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The Journal: The Response

The response to the Editor's appeal in the November *Journal* for material to publish was magnificent, and brought in at least twenty articles of varying length, and miscellaneous small items. All of these will be published, it is hoped, during 1976, but with the best will in the world, and even with a 40-page issue on this occasion, it would be possible to print only a comparatively small percentage of the total material received. It has also been necessary to exclude, temporarily, certain articles which could have been included if it had been possible to tailor them to the required length; and tailoring, unless done by the author (when there is time to do it) is undesirable in specialist articles.

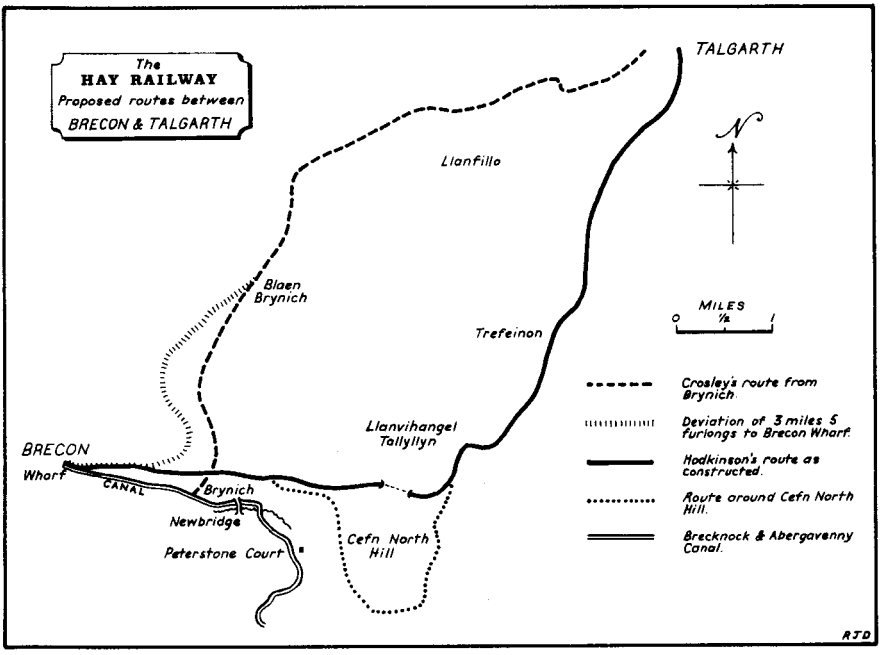
The Editor would like to express his thanks to those who were able to respond (it is not everyone who has the gift of writing) and particularly to those who took the trouble to write and express their appreciation of the difficulties. Editorial work can be a lonely job, and not always rewarding, but it is pleasant to know that there are still many who will hurry to help when the alarm sounds.

The Hay Railway: The Passing of an Early Railway Act

BY JOHN VAN LAUN

On 28 March 1793 the Brecknock & Abergavenny Canal Company obtained its Act for a $32\frac{7}{8}$ mile long canal from Pontymoile on the Monmouthshire Canal to Brecon. It was not long before an extension was proposed from Brecon via Hay to Whitney, where the canal would join the River Wye. A notice dated 10 May 1793 appeared in the *Hereford Journal* on 29 May and 6 June announcing a meeting of subscribers at the Shirehall in Brecon for the proposed extension. The meeting took place as advertised on 11 June[1] with Walter Wilkins, a Brecon Banker in the Chair. The subscribers considered the plan and estimate of Thomas Dadford, the Brecknock & Abergavenny Canal Engineer, for a canal from "the intended aqueduct" on the Brecknock & Abergavenny Canal to join the River Wye at or near Whitney. £47,000 was subscribed and a sum reserved for absent landowners and others that might be entitled to shares.

It was resolved that application be made to Parliament for an Act to construct the canal and a committee of seven appointed, amongst whom were Walter Wilkins and Jefferies Wilkins who were to be among the original subscribers of



the Hay Railway 17 years later. James Jones and Edward Allen of Brecon and Hay respectively, were appointed Solicitors to promote the bill. They too were subscribers to the Hay Railway. Some further meetings must have taken place because the Parliamentary Notice was not issued until 11 September 1793.

After this, nothing further is heard of a means of connecting Brecon with Hay, until a notice appeared in the *Hereford Journal* dated 13 May 1805[2] for a meeting of subscribers to consider the "survey of a tramroad from Brecon to Hay". The Brecknock & Abergavenny Canal was opened to Brecon on 24 December 1800 and presumably the people of Hay were anxious for a link with the canal. The meeting was held at the *Swan Inn*, Hay, on 6 June, but after this nothing happened for a further five years.

It was not until 7 July 1810 that a group of landowners, bankers, coal and iron masters convened a meeting to consider the "Herefordshire & Breconshire Railroad".[3] The first meeting took place on 26 July[4] and it was agreed to form a committee to have the 1805 line re-surveyed and that the tramroad should run from the Brecknock & Abergavenny Canal to Parton Cross near Eardisley. It was decided that whole shares would be £100 each and that Wilkins and Co., the Brecon Bankers, should be appointed Treasurers. A notice dated 20 August 1810[5] appeared in the *Hereford Journal* "for leave to bring in a Bill for making and maintaining a RAILWAY or TRAMROAD to commence at a certain place called Brynych . . . and to extend to a certain place called Parton Cross". On 23 August the Canal Company[6] allowed its engineer William Crosley to re-survey the line but presumably he must already

have suggested a route by the time the Parliamentary Notice was drawn up on the 20th. In September he produced a hand drawn plan which showed the route from Brynych(*sic*) to Parton Cross.[7]

A General Meeting was held on 26 October[8] to consider Crosley's Report. He estimated a single line for £42,000 including the land and all other expenses which could be converted into a double line. Receipts would, he thought, be £5,918 (an average of 3d. per ton/mile) for goods transported from Brecon, and £1,479 back carriage. Maintenance he estimated at under £1,000. The meeting "upon mature consideration" felt that £42,000 would be "fully adequate" for the construction of the tramroad. It was to prove however, totally inadequate. The final cost was £63,380.3.4d.[9] and the highest receipts were £2,663.10.5½d. and the lowest annual expenditure £1,574.13.6d. The meeting resolved that unless £35,000 be subscribed by 1 February 1811 the subscribers would not be bound for the full share value. By 18 January[10] £31,600 had been subscribed towards the "Breconshire & Herefordshire Tramroad" and it was agreed that shareholders of £500 and upwards should be appointed to the Committee "to forward the general purposes of the undertaking". The larger subscribers were the Earl of Oxford £2,000, Sir Charles Morgan, Bart., £2,000, Walter Wilkins M.P., £2,000, Samuel Poplow £2,000, Viscount Hereford £1,000, Sir George Cornwall £1,000, T. F. Lewis £1,000, Walter Wilkins Jnr. £1,000, Thomas Watkins £1,000, James Jones £1,000, Tomkins Dew £1,000, Thomas Powell £1,000, William Davies £1,000. By 18 February[11] Thomas Wood and John Macnamara had also subscribed £1,000 making a total of £51,300 subscribed.

On 1 February it is recorded[12] that several owners of estates in the counties of Brecon, Radnor and Hereford petitioned the Commons for leave to bring in a bill for a tramroad as specified in the Notice of 20 August 1810. On 14 February leave was given and on the 19th the bill was read for the first time. Strangely, the bill was not submitted for consideration by the subscribers until 20 February.[13]

On 6 March several persons with an interest in the Brecon (*sic*) & Abergavenny Canal petitioned the Commons. They maintained that many inconveniences could be avoided and the public derive a greater advantage if the tramroad started near the public wharf of their canal in the Parish of St. John the Evangelist, instead of Brynich, and passed near the village of Eardisley instead of Parton Cross. This petition was referred to a Commons Committee. The bill received its second reading on 18 March and the Committee reported on the 19th that the owners and occupiers of the land for the proposed deviation of three miles five furlongs had given their consents (save one who had not replied), but the proprietors of land near the village of Eardisley had not. This report was considered by the House of Commons on 1 and 4 April, and on 5 April leave was given to deposit plans of the intended deviation.[14] Crosley drew up the plans which show "the proposed deviation" as well as the route from Brynich.[15] The printed plan for this is dated September 1810 but presumably the original plans were used and the deviation superimposed. The notice for the deviation was dated 8 April 1811 and printed in the *Hereford Journal* on the 10th. It was signed by James Spencer who was Clerk to the Hay Railway until 1847. In the notice there was no mention of a change of route to Eardisley village and Crosley's plan mentioned above shows the original route to Parton Cross.

Some amendments were made when the Committee on the bill reported on 1 and 10 May. On 14 May the bill was read a third time and sent to the

Lords. In the Lords the bill was read on 14 and 15 May and reported on the 17th when it was noted "the Deviation, which commences at *Blaen Brynich* and terminated near the public wharf of the *Brecknock & Abergavenny* Canal . . . (which Deviation was proved to be more commodious for the Reception and Delivery of Goods to be conveyed along the said Railway, as also for easing the Line of Road)". The bill was read for a third time on 21 May and received royal assent on 25 May.[16]

By 8 July 1811 the Proprietors of the Hay Railway had had further thoughts about Crosley's route and advertised for an "Engineer willing to undertake the resurvey of the line . . . as soon as the harvest is over."[17] His "proposals" were to be sent to James Spencer, the Clerk, for consideration by the General Assembly on 22 July. At this meeting a committee was elected for the management of the railway. The Act allowed for the election of 15 or more persons having five or more £100 shares in the undertaking, three of whom were to be a quorum.[18] At the meeting on[19] 31 July the Committee engaged John Hodgkinson the well known tramroad engineer, to make a survey and report on the line for £65. He was to mark out the line with pegs and to report on 7 September with plans, sections, and an estimate. At the same meeting £1,000 was to be paid to James Spencer towards his account for soliciting the Act. Crosley had written demanding payment for his services but payment was not authorized until he had submitted necessary sections of the line at the meeting on the 7th. By 7 September[20] the sections had been submitted and £180 was paid to William Crosley "in full discharge of the balance of his account". At this meeting John Hodgkinson made a report on the Parliamentary line and recommended an entirely different route between Brecon and Talgarth, to run via Llanvihangel Tallylyn. The Committee adopted his suggestion and he was ordered to make plans and surveys and give his report on 30 September.

The *Hereford Journal* of 11 September carried the notice that application was intended to be made to Parliament for leave to bring in a bill to amend the former Act so that the tramroad should run to Eardisley village and not Parton Cross, and should pass through a tunnel or an archway, (a common term for a tunnel at this time) under a hill referred to as Cefn North. On 15 September[21] a circular letter was sent out by the Clerk to the Company to all the subscribers informing them that the next General Assembly would be held on 30 September to consider Hodgkinson's Report. Hodgkinson's printed report[22] showed that the route surveyed by Crosley had a rise of 309ft. in the first three miles six furlongs, (a gradient of 1:66). For the remainder of its course it dropped 525ft. to Parton Cross. From the report it seems that Hodgkinson had suggested at a previous meeting the advantages of taking the line from Newbridge through Llanvihangel Tallylyn but had received directions from the Committee to take up the original line from the point at Brecon Wharf. Hodgkinson had therefore prepared two lines, one round the hill, referred to as Cefn North and the other by means of a short tunnel. He recommended the former as the summit turned out to be 34ft. lower than that attained by the shorter route through the tunnel. The rise on this route from Brecon would have been 154ft. 2ins. and the fall 370ft. The worst gradient on the line was 1:130. Hodgkinson estimated that on the original route proposed by Crosley one horse would only haul one ton either way over the elevation of 309ft. On his proposed amended line one horse would be able to draw three tons either way over the summit of 154ft. He reckoned that haulage charges on the original line would be 3s.1d. per ton for coal from Brecon to Hay, and from Hay to Eardisley 8d. per ton. He estimated that

back carriage haulage per ton from Eardisley to Brecon would be 4s., or from Hay to Brecon as 3s.6d. His estimate for the construction of the line authorized by the original Act of Parliament was £57,603.18s.6d. a considerable increase on Crosley's estimate of £40,000. He estimated the haulage charges on his proposed line as from Brecon to Hay 1s.9d. per ton of coal, and from Hay to Eardisley 8d. per ton; back carriage from Eardisley to Brecon as 1s.9d. per ton or from Hay to Brecon as 1s.3d. per ton. His estimate for the construction of his line was £50,375.12s.0d. In spite of the notice of 11 September the General Assembly adopted the line as suggested by Hodgkinson round the hill. It was resolved to make application to Parliament at the next session to amend the original Act accordingly. The length of the tramroad as shown on the plan would have been 26 miles 1 furlong.[23] The alternative route through the tunnel was 24 miles 1 furlong and was the route ultimately constructed. Hodgkinson's estimate for this route was £52,743.18s.0d.[24]

Immediately following the General Meeting the Committee[25] met and Messrs. Frere, Cooke and Powell, who were providing tramplates, were to be requested to consult with Hodgkinson, on the best point for delivering the remainder of the tramplates, so as to be more convenient to the amended line and to save some expense of delivery. The Clerk was to treat with owners of the land through which Hodgkinson's route would pass. Hodgkinson was instructed to mark out the line from Forddvawr to Eardisley so that the Committee could deal with the owners of the land through which the line would pass. On November 8[26] Hodgkinson was able to report that he had marked out part of the line proposed by him and that the line between Sheephouse and Stow (a distance of nearly 7 miles) would keep within the distance allowed by the original Act except through the land of two persons. Hodgkinson's plans show a deviation of about 1 mile at the Eardisley end. At this meeting Hodgkinson was instructed to prepare a plan and specification of the bridge intended to cross the Wye near Whitney Bridge. Hodgkinson's plan shows the tramroad crossing very close to Whitney Bridge whereas that of Crosley's shows the road crossing well upstream. In the end the tramroad used the existing roadbridge.

At the same meeting the Clerk was instructed to prepare a draft of the intended new bill.

On 6 December[27] the Clerk was ordered to advertise for tenders for 20,000 stone blocks to be delivered to the quarries near Hay and for a person to excavate the lands near Hay, this section being clearly within the distance allowed by the original Act. By 8 January 1812[28] the contract was entered into with John Williams of Llanfoist and John Jones of Abergavenny for making one mile of road from near Hay Bridge westwards towards the Sheephouse for a sum of £1,400 and a contract was also entered into with the same persons for 20,000 stone blocks at 7½d. per block (enough for about 6 miles). At this meeting the Clerk was ordered to write to Mr. Parry stating that the Committee would accede to his request to avoid his orchard in Eardisley. In fact this does not seem to have been complied with because in the Schedule for the Act,[29] Mr. Perry's orchard is included. James Spencer, the Clerk, was to be paid the sum of £300 for the purpose of soliciting the new Act. At the same meeting the petition to Parliament was read, and it was resolved that it be presented without delay.

By 22 January[30] some of the proprietors seemed to have thought that the original Act was sufficient and they intended to petition against the unnecessary expense of amending the original bill. However, the bill was read for the first time in the Commons on 27 January.[31] On the same day a notice[32] was

issued which stated "that the Company of Proprietors at their last General Meeting did not decide on the plans submitted to them without due deliberation", and that the Committee "have been guided solely by the instruction which was given them".

On 4 February 1812[33] the bill was read for a second time and committed. By 12 February,[34] 32 of those that had signed a petition against the proposed amendment to the original Act had changed their minds and were urging every proprietor to attend the General Meeting of 13 February so as to see a plan of the improved line. By 15 February[35] the Clerk was instructed to carry forward a bill "no other plan of any description having been submitted for . . . . inspection or approbation".

As the bill was at the committee stage, representatives of the Hay Railway Committee, moved to London. A meeting at Canon Coffee House, Charing Cross on 25 February was adjourned until 2 March which in turn was adjourned until 3 March.[36] This meeting was Chaired by Sir Charles Morgan. Three petitions against the bill had been presented to Parliament, the most important being that of Thomas Harcourt Powell of Peterstone Court.

Before 26 February,[37] Thomas Harcourt Powell, had petitioned against the bill for awarding the land round Cefn North Hill, as it went close to his estate, and it was resolved at this meeting on 3rd, that Sir Charles Morgan and Thomas Wood should see Thomas Harcourt Powell in an attempt to get him to withdraw his petition. On 7 March[38] Sir Charles Morgan was able to report to the meeting held at his house in Pall Mall that they had induced Thomas Harcourt Powell to withdraw his petition by agreeing, on the part of the company, to abandon the route round Cefn North Hill and to re-adopt the line through the tunnel to Llanvihangel Tallylyn and to allow him £200 towards the expense of altering the turnpike at Llanvihangel. He also agreed to sell land to the company for the branch to the canal at Newbridge. This meeting with Thomas Harcourt Powell must have taken place before 6 March because on that day the House of Commons Committee reported with some proposed amendments.[39] At the next meeting,[40] it was resolved "that the managing Committee should undertake in the name of the proprietors, to construct a line of tramroad to connect the new road to be constructed under the new powers of the Act with the canal at or near Newbridge". If they could not construct it under the powers of the amended Act they pledged themselves to construct it "as if the necessary powers had been obtained". It seems that the Brecknock & Abergavenny Canal Company took fright at this proposed branch to Newbridge, because another petition against the bill was considered by the House of Commons Committee who reported finally on 16 March.[41]

The Hay Railway Committee meeting started at the Office of Mr. Gunnell near the House of Commons on 16 March[42] and was adjourned immediately to the Gloucester Coffee House. A deputation of the Committee of the Brecknock & Abergavenny Canal Company had been received by the Hay Railway Committee and the former had entered into a resolution that the proposed line of tramroad from the canal at Newbridge would be highly detrimental to the interests of the canal company, and they would oppose it in Parliament. The Hay Railway Committee resolved that the bill, as amended by the Committee of the House of Commons, should remain unaltered. The canal company were now afraid that the Hay Railway would make use of the clause contained in the Brecknock & Abergavenny Canal Act which permitted the construction of railways up to eight miles in length and construct the branch to Newbridge under that Act.[43]

On 18 March 1812[44] the Brecknock & Abergavenny Canal Committee resolved that they would not be carrying out the "trust reposed in them by the Company of the Proprietors of their canal navigation if they suffered the intended Railway Bill to pass into law in its present shape without giving it their decided opposition".

In spite of this they were prepared to give every facility to the passing of the intended bill if it were modified, so that it would not interfere with their interests. The Hay Railway Committee[45] firmly stated that the company had no intention of availing themselves of the eight mile clause contained in the Canal Act, as this only applied to owners of land containing mines and minerals.[46] They believed that the connexion between the Hay Railway and the canal at Newbridge would be of benefit to the canal company. The Committee felt "that the canal company had taken alarm at the prospect of some future works being constructed, not under the powers of the Railway Act, but under the eight mile clause of the Canal Act of Parliament". Although the Brinore tramroad from Rhymney to Talybont was not to be considered for some time,[47] it is possible that it had been suggested, and the canal company felt that a link between the Brinore and the Hay Railway via Newbridge, was a possibility.[47a] This would of course have meant a considerable loss to the canal company in tolls. Later the canal company attempted to have the eight mile clause repealed but the Hay Committee felt "very material benefit [would] accrue to the Hay Railway Proprietors" by its continuance.[48] Sir Charles Morgan successfully opposed "the Bill to alter and amend the eight mile clause" at the second reading and the Bill was lost.[49] However, at the time the bill was in the House the Hay Railway Committee "distinctly avow[ed], they as a Company, have no idea or conception of ever making any work connected with the Canal, other than the line in the plan and the communication to Newbridge." In the event the branch was never constructed.

On 20 March the bill was read for the third time and sent to the House of Lords where it was committed on 23 April.[50] In the meantime there were two more meetings back at the *Swan* Inn, in Hay, on 6 and 13 April.[51] The London Committee met again on 23 April and 4 May but little happened.[52] On 5 May the Lords Committee reported without any amendments to the bill, which received Royal Assent on 20 May 1812.[53] (The Soliciting of the first Act cost £1,582.9s.7d. and that of the second £981.10s.10d.[54])

The Act directed that the plan and schedule of the route were to be certified by the Right Honourable Speaker.[55] This was done on 21 May 1812. A copy was deposited with the Clerk to the Justices on 13 July.[56] On this plan the entry regarding the route round the hill has been deleted and the plan is signed by Hodgkinson and Davies, the Surveyor. By 3 July[57] contracts were awarded to Robert Tipping, a miner from Newnham for the construction of the line from the Public Wharf at Brecon to Llangorse lane for £7,550. A contract was awarded to Anthony Tissington and John Thacker, both of Brecon, from the above to Porthamel for £3,750 and they were also awarded the section from Porthamel to the junction with Jones's and Williams's section. The section from Porthamel was also for £3,750. These contracts would complete the line as far as Hay. Unfortunately the original estimates fell short of actual expenditure. The Contractors for the two middle sections referred to as "job 2 & 3" were replaced by March 1813[58] and it was not until 7 May 1816[59] that the line was open to Hay and 11 December 1818 to Eardisley.[60]

The tramroad formed a link with the Kington Railway as far as Kington itself from 1 May 1820[61] and Burlingjobb in Radnorshire by the following October.[62] The Hay and Kington Railways together offered a continuous line of 36 miles in the early 1820s.

H.L. – Hereford Library.
H.J. – *Hereford Journal.*
H.L.R.O. – House of Lords Record Office.
W.H.C.R.O. – Worcestershire and Herefordshire County Record Office, Hereford Section.

1. H.J. 19 June 1793.
2. Ibid. 22 May 1805.
3. Ibid. 25 July 1810.
4. Ibid. 1 August 1810.
5. Ibid. 5 September 1810.
6. B. & A. Canal Committee Minute Book 23 August 1810.
7. W.H.C.R.O. Q/RW/T1a deposited 29.9.1810.
8. H.J. 7 November 1810.
   Part of Crosley's report was reproduced in "OBSERVATIONS on the Expediency of Constructing A TRAM ROAD from THE BRECON AND ABERGAVENNY CANAL to PARTON CROSS, Near EARDISLEY, In Herefordshire". dated 1 December, 1810. In this he is quoted as estimating a "Double road but laid single" at £41,100 and a "Double Road complete" at £60,250 (Maintenance he estimated at £800). The length is quoted as 22 miles, 5 roods and 4 furlongs. (National Library of Wales, Maybery 4094.)
9. W.H.C.R.O. N44. Printed statement of accounts 18 September 1843.
10. H.J. 23 January 1811.
11. Ibid. 20 February 1811.
12. H.L.R.O. Lords & Commons Journals. I am grateful to Mr. Johnson, the Assistant Clerk to the Records for his help in obtaining these extracts.
13. H.J. 20 February 1811.
14. H.L.R.O. Lords & Commons Journals.
15. H.L. Local Collection.
16. H.L.R.O. Lords & Commons Journals (51.Geo.III. c.cxxii).
17. H.J. 10 July 1811.
18. 51 Geo.III c.cxxii "the Company of Proprietors at . . . General Assemblies together with such proxies as shall be then present shall choose and elect out of such said Proprietors as at the time of such Election shall respectively be possessed in their own right of five shares at the least, in the said undertaking. The Committee to manage the affairs of the said Company of Proprietors . . . to consist of 15 or more persons, 3 of whom shall at all meetings of the said Committee be a quorum".
19. W.H.C.R.O. N44. "Proceedings of the Committees of the Hay Railway Company". Hereafter referred to as "Hay Railway Committee Minute Book".
20. Ibid.
21. Ibid.
22. H.L. Local Collection.
23. H.L. Local Collection. "Plan of an intended line of Tramroad etc."
24. Joseph Priestley, *Historical Account of the Navigable Rivers, Canals, and Railways through Great Britain, MDCCCXXXI* p.355. The tunnel was shown as 550 yards on the plan. It ended life as a railway tunnel of 674 yards.

25. Hay Railway Committee Minute Book.
26. Ibid.
27. Ibid.
28. Ibid.
29. Number 408 on plan in the occupation of John Harris. Number 393 on plan and schedule to the first Act.
30. H.J. 22 January 1812.
31. H.L.R.O. Lords & Commons Journals
32. H.J. 29 January 1812.
33. H.L.R.O. Lords & Commons Journals.
34. H.J. 12 February 1812.
35. Hay Railway Committee Minute Book.
36. Ibid.
37. H.J. 26 February 1812.
38. Hay Railway Committee Minute Book.
39. H.L.R.O. Lords & Commons Journals.
40. Hay Railway Committee Minute Book, 9 March 1812.
41. H.L.R.O. Lords & Commons Journals.
42. Hay Railway Committee Minute Book.
43. 33 Geo.III. c.xciv. Section 96 provided that the canal could be called upon to construct a "rail, waggon or stone road" from the Canal up to eight miles in length. If the canal company refused, the applicant could provide the communication himself.
44. Hay Railway Minute Book 20 March 1812.
45. Ibid.
46 33 Geo.III. c.xciv. Section 96, states the owner of any "manor, estate, or land containing veins of iron, ironstone, lead, coals or other minerals".
47. P. G. Rattenbury. "Survivals of the Brinore Tramroad in Breconshire". Journal of Industrial Archaeology. Vol.I November 1964.
47a. Actually suggested by Geo. Overton in "Description of the Faults and Dykes of the South Wales Mineral Basin".
48. Hay Railway Committee Minute Book, 19 January 1813.
49. Cambrian, 13 March 1813.
50. H.L.R.O. Lords & Commons Journals.
51. Hay Railway Committee Minute Book.
52. Ibid.
53 H.L.R.O. Lords & Commons Journals (52 Geo.III c.cvi).
54. Hay Railway Committee Minute Book, 31 August 1812.
55. "all this according to the line delineated on the said Map and Plan herein directed to be certified by the Right Honourable Speaker".
56. W.H.C.R.O. Q/RW/5a.
57. Hay Railway Committee Minute Book.
58. Ibid. 9 March 1813.
59. According to F. B. Ellison, *The Hay Railway 1810–1863*
H.J. 22 May 1816. "Yesterday sen'night the Tramroad from Brecon to Hay was finished, and several wagons with coal arrived at the latter place".
60. F. B. Ellison, *The Hay Railway 1810–1863.*
Hay Railway Committee Minute Book 23 November 1818. "That a contract . . . with Mr. John Hodgkinson for extending the line of Railway from the Wharf at Eardisley to the Junction of the Kington Railway at the sum of One Hundred Pounds".
61. *Hereford Journal* 22 March 1820, 26 April 1820.
62. V. H. Coleman. *The Kington Railway.*
Trans. Woolhope Naturalist Field Club, Vol.XXXVIII – 1964 p.19.

The Demise of a Successful Canal

BY M. J. MESSENGER

The Canal Age was swept away by the Railway Age with much social and economic change but not a great deal of physical damage. The traffic was uplifted wherever possible but in the main the canals were left to continue what business they could, even when owned by railway companies, so that many miles of cut survived to be destroyed or conserved in the present progressive times. Occasionally a canal was acquired and destroyed by a railway with covetous thoughts on its route but rarely was a canal replaced by a railway solely because the waterway was so successful it could no longer cope with the volume of traffic.

Such a line was the Liskeard & Looe Union Canal in Cornwall. Authorized by an Act of 1825 the canal was opened, albeit in a very incomplete state, in 1828 for agricultural purposes.[1] Limestone and sea sand, house coal and culm made the canal reasonably prosperous and permitted a dividend of 5% for a few years until "unprecedented agricultural distress" caused a continuing decline in limestone traffic. However, in the hills to the north of Liskeard massive lodes of copper were being discovered and exploited, and copper ore was soon to make up for the losses of the lime trade. Sponsored by the mine adventurers the Liskeard & Caradon Railway opened down to Moorswater, the canal's northern terminus, in March 1846, and with it came copper ore in ever increasing quantities. In 1853 the Cheesewring granite quarry gained a new and more spirited management and granite became increasingly more important to the canal. At first the mineral traffic provided a useful back carriage down the canal since all the agricultural traffic travelled up but by the early 1850s the balance had swung the other way. Congestion at Moorswater was fast becoming a continual and growing problem; ore was being landed on the towpath despite new wharves at the head of the canal. Trans-shipment was costing 4d. to 6d. per ton between the railway and the canal but it was sheer volume of traffic that was causing the difficulties.

Few tonnage figures are available for the canal but in 1849 21,713 tons[2] were carried compared with 48,193 tons[3] ten years later. The waterway was about 6 miles long and 24 locks were needed to lift the boats 156 feet from sea level at Terras Pill, a mile north of Looe on the East Looe River, to Moorswater. The journey from Looe, with the 16 ton capacity barges hauled by horses, took eight hours and in 1849 there were only 13 boats. Water was also in short supply and a feud with the millers of the East Looe Valley had been getting worse for some years. In 1857 it was stated that the capacity of the canal was 160 tons per day[4] and one can deduce from this that there was enough water for five boats in each direction or ten boats in all. Water came from the East Looe River or by leat from the Crylla stream, but the latter should only have been used for six months of the year to avoid depleting the River Fowey, which it normally fed. This restriction was stipulated by the 1825 Act but whether it was regarded at all is not known. Taking a six day working week and multiplying 160 tons, a figure of a little over 48,000 tons per year is obtained as the annual capacity of the canal. Thus it can be seen

that, either on the basis of boat capacity or water availability, The Liskeard & Looe Union Canal was indeed working to the limits of its resources in its last years.

Trade was being lost to other ports and the company's engineers, Silvanus Jenkin and J. J. Trathan, were asked to report on the construction of a railway. Their report[5] gave an estimated cost of £11,000 and a capacity of 300 tons per day, with one locomotive making three trips per day. They stated the capacity could be doubled simply by doubling the amount of rolling stock. The report was accepted and an Act duly obtained in 1858. Construction of the formation alongside, and in some cases encroaching on, the waterway commenced in 1859 and the track, laid on granite blocks, followed.[6] (The engineers must have taken a look at the Cornwall Railway at Liskeard for they decided to lay the last few miles on timber sleepers and, in fact, laid the final two miles of their standard gauge line on longitudinal sleepers in the best broad gauge practice.)

The railway opened on 27 December 1860, at a cost of £21,000 paid out of the company's reserves, and to all intents and purposes the canal ceased to function apart from a short stretch at the south end which was retained for agricultural use. Ironically the Caradon copper mines reached their peak of production about 1865 although working continued until 1885. The much truncated canal continued in use for at least another half-century for the very mundane carriage of sea sand and sea weed as manure, although it received very little maintenance during all this time.

The subsequent history of the railway and its involvement with the Liskeard & Caradon Railway does not concern us here although it is worth noting that the company remained the Liskeard & Looe Union Canal until amended to the Liskeard & Looe Railway by an Act of 1895.

And so the canal ceased to be; ousted by a railway built on or beside it simply because it could not cope. Had a Cornish miner not gone digging on a hitherto barren hillside or had there been a little more water in the East Looe Valley the Liskeard & Looe Union Canal might have been with us still.

REFERENCES

1. See the author's article in the *Journal of the Trevithick Society No. 1: 1973* for a fuller account of the early history of the Liskeard & Looe Union Canal.
2. Looe Harbour Commissioners Letter Book: 28 October 1850 Letter to Captain Washington RN
3. PRO/BTHR: LLUC Annual Accounts
4. PRO/BTHR: 30 September 1857 Report by S. W. Jenkin to LLUC Committee of Management
5. PRO/BTHR: 30 September 1857 Report ibid.
6. The use of stone blocks at so late a date is of interest but can be ascribed to the engineers' "parochial" knowledge. Silvanus Jenkin laid the North Kilmar branch of the Liskeard & Caradon Railway with granite blocks as late as 1879 but in this case the blocks were lifted from the then defunct Gonamena incline. On the Looe line passenger trains were still running over those laid down in 1860 as recently as 1911.

New Accessions to Record Offices, 1973

BY MAURICE BERRILL

This annual compilation of items of possible interest to members is extracted from *Accessions to Repositories and Reports added to the National Register of Archives 1973*, published by HMSO in May 1975 for The Royal Commission on Historical Manuscripts (price 95p). The document consists of 104 pages and contains in Part I notes of accessions to 150 repositories, divided into two sections – A: National and Special Repositories (57), and B: Local Repositories (93). The total of 150 compares with the total of 174 for the 1972 list, in which the present arrangement was first introduced (see R&CHS *Journal*, vol. XXI, no. 2, July 1975, pp. 32–34). Part II entitled 'Reports added to the National Register of Archives' (April 1973 to July 1974) is not extracted in this present compilation.

The preface to the 1973 document remarks: 'The sheer quantity of the material that passes each year into record repositories has now become so great that it is no longer possible to list it all exhaustively within the limits of the time and space available. The present aims of the compilers are to provide outline descriptions of the more important or unusual accessions to each repository, and so far as possible to avoid obscuring these with a mass of necessarily compressed and therefore often unintelligible detail, particularly of minor and routine accessions. The latter, it is felt, are now for the most part dealt with at more appropriate length in the published reports of individual repositories, and consequently need not be dealt with here.'

With this caveat in mind, and in the same spirit of economy, the following list of extracts dispenses with the full postal addresses of the various institutions, which may be found in the publication *Record Repositories in Great Britain* (5th edition, HMSO, 1973).

A. National and Special Repositories

National Library of Scotland

Stirling, Glasgow & Edinburgh Canal: legal papers, maps, etc, *c*1835–56.

National Library of Wales

Montgomeryshire Canal: minute book 1792–94.

Nottingham University Library

Lord Middleton (addnl): deeds relating to estate at Radford (Midland Railway) 1887.

Public Record Office of Northern Ireland

Londonderry & Lough Swilly Railway Co: minute books, plans, etc, *c*1860–*c*1960.

B. Local Repositories

Cambridgeshire and Isle of Ely Record Office

Bedford Level Corporation: maps by Robert Morden of Bucks, Herts, Hunts and Northants, *c*1700, maps by Thomas Badeslade of Great Ouse, the Fens

and the Great Level, 1723–24, South Level abstract of accounts, 1876–1920.
Copy of Cambridge canal boats inspection book 1896–1938.

Derbyshire Record Office

Cromford Canal: addnl permit books, 1821–27.

Devon Record Office

Sumner, estate agents and surveyors, Bideford: N Devon deeds 1534–1881, tithe redemption papers, railway and estate maps 18th–19th cent.
Exeter and Exmouth Railway subscribers agreements 1845.

Glasgow City Archives

Campbell of Succoth and Garscube: deeds, accounts, corresp and estate papers *c*1600–1950, incl records of Forth and Clyde Canal 1767–1880.
W. Ralston Ltd, photographers: *c*8000 negatives of industrial photography, clients incl Clyde Shipyards, *c*1920–50.

Gloucestershire Record Office

Stroudwater Canal Co: minutes, rent book, register of transfers, deeds, agreements, corresp and plans, 1812–1955.

Hampshire Record Office

J. D. Blake, shoemaker and railway telegraph clerk of Brighton, Salisbury, Romsey and Farnborough: diaries, 1842–62.

Kingston upon Hull City Record Office

British Transport Docks Board (Humber Ports): Humber Conservancy (incl records inherited from Trinity House) 1838–1967; estate management at Hull and Grimsby 1859–1960; corresp and at Goole 1828–1951; leases and corresp (incl records inherited from the North Eastern, London & North Eastern, London Midland & Scottish, Lancashire & Yorkshire and Great Central Railways and the Aire & Calder Navigation); engineering at Hull (incl records inherited from the NER, LNER, and Hull & Barnsley Railway) 1886–1960.

Lancashire Record Office

T. W. Badgery, solicitor: addnl papers relating to Colne and district, incl bills, minutes of evidence, map, corresp and subscription accounts for the projected North Western Central Railway *c*1890.
British Rail: 130 plans and drawing of track, stations, bridges, etc *c*1840–*c*1900.

Lincolnshire Achives Office

J. & F. Higgins, land agents, Alford: papers relating to enclosure, turnpikes, railways.
Market Deeping: local railway and drainage papers, 19th cent.

Liverpool City Libraries

*Liverpool & Manchester Railway: papers of William James (1771–1837), land agent and railway projector.
Cheshire Railway Lines Committee: corresp 1883–1913.

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*See Note on p. 36

Merioneth Record Office

Dolgellau railway station: waybills, delivery book, operating memoranda, *c*1874–1902.

Northumberland Record Office

Robert Stephenson: papers relating to him and his works, with photographs of workmen, 1847–1943.

Pembrokeshire Record Office

St David's Light Railway: plans and sections 1898.

Wigan Public Libraries

Plan schedules for Bolton, Wigan & Liverpool Railway 1844, Lancs Union Railway 1865, Wigan Junction Railway 1874, Manchester and Southport Railway branches 1846.

The Mystery of Leeds Central Station

BY R. A. COOK

With two recently published books by members of this Society, namely John Marshall's *The Lancashire and Yorkshire Railway*, and David Joy's *Regional History of South and West Yorkshire* – both published by David & Charles – one could well think this subject closed. However, as both admit, the story of this station is one of great complexity, and even after the tremendous research evidenced in both books, the opening date of the station remains a mystery. This short article is in no way intended to criticize either of the authors, nor is it intended to cast doubts on either their dates or research. However, like most historians, the author confesses to pet theories, and one was formulated on this subject many years ago. Duly acknowledging the wealth of additional material the two authors mentioned have used in their books, the theory still remains plausible.

The first really serious attempt to unravel the mystery surrounding this station was the work of Messrs. Wilson and Field in *Trains Illustrated* for May 1956, and was not so much concerned with the machinations and turmoil which culminated in the passing of the Leeds Central Railway Station Act, but revolved around the actual opening date of the station, and its site relative to the temporary station which existed initially. In the R.&C.H.S. publication *Lancashire and Yorkshire Railway – Historical Maps* it was a comparatively easy matter for the author to dodge the issue, which research was showing up to be a complicated one and was likely to lead to a dead end. This, in fact, is exactly what has happened, but there are one or two pointers which lead into these theoretical flights. It is this aspect which is to be pursued in the hope that someone's memory may be jogged into remembering some obscure source which may lead to a definitive conclusion.

The facts concerning the station can be fairly easily stated. The first railway to reach the central part of the city was the Leeds & Bradford Railway – later to become part of the Midland Railway – which was incorporated by an Act of 4 July 1844, and opened to a temporary station at Wellington on 1 July

1846. The first station at Central, again a temporary one, was opened officially by the Leeds, Dewsbury & Manchester Railway on 18 September 1848. This company was incorporated by an Act of 30 June 1845, but had been taken into the L.N.W.R. fold in 1847. Originally it had been proposed to cross the Leeds & Bradford Railway on the level, but opposition to this caused a change in the provisions of the Act, and the L.D. & M. was obliged to approach on a high level to cross the L&B, the Leeds and Liverpool Canal and the river Aire. The third company to approach this part of Leeds was the Leeds & Thirsk Railway, incorporated by Act of 21 July 1845, and opened to the temporary station of the L.D. & M. on 10 July 1849. David Joy refers to this as being opened to the "incomplete" Central Station. There can be two meanings to this statement, as detailed later.

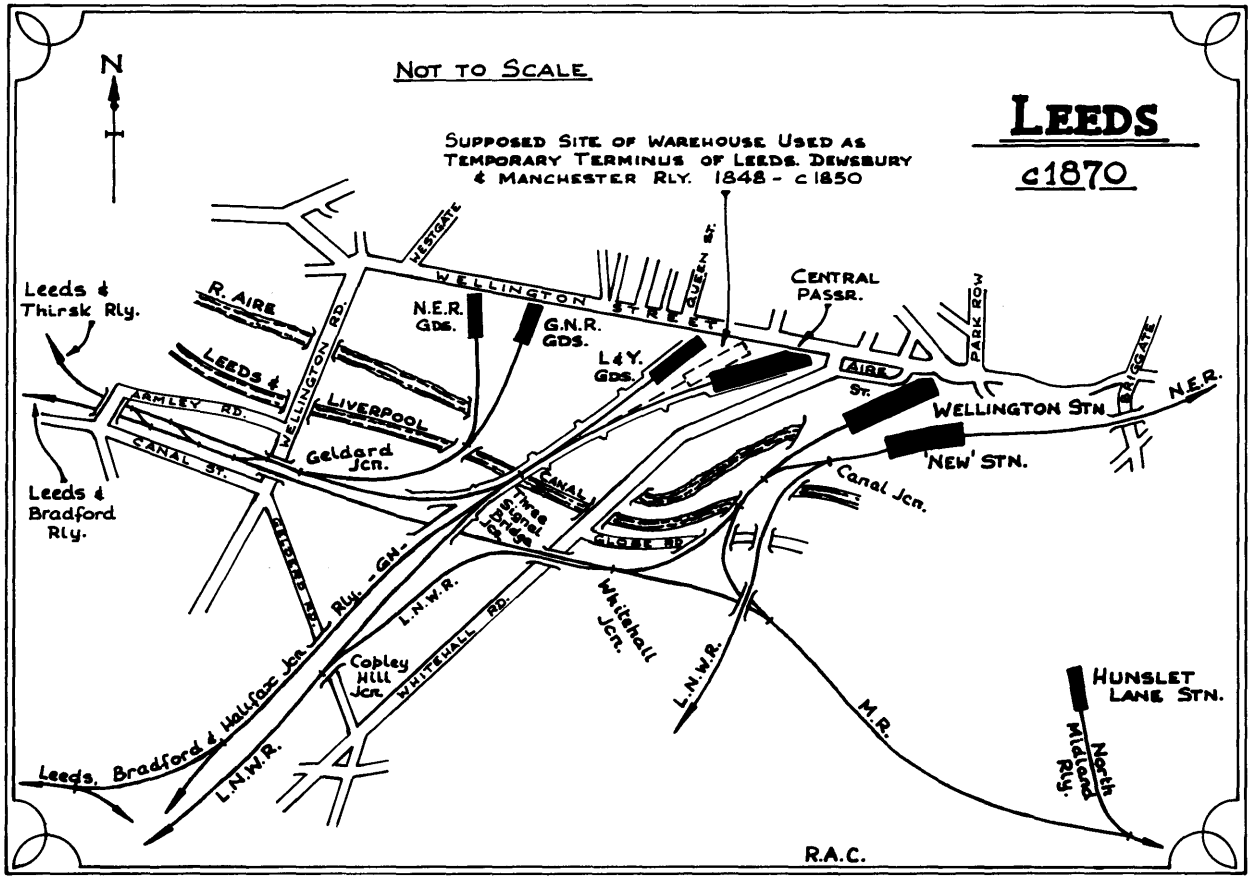
The reason for the temporary station for the L.D. & M. was that as early as 1844 plans were afoot for permanent facilities for the L.D. & M. and the L. & T. to have separate, but contiguous stations at Central. The Great Northern Railway also had designs on this central area of the city but met strong opposition from the Midland Railway, in the person of George Hudson. Eventually the company obtained running powers over the Wakefield, Pontefract & Goole Railway (L. & Y.) on 1 May 1847 and proposed to extend over their own metals from Methley to Leeds. The Bill was thrown out and on 16 October 1847, running powers were obtained over the Midland – a rather strange climb down by that company, but one which may be attributable to the Great Northern's determination to reach Leeds with or without the consent of Hudson, or the Midland.

The Midland Railway itself obtained access to Wellington Station by means of an extension from a junction short of the original station at Hunslet Lane to join the Leeds & Bradford by two connexions: one direct, with the second being the curve into the station. Both lines were opened on 1 July 1846.

Hovering in the background was the Lancashire & Yorkshire Railway, which, under its original title of the Manchester & Leeds Railway had been thwarted in its principal objective of reaching Leeds on its own metals. Its own direct lines in the mid 1840s terminated at Halifax, and at Goose Hill Junction, immediately south of the Normanton station of the North Midland Railway. From this point running powers were granted over the North Midland – part of the Midland Railway by that time – into its terminus at Hunslet Lane. The L. & Y. thus had a very circuitous route to Leeds and jumped at the opportunity presented by the L.D. & M. to work its line and gain a second, less circuitous, and more central access to Leeds.

We thus have the position of four companies with designs on the central area. The Leeds, Dewsbury & Manchester was already there, as was the L. & Y. with its running powers. The Leeds & Thirsk was planned to use a station there when opened, whilst the Great Northern was looking ahead to something better than its access over Midland metals. The four companies came together, and after a great deal of wrangling deposited a Bill for a joint station. This received the Royal Assent on 22 July 1848 as the Leeds Central Railway Station. All was not well, however, and further disagreements led to delays and a finalized layout was not agreed until the early part of 1849.

It is now necessary to look at the topography of Leeds, and in particular at the position of Wellington Street. Whatever the title of any station, or goods station, in that area, all were to flank the south side of Wellington Street. This equally applied to the M.R. Wellington Station. The original L.D. & M. temporary station was a conversion of a warehouse whose ownership was


N
NOT TO SCALE
LEEDS
c1870
SUPPOSED SITE OF WAREHOUSE USED AS TEMPORARY TERMINUS OF LEEDS, DEWSBURY & MANCHESTER RLY. 1848 - c1850
Leeds & Thirsk Rly.
R. AIRE
WESTGATE
WELLINGTON ROAD
WELLINGTON STREET
QUEEN ST.
N.E.R. GDS.
G.N.R. GDS.
L&Y. GDS.
CENTRAL PASSR.
PARK ROW
AIRE ST.
BRIGGATE
N.E.R.
WELLINGTON STN.
'NEW' STN.
Canal Jcn.
LEEDS & LIVERPOOL
ARMLEY RD.
CANAL ST.
Geldard Jcn.
Leeds & Bradford Rly.
CANAL
Three Signal Bridge Jcn.
GLOSE RD.
GIPTON RD.
Rly. - G.N.
L.N.W.R.
Whitehall Jcn.
Copley Hill Jcn.
WHITEHALL RD.
L.N.W.R.
M.R.
HUNSLET LANE STN.
North Midland Rly.
Leeds, Bradford & Halifax Jcn.
L.N.W.R.
R.A.C.

attributed in the two Leeds papers to Schunck and Co., and to Williams respectively, although in all probability a partnership between the two in one form or another. It is at this point that the realms of conjecture are entered. The warehouse converted would have had a ground level entrance, and in all probability the level of Wellington Street has been raised slightly since 1850. The façade of Central Station indicates that a difference in level of some 20–25ft. had to be overcome to build the new station. The temporary station has been stated by Messrs. Wilson and Field as being: "on the north side – adjacent to – but at a lower level" than the permanent one, and the site would undoubtedly be taken in during not only the construction of the new station, but also when the adjoining L. & Y./LNW goods station was being built, following pressure from the Midland to vacate its facilities at Hunslet Lane.

The question is made more complicated by the diversification of L. & Y. services into Leeds. Some of these ran into Hunslet Lane until the early part of 1851, and then into Wellington (MR) Station, to which some of its services were already being diverted. Reversion to Central was made in mid-1854, and this is one of the dates which holds a certain significance.

The Leeds & Thirsk used the Central station from its opening, but becoming rather disenchanted with the wrangling, and the inconvenience, moved its services to Wellington. The LNWR also left the project, as far as its services were concerned, on 1 October 1850 when the curve from Copley Hill Junction to Whitehall Junction was opened. The GNR had the most complicated approach to Central: via the Midland to north of Holbeck, a crossover on to the L. & T., and then a climbing reversal over Geldard curve into the station. It is not therefore surprising that its traffic was diverted to Wellington from 13 May 1850. The result of these moves was that from 1 October 1850 only the L. & Y. was using the station; and even then its passengers could not be sure of not being deposited at Hunslet Lane or Wellington.

It is the author's opinion, from the above analysis, that due to the proximity of the temporary station to both the site of the station to be built, and to the high level goods station, that the original temporary station was closed shortly after 1 October 1850 to allow the complete dismantling of the original station to be carried out, and the necessary earthworks to be raised for the new station at the higher level. It is considered unlikely that the Leeds & Thirsk would consent to use an incomplete station when its line was opened, and for which agreement on layout had been reached only some six months earlier, and it would seem almost certain that its opening was to the temporary station.

What happened to the L. & Y. trains during a period of four years is the major fly in the ointment, but it is felt that the diversification of its services – as stated earlier – can only mean that the remaining services terminated short of the re-building work at some temporary platforms; the whereabouts of which, if true, will almost certainly remain a mystery. In this context it is equally considered that the station names quoted in the contemporary timetables could not be relied on with the services as they were. It is conjectured that the station remained closed – temporarily closed might be a more suitable term – from the end of 1850 until it was sufficiently complete to cater for traffic from the newly-opened Leeds, Bradford & Halifax Junction Railway on 1 August 1854, at which time all L. & Y. services used the station on a regular basis. It is this latter date which is considered to be the public opening date of the "new" Central station, after being effectively closed from the

end of 1850. There is evidence to show that the station was in fact used earlier in 1854, probably as an expedient to the congestion of the companies using Wellington; possibly a polite reminder to the L. & Y. to get on with it. Even though opened in 1854, the completion of the entire works was not until 1857.

Whilst this solution may sound convenient, especially with the benefit of the evidence produced by Messrs. Marshall and Joy, it is felt that it is the only solution which has any credibility with respect to a station which took some eight years to build from agreement to completion, and with the best will in the world it is almost impossible to visualize an incomplete station being opened well within the first half of those eight years.

Time may well prove, or disprove, this theory but either way it may mean one less mystery to solve – or one more pet theory buried!

Gleanings from late 18th Century Local Papers

BY G. Y. HEMINGWAY

Apart from the Minutes of the Companies concerned, Acts of Parliament and other official documents, local newspapers are one of the more valuable sources of contemporary information about the Canal Age, not only for work carried out in their own area, but also for more distant projects. Many of the notices are mere routine – dates of meetings, calls and attempts to induce defaulters on these to pay, and similar matters, while the passage of Bills in Parliament is often followed stage by stage. The papers consulted are:

Newark Herald, published 1791–4 only.
Nottingham Journal, full of gaps to 1794, but fairly complete thereafter.
Lincoln and Stamford Mercury, from 1793.
Derby Mercury, almost complete from at least 1758.

These papers are shown below by initials only.
Some invitations to tender and notices of work to be done include:

D.M. 18.11.1790: The 1,600 yard tunnel at the summit of the Leeds & Liverpool Canal, and the deep cut at either end, will be let on 24 November at the Red Lion, Colne. Information from Mr. Whitworth, the Engineer.

D.M. 26.5.1791: "All Persons inclined to contract for the Execution of any part of the (Leicester) Navigation and Railways are desired to deliver their Proposals to Mr. Jessop, the Engineer, at Newark, or to Messrs. Carter and Heyrick, Solicitors, at Leicester".

D.M. 30.6.1791: Proposals for the above to be sent in by 4 July, "as the Works may be contracted for on that or the following day".

D.M. 27.2.1794: The cutting of various parts of the Dearne and Dove Canal to be let 27 March. (Some details given of the work involved.)

D.M. 25.6.1795: "To be let, the working and building of a Tunnel, in parts, for the Leicester and Northants Union Canal, near Fleckley, Leicestershire". Proposals to John Varley of Great Glenn, Engineer, where the Plan and Specification may be seen after 7 June. The Committee will receive proposals at the Three Crowns, Leicester, on 25 June.

Progress reports and dates of opening include:– N.J. 20.10.1787: "The Oxford Canal is now navigable to Norbury in Oxfordshire, all the way to London, and at the north end to Atherstone, and the cutting advanced to Polsworth, within 6 miles of Fradley, where it will join the Liverpool Canal."

D.M. 7.1.1790: The Oxford Canal was opened on New Year's Day. Upwards of 200 tons of coals, corn etc. arrived at Oxford. (Some details of the day's events.)

D.M. 15.7.1790: 'The Aqueduct at Fazeley being now completed, the junction with the Duke of Bridgewater's, Grand Trunk and the Birmingham, Coventry and Oxford Canals was expected to be opened yesterday, by which Mr. Brindley's great plan seems at length fully accomplished".

L. and S.M. 29.5.1793: Part of the Braunston Canal was begun last week. "370 men were paid last Saturday, and more hands are arriving every day. Another part will shortly be set about, being undertaken by Mr. Clifton, with his new machine for saving three fourths of the manual labour in cutting and removing the earth".

D.M. 18.11.1794: The Grand Junction Canal was opened on the 3rd. for traffic from Brentford to Uxbridge.

D.M. 4.6.1795: Last week, "that part of the Ellesmere Canal was opened which connects the Dee with the Mersey across the Hundred of Worral." (*sic*).

D.M. 9.7.1795: On Wednesday the 1st, the first canal packet-boat on the Ellesmere Canal began plying between Chester and Liverpool.

D.M. 6.8.1795: The first stone of the great Aqueduct on the Ellesmere Canal over the River Dee was laid 25 July.

D.M. 5.11.1795: "On Friday, 30 October, the Worcester and Birmingham Canal was opened amid great rejoicings by a tier of boats laden with coal, which passed from Birmingham along the line to Selley Oak".

L. and S.M. 13.5.1796: On the 3rd., the tunnel on the Leeds & Liverpool Canal, 1,630 yards long, was opened. (Some details of the work.)

L. and S.M. 14.2.1798: "The Dearne and Dove Canal is now open from the River Dun at Swinton to Earl Fitzwilliam's Colliery at Elsecar, and the line towards Barnsley as far as Aldam Mill, within three miles of Barnsley, will be open by 1 January next".

A number of references to machines may contain a degree of journalistic licence:–

D.M. 6.5.1790: "Mr. Duncombe, Engineer to the intended Canal between the Severn and Dee, has invented a method of raising Boats of any tonnage to the highest Summit whatever, and letting down the same without loss of Water, with perfect Safety and more Expedition than by the common Water Locks now in use. What is more remarkable, a loaded or unloaded Boat can

come up while an unloaded one goes down . . . . . and the whole is performed by a uniform unaccelerated motion".

D.M. 26.1.1792: "A very ingenious invention has been made by a Person at Beverley, Yorks, for bottom-scouring inland Navigations, to be worked by six men only, and to remove a ton of sludge from the bottom at one time".

N.H. 6.6.1792: "An improvement of the most important kind has been recently brought to perfection in the steam-engine: a circular motion is produced by the immediate action of the steam on wheels. This most useful machine may be now applied to very many purposes for which its jerky motion had hitherto made it unfit".

D.M. 20.9.1792: "We are informed that Mr. Sparrow of Nottingham has, after many trials, brought to perfection a Machine for raising the Matter out of Rivers when they have occasion to be deepened, and this machine will, after being filled, discharge a ton weight in less than two minutes".

D.M. 17.10.1793: "On Saturday (12th) was opened near Gloucester Mr. Carne's patent machine for expediting the formation of Canals. By this admirable Contrivance, the labour of removing the earth, which used to require a great number of Hands with wheelbarrows, is performed with much more expedition by a man and a horse".

L. and S.M. 12.8.1796: "A Canal Machine has lately been invented, by which the use of Tunnels will be rendered almost unnecessary, by its taking the soil from the bottom of the Canal at 40 feet deep with equal facility and dispatch as at 6 feet from the surface. One of these machines is at work on the Gloucester and Berkeley Canal. By the assistance of two men only, it removes 1,400 loaded barrows from the bottom of the Canal to a distance of 40 feet in 12 hours, and is so ingeniously devised as to bring up the loaded barrows, leave them at the top and take down the empty ones in regular rotation, and leave them at the bottom, and can, when required, be removed along the Canal to a distance of 20 yards in 10 minutes".

Some various items include:—

D.M. 6.11.1788: An iron barge has been launched at Shrewsbury, the unloaded draught of which is only 8 inches.

D.M. 5.9.1792: At a meeting on the 3rd at Wakefield, the Proprietors of the Aire & Calder Navigation determined to subscribe £30,000 towards a Navigation from Wakefield to Barnsley.

D.M. 20.9.1792: "Wanted, a number of Workmen for cutting the Worcester and Birmingham Canal, to begin near the Town of Birmingham. Apply to Messrs. Morcroft at Illington Road, Fountain Inn, New St., Birmingham, Hamstall Ridware, or Burton upon Trent".

N.H. 5.3.1794: Upwards of 100 actions have been commenced for arrears against subscribers to the Union Canal. "This circumstance alone demonstrates that the hasty progress of the work is not satisfactory to the majority of the Subscribers".

It is hoped that this random selection of items will show how much can be obtained from this source. Most Public Libraries in towns of any size will have a file of its local paper, and in the larger towns many of these go back well into the 18th century.

Cambridge's Quest for a Central Station

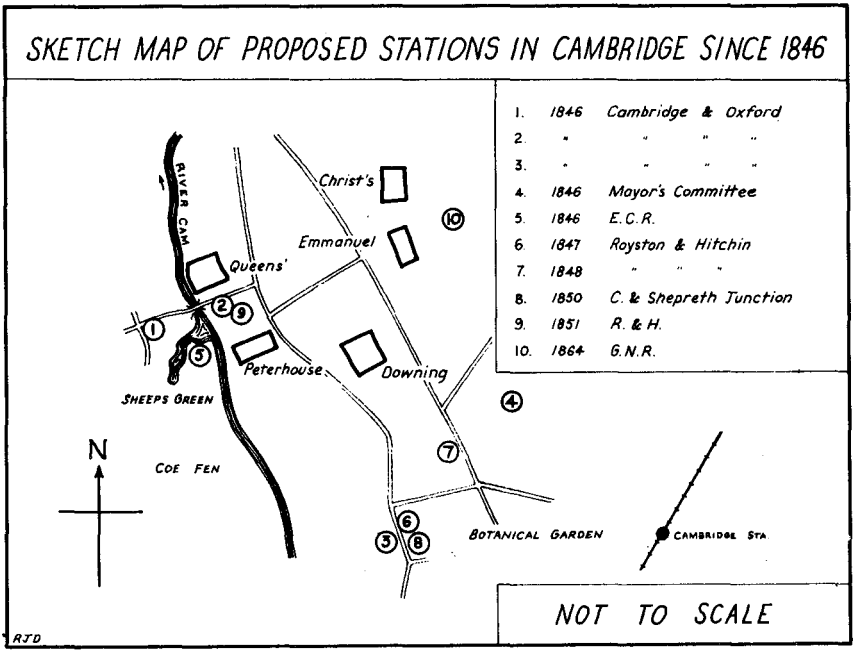
BY ADRIAN A. GRAY

The University of Cambridge has always zealously guarded its tranquillity and this was reflected in the siting of the city's first railway station; some 1½ miles to the south-east it opened on 30 July 1845. This was only one of many railway schemes then proposed that affected the city, and to discuss them a meeting was called at the Town Hall on 19 November 1845. George Hudson announced that he would be attending and it was felt locally that this would boost the importance of the meeting: "The King's name is a tower of strength", commented the *Cambridge Chronicle.*

The meeting was the centre of much public interest and the *Cambridge Chronicle* issued a special supplement which paraphrased all the main speeches. Joseph Wilkinson spoke for the Midland & Eastern Counties project, which planned a line from Cambridge to Worcester via St. Neots and Northampton, and made much of the city's need for a more central station. The *Chronicle* said that " . . . the want of a nearer or more central station to the town of Cambridge than that at present provided by the Eastern Counties Company was much felt, and the Midland & Eastern Counties Company proposed to run their line through Coe Fen and bring their station, as it were, into the very heart of the town." Alderman Fawcett said that the present station was "little better than a road-side station" and proposed that a new one should be built on the Botanic Garden although there were "various difficulties in the way". As if to prove that these difficulties did exist, Rev. J. Arlett of Pembroke College said that a central station must not interfere ". . with the beautiful walks around the town, or with the college grounds." In Arlett's opinion a central station would be best sited on Trumpington street. George Hudson, of course, stole the day: "Mr. Hudson said his first visit to Cambridge was made about three weeks ago and he was astonished to find the station where it was. That was not the way they did things in his part of the country." The meeting broke up when it was decided that a committee should be formed to look into the complex railway situation.

At a council meeting on 13 January 1846 the committee reported in favour of a new, central, station close to the town gaol on the western edge of the central area. It was felt that many benefits would arise from all the proposed lines running to the central station, and particular reference was made to the Cambridge & Oxford line; this concern had plans for a variety of termini but the two sites on Sheep's Green particularly angered the Fellows of Peterhouse college. Indeed the council committee reported ". . . in favour of the Cambridge & Oxford line, provided that the two proposed termini, on the north-west of St. Peter's College, and the proposed railway approaches to the same be abandoned, and that arrangements can be made to introduce the railway into the town, so as not to be objectionable to any college."

A second public meeting was held on 23 January 1846 but was attended by only 60 people, much to the dismay of the council; one cannot help feeling that this public apathy was a result of the bewildering number of projects then being put forward. A rather curious resolution was passed at this



meeting, accepting that there did not ". . . appear to be any practicable mode of obtaining a general central station at Cambridge . . .", but that the Eastern Counties station should be enlarged ". . . together with the addition of a passenger station near the Town Gaol."

There the matter seemed to rest until notice appeared in the *London Gazette* of 14 November 1846 of the ECR's intention to build several lines in the area south of Cambridge together with ". . . a Branch railway, to be used as a tram-road. . ." which would have run into the city from the south across Coe Fen and terminated on Sheep's Green. In his book *Railways to Cambridge,* Canon R. B. Fellows theorized that a shuttle passenger service would have worked over this 1¾ mile branch but this seems doubtful. The council committee reported in January 1847 that "This line is intended as a town depot for goods traffic only, and is proposed to be worked by horses and not by steam power." It was apparently to have been single track but with land allowing for future doubling.

This short branch proposal provoked a furious clash in the interests of town and University, although some people joined the argument on such trivial grounds as one of the best bathing-places being ruined. The town's case was ably put by Councillor C. Balls, who was reported in the *Cambridge Chronicle* of 16 January 1847 as having said that ". . . he was not one of those disposed

to annihilate the town; and if the University were disposed to act in that spirit, let them at least come forward and compensate gentlemen for the loss of their business and take their premises into their own hands. If the University were disposed to reduce the town to a collection of shopkeepers, he begged to say they were taking the right steps to carry out their views." An anonymous handbill was circulated giving the academic community's opinion and was largely based on the image of hundreds of laden barges being dragged upriver through the Backs to the railway wharf near Peterhouse. "It is earnestly hoped that all persons who feel an interest in the beauty, comfort, and property of the river Colleges will exert themselves to prevent this project from being carried into effect," the document concluded. It was the University's weight that won.

While the Eastern Counties had been thus occupied, the Cambridge & Oxford was still trying to battle its way into a central terminus. Several sites were proposed, including two on Sheep's Green and two near the Botanic Garden in Trumpington Street. This threat to tranquillity was solved in a different way – the line was initially only authorized from Hitchin to Royston and eventually only to Shepreth. The same fate befell the Cambridge & Shepreth Junction scheme of 1849/50 which had the support of the Mayor and council but was opposed by the University's MPs on the grounds that two stations would be inconvenient. The 1851 scheme by the erstwhile C & O (now Royston & Hitchin) was opposed because it would have passed "under the windows of St. Peter's College."

The final attempt to link central Cambridge with the Hitchin area came in an 1864 proposal by the Great Northern Railway for a line terminating near Emmanuel College. This was predictably opposed by the colleges but the line was never necessary because the GNR was able to negotiate for better access to Cambridge station.

Thus the University successfully defended itself against all-comers in the railway field despite the pleas of the townspeople. Although this attitude must have seemed selfish at the time, there can now be no doubt that a railway terminus near to Queens' and Peterhouse Colleges would have been environmentally disastrous.

This article is based on the records held in the Cambridgeshire Collection, and I am grateful for the help of the staff at the Central Reference Library, Cambridge.

RAILWAY AND CANAL COMPANIES. – We are informed that amicable arrangements have this week been come to between the Lancaster & Preston Railway Company and the Lancaster Canal Company, so that now there is little doubt that the long-pending suit with the Lancaster & Carlisle Company will be shortly settled also. (*Lancaster Gazette* 11 April 1848)

(*On 18 April 1848 it was reported that "arrangements were now completed and the original dispute satisfactorily settled.*)

Sources for Canal and Railway History

The John Johnson Collection of Ephemeral Printing

BY HARRY PAAR

In January David Garnett drew attention to an assortment of railway material which had been accumulated over many years by Johnson, the university printer, in the archives of the Oxford University Press. Recently this collection, of which the railway material forms only a fraction, was transferred to the Bodleian Library, where it is housed in the New Library, location JJ Room, Ground floor.

The railway material has been described by George Ottley to a fair extent in his *Railway History*, 1973, pp21–24, and Mr. Garnett has furnished a copy of the library's summary list of the contents of the 27 boxes involved. Some need no further description, e.g. box No. 3 contains plans and sections of the Cheltenham, Oxford, London and Birmingham Railway, 1836, and Bradshaw's Railway Map 1841, while box No. 22 contains Tredgold's *Railway Engine* as issued in parts. Others require a full examination to determine the contents, e.g. box No. 2, Company prospectuses and reports, bills before Parliament; box 4, railway certificates and exhibitions, opening and closing of railways, inventions. Two Imperial size portfolios, "Railways I and II" contain maps, posters, prospectuses, etc and some of the maps have been listed in the Map Room. It will suffice to add that the collection contains material on such diverse subjects as tickets, travelling post office, Railway Clearing House, ballads and songs, anti-railway movement, F. Madan's notes on Bradshaw's time-tables, trades unions, charity and insurance.

Hugh Compton has recently examined the two boxes of canal material in the collection, and has supplied the following report on the contents of Box No. 1 (Box 2 contains material on the Suez and Panama Canals). Our three fellow-members have given us a useful picture of the railway items, and a specific list of those relating to canals. There is scope for further work on the railway material, so that references can be added to our source index.

John Johnson Canal Collection: Bodleian Library, Oxford

(Located in JJ Room, ground floor New Library, Apply to Mr M. L. Turner)

BOX 1

Engravings: Double locks, Islington, City Basin Regents Canal
Oxford Canal petition against Grand Junction Bill, 1793
Ministry of Transport report on canals 1921
Details of French dredger, 1797
Details of patents: Canal lift, James Anderson, 1795
do. Weldon, 1792
do. Fulton, 1794
Boat raising machine, 1797
Article on Regents Canal, 1885

Printed queries on proposed Isleworth-Monkey Island Canal, c.1795
Ancholme Drainage: 1807 Letter
Aylesbury-Abingdon: notice of meeting
Basingstoke: sale of shares
Birmingham: notice of meeting and report for year 1867 to committee
Bridgwater: traffic arrival advice to trader. Plan and section of underground canal and inclined plane at Worsley
Cam-Ouse: petition 1780
Dorset & Somerset: report to committee 1800
Edinburgh & Glasgow: shares payment receipt
Ellesmere: timetable for packet boats ex Chester to Ellesmere Port
Essex, Suffolk & Norfolk: prospectus, no date
Exeter Canal: *Country Life* article 1955
Forth & Clyde: association prospectus and maps 1909
Grand Junction: printed statement of resolutions passed at meetings in the Watford area, 1792
Hereford & Gloucester: prospectus 1838
Leeds & Liverpool: printed case and resolutions for Bill 1819
Isleworth-Maidenhead Canal: map of proposed route 1819
North Wilts: notice of call on shares now due
Regents Canal: printed notice of resolutions passed 1819/20. Report to Committee 1815. Receipts and expenditure account 1838. 12 different engravings of canal.
Shefford Navigation: petition and map (River Ivel) 1806
Thames: Brindley's report to Common Council, City of London 1770. Petition against Thames Conservancy Bill 1857. Printed booklet for Richmond lock opening ceremony 1894
Warwick & Birmingham: notice of meeting 1831
Wye-Lugg: printed petition, no date
Old Passage Severn Ferry: map, fares and time table 1934
Manchester, Sheffield & Lincolnshire canals dept.: rainfall statement 1862

Large Folder entitled "Canals & Rivers"
Drawing of packet boat house, Westbourne Terrace, Paddington, with intending passengers
Dorset & Somerset Canal share certificate on parchment, very fine.
Basingstoke Canal notice calls on shares
Reasons against North Wilts canal
Drawings of lock at entrance to Sapperton Tunnel: Stroudwater Canal
Reports on Dorset & Somerset Canal
Report on Stroudwater Canal 1822
Manchester Ship Canal: *Illustrated London News:* large amount of material

Large Folder entitled "Ferries"
Mainly Thames Tunnel
Prospectus for Deptford-Vauxhall Canal, no date
14 drawings and paintings: serious and caricature of Paddington-Uxbridge packet boat working — very fine collection indeed
MS Booklet, ref. MS Top Gen e48, dated 1790: a list of all canal and navigation Acts with brief notes on each from 1425 to 1790

(Also in the Bodleian Library: Survey of the River Nene from Northampton to Peterborough, 1606 (Ref. 16627 K10))

RAILWAYS

BOX 1 Early pamphlets and broadsides
Ballads
Purchase, preparation, surveying
Anti-railway movements and petitions
Railway boom of the forties
Parliament and railway flotations
Nationalization

BOX 2 Companies' prospectuses and reports, bills before Parliament. Arranged alphabetically under railways.

BOX 3 Plans and sections of Cheltenham, Oxford, London & Birmingham Railway in three cases, 1836
Bradshaw's Railway map 1841

BOX 4 Railway certificates
Railway exhibitions etc.
Opening of railways
Closing of railways
Inventions

BOX 5 Return to Parliament on protection from weather of third class carriages, and carriage designs
Railway timetables of royal and other ceremonial journeys
Workmen's tickets and trains
Railway Season Ticket Installment Company
Railway Sorting Office (R.S.O.)
Channel Ferry and Channel Tunnel
Harwich – Zeebrugge Train Ferry

BOX 6 Pullman Cars and Wagon-lits
Juvenile models and novelties
The Narrow and Broad Gauges

BOX 7 Catalogues of railway collections
Excerpts from magazines, etc.

BOX 8 Illustrations and Cigarette Cards

BOX 9 Railway Insurance
Railway Charity
Receipts, forms etc.
Sale of Unclaimed goods
Trade Unions
Travelling Tax Abolition Committee
Railway Clearing House
Railway propaganda

BOXES 10 to 13 Railway ephemera arranged alphabetically under railways

BOXES 14 to 16 Excursion bills arranged alphabetically under railways

BOXES 17 to 19 Railway Tickets

BOX 20 Railway Bradshaws etc.

BOX 21 Underground, tubes etc.

BOX 22 Tredgold's *Railway Engine* as issued in parts

BOXES 23 to 27 Pamphlets.

Recent Literature

BY WILLIAM J. SKILLERN

BRITISH Railways Board (Whitby & Pickering) Light Railway (Transfer) Order 1975. (Statutory Instruments 1975, No. 1125). (H.M.S.O., 6p; by post, 12½p.)

BROWN, Paul. The Fighting branch: the Wivenhoe to Brightlingsea railway line, 1866–1964: a history. 1975. (Scribe Publishing, 9 Queen Street, Brightlingsea, Colchester CO7 0PH, 70p.)

CHADDERTON, D. The Saddleworth section of the Huddersfield Narrow Canal. (Local Interest Trails, No. 4). 1975. (Saddleworth Historical Society, 7 Elsted Road, Greenfield, Oldham, Lancashire, 20p.)

DORMAN, C. C. The Stephensons and steam railways. 1975. (Priory Press, 95p.)

EDWARDS, Margaret. The Garstang – Knott End Railway. 1975. (Lancaster Museum, Market Square, Lancaster, 5p.) *Duplicated typescript*

ELLIS, C. Hamilton. The Royal Trains. 1975. (Routledge, £5.95)

GEORGE, A. D. The Industrial archaeology of Preston. 1974. (A. D. George, c/o John Dalton Faculty of Technology, Manchester Polytechnic, Chester Street, Manchester 1, 20p.)

GREATER GLASGOW Passenger Transport Order Confirmation Act 1975. (Eliz. II 1975, cap. xxvi). (H.M.S.O., 60p; by post, 69p.)

GREATER LONDON COUNCIL. London rail study: Part 2. 1974. (G.L.C. Bookshop, County Hall, London SE1 7PB, £3.30)

GURNEY, Lyn. Welsh waterways – Camlasau Cymru. 1975. (James Pike, Ltd., Consols House, St. Ives, Cornwall, 30p.)

HOOLE, K. The Stockton & Darlington Railway. (Railway History in Pictures Series). 1975. (David & Charles, £4.50)

HUNTER, A. L. James Brindley, civil engineer, 1716–1772, born in the parish of Wormhill. [1975]. (Wormhill Well-Dressing Committee, c/o Holly House, Wormhill, Buxton, Derbyshire, 10p.)

JENKINS, Stanley C. The Witney & East Gloucestershire Railway (Fairford Branch). 1975. (Oakwood Press, 90p.)

LONDON Transport Act 1975. (Eliz. II 1975, cap. xxxi). (H.M.S.O., 60p; by post, 69p.)

NOCK, O. S. Locomotion: a world survey of railway traction. 1975. (Routledge, £5.95)

NORTH EASTERN revival: a story of the North Eastern Locomotive Preservation Group. 1975. (N.E.L.P.G., c/o 40 Poplar Street, Chester-le-Street, Co. Durham, 65p.)

PADFIELD, Roger and BURGESS, B. The Teifi Valley Railway. 1974. (Laidlaw-Burgess (Publishers), 2 Castle Square, Haverfordwest, Dyfed, £1)

PERKINS, John. Steam trains to Dundee, 1831–1863. 1975. (Dundee Museum, Albert Square, Dundee DD1 1DA, 60p.)

RAILWAYS, 1825–1975: British Post Office stamps; [with text by G. Freeman Allen]. 1975. (Post Office, 85p.)

SEMMENS, P. W. B. Stockton & Darlington: one hundred and fifty years of British railways. 1975. (New English Library, £2.25)

SIMMONDS, J. Scottish railways. 1975. (James Pike Ltd., St. Ives, 30p.)

SIMMONS, Jack (Editor). Rail 150: the Stockton & Darlington Railway and what followed. 1975. (Eyre Methuen, £4.95)

SINGLETON, David. Liverpool & Manchester Railway: a mile by mile guide to the world's first "modern" railway. 1975. (Dalesman, 90p.)

SPENCE, Jeoffry (Compiler). Victorian and Edwardian railways from old photographs. 1975. (Batsford, £3.95)

TIPPER, Rev. D. A. Stone and steam in the Black Mountains: [a Brecknockshire narrow-gauge industrial railway, 1912–1930]. 1975. (Rev. D. A. Tipper, Balderstone Vicarage, Oldham Road, Rochdale, Lancashire OL11 2HB, £1.25)

WALKER, Charles. Joseph Locke, 1805–1860: an illustrated life. 1975. (Shire Publications, 60p.)

WHITEHOUSE, P. B. (Editor). Railway relics and regalia. 1975. (Country Life, £5)

WRIGHT, H. E. Welsh railways – Rheilffyrdd Cymru. 1975. (James Pike Ltd., St. Ives, 30p.)

Correspondence

Material for the Journal

Sir, – I am sorry to read you are in difficulties over material for the *Journal*. Could you not continue the two series "Principal Railway Acts of Parliament" and "Opening of Railways: Centenaries" which were such endearing features of past *Journals*? You could, indeed, do them in two ways: (1) starting from 1973 and (2) starting from the beginning and carrying on to join up with the *Journal* series started in the 1950s.

A. St. G. WALSH

(The Editor has received several letters recently in which the above suggestions have either been specifically made or incorporated in general discussions on possible material. It is believed many members would like to have these subjects published; any person who would like to take this on should first get in touch with the Editor to agree on presentation.)

The East London Railway

Sir, – Since the article on the East London Railway in the *Journal* for July and October 1970, pp 62 & 85 was written, a few additions have become necessary.

A few days before the public opening to Liverpool Street a special train provided by the LBSCR conveying Directors and Officers of the EL, GE and LBSC Railways together with invited guests ran on Friday 7 April 1876 from Liverpool Street to Brighton where a collation was served. The party returned in the evening. A direct passenger exchange at Shadwell with the Blackwall line station was provided at the date of the opening of the EL station. The stairway brought into use on 1 August 1895 was constructed in connexion with the rebuilding of the Blackwall line station and replaced the original footway.

The dates given for the removal of the various connexions with British Railways are usually the dates the points were disconnected and fixed in the normal position. The actual removal of the points and replacement by plain line often took place weeks or even months afterwards. For instance at Bishopsgate Junction the points were disconnected and temporary stop blocks erected on 17 April 1966, the last through train having passed the previous day. The actual removal of the points and the erection of permanent stop blocks took place on 11 September 1966.

At New Cross Gate a connexion with the LBSC was removed on 17 September 1972 and the final physical connexion also at New Cross Gate was removed on 12 January 1975. It does not appear to have been used for a very considerable time.

H. V. BORLEY

For Those in Peril

Sir, – I enjoyed Mr. R. A. Cook's, article but regret there are several points with which I am unable to agree. There is an unfortunate slip in the sixth from last line of p.26; for "1836" read "1846". In addition to the Chester & Holyhead and the Furness Railways, the L. & S.W.R. also gained powers to operate sea-going steam vessels in 1848. In all three Acts the ports of call were strictly defined and the powers were limited to fourteen years duration. Perhaps the first railway to own steamers was the Chester & Birkenhead Railway which acquired the Monk's Ferry from Birkenhead to Liverpool[1]; I presume without Parliamentary authority.

"On the Clyde services, and on those to the off-shore islands in Scotland, the paddle-ship remained almost unchallenged even to the present day, because of its greater manoeuvreability": the service to the Islands was not a railway concern, except for a short period from 1870 to 1880 when it was run by the Dingwall & Skye (Highland) Railway. These sailings were taken over by David MacBrayne on the latter date[2]. David MacBrayne Ltd. was taken over by David MacBrayne (1928) Ltd in that year and became half owned by the L.M.S.R. The new company's last paddle-ship was the *Pioneer* which lasted until 1942[3] but it was only employed on relief duties; long before this, all the important services had been taken over by screw propelled ships.

The L.M.S.R. and the Caledonian Steam Packet Co. (the Calendonian Railway never obtained powers to operate its own ships) built five new paddle-steamers between 1934 and 1937, of which the *Juno* and the *Mercury* were lost on War

Service and thus could qualify for mention in Mr. Cook's article. The last of the other three was withdrawn in 1970. The L.N.E.R. built the P.S. *Waverley* in 1947 and this was the last railway paddle-steamer to operate on the Firth, until 1973. It is now preserved and sailing on its home waters under the flag of an enthusiasts' society. By 1967, there were only four railway steamers still operating on the Clyde, the P.S. *Caledonia*, the P.S. *Waverley*, the T.S. *Duchess of Hamilton* and the T.S. *Queen Mary II*, the last, I believe, still in service. At "the present day" all the other ships are diesel-operated screw-propelled vessels.

The paddle-ship is not more manoeuvreable than the screw-propelled ship, especially if the latter is fitted with a bow-rudder. The reason for the popularity of the paddler is that, generally speaking, it draws less water. The Craigendoran (N.B. and L.N.E.) fleet never included a screw-propelled ship for this reason.

1. ELLIS C. H.: *British Railway History 1830–1876* p.403.
   MARRIOTT S.: (Birkenhead's Forgotten Station) *Railway Magazine* 1967.
2. VALLANCE H. A.: *The Highland Railway* Chapter 12.
3. DUCKWORTH & LANGMUIR: *West Highland Steamers* p.112 (2nd Edn.)
4. STROMIER & NICHOLSON: *Steamers of the Clyde* 1967.

A. L. BARNETT

Sir, – I am indebted to my colleague Dr. A. L. Barnett for his kindness in sending a copy of his letter to the Editor with regard to my article in the July *Journal*. The 1836 date should definitely be 1846, and was a typing error. I have only recently found the L.S.W.R. 1848 Act in browsing through Bradshaw's *Manual*; the basic information for this section was extracted from the Index to Local and Personal Acts, which is not really an adequate reference source. In passing, it can be added that the L.S.W.R. received powers in perpetuity in 1860.

Dr. Barnett is perfectly correct with his reference to the offshore islands traffic; one of two cases of an unfortunate choice of words. The intended meaning was the islands of Bute, Arran and Cumbrae (Millport), which hardly qualify as being "offshore". Equally so was the choice of "manoeuvreability"; a better word would have been adaptability, due to the paddlers being able to accelerate quicker, and to stop in a shorter distance than is normal with a screw steamer, with their shallow draught enabling them to work from short piers and close inshore. A further fact which had been ignored was that, unlike paddle tugs, the passenger paddlers were not equipped for working in extremely confined waters, as were their more specialized sisters, with their facility for individual drive to each paddle.

The *Juno* (as H.M.S. *Helvellyn*, bombed and sunk during a London blitz 19 March 1941), and the *Mercury* (foundered on tow off the Smalls on 26 December 1940, after striking a mine off the Irish coast on Christmas Day) do indeed qualify for inclusion, but in an article of that length it was a case of choice, and the *Waverley* seemed the more logical by being involved in both World Wars. There is much to record, even of those included, in what was, essentially, a pilot article.

I would agree with Dr. Barnett that the Chester & Birkenhead Railway was probably the first physically to own steamers, but it would appear that they had little idea how to run them and the service was leased to a private operator, the vessels remaining railway owned.

The T.S.S. *Queen Mary II* was still in service through the 1974 season but it is not known whether she worked through this season. Her days may well be numbered however. Her contemporary, the MacBrayne steamer *King George V,* sailing out of Oban, was put up for sale last December. The P.S. *Waverley (IV)* returned to the Clyde in May of this year, but although owned by the Paddle Steamer Preservation Society it is thought that she may be flying the flag of a registered operating company rather than the P.S.P.S. Perhaps one of our Scottish members can oblige with these two latter points?

R. A. COOK

Waterways and Railways to Warrington

Sir, – I have greatly enjoyed reading this excellent book. Mr. Peter Norton is to be congratulated on his production, on which he has obviously spent a great deal of time in painstaking research. I wonder however if I might comment on one or two small errors that have crept in.

The map on p.38 showing "Walton Junctions 1894–1968" does not tell quite the whole story. Acton Grange Junction signal box as drawn was not erected until c.1941. Before that the box was situated crosswise over the Chester line tracks immediately adjacent to the south end of the Ship Canal bridge and was known as "Acton Grange Viaduct". I remember it well in this position, and confirmation is given by a photograph in the *Railway Magazine* Vol. 10, p.256. (1915 – II). The crossover junctions were also close to the bridge. Box and connexions were replaced further south early on in the 1939–45 war.

On p.60 Mr. Norton states that the C.L.C. line from Glazebrook to Skelton Junction was singled when the passenger service ceased in 1965. This is not so, as the line is still double.

Lower down the same page, in the last line of the second paragraph, Stockport (Tiviot Dale) is referred to, but surely this is a misprint for Stockport (Edgeley), as the former has been closed and I understand completely demolished.

GEOFFREY PLATT

Cast Iron Aqueducts

Sir, – Readers may be interested in the following items which came to light during my investigations and travels in connexion with Cast Iron Aqueducts. They were not included for reasons which will be obvious.

1. There is a very small wooden aqueduct on the Calder and Hebble canal adjacent to the main road and shortly before its junction with the Halifax branch.

2. The lock basin at Beeston in Cheshire has cast iron sides and bottom. This was necessitated by the very poor foundations.

3. Telford recommended cast iron lock gates for the Caledonian canal.

4. I have been informed about 3 aqueducts on the Edinburgh and Glasgow canal, the Avon, the Almond and the Water of Leith. Although they were designed by Baird, they were modelled on Telford's aqueduct at Chirk in that only the linings are cast iron.

5. The museum at Stoke Bruerne has a sample of cast iron gates.

6. The South Yorkshire Junction canal has 3 steel troughs 10′ deep, about 20′ wide and of considerable lengths. W. H. Barth was the engineer.

7. A. J. Sword was appointed by the Glasgow Paisley and Johnstone Canal Co. in 1828. The lettering on the Welshpool canal is not too clear. Could this be a coincidence? or is it the same man?

8. On the Lancashire side of the Littleborough summit of the Rochdale canal, the river is carried over the canal by a steel fabricated non linear channel.

9. Cast iron lock gates were originally used on the Montgomeryshire canal.

10. In Sweden, at Häverud there is a 3 level system consisting of a reinforced concrete arch bridge over an aqueduct of the Dalslands canal, both being over the river. The aqueduct is of the fabricated "lift" pattern.

11. It will be general knowledge that the Bridgewater canal is carried over the Manchester Ship canal by the Barton swing aqueduct, a steel structure.

12. The entrance to the Anderton Lift is a steel trough.

13. There are cast iron side plates to the aqueduct next to Gas St. basin.

14. Amongst the ruins of the disused peat works north of Thorne near Doncaster lie the remains of a wide but shallow wrought iron trough which carried small boats to the processing works over a drainage channel having a very small clearance.

15. The embankment of the Leeds and Liverpool canal at Burnley is pierced by a steel aqueduct.

16. The Macclesfield bridge over the Regents canal (next to the London Zoo) was originally constructed on cast iron pillars. After it had been blown up by gunpowder in transit on a barge it was reconstructed re-using the columns, but as many declare, upside down.

17. J. A. Roebling built a suspension aqueduct for the Pennsylvania canal across the Alleghany river at Pittsburgh. There were 7 spans of 162′. The timber flume was 16½′ wide at the top and 14′ at the top being 8½′ deep with cantilevered towpaths. There were two cables of 1900 wires $^1/_8$″ dia. of wrought iron. It was opened 22 May 1845 and remained in use until the canal was abandoned in 1861.

S. TYSON

Sir, — Mr. Tyson's useful article in the *Journal* for November 1975 prompts a few queries, corrections and additions.

3. Cromford. There are 6 panels each side, not 16. And was the bracing really added after construction? The truss bars are attached to bosses and lugs cast integrally with the plates, and if the bracing is not original then 8 out of the 12 side plates are not original either.

7. Wolverton. This aqueduct's main point of interest to me lies in its structure. The trough does not rest on the abutments or the central pier, but its whole weight, and that of the water, is carried by the arched ribs let into its sides. Structurally it is an inverted or arch suspension bridge, the earliest example of this principle that I know, although the idea had been suggested before and partially applied by Telford to his rather unsatisfactory Buildwas bridge of 1796.

10. Stretton (Watling St.) The full inscription reads:

BIRMINGHAM AND LIVERPOOL CANAL

THOS TELFORD, F.R.S.L. & E.
ENGINEER
JOHN WILSON CONTRACTOR
1832

Wilson's name has been chiselled off, apparently (if unfairly) because he died before the aqueduct was finished; but it is still faintly visible.

12. Nantwich. There are 5 plates completely visible on each side.

14. Longdon-on-Tern. Not the earliest cast iron aqueduct: Mr. Tyson has correctly granted this distinction to the Holmes on p.54.

15. Pontcysyllte. The inscription is (as often) mistranscribed. Punctuation apart, read SEVERNE, PONTCYSYLLTY, and M,DCC,XCV. Telford's name does not appear at the end.

16. Chirk. Telford, as his writings and drawings make plain, installed cast-iron bed-plates only, leaving the sides as plain masonry. The side plates were added, apparently about 1870, because of leakage.

18. Wootton Wawen. The plaque is oval and reads:

THIS AQUEDUCT
was erected by
THE STRATFORD CANAL COMPY
in October 1813
BERNARD DEWES ESQR CHAIRMAN
W. JAMES ESQR DEPY CHAIRMAN
W. WHITMORE ENGINEER

21. Brownhills. Belonged to the Wyrley & Essington Canal.

23. Welshpool. The grid reference is SJ 227074. The inscription reads J. SWORD rather than J. S. WORD, and there are 6 plates in each side, with very wide bottom flanges. Welshpool, Stretton, Nantwich and Congleton aqueducts have cast iron railings of identical pattern, which suggests a common origin.

Additional entries:
Grand Western Canal: there were at least six more cast iron aqueducts, in addition to that at Nynehead over the Tone (no. 8). Most of them were iron troughs inside stone surrounds. See Helen Harris, *The Grand Western Canal.*

Huddersfield Narrow Canal: Stalybridge (SJ 954982). By Benjamin Outram, about 60' span with rectangular plates. The towpath is carried by a high stone arch alongside, a replacement of 1875.

Montgomeryshire Canal: Brithdir (SJ 198022). A trough of 7 plates a side, apparently identical castings to those at Welshpool.

Trent & Mersey Canal, Uttoxeter branch: Tean (SK 077348). Demolished. Mention could also usefully be made of Charles Hadfield's admirable article "Telford, Jessop and Pontcysyllte" in the *Journal*, xv.4, 1969.

M. J. T. LEWIS

Sir, – I would like to make two points in connexion with Mr. Tyson's interesting notes on aqueducts.

Item 5. The Holmes: The Derby Canal passed along the north-east boundary of the Bus station. The aqueduct was in fact under the roadway to the east of the Bus station until about 1970 whereas the station was built about 1935. The trough was over what appears to have been a branch of the Markeaton Brook but may have been a separate watercourse which drained the area north of the present Traffic Street. The upper structure did not carry a railway but a road known as Market Thoroughfare. The bridge carrying this road over the River Derwent was apparently built by the Midland Railway, though the design appears to preclude use by rail traffic. The Butterly Company tendered £4,335 for this bridge, but the contract went to Hayward for £2,918 (M.R. Minutes 4 June 1861). It seems likely the canal bridge was built about the same time.

Item 11. Congleton: This aqueduct is, of course, on the Macclesfield Canal.

P. JUSTIN McCARTHY

Sir, – I can add a little to Mr. Tyson's article in the November *Journal* regarding cast iron aqueducts in the West Country, although I have never taken a great note of structural details or measurements. That on the Tavistock Canal (Mr. Tyson's No. 22) at SX466721 is at Shilla Mill although I would hesitate in stating this to be its name. It consists of panels bolted together and those on the opposite side to the towpath bear the inscriptions "Gill & Co" (one of the Tavistock foundries) and "1839". Water still flows through the aqueduct for the hydro-electric power station at Morwellham. On the Grand Western Canal there are two further cast iron aqueducts. About a third of a mile south-west of that over the River Tone and a few yards from the remains of Nynehead lift a cast iron trough carried the canal over the former private drive to Nynehead House. The canal is now dry but the very elegant masonry that encases the trough was being restored when I last saw it, in September last. It is at ST144218. Where the Bristol & Exeter's Tiverton branch passed under the Grand Western Canal at Halberton a two arch aqueduct was constructed in 1847. Hadfield describes it as a cast iron trough supported on two cast iron arches and bricked in. The canal here is now "wet" and used for pleasure purposes. Grid Ref. is SS997122.

M. J. MESSENGER

Kent Atmospheric Railway

Sir, – In the July *Journal* there is a quotation from a letter of 1846 by a disgruntled shareholder of the proposed Kent Atmospheric Railway. You comment that the following week there was an even more inconsequential letter. Unless one has one's head so deep in the technicalities of railway history that economic, political and social developments are irrelevant, surely not a posture to be expected from your journal, it is difficult to see what is inconsequential about the letter you quote. The writer has been rash enough to invest in a venture which it now seemed unlikely to give him a reasonable return, so he wanted his money back, especially in view of other claims on his resources. This must have been typical of many who invested in the railway boom of 1845, and surely needs no justification. The reference to the education of the upper classes of Ireland is to a matter which excited greater political controversy in 1845 than the railway boom, as the proposal by Peel to make a grant to the Catholic College at Maynooth led to half his supporters in the Commons voting against him and to considerable Protestant opposition in the country. Many like your shareholder regarded it as a complete misuse of public money. As an example of misguided expenditure, it was on a par with his personal investment in the Atmospheric Railway.

D. J. HODGKINS

(Apologies to Mr. Hodgkins: no doubt the word "inconsequential" was the wrong one, and was probably due to the speed with which everything had to be done at the last moment, as usual! Ed.)

New Light on William James

Sir, – In compiling the annual list of new accessions to record offices which appears elsewhere in this issue (pp.13–15) your contributor was intrigued as he entered, under Liverpool City Libraries, the item 'Liverpool & Manchester Railway: papers of William James (1771–1837), land agent and railway projector'.

It came to his mind that in 1961 there was published by David & Charles/ Phoenix House a 'centenary reprint' of *The Two James's and the Two Stephensons or The Earliest History of Passenger Transit on Railways* by E.M.S.P. In his Introduction to the reprint, the late L. T. C. Rolt commented: 'Among the books dealing with the birth of the locomotive railway *The Two James's and the Two Stephensons* has for many years been one of the scarcest items . . . To those who have never heard of this little book it must be said at once that it is a piece of special pleading. The author, "E.M.S.P." has been identified beyond reasonable doubt as William James's daughter, Mrs. Paine. She obviously believed passionately that her father and her brother, W. H. James, had been the victims of grave injustice. Unfortunately, strong emotion of this kind, however justifiable, seldom goes hand in hand with objective truth. Thus Mrs. Paine defeats her own object by overstating her case, while she forfeits much of her readers' confidence by seeking to hide under the anonymity of initials.'

Mr. Rolt concluded his Introduction as follows: 'This little book contains tantalizing references to, and all too scanty quotations from, correspondence, journals and reports which, if they could be studied in full, might well present these bygone events and James's part in them in a different and clearer

light. Such documentary evidence may exist. The publishers' enterprise in reissuing this book will be amply rewarded if it succeeds, as it certainly should, in prompting further research into the life and work of a most remarkable man.'

Note the hope inherent in the sentence, 'Such documentary evidence may exist.' Perhaps one of our Society's members in the Liverpool area might care to follow up this clue and thus discover whether the papers recently deposited there do throw new light on William James, whose daughter staunchly maintained that he, above all others (and especially above the Stephensons) 'had the greatest right to the title of being designated the "*Father of Railways.*" '

MAURICE BERRILL

Membership Secretary: Will members please note that Mr. R. J. TAYLOR has taken over the position of Membership Secretary. His address is 64, Grove Avenue, Hanwell, London W7 3ES

Items of Historical Interest

MIDLAND PULLMAN CARS. — The Midland Railway Company commenced on Thursday a Service of Pullman cars between Manchester, Liverpool and St. Pancras. The great length of the cars rendered an alteration to the tunnel at Marple and thus delayed the introduction of the cars which had been running for some months between London, Leeds and Bradford. The Midland Company had not been able to place a sleeping car on the Manchester Service in consequence of the very limited number of vehicles of that kind which are at their disposal and passengers who "take beds" at St. Pancras have to change into the palace car at Marple while the sleeping car goes forward to the terminus at Liverpool. In a short time however a sleeping car for Manchester will be added to the trains and night travellers between Manchester and London will obtain the advantage of the new system. The first train arrived at London Road shortly after ten o'clock on Thursday morning and the second at nine o'clock at night. There were sixteen passengers in the second train and very great satisfaction was expressed with the care and comfort with which the journey had been made. At the Central Station, Warrington, crowds of people witnessed the arrival and departure of the cars which were greatly admired. (From *Warrington Advertiser* 3 April 1875)

CALEDONIAN RAILWAY. – The express-train which left the Euston station at nine o'clock on Monday morning last, arrived at the Lothian-road station of the Caledonian Railway, Edinburgh, precisely at twenty eight minutes past nine in the evening, thus performing the first through passenger train transit within twelve and a half hours. The corresponding train from Edinburgh to London (which also performs the journey in twelve and a half hours) started from the Lothian-road station at a quarter past ten in the morning, and arrived at Carlisle in three hours, and the passengers, after partaking of some refreshments there, proceeded to Manchester, Liverpool, Birmingham and London, without any change of carriage. (*Railway Times* 6 May 1848)

SOUTH WESTERN RAILWAY EXTENSION. – The site for the terminus of the South-Western Railway in York Road, Lambeth, has been cleared by Messrs. Lee, the contractors for the whole of the works connected with the extension from Nine Elms, and they are making active progress towards the completion of the line by the spring of the ensuing year. The viaduct, with the exception of a few openings, is nearly completed to the Westminster Road; and for a considerable distance four lines of rail, forming the permanent way, have been laid down. The whole length of this viaduct, nearly two miles, passes through a densely-populated neighbourhood. The South-Western Company, with a view to letting the arches for shops, workshops, and dwellings, having taken the very necessary precaution to protect the arches from wet, by covering the entire length of the viaduct with "Seyssel Asphalte". The preparation of this material is carried on by an ingeniously-constructed portable steam-engine, made by Messrs. Easton and Amos, which not only drives the gear of the large cauldrons in which the material is kept, uniformly and constantly agitated, but also raises, in iron buckets, the prepared material to the top of the viaduct, where it is received upon a truck, and conveyed, by means of a tramway 500 feet in length, to wherever the workmen may be stationed to lay it.

[The Superintendent in charge stated that "the entire surface to contain about 450,000 feet"]. (*Railway Times* 23 October 1847)

STATION LENDING LIBRARY. – "Another important element of usefulness in connexion with Wolverton is 'the Station Lending Library', under the sole charge of the clergyman. The object is to furnish a gratuitous supply of books to every first-class station on the entire line. In this arrangement the locomotive departments at Birmingham and Camden station are included. Supplies have also been placed at Roade and Bletchley. The library boxes were given by the company; each contains 50 or 60 volumes. It is placed under the charge of the chief clerk at the stations; the books are exchanged as soon as read; and the boxes are removed from one station to another as often as it is requisite. An exact account is kept of the number of times the books are issued. More than 700 volumes are now in circulation between London and Birmingham. (From *Cambridge Chronicle* 1 February 1845)

TAW VALE RAILWAY. – On the 29th of April, and 3rd and 4th inst., numerous and highly respectable meetings were held at Barnstaple, Eggsford (*sic*), and Chudleigh [Chulmleigh] consisting of the magistrates, gentry, and clergy of the district, to protest and petition against the decision of the Railway Commissioners, on the gauge of the Taw Vale. At the meeting at Chudleigh(*sic*) a village half way between Crediton and Barnstaple, the chair was taken by the Hon. Newton Fellowes, who was supported by nearly a hundred of the leading landowners of the neighbourhood. From the tone manifested, it is quite evident that the Taw Vale Directors have the invaluable assistance of these parties who are practically interested in an efficient railway communication being established at the earliest possible date. (*Railway Times* 6 May 1848)

SOUTH WALES RAILWAY. – We regret to learn that the splendid wooden bridge over the River Usk has been consumed by fire, through the carelessness of one of the workmen engaged in driving bolts (overheated) into the kyanized timbers of the bridge. The scene is described as having been awfully grand, and the loss (upwards of £20,000) will fall upon the insurance offices with which the contractors, Messrs. Rennie, Logan & Company, had recently insured to the full amount, at a very high premium, in consequence of the enormous risk incurred. The accident will occasion a delay of two years; and the bridge will, it is said, be rebuilt of stone. (*Railway Times* 3 March 1848)

We regret to find that the Directors of the South Eastern Company have felt themselves compelled, on reopening of the Gravesend and Rochester line, to augment – we ought to say double – the fares. The 1st class was charged 8d., the 2nd 6d. Surely the alterations in the tunnel will not be pleaded as an excuse for this wholesale attack upon the pockets of the passengers. In addition to this aggravated cost, the public (and in the vicinity of the towns of Chatham and Sheerness this implies by no means a wealthy community) are deprived of the alternative of third-class trains, except twice a day, and then, (as the *Kentish Observer* remarks) "at such hours as to be but little available to them".

(*Railway Times* editorial 28 August 1847. On 18 September 1847 the *Railway Times* printed the report of the South Eastern Railway, to which the above refers, and says the line was reopened on 23 August "to the old station at Gravesend."

CALEDONIAN RAILWAY. – At a meeting of the Directors it was resolved that the line should be opened to the public on Tuesday the 15th of February; and that the fares for passengers between Edinburgh and Glasgow should be at the rate of 6s. for 1st class, 4s.6d. for 2nd class or 3s. for 3rd class. The rates on the Edinburgh & Glasgow line are respectively, 8s., 6s., and 3s.10d. (*Railway Times* 5 February 1848)

TRAMROAD MURDER — The *Gloucester Journal* for Friday 3 September 1813 records that a murder had been committed at Ryd-y-Blew, Monmouthshire, near the turnpike road leading from Merthyr Tydvil to Abergavenny; the weapon used was a "tram-cart axle-tree."

PRIZE ESSAYS On the SABBATH by WORKING MEN. — A Prize of £25 will be given for the best Essay . . . . on the TEMPORAL ADVANTAGES of the SABBATH to the LABOURING CLASSES, and the consequent importance of preserving its rest from all the encroachments of unnecessary labour.

The Competitors must be working men, in the strict sense of the expression; and the Essays must be short, not exceeding twice the length of one of the "Sabbath Tracts for the Times" now in course of publication.

All the Essays must be forwarded to David Robertson Esq., Bookseller, Glasgow, before the 30th of March next. And each Essay must have two mottoes inscribed on it, and be accompanied by a *sealed letter,* inscribed with the same mottoes, and containing in it the Name of the Author . . . . . .

P.S. Intending Competitors, who have not read the "Tracts for the Times" will be supplied with copies, gratis, by David Robertson Esq., Glasgow, or Messrs. Partridge and Oakey, 34 Paternoster-row, London. (Advertisement in the *Railway Times* 29 January 1848)

ERRATA: November 1975 *Journal*

p.54: Wargrave station was opened in 1900

p.67: Receipts v. Expenditure. For Water 10¼d. read 10½d., otherwise the total is wrong.

Charges for advertisements are as follows: for small advertisements, members 3p per word, non-members and commercial advertisers 6p per word. Minimum charge for any small advertisement 50p. A *full* page advertisement costs £15 and a *half* page £10. Remittance should be sent, with the copy, to Mr Michael Stimpson, 83 Sunny Bank Road, Potters Bar, Herts., EN6 2NL

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