

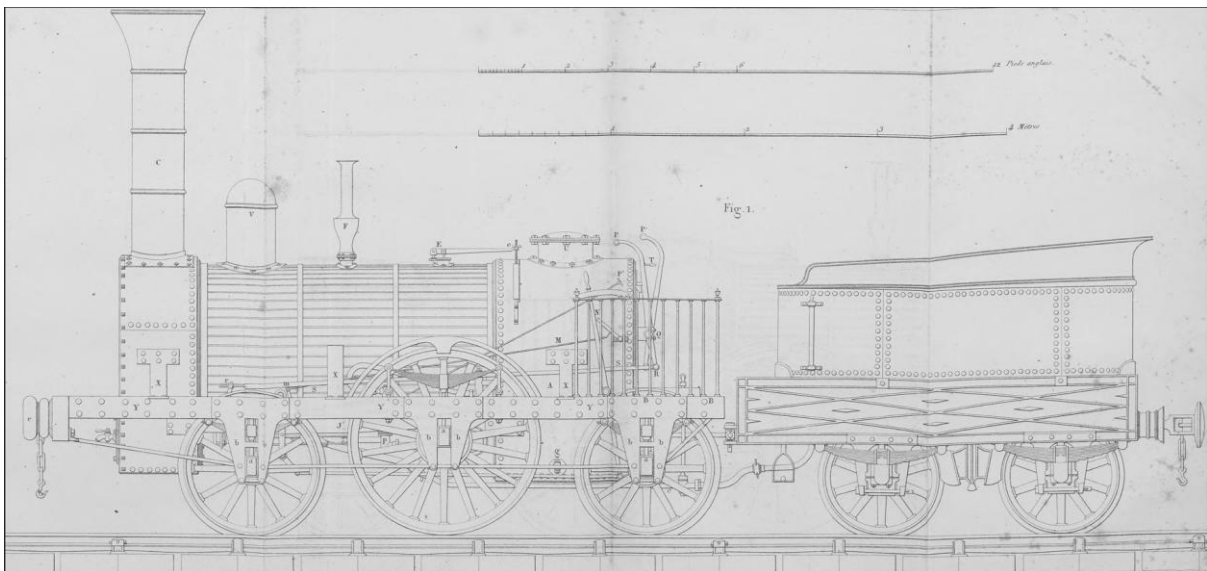
Harvey Combe & Leviathan: Robert Stephenson locomotives on the Bury dominated London & Birmingham

By Tom Nicholls, including many references from Harry Jackⁱ

Robert Stephenson was precluded from applying to supply locomotives to the London & Birmingham as he was the Chief Engineer. This might not have been unusual except that that conflicts of interest were widely ignored, between certain parties, at this time in a way that is peculiar to us today. Indeed it would appear that this criteria was specifically created with the aim of precluding Robert Stephenson and his company from applying to supply locomotives. The motivation being a prejudice borne against him by of some Liverpool based company directors.

Edward Bury, the choice of the Liverpool directors, was in any case confident that his two loco types would meet all London & Birmingham's motive power needs. Much debate would ensue with regard to the benefits of three axle locos over just two, particularly when accidents occurred and four wheel locos were seen to be less stable. Bury stuck to his guns, however as train lengths and weights increased it was necessary for the London & Birmingham to multihead trains from Euston. Not until 1846 did Bury finally admit defeat and recognise the need for bigger engines as train weights and speeds increased.

By way of which we understand how the London & Birmingham had only the two Bury types of locomotive. There was however for a brief moment, the chance to try a three axled locomotive in what is now thought to have been something of a back door sales pitch, just before the board made its final decision.



'Harvey Combe' was a named Stephenson patentee locomotive but never achieved the status of a passenger engine on the London & Birmingham. Although bought by the company after a year of working, it was restricted to working as a ballast engine until it was sold at the end of 1843.

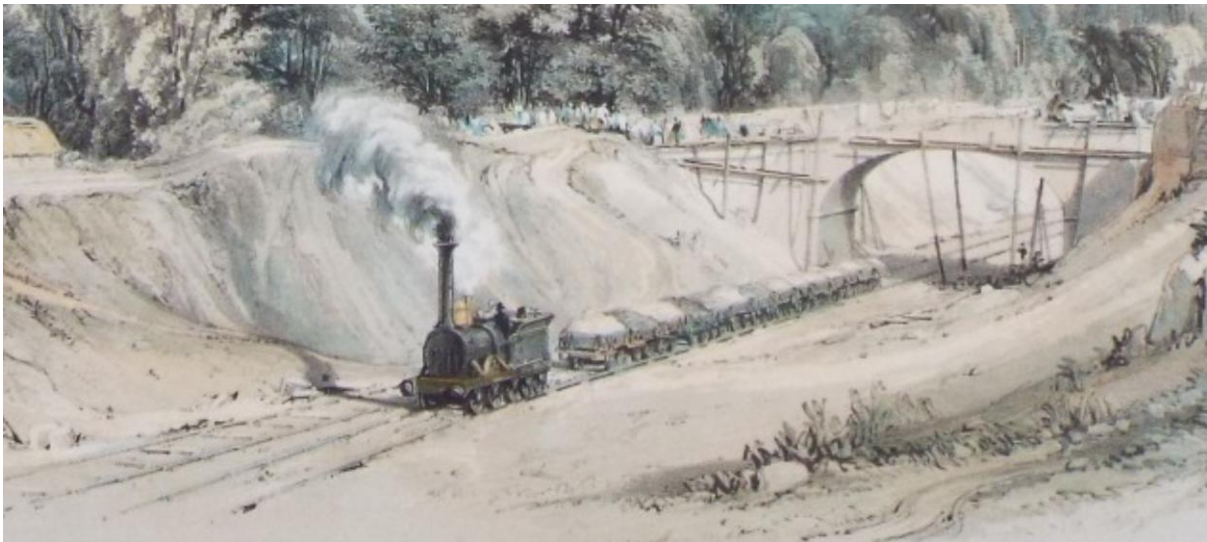
All of this is expertly detailed by Harry Jack. *"The use of a passenger single as a ballast engine has always seemed puzzling, but it can now be seen as part of Stephenson & Co's campaign to promote their patent locomotive."*

Just at the time the L&B directors were considering candidates for the position of locomotive power contractor, Robert Stephenson persuaded W. & L. Cubitt & Co to take one of his firm's Patentee type as a works engine for their contract on the L&B. An engine (RS 123) which had just been completed for Belgium was quickly diverted south, arriving on Cubitt & Co's Berkhamstead contract on 28th December 1835.

It was named Harvey Combe after the Master of the Old Berkeley Hunt, whose territory was disturbed by the building of the L&B in Hertfordshire. Stephenson was clearly trying to use this indirect means to show off his patent six-wheeled passenger engine to the directors in the hope of procuring orders for the Newcastle firm or, failing that, obtaining royalties if orders were placed elsewhere.

Note that Harvey Combe was initially bought by Cubitt not the London & Birmingham Co. when Robert tried in October 1836 to sell directly he was again turned down. "In October 1836 Robert Stephenson wrote to the Birmingham Committee recommending the purchase of an engine from his firm. The engine would cost £1,575, the tender £220. From the price this was clearly a six-wheeled engine; his offer was not taken up."

In October 1837 Robert Stephenson recommended that the L&B should buy Harvey Combe from Cubitt for use as a ballast engine; this time the Board agreed initially, but by the next meeting had second thoughts: Harvey Combe was too expensive, had been too long at work, and in any case was a passenger engine. But then it was revealed that it had already been taken away "by order of Mr Stephenson" and because of this Cubitt & Co had missed another chance to sell it. The Board, under a moral obligation, agreed to buy it on 25th October 1837 but only at a price reduced from the £900 originally asked. It had only done a year's work and "would be suitable for drawing ballast trains down the incline from Watford. It was working at Watford Heath by 31st October, when it was derailed on a temporary crossover."



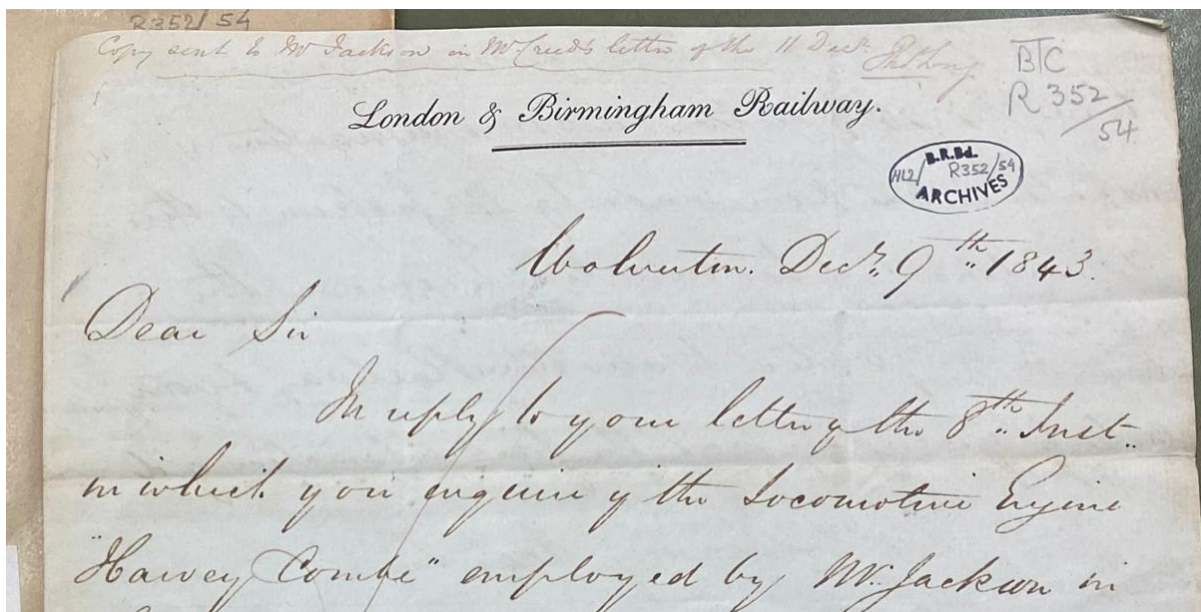
Harvey Combe working the Berkhamstead section while the line was under construction captured by the artist John Bourne. Apparently dated 10th June 1837.

"In 1838 Harvey Combe had been used in tests by Nicholas Wood for his report to the Great Western directors; it performed well against the GWR's North Star and the published results showed the L&B engine was 'very superior and more economical' according to letters in the railway papers in 1840. In December of that year it was taken out of the ballast stock and was tried on passenger trains for a few months. This might have been arranged as a response to the publicity, to appease the vocal

Stephenson supporters on the Board, or maybe it was just Bury's way of demonstrating that a six-wheeled engine had no advantage over his four-wheelers. From the very detailed results which were published it is clear that Harvey Combe was a poor performer by comparison with the Bury engines. It was slower, consumed far more coke and oil and was heavier on repairs. It broke an eccentric rod in April 1841, but was back working as a traffic engine in June. Its last appearance in the monthly lists was on 8th September 1841; thereafter it disappears from L&B records and is listed neither as a ballast nor as a traffic engine.

Evidently it remained L&B property. Late in 1843, at the request of the contractor Thomas Jackson, it was altered at Wolverton to the 5ft gauge of the Northern & Eastern Railway; Jackson had a contract with that line and needed engines there. Harvey Combe was transferred to him on 15th December on payment of 5% interest on the valuation, on condition that he bought it outright at the end of his contract.

Within the cache of London & Birmingham railway historical letters is the letter from Edward Bury discussing difficulties with the apparent sale of Harvey Combe to the Northern & Eastern. It would appear that instructions had been given to alter the locomotive's gauge – seemingly in preparation for the move to the Northern & Eastern which was 5' gauge – Edward Bury it seems had not been informed of this.ⁱⁱ



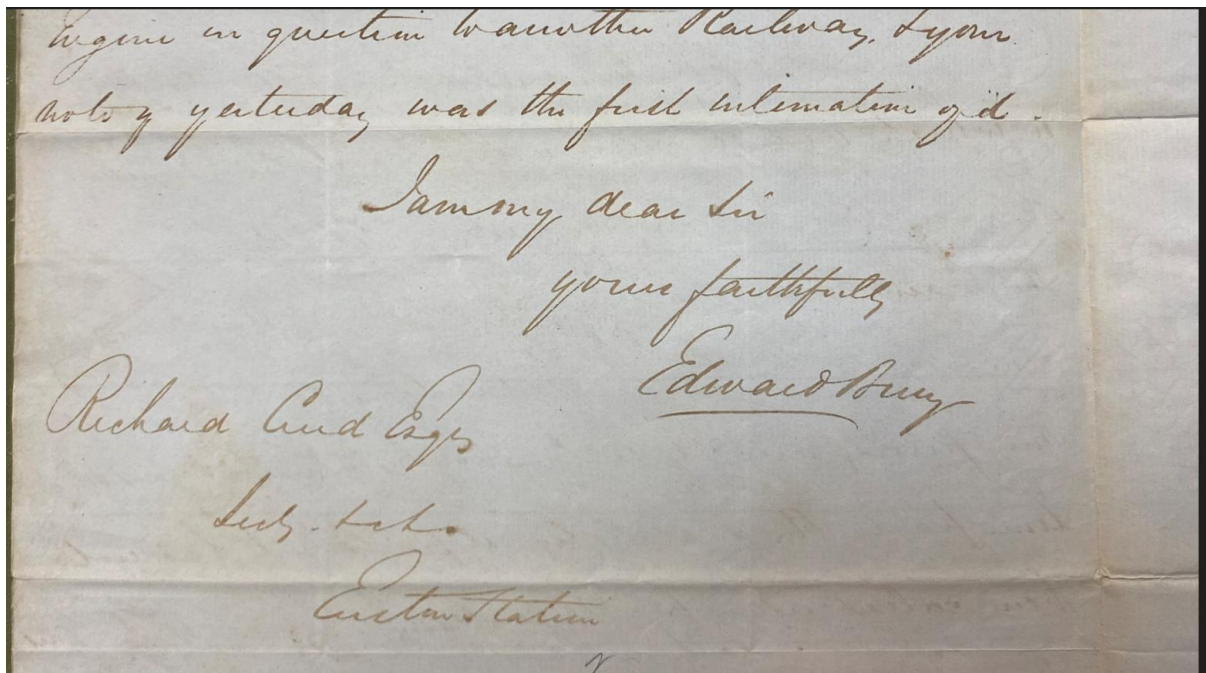
“Wolverton December 9th 1843

Dear Sir,

In reply to your letter of the 8th inst, in which you enquire if the Locomotive Engine “Harvey Combe” employed by Mr Jackson in the maintenance of way department has been removed to the Northern & Eastern Railway with my consent. I beg to state that for some time past the locomotive department has not been called upon by Mr Jackson to repair the ballast engines except occasionally and that when last the Harvey Combe which were sent him the order was to alter the gauge but for what purpose did not transpire – no notice or communication whatever has been made by Mr Jackson to their department of this intention to remove the engine in question to another railway & your note yesterday was the first intimation of it.

I am my dear Sir,

Edward Bury”



Interestingly the gauge alteration of the N&E and ECR was being openly discussed from October 1843 but didn't occur until the period 5 September and 7 October 1844.

Other Stephenson locos including Leviathan

From Harry Jack again: "By May 1837 the first section of the railway was within a few weeks of opening but the Camden stationary engines were far from ready; in fact, the components had not yet been brought to the site and were to be further delayed by repairs to the Regent's Canal. Bury told the Locomotive Committee that until rope working commenced it would be necessary to use coupled engines as bankers. But none of the goods engines could be expected before the end of the year and the only coupled engines available were the puny ballast engines.

At the same time there was another crisis, a shortage of engines on the Blisworth contract, and on 19th May the L&B Secretary Richard Creed asked Robert Stephenson if he could "procure a locomotive and tender from his connection at Newcastle, within a month." Just then Robert Stephenson & Co were in the middle of an order for six 2-4-0 engines (works numbers 151-6) for America via the agents G. & A. Ralston. The first two had been sent to London en route for the Baltimore & Susquehanna Railroad in January and March and the third left Newcastle on 31st May.

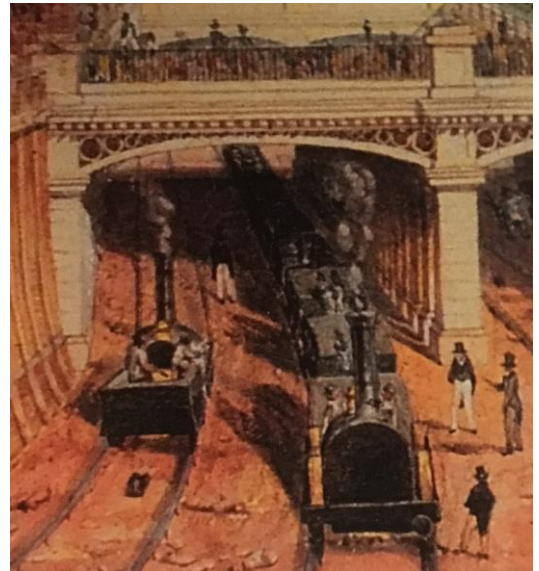
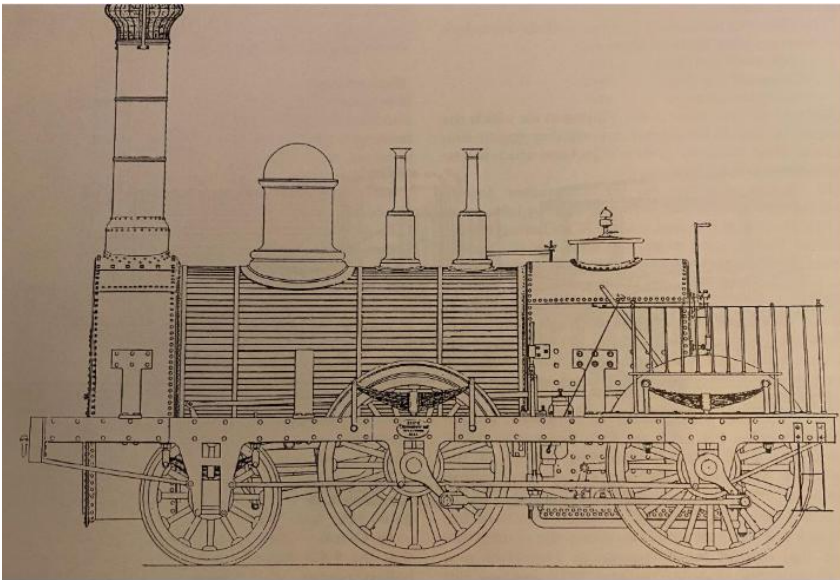
Meanwhile G. & A. Ralston had got themselves into financial difficulties and the latter part of their order was cancelled. Construction of the last two engines was abandoned while the fourth was sold to the Paris & Versailles left bank line as La Victorieuse. The third engine (153) arrived in London early in June and Stephenson appears to have transferred it to the L&B for delivery by canal to the Blisworth contract. "By chance" it was unloaded at Camden and remained there. The invoice was sent to Creed on 5th June and the London Committee recorded the payment of £1,750 to Stephenson on 12th July. One of Tayleur's ballast engines was sent to Blisworth in its place.

The 2-4-0 arrangement was a novelty and the engine was large and powerful for its time. The inside cylinders were horizontal, with the slide bars over the low leading axle; the valves were operated by

the new four-eccentric gear with large gabs, controlled by a single reversing lever. Framing was the normal Stephenson outside sandwich type.

The first part of the line was opened on 20th Jul 1837. Lecount describes an average of fourteen trips from Euston "with the great engine made by Rober Stephenson & Company to work the trains up the inclination till the fixed engine was ready [which amounted to 15 miles an hour with 70 tons, viz. 10 carriages and 148 passengers, at a steam pressure of 50 lbs per square inch."

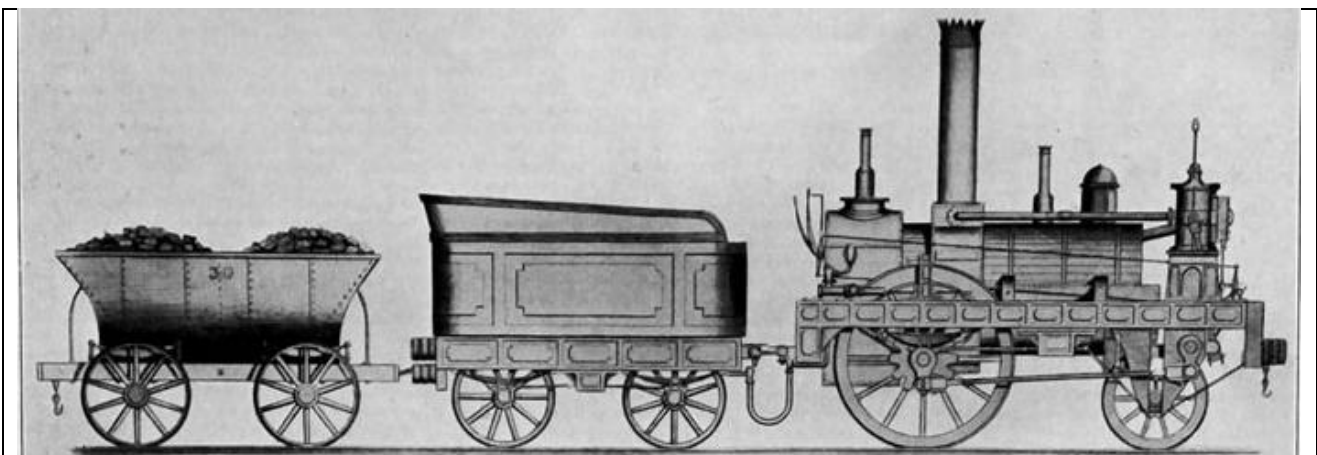
After the Camden stationary engine began regular work in October, the 2-4-0 appears to have gone into the ballast stock and was probably named Leviathan."



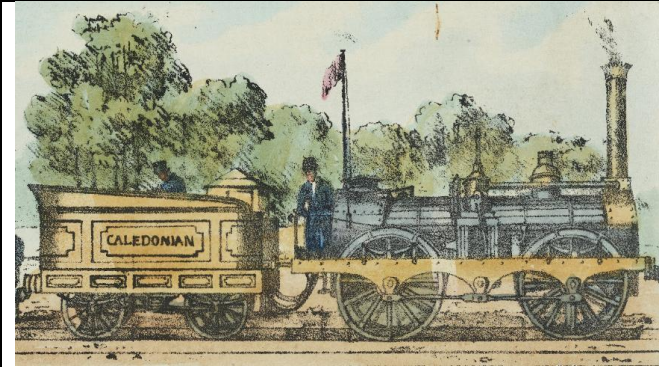
(Left) Stephenson 2-4-0 likely the same type as used on the Camden Incline. (Right) Robert Blemmell Schnebbelie's depiction of the railway's Hampstead bridge captures locomotive working of the Camden Incline. To the left is a Bury loco heading down the incline towards Euston. Note the pulley/sheave missing the rope just behind the loco. Coming towards the artist however is a seemingly larger locomotive pulling a train. The engine could be a depiction of the Stephenson loco although the Chris spotted the double driving wheel arches suggesting an 0-4-2 rather than a 2-4-0.

Leviathan's "last mention in the records is its derailment on 23rd August 1843; when running from Roade to the Watford ballast pits it collided with a "lurry" near Leighton." After this as Harry Jack states, it may have been taken on by the contractor Thomas Jackson.

Caledonian (Liverpool & Manchester history provided by Dawsonⁱⁱⁱ)



Galloway, Bowman and Glasgow were based at the Caledonian Foundry, Great Bridgewater Street in Manchester. They were millwrights and engineers and built their first locomotive for the Liverpool & Manchester in 1831. Dawson states that this was a separate locomotive from Caledonian although Dendy Marshall concluded that Caledonian was the product of a rebuilding of Manchester. Dendy Marshall's image (left) is also likely the engine in an already rebuilt form with the controls in a 'conventional position'. The tender buffers show the additional lower narrower set for when the loco was working at the Haydock Quarry. This also corresponds with Dendy Marshall's date of the illustration as being 1832.



Caledonian has a number of obvious similarities with Manchester. Note the arrangement of the piston exhaust pipe to the base of the chimney and the piston shape and mount. The complicated boiler arrangement of Manchester must have caused some problems as Caledonian shows a return to a more conventional form along with the drive wheel springing. Note the similar tenders between the two locomotives.

The Caledonian "was delivered in autumn 1832 and underwent successful running trials". Seemingly becoming LM No.28. The Manchester Courier reported on the 29th of September 1832:

NEW LOCOMOTIVE ENGINE.—On Thursday week, a locomotive engine of an entirely new construction, the invention of Messrs. Bowman, Galloway and Glasgow, of this town, performed an experimental trip upon the railway with a train of loaded waggons. The engine proceeded at a rapid rate from Manchester to Liverpool, and shortly afterwards returned to Manchester. We understand the experiment was highly satisfactory. Unlike those of Mr. Stevenson, the cylinders are perpendicular, and are placed on the top of the engine.

It should be said perhaps that vertical piston engines and (jack) crank worked engines would continue throughout the history of the development of the locomotive. Other contemporaries included for example Hibernian on the Dublin & Kingstown (1834), and J. & C. Carmichael's locomotive for the Dundee & Newtyle Railway (1833).

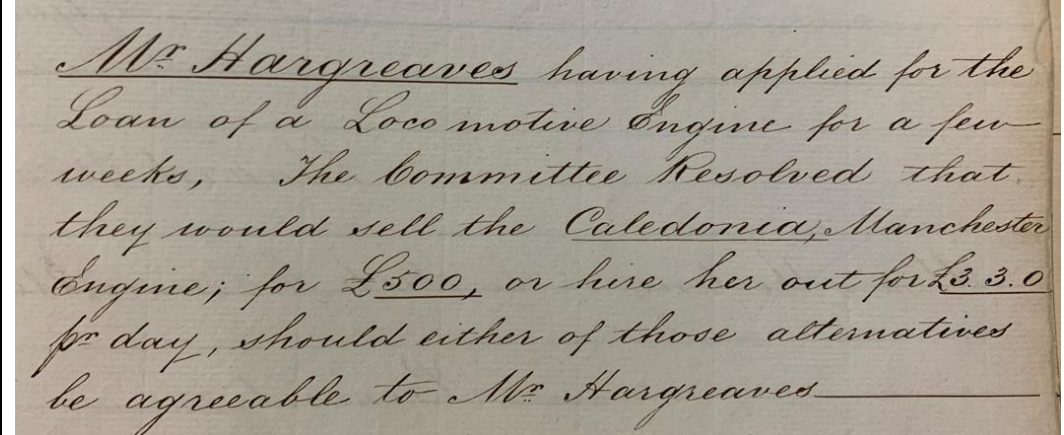
"John Galloway's notebooks record that on 20 September Caledonian took a load of 25 waggons from Manchester to Liverpool. She left Manchester at 6.30am and reached Parkside where she took on water at 6.30am. She stopped for 8 minutes at the foot of the Sutton incline which she surmounted at 7.02am and arrived in Liverpool at 8.08am having burned 630lbs of coke. A week later (27 September) she made the same run with 30 loaded waggons making a gross trailing load of 150 tons. Despite her vertical cylinders she was obviously a success and the Board agreed to purchase her for £800 on 29 October 1832, including a spare set of wheels."

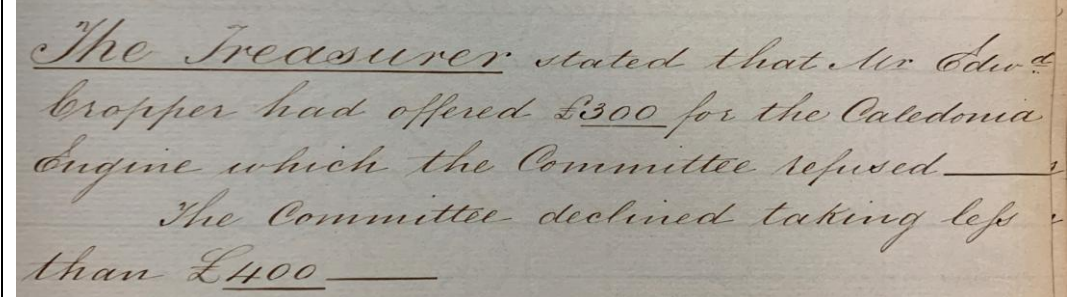
"Caledonian was involved in a fatal accident on 28 February 1835. 'Owing to the switch leading out of the St Helens Junction Line being left wrong placed' she collided with the Horsley Iron Company engine, Star 'which was proceeding with the train to Manchester': Caledonian 'was jerked off the rails and ran across to the opposite side of the road when she came into collision with the Caledonian Engine and Tender. Ralph Thompson the Company's Engineman was thrown off and killed on the spot, a working mechanic belonging to the Horsley Company was also thrown off and had his foot badly crushed... The Company fireman and Barnsley the Horsley Company's Engineer escaped without

much injury. The engine having broke loose from the train, the Coaches kept the way, and after about ½ an hour's delay, were forwarded to Manchester by another engine'

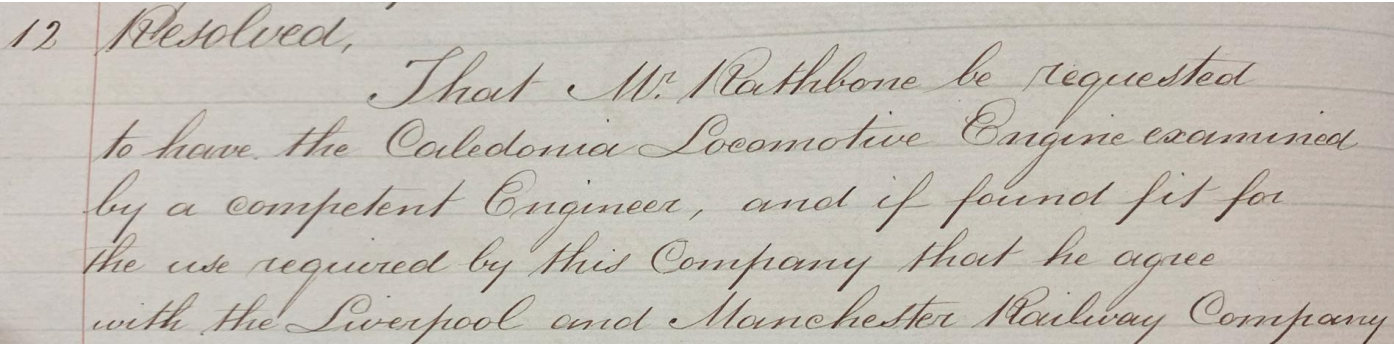
Caledonian was severely damaged, the 'tender was literally broken to pieces'. Henry Lawson, Caledonian's driver, was suspended on 1st of June by the Board for carelessness ... after the Piston Rings were broken, by which the Cylinder-Cover was damaged?"

It would appear that the Liverpool & Manchester Board Sub Committee put in quite a bit of work in attempting to sell Caledonian. First to the Bolton & Leigh, although this presumably failing as the committee considered a second offer a four months later from Edward Cropper.

 <p><i>Mr Hargreaves having applied for the Loan of a Locomotive Engine for a few weeks, The Committee Resolved that they would sell the Caledonia, Manchester Engine; for £500, or hire her out for £3.3.0 per day, should either of those alternatives be agreeable to Mr Hargreaves</i></p>	<p>5th January 1837^{iv} It would appear that the Bolton & Leigh, thus the reference to Mr Hargreaves, were considering either the purchase or hire of the Caledonia [sic]. Presumably this</p>
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<p>May 1837, (p.203)^v Edward Cropper, was a director of the London & Birmingham Railway and presumably acting on their behalf.</p>	 <p><i>The Treasurer stated that Mr Edward Cropper had offered £300 for the Caledonia Engine which the Committee refused. The Committee declined taking less than £400</i></p>
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On the 12th of May 1837 the London & Birmingham board resolved that their (non resident) Director, Theodore Rathbone, who incidentally was also a director of the Liverpool & Manchester Railway, should look into fitness of the locomotive for use by the London & Birmingham.^{vi}

 <p>12 Resolved, That Mr Rathbone be requested to have the Caledonia Locomotive Engine examined by a competent Engineer, and if found fit for the use required by this Company that he agree with the Liverpool and Manchester Railway Company</p>

for the purchase

While I don't have the reference myself, Dawson and Harry Jack agree that the Caledonia was in fact purchased in May for £400. The Caledonia [sic] however must have proved not to be fit for purpose as Stephenson was already instructed to sell the locomotive on the 8th December 1837.^{vii}

That the Caledonia Engine should be sold;

29th Ordered, That Mr. Stephenson put a price on the Caledonia Engine and state whether she should be sold on the spot or sent here.

Harry Jack states that the locomotive was sold for £200 and “Probably it went, in 1838, to a contractor building the Midland Counties railway where, renamed Mersey, it featured in the opening celebrations of the Nottingham- Derby section 30th May 1839.”

The Nottingham and Newark Mercury states on Friday 31 May 1839, that the locomotives at the opening were: Aerial, Mersey, Hawk and Sunbeam. In the details of the article each locomotive gets several further mentions except Mersey. This would suggest that Mersey was not one of the company's own engines fitting with Harry Jack's comments.^{viii}

A contractor for the Midland Counties was William Mackenzie of St Ann's Street Liverpool. He would certainly be a good candidate for the final owner of the 'Mersey', given the Liverpool connection. Mackenzie's diary records a locomotive by the name Mersey and three others being brought over to France and records it at work in 1843 through to 1845^{ix}. If Caledonia was Mersey, it may have ended its days on a French railway.^x

ⁱ 'Locomotives of the LNWR Southern Division', Harry Jack, RCTS, 2001

ⁱⁱ TNA Rail 1008 106, Historical letters, Locomotive Superintendent's letters, R 352/54

ⁱⁱⁱ 'Locomotives of the Liverpool and Manchester Railway', Anthony Dawson, Pen & Sword Transport, 2021

^{iv} TNA Rail 371/10 Liverpool & Manchester Railway Board Sub Committee

^v Ibid.

^{vi} TNA Rail 384/78 Minutes of the London & Birmingham Board (Birmingham Committee)

^{vii} Ibid.

^{viii} Aerial, the speeches tell us, was a product of Butterly Works, as announced by Mr Glynn, built by Messrs Jessop Wright & Co. , Hawk (Stark & Fulton) and Sunbeam (Jones, Turner and Evans). Whishaw records that the Midland Counties had five named locos in 1839, being: Hawk, Sun (Bury), Tiger (Bury), Vulture and Eagle.

^{ix} 'The Diary of William Mackenzie', By William Mackenzie, editor, David Brooke ; publisher, Thomas Telford, 2000

^x 'In France, locomotives from Potts & Jones of Newton-le-Willows, Hawthorns, Newcastle, Hicks, Bolton, and Kitsons, Leeds, made a major contribution to construction and, when no longer required by Mackenzie & Brassey, were sometimes sold to French railway

companies', William Mackenzie and Railways in France, David Brooke, Construction History Vol. 13. 1997