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JOURNAL OF THE RAILWAY & CANAL HISTORICAL SOCIETY

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CONTENTS

Obituary: Jack Brooks

H. W. Paar writes:

Our member Jack Brooks died peacefully in July 1983, in his 83rd year. Both Mr Brooks's parents were from railway families, and in 1906 his father was appointed station master at Welton, south of Kilsby tunnel. In September 1914 Jack started work as an office junior with the LNWR at Euston, and by 1922 was stationed at Watford Goods Depot. Through the years he became expert in all matters concerning the safe handling and stowing of loads, and as an inspector in this branch he travelled over a large part of the LMS system until he retired in 1965. In recent years he recalled his life in the station master's house at Welton; certain peculiarities of the layout there caused him to start research in Northampton County Record Office, and with some help from Society members he collected enough data to produce an account of the station's history. Failing health prevented him from writing up the account, but it is hoped to present this in due course. Jack was a cheerful man with wide interests, very knowledgeable on matters of railway operation and history, and very active until within a short time of his death, riding a motor cycle until he was 82. We extend our sympathy to Jack Brooks's family.

Obituary: Geoffrey Ogden Holt

Gordon Biddle writes:

Geoffrey Holt, a founder member, former President, and a Vice-President of the Society, died suddenly on 2 April, 1984, aged 73 years.

Geoffrey Holt was a principal architect of the Railway & Canal Historical Society, one of the small band who founded it in 1954: Bertram Baxter, C. R. Clinker, R. A. Cook, M. D. Greville, Charles Hadfield, K. P. Seaward, Jeoffry Spence, H. A. Vallance, and myself. As the first Honorary Treasurer he played a leading part in establishing the Society on a sound basis, going on to serve on the Council continuously until his death. For many years he was also a member of the Managing Committee, and later was elected President and afterwards a Vice-President. In his work for the Society he was supported by his wife, Margaret, who not only accompanied him to events but, in the early years, helped with innumerable jobs behind the scenes, from addressing envelopes to providing generous hospitality for meetings held at their home at Kings Newton, near Derby.

Like many of us, Geoffrey's interest in railways began in boyhood. Born in 1910 at Burnage, South Manchester, he attended William Hulme Grammar School, where he shared an enthusiasm with the late Geoffrey Platt. After leaving school they lost contact until, years later, they met again when Platt joined the RCHS and their friendship was resumed.

Geoffrey Holt joined the LMS in 1929, despite some parental misgivings on his choice of career. The concept of railway work as a family tradition still held strong, and outside it a desire to become a railwayman was considered to be somewhat unusual, to say the least. He started as a clerk at Levenshulme station, from which he proceeded to gain wide experience in railway operating on all parts of the system, particularly in the North West and including a period at Stafford. During the war he was closely involved with train movements from the large

military depot at Bicester, and in later years could recall a fund of wartime railway experiences. In 1945 he was appointed District Traffic Inspector at Penrith, which marked the beginning of fifteen years' intimate knowledge of the Lancaster & Carlisle Railway, the problems associated with working trains over Shap, and the rigours of the hill country he came to love. It was during this period that he carried out extensive research into the history of the railway, coming to look on it very much as 'his' line.

From 1954 he had regular engagements at the School of Transport in Derby, as a tutor in railway operating subjects, where a few years later he accepted a permanent appointment and moved to Kings Newton, near Melbourne. After reorganisation closed the School, he spent some years in the Line Manager's Office at Derby, followed by several years on special duties at Crewe before retiring in 1970.

Geoffrey was proud to call himself a railwayman and, while not afraid to acknowledge the railways' shortcomings in a period of great change, strongly upheld the tradition of service. He was quick to spot and demolish anything he considered was unfair criticism of railwaymen by authors and others he felt not to be in possession of the facts. His own writings displayed the care and accuracy that were characteristics of all his work. He contributed a number of valuable articles to *The Railway Magazine,* which he had read from the age of thirteen, including an account of *The Battle of Crown Street* (Carlisle) and a series on the railways of Manchester, Liverpool, and Preston, some written jointly with the late M. D. Greville, a close friend and correspondent of long standing. Together they wrote *The Lancaster & Preston Junction Railway,* one of the early books to appear under the David & Charles imprint, although Geoffrey's first book was also the first to be published by the Society, *A Short History of the Liverpool & Manchester Railway,* produced in 1955 to commemorate the 125th anniversary of its opening, and re-published in a second edition ten years later. He is probably best known for his volume on the North West in the David & Charles *Regional History* series, published in 1978. None knew the area and its railways more closely, and at the time of his death he was preparing a second, up-dated edition. Not least, he ran evening classes in railway history for thirteen years.

Railways were by no means an exclusive interest, for Geoffrey took great pleasure in studying local history and delighted in travel and observing the countryside. He could discourse on a wide variety of subjects from trams to cathedrals, aided by a remarkably accurate and retentive memory. He had a wide knowledge of inland waterways, too, and with his family was among the first to enjoy boating holidays at a time when the pleasure-craft business was in its infancy and the canals were relatively unknown—hazards and all. The Holts were early customers of Wyatts of Stone, who themselves were pioneers among the early post-war hire-craft operators. He and Margaret were also active in local affairs, particularly at Melbourne parish church, where Geoffrey was a server.

A quiet and unassuming man, he was always ready to help and advise, giving freely of his extensive knowledge and experience through a prolific correspondence which ensured a constantly growing circle of acquaintances. Although he would probably have been the last to realize it, Geoffrey's passing will leave a large gap in the lives of more than a few friends, students, and Society members. To his sons James and Michael the Society extends its sympathy; to Margaret, more—our sincere gratitude for her own active help and support.

Obituary: Charles Edward Lee

John Norris writes:

It is with very great regret that we have to record the passing of Mr Charles E. Lee on 6 December last; he was 82 years of age and had been ill for about two weeks.

Mr Lee was gifted with an extraordinary memory and intellect and although he had devoted much of his life to the transport interest, he could talk freely on many subjects, in particular the London which he loved. His early career had given him an accountancy background, but he had also obtained brief experience in the field of public transport in the employ of the South Eastern Railway before joining the Tothill Press in 1925 on the editorial staff of the *Railway Gazette*. Between 1928 and 1933 he worked on *Shipbuilding and Shipping Record* but he then returned to railway journals and until his retirement in 1966 he was actively engaged with such publications as the *Railway Magazine* and the *Directory of Railway Officials and Year Book*.

His enquiring mind gave him an immense fund of knowledge of railways at a time when facilities for research were far less than those available today and this knowledge was made available to the reader of the *Railway Magazine* through his articles and features on a wide variety of subjects. Many of these contributions are historical masterpieces in their own right. His books were similarly modest in scale but the richness of their content is beyond question.

He was deeply interested in the affairs of his church and in charities for the welfare of children, but many other organisations also enjoyed the benefit of his advice and experience—The Railway Club, Newcomen Society, and Omnibus Society to name but three—and with all the organisations with which he became involved he showed himself to be a man who put in more than he took out.

This capacity to give could not be demonstrated more clearly than in his involvement with our own Society, of which he was a founder member in 1954. He went on to serve as its President from 1966 to 1968 and as a member of its council from 1969 to 1977, when he was appointed a Vice-President. But it was Mr Lee, probably more than any other man, who provided the drive and inspiration to the Society to obtain incorporation and charitable status in 1967, and it was a fitting tribute that this should have been accomplished during his presidency.

For many members, it was a particular pleasure to welcome their distinguished Vice-President on the tour to the London Docks after the annual general meeting in 1983, when his comments and recollections were as keen as ever and make us realise even more just how much this remarkable man will be missed. He was an Edwardian gentleman to the end and while this may have identified him with certain idiosyncracies, such will only add to the affection with which he will be remembered.

Mr Lee was the author of several well-known books published between 1937 and 1946, including *The Evolution of Railways, Passenger Class Distinctions,* and *Early Railways in Surrey*. More recently he produced a series of short histories of the railways of London Transport—may they long keep his name before a wider public.

William J. Skillern writes:

Charles E. Lee was not only one of the foremost railway historians, but he was also a good Churchman. For 12 years from 1948 he was a Churchwarden of St Pancras Church, in the shadow of which he lived. He was also Treasurer of the Parochial Church Council for at least part of that period and his wife, who predeceased him, was Secretary. The present classical church, across the road from Euston Station, dates from 1822, but the parish is ancient, and a list of Vicars going back to 1170 is included in *St Pancras Church and Parish,* which Lee wrote and the Church Council published in 1955. This hard-backed volume of 147 pages, including a six-page index, was the result of 25 years work and is a model to which all church historians should aspire. Like all his writings, it was well researched, well written, and well printed, and it resulted in a most enthusiastic review in the *Times Literary Supplement.*

Charles Hadfield—A 75th Birthday Tribute

BY DAVID ST JOHN THOMAS

May David pay tribute to Charles on the occasion of his seventy-fifth birthday? May we all celebrate a career that among other things has left us the most complete and accurate history of canals in the British Isles?

I first heard of Charles Hadfield when, as a young journalist, I began taking interest in the transport system of the South West. There were endless periods of 'day duty' and 'night duty', especially over the weekends, when there was no direct call of duty and ample opportunity to make notes from the extensive records Charles kindly lent. So this is the first thing to be said: Charles has encouraged and given practical help to countless other historians, and many of us owe him a considerable debt of gratitude for that alone.

Then came his *British Canals,* published by Phoenix House, an imprint of J. M. Dent run by John Baker, and the first of the regional volumes in 'The Canals of the British Isles' series. I wrote to John Baker asking if I might be considered as general editor for a comparable railway series, and started if off with *The West Country* in 'A Regional History of the Railways of Great Britain'.

Next, it seemed a good idea to supplement our major histories published in London with smaller works, mainly in paperback. David & Charles was born on 1 April 1960. The name was pure chance. We sought various alternatives to begin with but all were turned down. The combination of our Christian names was a last resort, and for many years I disliked it, especially when people said it sounded more like a pair of avant-garde hairdressers operating furtively under the stairs than a respectable publishing house!

Charles was not particularly keen to get started, having heavy responsibilities in the Central Office of Information and wanting to spend as much time as possible on his own canal writing. Without him, it is possible that David & Charles might never have started. He taught me a great deal in the early years, and though he resigned as a director nearly twenty years ago, we have worked happily as publisher and author since. His place in our name is well deserved.

Ironically, his 'Canals of the British Isles' series came to David & Charles from Dent's/Phoenix House just as he ceased taking part in the management at Newton Abbot. There were other quirks of history, too. His *Canal Age,* one of the finest waterway books of all times, was sold by us to John Baker at Readers Union while that book club was still owned by Dent's, but almost immediately the club was bought by us and back came the copies to Newton Abbot.

Undoubtedly the greatest achievement of Charles Hadfield, and the thing he should be particularly proud about as a *Festschrift* is prepared for his seventy-fifth birthday is the completion of 'The Canals of the British Isles'. Charles is author (in a few cases with a collaborator) of all but three of the fourteen volumes, and of course a very active editor even in the case of the three he did not take part in the actual writing himself.

Long after we have all passed away, this will still be regarded as the standard work. Histories and other works in different kinds of formats there may be, but the factual research will never be done again. In the few cases where Charles had his facts wrong, those facts will continue to appear wrong in the books of many other writers!

Accuracy is the hallmark of the series. But it is more than a collection of facts. The canals and their builders and the people who navigated them come thoroughly to life against the background of the age. This is social and economic as well as transport history, part of the story of the nation as a whole. No collection of regional books, no transport library is complete without the appropriate volumes. Some of the regional volumes have not been big sellers, any more than have Pevsner's *Buildings of England;* their influence is far greater than their sale. Some volumes now out of print may not be reprinted, though we will do our best to keep the more popular volumes (mainly those covering England) available from time to time.

British Canals itself is a different story. Its sixth large edition is now in preparation. It happily remained the best and most bought single volume history of our waterway system. *The Canal Age* and certain other titles have also enjoyed wide readership, and all this has given considerable stimulus to the canal cruising movement. Now Charles is working on his final grand project, *World Canals.*

I have been proud of our continuing association with CH. No member of the RCHS has done more to stimulate research, help others in the field, and publish such a volume of fine works. Quite a few members have done one or two of those things, but who else all three? It is a remarkable achievement.

Railways, Railwaymen, and Recorders*

BY H. P. WHITE

This, the first Clinker Memorial Lecture, is for me both an honour and a challenge. It is an honour indeed to be invited to pay tribute to someone whom time will confirm to have made a major contribution to the study of railway history; and a challenge because it is hard to say something meaningful about the history of railways in such a short space of time and to such a discerning audience. My only claims to be giving this lecture are my enthusiasm for railway history and my long-standing admiration for the work of Charles Clinker.

It is one of the contributions of the R&CHS, which Clinker did so much to found and to build up, that as an act of deliberate policy it has set out to encourage the historical study not only of railways and canals, but also that of roads, coastal shipping and ports. Most of us start with an interest in one particular mode, railways for example. But in many cases this leads us to consideration of the way in which the development of a particular line of railway affects and is affected by the economy and the society of the area through which it passes, and its relationship with other modes of transport.

I would therefore like to start with a brief attempt to put early railway development into a historical perspective. Any major development in industry, as well as in transport, depends on the co-incidence of a number of factors:

1 A rapid expansion in the demand for a good or service
2 The necessary technological innovation
3 Access to a supply of capital
4 Availability of managerial and labour skills

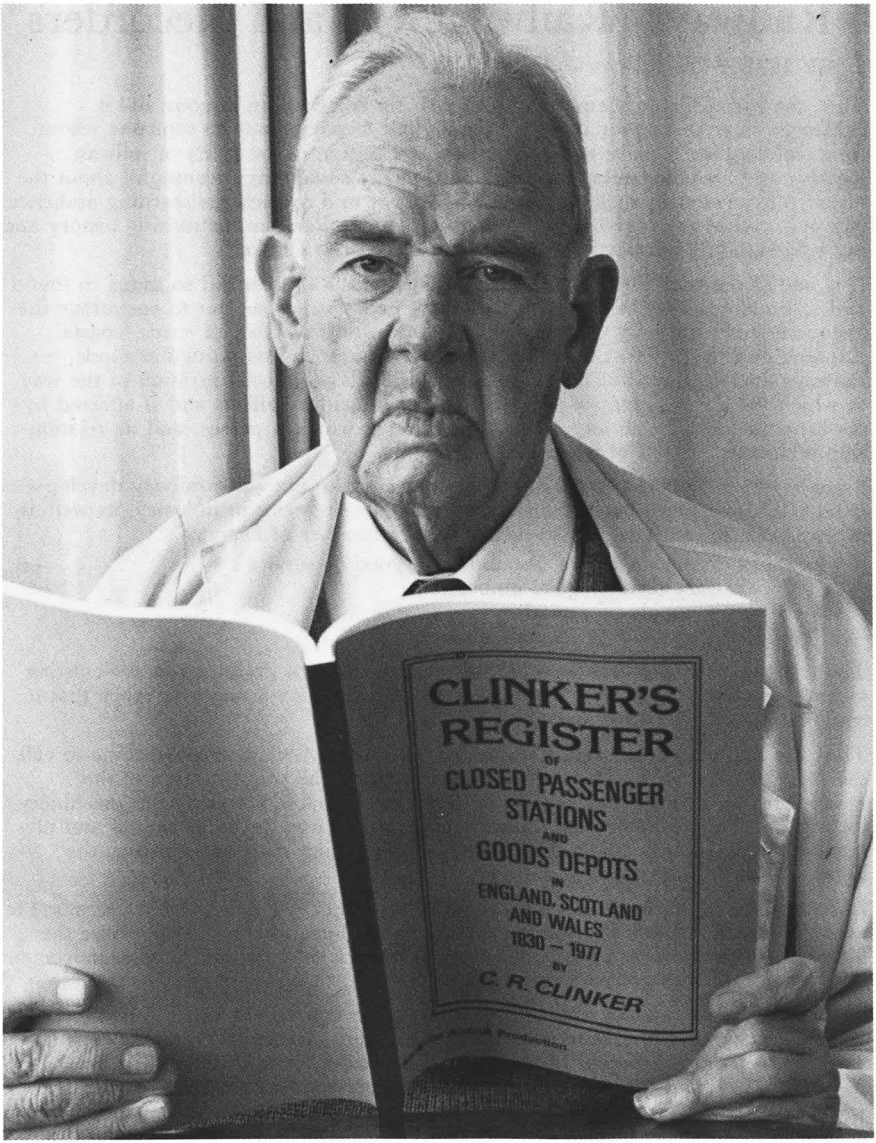
The technological innovation would normally have been grounded in pre-existing technology, but at the same time it might represent such a major advance that it could be described as revolutionary.

Thus the mid-eighteenth century saw the beginning of what we have come to call the *Industrial Revolution.* This can be summed up as the concentration of the manufacturing process into large-scale factories to enable power-driven machinery to be used. This technological innovation required large inputs of capital and of managerial and labour skills. It also needed expanding markets to absorb the higher levels of output.

In turn this revolution in manufacturing led to increasing demand for transport; to assemble the raw materials and the energy in the form of coal; to distribute the finished products; to feed the town-dwelling factory workers; and for the movement of people on business or seeking new employment.

Demand grew too rapidly and too generally to be met by the existing transport system, coastal and river navigation and the locally maintained road network.[1] This led to the development of the Turnpike Road system. The first Act was passed in 1663, but the great period of expansion of new roads and road traffic was 1750 to 1830, at which date there were over 1,100 Trusts administering some 23,000 miles of road.[2] This was followed by the Canal Era, the main periods of expansion being 1765 – 72 and 1790 – 7.[3]

*The text of the first Clinker Memorial Lecture, given at Leicester Museum on 26 November 1983



Charles Ralph Clinker
(By permission of Paul Broadhurst)

Against this background came the technological development of the railway from the horse-powered tramroads such as the Surrey Iron or the Oystermouth of the early 1800s to the *modern railway,* usually accepted as being represented by the Liverpool & Manchester of 1830. By 1838, when completion of the London & Birmingham provided rail connection between London and Liverpool or Manchester, some 500 route miles of public, locomotive-operated railway were open. Ten years later, in 1848, no less than 5,127 route miles were in operation, and by 1854 this figure had grown to 8,954 route miles.[4]

To put this into perspective—in the 12 years after 1830 1,300 route miles of railway were opened, while in the 20 years after 1958, when the Preston By-Pass opened, 1,434 miles of motorway were completed. The achievement of laying the foundation of the British railway system in the quarter century after 1830 is outstanding in the history of this country. But it was only one aspect of the *Transport Revolution.* To what extent therefore did the emergence of the new transport mode and the completion of the main line network represent evolution, and to what extent was it revolution?

Let us first look at the technology. The long period between the creation of the Roman Road network and that of the Turnpike and canal networks was characterised by a virtually static technology as far as infrastructure and vehicle development were concerned. The Turnpikes were associated first with the provision of better surfaces and then with considerable civil engineering features such as the cutting of the Archway Road (Highgate) in 1813 and the building of the Waterloo and Menai Bridges on the Holyhead Road. Civil engineering skills also advanced considerably with experience of canal building, which produced the Pontcysyllte Aqueduct. Thus it took eleven years to complete Brindley's Harecastle Tunnel of 1775 and three years for Telford to finish his larger bore tunnel of 1815.

We can thus see a direct transfer of civil engineering technology from roads and canals to railways. The real innovation was the successful application of power to rail vehicles, something which was not achieved with roads and canals. It has been said it was prejudice that prevented the success of Goldsworth Gurney's steam road-coaches. But the long history of failure of steam on the highway, other than for the heavy haulage traction engine, would lead one to suppose there were also technological reasons, most probably because of the low power/weight ratio inherent in the steam engine. It was therefore on the railway, with vehicles marshalled into trains hauled by a comparatively large power unit, that, as far as land transport was concerned, power was first applied to transport as opposed to the manufacturing process.

This resulted in a twofold development. First the railway provided a new dimension in terms of speed and therefore of time. We must realise there is a close link between time and space. 'We are moving Manchester nearer to London' was the marketing slogan of 1966 for the new electric service. And this was the literal truth. So the 10 – 12 m.p.h. mail coach and the slower stage coach was replaced by the 40 m.p.h. train. This was no less in scale than the superiority in the 1930s of the 200 m.p.h. aircraft over the 70 m.p.h. train. Henry Booth, writing in 1830 of the Liverpool & Manchester, said: 'But perhaps the most striking result produced by the completion of the railway is the sudden and marvellous change which has been effected in our ideas of time and space'.[5] At the official opening of the South Eastern Railway to Folkestone in 1843 a special train was run from London in connection with a steamer which reached Boulogne at Midday. The SER Directors presented their French hosts with a copy of that morning's edition of the *Times.* It was precisely analagous to an experience in 1967 when I was able to buy a London Sunday paper at midday on the same Sunday in Ibadan (Nigeria).

The second technological consequence was the ability of the rail to engage in the mass movement of freight. At first the movement of minerals, particularly of coal, was over short distances—from mines to ports for shipment coastwise or to nearby manufacturing areas. When the Midland Counties was connected to the London & Birmingham at Rugby movement of coal began to London, even though in small quantities. The LNW had been primarily a passenger mover, hence the remark attributed to H. P. Bruyeres, Superintendent of the Southern Division: 'What! coal by railway? They will be asking us to carry dung next'.[6] Certainly, when the Great Northern was opened in 1850 not only did vegetable traffic from the market gardens of Sandy develop, but the latter benefited from return loads of manure from the London stables. But it was not until 1852 that for the system as a whole revenue from freight exceeded that from passengers.

So we must not forget the mass movement of passengers and its consequences. Although in the pre-railway age Wigan miners and their families would go on seaside excursions to Southport by canal boat to Scarisbrick and thence by road wagon, it was the railways that were able to move large numbers over long distances at low fares. The unparalleled success of the 1851 Great Exhibition must have been largely due to the fact the main line railways into London had been completed and that so many excursions were run from all parts of the country. Not that the organisational abilities of the railways were always able to measure up to the occasion. Once 3,000 returning excursionists arrived at Maiden Lane, the temporary terminus of the GNR, to find trains with a total accommodation for 1,000. A company of Yorkshiremen took possession of a train scheduled for Lincoln. Edmund Denison was restrained from attempting to dislodge them single handed while a train of cattle wagons was brought up—presumably for the Lincoln passengers.[7] The first excursion train arrived in Brighton on Easter Monday 1844, made up of 57 four-wheeled coaches headed by six locomotives and heralding the end of Brighton's aristocratic exclusiveness as a resort.

This economy of scale resulted in continuing reductions in transport costs when expressed in real terms. In 1846 the single fare from London to Brighton was 72½p first class and 47½p second. Yet nearly a century later in 1938 the rates stood at 47½p and 31p respectively. Yet in 1846 the average weekly wage for an unskilled worker was about 50p, against £2 in 1938. Excursion fares were always very much lower. In 1865 an excursion was advertised from Charing Cross to Whitstable (via Canterbury) at 22½p second class and 12½p by 'covered carriage'.[8] The gloomy prognostication of the Duke of Wellington that railways would cause the people to move about was being fulfilled.

There were equivalent reductions in freight rates. In 1831 coal landed at Southampton cost £1.15 to £1.50 a chauldron[9] but £2.50 to £3 in central Hampshire. The opening of the London & Southampton in 1840 meant only 30p was added to the Southampton price when sold at points inland to Basingstoke. As branch lines extended the rail net further into the rural areas in the 1850 – 65 period there were similar drastic reductions in the price of coal. This not only raised living standards, but also lowered the cost of manufacturing and led to a wider spread of industry.

In its organisation the new transport mode owed a lot to previous experience. The idea of working to an exact and previously-published time table and the application of the latter to an extensive and national network was developed to a fine art by the mail/stage coach system, as was the method of booking and allocating seats. The provision of services such as refreshments at terminal and intermediate points was also pre-railway, though the railways provided them at their own stations rather than at inns. The design of freight terminals was based on canal practice.

But control of trains on a fixed-track system was something quite new. On single-track mineral railways, if all else failed when opposing horse drawn wagons met, precedence could be determined by fighting it out. But control of fast-moving trains was a different matter. It might be thought that keeping to the left-hand track of a double line was fundamental to safety. But in the early days Great Western locomotives were sent off wrong-line from Paddington to look for a late running train. A collision at Beeeston (Notts) in 1844 resulted from irresponsible wrong-line working in fog.[10]

However, the 'time interval' system was theoretically unsound. A following train was allowed into the section ahead after a period of time laid down in the rules, but all too often interpreted as being when the preceding train was 'well out of sight' (as Sir Sam Fay put it). The trouble was that there was no guarantee the train ahead would be maintaining a constant speed, or even moving at all.

But until the electric telegraph was developed the 'space interval' or absolute block system could not be introduced, as there was no way of locating the position of a train. Until its closure in 1936 the Bishop's Castle line had neither telegraph nor telephone and Bishop's Castle station had no knowledge of the whereabouts of the train after it had left until it was heard approaching on its way back from Craven Arms. Peculiar things could also happen on more sophisticated lines. In the 1950s all intermediate boxes between Ashford (Kent) and Maidstone East were closed at night. One night a freight train left Ashford, but it never reached Maidstone. The only way to locate the broken down train was to request the Kent Police to send a patrol car to look for it. Yet it took a long time and many horrific accidents, such as that in Clayton Tunnel (1861), before the absolute block system became universal.

Another organisational innovation was the creation in 1842 of the Railway Clearing House. This allowed through freight operation on a nation-wide basis, however many companies were involved. Its primary task was the apportionment of revenue to the various companies involved in a through transit. But it was also concerned in checking and tracing through wagons. It also laid down uniform technical specifications, such as the height of buffers.[11]

Having looked at technological and organisational innovations, it is appropriate to follow with a few words on finance. The availability of capital for railway development at the pace already indicated between 1830 and 1860 is something of a phenomenon, since this surge came at a time of general economic expansion both at home and overseas. Obviously there were checks, in the same way as there have been periodic checks to development plans in our own day, when schemes started have outrun the resources financing them. Thus there were three major checks: the collapse of the 'Little Mania' in 1836, that of the Railway Mania itself in 1845, and that in 1866. The last-named, however, was more a national collapse of confidence than a railway-induced one. But the failure of Overend & Gurney, the Bankers, led to the stopping of railway schemes both proposed and under construction, such as the Surrey & Sussex Junction, and to bankruptcies, notably that of the London, Chatham & Dover. However, by 1866 most of the important links in the network had been provided. Thereafter, though a large number of branches were built, few trunk lines came to fruition. The Great Central's London Extension and the Hull & Barnsley were the exceptions.

Financing has not received all that much attention from historians, though there have been some notable exceptions.[12] The finance for the Liverpool & Manchester came largely from Liverpool, where money made from shipping in a period of rapidly-expanding overseas trade was looking for further outlets. It is significant

that at the time Manchester was expanding faster as a manufacturing centre and it would appear there was less capital seeking other outlets than in textiles.

The success of the Liverpool & Manchester led to Liverpool investment in other lines, particularly the London & Birmingham, the London & Southampton, and the Eastern Counties. It was not until 1836 that railway development attracted the attention of the City of London, which eventually came to dominate the railway market. The importance of this as an outlet for private savings is reflected in the founding of Herapath's *Railway Journal* and the other specialised press which provided information for investors and which incidentally gives excellent sources for the railway historian.

The financing of branch lines tended to follow a different path. Many were built by local initiative. A company would be floated by local businessmen and landowners. In spite of often lurid prospectuses, the main reason for investment was the hope the line would expand trade and lead to increased rents. If the 'main line' company considered the local line had stretegic importance, it might support the local company. If not it would wait patiently and eventually buy out the local company at a considerable discount. Charles Clinker in his study of the Worcester, Bromyard & Leominster[13] stated that the Act of Incorporation of 1861 authorized the issue of £200,000 in £10 shares. The 1887 shareholders accepted the Great Western offer of 50p per share.

The spectre of the unremunerative branch line is by no means the sole product of the motor age. In Continental Europe finance came from provincial governments and even in Ireland the local authorities, the Baronies, gave grants. In Great Britain there was only a very small input of government money from Exchequer Bills, created as poor relief.[14] Thus if rural lines had to be financed from private capital, there was no other way than the one just described.

The rapid growth in the mileage of what was then an intensive user of labour resulted in the need to recruit a large labour force which required new skills and attitudes. There have been a number of studies on the railway navvies, but fewer on the permanent employees. As far as I am aware Kingsford's[15] is one of the few such and what I have now to say is based on his work.

By 1847 railway employment had reached 47,218, but by 1860 it had grown to 127,450. By that time the number of workers per route mile had also grown, a reflection of denser traffic flows. The origin of recruits varied. But they tended to be recruited locally. Among other companies, the Great Northern made this a specific policy. Mostly they came from agriculture, in which pay was very low, hours long, and work hard. Swindon was in an area suffering unemployment due to the Enclosures. Discharged soldiers would take up railway employment, while gentlemen's servants were regarded as particularly suitable for traffic grades. We hear a lot about the hard conditions of railway work, especially the long hours on duty. But conditions were probably not more onerous that in other industries. On the other hand railway employment meant relatively secure and regular work, and therefore regular wages.

The higher operating grades were filled by promotion, and during the period of rapid expansion of the mileage promotion was quite fast. In 1861 the origins of 60 stationmasters and clerks-in-charge on the LB&SCR included 18 porters, and the average time they took to reach stationmaster was five years. In the very early days things were different, and Sir Sam Fay said that on the LSWR a station-master might have been a gentleman, an ex-coach proprietor, a shopkeeper, or a farmer (displaced perhaps by Enclosure). On the SER in 1842 there was a policy that stationmasters should be selected from the better type of applicants, better educated and used to office work or general business. But subsequent practice did

not bear this out. The feckless Bramwell Brontë was of course given the post of clerk at Luddendenfoot on the Manchester & Leeds.

Mobility was one of the new features of railway work—social mobility with the possibility of rising through the grades, as well as geographical mobility. Promotion as well as the opening of new lines both involved the latter. The *West Sussex Gazette* described the special train leaving Three Bridges on 8 October 1859 for the new Mid-Sussex line. 'Men, women and children were being removed to a district which some of them had never seen before..... and this train conveyed them to their destinations with their small collections of children, goods and chattels'.

Railway work entailed both working in isolation and the bearing of considerable responsibility. This led to the framing of a rigid code of rules and the imposition of rigid discipline to ensure the rules were applied. One may speculate whether this insistance on working to rule led to the rigidity in commercial as well as in operating practices which have been world-wide afflictions of railways. As for discipline, it appears that one factor in the 1876 Abbots Ripton disaster was the failure of the Holme station staff to stop and warn the Scotch Express that the whereabouts of the preceding coal train was uncertain. This was due to their fear of being disciplined for delaying the express. It was the recognition of this by the Huntingdon Coroner which saved the stationmaster from a charge of manslaughter.[16]

The need for communication by the written word, the issue of rule books, time tables, special notices, etc. meant universal literacy. Or nearly so—the enquiry into an accident at Harrow in 1840 revealed that the driver of a preceding train could not read, but had a 'printed list of instructions which his wife constantly read over to him before going on duty'.[17]

As for the Officers, some of the early civil engineers and certainly all the mechanical engineers have attracted more than their fair share of attention from railway writers. Managers have attracted much less, yet it was by their work railways progressed or failed. Recent years have seen the publication of excellent studies of Mark Huish[18] and Sir Herbert Walker.[19] But outstanding managers such as Sir Henry Thornton of the GER and A. L. Stride of the neighbouring LT&SR have had no biographers. Fortunately we have the autobiographies of G. P. Neele of the LNWR[20] and Sir Sam Fay (as far as his LSWR experiences were concerned).[21] These provide magnificant insights. The sparse suburban service on the LNWR is revealed by Neele—'on one occasion travelling from Euston by a train I fondly expected would call at Kilburn, I found myself landed at Harrow about five p.m.; there was no train due back until seven p.m.'

It was not until recently I realised that in the early days Directors engaged in day-to-day management. We have already seen Edmund Denison, Chairman of the GNR, trying to control the crowd at Maiden Lane. As for the Liverpool & Manchester, the Directors were active from the beginning. Even before the line was opened exception was taken to George Stephenson's inviting a glamorous young actress, Fanny Kemble, to a footplate trip. The *diktat* went forth that only Directors would be allowed on the footplate. Presumably they were less of a distraction to the enginemen.

Mark Huish provides us with a good example of an early professional manager. In his youth he served in the army of the East India Company—hence the title of Captain. On his return from India in 1837 he was appointed Secretary to the Glasgow, Paisley & Greenock Railway and in 1841 became Secretary and General Manager of the Grand Junction. He rapidly emerged as a new type of manager, advising the Board on policy, engaging in labour relations and projecting the public image of the Company. With the formation of the LNWR in 1845 he

became General Manager of the new Company. His time is usually associated with his ruthless furtherance of the Euston Confederacy, which led to his downfall in 1858. But his period in charge also saw the initiation of systems of accounting and cost-control, while the pricing and pooling systems of the Confederacy provided a massive contribution to railway working. He was also concerned with the improvement of working conditions. Gourvish concludes: 'His activities were similar to those expected of to-day's top managers in large companies'.

At a later date, when the pattern of management was perhaps more set, we can look briefly at two railwaymen, whose influence was certainly negative as well as positive. Sir Edward Watkin was the son of a Manchester businessman. At 26 he became Secretary to the Trent Valley Company, a creature of the LNWR, which brought him under the influence of Huish. Later he held various posts in the LNW and in 1854, at the age of 35, he became General Manager of the Manchester, Sheffield & Lincolnshire and in 1864 Chairman, an office he held for thirty years. In 1864 he also joined the Board of the SER, becoming Chairman two years later. He was also Chairman of the Metropolitan from 1872 and a Director of the Channel Tunnel Company. After an illness he retired from all offices and died in 1901.

We can thus see the practical basis of his vision of through trains from Manchester to Paris and the conversion of the MS&L into the Great Central and the extension to join the Metropolitan, struggling to convert itself from an urban *Metro* to a main line. The GC's London Extension was to be the last British trunk line, the building of which has been so magnificently recorded in the photographs held in the Leicester Museum. But we railway historians, with benefit of hindsight, are now busy trying to convince our readers it should never have been built and that it really died of malnutrition and was not murdered by the British Transport Commission.

Watkin's thorn in the flesh was James Staats Forbes,[22] though since we have no definitive study of the two men, we have no real idea of how they became such deadly enemies. Forbes was an Aberdonian by birth, training on the GWR and becoming General Manager of the British-owned Dutch Rhenish Railway. Then in 1861 he became General Manager of the London, Chatham & Dover, and its Chairman in 1873.

For thirty years these two men steered the SER and the Chatham through a series of financial crises, using all their resources in vain efforts to crush the other and to delay the inevitable fusion of the two Companies. The immediate price was stagnation in services and over-capitalization, but the eventual outcome was a network of lines that would never have been permitted by rational planning, but which were there for Sir Herbert Walker to develop and adapt to the unforeseen expansion of suburbs and of industry in the inter-war years.

But Kent was not a big enough battle ground. Forbes used his suave charm and tact to turn War Office opinion against the Channel Tunnel, and successfully deprived this country of a fixed link with the Continent. Then too the District Railway, with the perverse urge of a football club to appoint a manager sacked by a rival, made Forbes Chairman, though they were bound in unholy wedlock to the Metropolitan, sealed by the ring of the Inner Circle. Again the result was stagnation in the sulphurous tunnels beneath London. It took the appointment of Yerkes in 1901 to drag the District into the new electric century.

Let us continue on a happier note with a reference to Sir Herbert Walker, who might have been described by W. S. Gilbert as a 'very model of a modern railway manager'. Trained on the LNWR, he eventually became Assistant to the General Manager. In 1912 he was appointed General Manager of the LSWR, being

described as one of the most capable of the younger railwaymen. One of his strong points was his interest in and phenomenal memory for rank-and-file railwaymen. His administrative gifts were prodigious and he was appointed Chairman of the Railway Executive during the 1914 war. He introduced electrification to the LSWR, and after 1923 he not only welded the disparate components of the new Southern into a corporate whole, but created 'Southern Electric', which had such a profound influence on the Society and economy of South East England. Of him the *Times* said: 'his great gift was that he knew what the public wanted.... and he had the vision and will to scrap old ideas and old ways to make these things possible'.

In the beginning there can be no history. But records can be kept and we have already mentioned professional railwaymen as recorders. Also Sir Francis Head in 1849 gave us a magnificent account of day to day working on the infant LNWR, while F. Whishaw left a record of the British system as it was in 1850.[23] But one of the first histories, as opposed to recordings, was by John Francis.[24]

In later years came Company histories. A pioneer work was F. S. Williams's *The Midland Railway* (1877), while outstanding in this *genre* was W. W. Tomlinson's *History of the North Eastern Railway* (1915). More recently came the work of H. G. Lewin, including his *Railway Mania and Its Aftermath* (1936). It is in this august group we must place Charles Clinker. Though he did not produce the major work he envisaged—he told me he hoped to complete *Clinker on Railways*—his influence on the art of railway history has been profound and cannot be measured solely by a list of publications.

He too was a professional railwayman of wide experience and many years standing. While in railway service he published a number of contributions to railway history under the pseudonym of 'Precursor', an echo of his early upbringing in Rugby in LNWR days. After the last war he turned to full-time study. Though he published a number of meticulously-researched papers on such subjects as the Leicester & Swannington[25] and the Hay Railway,[26] his principal contribution was the development of methodology and the wide spread of high standards of scholarship. At a time when the study of railway history was rapidly gaining in popularity and when virtually any manuscript on the subject could gain publication, Clinker's influence had its greatest effect.

In the first place he insisted that worth-while study entailed the use of primary sources and the reduction of uncritical dependence on secondary sources. Ironically, he would probably find his first memorial lecture not without sin in this respect. It is to be hoped however that it does not merit such an *exposé* as was given by Clinker in his R&CHS Presidential Address of 1958 of an alleged *Historical Geography of British Railways* published about 25 years ago and demonstrably neither history nor geography.[27]. Conversely he was extremely generous in his support and praise of those publications which measured up to his high standards.

He was also insistent on the need for field work in historical research, and an article by him entitled *The Wansford Mystery*[28] reveals his meticulous field work as an adjunct to his documentary reseach. He also taught the value of co-operative research.

He spread his ideas by engaging in extra-mural teaching during the 1950s.[29] This was at a time of expanding interest, and his beneficial influence was felt in the most effective way. His ideas were also incorporated into those of the R&CHS, which is perhaps his most fitting memorial.

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The Clinker Railway Collection at Brunel University

BY NICK CHILDS (LIBRARIAN OF BRUNEL UNIVERSITY)

Charles Clinker, the railway historian, who died in Cornwall on 5 April 1983, bequeathed to Brunel University Library approximately 8,000 railways books, journals, maps, and documents, forming what was probably the most important private collection on the subject in this country.

Mr C. R. Clinker, who was on the management staff of the Great Western Railway until 1945, served as a liaison officer between the railways and Southern Command during World War Two, playing a key role in organizing troop movements by train following the evacuation from Dunkirk.

After the War, convinced that valuable evidence about railway history was being destroyed, he devoted himself full-time to collecting this material and writing about it. He lectured for the extra-mural departments of Birmingham and Nottingham universities. He undertook the revision of MacDermot's classic *History of the Great Western Railway,* and he produced numerous books of which the best known is probably *Clinker's Register of Closed Passenger Stations and Goods Depots.* He was a founding member of the RCHS and a past president. His breadth of knowledge was awe-inspiring. He could tell you why the locomotives of the Bodmin & Wadebridge Railway were called *Camel, Elephant,* and *Bodmin.* He would recall the delicate situation which developed when a French Army Division, due to embark at Southampton during the War, arrived at Northampton and could not find the docks. He would explain the procedures for running large goods trains through the Severn Tunnel in the 1930s and what had to be done if fewer trucks came out than went in. Unimpressed by the myth of nineteenth-century efficiency, he could produce bills paid regularly to local farmers for teams of oxen to tow the trains in when locomotives broke down.

He had a seriousness of approach which has often been lacking in railway historians. He imposed on himself and expected of others very high standards of accuracy. The course of extra-mural lectures he undertook for the University of Birmingham in 1953 on Railway History was the first full-length course of its kind in this country. He found a complete absence of suitable textbooks and 'recommended reading'. There was no book dealing with either sources or methods of research peculiar to railway history. He therefore wrote one, his *Railway History Sources: a handlist of the principal sources of original material, with notes and guidance on its use.* He ran further extra-mural courses at Derby, Nottingham, Leamington, Coventry, and in other Midland towns. One of these was attended by a future Vice-Chancellor of Brunel University, who was then working for Rolls-Royce. A connection was thus established which became important in later years, when Charles Clinker was seeking a permanent home for his remarkable library.

He did not collect for the sake of collecting. He was interested in literature as evidence for the history of railways. Time-tables could tell him of the existence of a station at a given time, about running times and the volume of traffic. Maps, photographs, and diagrams were an essential part of the collection.

It includes *Mugby Junction* (1866) by Charles Dickens, Bradshaw's great maps of 1830 and 1839, 87 of the area maps published between 1869 and 1932 by Airey and the Railway Clearing House, as well as seven volumes of Junction Diagrams by the Railway Clearing House, the earliest from 1867, the most recent from 1928. There is the original contract for the construction of the Kington Railway, dated

1818, Brand's *History of Newcastle* (1789) with its early references to coal railways, an early engraving of a rail-truck with a flanged wheel in Desaguiler's *A Course of Experimental Philosophy* (1734).

Among the journals there are good runs of *Bradshaw's Railway Manual, Locomotive Magazine, Railway Gazette, Railway News,* and *Railway Magazine,* together with a set of the *Illustrated London News* with Charles Clinker's own index to the references it contains concerning railways.

Most of the photographs in the collection are deposited with Dr Richard Gulliver, of 6 Cornelian Avenue, Scarborough, N. Yorkshire, who provides a copying service. The few thousand photographs which remain are being transferred to acid free covers for preservation, while great care is being taken to transfer any notes about location at the same time.

Reflecting Charles Clinker's professional background and personal interests, the collection is more concerned with the management and running of railways than with railway and locomotive engineering. It is most concerned with GWR and its constituent companies, although it contains a great deal of material about other areas of railway history.

It is normal for library collections to contain books, maps, journals, photographs, and manuscripts, but leaving these aside, they contain little that is *real.* The 'Frog' listed in the catalogue is not a real frog, but a book about a frog. I am glad to say that the Clinker Collection includes two real chairs—one from the Bristol & Exeter Railway and one from the South Devon Railway—and a real guard's flag.

Charles Clinker left no catalogue. His was a working library, carefully arranged, so that he knew where everything was. Before moving the collection from Cornwall, Brunel University Library staff numbered the items so that the original arrangement could be preserved. The books are on the University Library shelves in the order they were in at Mr Clinker's home. We may change this arrangement later. For the moment we benefit from a logical order determined by someone who understood railways.

The books have been catalogued. Manuscript catalogue slips are already available for consultation by railway researchers who come to Brunel. The slips have not been typed and never will be. Within the next five years Brunel will introduce a computerized catalogue for all its catalogues. Within a much shorter time there will be a computerized catalogue for the Clinker Collection, providing access to the material by author, title, and keyword. We do not have Mr. Clinker's prodigious memory, but we do have technology to help us.

It is important that the collection should continue to grow. The University Library already buys serious new books on railway history as well as books on the history of technology generally. It maintains an up-to-date collection of government publications, so that railway historians should find much of the background material by author, title, and keyword. We do not have Mr Clinker's prodigious memory, but we do have technology to help us.

Brunel has a fine university library building designed by Sir Richard Sheppard. Part of it is to be converted to make a permanent home for the Clinker Collection. We cannot place this collection on open access because so many of the items in it are rare or fragile, but all serious researchers may consult the material in the reference area of the Library. Members of the RCHS are especially welcome. The nearest canal to Brunel University is the Grand Union Canal, at Cowley Lock. The nearest BR station is West Drayton, and the nearest LT station is Uxbridge. If you prefer to come by road or air, the M4 and M40 are close, while Heathrow Airport is only 6 miles away.

Railways and Detective Fiction: Fourth Report

BY P. L. SCOWCROFT

I hope the following observations, which supplement my earlier articles in the *Journal*,[1] will be of interest. Everett F. Bleiler's fairly recent *Treasury of Victorian Detective Stories* (Harvester Press, 1980) reprints some early material. In Andrew Forrester Jnr's *Arrested on Suspicion*, a short story from *Revelations of a Private Detective* (Ward, Lock, 1863), a map in the South Eastern Railway Guide gives the narrator the clues to enable him to track down a jewel thief at Margate and thus clear his wrongly-accused sister. Bleiler's anthology includes two other tales of railway interest. Mrs Henry Wood's *Going Through the Tunnel* (from *Johnny Ludlow, 1st Series*, first published 1874) tells of the theft of a gentleman's wallet in a first-class compartment. It has one or two period touches like its mentions of 'railway time' and of carriage oil lamps, but little detection worth the name and we should not be surprised that the (admittedly ingenious) thieves get away with it. Arthur Conan Doyle's *The Recollections of Captain Wilkie*, from *Chambers Journal 1895*, has a reformed burglar/pickpocket reminiscing to the story's narrator, a doctor – Doyle himself, perhaps? – in a 2nd Class compartment of a London, Chatham & Dover Railway boat train. He even gives practical demonstrations, using the doctor as 'guinea pig', that his former skills have not deserted him! The words in the first paragraph, 'Three is company and two is none upon the railway' recall the real-life Briggs murder on the North London Railway in the 1860s and subsequent atrocities in non-corridor carriages.

One of the most famous Victorian detective thrillers, Wilkie Collins' *The Woman in White* (1860), contains several mentions of railways and many train journeys. The story is set in 1849–51, the same period as Collins' *The Moonstone*. Many of the journeys begin at Euston, going under its old style of 'Euston Square'. There is one reference[2] to the decline of the coaching inns brought about by the rise of the railways and particularly the new station hotels which 'had gradually absorbed the business', a factor which hampers the detective Walter Hartright in his enquiries. Limmeridge House, where much of the action takes place, is obviously close to the Maryport & Carlisle line which was even then in existence.

One never ceases to marvel at the railway interest of Agatha Christie's detective fiction. She is often accused of taking little trouble with the backgrounds of her stories, but we must make an exception as far as railways are concerned. Two of the short stories in *Parker Pyne Investigates* (Collins, 1934) are set in continental trains. Pyne is, unlike Poirot or Miss Marple, one of Christie's more occasional detectives; not that he is a detective, exactly – just one who tries to make unhappy people happy. The adventures in a Geneva–Paris express in *The Case of the City Clerk* are bogus, for the benefit of the clerk who wants a little adventure, which Parker Pyne is determined he shall have. *Have You Got Everything You Want?* is set, like Christie's famous novel of that same year, on the Orient Express, but eastbound this time. A rich American woman's jewels are taken after a ruse has got her away from her compartment. Pyne finds a suspicious-looking woman there, but she (and the compartment) are searched unsuccessfully. She cannot have thrown the jewels out of the window to a confederate as the train was at the material time crossing the bridge linking Venice to the mainland. Pyne solves the problem and restores the jewels.

Christie's railway predilections appear also in the short story collection *The Labours of Hercules* (Collins, 1947). In *The Girdle of Hippolyta*, a schoolgirl,

en route to finishing school with eighteen other girls, disappears from a Calais–Paris train soon after the Amiens stop. The train has not subsequently stopped, though the missing girl's hat and shoes are found at the lineside – she is found, drugged, near Amiens shortly afterwards. How was she taken off the train? A Swiss funicular figures in *The Erymanthian Boar* and the London Underground, quite graphically described for Christie, in *The Capture of Cerberus* from the same collection. In Christie's novel *At Bertram's Hotel* (Collins, 1965), Chapter 8 is almost an 'action replay' of the real Great Train Robbery of two years before, with the Irish Mail the train violated this time. Then, at the outset of her early novel *The Secret Adversary* (Bodley Head, 1921) mention of Dover Street tube station reminds us that this was the name of Green Park (Piccadilly Line) before alterations in 1933. That novel featured as detectives Tommy and Tuppence Beresford who re-appeared some years later in *Partners in Crime* (Collins, 1929), which was basically a series of take-offs of other detective writers, among whom is Freeman Wills Crofts, the 'railway alibi' purveyor. In Chapter XIX, entitled 'The Unbreakable Alibi', how can a girl dine in Torquay, having reached there by restaurant-car express, and then be seen dining at the Savoy scarcely two hours later? The answer, I am afraid, is a cheat – but the story is after all a parody. Finally, the short story *The Girl in the Train*, a charming piece of nonsense included in *The Listerdale Mystery* (Collins, 1934), makes delightful use of the name Rowland's Castle, a station on the former London & South Western's Portsmouth line. All these latter three Christie tales have been adapted for television in recent years.

In earlier articles I expressed surprise that the locked-room-puzzle king John Dickson Carr had never set a detective mystery in a railway carriage. I did him an injustice, for in 1928 he wrote the short story *The Murder in Number Four*, published in book form for the first time in *The Door to Doom* (Hamish Hamilton, 1981). A man, alone in a compartment, bolted from the inside, of the fictitious 'Blue Arrow' express (Dieppe–Paris) is strangled. An international diamond smuggler, he has been robbed of a large sum in notes. Two witnesses at either end of the corridor swear that no-one approached the compartment; the compartment's outside window is only slightly open at the top. Why has the murdered man put on a false beard after being seen by the customs at Dieppe and by the ticket collector? Monsieur Bencolin, Prefect of the Paris Police and Carr's earliest series detective, elucidates.

Finally, a nice comment from the late J. R. L. Anderson's *Death in a High Latitude* (Gollanez, 1981). Early in the book the narrator says:

> 'Breakfast standards are, alas, declining, but there is one honourable exception in the breakfasts you can still get in restaurant cars on British Rail . . . . on my early train to Cambridge . . . . I thoroughly enjoyed my meal'.

I, too, have enjoyed BR breakfasts.

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Books to Come

BY HARRY PAAR

The London Underground Railway Society has the excellent idea of Retrospective Reviews – reviews of books of merit from the deep past. Here, with some trepidation, the writer proposes to venture into the future and to suggest some titles yet to appear, trying to take a wide view of some subjects which appear to warrant informed treatment.

The view has been expressed that most of the history of British canals and railways has been set down, and indeed this was held to be one reason for enlarging the activities of the RCHS to include road transport, coastal shipping, and other aspects of transport history. This action was certainly a sound one, but the particular premise above mentioned was then and still is open to question.

It is true that one would be hard put to it to find a line of either canal or railway the history of which has not been recorded in some fashion, somewhere. But whether the record is a good or even an adequate one must be the subject of critical appraisal, if only for the following reason. The history of a transport medium reaches down into the grass-roots realms of local and social history, and reaches up through areas of geographical, industrial, and technical history into those of economic, regional, and national history. Unless all of these aspects are dealt with, insofar as the subject is involved, the record must be considered incomplete, however excellent in quality.

If one considers a specific subject, and seeks a reliable and detailed account, it may soon be found that it does not exist. Considering as an example the Hayfield branch of the MS&LR in north east Cheshire, the essential dates are in George Dow's *Great Central Railway*, but beyond this the little line appears to have been worked from 1868 until early in 1970, when it passed into oblivion, with little notice.

During the several years in which this matter has been in my mind, accounts of some subjects originally envisaged for inclusion have reached the press, and where these are clearly based upon sound and original research, and are of a definitive nature, they have been excluded. This is not to say that nothing can be added to such subjects, but that further contributions are likely to take the form of notes or articles rather than further books – particularly in mind are the Manchester & Milford Railway, the Wisbech & Upwell Tramway, and the Earl of Carlisle's Railway.

A Short Bibliography of British Canal History

Whilst not aiming at the comprehensive treatment George Ottley has given to railway bibliography, this work draws together in handy reference form particulars of the post-war works, the major works prior to this period, and possibly the more significant articles in journals, etc. River navigations are included and a list of relevant Acts of Parliament enhances the reference value.

An Atlas of British Coastal Shipping Places

Our coast line is presented in sections and the many harbours, ports, and other shipping places are located. An alphabetical listing indicates if the place was of a public or private nature, the nature of the facilities, principal cargoes handled, and references to any published sources. Inland ports to which coastal shipping penetrated, such as Wisbech, are included.

British Road History, a Pilot Bibliography
The printed sources for our road history are probably so numerous that no attempt is made here at a comprehensive treatment, but the work is firmly based upon Dorothy Ballen's 1914 bibliography, supplemented from the references to more recent works in the records of the Society's Road History Group and elsewhere.

The British Railway Overseas
An account of the world-wide export of the railway – its civil engineering, track, locomotives, rolling stock, ancillary equipment, and even staff. The emphasis is placed on the Victorian period, rather than on the later years when rolling stock was the main export, but attention is given to the successes in recent years of BREL.

Contractors' Jobs: a History of Railway Promotion by Contractors
Traces the development of contractors' involvement in the promotion of railway schemes, with an account of the financial collapse of 1866 and its effect upon existing and proposed lines.

The North London Railway in Action
An excellent brief history, a detailed account of the locomotives and a good pictorial account of this once-important line already exist. Here we have an expansion of the essential history into the social and economic fields, together with details of track-work, signalling, train services, stations, and the incidents of life on the line in good times and bad.

The Solway Junction Railway
A general article and extended references in more general works have hitherto formed the slim record of this interesting line. Built with a mainly industrial purpose and involving a lengthy viaduct across the sometimes violent Solway estuary, the line was initially worked with its own motive power, but later became a part of the Caledonian Railway system.

The Bodmin & Wadebridge Railway
Several accounts of this most interesting early Cornish railway have been provided over the years, but they are long out of print; this work incorporates the existing knowledge, supplemented by further research, so that it may be considered definitive.

The Maryport & Carlisle Railway
The subject of a fine small book in 1947, the M&C was an independently-worked line some 40 miles long, having several features of interest in its traffic, its locomotives, and its position relative to other companies. Since 1947 the company's records have become accessible, and Public Record Office at Kew has the run of minutes for the proprietors' and directors' meetings from 1835 until 1923, the notebook of John Addison (general manager 1858–1868), accidents book 1861–1912, and many accounts, share information, and other records.

The Colne Valley & Halstead Railway
A pleasant short account of this East Anglian line, which had an independent existence of 63 years, appeared in 1951; based largely upon local material, it has long since become a rare book. A pictorial survey of recent issue reproduces mainly post-war photographs. For a full historical account there exist copious

company records in the PRO at Kew, some useful material in Newham (Stratford) Reference Library, and several references in Eastern Counties and Great Eastern Railway records.

The London & Blackwall Railway

This line was in some ways the counterpart north of the Thames of the London & Greenwich Railway south of it, although the purposes of each were quite different, and they differed as to gauge and motive power. While the southern line is part of a main rail artery, half of the northern one is now trackless. The history of the L&G has been finely chronicled, but that of the L&B, equally interesting, has only been dealt with in summary fashion.

The Geography of Minor Railway Stations

There was quite a surprising variety in the physical arrangements at the lesser stations, both concerning the buildings themselves – their materials, design and scope – and the trackwork. Here many of the varieties from a wide number of railways at differing periods of history would be considered, using the 25" OS plans, official plans, old photographs, and other sources and concentrating on the locational factors for the stations, the degreee of success which attended their being, the track arrangements, and the facilities provided.

The Llanelly Railway & Dock Company

A good short account of this interesting and quite ancient railway is available (MacDermot), its locomotives have been ably chronicled, and there are other references. Nevertheless, much more needs to be said of a system which once reached 72 track miles, had two rope-worked inclines, and was early in the field of the interlocking of facing points; this work would include good, detailed maps of the whole line, showing all junctions with other lines, and the industrial sites served.

The Edenham & Little Bytham Railway

This privately constructed and operated minor line perished early, in 1871/72, and it might be held sufficient if one has access to files of the *Locomotive Magazine* and the RCHS *Journal* to obtain the historical facts. However, no one of these sources has the full story, and there is more to be found out, via the Board of Trade Inspectors' reports and GWR records, which reveal the involvement of Daniel Gooch in the provision of the line's locomotives. It might be a useful device to link an account of the E&LB with one of the Belvoir Castle Railway, not a great distance away, since both were privately built by noble lords, though the latter was a horse-worked line and of much earlier date.

The Eastern Counties Railway

The Cinderella of Railways, as the ECS was once dubbed, has certainly lived up to that name insofar as its history is concerned. Apart from general accounts of the region, several excellent monographs on specific lines, and a few notable articles in periodicals, there is not much on record. Yet the concern had a most interesting, if impecunious, history, and ample materials are preserved in the PRO at Kew and elsewhere. The locomotive history was dealt with in detail many years ago in the *Locomotive Magazine,* but there were many subsequent amendments through the years and a connected story of this aspect has never appeared. The company, in spite of its often parlous financial position, was by no means backward in the field of locomotive development, and time spent in examining its details would be time well spent.

The Bishop's Castle Railway

The publication of a further book on a subject about which a competent work already exists can be justified if the existing work is out of print or if there are major additions to be made to it. This book would pay attention to what may loosely be termed the pre-history of the BCR – the various schemes which preceded it; also it would make use of the considerable amount of research material which is now available in the S. H. P. Higgins collection, in Board of Trade Inspectors' reports, and in a report by a Mr Fraser made in 1875 and now in the PRO at Kew.

The Development of Railway Track Layout

This work would provide a firm basis for an understanding of the subject by studying and analysing a wide selection of nineteenth century sources – station and junction layouts, prints and early photographs, supplemented by the diagrams appended to accident reports. Comments would be offered on such subjects as the use of turn tables in early layouts, the extent of the antipathy towards facing points in running lines, the layout of sidings, and the use of single as against double running lines in the early railway period.

The Working of single-line Railways – a Brief History

This will not be a detailed technical treatise, but a distillation of the simple, practical essence of the different systems for controlling traffic on single line railways. A tabulation of the principal single-track lines, excluding the minor branches, will be a useful appendix.

Unfinished Railways

At one time, before modern farming and earth-moving machinery made it economical to plough them out, the countryside bore many marks of railways upon which construction was begun but never completed. These lines are of interest as historical facts and curiosities and because they affected for a short time the districts concerned. The research involved would include the collecting of the many reliable references to such lines in books and articles, the locating of further examples from the 1" OS maps of earlier periods, and the tracing of the historical facts which led to their being. By the use of the late Mr Wilkins' work, and of the Index to Local & Personal Acts, a list of those companies which were authorised to construct railway lines, but which never did so, is also established.

Europe to London by River and Railway

A definitive study of the various schemes for improving communications from the Continent to the Metropolis, from the Blackwall Railway onwards, involving Thames Haven, Port Victoria, Sheerness Pier, and other places; some record is created of the vessels used by the railway companies and others in this traffic.

The writer realises that the above selection is heavily weighted on the railway side, which is because of his lack of familiarity with the literature of the other transport modes. However, within such limitations it is hoped that the existence of many subjects worthy of detailed investigation has been demonstrated, albeit in a very limited form, and almost without mentioning whole districts where once independently-operated railways flourished, such as the North-East, the North-West and South Wales.

Book Reviews

GEORGE PARKER BIDDER—THE CALCULATING BOY by E. F. Clark, with an appreciation of his calculating ability by Joyce Linfoot. XXVI + 518 pp., with 91 illustrations. Knotting Services Limited, Bedford, 1983.
ISBN 0 9508543 0 1. £21.00.

This massive hardback biography of a distinguished Victorian civil engineer and entrepreneur has been thoroughly researched from private letters and other papers by a mechanical engineer who is also the great-great-grandson of George Bidder. Mrs Linfoot, a mathematician, also has a connection with Bidder through her college in Cambridge.

The work is remarkable in that more than a third of its pages are given to extensive notes, to useful brief biographies of the principal characters mentioned in the text, to a bibliography, and to a fully-detailed index. The notes are of interest in themselves for, in addition to giving the formal references, they allow the authors to expand and digress on worthwhile topics without confusing the argument of the main text.

The main text, concisely written, nevertheless reads easily. It relates in twelve chapters Bidder's activities, in parts almost from day to day. Repetition of the technical details of his engineering works, when details can be found elsewhere, is scrupulously avoided, but there are also ten other chapters in which more information about his major works, notably in railway construction, and his activities in maritime engineering, in naval architecture, in public health, in the gas industry, and with the electric telegraph are described fully.

The three chapters by Mrs Linfoot describe Bidder's extraordinary ability in mental arithmetic. To observers he may have appeared to be a child prodigy; indeed his stonemason father arranged public displays of this skill which attracted the attention of men willing to advance him in life. However he was no genius; his strength lay in tackling each calculation in a series of logical steps, like a computer program, so that at each stage he had to remember only a running total. He could calculate a seven-figure logarithm in about two minutes. Mental arithmetic stood him in good stead in later life when he had to give evidence before Parliamentary Committees and to attend Board meetings.

After attending Edinburgh University, Bidder entered civil engineering as a land surveyor and gradually obtained professional engineering experience of railway and dock construction. After nine years under H. R. Palmer and James Walker, in 1834 he became an assistant to Robert Stephenson, working on the London & Birmingham Railway and on the alternative route for the Brighton line. With Stephenson, a fellow student at Edinburgh, he established a lifelong friendship, later becoming his partner as a consulting engineer, and ultimately following Stephenson and Locke as President of the Institution of Civil Engineers.

Bidder, as a civil engineer, never had the flair of Brunel, Robert Stephenson or of the Stevenson family; he would not have designed or built a subaqueous tunnel, a box-girder bridge, or an offshore lighthouse. His strength lay in his methodical approach to engineering, in hard application, and in his determination to complete the works on which he was engaged to time and within the budget. These were particularly valuable qualities in railway construction in the mid-nineteenth century, as indeed they are to-day, and it led to him being consulted on many railway projects in this country, in Europe and in India (Pakistan). It led also to directorships in other fields—the Netherlands Land Enclosure Company, the Danish Gas Company, collieries in North Staffordshire, and the Electric Telegraph Company.

Bidder amassed a considerable fortune in his lifetime. This enabled him to promote several of these ancillary ventures, to finance research into steam trawlers, to found a bursary in his benefactor's name at Edinburgh University, and to enjoy a happy married life with his wife and large family, also with his old friends. Such leisure as he left himself seems to have been spent with his family and with Robert Stephenson in offshore cruising in their yachts.

Mr Clark—and Mrs Linfoot—deserve much credit for bringing to the attention of the general reader and of the student of engineering history the life and achievements of a great, hitherto relatively unrecognised, Victorian engineer. This book will remain a definitive work. At £21.00 it is costly, but it is outstandingly informative and enjoyable to read. I. P. HAIGH

THE RAILWAY BUILDERS: LIVES & WORKS OF THE VICTORIAN RAILWAY CONTRACTORS by R. S. Joby. 200 pp. 8 pp. illus. David & Charles, Newton Abbot 1983. ISBN 0 7153 79593. £9.50.

In the present century little has been written about the railway contractors, apart from Charles Williams' biography of Brassey—which, oddly, is not included in the bibliography although it includes material from sources not available to Helps when he wrote his 'Life & Labours' in 1872—so this book is welcome for covering a neglected subject.

The almost equal neglect of the lives of the Victorian railway engineers since the time of Samuel Smiles has been tackled by writers in recent years, perhaps helping to foster the impression that they alone were responsible for the soundness and solidity of our railway structures, to the extent that many are withstanding present day traffic stresses far beyond anything their designers envisaged. Yet the contractors who followed the engineers' specifications and drawings were equally responsible for the soundness of the works they created. As Dr Joby remarks in his introduction, 'the best railway contractors were also the master builders of their age', and their works stand today to prove it. Even those now disused survive with little or no maintenance, and many prove difficult to demolish.

The book is roughly chronological starting with the direct predecessors of the railway contractors, the canal and dock men, and proceeding through the early days of small piecemeal contracts to the growth of the great contracting dynasties working at home and overseas—Brassey, the Cubitts, Peto, Betts and their contemporaries. Attention is given to working conditions and methods of employment, including the notorious tommy shops which eventually gave rise to legislation which today bedevils the efforts of employers and trades unions to encourage the payment of wages by credit transfer instead of cash, thereby stemming the alarming growth of wages 'snatches'. It is odd how breaking the evil of one century has directly promoted one of the next.

One suspects that Brassey perhaps was not quite the model employer he has been portrayed; Peto and Dargan stand out more in their efforts to improve their men's welfare. Lesser known contractors receive their share of treatment, including David Davies and Thomas Savin in Wales. Dargan unusually confined most of his work to his native Ireland. A happier title than 'Celtic Fringe' might have been chosen for the chapter on their activities.

Later chapters cover the work of those who followed the pioneeers, such as the Firbanks, Lucas & Aird, Pearson, and Cowdray and the specialists who undertook the great late-Victorian bridge contracts and tunnelling jobs. In a chapter entitled 'The Minor League' we read of some of the typical smaller local men who built

minor lines, often under-financed, like the East Norfolk and Southwold Railways. As a result many were built cheaply, so that in our own time their defects have contributed to their early demise.

The two final chapters are quite short and really add very little to the book. One very briefly refers to contractors' locomotives fleets, a subject dealt with comprehensively elsewhere, and the other, in the form of an epilogue and even shorter, touches on contracting in recent times by the well known civil engineering groups. As the author has found plenty to say about Victorian contractors it might have been better to have left it at that and let future generations deal fully with the works of today.

One small point—the notes refer to an anonymous author of *Stokers & Pokers* instead of Sir Francis Head, although admittedly his name does not appear on the title page of the 1849 edition. GORDON BIDDLE

THE RAILWAY NAVVY by David Brooke. 216 pp. 11 half-tone plates, 17 drawings, 1 map. David & Charles, Newton Abbot. ISBN 0 7153 8449 X. £9.95.

The traditional portrayal of the railway navvies can be summed up in the keywords Shanties, Drink, Irish, Truck, Immorality, Outcasts, Missionaries, Violence. The author examines the navvy phenomenon in a scholarly yet very readable account. His preface suggests that the traditional picture 'may be a gross caricature', and points to the dearth of unbiased contemporary evidence—newspapers reported mainly misdeeds, the missionaries were mainly concerned with the navvies' failure to subscribe to middle-class morality. He does not attempt to destroy the widely accepted images entirely, but seeks overall objective assessments rather than lurid but not necessarily typical examples. Chapters are devoted to the navvies' origins both geographical and occupational, where and how they lived, their skills, their employers, their relations with the local population, the Balaklava Railway (their finest hour), the effects of missionary work and finally the price paid by the navvies for our railway system.

Great use has been made of census returns, involving the extraction and analysis of data concerning nearly 40,000 workers employed on 79 railways, and of over 26,000 women and children. This material is supported by carefully-sourced information from contemporary reports and accounts. The findings are often surprising, for example the navvies usually lived in permanent buildings rather than makeshift huts and often as lodgers, which suggests that their representation as social outcasts may have been overdone. On the navvies as fighting men, in spite of their strength and numbers 'it is difficult not to conclude that the navvy was an irresolute and unheroic fighter.....'

Two minor puzzles are presented. The sub-title of the book is 'That Despicable Race of Men' but the quotation does not seem to be given a source or context in the book. The jacket photograph, by Newton of labourers on an embankment, is also reproduced within, but as a mirror image—it seems likely that the jacket version is the reversal, to suit the layout.

The author concludes his preface: 'the railway navvy remains, alas, an obscure and elusive figure, and the writer would welcome any information, even of an anecdotal nature, from readers on this subject'. Authors of major works do not always write thus, and I hope that this invitation will be taken up so that Mr Brooke may be able to provide further specialised studies, perhaps as articles, on the many aspects of his subject, here so ably presented. H. W. PAAR

NAVVYMAN by Dick Sullivan. 262 pp., 42 plates, paperback and hardback editions. Coracle Books, 1983. ISBN 0906280 109 & 0 906280 05 2. 1 Prince of Wales Passage, Hampstead Rd. London NW1. No prices quoted.

Navvyman provides a fascinating glimpse into the life and times of men who moved incalculable quantities of earth ('muck'), mostly by hand, to transform the landscape of Britain. For nearly two centuries we share their experiences, first on canals, then in railway and dock construction, with large-scale public works from the latter part of the 19th century.

The Sullivans were of navvying stock and the text is interspersed with colourful anecdotes and commentary by Dick Sullivan's father on most aspects of life as a navvy. A few myths are dispelled—Irishmen were evidently a minority, for example—but the impression gleaned from occasional references in Company Minute Books and other 'official' records is confirmed. Navvies worked hard, often in appalling conditions, lived violently, and often died young. 'Rough times, though. A rough affair.'

Navvies were clearly 'working class', but the nature of their work and attitudes towards their fellow beings made them almost a race apart; 'the perpetual outsiders'. Dick Sullivan goes to some lengths to show that the organised working-class movement of industrial regions to some extent included navvies under its wing, but this appears to have had little effect on their working conditions. Navvying declined in the inter-war years, owing to the recession, general unemployment and cuts in public expenditure, and the Second World War evidently sounded the death knell of the navvyman. Nevertheless, no corner of the British Isles is without some monument to this extinct species. Through the pages of this book one is given a new slant on how many of these monuments came into being.

Navvyman is very thoroughly researched, with copious references to source material and a general bibliography. The author's approach to the subject is somewhat unconventional; apparently unrelated topics follow in quick succession, with little ordering, chronological or otherwise. Nevertheless, this may be a deliberate reflection of the itinerant life of the navvy—a railway today, tomorrow a dam, then 'on the tramp' again.

Anyone with the slightest interest in the development of transport systems or civil engineering cannot help but be fascinated by this refreshingly different approach to industrial history. After reading the book a visit to the Great Central, for example, or the Manchester Ship Canal, or the Chew Valley works, will never be the same again. J. IAN LANGFORD

STEPHENSONS' BRITAIN by Derrick Beckett. 239 pp. 86 plates, 60 figs. David & Charles, Newton Abbot, 1984. ISBN 0 7513 8269 1. £9.95.

Samuel Smiles was obsessed with the personalities of his subjects—and this was made worse by his excessive eulogy. L. T. C. Rolt went a long way to correct the bias of Smiles. But now this book tells us about what really matters—what they did rather than what they were. The personality may interest and even amuse, but the serious historian needs to know something of the technological contributions made by the subject and the author puts this over very well. In the main pages of the book the technicalities are easy enough for the layman to understand and those wishing to delve further are catered for in the appendices. There is also a useful gazetteer.

There is far more on the work of Robert than of his father, George, and some readers may feel that bridges get a disproportionate amount of coverage. But they are a vital part of engineering development at that time and well warrant the space allotted. The author, himself an engineer, explains, perhaps for the first time in a book for general readership, why the bridge over the Dee collapsed and the High Level Bridge at Newcastle still carries trains and road traffic far in excess of the weight for which it was designed—some earlier writers having loosely suggested that all bridges constructed partly of wrought and partly of cast iron in that period were suspect because the relationship of their characteristics was not then understood.

No book seems error-free nowadays. Abraham Darby I died 5 May 1717 and not 1711—and there are one or two others. But this is a good book, beautifully illustrated and well printed. I was a little irritated by the publishers' paranoid insistence that the many dimensions each had to have its metric equivalent adjoining in brackets. A separate conversion table would have made reading easier if felt necessary, but mercifully 4 ft 8½ ins went unscathed! JOHN DENTON.

THE SEVERN & WYE RAILWAY (VOLUME ONE) by Ian Pope, Bob How & Paul Karau 158 pp. (Hardback) Numerous photo and line illustrations, maps etc. Wild Swan Publications Ltd, Upper Bucklebury, Berks 1983. ISBN 0 906867 17 7. £10.95

This is the first of a series of books intended to place the history of the railways of the Forest of Dean in the context of the industrial history of the Forest. Let it be said at once that it succeeds admirably in this objective, bearing all the hallmarks of painstaking research by the authors and the whole brought together by a publisher who really cares.

Only about a quarter of the book is pure narrative and the remainder comprises maps and plans, line drawings and a unique assembly of photographs, all beautifully reproduced. Many of the captions to the photographs embody quite substantial additions to the narrative, while others present analyses of what is illustrated, including points which the reader might so easily fail to appreciate. About half the narrative is devoted to a general history of the Severn & Wye Company and the remainder to an account of the line from Lydney Junction to Parkend, some four miles only, plus sidings and short branches.

It is in this latter account that the book achieves so much, tracing the development of the mines and other industries which were served by the railway, the operation and signalling of the line, the engine sheds at Lydney, the passenger stations and some of the people associated with the railway and its customers.

The second volume in the series is already in preparation, covering the railway and associated industries beyond Parkend and on to Cinderford. It is a remarkable act of faith for a relative newcomer to this field of publishing to embark on such a project. Hopefully he will succeed and so provide all those who love the Forest with a set of books which they may cherish for years to come. JOHN NORRIS

THE MEN WHO BUILT RAILWAYS by F. R. Conder. 204 pages 25 illustrations. Thomas Telford Ltd. 1983. ISBN 07277 0183 5. £9.95.

This is a reprint of *Personal Recollections of English Engineers* published anonymously in 1868, but acknowledged by F. R. Conder to be his work in 1874. This edition has been annotated by Professor Jack Simmons with most informative comments relating Conder's reminiscences to other sources and giving factual background on the other people to whom Conder refers.

The book comprises reminiscences and trenchant comment made by a civil engineer who worked on the staff of some of the best known names of early railway building. Brunel, Robert Stephenson, Locke, Rastrick and others pass across the pages and are brought to life by a combination of personal observations and technical descriptions of their activities. Captain Moorsom, engineer of the Birmingham & Gloucester Railway comes in for heavy criticism. His ability as a manager is unfavourably compared with that of his more famous contemporaries.

The building of the railway through the Strood Tunnel, the circumstances of the collapse of Stephenson's Dee Bridge and Brunel's approach to his railway work in Pembrokeshire are just some of the episodes treated in detail. The illustrations are added for this edition and are mostly well known contemporary prints. A fascinating book which this reprint will now make more widely available and which Jack Simmons' notes will make newly interesting and important to the researcher.

MARTIN BARNES

THE KETTERING—HUNTINGDON LINE by John Rhodes. Card Covers. 55 pp., 23 half-tone illustrations, 2 maps and 9 diagrams. Oakwood Press, Trowbridge. 1984. ISBN 0 85361 301 X. £2.70.

This line was one of the cross-country branches of the Midland, opened to passengers in 1866, which led an uneventful and unnoticed existence for some 90 years until its closure in 1959. With attention and glamour directed to the main lines, little was written about the route, apart from incidental references in Roger Lloyd's *The Fascination of Railways* and Norman Marlow's *Footplate and Signal Cabin.* Now it is the subject of a *Locomotion Paper* in the Oakwood Press series. Chapters describe its Construction and Opening, General Operation, Closure and the Route, whilst appendices cover locomotives, specimen timetables, station opening and closing dates and an 1870 handbill.

Yet reading the book left me with the feeling that I did not know the line very well and that I had read a specific history drawn from the general, rather than one which had been prepared from primary sources. This may reflect the imbalance of the book where nearly half the narrative is concerned with construction, opening and closure or almost half the photographs are either off the line or at one of its two extremities. Whatever it was, I did not have a clear idea of the line in operation. How many passenger trains a day were there? Did this vary much over the life of the line? Did ironstone predominate in the goods traffic? Which ironstone mines had their own railway connections? And what was the pattern of their operation? From this one can see that, although this book covers the basics of the line's life, a good deal is yet to be discovered. In the words of the school report 'Room for Improvement'. R. DAVIES

THE SCENIC SETTLE & CARLISLE RAILWAY by Donald Binns. 64 pp., 240 x 180 mm with 100 illustrations. Wyvern Publications, 50, Long Meadow, Skipton, 1982. ISBN 0 907941 02 8. £4.25.

So much has been written about the Settle & Carlisle line at so many levels that yet another publication on the subject tempts one to ask whether we have reached saturation point. Yet here is an excellent little book presenting a really exceptional selection of photographs, many of which have never been published previously even though some show the Midland Railway in all its magnificence.

The book appears at a time when the line can scarcely be expected to last much longer and the concise account of its early years, its growth and decline bring the story almost to the present day. The author is to be congratulated on stating accurately the height of Ribblehead viaduct, 104 ft, instead of perpetuating what was evidently a printer's error of a century ago, which showed it to be 35 ft higher than Smardale, the highest of all those on the line. One wishes he could have given us chapter and verse for the dubious story about the locomotive revolving on the Hawes Junction turntable in a high wind, which seems to have been unknown fifty years ago. Surely the stockade built around it was intended to prevent drifting snow from filling the pit in which this exposed turntable was balanced?

G. O. HOLT

A REGIONAL HISTORY OF THE RAILWAYS OF GREAT BRITAIN
Volume 14 THE LAKE COUNTIES by David Joy 270 pp. 45 photo illus. 21 illus. in text, folding map, David & Charles, Newton Abbot.
ISBN 0 946537 02 X. £10.95.

This, the penultimate volume in the series, maintains the high standards set by David Thomas when he launched the Regional Histories with his volume on the West Country in 1960. The area covered extends from Settle Junction and Lancaster in the south to Carlisle and Gretna in the north. Thus it includes the Settle & Carlisle line currently faced with closure, the Lancaster & Carlisle, the whole of the lines which made up the Furness system, the Maryport & Carlisle and the lesser lines in west Cumberland.

David Joy is an acknowledged expert on the railways of this area and he has come up trumps with this volume. As is one of the main themes behind this series, he pays considerable attention to the economic background of the districts involved. In this area perhaps the most striking feature was the vast development of Barrow, almost entirely brought about by the Furness Railway. Mr Joy describes this development from its early stages, how the FR kept pouring money into the project even when its own finances were none too healthy, how it never quite reached the status envisaged for it as a rival to the port of Liverpool, and how it became known as the 'English Chicago' by way of its rapid growth, industrial boom, and general lawlessness.

The vicissitudes of the West Cumberland orefield are dealt with, including the rise of the ports of Silloth, Maryport, Workington, and Whitehaven. Other features which were associated with railway activity in the area include the development of the resorts of Seascale and Grange, and the opposition (inspired by the poet Wordsworth) to the railway 'invasion' of the Lake District.

Maps in the text include details of the intricate layouts at Carnforth, Carlisle, Barrow, and in West Cumberland. The folding map at the end thus shows only the principal lines in these areas. In view of the density of the lines concerned this eliminates much fine detail which in view of the size of the map is no bad thing. There is a comprehensive bibliography, but a chronology of opening dates, etc. is lacking.

Mr Joy does not make the position quite clear as regards the gauge of the original Ravenglass & Eskdale Railway. As he states on p. 219 the Act of Incorporation specified a gauge of 2'9" but the line was actually built to a gauge of 3'. The reference to the seasonal service on the Lakeside branch in latter years reminds your reviewer of an occasion in the summer of 1948 when he travelled from Bowness to Ulverston, complete with two suitcases. Alighting from the boat at Lakeside pier he found that the train service consisted of Ulverston—Lakeside trains in the morning and Lakeside—Ulverston trains in the evening, the balancing workings in each case being ECS. He had to walk to Newby Bridge carrying the cases in order to join a bus!

This is a book which is highly recommended to anyone interested in the area, either its railways or its industries. One looks forward to the next and final volume on Northern Scotland. If it is as good as this one it will be a fitting climax to a great series. NEIL PITTS

THE '4 SUB' STORY by Bryan Rayner & David Brown 108 pp. 145 mm × 207 mm 53 photo illus. Limp covers. Southern Electric Group, London, 1983. ISBN 0 906988 09 8. £2.95.

Students of railway rolling stock will be familiar indeed with the 4 Sub stock of the Southern — Railway and subsequently Region. First introduced in 1941 with the last of the 227 units not withdrawn until 1983, it was for over 30 years among the commonest of the Southern's passenger stock.

This booklet tells its story quietly and efficiently and seems to have left out nothing of importance. Appendices to the text, eight in number, give all the detailed information about numbering, switching of vehicles, depot allocations and disposals. An excellent book, right up to date and good value for money.

P. R. DAVIS

19th CENTURY RAILWAY DRAWINGS in 4 mm Scale by Alan Prior. 96 pp. 215 × 300 mm, 90 Drawings with introduction and index. David & Charles, Newton Abbot 1983. ISBN 0 7153 8006 0. £10.

A picture, they say, is worth a thousand words. If that be so, then to the student of engineering history a general arrangement drawing is surely worth a thousand words *and* a score of photographs. Nothing else can so effectively unravel a complex subject like a railway locomotive, and even if Prior's book is intended primarily for the model builder it is none the less a useful addition to published railway history. The modeller and historian have a common interest in the depiction and interpretation of a past age, and it may be that the needs of the

former have helped to widen the horizons of the latter beyond steam locomotives and express passenger trains, thus correcting a bias unfortunately present in much that was published twenty or more years ago.

In this book Prior has presented a selection of railway subjects covering the period 1820 – 1900: locomotives, carriages, wagons, lineside furniture, and permanent way. It is a balanced, interesting, and at times thought-provoking selection, even though it cannot be but the merest scratch on the tip of a huge iceberg. The drawings are clear and well produced, avoiding the temptation to include every minute detail and thereby cloud the main features.

A brief introduction sets the scene and highlights a few of the more notable drawings. It could have been much longer but clearly the author had to be very selective as to what to include and one would not wish to see the pictorial content compromised to expand the text. Contrary to the impression given by the author, cast iron rails were superseded by wrought iron at the dawn of the railway era and apart from the earliest subjects in his book none would have run on cast rails. The bogie coach was introduced to Britain by the Festiniog Railway in 1872, not the Midland in 1874. There are some minor quibbles with a few of the drawings, though I would hesitate to apportion blame for most of them as I know only too well that a drawing office can turn out fiction of the highest quality.

This is a book well worth its purchase price, for not only is it interesting reading. (if that be the right term) but it can be *used.* As a work of reference it deserves a place on the bookshelf of historian and model builder alike. One would like to think that it will receive a good enough reception to encourage the author to produce a sequel. RODNEY WEAVER

THE LAST DAYS OF STEAM IN GLOUCESTERSHIRE by Ben Ashworth 137 pp. 210 illustrations and one map. Alan Sutton Publishing Limited 1983. ISBN 0 86299 057 2. £7.95.

'Something akin to a revolution occurred on the railways during the period of seven or eight years which these photographs illustrate' states the preface to this volume. Not only was steam replaced by diesel but stations and branches closed to such effect that the ninety or so Gloucestershire stations of 1959 were reduced to about twelve in 1966.

This book comprises a wide geographical spread of photographs throughout Gloucestershire, on both the former Great Western and LMS lines, in that period of change. It gives an exclusively photographic survey with text restricted to short captions. All of the illustrations bring back memories of a forgotten age with the occasional recent shot to show the extent of change. All of the pictures are hitherto unpublished and show the train in the landscape, although sometimes there is a little too much landscape.

The standard of reproduction is good but the captions could be longer and thus more informative. My overall verdict on the book is that it is bland—good enough—but with no particular reason to make it stand out from the many photographic albums published today or to buy it. A book needs more than just nostalgia to make it worthwhile. R. DAVIES

LOCOMOTIVES OF THE LNER, Part 6B. TENDER ENGINES—CLASSES 01 to P2. Published by the Railway Correspondence and Travel Society. In card covers. ISBN 0 901115 54 1. Price £7.50p.

This latest addition to the RC&TS series of volumes on the locomotives of the LNER is in keeping in its excellence with the previous issues of the series. Full coverage is given of the pre-grouping, eight-coupled tender engines with subsequent additions and alterations after January, 1923. With the Robinson design of 2-8-0, (class 04 on LNER), a full total is given of all those built for HM Government, Railway Operating Division during the latter part of the First World War, the engines being constructed from 1917 to 1920, while all those that came into the LNER are shown with the storage dumps around the country from which they were received. (One small error while dealing with slow sales of these ROD engines, on page 48, the number purchased by the London & North Western Railway in 1920 is shown as twenty. This should read 'thirty').

The coverage of the later designs is excellent with varied war histories of all classes amply covered and the text supported by over 150 photographs and line drawings.

G. D. WHITWORTH

GWR MAGAZINE. Reprint No. 1 Vol. 1, December 1983. Card covers, 64 pages, 53 illus, 5 maps and 4 plans. Avon Anglia, Weston-Super-Mare. ISBN 0 905466 60 8. Price £5.95.

The GWR Magazine, founded in 1888 as the organ of the Company's Temperance Union, was in later years bought mainly in its 2d monthly Insurance Edition rather than for its reading matter, which ranged from comprehensive reports on contemporary developments to minor items of personal news. Nowadays single issues are priced at more than a pound apiece, and complete volumes are scarce as well as expensive; hence the present venture, the first in a projected series, of reprinting a selection of items covering a sixty year life span.

The reprint has a slightly reduced page size, but the paper is of good quality, and the standard of reproduction, photographs included, is generally acceptable. Appropriately we begin with the first four pages of issue No. 1, featuring an article on The Electric Telegraph by C. E. Spagnoletti himself. As with several of the earlier articles the style is anecdotal. Then follow, inter alia, useful articles on the Stratford and Moreton Tramway (1889), the GWR Signal Works, and the construction of the N. Warwickshire Line (both 1908). The 5-part article on Rail Motor Services in the Brent Valley (1908 again) by W. J. Scott BA, a frequent contributor to RM, might well have been something that Sekon turned down as far too specialised, and hardly seems worth reprinting in full. By way of viaducts, bridge reconstruction and a tide gauge, not omitting mention of a GWR 2-8-0 undergoing trials on the NBR in 1921, the journey terminates with 18 pages on the rebuilding of Cardiff station (1934).

The reprint's editor appears to favour a selection of typical items, rather than concentrating on those of lasting value. I would welcome a couple of pages of editorial comment, placing articles in a wider context where necessary, and personally would prefer an issue to be devoted to a short time span or a limited range of topics. The selection is too random to satisfy the historian, but the series should provide a great deal of enjoyment for the enthusiast who believes the creation of the GWR to be conclusive proof for the existence of a beneficient Almighty. Despite being an agnostic I look forward to seeing the next issue.

DENNIS HADLEY

THREE BRIDGES TO TUNBRIDGE WELLS by David Gould. 64 pp. Card covers, 35 photographic illustrations. 13 maps and drawings. Oakwood Press, 1983. ISBN 0 85361 299 4. £3.90.

This book gives a good account of the initiation and development of the west to east cross-country route between the places named in the title. The first section to be opened, in 1855, was a typical branch line of the period, sponsored by local people to connect the market town of East Grinstead with the main London to Brighton line at Three Bridges. Ten years later this line was purchased by the LB&SCR. As so often happened in such circumstances, the original promoters 'did not get back their capital in full.'

The line was later extended eastwards to Tunbridge Wells, where later a short connecting link was built to the South Eastern Railway's Hastings line. Subsequently other lines were built, two from the London direction and two from the South Coast, all of which made junction with the Three Bridges to Tunbridge Wells line and markedly affected the train service patterns thereon.

All these developments have been carefully researched by the author, an East Grinstead resident, who has made good use of local sources of information. The only parts of the material somewhat difficult to assimilate at first reading are the longish paragraphs detailing timetable information and changes. A multitude of station names and train timings in the running text provides indigestible reading. matter. Maps, diagrams, and architectural drawings are by the author; these are beautifully drawn and extremely informative; they can serve as a model of how such material should be presented. The book concludes with a list of train headcodes and a useful bibliography. B. S. COOPER

A BRUSH WITH STEAM by David Shepherd. 264 pp., 94 b&w photographs, 10 colour plates and numerous sketches. David and Charles. ISBN 0 7153 8157 1. £10.95.

This book is the railway autobiography of the best known celebrity of the locomotive restoration movement. David Shepherd is not yet a historical figure but his book may eventually become a source for people studying that peculiar phenomenon of railways in the mid 20th century, the steam locomotive restorer. Shepherd's account of his early experiences around London loco sheds as a painter powerfully evoke the atmosphere of the steam shed. Since the mid 1960's he has devoted a lot of himself to the preservation of his two BR Standard locomotives, 92203 a class 9 2-10-0 and 75029 a class 4 4-6-0. His chronicle of the frustrations and elations which have punctuated his battle to keep them in working order and to find and establish a working home for them is fascinating. A sub-plot is the story of the Zambesi Sawmills Railway and David Shepherd's rescue of two of its locomotives and a carriage. The last part of the book describes the work of building up the East Somerset Railway and the financial and management difficulties which have had to be overcome.

Most railway enthusiasts will enjoy the book but the historian will find little in it which feeds his special interest. There are very few numbers, dates, or dimensions in the book but an ample compensation of anecdotes and factual accounts of happenings which are compelling contemporary history. The story is copiously illustrated with relevant photographs, there are several colour reproductions of Shepherd's superb paintings of grimy locomotives and many of his on-shed sketches. MARTIN BARNES

TRANSPORT IN THE INDUSTRIAL REVOLUTION edited by Derek H. Aldcroft and Michael J. Freeman. 227 pp., 31 tables, 17 'illustrations' (i.e. maps, graphs, etc.), Manchester University Press 1983. ISBN 0 7190 0839 5. £17.50.

This consists of six essays contributed by staff members of universities and other educational establishments under the headings of 'Introduction', 'The turnpike trusts', 'Road transport', 'Canals and river navigations', 'Coastal shipping' and 'The ports'. To those of us whose livelihood calls for occasional reference to Jackman, this comes as a useful alternative to that tome and there is much information. But 'Cubitt's Birmingham & Liverpool Junction scheme' on page 4 alerts the reader to surprises ahead such as reference to the Duke's dock in Liverpool 'at the terminus of the Bridgewater Canal'. Railways are almost ignored and the index has no entry for waggonways, tramways, etc. which surely have significance in the (undefined) period of the Industrial Revolution. Other definitions would have been welcome too. What is a 'main road' when used statistically? Some local roads carried heavy short-haul traffic while some trunk ones had much less. All books seem to have mistakes nowadays but it is less excusable here to re-issue without revision a map of the 'principal waterways c 1830' originally published in 1969, which categorises them as 'Broad', 'Narrow' and 'River' and thus makes the Chard Canal taking 26ft by 6ft 6in tub boats (and not even Incorporated let alone started in 1830) as 'Broad'. The Shropshire system for even smaller tub boats is also categorised as 'Broad' and so, too, is the Montgomeryshire which was standard narrow. There are other errors. I would expect something better for the very high price—but useful nevertheless. JOHN DENTON

THE RAILWAY HERITAGE OF BRITAIN by Gordon Biddle & O. S. Nock with other contributors. 270 pp. 673 photographs, 78 drawings and 5 maps. Michael Joseph, London, 1983. ISBN 0 7181 2355 7. £12.95. 300 × 225 mm.

As Sir Peter Parker states in the Foreword 'Here then is the unique architectural record of British achievement embodying the confident and pioneering spirit of the Railway Age'. When that record is written by authors such as Gordon Biddle and O. S. Nock assisted by Martin Robertson, John Hume, and Jeoffry Spence as contributors with Prof. Jack Simmons as Historical Adviser the end result, with first rate print-work, is an excellent production which must be considered cheap at £12.95 for what is contained therein.

The book deals with each of the present BR regions, listing under each county in England and Wales and each region in Scotland all listed and other buildings worthy of recording together with other items of railwayana that go to build up the heritage of British railways over the years. Not only does the book contain a pictorial record of all listed buildings and structures of British Rail together with many non-listed ones, it also gives details of the architect or engineer concerned, the railway company responsible and details of each building/structure thus making the book a valuable work of reference. There are also articles, illustrated in colour, on such subjects as the heritage aspects of railway architecture, mechanical engineering, landscapes, posters & postcards, railway art, signal boxes, decoration details, company mementoes and Brunel's working drawings.

It is in a size and format which is not unfamiliar these days and which, when first seen could give the impression of another large, cheap and nasty type of publication containing more pictures than print. This is not so, for here we have excellent illustrations together with historical and other information contributed by

persons of note in their fields. Any member bookstall-browsing will discover that this is a book which should be bought for the valuable record it contains and which deserves a place on his bookshelves. At £12.95 it is affordable and one would, in fact, when comparing this with the prices of books today expect to pay more. If this reviewer has any regret about this publication it is that, being a book about a great part of Britain's Industrial Heritage, it was not printed in Britain by another of our long-standing industries. The fact that it was not does not decry the excellence of its production and one can only assume that its printing abroad enables it to be sold at such a reasonable price. ALAN P. VOCE

THE THAMES & SEVERN CANAL, by Humphrey Household. 2nd ed. 70 illus. 12 figs and map. Alan Sutton, 1983. ISBN 0 86299 056 4. £9.95.

The first edition of Humphrey Household's book, published in 1969, was justly commended for its live style in C. P. Weaver's review (Jan. 1970 *Journal*). The present edition is in a completely new format. The text has been slightly extended and rearranged, mainly in the chapters dealing with the background 'prehistory', the promotion of the companion Stroudwater Navigation and the contemporary states of the Thames and the Severn. References are now more conveniently located at the end of each chapter, although it must be admitted that searches for '*op. cit.*' under previous chapters can be a little tedious. The illustrations have been doubled in number, adding to the enjoyment of the reader; some of the photographic reproductions, especially of original drawings, would benefit from stronger printing. It is a pity the outline map is quite inadequate since much of the canal, many of the place names and the locks are not shown on 1:50,000 OS maps. The publisher will no doubt plead economy and offer instead his forthcoming 'Towpath Guide' by Handford and Viner.

Reading the new edition with pleasure, the reviewer found little to quibble about. A few misprints. The wording on p. 18 could be construed to imply that the formation of the Trent & Mersey Company followed publication in 1766 of *The Advantages of Inland Navigation* by Richard Whitworth (oh whence that title 'Sir'?) whereas this surely presented an alternative scheme to that of the Wedgwood party who got their Act in 1766. Ironically, the author's light-hearted concluding remark in connexion with the Stroudwater, that a canalside path is nearly always the longest of routes between two points, does not seem justified in this case for the published plan of 1775 claims the canal to be just over two miles shorter than the turnpike road.

A thoroughly researched and well written book, attractively produced; one wishes there were more such in prospect. EDWIN SHEARING

THE WEAVER WATERMEN, by T. S. Lightfoot. 82 pp., 210 × 213 mm, 56 illustrations and 4 maps, card covers. Cheshire Libraries and Museums, not dated. ISBN 0 904532 07 0. No price stated.

This fascinating book might better have been called *A Weaver Waterman*, for in it Tom Lightfoot looks back on some of the years between 1930 and 1955 when he worked on the steam packets that carried salt from Winsford to the Merseyside

docks. The set-up aboard is described with the aid of many clear sketches (some of which would have been better redrawn to scale) and the life of a typical crew recounted. Then follow descriptions, replete with detailed first hand knowledge lacking in more scholarly works, of loading, the voyage down river and discharging the cargo. The whole is fully illustrated with painstaking 'Sunday painter' style pencil drawings by the author that are often evocative but might in places have been replaced by the photographs on which they appear to be based. A text of earnest honesty, recounted in a flat matter-of-fact style that nevertheless betrays a pride in the job: not until the last few lines does Tom Lightfoot remember that the work was hard and the pay not all that good.

Presumably publication has become economic because of the vogue for nostalgia and naivety, so that although industrial historians can benefit from this circumstance they may be disappointed that the editor has not provided some additional comments and dates. The period covered appears to be confined essentially to 1930 – 39, but this is not made clear, nor does one know how much (or little) is owed to the 'expert advice' that is acknowledged. One final regret: what a pity that Tom Lightfoot was not encouraged to let more of his own personality appear. He need not have been so self-effacing. DENNIS HADLEY

WALKING CANALS, edited by Ronald Russell. 160 pp. 20 illus. 16 maps. David & Charles, Newton Abbot, 1984. ISBN 0 7153 8350 7. £5.95.

Towpaths offer advantages over ordinary footpaths in the extra dimension of water that normally accompanies them and the life that brings, the many observables relating to canal construction and use, and the unmistakeable route. Not that the latter is of much help when a promising towpath disappears into the water, washed away by powered boats. But if walkers fail to use the towpaths and boats fail to use the canals one can hardly expect to win support for their maintenance. The editor, well known for his valuable work *'Lost Canals. . . .'*, introduces the present book with chapters outlining the reasons, historical and otherwise, for those observables. He stresses the added interest and pleasure of discovering the explanations for things, whether from books (there are references in the text and a Bibliography) or by personal enquiries, including this Society amongst suggested sources. There follows a selection of planned walks of from 3 to 11 miles, described by the editor and his ten collaborators, covering three abandoned canal routes and ten navigable ones, with sketches of walks the whole lengths of the Kennet & Avon, Leeds & Liverpool and 'Montgomery' canals. Well written with zest and enthusiasm, the book serves as an introduction that should encourage the use of towpaths and help to develop more widely an interest in canal history and industrial archaeology.

The maps are not satisfactory for the disused canals, most of which are no longer marked on OS maps; that for the walk on the S. Oxford serves its purpose well, showing clearly how to circumvent stretches of missing or overgrown towpath. There are several slips, notably *Dunsley* Tunnel, 23 yards not feet (Staffs & Worcs); 108 locks on the Worcs & Birmingham should be 58. More importantly, Telford can afford to lose credit for bridges on the Macclesfield to William Crosley Jr. (Peak Forest walk); the Macclesfield 'first lock' is not a reflexion on engineering tolerances but is a stop lock required by the Trent & Mersey to safeguard their water supplies, while two locks hardly bring the T&M down to the Cheshire Plain (Potteries walk). The 'uniqueness' of Newbury Lock is probably in respect of

ground paddle hand levers which are (or were) not uncommon on the Leeds & Liverpool, while the 'Stone Museum' and 'a particularly fine church' are at *Great* Bedwyn (K&A). There seems no proof that the Rednal warehouse was connected with the passenger service there (cf Wilson *'The Ellesmere & Llangollen Canal'*) but there is a substantial rail/canal transhipment basin behind the Bone Works. Things are always changing, and after many years the hulks of the two working boats at Belan have now been dredged away. ('Montgomery'). EDWIN SHEARING

ONE HUNDRED AND FIFTY YEARS OF IRISH RAILWAYS by Fergus Mulligan. 192 pp. 56 photo illus. 6 maps & diagrams. Woodcuts, timetable extracts, reproductions of tickets. Appletree Press, Belfast. ISBN 0 86281 117 1. £10.95

Although there have been many books in recent years on individual railways in Ireland there have been few general accounts of Irish Railways. The appearance of such a book is particularly welcome commemorating as it does the 150th anniversary of the opening of the first railway in Ireland and the inauguration of the Dublin suburban electrification.

The book sets out to cover the history of the Irish railway system, the first six chapters each being devoted to one of the more important companies, the seventh to the smaller 5'3" gauge lines, chapter eight to that fascinating freak the Listowel & Ballybunion monorail, the ninth to the narrow gauge lines, and the final chapter to the last sixty years, being concerned with the amalgamations and nationalisation resulting in the GSR, CIE, UTA and NIR, followed by the transition from steam to diesel traction with a brief mention of the current electrification of the Dublin suburban lines.

The concept is grand but the work is spoiled by the large number of errors which have crept in and regrettably not eliminated at the proof reading stage. The more important of these are:—

p. 14 E. L. Ahrons quoted as describing Westland Row in the 1920s as a dingy dirty shed with one platform. Surely this description must refer to Harcourt Street station.

p. 24 'Brunel recommended the use of the atmospheric system to the English Great Western on its line from Gravesend to Chatham'.

p. 40 CIE was not nationalised until 1950, merely created by compulsory merger of GSR and DUTC in 1945.

p. 45 Hamilton Ellis' christian name is Cuthbert, not Charles.

p. 64 O.V.S. Bulleid and not H.A.V. Bulleid became CME of CIE in post war years.

p. 96 & 100 The 'Enterprise' express was not introduced until 1947.

p. 102 The GNR did not acquire the D&NGR in 1933 but merely worked it on behalf of the LMSR.

p. 106 The present NIR terminus at Derry is a new station 200 yards from the NCC Waterside station.

p. 108 Donaghadee is in Co. Down, not Antrim.

p. 164 The Castlegregory branch of the T&DLR closed completely in 1939 when regular passenger services between Tralee and Dingle were withdrawn.

There are very many other errors of lesser nature, some of which will be obvious to the reader.

The maps and diagrams leave much to be desired. That of the passenger network in 1983 shows the NIR line from Antrim to Bleach Green in that category when it has only been used for stock movements for some years. Those of Dublin and Belfast in 1983 show stations long closed, implying that the lines which formerly served them are still open. The track diagram of Limerick Junction is incomplete.

There is a good selection of photographs but unfortunately many of them have reproduced too darkly with much loss of detail.

A curious omission in the individual lines described is the Schull & Skibbereen. Doubtless it was omitted owing to its near tramway status, but the large colour illustration on the dust jacket is of a S&S train crossing Ballydehob viaduct!

Unfortunately this book in its present form cannot be recommended to anyone wishing to undertake a study of Irish railways, but it is to be hoped that a thoroughly revised edition will appear in the future eliminating its many shortcomings. It would then make a fine contribution to the literature of the subject, the concept being excellent and the author's style most readable.

NEIL PITTS

METROPOLITAN CORRIDOR—RAILROADS AND THE AMERICAN SCENE, by John R. Stilgoe. 260 × 180 mm, xiii + 397 pp., numerous illustrations, Yale University Press. ISBN 0 300 03042 8. £25

The part played by railways in the nation's history and development is more widely documented in the USA than in this country. But even for the US this is a new approach. The author's thesis is that in the period 1880 – 1930 railways directly and indirectly reshaped the American built-environment. The trains, the right-of-way, fringing buildings and the way of life combined to create a Metropolitan environment wherever they went. Hence the 'Metropolitan Corridor' of the title.

The author develops his thesis in a fascinating and very readable manner, while the text is amply illustrated by a wealth of well chosen illustrations, even selected from Lionel model catalogues to show how they reflected features of the real thing. There is also a vast range of references to the literature, fictional as well as non-fiction.

Having said that, the chapters do not follow in any logical order, rather they take the form of self-contained essays. Thus the opening chapter 'Gateway' is an examination of the form and function of the terminal, especially those of New York. This is followed by 'Elegance', an account of the luxury Pullman train and its effect on those who travelled in them and those who watched them go by. 'Crossing' is the most penetrating account of level crossings and the psychology of road users I have ever read. 'Depot' shows the small country station bringing the Metropolitan way of life to Main Street, while 'Villa' looks at commuter suburbs. But the biggest surprise is 'Trolley', the correct name for the rural-penetrating inter-urban as opposed to the urban 'streetcar'. In their short-lived heyday there were about 60,000 route-miles. And this is only a selection of the essay topics. The book is a thought provoking 'must' for all transport and social historians.

H. P. WHITE

ESTATE MANAGEMENT IN 18TH CENTURY ENGLAND by Ross Wordie. 303 pp. Published by The Royal Historical Society 1982. ISBN 0 901050 87 7. £20 to non-members.

'Landlords everywhere promoted the industrial development of their properties, and in some areas took the lead,' writes the author of this valuable study of the agricultural, industrial and transport administration of the Leveson-Gower properties in Staffordshire. After 1803, from marriage to the Duke's sister, the growing revenues of the Bridgewater Canal added substantial funds to this already wealthy and powerful dynasty. The main research analyses the renting of estate farms, with its delicate relationship between squire and tenant, concluding that this family supplied substantial capital investment, improved mining technology through Earl Gower & Co., and usually showed justice and tolerance to its dependants, though the term *estate agent* is confusing—one prefers the more traditional *land agent*.

The writer's touch is less sure on the mining and transport details. On p. 46 Thomas Gilbert is described as devoting himself exclusively, as agent, to the Leveson-Gowers, when it has long been known that he was also General Agent for six of the Bridgewater estates. On p. 54 we learn of Earl Gower and the Duke 'sinking into somnolent retirement,' when Francis Egerton was struggling to extend his Liverpool dock, rebuilding Woolmers, planning a new water supply for London, reorganising the Grand Junction, and personally supervising the Worsley system. English gentlemen never care to look as though they are trying, but it is hard to believe that the Duke could have done all this while half asleep—some somnolence! On p. 139 we learn of the genius of Brindley's contribution to the Bridgewater—long known to have been limited and not altogether satisfactory. The key map is ill-placed, and the editor of this distinguished imprint has allowed too many proof errors. Of the religious and important artistic aspects of this family we learn nothing, but few of the squires lived by bread alone.

On the credit side, this work contains new information on land agents, notably Thomas Gilbert and James Loch, on coal mining and the timber crisis, and the financing of politics from estate revenues—all useful enough to encourage revision, although this remains a thesis for the discerning, rather than for the general reading. HUGH MALET

THE CANAL DUKE'S COLLIERIES, WORSLEY, 1760 - 1900 by Glen Atkinson. 52 pp., maps, diagrams photographs and advertisements. Neil Richardson Publishing, 375 Chorley Road, Swinton, Salford. ISBN 0 9506257 79. £3.50. A4 size.

Mr Atkinson's substantial work on the collieries at Worsley makes some significant contributions to the history of mining, but is sadly marred by errors of fact and assessment on the historical side. With commendable industry the author has sifted numerous archives to give us a detailed survey of the underground canal systems, and has added the important new discovery that these extended for over 51 miles, and not the 46 miles previously acknowledged. He chronicles the history of mining, evaluates the social conditions, the advent of trade unions, steam power, and the technology of mining as it improved. The format of this work is most attractive, with fascinating photographs of the underground canals and the inclined plane, while the maps are clearly drawn.

The errors which detract so significantly from this valuable achievement lie mainly in the introductory history and are too numerous to list in detail, but one glaring

example is that the First Act authorising the waterway bound the Duke, the writer tells us, to sell his coal for a maximum of 2½p per cwt, when in fact the price was 4d: the entire enterprise would have been doomed on such pricing as Mr Atkinson suggests, quite apart from the error of p for d. Nor was the Salford Canal approaching Manchester at all when first under construction, for Salford, then, even more than now, was a proudly independent conurbation. Brindley was not introduced to the Duke via Earl Gower, but by John Gilbert, but worst of all is the extraordinary statement that 'the Ducal estates hardly bothered' Francis Egerton. Anyone who has studied the Duke's life and work in general, and his coachman's meticulous expense sheets in particular must be staggered by such an inaccurate and derogatory statement.

Mr Atkinson tells us that his work is destined for the general reader as well as the specialist historian, but the danger of publishing works which have not been fully checked is that students from primary schools to universities reproduce these inaccuracies. The writer has broken new ground, though, and assembled evidence which, if corrected and provided with at least some footnotes, and a detailed index, really could be of value to historians and to mining authorities. HUGH MALET

THE BRIDGEWATER HERITAGE—THE STORY OF BRIDGEWATER ESTATES by C. Grayling. Bridgewater Estates PLC. Illustrations and maps. No ISB number given. £3.95.

The proper administration of a great estate calls for managerial skill, legal precision, human understanding, and a sense of service, and when it is as varied and important as the one the Canal Duke evolved at Worsley in Lancashire, it can have national and international repercussions, but there are few good histories of such enterprises. Credit is therefore due to the Bridgewater Estates PLC for commissioning Mr Christopher Grayling to chronicle this story with a benevolent frankness which must be wise public relations, from manorial origins to the latest building programmes, including dividends paid.

The author was faced with a formidable task in concentrating the Bridgewater story into a short work which would appeal to the general public, but he has achieved a clear narrative line which grips the reader, while giving the right degree of emphasis to those eras in which the most significant events took place. His work is also of value to historians as well as the public, because his outline breaks new ground, carrying the story on beyond the Victorian period mainly covered by Professor Mather in his *After The Canal Duke,* through the sale by the Egerton family in 1923, and including the stringent administration of that redoubtable Manchester man of business, Jesse Wallwork.

It is encouraging when an impartial historian places the Canal Duke (at last) among the founders of the industrial revolution, though mediaevalists might be less happy with Mr Grayling's assessment of 'subservient peasant labour' working manorial estates. A few factual errors are inevitable in a work written urgently to meet the Company's celebration of sixty years, particularly where John Gilbert is credited with a plan under the First Act to build the canal 'as far as the River Irwell at Barton' or Elias de Worsley is placed in the 1860s. The Act for the Salford Canal was planned to run to Holmes Bridge, near Ordsall Hall, in Salford. Long may this work remain in print, though, as one of the best general histories of sound estate management. It would be of greater value still to the historian if a bibliography, a detailed index and some footnotes on Mr Grayling's original research could be added, but this, it is fair to mention, was not the prime objective. HUGH MALET

Correspondence

Railway Strip Maps

Sir,—David Garnett's interesting article in the *Journal* for November 1983 (pp. 284—7) has encouraged me to search my own files, and I have found some variants on this theme which are probably worth recording.

First to be noted is *The Track of the Coronation Scot.* This is a 28-page booklet, $9\frac{1}{4}'' \times 4\frac{1}{4}''$, in blue and white card covers which was issued by the LMS in 1937 in connection with the introduction of the train of the title. The booklet includes an introduction by Edmund Vale and 21 pages of strip diagram maps. The publication date, 1937, is thus midway between the two LMS series mentioned by Garnett. On the inside front cover there appears this information:— "This is the LMS Book of the Train No. 3. No. 1 is The Triumph of the Royal Scot; No. 2 is The Story of the Irish Mail."

Next there are two strip maps of the line from Glasgow (Buchanan Street) to Oban. The first of these, issued in 1935, is no more than a rather elaborate excursion handbill, $9\frac{1}{2}'' \times 6''$, with five pages of stylized strip diagrams with descriptive notes of the interests along the line of route.

The second, issued by British Railways in July 1955, is printed in blue and green on good quality paper with the rail route running sinuously up the middle of the pages, which are embellished by delightful sketches of features of both scenic and railway interest. This version thus appears similar in treatment to the Pike series described in Garnett's last paragraph.

Finally, it may be of interest to know that an excellent facsimile reprint of an early Railway Chronicle "Travelling Chart" (London and Brighton, Second Edition) is on sale at Lewes Public Library. B. S. COOPER

Sir,—David Garnett's survey of 'On Either Side' strip maps overlooked two booklets published by the LMS in the late '30s. These are *The Track Of The Coronation Scot* published in 1937, and *The Track Of The Royal Scot* published in July 1938, the latter re-using a title first used in the 1927 series. They are recorded in Ottley (1st edition) at 6829 and 6834. They are $9\frac{1}{4}'' \times 5\frac{1}{4}''$ and are centre-stapled in the conventional manner. Contents consist of some brief notes about the train and its locomotives, a short introductory essay by Edmund Vale (virtually the same for both booklets), and the strip maps which are lifted straight from the 1927 series though the quality is poorer. The cover design, again common to both, has a stylized streamline Pacific locomotive heading diagonally down the page. The *Coronation Scot* is printed in royal blue, black and white and *Royal Scot* in red, black, and white.

The insides of the front covers indicate that the booklets are numbers 3 and 4 of a series entitled 'LMS Book Of The Train', No 1 being *The Triumph Of The Royal Scot,* and No 2 *The Story of The Irish Mail,* both published in 1934. They were not, however, route books. The former described the visit of the Royal Scot train to the USA; I do not have a copy of the Irish Mail booklet to hand but I believe it was mainly historical in content.

Another edition of the *Coronation Scot* booklet, not recorded in Ottley, was issued in July 1939. The train particulars were slightly increased and two pages of point-to-point mileages and timings added. The cover changed to a dull and conventional monochrome view along a stretch of four track main line. The LMS publicity

department, never very adventurous and doubtless anticipating the withdrawal of the service at the onset of war, were obviously unwilling to put much effort into the new edition. ROBERT HUMM

Acknowledgement of Sources

Sir,—Mr Hadley's letter in the *Journal* for July raises several interesting points. I agree that it is reprehensible to use another author's material without proper acknowledgement. It has happened to me in a small way, but I do not know whether I was irritated, amused, or flattered! There can be no copyright in fact. It seems to me, therefore, that it is legal, though not moral, to use someone else's writings, presented in a somewhat different way, provided they are correct, but illegal if they are wrong. My father used to say—and I am sure the remark was not original—that to copy from one or two books was plagiarism, but to consult five or six was original research.

Our late President, Mr Clinker, observed that railway books could be divided into the good, the bad, and the indifferent. Railway authors (I will not call some of them historians) can be put into the same categories. I could name three or four of the second type, but the law of libel forbids. It does not take the serious student too long to make up his own mind.

References are a great difficulty. I am sure that if works such as McDermott's *Great Western Railway* or Dow's *Great Central,* to mention only two, had been fully referenced, they would have run into a further volume. This is not commercially possible, and it is only demanded by a few readers. It is not the reader's job to check the author's accuracy; that may be the unenviable task of the reviewer. Nor are copious references necessarily a criterion of careful research. I have recently read a book with nearly 1,000 references which nevertheless contained many inaccuracies.

Finally, one must express gratitude to the *Journal* and to the magazines of societies similar to ours for candid and unbiased opinions on recent publications. The commercial railway press is too anxious about its advertising revenue to be over-critical in its reviews. A. L. BARNETT

Tottenham & Hampstead Junction Railway—Gospel Oak

Sir,—When the Tottenham & Hampstead Junction Railway was under construction in 1867 – 8 it was the intention to provide a turn-table at gospel Oak and some circular brickwork was erected; much of this still remains but is now completely buried.

By June 1868 funds were exhausted and no further capital could be raised. Nothing further was done at Gospel Oak until the Midland completed the line and constructed a single-platform station in 1888.

Although some large scale OS maps mark 'turn-table' against the brickwork there is no evidence that a turn-table was ever provided, nor was one necessary as all trains including those to Southend were worked by tank engines.

The reference to a turn-table in the *Journal* Vol. XVIII (1972) page 94 needs to be amended. H.V. BORLEY

Staggered Platforms

Sir,—I found Mr Martin Smith's letter (*Journal,* March 1981, p.23) concerning engineer Jacomb Hood's views most interesting. Dr D. G. Tucker has been good enough to send me an extract from the *Railway Magazine*, Vol. 7, 1900, p.473 which notes that the new Down platform at Holloway (GNR), then under construction, was opposite the Up platform and when completed would mark the disappearance from London of 'the last of the old-style stations, with the up and down platforms not opposite each other... the object... was to avoid constructing subways or over bridges for the use of passengers, which would have been necessary had the platforms been opposite each other, as when trains were at the platforms, passengers could not cross from one line to the other. With the platforms not quite opposite, this was, however, possible, as passengers simply went at the rear or front of the train, as the case might be'.

It is worth noting that in most of the examples we have recorded, it was not a case of the platforms being 'not quite opposite', but of not being opposite at all, except in the sense that they were, of course, on opposite sides of the lines. The similarity of the explanation to Hood's will be noted, although the latter put it rather more clearly; it is apparent that passengers could only cross the tracks in reasonable safety when two trains had arrived simultaneously, and even then it had to be assumed that there was no chance of one setting back inadvertently.

Regarding the presence of sidings conditioning the layout, at Welton there were sidings on the Down side, opposite the Up platform—but then there were other sidings behind the very narrow Up platform itself which passengers had to cross on the level in passing from the station building to the platform, and moreover there was a road bridge between the two platforms, so that it was not necessary for passengers to stray onto the tracks at all, the two platforms having independent access to the road.

Further examples of stations having staggered platforms have been noted in articles, books, and from observation, as follows:

(C stands for conventional or 'downstream' staggering, ALC for 'on either side of a level crossing', NC for non-conventional stagger, and NLC for 'no level crossing')

Elsenham GER (C, ALC)
Wylam NER (NC,?ALC)
Llanvihangell GWR (C, NLC, overbridge between platforms)
Stanford-le-Hope LTSR (C, ALC)
Hebden Bridge
Burneside LNWR (NC, ALC)
Naworth NER
Melton GER (C,?NLC)
Wickham Market GER (C,?NLC)
Saxmundham GER (NC, ALC)
Cradley Heath
St Mary Cray (formerly)
Sydenham (in course of reconstruction with opposed platforms, May 1982)
Barkston GNR (C, NLC)
Postland (GN & GE Joint)

Mr Borley has advised that Kensal Green and Harlesden station, on the Hampstead Junction line, originally had opposed platforms, but later one was moved to a staggered arrangement to enable junction points to be set back.

HARRY PAAR

Early Iron Boats—the North Staffordshire connection

Sir,—The issues of the *Journal* for March and November 1978 include several letters concerning early instances of the use of iron boats on canals. I was particularly interested in the reference to the iron-reinforced ice boats produced by 'W. Henwright & Co., Stoke-upon-Trent, near Newcastle', in 1800 and 1801. According to the *Staffordshire — General and Commercial Directory* by W. Parson and T. Bradshaw (1818), William Kenwright was a timber merchant at Longport and also in partnership with a 'Mr. Kirkham', as timber merchants, at Shelton Wharf, Stoke-upon-Trent. In another entry 'Mr. Kirkham' is revealed as 'John Kirkham, timber merchant' of 'Penkhull Hill'. During my researches for my book *The Trent and Mersey Canal* I did not come across any references to Kenwright and Kirkham as boat-builders, although it is now obvious that they were. In addition, I was only able to find references (and illustrations) to wooden ice-breakers on the Trent and Mersey before 1940.

An even more interesting reference turned up during my research into the careers of John and Thomas Gilbert, the canal pioneers. John Gilbert had erected limekilns at Cheddleton, on the Caldon Canal, and following his death in 1795 these kilns were operated by his son, also John Gilbert. The younger John Gilbert was still operating these kilns in 1808, when Mr Marshall wrote:

> Good lime, brought by the Staffordshire Canal (Trent and Mersey), in iron boats, from the neighbourhood of Leek, may be purchased, at the wharf at Acton bridge, at sixpence the bushell.

The Gilberts had their own boat-yard at Cheddleton and they could have manufactured such boats. Of greater importance is this direct reference to iron boats carrying a common cargo, which indicates that their use was more widespread than previously suspected. I assume (with some confidence — in view of the Kenwright reference) that these would also be iron-sheathed boats. The Gilbert link with Shropshire may also prove to be of great interest, but further research is required. PETER LEAD

Airey's Railway Map of Staffordshire & District

Sir,—The excessive gap between the FIRST EDITION of this map and the next hitherto recorded—that of 1880—has been reduced somewhat by a recently acquired map.

This map must now be regarded as [SECOND] EDITION, pushing 1880 into [THIRD] place, though it seems most probable that there was a dated edition before that.

The new map differs but little from the FIRST EDITION, known from the Stationers' Hall Register to have been published on 19 May 1874. A Station and a Siding have been added, but a great deal of work has been done to improve the map. Previously the River Severn was the only river shown, but many more have been added, together with canals, many more hills, forests, etc.

Of significance in ascribing the publication date to [November/December 1875] is the addition to the list of 'Other Maps in this Series' of SCOTLAND, published on 1 January 1875, and DURHAM, published on 20 December 1875 but actually dated 'January 1876'. The newly acquired STAFFORDSHIRE map must have been published whilst DURHAM was in preparation but before the decision was made to print a date on it.

Sheet Two of my list of Airey's Undated Maps has been revised w.e.f. 17.10.83 to show this, with Title 2. DAVID GARNETT

From Mr Stanley Tyson: MOVEABLE BRIDGES Excluding Swing Types, a List

Name/Locality	Mode of Action and other notes	Date	Traffic	If still in Existence
Bridgwater—R. Parret	Multi span plate girders. One span slides sideways to allow river span to slide back into place.	c1870	Rail	Now fixed
Victoria—R. Dee	Framed. Central span in two halves, *each half truly telescopes* into adjacent spans.	1897	Rail	Replaced
Keadby—S&SY Navigation	Plate girder, skew to canal, hauled sideways to give clearance.	c1925	Rail	Still in use
Ulverston—Ulverston Canal	Plate girder, skew to canal, hauled sideways to give clearance.	1885	Rail	Now fixed
Crinan Canal—R. Severn	Braced. On wheels, rolls away at right angles to the canal.		Road	Still in use
Tewkesbury to Malvern	Multi span plate girder, motion obscure but 'in line'.	1869	Rail	? no information
R. Avon	Wooden Frame on large wheels to roll back on ℄ of track.	1846	Rail	Gone
Alexandra Dock Extension	Frame on wheels to roll back on ℄ of track.	c1914	Road/ Rail	? no information
Middlesborough Docks	Frame on wheels to roll back on ℄ of track.	c1874		? no information
Chichester Canal Hunston	Cast Iron beam on small wheels to roll away at right angles to the canal.	1820	Road	Ruinous

(See *Journal* XXVII, No. 9 (Nov.1983) p. 301) Can any member add to this list?

TRAVELLERS' FARE—1868 (*From John Norris*)

ADVERTISEMENT—Refreshment Rooms, Shrub Hill railway station, Worcester—Mr. Nathaniel Taylor has been instructed by Miss Day, who is relinquishing possession of the above rooms, to sell by auction on the premises on Monday, December 21st, 1868, the whole of the valuable and well selected stock-in-trade, comprising several hogsheads of Martell's brandy, gin, whisky, rum and liqueurs, 50 dozens superior Moets and other champagnes in quarts, pints and half-pints, first class clarets in ditto, wines, still and sparkling hock, hogshead of fine pale sherry, small quantity of port, cigars etc., extensive china dinner, dessert, tea and breakfast services, richly cut glass, quart and pint decanters, handsome plated and cut glass salvers, cruet, pickle and spirit frames, plated tankards, claret jugs, table knives, forks and spoons, a few articles of furniture and numerous articles connected with the business. (From *Berrow's Worcester Journal,* 19 December 1868).

From January to April 1853 the *Sunderland News and North of England Advertiser,* which regularly advertised local train times, included the statement that on the Blyth & Tyne Railway 'A train leaves Seaton Sluice every Tuesday and Saturday at 7.4 a.m., returning from Percy Main at 5.30 p.m.' The note disappears after April.

According to Cook and Hoole's *N.E.R. Historical Maps* the line from Seaton Sluice Harbour to Diary House Junction, south of Hartley, was opened privately in 1846: and the service from the junction to Hartley was opened to passengers on 3rd March 1847. However, I have seen no other reference to passenger traffic on the Seaton Sluice branch. The line from Hartley to Diary House Junction was subsequently extended to Monkseaton and Tynemouth. *From S. L. Bragg*

All copy for the November *Journal* should be with the Editor by 10 August 1984 and must conform to the style-sheet published in the November 1981 issue. The top copy should be sent, not a carbon or a photocopy.

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