

A NINETEENTH-CENTURY COLLIERY RAILWAY

BY JOYCE H. M. BANKES

HISTORY is an account of the actions of men operating in large numbers but conducted by individuals, wrote William Bacon. This story is of an enterprise which required the labour of many men, but which had as its mainspring an individual, who combined considerable zeal and vision with unyielding determination. Meyrick Bankes, although a man of many interests, was by no means an absentee landlord. He took a tremendous interest in his collieries and was often to be seen on the pit bank first thing in the morning ready to go down the shaft with his workmen. It was, in fact, in his colliery office in Liverpool that he died at the age of seventy.⁽¹⁾ We are primarily concerned here with his development and use of his own particular railway for coal transport, and with his energy and enthusiasm which created a successful business from small beginnings.

I THE BUILDING OF THE RAILWAY

In 1830, fifty-six years after the construction of the Wigan branch of the Leeds and Liverpool canal, the railway from Liverpool to Manchester was opened, and the next year the connecting branch from Newton to Wigan was completed. Shortly afterwards the line was extended from Wigan to Preston. By opening up the Wigan coalfield these railways stimulated a variety of trades which had first been encouraged by the coming of the canal.⁽²⁾ The focal point of the new

⁽¹⁾ In his will Meyrick Bankes directed his trustees "to carry on my business of a coal merchant in the parish of Wigan . . . and at Liverpool, Manchester, Bootle, Birkenhead, Runcorn and Seacombe" for the term of seven years after his death, but with power for them to let the colliery business if they wished.

⁽²⁾ At the beginning of the nineteenth century, the waterfront was controlled on the southern bank by such pottery firms as Messrs. Leigh, Latham and Leigh, and Richard Meir Astbury, both of Wigan, and Bolton and Ellis of Warrington, earthenware manufacturers. John Thompson of Wigan represented the iron industry, while in the background the bankers, Thomas Woodcock and Ralph Thicknesse, assisted with the financial hazards of the various enterprises. In a deed executed between William Baldwin, gent., Edward Jackson, builder, and Thomas Woodcock of Wigan, gent., it is recited that "Edward Jackson had lately erected two messuages, a warehouse and stable. Also a water corn mill, kiln and warehouse, and had obtained the consent of the Lord of the Manor of Wigan and others to the use of the water of the River Douglas and other streams

activity was a small area of land in Wigan between Wallgate and the river Douglas. Here wound the Leeds and Liverpool canal with its convenient Wallgate basin. A pier head, well-placed for canal transport, had already attracted colliery proprietors, and possession of a coal wharf was deemed to be extremely desirable.⁽³⁾ As a first step towards gaining a foothold on the canal water front, Meyrick Bankes's father had purchased in 1822 a small estate in Pemberton known as Clapgate or Hindleys. This acquisition rounded off another larger purchase of land in Pemberton in 1757 from Lady Penelope Cholmondley and George Lewis Scott.

Meyrick I died in 1827⁽⁴⁾ and was succeeded by his eldest son, also called Meyrick, who came of age in 1832, the momentous year of the first Reform Bill. Meyrick II set his hand to the expansion of the collieries. On his accession to the estate there were three mineral leases in being. The most important was that granted in 1792 to Messrs. Clarke and German for the Orrell four-foot mine in Winstanley. The second was to Stopford and Briden for the Clapgate coal, and the third, and perhaps most interesting, was to Thomas Claughton for mines under various estates in Pemberton.⁽⁵⁾ The lease to Claughton has a rather curious history and far-reaching consequences. It would appear that he visualised a most advantageous chain of mineral leases stretching from the Ashton-Pemberton boundary to the canal wharf in Wigan. He may also have had plans for the Ashton side as he held several coal leases from Sir William Gerard in that area.

there for the purpose of turning the said water corn mill, and had erected a weir and made divers sluices." William Baldwin, the elder brother of Thomas Baldwin, vicar of Whalley, went bankrupt, and his possessions were sold in 1801. In 1805 a flint mill is mentioned with a steam engine, the property of Leigh, Latham and Leigh. Deeds relating to this area covering the seventeenth, eighteenth and nineteenth centuries are to be found among the Winstanley muniments deposited at the Lancashire Record Office.

⁽³⁾ Winstanley Deeds. "On or about 1774, William Earle the elder, Samuel Warren and Jonathan Blundell, together with Edward Chaffers of Liverpool, agreed to become partners under the firm of Samuel Warren and Co. in the buying of coal and cannel from the several mines near the River Douglas and carrying the same in flats, barges and other boats and vessels by means of that Navigation and the Leeds and Liverpool Canal for sale and disposal thereof at Liverpool."

⁽⁴⁾ For an account of Meyrick Bankes I see TRANSACTIONS, Vol. 112, pp. 159-166. The family motto on p. 165 should read *Nullius in Verba*, which is taken from a line of Horace, *Nullius addictus iurare in verba magistri*, which H. Ellis Tomlinson has translated as *Not pledged to echo the sentiments of any master*. Mr. Tomlinson has also drawn attention to the fact that the *canton of the second* in the Bankes blazon was not painted on the hatchment.

⁽⁵⁾ "Records of Mining in Winstanley and Orrell", *Lancs. & Ches. Ant. Soc. T.*, Vol. LIV., p. 54; *V.C.H.*, Vol. IV, p. 170, n. 20; *Burke's Landed Gentry* (1849), p. 709; Cross deeds, L.R.O.; G. Ormerod, *History of Cheshire*, Vol. III, p. 338; Claughton and Co. appear also in the Orrell area in 1820 as employers of eight colliers (Land Tax Assessments).

A few particulars of the lease of 31 March 1822 to Thomas Claughton are relevant. The term was for twenty-one years and covered an area of eighty-seven Cheshire acres. The demised mines were the "Upper mine, containing five feet of coal and the Lower mine, containing four feet of coal" lying beneath the Hindley Hall estate, the Bull's Head public house, and Shelley's or Culcheth's estate, a moiety of the Stone House mines, and various other small portions of land. All these had frontages to the turnpike road. The rent was to be £400 per annum for each mine and this was stipulated to be paid "in lawful British money current in England and not in any Bills of Exchange".⁽⁶⁾

In the same year, 1822, Thomas Claughton contracted with various parties for a pier head on the canal. Unfortunately, he had too many irons in the fire and was declared a bankrupt on 5 March 1824. Thus his colliery empire foundered, although he had succeeded in raising a loan from his rich aunt, Martha

⁽⁶⁾ The following extract from the lease shows how coal-mining was carried out at that time:

"... according to the common and usual methods of working Coal mines in Upholland and Orrell in the said County of Lancaster work the said hereby demised Mines and Beds of Coal with effect and shall and will as soon as the said demised Mines shall be opened begin to make and drive and as the same shall be carried on continue to make and drive and complete and finish one main drift and or watercourse of at least five feet wide but not to exceed five feet and a half in width with Pillars or ranges of Coal on each side thereof of five yards thick and the openings or cut through as often as shall be necessary five feet wide each which Pillars or ranges shall not be gotten from the bottom of Engine Pit which shall be made by the said Thomas Claughton his executors administrators or assigns on or towards the deep of the said demised Mines in the said closes or parcels of land and from thence so far as the said demised Mine shall be gotten and that the water may be carried off and conveyed therefrom by and through the said Drift End or watercourse to be made and driven by the said Thomas Claughton his executors administrators or assigns and shall and will as the same Drift end or watercourse shall be made and driven and after the completing and finishing thereof at all times keep the same open and in good order and condition *Provided always* and it is agreed that the said Lessee his executors and administrators shall and may at the end of any of the said Pillars or Ranges cut an opening or Through of five feet wide but not more into or out of any of the Drifts of the said Mines. *And Further* that the said Pillars or Ranges of Coal shall be made and left five yards Thick and that the same ranges or Pillars or any of them shall not be gotten by the said lessee his executors administrators or assigns But that the said Thomas Claughton his executors administrators or assigns shall and may in such case get take and carry away the like and the same quantity of Coal as shall be contained in each such Pillar or Range from and out of such part or parts of the Fields Closes and Parcels of Land as shall next adjoin such last mentioned Pillars or Ranges respectively provided that the said Thomas Claughton his executors administrators or assigns shall not by any means make or sink any pit or pits in the same fields closes and parcels of land or any part thereof and the said Thomas Claughton his executors or administrators from time to time paying unto the said Meyrick Bankes his heirs or assigns after the rate or price hereinbefore mentioned for all such parts of the last mentioned mine as the same shall be gotten and paying all trespasses and damages that shall be committed thereby in or upon the same closes Fields or parcels of Land. . . ."

(L.R.O., DDBa/Div. 6/b.8.)

Ormerod, and a further sum from Peter Newton of Warrington whom Cloughton had "prevailed upon to lend him £4,000 for which the colliery premises, the steam engine and the railway formed security". After devious negotiations the assignees of the goods and effects of the insolvent Cloughton put the Stone House estate up for sale by public auction at the Eagle and Child inn at Wigan on 26 July 1830. Before this, however, they had agreed to sell a portion of the mines and an assignment of the 1822 lease to John Daghish of Wigan, civil engineer.⁽⁷⁾ Daghish had entered into partnership with Peter Brimelow of Wigan and had agreed to carry on business at the Stone House colliery. At the auction, the property was bought in at £3,400, but Meyrick's guardians offered £4,050 and this was accepted. Thus the surface of the Stone House returned to the Bankes family after a lapse of 173 years.⁽⁸⁾

The plan accompanying the sale catalogue shows the position of the two pits sunk to the Pemberton four-feet and five-feet mines with the tramroad leading from them to the canal wharf. Further details are set out as follows. "This estate is in a ring fence and lies within a mile of the town of Wigan and adjoins the turnpike road from there to Warrington. There is a tramroad from this property to the Leeds and Liverpool canal and the undertakers of the Railway from Wigan to Newton are pledged to make a branch from Winstanley to that railway which will pass near this estate." The sale catalogue also listed "12 cottages, smithy, workshop, and a large building formerly used as an Iron Foundry".

Pending the arrival of the railway as envisaged in the last paragraph, the problem confronting Meyrick and his agent Tebay, was how to convey the coal from the recently sunk pits in Winstanley to the canal, except by the slow and laborious method of horse carting. Thomas Tebay did his best to organise

⁽⁷⁾ "The family of Daghish and the St. Helens foundry", notes by T. C. Barker (Wigan Reference Library), "In 1804 John and Robert Daghish are said to have settled in Wigan as engineers to Lord Balcarras with particular responsibility for the working of the Haigh foundry". The Wigan Court Leet Records (Vol. III, Roll 1803) give John Daghish and Henry Bullock as gatewaiters for Millgate, Wigan (Wigan Reference Library). It is not known if John and Robert were brothers, but as the life dates of the latter are given as 1774-1865 and we know that John died in 1851, it may be reasonable to suppose that relationship pending further research.

⁽⁸⁾ Peter Brimelow of Wigan, coal master, died in 1837. During his partnership with Daghish he lived at the Stone House. This small estate formed one of James Bankes's first purchases in the district in 1581 (J. H. M. Bankes, "James Bankes and the manor of Winstanley", *TRANSACTIONS*, Vol. 94, p. 63). For some reason it was sold in 1657 although a portion of the minerals were retained, yielding a yearly rent of 10s. 0d. to the Bankes family. Thomas Cloughton bought the Stone House, in 1819 from the brothers Wagstaff of Warrington, who had inherited it from their aunt, Mary Doxon.

transport along a neighbouring tramroad from the Pemberton collieries belonging to the Blundell family, but on 11 July 1835, Mr. Blundell Hollinshead wrote, "I find you contemplate what I never expected by my railway. As it is a new feature, may I ask what Common coal it is you intend getting? I am apprehensive the Duke's Trustees will object." The common coal would be from the Orrell yard mine. Mr. Tebay wrote at once to the trustees of the duke of Bridgewater at the Worsley headquarters.

"When Mr. Bankes left home for British America about six weeks ago, he had agreed with Mr. Hollinshead to waggon his coals along Mr. Hollinshead's railway (which I understand crosses some fields belonging to your Trust) to the canal at Wigan, by paying a certain tonnage, and that you consented to this arrangement in consequence of Mr. Bankes promising to lease to Mr. Hollinshead some Orrell coal in Pemberton, and granting him a right of way over part of this estate in Pemberton to the Tan Houses belonging to you, which would connect those mines with Mr. Hollinshead's present colliery, which at present are shut out of the market. I am now informed by Mr. Hollinshead that you will not allow Mr. Bankes to take his coal along Mr. Hollinshead's railway, and I am also informed that a very unjust representation has been made to you by some of the Coal Masters in this quarter, respecting Mr. Bankes' coal and collieries. I have taken the liberty to address you on the subject and would be glad to wait on you any time you may appoint to give any further explanation you require. Your objections can have no other effect than putting Mr. Bankes to some additional expense and then the Orrell and other mines under the Tan Houses estate would remain shut out of the market."

The answer came by return.

"Sir, Mr. Latham requests me to acknowledge the receipt of your letter to him of the 20th instant, and to say that, however anxious he may feel to meet the wishes of Mr. Bankes and Mr. Hollinshead, he cannot, at present, alter the opinions he has formed as expressed in my letter to Mr. Hollinshead.

I am, sir,
yours respectfully,
William Atkin."

After this rebuff it became even more urgent to negotiate an independent outlet for the Winstanley coal. In 1836, E. Stanley, a Liverpool surveyor, produced a "Plan and section of a Proposed Railway from the Winstanley collieries to Wigan, belonging to Meyrick Bankes, Esq. in the Townships of Winstanley, Pemberton and Wigan". A large part of the route crossed land belonging to Meyrick, but he had to negotiate with seven other landowners in addition to the trustees of the Warrington-Wigan turnpike road. These difficulties were eventually overcome. The turnpike trustees agreed to a wayleave over the high road of £20 a year. Neighbouring proprietors made arrangements to wagon their coal on the railway at "6d. for every ton of 22 cwts. and 4d. a ton for slack". If the

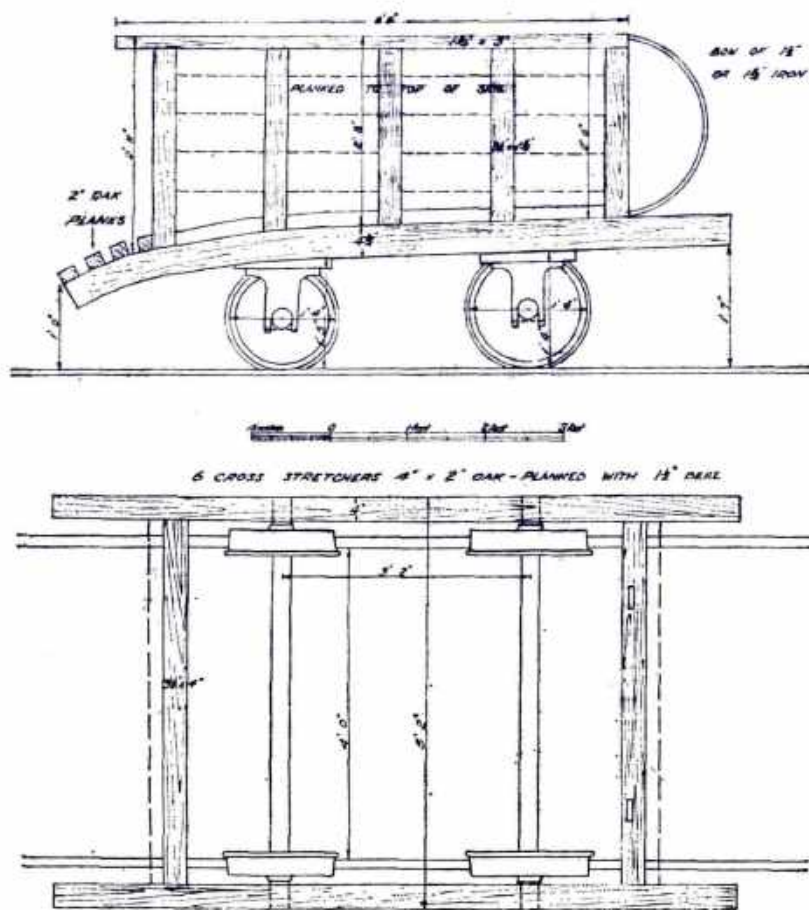


Figure 12.

Drawing of the double-horse truck used on the Winstanley railway in the middle of the nineteenth century.

owner provided his own labour and wagons, the charge was reduced to 4d. and 2d., respectively.⁽⁹⁾

The length of Stanley's main 4-foot gauge line starting from near No. 2 pit and ending at the canal wharf, is stated on his plan to be 3,791 yards, and in addition there was a shunt to No. 3 pit of 100 yards and a short extension to No. 1 pit, from where a tramroad was laid to carry coals "up to the cellars of the Hall." Two inclined planes are shown on the ordnance survey map of 1848. For these to work effectively a certain minimum gradient was required: various authorities give a fall of 1 in 36 as the optimum but less than this had been found possible when the length of the track made it practicable to get sufficient way on the train of wagons.⁽¹⁰⁾ It would appear that the system at Winstanley was a combination of the inclined planes plus horse-power. As far back as 1828, the *Liverpool Mercury* printed a description of a "dandy cart" or horse wagon for use on mineral railways. This consisted of a two-wheeled truck boarded up on two sides and hitched to the back of the train of wagons. Two or more horses rode on the truck and were destined to pull the empties back up the incline. The reporter in the *Liverpool Mercury* noted that the horse rode down "the runs" in the truck, and "quietly eats his provender, and is quite refreshed when his services are required again. The driver can give greater velocity to the wagons and is thereby enabled not only to save time—but also to run over a greater extent of level ground where power is otherwise required". The extension of the railway to No. 4 pit, however, did operate on the principle of the self-acting inclined plane.

It consisted of a double track with a large wheel at the top end fitted with a brake: the loaded descending wagons pulled the empty wagons up the other track. Recent excavations have unearthed a portion of the original track 3 feet below the present surface of the ground. The rolled iron rails⁽¹¹⁾ were laid in 5-yard lengths on cast iron chairs spiked to stone blocks, approximately 3' 6" apart. The rail is of the early bull-headed type. The stone sleepers⁽¹²⁾ were supplied by the Bispham Delf

⁽⁹⁾ Winstanley deeds. Between 1850 and 1870 the freehold of most of the properties traversed by the railway had been purchased by Meyrick Banks. "Thompson's Pier Head" was bought in 1850 for £1,960 0s. 0d.

⁽¹⁰⁾ Hughes, *Coal Mining* (1892); Fairley, *Colliery Managers' Catechism*, 2nd ed. (1888); Dr. Holland, *Fossil Fuel*, 2nd ed. (1841), pp. 356-7.

⁽¹¹⁾ John Birkenshaw took out his patent for rolled iron rails in 1820. J. H. Clapham, *Economic History of Modern Britain*, Vol. I, pp. 90-1.

⁽¹²⁾ These stone blocks were in general use at this period. The dates 1793-1800 are given for their introduction, though earlier instances are quoted. One argument for their use instead of timber was that they "were more difficult for enemies to uproot or burn than wooden sleepers". They were also considered



Plate 14. THE END OF THE LINE
The canal waterfront at Wigan.



Plate 15.
Stone railway sleepers built into a barn wall near No. 3 Pit.

Company; £185 19s. 0d. was paid to the quarry in 1845. Mr. Gossage, in charge of Meyrick's Liverpool coal yard, procured rails to the value of £825 14s. 5d. Tayleur and Company sold £32 16s. 1d. worth of iron wheels. Other suppliers of rails were the Mersey Steel and Iron Company, Messrs. Thompson of Wigan, and Messrs. Moore and Sons. Much of the timber for the wagons seems to have been provided from the estate; 1,647 feet of oak was used at the colliery in 1849, as well as a quantity of ash and "white wood". The loading capacity of the early wagons, judging by the shipment lists, was about 2.17 tons, but there seems to have been a difference in size in the wagons, as those "for the canal road" cost £35 0s. 0d. apiece when newly bought, and those "for the Lancashire and Yorkshire Railway", £50 0s. 0d. apiece. Two brakemen operated a train of from six to eight wagons sent down to the canal with the door at the front ready for the tipler. Each brakeman stood on the buffer of the wagon to operate the long-handled brake fitted with a wooden shoe. In addition, there would be two-horse wagons with their accompanying horseman, in readiness for pulling the empties back up the line. A drawing, dated 1851, shows these horse wagons as 6½ feet long with a gauge of 4 feet. Though the lower or Wigan end of the railway was obviously in being by 1842, it is indicated by account book entries that the total length of approximately 3½ miles from No. 4 pit to the Wigan pier head was finally completed by 1845. There is an entry noting that Mrs. Howard of the Stork Inn, Billinge was paid £2 14s. 0d. "for ale on sending first coal".

The railway was thus accomplished: the terms of the 1822 lease were invoked, and, pending the termination of the leases, a junction was made with the Winstanley line and with that already constructed under the Cloughton-Daglish régime.⁽¹³⁾ Meyrick and Thomas Tebay were justly proud of the success of their scheme, brought to fruition in the face of many difficulties and much opposition from rival coal owners. Customers for coal, slack and coke included such undertakings as the gas companies of Liverpool, Warrington, Wigan and Prescot, the Haigh Foundry Company and many other local firms as well as private customers in Liverpool. Coal yards and offices were

to be easier for the horses, since they left sufficient space and no obstacles to stumble over. C. F. Dendy Marshall, *A History of British Railways Down to the Year 1830*, pp. 148-9. H. E. Clegg, "Presidential address to Manchester Geological and Mining Society", (1957), p. 9, n. 1. Mr. Clegg gives a list of five tramroads in the area, the Winstanley railway among them.

⁽¹³⁾ This tramway is shown on two contemporary plans: G. Hennem, "Map of the County Palatine of Lancaster 1828/9", and R. Kellet, "Plan of the Town and Borough of Wigan" (1837).

established in Liverpool and Manchester to dispose of boat-loads of coal sent via the canal.

True, a little trouble had arisen in the early 1840s on the termination of the twenty-one-year lease granted to Thomas Claughton in 1822. About 1840 John Daghish had become the proprietor of the remainder of the leasehold interest of Peter Brimelow and his heirs, the term of which was up in March 1843. Articles of agreement had been signed by Meyrick Bankes and John Daghish in January 1842, whereby Daghish agreed to sell to Meyrick

"... for the sum of £1,250 all that right and interest in that part of the railway or waggon road commencing at a certain point in Pemberton called Hodsons Lane—where a certain other railway, belonging to Meyrick Bankes joins the railway of John Daghish—and extending from that point to the Pier Head now used by John Daghish and Meyrick Bankes on the banks of the Leeds and Liverpool canal . . . and also the weighing machine and tipler, together with all rails, bridges, shunts, sleepers and other matters belonging to the said railway, subject also to the payment of various small rents, viz. £30.0s.0d. *per annum* to the Rector of Wigan [for Parson's Meadow], £23.0s.0d. to the heirs of John Thompson, £12.0s.0d. to the heirs of James Andrew Bolton. £5.10s.0d. to the representatives of James Orrell and 10s. 0d. to the Rev. Amitriding."

A squabble seems to have developed in the following year. Meyrick alleged that Daghish had failed to fulfil some of the conditions of the original lease—in particular the bowling green at the Bull's Head public house had not been reinstated and the barn and buildings at the Stone House had decayed alarmingly. There was also unpaid surveyor Mercer's bill for £75 0s. 0d. for measuring the workings, and two cottages had fallen down at Smithy Brook. Daghish denied these charges, and said that the cottages had fallen down due to old age. He put in a counter claim "for not keeping in tenable repair the Stone House in accordance with a landlord's obligations", but agreed to reinstate the bowling green. However, in May 1844, he wrote to Thomas Tebay, "Sir, You pulled up my rails and stopped me from shipping my coals before the time specified. With damage done to me by so doing £45.0.0." Matters came to such a pass that a writ of summons was issued against John Daghish on 21 September 1844, but Meyrick's counsel found a flaw in the legal drafting of the 1822 lease and advised his client not to resort to extreme measures. The affair was eventually settled amicably, and Meyrick became the sole owner of the railway to the pier head.⁽¹⁴⁾

⁽¹⁴⁾ By this time, John Daghish had taken on larger colliery interests at Norley and Shevington, which occupied him until his death in 1851. His will, which was proved 19 June 1852, describes him "of Pemberton coal merchant". His son predeceased him and he left his estates to be divided among his four grandchildren.

Meyrick also had other interests besides the collieries in Lancashire. In 1835,

II MISCELLANEOUS ITEMS FROM
THE WINSTANLEY COLLIERY RECORDS⁽¹⁵⁾

The growth of the railways presented a challenge to the established method of coal transport by cart and canal. Monoplists of the latter resisted the change, although, in many cases, the colliery tramroads were valuable feeders for canal traffic. Meyrick Bankes was not among the landlords who opposed the coming of the railways. He had inherited five £100 shares in "the Wigan railway" from his father, and his guardians had spent £3,000 in sinking new pits in anticipation of the expansion in trade.

he had purchased land on the west coast of Scotland from the Mackenzies of Letterewe and another property in the vicinity from the Davidsons of Tulloch. His yacht, *Iris*, voyaged between Liverpool and Gruinard Bay, carrying cargoes of coal, building materials, food, and a curious item on one occasion, "£6.0s.0d. worth of chimney pots at 4s. 0d. each, supplied by the Haigh Foundry".

The return cargoes seem to have consisted of wool and timber. The first sheep farm in the modern sense was started at Letterewe on the shores of Loch Maree in 1810. Two items in connection with this property are of interest. In 1846, the potato disease struck the Western Highlands, bringing hunger and destitution in its wake. The relief committee set up in Edinburgh gave grants to the distressed areas, and Meyrick Bankes and Hugh Mackenzie of Dundonnel were appointed administrators of the funds.

Labour was employed in road making in one instance, principally on the stretch of road from Poolewe to Aultbea, known in after years as the "Destitution Road". Cargoes of spades and forks, grain and potatoes were carried north in the *Iris* to help with the situation.

The second item has a strange modern twist. The inhabitants complained of a mysterious creature living in one of the lochs, devouring lambs and frightening all who thought they saw it. Meyrick shipped a large pump and quantity of iron pipes on board the *Iris* and proceeded to pump the loch dry, as if it had been one of his own coal pits. Unfortunately, the engineer miscalculated, and water flowed into the loch faster than it could be pumped out. As a last resort, the crew of the *Iris* dumped a quantity of lime into the deepest part of the loch and nothing more was heard of the monster. Meyrick could not have been popular in spite of this, as he is said to have fined the "non co-operators" in the monster hunt £1.0s.0d. a head. See J. D. Dixon, *Guide to Gainloch and Loch Maree* (1886), pp. 62, 149, 137; and O. H. Mackenzie, *A Hundred Years in the Highlands* (1921), pp. 235-7.

⁽¹⁵⁾ There are three colliery ledgers extant. The first covers the period July 1833 to January 1841. This contains an alphabetical list of customers with the amounts of coal supplied to them from the "old and new collieries" with the prices and sums paid to the carters. The second ledger runs from July 1845 to October 1859 and contains accounts for "Farming, Gardens and Woods, as well as Rental and the colliery accounts". The third book contains colliery accounts from January 1878 to June 1881. In addition, there are two letter books for the years March 1850 to November 1867, and December 1867 to December 1884 as well as a bundle of miscellaneous letters.

The phrase "old and new collieries" is intriguing. In 1833 Meyrick referred to Clap Gate colliery as "in hand but nearly out", and the same verdict could be given of a colliery near the Up Holland-Orrell boundary, which had been worked by his ancestors, the Holmes family of Up Holland (List of land tax assessments, 1820, 1821 and 1831). A. J. Taylor mentioned an Orrell colliery worked by Meyrick Bankes in 1851 (TRANSACTIONS, Vol. 105, p. 117), but it seems that this was Walthew House colliery owned by William Hill Brancker. No coal was worked on such a scale by Meyrick Bankes at that date in that area.

The contributors to the *Quarterly Review* of 1825 had made out a strong case for the construction of the Liverpool and Manchester railway, instancing the costly delays, damage and loss of freight occasioned by canal transport. Liverpool merchants were quoted as saying, "We consider the present establishment quite inadequate and that a new line of conveyance has become absolutely necessary to conduct the increasing trade of the country with speed, certainty and economy." Nevertheless, there were occasional protests as instanced by the following letter:—

"We, the undersigned, beg respectfully to submit to your notice the alteration which has recently taken place in the coal trade here, in consequence of certain Proprietors of the Orrell and King Coal introducing these qualities of Coal into the market by Railway, by which means they have been enabled to deliver *free* of extra cartage to the most important parts of the Town, as also to those Docks where extra was charged to.

The establishment at the Canal (being proprietors of Mines of Orrell and King Coal, finding their Customers were interfered with most materially in consequence of this innovation) came to the determination to abolish the extra cartage to all parts of the Town and to the Docks also. Now it is very evident that this important determination on their part must interfere very seriously with us, who are only purchasers of Coals, having to pay the present price at the Colliery, and to have to pay to our carters the full extra as before, although we cannot get it paid from our Customers who take care to tell us our neighbours do not make the charge.

The scale of extra averages 1/9d. per load of two Tons, or 10½d. per Ton. Those Proprietors at the Canal who have been the first to abolish the extra have as a substitute allowed the carters 6d. per Ton, in addition to the 10d. per Ton heretofore paid, making 1/4d. per Ton out of the 14/6d. per Ton charged, which we consider is tantamount to a reduction in the price.

It is, therefore, on that account that we, on the present occasion, being Customers for your Orrell Coals, appeal to you to take into consideration the propriety and indeed the policy of making us such a reduction in the price of your Coal at the Collieries, as will enable us to retain our Customers and continue to be able to dispose of your Orrell Coals upon terms equal to our Competitors in the Trade.

Your early consideration and reply to this will much oblige,

Your very obedient Servants,

John Evans.

John Rigby and Son.

Gaskell and Parker.

Taylor and Savage.

Simm and Co.

Edward Morgan.

Hawkins and Russell.

Case and Morris.

Cooper Brothers.

SCALE OF EXTRA CARTAGE

	s.	d.	
1st Length	0	6	per load
2nd "	1	0	" "
3rd "	1	6	" "
4th "	2	0	" "
5th "	2	6	" "
6th "	3	0	" "
6th	10	6	

1s. 9d. per load

Liverpool, 10th August, 1841."

With the completion of the colliery railway and the expansion of the national railway network, it was decided to deepen the shafts in 1848.⁽¹⁶⁾ Tenders were invited from contractors and the first to be received was from William Pigot of Pemberton, founder of a firm of sinkers well known both in this country and abroad. Pigot's terms were as follows:—

"From the circumstance of hearing that you are about to sink the higher pit, No. 2 from the 5 feet mine down to the 4 feet mine, a distance of from 63—66 yards, I beg to offer the following prices at which I shall be able to complete it at, viz.

		£	s.	d.
Sinking	per yard	1	5	0
Bricking	" "		6	0
Partitioning	" "		2	6
William Pigot. (his mark)."				

This was followed by an estimate from Messrs. Daniel Simpkin and Mathew Fairhurst whose prices differed slightly:—

		£	s.	d.
"Sinking	per yard	1	18	0
Bricking	" "		5	0
Partitioning	" "		2	6

We will bear the expenses of the banks man and powder and candles, and you to find all the tubs to work with."

Another group of sinkers from Lamberhead Green sent in their prices also:—

		£	s.	d.
"Sinking	per yard	2	0	0
Bricking	" "		5	0
Partitioning	" "		5	0

and we will stand to 3—60 gallon buckets an hour and if it makes more you must provide water lifters."

Another group wrote,

"We, the servants of Meyrick Bankes do understand that you are going to sink No. 1 pit from Orrell 5 feet to Orrell 4 feet, which is considered to be about 64 yards. We have a desire to engage for it for:—

⁽¹⁶⁾ According to a contemporary plan the depth of the coal at Nos. 1 and 2 pits was:—

Orrell Yard	..	74	yards	
Orrell five feet	..	144	"	
Orrell four feet	..	199	"	at No. 1, Pit and slightly shallower at No. 2.
At No. 3 pit:—				
King Coal Mine	..	8	yards	
Ravine Coal Mine	..	56	"	
Orrell Yard	..	98	"	
Orrell five feet	..	168	"	
Orrell four feet	..	232	"	

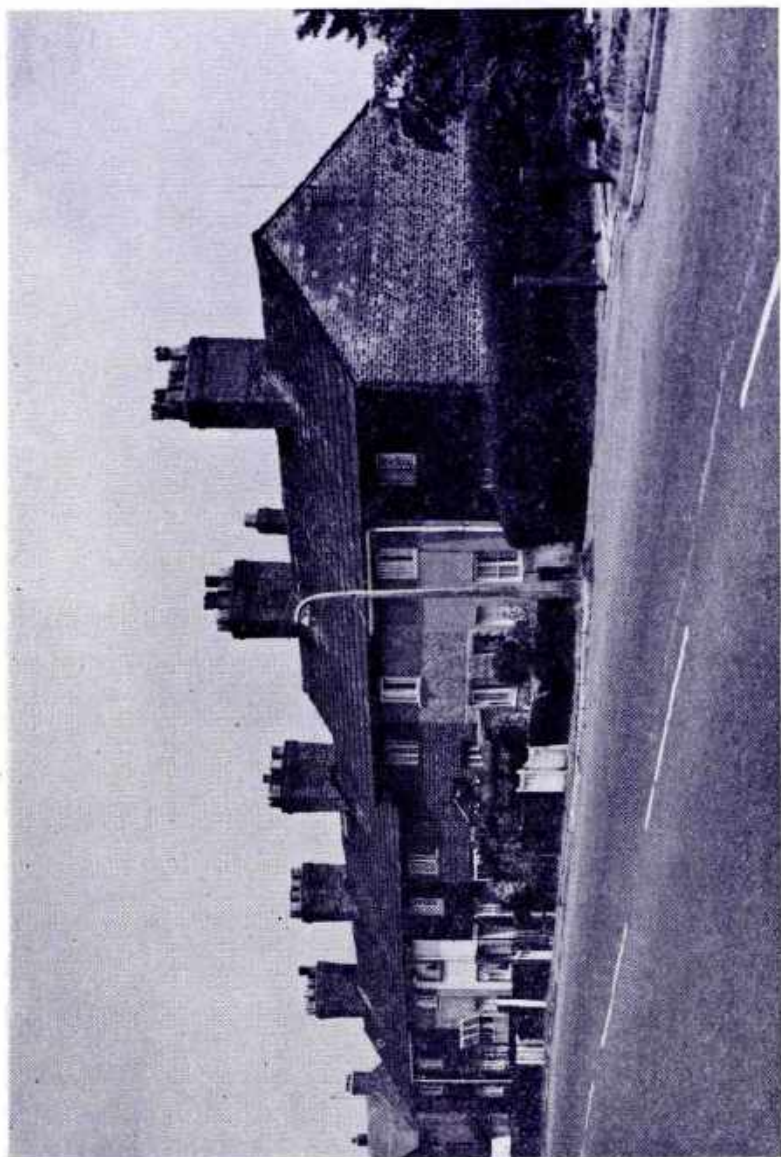


Plate 16. THE NEW HOUSES, PEMBERTON ROAD, WINSTANLEY
Built by Meyrick Banks for his colliery workers.

		£	s.	d.
Sinking	per yard	1	12	6
Bricking	" "		5	0
Partitioning	" "		2	6

viz.

Richard Rylance
 Samuel Fairhurst
 Samuel Cheetham
 John Meadows
 James Rylance

We are all your 'umble servants."

Unfortunately, no record remains of the accepted contractor. There is, however, a record of the sums paid by the sinkers to the management for powder: £56 14s. 10d. in 1849, £54 13s. 9d. in 1850, and £33 3s. 11d. in 1851. These shafts were ten feet in diameter and lined with stone before the commencement of the bricking.

The colliery office, smithy, workshop, saw mill, wagon sheds and stables were grouped around Nos. 1, 2 and 3 pits. The coke ovens lay on the east side of the main road. So did a row of cottages known as the New Houses, inhabited principally by colliery employees.⁽¹⁷⁾ Some of these houses had originally been built towards the end of the eighteenth century as weaving shops, but were untenanted by 1866.

Great care was taken over the building of the engine house at No. 4 or Mountain Pit. This was erected by the masons Winnard of fine dressed stone. A windmill pump situated on the bank of an adjacent lake (an additional dam was constructed for the purpose in 1835) supplied the boiler feed system at the colliery. The account book for December 1854 notes "new windmill for pumping water to No. 4 and pipes for conveying water from windmill—£180 0s. 0d.". By 1866 it was believed that "the windmill will not be required much longer as the donkey engine should do the work".

The following is the stock account for the year ending 31 December 1845. The figures in square brackets denote the depreciated value given to items in the 1849 account.

	£	s.	d.
By: One 30 Horse Steam Engine, Stone Pillars, Engine house, L Legs, Pump Stocks, Head Gear, Conducting Rods, Stages, etc. etc.	[£1,820.10.0.]	2,295	16 0
„ One 20 Horse Steam Engine, Stone Work, Engine House, Head Gear, Conducting Rods, Regulators, etc. etc.	[£966.19.3.]	1,208	14 0

⁽¹⁷⁾ A Winstanley rental of 1858 gives the names and occupations of the inhabitants, among whom were "Hugh Richardson, engine tenter; John Heaton, bottom dayteler; James Fishwick, nail maker; Ellen Wright, filler to No. 4 pit; Moses Daniel, blacksmith; and James Lancaster, hooker on No. 3 pit etc.

	£	s.	d.
By: One 20 Horse High Pressure Steam Engine, Stone Work, Engine House, Head Gear, Con- ducting Rods, Stages, Smithy, etc. [£1,000. 0.0.]	1,580	0	0
" 46 Coal Waggon at £33.0.0. each	1,518	0	0
" Six Horse Waggon at £8.0.0. each	48	0	0
" One Lorry	12	0	0
" Two Weighing Machines	80	0	0
" One pair of Dobbin Wheels	20	0	0
" One Rack	10	0	0
" One Tub making apparatus	20	0	0
" Sundry Smiths' Tools	30	0	0
" Three Vices	9	0	0
" Two Cupboards and a Box	2	0	0
By: Screw Tackle	16	0	0
" Three pairs of Large Bellows	20	0	0
" Two Iron Cisterns	4	0	0
" One Stone Trough	1	10	0
" Four anvils	22	0	0
" One pair of Three Legs	2	0	0
" One Crane	1	0	0
" One Tub Block	15	0	0
" One Cone	12	0	0
" One Gauge Block	1	0	0
" Conducting Boxes and Pins	8	17	0
[This item shows that Winstanley colliery was in advance of local custom.]			
" Two pairs of Blocks	9	0	0
" Stock of Iron and Waggon Rails	80	0	0
" Three pairs of Bellows and Anvils for Colliers	8	0	0
" One Grinding Stone	3	0	0
" Smithy and Workshops	100	0	0
" Sinking Trams and Hoppits	8	0	0
" Brickmaking Tools	4	0	0
" Trams and Barrows on Pit Brows	20	0	0
" Capstan and things attached	30	0	0
" 120,000 bricks at 25/-	115	0	0
" One Saw Pit	10	0	0
" Railway from the pits to the Canal at Wigan, including two Inclined Planes and pullies, three Stables, one Station House, Two Bridges, One Weighing Machine, One Tipler, Incline Ropes, etc. etc. [£6,576.0.0.]	8,220	0	0
By: 150 tons of Tram Rails at £8.0.0.	1,200	0	0
" 6 tons of Tram Rails on Brows at £8.0.0.	48	0	0
" 126 tubs at 10/- each	63	0	0
" 10 Hammers for sinkers	2	10	0
" 50 Drills at 5/- each	12	10	0
" 200 yards Boring Rods, 20 Chisels, 4 Shells, 1 Bellmouth, 2 Augur heads	60	0	0
" Stock of Timber and Boards in hand	50	0	0
" 4 pairs of Flat Ropes, Capstan Rope and Sundry other Ropes	135	0	0
" 88 Colliers Trams and Hitch Incline	64	0	0
" 13 Cinder Ovens and Sundry Tools and Barrows	130	0	0
" 40 Coal Spades, 2 Stakes and 6 Crowbars	10	0	0
" Grease making apparatus, Boiler, Tubs, Cistern, etc.	12	0	0
" One pair of Three Legs	3	0	0
	<u>£17,354</u>	<u>12</u>	<u>0</u>



Plate 17. No. 4 OR MOUNTAIN PIT TODAY

The only pit in the Winstanley Colliery group still winding coal. The road work in the foreground is the cutting of part of the motorway M6, during the summer of 1962.

The prosperity of the colliery fluctuated considerably. In 1847 it achieved a profit of £6,595 15s. 4d. (receipts £19,028 11s. 11d., expenses £12,432 16s. 7d.), and in 1879 a loss of £4,563 18s. 11d. (receipts £29,064 16s. 9d., expenses £33,628 15s. 8d.).

Unfortunately the colliery pay book has vanished. According to tradition it was destroyed with other records in the scrap paper drive of the 1914-18 war. But there are tantalising references to wages in the ledger which covers the years 1845-59. Wages were paid fortnightly. The total wages bill for 1848 was £7,786 10s. 1d. Of this Tebay the agent received £200 together with a commission on sales, which in that year came to £394. In addition to wages the management bought some clothing. In 1850, for example, J. Knowles received £20 for supplying "colliers cloths"; the suit for the underlooker cost £4, and "flannel for frocks"⁽¹⁸⁾ £12 5s. 0d. There was also a medical service, apparently provided free, for the victims of mishaps. In the middle years of the century Dr. Thomas Fisher and Dr. George Daghish, brother of Robert Daghish of the St. Helens Foundry, appear most frequently in the accounts. Fisher had colliery interests of his own. In 1850 he leased the Stone House from Meyrick Bankes and worked Hindley Hall colliery. For medical attention at Winstanley Colliery he received £22 17s. 6d. in 1851 and £32 10s. 2d. in 1852.

One of the recurring expenses of mine equipment was haulage materials. Ropes from J. B. Wilson in 1849 cost £143 0s. 0d. In the following year the same firm supplied £101 1s. 3d. worth of wire ropes and £92 3s. 0d. of flat hemp rope. Incline pullies from Watson and Co. cost £266 10s. 0d. in 1850 but as much as £669 8s. 0d. in 1846. Another item much subject to wear and tear was baskets. The hazel rods for these were usually bought from a merchant, William Hayes of Runcorn, who charged 11s. 0d. per thousand. On arrival at the colliery the rods were soaked and then sealed in long tubes through which steam was forced until they could be woven into baskets capable of containing three hundredweight of coal. The "pit girls", wearers of the flannel frocks, seem to have been employed on this work. Safety lamps cost £2 2s. 0d. in

⁽¹⁸⁾ No evidence has been found to date of women working underground at the Winstanley pits, but this does not say they did not follow the local custom. Women were certainly employed about the brow and the railway. Alice Berry is noted as the "driver of a train of wagons from Pemberton colliery to the canal" in 1851 (*Wigan Observer*, 28 March 1851). In 1867 the Winstanley agent wrote to the manager at Pemberton, "Monday and yesterday our railway women struck in consequence of my having changed the mode of paying their wages. I am told that one Elizabeth Hitchen has got on at Blundells, if such should be the case please send her back to at least serve a proper notice". "The Wigan Ladies" are mentioned by Galloway, *Annals of coal mining*, Vol. II, p. 152.

1854. The bill for air cloth, for controlling the air current ventilating the workings, in 1846 came to £23 8s. 1d. In the same year, iron castings bought from five different firms cost £327 1s. 0d.

On special occasions bills were presented for ale. Mrs. Starkey of the Horse and Jockey (renamed Favourite Pony Dick in 1864) supplied £4 3s. 4d. worth in April 1846. Similar sums were paid to The Stork at Billinge and the Bulls Head at Pemberton.

That the tramways were a source of danger is apparent from these two strikingly disproportionate entries. In 1849 £1 10s. 0d. covered the funeral expenses of a child killed by the tramway. Next year £10 0s. 0d. compensation was paid to the owner of a cow which got in the way of the wagons.

New headgear for pits Nos. 1 and 3 cost £30 0s. 0d. and £25 0s. 0d. respectively. The keep of the colliery ponies at £104 0s. 0d. per annum remains static throughout the period, but extra fodder was bought when required.

The year 1848 saw the completion of the Liverpool locks which connected the Wigan canal with the River Mersey. This widened the trade horizon and Meyrick organised coal yards at Seacombe and Tranmere to receive coal loaded at the Wigan pier head. The canal boats bore a wide variety of names. The *Mersey* plied in company with the *Fair Maid of Winstanley*. There were also the *Septimus*, *Ant and Bee*, *Eleanor*, and *Gruinard*. Cartmells of Parbold built some of the boats and, together with Ormandy and Co. of Wallgate, Wigan, carried out repairs. Sails for the *Squire* cost £22 19s. 2d.

Records of shipments from the colliery covering three weeks indicate that from three to five boats were loaded daily with a carrying capacity of 36-40 canal tons apiece. This measurement was for the "long ton". One customer questioned his account and was informed "that our shipping notes are always made out for long tons, and the first item named, '15th April, 1848. 22 tons coal charged 24 tons', is as follows:— 22 tons of 22 cwt. of 120 lb. which you will find contains nearly 26 tons short weight".⁽¹⁹⁾

Apart from stocking the coal yards, Winstanley colliery accepted private orders as can be seen from the following two notes. "Wright and Taylor are wanting two of our boats of best

⁽¹⁹⁾ The "long ton" in use on the Sankey Navigation for coal was defined as 3,360 lb., 30 cwt. to the ton. This differed from the imperial ton of 2,240 lbs. (T. C. Barker and J. R. Harris, *A Merseyside town in the Industrial Revolution*, p. 338.) J. U. Nef, *The rise of the British coal industry*, Vol. II, p. 377, mentions a ton of 21 cwt. as being in use for coal in the Forest of Dean.

coal for New York on Monday. Please see that they are sent as large as possible". And, "The agent presents his respectful compliments to Sir Richard Brooke and is much obliged to him for the cheque received this day for £241 10s. 0d. being coals supplied to Norton Priory". An undated advertisement from a local paper gives an idea of what the colliery had to offer:—

BEST ORRELL HOUSE AND FIRE COAL

Yards: Dutton Street (near canal basin) and Harrington Dock

Meyrick Banks, Esq., of Winstanley Hall, Near Wigan, respectfully informs the inhabitants of Liverpool and the neighbourhood that he supplies from the above named yards, the PURE ORRELL COAL, from his collieries in the township of Winstanley, the quality of which has been highly appreciated during many years past for its strong soldering quality, great durability, and clearness in burning.

This coal is brought by the Dukes Canal via Runcorn to the Harrington yard without being transhipped, which prevents breakage. They are also delivered to vessels in any of the docks from boats alongside.

The Best Orrell Coal	14/6d. per ton
The Best Orrell Slack (excellent for smiths' use) ..	8/4d. " "
The Best Orrell Cinders or Coke	20/- " "
The Best Wigan Coal	10/- " "

Also at Runcorn for shipping

The Best Orrell Coal	12/6d. " "
The Best Orrell Slack	6/8d. " "
The Best Wigan Coal	8/- " "

R. L. Gossage, Agent

Offices, 68 Old Hall Street, and 4 Stanhope Street,
Near St. James's Church

R. L. G. also supplies RIVER COAL⁽²⁰⁾ of the best quality.

As colliery workings advanced both in depth and extent during the nineteenth century, the problem of safety exercised all thinking minds. Various acts of parliament had been passed both before and during the century, and in 1850 came the act for the Inspection of Coal Mines in Great Britain (13 and 14 Vic., c. 100). This also made compulsory the notification of fatal accidents. In 1851-2 there are two letters from the colliery manager reporting the deaths of two men from roof fall. Ten years later come two more records of deaths from drowning.

In many pits the amount of air current necessary to ventilate the distant parts of the mine proved on examination to be inadequate for the safety of the workers. In many cases this seems to have been due to insufficient knowledge of the principles of ventilation on the part of those in charge. A few weeks before the passing of the more comprehensive Mines Regulation and Inspection bill in August 1860 (23 and 24 Vic., c. 151),

⁽²⁰⁾ Coal spilled into the river or docks when loading ships, and later washed up by the tide and recovered by merchants.

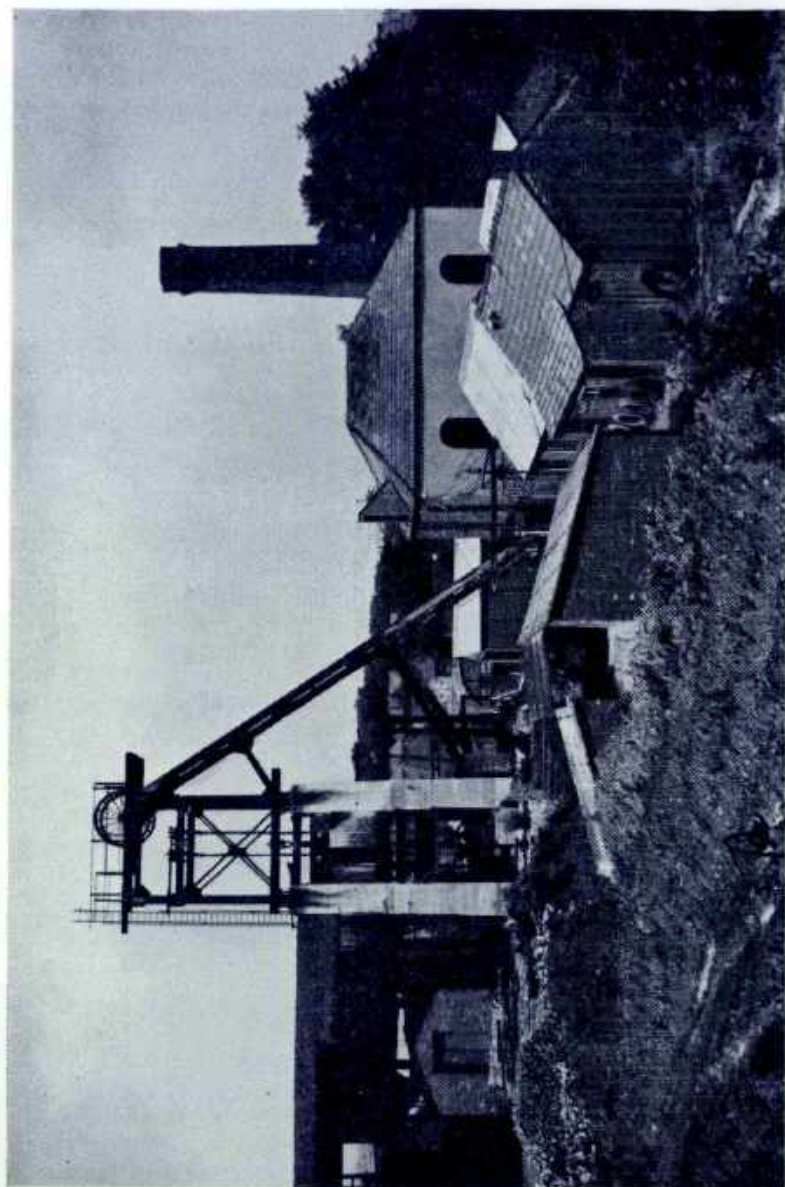


Plate 18.
THE ABANDONED PIT HEAD OF NO. 3 OR BAXTER'S PIT TODAY.

an explosion occurred at No. 3 pit resulting in the loss of thirteen lives. (This pit was commonly called Baxter's pit, presumably after the master sinker, who may have come from a family of craftsmen living in Goose Green at that time.) Details of this accident were reported in the *Wigan Observer* of 3 August 1860, and they give an idea of the method of working the Winstanley pits of the period.

"The number of men and boys employed down the mine is on an average about forty, yesterday morning at the customary hour for commencing work thirty-seven persons descended. All appeared to go on right till towards ten o'clock, when intelligence was brought to Mr. Thomas Nicholson, who superintends the colliery, that an explosion had taken place in some part of the workings. A descent was at once made when it was found that a number of men in the mine who worked nearest the shaft were making their way in that direction, and that they were comparatively unhurt. A relay of searchers now descended the pit but the choke damp was so dense that it made the penetration of the workings dangerous."

From evidence given at the inquest witnesses described the pit as "a safe comfortable pit to work generally speaking, and materials were supplied when asked for, the proprietor was not niggardly". Safety lamps were used in the pillars but candles were used in the strait or narrow workings. These latter were driven six feet wide. The furnace man "tried" them with a safety lamp when he went down in the morning. Powder was used in the straits but not in the pillars and was supplied by the manager. The method of ventilation was by a single air current which descended No. 3 pit, which was then the downcast shaft. This air current, "which amounted to 10,225 cubic feet per minute, was split at the bottom of the shaft and 5,300 cubic feet passed directly to the furnace at No. 4 pit. The remaining 4,925 went all round No. 3 working places then on through a 'sink' or goafed area to the No. 4 workings, it coursed all round these and back to the furnace." Although the area of the workings was extensive, the pit was only worked slowly and very little gas was made although gas had been found in the goaf at No. 4. Apparently the Inspector had advised the construction of an improved type of furnace at No. 4, and this was being made at the time of the accident. It was also stated that before the explosion there was only one furnace man who worked a twelve-hour shift from 4 a.m. to 4 p.m. Before he left each day he raked the fire, not with slack but with lump coal. After the accident a furnace man was employed to tend the furnace during the second shift. All the air stoppings were of cloth, which, in an extensive pit, was a poor arrangement.

Finally, the jury returned a verdict of accidental death and the coroner added there was no direct blame or charge of

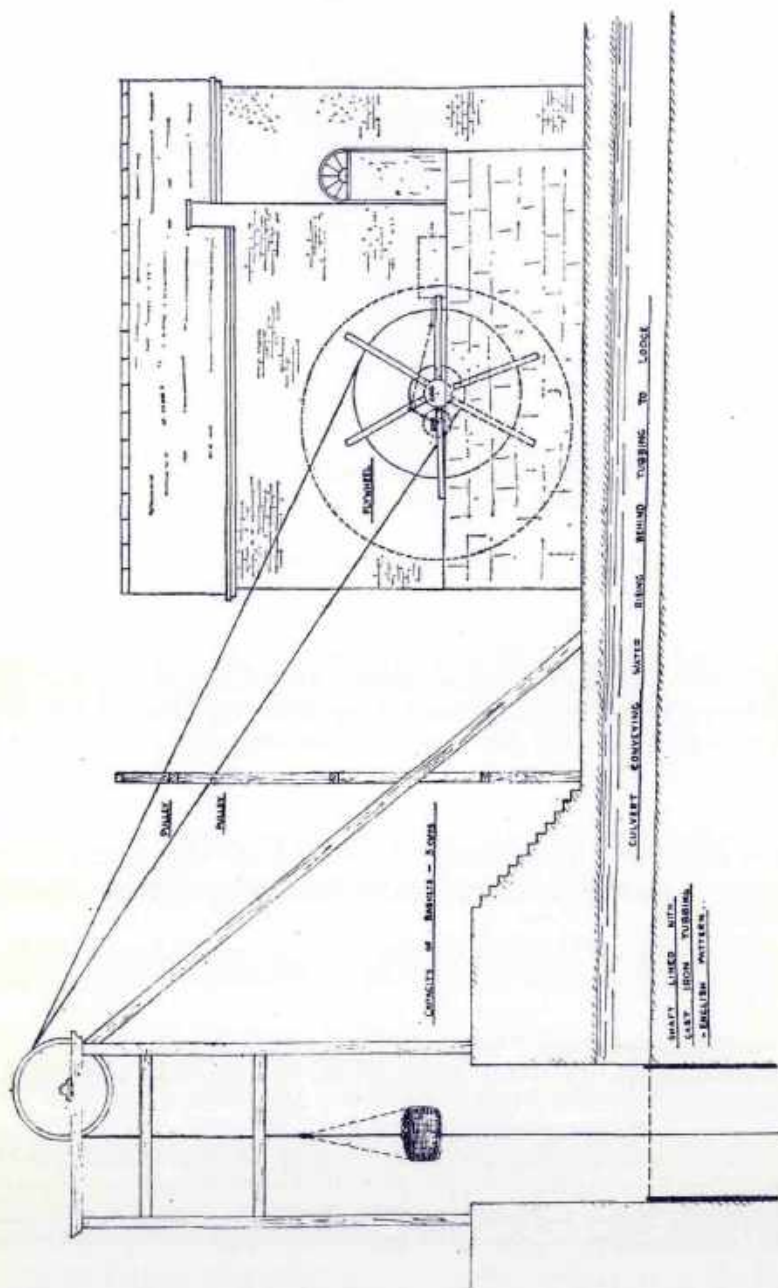


Figure 13.
Winding baskets at No. 5 Pit, Winstanley.

negligence attached to the management of the mine, "but they thought the ventilation ought to be rendered more effective than it appeared hitherto to have been".

Another visit from the government inspector came in 1873, thirteen years later, and what he found is recorded in the following letter to the manager:

"On looking over your works yesterday, I have to complain of you as a certified manager in not having the rules at the colliery together with the abstracts of the Act posted on the works. Also that you had not the books as required to be kept at the office of the mine, but that they were at different places and not near to the proper place or office. The pits are not properly fenced, exceedingly dangerous to persons who may be employed about them, the drawing chains at the Mountain pit are not strong enough, there is also want of a double rapper wire. The system of drawing coal in baskets is deplorable. I have not seen a more dangerous pit in all my district and it ought, at once, to be altered. You will be getting someone thrown out and killed and I cannot see what there is to save you from manslaughter, especially when the place will warrant you putting in boxes and proper cages and slides. The cost will be trifling but what is that to the saving of life. You had better lay the matter before Mr. Bankes as early as possible as I cannot pass over a place in silence in such a state."

This letter caused a considerable flurry, and alterations to comply with the inspector's wishes were carried out, although tradition has it that coal continued to be wound in baskets from No. 5 pit for a further fifteen years. The workmen used the basket to ride down the pit, three men in one basket, each one grasping one of the three chains attached.

In May 1840, the heirs of the Molyneux family decided to put the Hawklely Hall estate in Pemberton up for sale by public auction. This property was advertised as "supposed to contain six or seven distinct mines of coal".⁽²¹⁾ The place was to be sold in one lot, subject to two leases granted by the Reverend William Molyneux to Messrs. Thomas Jenkinson and Robert Grimshaw. The five-foot and four-foot mine lease was for forty years from 1832, and that for the house and farm for nine years from 1835. The portion containing the Ben Johnson public house was let on a yearly tenancy to one George Glover, and was advertised as "well adapted for the sites of villas". Meyrick bought the estate, and Jenkinson and Grimshaw continued to work the coal. They entered into an agreement with the new owner in 1847 by which it was proposed to supply the lessees with a more powerful engine for their colliery, "of 100 horse power on the high pressure system with horizontal action".

⁽²¹⁾ Bryan William Molyneux sold a portion of the "Hawklely Coal Estate" to seven different parties in 1797, among them the Stock family of Ashton and Billinge (Winstanley deeds).

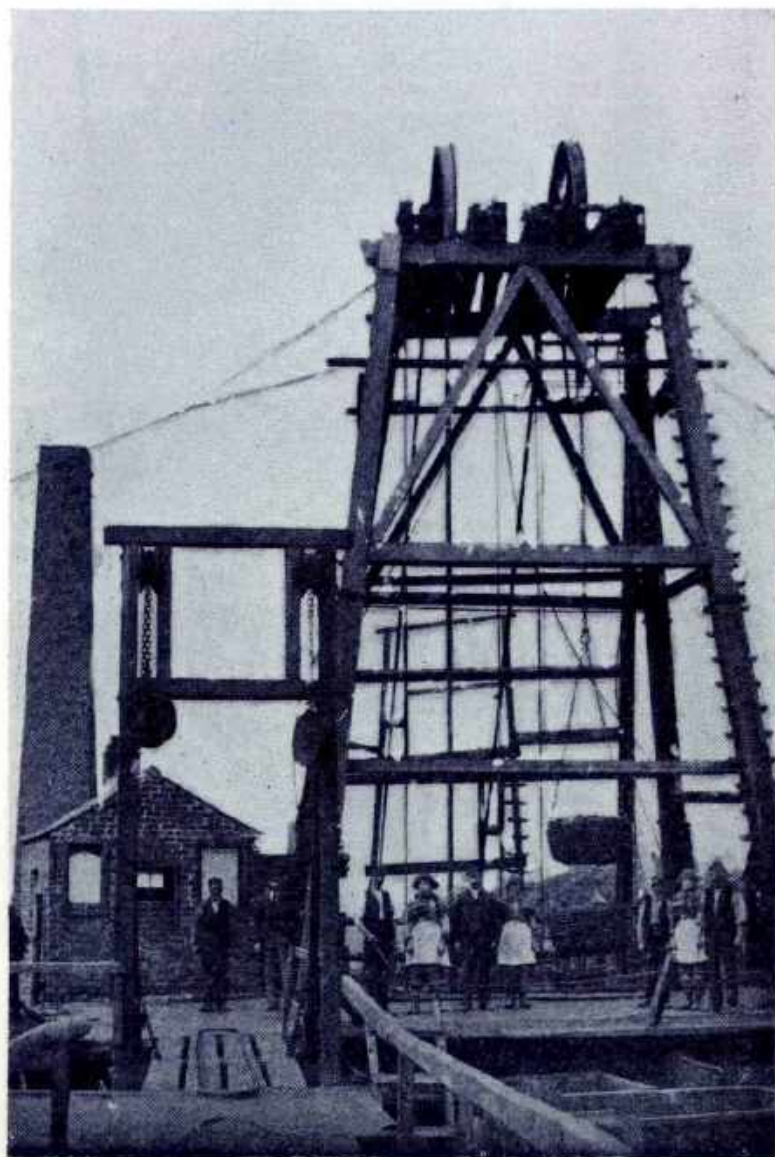


Plate 19.
BASKET WINDING AT NO. 5 PIT, ABOUT 1880.

Agent Barton, successor to Tebay who had died in 1848, wrote to Grimshaw, "Mr. Bankes has consented to provide an engine for you on your engaging to keep it in thorough repair and pay him interest on the outlay at $7\frac{1}{2}\%$ ". Specifications for this engine were sent to three firms, the Haigh Foundry, Robert Daghish and Company, and Mr. Peter Johnson of Messrs. Johnson and Caywood, Chapel Lane, Wigan. They were asked to tender for "a direct acting engine, the steam cylinder (placed vertically over part of the pit and directly attached to the pump rods) to be 45 inches in diameter and capable of working a 7-foot stroke, fitted up with metallic pistons, side pipes with brass rising valves on the Cornish principle, and furnished with three steam boilers, each 35 feet long and 5 feet diameter, fitted with furnace work, safety valves, change boxes, feed pipes, etc. The engine must be equal to 100 horse power at a pressure of 35 lb. on the square inch, and the steam boilers to be warranted to resist a pressure of four atmospheres". Shortly afterwards, Barton wrote to the solicitor, Darlington,

"I have at last got an estimate for the engine and the Haigh Foundry Company are £410.0.0 below the lowest of the other two. This I cannot understand. What is your opinion? Grimshaw has just gone to Samuel Stocks [a Billinge coal proprietor] to see an engine there on the principle wanted."

It was advised that the Haigh Foundry should be written to again to the effect that

"it would be better for the party that executes the order for the engine to fit up the engine house and all complete, and so handle all under his or their control. Under the circumstances, will you oblige me with an estimate for engine house with all requisite work for engine bed, together with pump stocks complete from 120 to 140 yards. The whole to be completed in the best workmanlike manner and guaranteed for twelve months?"⁽²²⁾

It appears that the contract was given eventually to Messrs. Johnson and Caywood, but their progress with the job was not satisfactory. The exasperated Barton wrote,

⁽²²⁾ The following letter from the Haigh Foundry and dated 1850 was sent to Meyrick Bankes:—"We have to apologise for troubling you with this. Our reason for addressing you is that we fear some influence is at work that does not comport with either your interest or our own. We have to beg, therefore, that this communication may be considered as strictly confidential. We have given two estimates for an engine to be erected at Hawkey colliery, the one a direct action engine suited to pumping only, the cost of which, together with the pumps and engine house and foundations is £1,330.0s.0d. The other for an engine that may be used for winding also, the cost of which without the engine house and foundations will be £1,500.0s.0d. or upwards, and the cost of the engine house and foundations would probably be £205.0s.0d. making altogether £1,705.0.0 or £1,745.0s.0d. We have reason to suppose you are intending to provide a pumping engine that will do the required, and this we would guarantee the one we have estimated for would perform."

"Gentlemen,

It is now a fortnight since you promised me that the engine should be at work in three weeks. But I am informed that you are doing nothing about it. Now the five feet coal is drowned out and the damage is getting so serious that, unless you at once complete the engine, we shall take steps that will be very unpleasant."

Shortly after Johnson and Caywood completed their contract for the sum of £1,250.0s.0d.

The foregoing correspondence has been quoted in some detail as it is the first mention of Meyrick engaging for an engine of 100 horse-power. Hitherto his engines were of a low calibre as is evident in the stock accounts. Winding engines of 90 and 175 horse-power are mentioned in the district in the 1840s, but such were not employed at the Winstanley pits.

"Grimshaw's Hawkley colliery" appears in the list of coal proprietors in Mannex's *History, Topography, and Directory of Mid-Lancashire* (1854). The colliery had its own tramway and pier head at Moss Bridge on the Leigh branch of the Leeds and Liverpool canal. But Grimshaw seems to have disappeared a few years later when a valuation of "the engine and its accilaries" was taken for Meyrick Bankes. The figure quoted in the stock account was £988 19s. 0d.

The basic economy of the Winstanley collieries depended on annual contracts entered into with various firms and local corporations, as well as on sales from the coal yards. For 1865 the records state that "contracts for this year are with Simpson and Davies [shipbrokers, commission merchants and carriers of Chester], 1,000 tons per month at 10s. 6d. and 11s. 0d. per ton, Thompson 3,000 tons at 11s. 6d. and Fletcher 1,000 tons at 12s. 0d. These quantities can readily be supplied and leave a considerable quantity to take the chance of the market. The yards are well filled, Bootle especially which has about 1,600 tons." By 1867 the management had encountered the more imaginative salesmanship being practised by the Pemberton collieries of Captain Henry Blundell Hollinshead Blundell, a descendant of Bryan Blundell of Liverpool. In the first half of the nineteenth century Blundell had purchased freehold land on the Winstanley-Pemberton boundary, and in 1867, the Winstanley management complained that, "many of our customers over the water are leaving in consequence of Blundells and others delivering coals in sacks which saves wheeling along walks and other inconveniences. Blundells also have light carts on springs which carry about one ton, so that the horse can trot when the cart is empty, thus saving a good deal of time on the way."

Meyrick Bankes ploughed back some of his colliery profits when, in 1856, he sunk another pit near No. 3. This sinking, through a band of gravel, was particularly tricky, and he paid Robert Daglish £10 10s. 0d. "for reporting on New Pit". Cast-iron tubing was put in to a depth of 44 yards from the surface before the bricking began.

A considerable purchase of land was negotiated with the trustees of the Bridgewater estates in 1860. In addition, a complicated exchange of land and minerals was entered into with Captain Blundell. The main point in this transaction from Meyrick's point of view was the acquisition of the Tan pit shaft which was used for water winding until it was dismantled in 1897. There was a clause in the conveyance which allowed Meyrick to purchase the old Tan pit railway when this was no longer required by Blundell. This eventually enabled the Winstanley colliery wagons to connect with the branch of the Lancashire Union railway in Pemberton.

The scheme for this railway had been outlined first in 1863 and, in the words of the *Wigan Observer*, it had as its object "a number of short lines which will place the extensive collieries of south Lancashire in direct communication with Blackburn and east Lancashire on one side, and the ports of Widnes and Garston, on the upper Mersey, on the other. Its promoters have been principally, if not altogether, the coal owners of the district, whose object is to obtain access on reasonable terms, to new markets for their produce." After some opposition and rivalry between the Lancashire and Yorkshire and the London and North Western railways, the required acts of parliament were obtained, and the first sod of the Lancashire Union Railway was cut during the summer of 1866. At the inaugural ceremony, the mayor of Wigan stated, "when this line was first promoted it was by the coal trade, coal being raised quicker than it could be taken away". The mayor of Salford went one better with his remarks, "I believe no invention that has been conceived and carried out in the history of the world has contributed so much to the well-being and prosperity of this locality as this railway system." Certainly the 1860s have been authoritatively cited as the peak period of production in the Wigan coalfield.

The coming of this railway gave the Winstanley collieries three outlets to the markets. Their branch line, running from Nos. 1, 2 and 3 pits past the coke ovens and over the main road to the sidings on the Lancashire and Yorkshire railway had been in use for some years.⁽²³⁾ At this period, Meyrick's

⁽²³⁾ Under the Liverpool and Bury Railway Act of 1845 (8 and 9 Vic., c. 19, 20, section 76), Meyrick was allowed "to make private branch railways communica-

agent wrote, "the price of best coke is 10s. 0d. per ton put into wagons at our sidings, the quality is first rate, we are making 30 to 40 tons per day and are supplying London and Northampton and the Lancashire and Yorkshire railway". In spite of this rather grandiose statement, matters were not always harmonious between the colliery and the railway company. In 1867, the former complained to the company that

"being desirous of sending slack from this colliery to Messrs. Blundells, a distance of about one mile on your line, I applied to the station master at Pemberton for the amount of toll for the distance, and he informed me that the charge would be 6d. a ton (8 tons of slack to the wagon). This sum I think, under the circumstances, much too high, as the charge to Wigan is only 4d. Besides that, the slack is to be made into coke at Messrs. Blundells and would be subject to a further toll on leaving that colliery. I hope I may have a note from you that the before mentioned charge may be reduced to 3d., so that I may dispose of the slack in that way."

Unfortunately, there is no record of who won the battle for 3d.

By that time, 1867, a third rail on the colliery railway allowed wagons of the standard gauge to be used, as well as those of narrow gauge. Steel rails were replacing iron. The following is an extract from the agent's letter:

"My reason for ordering these in preference to iron is that the price is lower when the weight is considered. A 40 lb. per yard steel rail is stronger and more durable than an iron one of 45 lb. per yard. Last year, a few were tried on the wagon road to Pier Head and answered very well as the friction is less and makes the work for the horses a good deal easier."

During these years of expanding trade, one year's toll paid by the colliery to the railways totalled £2,080 0s. 8d. The difficulty of keeping the wagons on the move was a very real one,⁽²⁴⁾ and the idea of investing in a locomotive was mooted. The argument put forward was that "the estimate sent in by Dalglish and Company of St. Helens for a stationary engine is £876 6s. 10d., exclusive of foundations, line, *etc.* There would also be needed ropes and probably horses. The cost of a locomotive engine such as would serve the purpose would not cost more, if as much, as the other, and we should be able to load the coals at one half the cost." After much cogitation, the "loco" was purchased from Walker Brothers of Wigan in 1878

ting with the railway". Certainly "the shunt near the Arches in Pemberton" was in use by 1851, if not before, worked possibly by a stationary engine. The accounts for 1848 record "cost of new tramway to railway, engine, *etc.* £400.0s.0d." Rules were strictly enforced on the railway. In 1865 a letter was sent to one employee, "I find that on Friday last you, in direct opposition to my orders, allowed one or more persons to ride up in the wagons under your charge. You can for such disobedience either forfeit one pound of your next wages or leave your present employment at once".

⁽²⁴⁾ The July Fair at Lamberhead Green was the occasion for a colliers' holiday, and the manager wrote to impatient customers, "Gentlemen, On Thursday I mean to try and get the colliers to work, but have no hope of their doing much, but your wagons will be loaded first if they are here".

for £1,000 0s. 0d.⁽²⁵⁾ She was named *Eleanor* and another engine, *Harry*, was hired from the same firm for a short period for £100 0s. 0d. Some doubt had been expressed about the gradient of the tramway, which was 1 in 34·1, and it was noted that "many of the would-be wise people predicted that a loco could not get up the track by itself, but they have been proved false prophets". *Eleanor* continued working long after her owner's death and the passing of the collieries from his family's control.

After the modernisation of the railway, the next item on the list was canal boats. The question was raised of purchasing a steam boat, which could operate when "wind, tide and tired horse" brought things to a standstill. The duke of Bridgewater had tried to use steam power on canals as early as 1799: by 1878, nearly a century later, steam boats were in use on the Bridgewater canal "and not objected to by the boatmen". The argument in favour of using steam boats on the Leeds-Liverpool canal was set out as follows:—

COMPARISON BETWEEN COST OF CONVEYING COAL

- A. By hatch boats (two- or four-hatch).
 B. By steam boat with second craft in tow.

A. HATCH BOATS

Two-hatch boats (two in number).

No. of trips per year	..	67 (33½ each boat)
Tonnage per trip	..	40
Total tonnage per year	..	2,680 for two boats
	..	1,340 for one boat
Cost per trip	..	£3.10.0. for hauling
Cost per year	..	£3.10s.0d. × 67 = £234.10s.0d. or 1s. 9d.
		per ton for two boats.

Four-hatch boats.

Tonnage per annum	..	5,360 for two boats
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NOTE—Last year three extra boats moved a little over 7,000 tons.

⁽²⁵⁾ The description given by the makers of this engine was as follows:— "Twelve valve locomotive, four wheels coupled, outside cylinders. These engines are largely used by contractors and colliery proprietors for general works purposes and for short lines of railway. The engines are evenly balanced on their axles, and have a short wheel base adapted for the quickest curves. The sizes of the cylinders of this class of engine range from six inches to fifteen inches diameter.

"We have similar engines working up gradients with full loads, of 1 in 18 to 1 in 20. One twelve-inch locomotive hauls loaded coal wagons up a gradient so steep, that for thirty years it was considered impossible by the colliery owners to work the traffic by any other means than by fixed engines and ropes. The application of this locomotive to this incline soon led to the removal of the fixed engines, with considerably economy as the result." [This information is given by the courtesy of Walmsleys (Wigan) Ltd., previously Walker Brothers (Wigan) Ltd.]

In 1882 the trustees for the Winstanley Collieries bought a smaller engine, *Louisa* of 9-inch diameter cylinders, built by the Hunslet Engineering Co. Ltd. Later she was sold for work at Brixworth, Northants. E. S. Tonks, *Ironstone Railways and Tramways of the Midlands* (1961), pp. 52, 54, 298.

B. STEAM BOAT

Steam boat carries 50 tons	}	Total for two boats .. 100 tons
With boat in tow 50 tons		
Number of trips ..		1½ per week, say 60 trips per annum.
Tonnage moved per year ..		6,000 tons for two boats.

COSTS—WAGES, COALS AND STORES

	£	s.	d.
3 men at 27s. 0d. per week, }	200	4	0
2 men at 25s. 0d. per week. }			
Coals or coke from Gas Works }	32	0	0
80 tons at 8s. 0d.			
Stores (oil, tallow, etc.) }	15	0	0
60 trips at 5s. 0d.			
Total			
	£247	4	0

or 10d. per ton or a saving in haulage alone on 6,000 tons of £275.0s.0d.

Difference in cost per ton: A ..	1s. 9d.
B ..	10d.
Saving per ton ..	11d.

Cost of sails and ropes for four-hatched boats taking an average of four years has been £190.0s.0d. per annum. (An amount far in excess of what an engine would cost in repairs, etc.)

Cost of ordinary hatched boat .. £350—£400

Cost of boat to carry engine, etc. .. £350—£400 plus £260 for engine, etc.

SUMMARY

One steam boat plus one in tow do as much work as four ordinary hatch boats. They also save £190.0s.0d. for sails, ropes, etc.

Total saving .. £427.10s.0d. p.a.

The further saving of having only two boats to maintain instead of four would be about equal to the 20% p.a. (£65.0s.0d.) which would be the annual depreciation of the engine.

Two records of output survive for 1878.⁽²⁶⁾ That for the month of January gives "a total of 3,627·18 tons of best coal at 9s. 3d. per ton, plus nuts at 7s. 6d., slack at 4s. 0d. and coke at 17s. 6d. were loaded at the colliery". The tonnage sent by the canal in August of the same year is given as 4,143: the note accompanying the list adds "we have had a very good month

⁽²⁶⁾ In a "List of Collieries in Lancashire, 1863, prepared for the Wigan Coal and Iron Company" the output from the Winstanley collieries is given as 39,000 tons per annum. This may have been correct at that date, but there is evidence that the output increased in succeeding years. A letter of 1880 gives the daily output at 600 tons. [At this rate the monthly output would be over 13,000 tons, which would bring the yearly total to something over 150,000 tons.] As trade was poor it was contemplated reducing this to 400 tons a day.

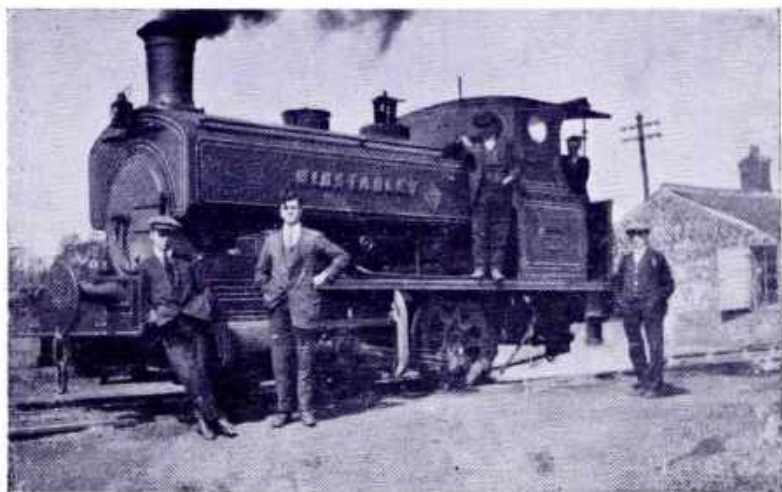


Plate 20.

TWO LOCOMOTIVES ON THE COLLIERY RAILWAY.

for vessel orders. I have been obliged to take your boats to assist them and hire for your yards. I cannot make hired boats go where I want them. Your yards are well stocked, slack is very scarce and much enquired for, but I don't hear of any more money offered."

The trade slump of 1879 has been described as "a tale of universal woe". One correspondent wrote "trade in general keeps going worse and worse, it is almost impossible to give coals away. All gets worse and colliery folks faces longer." Meyrick did not live to see the recovery of his collieries from the general depression. In 1885, his heirs and executors decided to lease the concern to Messrs. Tomlinson, Rogers and Simpson. They and their assignees carried on the business under the name of the "Winstanley Colliery Company Limited (formerly worked by the late Meyrick Bankes)" until 1928. Further pits were sunk and a tramway extended to the new 'winning' at Billinge Lane. On the main colliery line, engines *Winstanley*, *Billinge*, *Walter* and *Leyland* succeeded *Eleanor* and *Louisa*.

Vestiges of the old railway line can still be traced from Billinge to the Leeds and Liverpool canal in Wigan.