

JOURNAL

of the Railway and Canal Historical Society

Vol.9. No.6.

November 1963

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THE LANCASTER CANAL TRAMROAD

by Gordon Biddle.

Addendum to first part, published in September 1963, Journal

Since writing this article I have, through the courtesy of Mr C.M. Marsh, North Western Divisional Manager, British Waterways, been allowed to inspect the records held at the Divisional Offices at Liverpool, relating to the Lancaster Canal. A number of hitherto unsolved problems will obviously be answered in these records, and in connexion with the tramroad the doubt I expressed on p.90 of the Journal appears to be resolved. A set of plans to the scale of 2 chains to the inch prepared for the canal company by William Millar, their Engineer, in 1807, clearly shows a building marked "Engine house" on the site of what is now Summit Farm, at the foot of Walton Summit Incline. As the incline was worked by an endless chain it would be quite feasible to have the engine at the bottom instead of the more usual place at the top. If any members have information on other planes worked by endless chains, I should be pleased to hear from them.

(part 2)

Accidents on the inclines were fairly frequent, often due to the

chain breaking, and another bye-law prohibited a northbound train from entering the Ribble bridge before the last wagon of the preceding train had been hooked on to Avenham chain. This chain made a complete revolution in nine minutes and wagons were hitched on one at a time at roughly equidistant intervals, the whole length being required to take up a six wagon train. The descent for the same number took six minutes. Chains were a constant source of trouble, in 1818 it being recorded that a patent twist-link chain at Penwortham had stretched by a tenth in 21 months and broke after a year. The more orthodox straight-link chain at Avenham lasted three years without breaking and over $3\frac{1}{2}$ years it stretched by one sixth. There is a graphic description in the minutes of an accident in 1826 when Avenham chain broke in the upper wheel and sent three wagons full tilt back down the 1 in 6 gradient. A halter riding on the middle one jumped clear and fortunately only his two horses were killed, but on other occasions loss of life was not limited to animals.

The permanent way and the Ribble bridge also were costly to keep in repair, large sums regularly being spent on maintenance. So by and large the tramroad was an expensive item and in 1822, on being asked to join the Duke of Bridgewater, the Mersey & Irwell Navigation and the Leeds & Liverpool Canal in opposing William James's Liverpool & Manchester Railway scheme, the committee declined. "Having found the maintenance of a Rail Road so much more expensive than a canal, they think the plan will not be generally adopted".

Despite immediate lack of wharfage the opening of the tramroad gave a rapid improvement in revenue. Gross income in 1803 was £4,853, in 1804 £8,489 and in the first six months alone of 1805 it amounted to £5,241, so that at the general meeting on 1 July it was felt that the company's first half-yearly dividend could safely be declared at £1 per share. Dissention now rose again between the parties. The Liverpool Party wanted the Ribble to be crossed by canal as the next step, but the Westmorland Party, backed by the Lancaster faction, succeed in insisting on carrying the canal on to Kendal, and in 1813 it was decided to make a start, at an estimated cost of £98,095 against £160,537 for replacing the tramroad. Walton wharves had been extended and 19 teams were working back and forth twice daily. The greater part of the road had been paved and it was argued that having incurred so much expense, and as it was now apparently functioning quite well, the tramroad could continue in use a little longer.

In 1817, the Liverpool Party tried again but this time the northern proprietors had their eye on a branch canal to Glasston Dock as soon as the Kendal canal should be finished, (it was completed in 1819). There had been complaints from traders about long delays at the inclines so instead it was decided to divert the line at Penwortham to avoid that incline entirely, and replace the Avenham engine with one more powerful, for which a second-hand one was bought for £240 but not erected until 1822. Two years later the Ribble protagonists tried a last time but the Lancaster Party was now firmly convinced that a Glasston branch would revive the declining Port of Lancaster and the plan to bring the South End to Preston was finally dropped.

Improvements to the tramroad continued and in 1827 it was suggested

that a diversion should be made at Avenham, the incline abandoned and Fishergate Tunnel enlarged to take two tracks, but these proposals were not pursued. Next year 9 ft. plates were experimentally laid in the tunnel and on proving a success the west side of Walton Incline also was relaid, after which it was found that five laden wagons could be taken up instead of two. The new plates were cast by Lindsay & Co. of Preston, and Hills & Wheeley of Blaenavon. B.P.Gregson, Samuel's son and assistant, visited the Stockton & Darlington and Bolton & Leigh Railways in September, returning to Lancaster to recommend broader wagon wheels fixed to the axles instead of loose springs, and brakes instead of "Lock chains", to improve efficiency. In 1831 "new through blocks with hollow plates grooved in, and paving across the Turnpike Road at Bamber Bridge" were laid - evidently a form of level crossing.

The committee obviously took to heart the success of the Stockton & Darlington and Liverpool & Manchester Railways for in 1830, the year the latter was opened, they directed that the canal staff was to be reduced to the minimum as an economy measure and asked B.P.Gregson to prepare an estimate for converting the tramroad for locomotive haulage, which he thought would cost £11,650, excluding diversions and banking. This followed the threats of competition from the projected Preston & Wigan Railway (one of the constituents of the North Union Railway) and the Manchester & Preston Railway. Gregson suggested they could be countered by either converting the tramroad to a railway for steam traction or joining forces with one of the newcomers and abolishing the tramroad and canal from Johnson's Hillock altogether, leaving the South End to the Leeds & Liverpool, which it already used as part of its line. He seemed to be alive to the danger in a railway parallel to the canal and pointed out that even should the present projects be defeated the benefits of railways were now so apparent that others would soon take their places. He went on to state his opinion that if the committee decided seriously to oppose the Wigan line, the best method of all would be to promote their own direct line from Preston to Liverpool. So the committee resolved to seek George Stephenson's advice on the practicality of converting the tramroad, and after making a survey he reported that he would propose four self-acting inclines between Walton and Penwortham bottom and an engine-worked incline on a new line at Avenham, at an estimated cost of £11,894. 18s. Od. Gregson commented that the plan would be difficult to execute and inconvenient to operate. He manifestly thought very little of Stephenson's addiction to inclines. Simultaneously the committee was meeting the Preston & Wigan promoters who offered to build a $\frac{1}{4}$ -mile branch tramroad at Brownedge, whence canal traffic would use the new railway into a terminus at Preston alongside the wharf. The canal committee rejected the proposal on the ground that it was too vague. The Wigan & Preston Bill received Royal Assent on 22 April, 1831. Negotiations were also opened with the Manchester & Preston on similar lines, but their Bill failed.

A few years later the performance was enacted a third time, with the Bolton & Preston Railway, who wanted to use the tramroad course for their projected line into Preston, and on 27 January, 1837, it was agreed by the canal company to lease the tramroad to the railway in perpetuity, together with land near the canal wharf for a station, and all tolls received from traffic on the South End with the exception of income from Leeds & Liverpool traffic.

In return the railway company agreed to pay the canal £8,000 a year, construct a short branch from their Preston station to the canal wharf, maintain (by means of their railway) an efficient link between the North and South Ends of the canal and keep an engine solely for the use of canal traffic. However, on 4 July 1838, the Bolton & Preston obtained an Act empowering them to enter Preston over North Union Railway metals from Euxton Junction as part of the price of buying off North Union opposition, so they never used the tramroad, but eventually agreed to maintain it for the canal in return for £600 a year towards the cost. The canal company later increased it to £1,000 rather than allow the B. & P.R. preferential coal rates on the North End for traffic transferred at Preston. The new agreement was sealed on 6 September 1838.

The clue to the canal company's willingness to shed what appeared to be its lifeline lay in the siding from the B. & P.R. to Preston wharf, which was eventually built by the N.U.R. To take this in exchange for the tramroad and tolls on the South End might seem a bad bargain, despite the £7,000 a year net payment from the B. & P.R. but it was far from it. Gregson foresaw that improved transit by rail and extensions northward would slowly sap their mineral traffic, hampered as it was by double transshipment, and in any case the tramroad was expensive to maintain, so why not concentrate on retaining the canal company's old established trade on the North End, using Preston as a rail-head? This they did with some success, to the extent later of making an agreement with the Lancaster & Carlisle Railway for sharing traffic, the canal taking minerals and heavy goods, the railway the rest. Traffic from the South End collieries would have to continue using the tramroad, although on a declining scale as the railway network spread, so that before long it would probably cease to be a paying concern. The wisdom of this argument was shown in the North Union accounts, that company certainly having the worst of the bargain. The project to use the tramroad site for a railway was revived briefly in 1843 during the B. & P.R.'s rate-cutting war with the N.U.R., but finally lapsed when the two companies amalgamated on 10 May 1844. The tramroad thus passed to the N.U.R. and later to the London & North Western and Lancashire & Yorkshire Railways jointly in the course of further amalgamations.

The first act of the new owners was to raise the tolls "to the highest level", after which the B. & P.R. had to set about renewing the Ribble bridge supports which were in a bad state. Wrought iron plates were also used in future track replacements. Gross profit from the South End tolls and tramroad in 1839 was about £1,000, but by 1850 the N.U.R. was losing nearly £5,600 on its canal venture. In 1847 the Ribble bridge was in need of urgent repairs, of which the bare minimum was executed, and there was talk of discontinuing tramroad maintenance, but the canal company stuck to the agreement, as it had no desire to redeem the millstone. It was doing quite nicely in its truncated form, and was receiving its £7,000 annuity into the bargain. By 1856 it was apparent that the Ribble bridge would have to be renewed and the N.U.R. asked its controlling boards to sanction the expenditure of £1,500 for this and £1,000 for altering the tramroad gradients. The L. & N.W.R. did not demur, but the L. & Y.R. jibbed at first before reluctantly agreeing to its share. The N.U.R. asked the canal company to agree to closing part of the tramroad in order to avoid

having to rebuild the bridge, but again the Lancaster company insisted on adhering to the 1837 agreement. The Avenham engine boiler was renewed for £120 in 1858.

In 1851 the Lancaster Canal leased to the Leeds & Liverpool Canal the tolls it had continued to receive from the latter's traffic on the South End. The Leeds & Liverpool's own tolls were already leased to railways which were attracting traffic away from the canal, so the decline of the tramroad was accelerated. In the late 1850s trade depression decided the canal committee, ever realists, to open negotiations with the L. & N.W.R. and the Leeds & Liverpool with a view to disposing of their canal, although the half-yearly dividend had not fallen below 16s. The result was the Lancaster Canal Transfer Act of 29 July 1864, whereby the North End was leased to the London & North Western and the South End to the Leeds & Liverpool in perpetuity. The L. & N.W.R. and the L. & Y.R. were allowed to close the tramroad from Bamber Bridge to Preston and come to an arrangement with Preston Corporation regarding that portion in what was now Avenham Park. The last through traffic recorded was in January 1862, although local traffic continued to use the section from Walton to Bamber Bridge, which was to be kept open. An Additional Powers Act of 21 July 1879, permitted the two railway companies to close the remainder, which they subsequently did. Most of the plates were taken up for scrap, but those in Fishergate Tunnel and down to the wharf appear to have been left, as in September 1884 they were mentioned in connexion with street improvement works, part of the tunnel being filled in, and in November of that year we learn that the tramplates were finally removed from the north side of Fishergate. The rest of the tunnel was later enlarged by the L. & Y.R. to form a road entrance from Corporation Street to its Butler Street goods yard. On 1 July 1885 the canal was formally vested in the L. & N.W.R. and the company was wound up on 1 January, 1886.

Considerable traces of the tramroad remain today, throughout most of its length, and it is a pleasant walk from Leigh Brow down past Carr's Wood at Penwortham and over the embankment to the Ribble bridge, which has been reconstructed in reinforced concrete to the same design as its wooden forerunner. Avenham Incline is now a park footpath. Only a short length at Brownedge and the portion in Preston have completely disappeared, except for a small piece of bridge abutment at the foot of Garden Street. Large numbers of sleeper blocks have been used to make a cart road up Walton Incline, and blocks are also to be found near Penwortham and other odd places en route.

My thanks are due to the British Railways Board Historical Records office for kind permission to consult the Lancaster Canal Company's records, from which much of this article has been compiled, the Librarians of Lancaster, Preston and Blackburn, and the Lancashire County Archivist.

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AN EARLY SIGNAL BOX - MIDLAND RAILWAYby J.H. Boyes

When and where the first signal box raised above the level of the adjacent lines was erected is probably well known to others more versed in the history of signalling than myself, but the story of one of the earliest signal boxes of this type, if not the earliest, on the Midland Railway is not without interest in the exchange of views and arguments between the Board of Trade and the Railway Company.

In 1860/61 the Lancashire & Yorkshire Railway exercised their powers to construct a short line 1,000 yards long linking their existing Goole to Wakefield line to the existing Midland line from Leeds to Sheffield at Oakenshaw, about a mile south of Wakefield. The purpose of this line was to speed the interchange of traffic and the better accommodation of through traffic between the two companies to the south. This short line was completed in the summer of 1861 and in accordance with legal requirements an inspection of the line was made by Capt. Tyler, the Inspecting Officer of the Board of Trade, on 26 June 1861, and his report was made the following day.

"At the Lancashire & Yorkshire junction a 'raised stage' of a superior description had been erected and the points and signals have been placed conveniently under the hand of the signalman". Capt. Tyler recommended that an "apparatus shall be applied to them such as is now coming into common use" so providing some form of interlocking and also that "additional cover at the sides and front shall be provided for him" [the signalman]. The Engineer of the Lancashire & Yorkshire duly gave an undertaking that Stevens apparatus would be applied for connecting the working of the signals with the switches within six weeks.

Capt. Tyler went on to say that the Midland Junction was very inferior; "the signalman's platform was on a level with the ground, the signal handles and the point handles are neither of so good a description nor so conveniently arranged for working, and the Regulations printed and posted up on a board in the signalman's cabin are of an objectionable description".

He recommended the construction of a raised stage with proper cover for their signalmen and to furnish better levers for the points and signals placed conveniently upon such a stage. "Under the present arrangement the point levers are short; they are too near the line and they have no catch so that the signalman is obliged to hold his hand nearer than is necessary to the line. They should also [interlock] the points and signals".

In view of the foregoing and the unsatisfactory method proposed of calling on trains by hand signals, permission to open was refused by the Board of Trade.

This brought forth an immediate response from James Allport, General Manager of the Midland, in which, regarding the raised stage and interlocking arrangements, he said that "for many years the junctions upon this railway were worked with a single semaphore but that upon the recommendations of the Inspecting Officers we have latterly adopted the double semaphores at all new junctions and have altered the signals at some old junctions, and this mode, as already approved upon other parts of the line by the Board of Trade, has been applied to the junction at Oakenshaw".

He further said that his officers had inspected and reported upon the apparatus for connecting the points and signals in a similar way to that recommended by Capt. Tyler, and that "it was not considered so perfect and safe a mode of signalling as that in operation at all the Junctions upon this Railway".

With regard to the point handles being near the line, he said "there are hundreds of point levers upon this and other Railways quite as near to the main line that have been in use for many years and the experience thus gained has proved them to be perfectly safe".

He concluded by saying that the public had been informed that the line was to be opened on 1 July and hoped that the ban would be lifted.

A reply from the Board of Trade was not sent until 1 July and the ban was not lifted. Capt Tyler could see no good excuse for Mr Allport objecting to afford shelter to the signalman or to raise his platform above the level of the permanent way so as to give him a better view.

In view of the determination of the Board of Trade James Allport agreed to provide, within six weeks, the raised stage with cover and to interlock the points and signals with levers placed on the raised stage. At the same time he emphasized the efficiency of the existing signal arrangements on the Midland and their comparative freedom from accidents and went on to say that the Directors must leave the responsibility of the adoption of this new system with the authorities. In his opinion, the new system with its complicated machinery was much less safe and efficient than the existing arrangements.

On being given the undertaking to comply with their recommendations, the Board of Trade lifted the ban. Capt. Tyler reported, in passing, that the necessity for these improved arrangements had been demonstrated by accidents on the Midland Railway as well as other lines.

In a further letter, James Allport asserted that the interlocking system is unquestionably new to the Midland Railway and he contends that the signalman being on the ground near the points is much more efficient than his being on a raised stage away from them. This letter is the evidence on which I suggest that the Oakenshaw box was probably the earliest one of its type on the Midland Railway and the earliest example on that line of signal interlocking.

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FOR SALE OR EXCHANGE - RAILWAY SURVEYS ?

by P. Stevenson

By the kind permission of Mr P.A.Kennedy, previously Archivist to the County Council, and of his successor, Mr W.R.Sergeant, the writer has been able to make an exhaustive study of the 264 railway plans deposited with the Nottinghamshire Clerks of the Peace since 1813. Much printed matter stands in need of correction in the light of the information obtained and would have benefited by a closer study of this source in the first place. Further contemporary evidence has still to be sought in substantiation before going into detail on that score, however, and the writer is here concerned with a more curious situation. At various times, particularly during the "mania", but also continuing into a much later period, different promoters have, sometimes at the same time, entered almost identical schemes, in some cases amounting to exact copies of all or parts of someone else's plans. In a few cases this can be explained by a common purse among the promoters but in others parallel action was taken by groups which appear to have been bitter rivals. Was there, perhaps, in some of these cases collusion or a leakage of information ?

The first faint signs of the process appear in 1832, when the MIDLAND COUNTIES promoters adapted Josiah Jessop's two-year old LONDON NORTHERN plans between Pinxton and Leicester; their development is another story. Progress was then straightforward and uncomplicated until 1836, when the legislature imposed its extremely arduous Spring Deposits. Until 1824, Notice of Application and Deposition of Plans was performed in August or September. In that year the deadline was extended into October and November and later confined to the latter month. While this still applied to all other Second Class local Bills, in 1836 Parliament, against the advice of every engineer of repute, decreed that in future railway plans must also be deposited during the previous February or March. Whatever the reason, and there were several advanced, the results, prepared in the worst possible weather conditions, were chronically imperfect and hastily compiled. It was often necessary to introduce amendments into the Autumn plan, where there had been any land developments in the interim, and until 1842, when the Order was rescinded, almost every plan in this collection bears mute witness to the difficulties imposed by this requirement. Thus the NOTTINGHAM & LINCOLN plan of March 1840, is quite literally a scissors and paste edition of the three-year old HULL, LINCOLN & NOTTINGHAM project. First introduced by W.D.Holmes in November, 1837, with little more than the rough field survey, his MIDLAND GRAND JUNCTION plans were polished up through the next four Sessions, taking on meantime a modified MIDLAND GRAND UNION title. The final product, which would have run from Lenton to Eckington, was still inferior to the serious projects of the previous period. It set out a perpendicular junction with the Midland Counties line and was apparently intended to be continued southwards.

Formulated in anticipation of the amalgamation, plans for the constituent companies' Lincoln extensions from Nottingham and from Wath-on-Deane were prepared by the newly-formed MIDLAND RAILWAY COMPANY in

November 1844. Not unnaturally, the two plans dovetailed together neatly at Lincoln although in the event only the Nottingham scheme was successful. It was not surprising, therefore, that the Wath-Lincoln project should re-appear in the following Session with little alteration, nor that 2½ miles of its surveyed route should also appear in the Company's Newark-Gainsborough plan. Less expected, however, was the direct appropriation of 33 miles of this survey between Lincoln and Doncaster in Hudson's last desperate stand against the LONDON & YORK, which simultaneously appeared as an EASTERN COUNTIES RAILWAY EXTENSION from Lincoln to Milford - he was hoping to induce the Cambridge & Lincoln promoters to fall in line. Hudson's control of the two companies involved obviously explains the ready provision of these surveys. The MIDLAND COMPANY was also committed to a curious series of overlapping schemes during this "mania" Session, 1845-6. Not content to rely on the individual success of its Clay Cross & Newark scheme, it duplicated 3½ miles of the route between Clay Cross and Doe Hill by its Pye Bridge & Clay Cross plan and another four miles between Kirkby-in-Ashfield and Mansfield by its Pye Bridge & Mansfield project. 1½ miles of the last portion were also followed by the Nottingham & Mansfield plan, the sheet annotations being corrected accordingly. Such was the pressure upon engravers at this time that they appear to have almost universally adopted the use of company initial notation for the several sheets of the now standard dissected surveys to avoid loss and misplacement in binding up. It might be excusable for a single company to juggle with its own surveys in this way but there were other more extensive exchanges, indicated below. Strange to relate, Parliament apparently overlooked the situation and authorized the Clay Cross - Doe Hill and Sutton - Mansfield sections in each of two separate Acts; neither was built under these powers !

The reason for this furious scramble was, of course, the intense competition, first from the LONDON & YORK and the embryo MS&LR group in 1844-5 and then from a host of secondary promotions in 1845-6. Suspension of the LONDON & YORK and SHEFFIELD & LINCOLNSHIRE JUNCTION schemes from the first to the second of these Sessions gave ample opportunity for competitors to poach their surveys and while it may be that geography dictated coincident routes for these two companies' lines between Sykes Junction and Lincoln, it must be borne in mind that the S&LJ had originally planned a rather different and more southerly route from Clarborough into Lincoln. This had been rejected in favour of the L&Y and the company introduced a separate Bill for its new Lincoln branch. Both companies secured the construction powers and then agreed that the GREAT NORTHERN RAILWAY, as the L&Y was corporately known, should exercise them. Alongside these chief protagonists, the DIRECT NORTHERN and CAMBRIDGE & LINCOLN schemes, the 1844-5 Session had witnessed a LINCOLN, YORK & LEEDS DIRECT & INDEPENDENT scheme. Modified in detail, it reappeared alongside the suspended and re-committed projects in the following Session, freshly styled CAMBRIDGE & LINCOLN EXTENSION & LINCOLN YORK & LEEDS JUNCTION RAILWAY. So many fresh schemes had also appeared that no portion of the county escaped competition although much of it was along parallel routes. In some cases, however, there was evidently both collusion and leakage ! The L&Y plans having been common knowledge for twelve months, it is not surprising that they should lend themselves over the three miles between Barnby Moor and Retford to the LEEDS, MIDLAND

& LINCOLNSHIRE JUNCTION although this project aimed to connect the MR and S&LJR lines. In a similar fashion, the GAINSBOROUGH NEWARK & NOTTINGHAM RAILWAY proposed to use seven miles of L&Y route between Newark and Normanton.

Several projects vied with one another for occupation of the MANSFIELD & PINKTON property, but this was well defined and had been in active use since 1819. Two of the competitors, however, occupied identical routes beyond Sutton-in-Ashfield to Teveral and Clay Cross. But the NOTTINGHAM, MANSFIELD & MIDLANDS JUNCTION approached from Nottingham, while the BOSTON, NEWARK & SHEFFIELD project cut across at right angles near Mansfield and continued to join the S&LJ route at Kiveton Park. Not content to rely on that party's independent success, the BN&S plans also incorporated the remainder of the S&LJ route into Sheffield. There may well have been common financial interests involved here but one wonders about the PONTEFRAC, DONCASTER, WORKSOP & MANSFIELD JUNCTION. Engineered by different authorities, this group's plans were unashamedly cribbed from the BN&S between Mansfield and Whitwell. No attempt had been made to tidy up arrangements at Mansfield where the last of the BN&S sheets used continued into oblivion and all the sheets had the initials PDW&M hastily substituted in script for the original printed BN&S page titles. Did Sanderson sell his surveys to three different groups or were they really in league with one another ?

In the case of the AMBER GATE, NOTTINGHAM & BOSTON & EASTERN JUNCTION and the GRAND UNION schemes, geographical considerations presumably dictated a common route via West Bridgeford and Bingham but although their plans were not exact copies, one group must surely have been aware of the other's progress ! An unusual variation was provided by the PETERBOROUGH & NOTTINGHAM JUNCTION project which deposited one set of plans for a line from Nottingham to the MR at Melton and at Stamford and another identical set truncated to terminate at Melton. Most of these schemes failed at various stages and the problem is only of academic interest. The GNR continued to follow the MR's lead during the next few years and introduced duplicate applications for certain sections of its numerous deviations. Details are better left for a full analysis of this company's progress.

Some of the strangest cases occur during later periods. In 1860-61, when the MR first unsuccessfully proposed to extend its line from Mansfield to Worksop, the survey began $1\frac{3}{4}$ miles short of the terminus in order to cut out the severe 10 chain curve over the original M&PR viaduct at Kings Mill but joined the existing line for a short distance at the site of the later Mansfield South Junction before turning away round the north-west side of the town. Bereft of the deviation at Kings Mill, the same plan was deposited in 1864-5 by the MS&LR in opposition to the MR's renewed application for a modified route over the present viaduct. The Bill was dropped upon the promise of running powers into Mansfield over the MR but the problem remains; by what process did the MS&LR select an exactly identical route to that surveyed by its opponents four years previously ? Repetition in the case of the companies' joint efforts to secure a line between Conisborough and Shireoaks has a logical sequence. Together with

the notorious Doncaster & Rushton project of 1872-3, the companies deposited plans for this isolated section, an inverted Y between Conisborough, Wales and Shireoaks. Rendered ineffective by partial rejection, the major project was dropped, but the MR continued on its own account to press for the subsidiary line, depositing the same plan again in the following year bereft of the arm from Anston to Wales. It was again unsuccessful and the line was re-surveyed for fresh attempts by the MR alone in 1889-90 and by the Sheffield & Midland Companies Committee in 1890-1. Nottinghamshire records do not cover the subsequent development of this area.

A particularly puzzling case of duplication occurred in 1891-2. The MS&LR had just been authorized to build its Beighton-Annesley line but refused its first attempt to secure further extension to London. The plans for that purpose, deposited in November 1890, also included minor deviations of the Beighton-Annesley section and a branch from Kirkby-in-Ashfield to Pleasley. At the same time the GNR was seeking a similar line from Annesley to Pleasley and Langwith, joining the MR Worksop line at Norwood Siding. Neither being successful, both companies went ahead with another application for the following Session. Apart from the complications introduced by the LD&ECR's incorporation during the year, the GNR plan was unaltered. That of the MS&LR, however, which accompanied renewed application for the London Extension, now continued beyond Pleasley over exactly the same ground as the GNR's previous attempt - identical to their renewed application except that it neglected the now corporate existence of the LD&ECR. In the final analysis the GNR succeeded, although it afterwards modified its plan for a further tunnel under the Shoulder of Mutton and followed the MS&LR's proposed route to Kirkby South Junction instead. As a result $1\frac{1}{2}$ miles of MS&LR metals and their tunnel were interposed between the GNR Extension and its parent Leen Valley Branch. The problem remains; by what lawful process did the MS&LR manage to produce an exact copy of their opponent's previous plan? It might appear that, once deposited, any plan became common property for others to adapt as they saw fit!

The last example of any note occurred in 1914-5 when the SOUTH YORKSHIRE JOINT Authority and a WORKSOP & BAWTRY RAILWAY applied for contiguous routes between Oldcoates and Firbeck Colliery. The apparently independent project was to have connected the GNR, GCR and MR systems and may well have been promoted by one of the five partners in the South Yorkshire Joint group with access to their plans.

The writer would be most interested to hear members' comments and explanations of the situations described and details of similar occurrences in other areas. Specific enquiries concerning this collection will be dealt with as time permits pending the completion of a detailed analysis.

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The Marple Aqueduct on the Peak Forest Canal is in process of being repaired and restored at a cost of £50,000. The major cost of repair is being borne by the British Waterways Board. The contractors are Messrs Faircloughs of Warrington.

from Brian Lamb

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BOOK REVIEW

THE SEVERN & WYE RAILWAY. H.W.Paar.

173 pages, 9 maps, 39 illustrations. David & Charles, 30/-

The Forest of Dean was described by a writer in Chambers' Magazine in 1864 as "a singular nook of the British Isles." It was indeed, for despite deposits of coal and iron, blast furnaces, forges, and even tinplate works, it lacked the transport arrangements which one would then expect to find in such an industrial area. As the writer of 1864 went on to say: "No railways traverse it, the hills which rise on every side guard it from the incursions of the trains...." This coal and iron complex was still served by horse-drawn tramroads, and although locomotives started to replace horses in the same year as the Chambers' Magazine article was written, it was the end of the 1860s before the Severn & Wye began to transform itself into

a railway of the kind which had served other industrial areas in the country for thirty or forty years. This time lag clearly gives the Severn & Wye Railway more than local interest.

This book, the product of more than ten years' research, is very soundly based upon primary source material. Mr Paar (assisted by Mr L.E. Copeland and the Rev. D.A. Tipper who together composed the group who wrote as "Dean Forester") has drawn upon material at the House of Lords Record Office and among the Gloucester County Records as well as B.R.B. Archives at Royal Oak and from the files of the Gloucester Journal. He has even been fortunate enough to draw something out of that fantastic lucky dip, the Treasury Papers at the Public Record Office, wholly uncalendered for this period. There is much good and original detail in these pages, including two useful chapters on the locomotives which were eventually used on the Severn & Wye from the pen of the Rev. D.A. Tipper, and a number of very carefully drawn maps. But there is little or no attempt to see these particular tramroads and railways against the broader background of industrial development of the area and the markets which were served by it. Indeed, it must be confessed that we learn less about the reasons for the building of these tramroads here than we do from a few pages of Charles Hadfield's Canals of South Wales and the Border. Nor does Mr Paar make much of the leading characters in his story. There is surprisingly little, for instance, on Thomas Sheasby, who ran the concern from 1811 to 1847. In fact, the text misleads us by remarking that he was formerly a coal merchant at Swansea. No doubt he was; but, surely of more importance was the engineering experience he gained as assistant to his father on the Swansea Canal and as engineer of the Aberdare Canal. Again, one would never guess from the occasional references here to David Mushet, one of the original subscribers and an industrialist in the area, that this was the David Mushet whom most people would associate not with the Forest of Dean but with black band ironstone in Scotland or, perhaps, with Papers on Iron and Steel. He had moved to Coleford in 1810 while the first part of the tramroad was being built, a coincidence perhaps worthy of further investigation. It is a pity that a book with so much that is fresh and original to commend it should be marred by a blinkered determination to limit itself to the Forest of Dean and nothing but the Forest of Dean. After all, having spent years in the archives, it would have been a comparatively slight additional task to incorporate in the text background information which could be readily culled from a few books, some of which are, in fact, referred to in the notes.

T.C.B.

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Mr Brian Lamb, of 19 Moss Vale Crescent, Stretford, Manchester, would be glad to hear from anyone who can help him to fill in gaps in his collection of Journals. The issues required are as follows:
1955 all copies; 1956 all copies; 1957 January, March, November; 1958 January; 1959 January, September, November; 1961 May, September, November.

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LOCAL GROUP SECRETARIES

LONDON: J.A.Hall, Flat 3, 110 Crouch Hill, London N.8.

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CORRESPONDENCE

Corrections to MacDermot's G.W.R.

Sir, - May I briefly fill out Mr H.A.Vallance's reference to the errata sheets of E.T.MacDermot's History of the Great Western Railway (Journal, September 1963, page 84) ? These corrections were put together by Mr MacDermot in 1938 at my suggestion and brought out by me (not Oakwood Press) on separate sheets for slipping into the three books. After the war I asked the author if he had any further corrections, and he sent me a supplementary list, adding some new corrections and cancelling a few of the previous ones. This modified and expanded list was printed in the Journal of Transport History for May 1954 (Vol.1, pp.185-7); this number is, I understand, still available from the Leicester University Press, price 12s.6d. While with further research more minor errata could be discovered (as to my knowledge has been done), the 1954 list does represent the sum of all the corrections accepted by the author in his lifetime.

R.M.ROBBINS

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The First Stockton & Darlington Locomotive.

Sir, - There is a curious disagreement in detail between the references by Samuel Smiles to the No. 1 locomotive on the Stockton & Darlington Railway in his Life of George Stephenson and in Vol.III of The Lives of the Engineers, which is devoted to George and Robert Stephenson.

In my copy of the Life (which is the "Third Edition, revised, with additions" dated 1857) he records that "No.1 engine, the 'Active', which was first delivered upon the line, weighed about eight tons"; and on a later page he describes how "a race actually came off between No.1 engine, the 'Active', and one of the stage coaches travelling from Darlington to Stockton".

In my copy of Vol.III of the Lives (dated 1862) exactly the same references appear, except that the name of the engine has become "Locomotion" - the name which, of course, it still bears on its pedestal in Darlington Bank Top station.

J.G.H.Warren, after listing the first six engines in his book, A Century of Locomotive Building by Robert Stephenson & Co., 1823-1923 states that "it is practically certain that names were not given to the early engines until some time after they had been put into service".

Is there any positive evidence that the No.1 engine on the Stockton & Darlington Railway was named "Active" before becoming "Locomotion", or was Smiles merely mistaken ? And when was the name "Locomotion" given to it ?

J. FOSTER PETREE

Sir, - Mr Stevenson's letter in the July Journal requires some amplification. The Act of 1863 included the Authorization for a railway commencing with a junction with the North Midland line from Derby to Leeds about a mile north of Staveley (Barrow Hill & Staveley Works) station, near the point where the N.M. crosses over the Staveley - Eckington road and the River Rother. The new line would have curved eastward and then rapidly south, east of Netherthorpe (Staveley Town) station, and, following the Doe Lea Valley, would have crossed the Staveley Iron and Coal Company's line at or near Seymour junction. It then continues as described by Mr Stevenson. An Act of 1865, 28 & 29 Vic., Cap 335, allowed the Midland Railway to acquire three small lines of the Staveley Company, and to abandon the construction of about two miles of railway authorized by the 1863 Act from the junction with the M.R. to its crossing of the Staveley colliery railway.

May I say that I consider the publication of Acts of Parliament of one hundred years ago a most valuable feature of the Journal ? At the same time, its presentation may be most misleading unless the reader has an extensive local and/or historical knowledge. As an example, the railway listed on page 42 of the Journal of March 1962, is not for a line from Duffield to Crich (the printer's error is a pardonable one), some seven miles long, as would appear on first reading. It is, in fact, for just over a quarter of a mile of railway, from Ambergate South junction to Ambergate West junction. This was opened in 1863, and allowed through running from Derby to Buxton; prior to this, it would seem that local traffic from Ambergate to Rowsley must have backed out of the station and reversed over Ambergate North junction.

A.L.BARNETT

Sir, - I think that Mr Stevenson, whose letter appears in the July issue of the Journal, page 69, expects too much of my modest attempt to summarize year by year the railway Acts of Parliament of the previous century. To steer a middle course between conciseness and precision is by no means easy, and I cannot hope invariably to satisfy the specialist historian. When I embarked on this task in succession to Mr Clinker I imagined that in most cases it would be appropriate to cite the names of parishes in

which a line terminates. This policy, I found, can lead to pedantry - who, for example, would identify the parish of Holdenhurst with part of Bournemouth ? - while other parishes such as Stockport and Willesden are, or were, inconveniently large. Having abandoned the parish as a unit, only inspiration helped by the British Railways Pregrouping Atlas and Gazetteer, and Bartholomew's Road Atlas of Great Britain can lead me to the right answer. Sometimes a line is described differently in the title, the preamble and the body of the Act respectively, but I never go beyond the four corners of the Act, and terms such as "Stretton Junction" are therefore inadmissible. In the circumstances I feel that my summaries of the Acts, referred to by Mr Stevenson, were fair and reasonable.

Another problem which perpetually confronts me is to decide whether to mention junctions with other lines, but generally I do this only in congested areas. I think it is usually superfluous to record that a new company's line formed a junction with the lines of the existing companies which were authorized to work it. In some cases an omission can be significant - for example the Kettering & Thrapstone Railway did not join the L.N.W.R. at Thrapston. To call attention to such a detail would consume more space than its importance justifies, and I would therefore urge interested readers to consult the original Acts if they can, or to write to me privately if they cannot.

While I have pen in hand, may I make a belated attempt to answer a critic whose letter has appeared in your pages ? In Volume 6, page 100, a member takes me to task for referring to the tunnel under St. Pancras station as Kings Cross Tunnel. It is true that in some official documents this dank cavern is referred to as St. Pancras Tunnel, but according to an article which appeared in the LMS Magazine, August 1936 page 380, a plate bearing the legend "Kings Cross Tunnel, 1486 yards" was affixed near the northern mouth of the tunnel. Can any reader tell me if this plate is still in position ?

GEOFFREY WEBB

Closed station at Leighton Buzzard.

Sir, - About a hundred yards beyond the north end of the platforms of Leighton Buzzard station there was once a level crossing which was stopped up under the London & North-western Railway (Additional Works) Act 1858, apparently in order to facilitate the construction of the additional up line known as the Third Line. The original station stood between this level crossing and the next overbridge, about 150 yards further north, and is shown on the deposited plans relating to the Act of 1858. A year or two earlier an up goods train had run into an empty Dunstable branch passenger train which was waiting at the platform. No-one was injured but the Board of Trade inspector had recommended that a separate platform be provided for branch trains. Some rebuilding of the station would have been necessary to accomodate the Third Line, but I suspect that the new

site was adopted in order to bring the station nearer to the point where the Dunstable branch diverges from the main line. The station is shown in its present position in some further plans deposited in November 1871. The History and Topography of Buckinghamshire by James Joseph Sheaham bears the date 1862 on the title page, but the preface is dated December 1861. On page 704 it is recorded: "The present Railway Station was opened on 14 February 1859, at which time the previous station, which was situated some distance from it, was taken down". I think that this date may be taken as reliable, but I will try to confirm it sometime in the local newspapers. By my calculations it was a Monday. The station was called simply "Leighton" until about 1910. The old name is still displayed on the signalboxes.

GEOFFREY WEBB

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Sir, - In the Journal for July 1963, Maurice Berrill mentions the records made by the National Register of Archives. Members might like to know that records made as far back as 1866 can be examined between 10.0 am and 6.0 pm from Monday to Friday (excluding public holidays) on application to the Registrar, W.D.Coates at Quality House, Quality Court, Chancery Lane, London W.C.2. I might add that the record of transport items is quite remarkable and to many research workers opens up a whole series of repositories.

H. J. COMPTON

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THE FFRWYD BRANCH OF THE ELLESMERE CANAL

by R.J.Dean

Under the first Ellesmere Canal Act of 1793 the Proprietors were authorized to construct a canal from the River Mersey at Netherpool (now Ellesmere Port) across the Wirral peninsula to Chester, thence via Wrexham, Chirk, and Weston Lullingfields to the River Severn in Shrewsbury. Construction was delayed however, as many people objected to William Jessop's route, with its 2½ mile tunnel under Ruabon, and several alterations and deviations were authorized in the next few years.

Work began in 1794, and the Wirral Line was opened the following year. The Main Line between Chirk and Weston, and a branch to the Montgomeryshire Canal at Llanymynech were in use by the end of 1797, but the Chester-Pontcysyllte and Weston-Shrewsbury sections of the Main Line remained on paper as argument raged over the route and expense. Little is heard of the latter section after this, and it was never built. A further Act however was passed on 14 May 1796, authorizing the construction of a new route from Pontcysyllte to Chester, and the Company finally took the plunge

and decided to start cutting.

The canal was to run from the north end of the Pontcysyllte Aqueduct, then in the course of construction, up a flight of locks to Plas Kynaston, and thence on the level through Ruabon, west of Wrexham, and into the valley of the River Alyn. Here it was to descend by a further flight of locks into the Cheshire Plain to join the Wirral Line and the River Dee in Chester. There was to be a branch to Holt, and another $5\frac{1}{2}$ miles long from the north end of the summit level through Gwersyllt and Ffrwyd to Coed Talon, where there was to be a large reservoir approached by yet another flight of locks. The purpose of this branch was to tap the many collieries, iron, and lime works in the area.

It was on this branch, on the level section between the village of Ffrwyd and the Main Line, that work started. Contracts were placed with Fletcher and Whittle, who were also involved in cutting other parts of the Canal, and also with Richard Kirk, a local landowner, who had collieries and ironworks near Ffrwyd. At that time Telford was the Company's Engineer, but how much he had to do with the branch is not known. Construction began in May 1796, as soon as the Act was passed, and must have been well advanced by November of that year, for one of the Company's minutes orders "that Richard Kirk do lift with his engine the water to the level of the Frood (sic) branch, and that he be allowed the expense that such additional lift may cost".

Times were not favourable to canal construction however, and the Company soon realised that their funds would not be sufficient to finish the work, so they decided to cut their losses by dropping the whole Chester-Pontcysyllte scheme. All work on the branch was ordered to be stopped in June 1798, and was never resumed.

Altogether $2\frac{1}{2}$ miles of canal were built, at a total cost of £9,135. 1. 4d. No locks were needed, the whole length being 380 feet above sea level. It ran from the Moss-Gwersyllt road at the latter place, near to the intended junction with the Main Line, in a northerly direction for about $1\frac{1}{2}$ miles, then it turned abruptly south-west, and followed the contour around Windy Hill to a basin about half a mile S.W. of Ffrwyd.

At the Gwersyllt end the branch is lost in a housing estate which is rapidly engulfing more of it, but further north it is easily traceable. Along the eastern slopes of Windy Hill there is an untouched section almost half a mile long, of great interest as it represents a canal as built, and undamaged by either silting or bank erosion, as this part of the branch never held water for more than a couple of years and was almost certainly never used. The canal is 33 ft. wide at the water level, and 5ft. 9ins. deep, with a flat bottom and 8 ft wide towing path.

The canal to the west of the Hill is much overgrown, and is also built on in places by the now disused Brynmally Colliery branch of the Great Central, which cuts across it several times in following an almost parallel course. On the slopes behind Ffrwyd Farm the branch can be seen emerging from the old railway embankment, to terminate a little further on

in a triangular basin. The rest of the canal is indistinct, and has either been built on, levelled, or destroyed by open cast mining.

At least three bridges were made, and two of them, to the north and west of Windy Hill, are marked on the 1" Ordnance Survey Map of 1838. None remains standing, but the stones of a third near Old Hall Farm have been built into a wall, and bear an Ordnance Survey bench mark. About 200 yards from the Ffrwyd basin the canal intersects a road, and as this is about twenty feet below the canal level it is highly probable that an aqueduct was built here. The 1838 Ordnance map shows a bridge over the road on this site, although the canal itself is only indistinctly marked, and further evidence is given by one of the retaining walls of the embankment approach to the old railway bridge which now occupies the site, this wall looking suspiciously like the foundations of another structure. A local gentleman whose grandfather built the railway bridge in 1860, and who can remember skating on a water-filled stretch of the canal, is fairly sure there was an aqueduct here.

It is doubtful if any other work was carried out on the branch, although the length is given as three miles in the "Report to the General Assembly of the Ellesmere Canal Proprietors 1805", and no other traces of cutting can be found.

The Ffrwyd branch has always remained isolated, over eight miles from the nearest point on the canal system, and it is highly unlikely that it was used. However, in Pugh's *Cambria Depicta*, published in 1816, there is a romantic view of Caergwrle Castle, which shows the canal in the foreground, complete with a horse towing a laden boat towards Ffrwyd. One can only suppose that Mr Pugh was blessed with a fertile imagination, for he shows a boat on a canal which by that time was waterless and derelict !

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ARCHIVES AT SHEPHERDSWELL

by Ian L. Wright

Sidelights on the running of the light railways of the late Colonel Stephens were discovered when I visited Shepherdswell station on the East Kent Railway in the summer of 1948. After making a journey to Wingham and back on the afternoon mixed train I began exploring the surroundings of the station and discovered a curious octagonal iron shed with its door wide open. Strewn all over the floor were the contents of sacks and boxes of correspondence and goods invoices relating to the railway. In a few moments I had collected goods invoices for the years 1921-5 bearing the titles of twelve railway companies. Among the papers were two letters written by Colonel Stephens in 1917.

The goods invoices of forty years ago reflect the fuller use of rail freight facilities by manufacturers who nowadays own their own road transport fleets or in any event now consign freight by road. I quote one or two examples:

GWR Southall to Eastry. Invoice for 1cwt 14lbs Margarine
for Master of Eastry Union Workhouse 27/6/21.

Midland: Barnsley to Tilmanstone Colliery

1 consignment Miners Lamps 15/6/1925.

LBSCR. Willow Walk to Ash 84 Lbs Flour 30/6/1921.

GCR. St Helens (Cent) to Staple 5cwt crate of glass 8/6/1921.

Cheshire Lines Committee c/o Midland Railway: Liverpool Huskisson to Eythorne
Consignment 1 drum Paint 24/6/1921.

I quote the two letters: EAST KENT RAILWAY Engineers Office
Salford Terrace
Tonbridge
March 29th, 1917

H.M. Springgay Esq,
Shepherdswell

Trittons Bank

Please note that the gradient at the Sessions House end of the new bank may be 1 in 40. The old bank is not to be disturbed, the new 1 in 40 gradient running into it at a point shown on the enclosed section which is about 8 chs. from the level crossing of the public road near the Sessions House.

Please let Brenchley know and let me know he understands.

Yours faithfully,

H.F. Stephens.

EAST KENT RAILWAY General Manager's Office
Salford Terrace
Tonbridge
March 28th 1917.

Dear Sir,

Weekly work books.

I notice on going through these books this week that Osborne on the 20th inst enters in his book "blowing down and refilling boiler Loco No.2" and on 21st inst same loco is reported for tube leaking. I am not surprised at tubes leaking after such unusual practice. Please instruct all concerned in the Loco dept under no circumstances must they wash out boilers when hot, or even warm, neither must they empty boilers by blowing off, and then refill same. No tubes or stays will stand this without leaking.

The fitters book is only made up to Wednesday the 21st inst., why not made up to, and including Friday 23rd inst. Please take up with this man.

Yours faithfully

H.F. Stephens

H.M. Springgay Esq.

I have preserved the two Colonel Stephens letters and a few of the goods invoices. I often wonder how many other railway enthusiasts visited the curious iron building at Shepherdswell and whether, as I suppose, the Colonel Stephens letters were eventually burned.

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FOR GROUP SECRETARIES SEE PAGE ONE HUNDRED AND SIX