It is believed that the earlier pair were of open construction, similar to the gas-holder wagons, but the later ones were vertically boarded covered vans with end loading doors having the customary drop flap and a pair of double glazed doors in each side, centrally positioned. These vehicles were 27'0" x 8'1¾" over body with an extreme height from the rails of 12'3⅜" and a clear height under roof-stocks of 7'11¼" internally on the centre line. Wheels were 3'4⅝" diameter on a base of 16'0" and were braked by hand or automatic-vacuum, although through piping was provided for Westinghouse working. Little remains to be said save that Nos 1, 2 and 4 were withdrawn in 1929, the surviving No 3 being converted to a 7-ton flat wagon No F301 in June 1935 and scrapped in June 1940.

INTRODUCTION OF THE 24-HOUR CLOCK SYSTEM ON THE UNDERGROUND

In the Summer 1963 Edition of the Green Line Coach Guide, the London Transport Board introduced the 24-hour clock system to their timetables. This was done experimentally, with the intention of testing public reaction to the change, and it has since been extended to timetable leaflets for individual Green Line routes.

On the 6th January 1964, LT announced that public opinion had been overwhelmingly in favour of the change, and that the Board, therefore, proposed to extend the use of the system progressively over the next eighteen months - by which time all LT timetables will be issued on the 24-hour basis.

Next spring the Underground Guide will be on the new system - which has been in use on the Continent for many years and is steadily gaining ground over here. At the same time, Underground poster timetables will be changed over, as will the panel timetables at Country Bus and Green Line Coach stops. The tables at Central Bus stops and in local timetables will be changed progressively, as will all other printed matter. The whole operation will have been completed by the summer of 1965.

All other methods of distinguishing between a.m. and p.m. times have failed to make the distinction completely clear, and the new system, already in use on some parts of British Railways, should find general favour.

9th January 1964

Sir,

The writer of "The F Stock Story" ("UndergrounD" January 1964) attributes the removal of their excessive motor power to undue current consumption. Insofar that the surplus would enhance the accelerative power of the stock this is true, but after allowing for a small reduction in weight and in frictional losses by the removal of the surplus motors it may be argued that to maintain a given speed over a section the total power input required will be substantially unchanged, the smaller number of motors taking, individually, greater than before.

Whilst remaining open to correction I would venture to suggest that the true reason for de-rating this stock is to be found in its potentially higher maximum speed. More particularly with reference to the Earls Court-Whitechapel section, with its closely spaced rush-hour traffic, this high maximum was not only of no practical use, but in the absence of a corresponding improvement in the rate of deceleration constituted a positive danger. The position was that the signalling system, dating from 1905-6, had been designed round the characteristics of the old "B" stock, and no substantial alteration had been made up to the time of introduction of the "F" stock. To cater for these new trains, which constituted a comparatively small percentage of the District's total stock, demanded the complete re-signalling of the entire line, to provide adequate safety by increasing the signal overlaps. If done on the simple principles then in vogue - one, or at the most two, home signals per platform - this could but have resulted in a deterioration in the rush-hour service, for the older stock would have been detained quite unnecessarily at greater distances from the platform than safety required. Speed control of signalling, although used in a crude form on the New York subways, had not been seriously considered in London at that time.

Doubtless if the replacement of the entire stock had been in contemplation a different solution would have been reached, but in the prevailing circumstances it was considered best to impose a speed restriction on the "F" stock until its potential could be reduced by a permanent modification.

It may be of interest that it was found that with the prevailing braking characteristics the optimum average speed for maximum traffic (i.e. trains per hour) was of the order of 16 m.p.h.

Yours faithfully,

K. Benest

66 Hare Lane,
Claygate, Surrey.

7th January 1964

Dear Sir,

The ex-Metropolitan District Railway 'F' Stock

Many references to, and descriptions of, the recently withdrawn F Stock have appeared in the magazines and journals but, as far as I know, two interesting features of this stock have escaped mention.

The first is that they were equipped with window blinds - surely unique in this type of stock. An old driver told me before the war that this was because of a scheme to extend electric working to Southend. On the long aboveground section passengers would have been glad of them. I wonder whether there were any grounds at all for this view.

The second point worth recording is that 8-car trains of F Stock, before conversion to air-worked doors, carried two guards. One was in the usual place at the rear of the train, and the other in the cab at the inner end of the leading car. Certainly on sections such as that between East Putney and Wimbledon, it was the latter's duty to give the driver the starting signal when he received the 'right-away' from the guard in the rear. This he did by a simple air-worked bell which he operated by a sharp movement upwards of a slide or bolt in his end of a small diameter tube (about $\frac{3}{8}$") which ran the length of the double-ended motor cars.

For some time after the conversion of the doors to air operation, traces could be seen of the course of the air tube in the small holes in the brackets which supported the straps for standing passengers. However they seem to have disappeared as the years went by and few, if any, were to be seen towards the end of the life of this stock.

Yours faithfully,
(Rev) Peter W.Boulding

Saint Peter's School,
Horseshoe Lane,
Guildford, Surrey.

SNOW CLEARANCE

London Transport's plans for clearance of snow and ice from the lines this year comprise the extension of rail heating by the short-circuiting of current rails; snow-blowers to be fitted to some trains and all sleet locomotives; snow barriers on some lines, roof-clearing equipment at some depots and scythes (adapted from those normally used for mowing embankments) for clearing snow from the edges of platforms.

This is the first time that snow-blowing equipment has been used on normal services, and results will be awaited with interest.

ANNUAL MEETING Members are reminded that the Society's Annual General Meeting for 1964 will be held on Saturday 21st March, and will be in the Caxton Hall, Westminster. All Nominations for the Committee (not to exceed three), and proposed Amendments to the Rules and other Motions to be placed before the Meeting should be sent to the Secretary at 4 Southcombe Street, London, W.14 to reach him not later than the 7th February. The retiring members of the Committee are P.R.Davis, R.E.Labrum and S.Sparke - and the two last named are not seeking re-election; when making nominations for Committee service, it is essential to obtain the agreement of the person nominated before forwarding his name to the Secretary.

SUBSCRIPTIONS for 1964 are now due, and should be sent to R.E.Labrum at 134 Cranley Drive, Ilford, Essex, as soon as possible. Only members whose subscriptions have been paid for 1964 will be admitted to the Annual Meeting. The rates remain the same as those for 1963 - 15/- for Members or 7/6d for Associate Members. Please note that subs should be sent to the Assistant Secretary - Membership (Roy Labrum - address as above) and not direct to the Treasurer.

CENTRAL LONDON RAILWAY The Society is pleased to announce that this valuable little book by B.G.Wilson and V.S.Haram, believed by many to be out of print, is in fact still available. The remaining stocks have been purchased from the Publishers and are now available to members. The book is being sold at its original price of 5/- (which makes it a real bargain now) and may be ordered from R.E. Labrum (address as above). Please enclose remittance with your order - the price includes postage.

METROPOLITAN ELECTRIC LOCOMOTIVES by K.R.Benest (a Society publication) is also still available, and should be bought now by all those interested in the Met (if they have not already obtained their copy). Two editions are available - in laminated card covers at 5/- or with board covers at 7/-. Prices include post - orders to R.E.Labrum once again.

LONDON SUBURBAN RAILWAYS 1836-1960 The Electric Railway Society, who were to have published the above book last November, have now announced that it is not intended to proceed with its publication at present.

QUIZ TEAM Any member willing to help form a Quiz Team, to compete against other Societies at the meeting to be held at Amersham on the 7th March (see The Timetable this month), is asked to contact E.J.S.Gadsden at 63 Barrow Point Avenue, Pinner, Middlesex (or telephone Pinner 7537 as soon as possible.

CINE PROJECTOR Likewise, anyone having a cine projector which they would be willing to lend for Society functions is asked to get in touch with E.J.S.Gadsden.

EXHIBITIONS Members will be interested to learn that the recent Exhibition held in Pinner Public Library was so popular, both with the general public and the Librarians concerned, that it was extended for a further week - and then transferred to form a Window Display Exhibit at Rayners Lane Public Library for two weeks from the 31st December 1963. Unfortunately, news of the Rayners Lane showing was received too late to appear in the January edition of The Timetable, and it is hoped that no one who would have liked to see it there missed the opportunity because of this omission.

THE TIMETABLE

Friday 14th February 7 p.m. Library Meeting, at which the Library of the Society will be made available to members for the evening in the Meeting Room of Kensington Central Library, Campden Hill Road. Availability will be from 7-9 p.m., and the nearest station is High Street Kensington; leave the station and cross over the road, turn left, and Campden Hill Road is the second turning on the right - roughly two minutes' walk from the station.

Saturday 7th March 10 a.m. - subject to confirmation A Conducted Tour of Liverpool Street Terminus (British Railways - Eastern Region). Names to M.T.Connell, 5 Trenchard Street, Greenwich, London, S.E.10, accompanied by a stamped addressed envelope please.

Saturday 7th March 6 p.m. An Underground evening, in the Small Hall, Amersham Community Centre, Chiltern Avenue, Amersham, Buckinghamshire. A very full evening's entertainment is promised, including Tape Recordings, Colour Slides, Talks, and a Quiz on general railway subjects (covering British Railways not only the Underground). Refreshments can be made available during the evening at a cost of 2/6d per head, but if required advance notice must be given. So, if you want to eat during the interval, please notify E.J.S. Gadsden, 63 Barrow Point Avenue, Pinner, Middlesex.

Saturday 21st March 10 a.m. Visit to the Railways Section of the Science Museum, South Kensington, for a Conducted Tour of the exhibits. We understand that it will not be possible to visit the part of the galleries not yet open to the public on this occasion, as these galleries are now being made ready for opening, and work thereon would be delayed - but as the Society AGM is in the afternoon, it is thought that many members would like to re-visit the museum.

Saturday 21st March 2 p.m. Annual General Meeting at Caxton Hall (see Society Notices this month). If there is time, this will be followed by an Informal Meeting to occupy the rest of the afternoon.

Published by The London Underground Railway Society, 62 Billet Lane, Hornchurch, Essex.