

Herbert Fletcher of Bolton

1842-1895



**Mining engineer, clean air crusader
& supporter of workers' rights**

by Kenneth Wood

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‘The cleverest mining engineer in Lancashire’

When Herbert Fletcher, colliery owner, mining engineer and social reformer, died at the age of 53 in the early autumn of 1895, he was mourned by rich and poor, coal owners and colliers, high Tories and Socialists. A man of infinite interests and charm, he had a zest for life rarely seen in one person and enjoyed a reputation as an unusually considerate coal mine owner. His major flaw, which brought him on more than one occasion in conflict with the Mines Inspectorate, was a stubborn streak

It was Fletcher's love of an active life which led to his death. Entering Ladyshore colliery yard on the morning of September 16, 1895, he saw a bicycle leaning against a wall and said he would take a ride. Before he had gone very far he was heard to say something about being short of breath. He then fell to the ground and died soon afterwards. Fletcher's pet dog, a constant companion, stood by his master. and would not leave the body.

Fletcher, who died a bachelor, was a member of a family whose mining interests in the Bolton area went back to at least the 16th Century. He was the son of John Fletcher and one of the 50 grandchildren of Colonel Ralph Fletcher, 1759-1832, suppressor of civil rights movements and one of the magistrates whose decisions led to the Peterloo Massacre in 1819. A greater contrast between grandfather and grandson would be hard to find.

Herbert was a mining engineer born and bred and over the years was involved in the running of Ladyshore Colliery, Little Lever, and in pits at Clifton, Kearsley, Atherton and the Burnley area. He lived in style at the Hollins, in the Haulgh, Bolton. He was a pioneer of longwall mining in Lancashire, and as early as 1869 was planning to introduce it at the Atherton pits of John Fletcher and Others. His inventive mind turned to many mining problems and intriguing clues to some of his ideas suggest he was a man before his time.

His darkest days followed a major mine disaster in 1872, when 27 lives were lost in an explosion of firedamp at Lovers Lane Colliery, Howe Bridge, Atherton. As a result the firm of John Fletcher and Others was criticised for the ingenious, but deadly, system used to ventilate the pit, words which must have weighed heavily on Herbert Fletcher, the colliery's consultant engineer. After the Lovers Lane tragedy, Fletcher made an extensive study of ventilation in coal mines with the aim of reducing the risk of firedamp explosions, and his ideas were put into use at Ladyshore Colliery, where he was manager, and later, owner. Fletcher's radical views on ventilation and the use of candles underground brought him into a head-on collision with the inspector of mines.

Fletcher was never afraid to ruffle a few feathers and was outspoken on matters on which he felt deeply. A Conservative member of Bolton Council, he declared during the election campaign of 1895, that the Socialist candidate was the only one for whom he could, in any conscience, vote. Neither did he fit the popular image of a Victorian coal master, but was a follower of John Ruskin, the poet, artist, philosopher, social reformer and critic of the evils of capitalism. Like Ruskin, Fletcher was a man of many abilities, and the Labour Prophet, a Christian left-wing magazine, said on his death that he had supported his own workers against his own class in the battle for a living wage. A large producer of coal for powering industry, Fletcher carried on a long campaign against smoke pollution, and became known as the Smoke Crusader. "Himself responsible for many chimney stacks, he fought long and hard in the County Council and Town Council to prevent the smoke nuisance which blights our large towns, said the Labour Prophet. "His whole life is a record of generous action, broad sympathies, strong purpose; he was a practical reformer of a high type, full of robust common sense, energy and ability. By his death the world loses a good man and the Labour movement a good friend," declared the Prophet in its remarkable tribute. Bolton Trades Council also paid tribute to Fletcher and passed a resolution expressing profound regret and placing on

record the council's appreciation of his self-sacrificing labours and untiring zeal in public service. The trades council recognised his generous and exemplary conduct as an employer, especially emphasising Fletcher's efforts to reduce the suffering of miners and their families during the coal strikes of 1892 and 1893.

More tributes came from the Manchester Geological and Mining society, an organisation dominated by mining engineers which he joined in 1873, and to which he read a number of papers. "An engineer of considerable ability ... his genial manner and generous nature made him a favourite with all who had the pleasure of his personal acquaintance", said a note in the society's transactions. Even allowing for the hyperbole which often enshrouds the dead, Fletcher had an enviable reputation in both his home town and the mining industry.

Fletcher was buried at Rothay, near Ambleside, not far from the home of his father, and mineworkers from Ladyshore acted as pall bearers. At a memorial service at St. Matthew's Church in Little Lever, Bolton, the Rev J.K. Watkins said that in his younger days, Fletcher had been a runner and footballer "when football was more of a game and less of a profession than it is now." His outdoor life did not extend to the field sports which Fletcher thought unnecessarily cruel, and he was as manly in his mind as in his body, said Watkins. Some people, he went on, thought Fletcher was careless and thoughtless because he always had a joke on his lips and a smile in his eye. But if they cared to go beneath the surface they found a hard reader and profound thinker, a student and lover of Ruskin and Shakespeare, a mathematician, inventor and in his own way. the head of his profession. He has been described as the cleverest mining engineer in Lancashire," added Watkins.

An overview of Fletcher's career came from his brother-in-law, Canon M. D. Rawnsley, who wrote a tribute for the Lakes Herald. "Few people...knew that beneath the gaiety and almost boyish power of gladness, lay the earnest man of thought and reading, the social reformer, the practical engineer combined with rare ability in one man. His genius undoubtedly lay in the

art of a mechanical engineer ... he had excelled at solving difficult problems associated with deep mining engineering.”

Canon Rawnsley, Vicar of Crosthwaite, near Keswick, gave further evidence of Fletcher's willingness to take sides with his workers during disputes and his eagerness to lead his men in any emergency and personally direct operations underground in any difficulty. Noting Fletcher's radical views on ventilation and the use of candles underground, Canon Rawnsley said: “He held, in opposition to the received view, that except in mines of a particularly fiery nature, there was more safety in the use of naked lights than of safety lamps. All mines, he held, ought to be so ventilated and so freed from chance accumulation of gas as to render the naked light - with its great comfort to the worker - a possibility. He believed it was the duty of a proprietor to minimise risk from the falling roof of mines and held that the better illumination of a naked light helped in the right direction”,¹ the Canon went on.

Fletcher also enjoyed a reputation as a man of integrity, and once instructed his workers, ‘Never hide anything from the Inspector (of Mines) though it might be held against us,’ Nevertheless, his desire for truth and his confidence – or stubbornness - in his own ideas led to the confrontation with the Mines.

The major work of Fletcher's life as a social reformer lay in his efforts to combat the ‘smoke demon’. “If ever a healthier, happier industrial people feel the joy of midday sunlight and know the blessing of clean air and bright blue sky; and Bolton the Smoked becomes Bolton the Blue-skied; a monument should be put up to Councillor Fletcher in the Market Place,” wrote Canon Rawnsley. “Inspired by the love of his master, John Ruskin, and feeling very deeply the waste to the nation as well as the cruelty to the individual of depriving the houses of labour of the health and happiness of God's great gift of sunshine; realising too how much

¹. Safety lamps gave out about half of the light of a candle and made it difficult for miners to see whether the roof or sides of the workings were in danger of falling. Many more men were killed in the 19th century by falls of rock than by explosions.

of the intemperance, misery and hopelessness among the people was caused directly by their having to work under the sulphurous canopy of a smoke-clouded heaven, and fog-filled atmosphere, he resolutely set to work to devise means of making factory chimneys do their labour without belching tons of carbon and sulphur in fine division into the air.” Canon Rawnsley found a lasting memorial of his own in the year of Fletcher's death, when he became one of the three founders of the National Trust.

Fletcher was not a man of empty words and he used his inventive mind to implement ways of making furnaces consume their own smoke. He proved that the chimneys at Ladyshore Colliery and at Farnworth Bridge did not need to pour black smoke into the atmosphere. There was also a cash benefit from Fletcher's ideas because the introduction of mechanised stokers could save enough fuel in a year to pay for the capital investment.

Fletcher carried his campaign into the council chambers of Bolton and Lancashire County Councils. “As a member of the Sanitary Committee he was indefatigable in his advocacy of smoke consumption ... seldom a council meeting passed without him airing his opinions on the subject. “His efforts-resulted in great good being effected in the atmosphere of the town being without doubt improved on account of his exertions,” wrote the Bolton Journal.

Ladyshore and elsewhere

By 1869 Herbert Fletcher's talents were in great demand. He was manager of his father's colliery at Ladyshore, Little Lever; he was spending considerable time as consulting engineer at the expanding pits of John Fletcher and Others at Atherton, and from 1862-68 he had managed, on behalf of his father, the Clifton and Kearsley Collieries.

The Clifton and Kearsley Collieries, just down the valley from Ladyshore, included Wet Earth Colliery with its inverted drainage syphon designed by James Brindley in the mid-18th

Century, and which ran under the River Irwell. The pits had been inherited by Charlotte Anne Fletcher from John Fletcher (died 1835) and Ellis Fletcher (died 1854) but until she came of age her affairs were run by her cousin, John Fletcher, Herbert's father. The sinking by John Fletcher of the Manor and Spindle Point pits had brought a financial crisis to the family and to get back on to a sound footing the coal rights were leased to Joseph and Josiah Evans. The Clifton and Kearsley Collieries were never again run directly by a member of the Fletcher family.

In 1859 the Clifton and Kearsley Colliery comprised the following pits: Wet Earth, Botany Bay, Robin Hood, Bus, Manor and Spindle Point. More about the Fletchers at Clifton and Kearsley can be found in "Exploring Wet Earth" by Geoff Preece. Herbert Fletcher's reputation became widespread and he followed in the footsteps of his uncle and his grandfather in becoming the mineral adviser to the Duke of Buccleuch's estate in the Burnley area. At the age of 27, Herbert Fletcher was at the peak of his powers and apart from all his local commitments he also found time in July, 1869, to give evidence to the Commission on Coal Resources. He gave the Commission a detailed account of how much coal needed to be left under surface buildings and installations for support. Chairman of that session was Joseph Dickinson, a noted Inspector of Mines. The paths of Fletcher and Dickinson were to cross again in the years ahead, and not always in the best of circumstances.

From 1870 to 1895 when Herbert Fletcher died, Ladyshore was not a particularly large colliery and employed not many more than 300 men. According to the Inspector of Mines reports, in those 25 years some 13 men were killed in or around the pit. Men were killed in falls of coal and roof; in May, 1876, Joseph Kershaw died when he fell off a coal boat near the screens; in 1884 one man fell into the shaft sump hole and was killed, while others died in a variety of accidents.

Fletcher was an early convert to the opinion that coal dust was a major factor in colliery explosions and introduced the regular watering of dusty underground roads. His contentious campaign to use open lights underground reflects the stubborn streak in his nature. Although Ladyshore was not subjected to a major explosive disaster there were at least three accidents involving gas during the years 1870-95 in which one man died and several others were burned.

Miner burned to death

In 1872 Samuel Morris, who was working by candlelight, was burned to death when a blower of gas was ignited. According to Mr. Dickinson who investigated the incident, the gas had been intermittently escaping from the same blower since 1869.

In June 1883, three miners were burned when their candles ignited gas coming from the roof. "Safety lamps were afterwards introduced," reported Mr. Dickinson. In April, 1886, four men, including the 63-year-old manager, Mr. Edward Stott, were injured in an explosion of firedamp as they cleaned out a sough. They were using open lights, the Inspector reported. Looked at by the standards applying in the coal industry at the time, these accidents at Ladyshore may not have seemed excessive, but Herbert Fletcher undeniably put men at risk to support his views on the use of naked lights underground.

In the 1880s Ladyshore worked six seams, the Black and White (or Lower Three Yards), the Gingham, Doe, Five Quarters, Trencherbone and Cannel, which all dipped steeply. Coal production at this time was about 500 tons a day. Fletcher's technique of tightly packing the goaf or waste from where the coal had been taken, was to try and ensure that as little space as possible was left for the accumulation of gas, and so make it safe to use naked lights. This method of stowing was not unknown in thin seams, but Fletcher claimed it was new to his part of the coalfield where the seams were thick and steep.

Fletcher faced a major problem in finding enough material to stow in the waste from where between five and ten feet of coal had been taken. Not enough material was available close to the face and dirt had to be brought from other parts of the underground workings. Ladyshore lay on the Manchester-Bolton-Bury canal and Fletcher encouraged his major industrial customers to fill the returning coal barges with boiler cinder, which, on arrival at Ladyshore, was loaded into tubs and taken underground. By 1888 some 36 tons of cinders a day were being moved down the pit to the coal face where it was packed into the goaf, a handling and haulage problem which could have defeated a lesser man.

All this effort was devoted to Fletcher's primary aim to make the pit safe enough to allow men to use naked lights with its brighter illumination. This, in turn, helped to protect miners from roof falls, particularly in pits with thick seams. Fletcher's views were to lead to a major clash with Dickinson, and after a major explosion at Clifton Hall Colliery in 1885 in which 122 men died, Dickinson directed that all the mines in his area should use safety lamps. With the exception of Herbert Fletcher, all the coal owners agreed.

Fletcher told: Fall Into line

Dickinson was not prepared to see men put at risk or his authority flouted for a theory on ventilation and on May 3, 1886, he served a notice on Herbert Fletcher.

“... that the respective mines in the said Colliery (Ladyshore), to wit, the Great, the Gingham, the Doe, the Five Quarters, the Trencherbone and the Cannel are worked with open lights and not with safety lamps notwithstanding that such mines are subject to emissions of firedamp. And whereas I am of opinion that, having regard to the character of the mine, the said matter is dangerous or defective, so as to threaten or tend to the bodily injury of the persons employed in and about the colliery, now I hereby give you notice forthwith to remedy the said matter,” stated the official notice.

Arbitration meetings were held at Bolton and Manchester before an award was made in support of Dickinson. Herbert Fletcher immediately gave notice of appeal and in December 1886 he appeared in the High Court where his lawyers tried to make the best of a poor case.

Among the points Fletcher tried to make were that the original award “was bad on the face of it; that the Coal Mines Regulation Act did not apply to the question of the use of safety lamps or naked lights in Herbert Fletcher's collieries; that the umpire at the arbitration exceeded his powers; that the award was uncertain and “such other grounds as may appear to the court right and just”.

Not surprisingly Fletcher lost the appeal and by December 24 the Inspector of Mines had made another visit to Ladyshore. Candles were still being used but Fletcher struggled to get his own way and forced the Inspectorate to serve an amended award. By the end of March, 1877, proceedings had been started against him. On May 16, 1877, Fletcher was fined a total of £20 and costs for allowing the use of open lights, although the arbitrator did note that no accidents had occurred,

Fletcher would not abandon his ideas on naked lights and ventilation, and in the winter of 1889 he addressed the Manchester Geological Society at length on “The effects of goaf stowing on sudden issues of gas and on ventilation”. Fletcher tried to demolish arguments against his method of stowing, and spent considerable longer in extolling its virtue. In the audience was Joseph Dickinson, a prominent member of the society.

Nine explosions

He referred to nine of the most recent serious explosions in the Lancashire coalfield and claimed that with only one partial exception, that none of the collieries involved had practised packing of the waste. In five of the nine explosions - including the one at Lovers Lane,

Atherton in which 27 died - he claimed that safety lamps were used exclusively. In all the cases, he said, it was the ventilation which had been deficient.

He detailed wage rates at Ladyshore to prove to penny-conscious mine owners that packing the waste was not needlessly expensive even though all the wooden props in the waste were left standing - at a cost of 1.5d a ton. This helped to make life safer for the miner, because prop-taking was the “greatest danger which the pitman encounters. Only the pitmen amongst us who have used both (safety lamps and naked lights) can duly appreciate the great store set on their candles by pitmen at their work,” said Fletcher.

“It is neither good engineering nor good political economy to shackle industries. The lamp is a shackle to the coal getter...while to a manager ... it saves him the taking of many precautions, the observance of which would often interfere with his meeting the fluctuating demands of the market,” he went on.

As Fletcher concluded his lecture, Dickinson proposed a vote of thanks, and after a few questions he had the last word. Dickinson said he thought highly of Fletcher's plan for leaving the props in the waste, but did not think many would support the coal owner in his view of working with open lights in firedamp mines. “All those who are using candles are getting whipped up, one by one, into the use of lamps, and at the same time the subject is being carefully watched, in this district, as to the effect the introduction of lamps ... will have upon the number of accidents by fall of roof,” said Dickinson. “A poor light has always been put forward as being likely to cause a great increase in the number of accidents by falls... but we may expect to more than counterbalance it by the saving in the number of accidents from explosions,” ended the inspector. Not too many months after this meeting of the Geological Society, Fletcher was fined a further £20 for allowing the use of naked lights underground.

Herbert Fletcher and the Atherton pits

Herbert Fletcher , the son of John Fletcher, whose name was borne by the Atherton company of John Fletcher and Others, divided his time up to the early 1870s between the family's mining interests in Bolton and Atherton. There seems to have been some tension in the family with Herbert competing with his cousin, Ralph Fletcher Junior, for a major say in the running of the Atherton pits at Gibfield, Chanters, and Howe Bridge (including Lovers Lane). The Fletchers were a traditional and cautious mining family and it might have been that Herbert's desire to introduce new techniques brought him into conflict with other members of his family.

Less than three weeks after the disastrous explosion at Lovers Lane which killed 27 men and boys, matters rapidly began to come to a head. The partners were called to John Fletcher's home in Southport and it was agreed that Herbert should have responsibility for all the underground management. This did not please Ralph Fletcher Senior or his son, Ralph Junior, and on June 26 another meeting of all the partners was called. Herbert tabled a number of resolutions, which if adopted, would have placed him in a commanding position with a great deal of executive power and relegated Ralph Fletcher Junior to more mundane duties. The partners refused to give Herbert the full backing he wanted and agreed that Herbert was to be responsible for the design of all work, and Ralph Junior was to be responsible for the execution of all work and be free to engage his own assistants. Within a short time of that meeting the structure of the board of directors changed dramatically and heralded drastic changes in the fortunes of Atherton Collieries and the Fletcher pits at Bolton. Later in 1872 John Fletcher retired and another partner, James Pearson Fletcher, died. The company was re-formed with Ralph Fletcher Junior and Abraham Burrows joining the board. Burrows' background was not in mining but he was an exceptional business man and under his

guidance the Atherton pits thrived. In 1874 the company was again reorganised and became known as Fletcher Burrows and Company. A story which persisted in the Fletcher family for almost a century said that at the end of the power struggle, Ralph Fletcher Junior and Herbert Fletcher decided to go their separate ways and tossed a coin to decide who should take the Atherton pits and who should take the apparently more prosperous Bolton operation. "My grandfather, Ralph, got Atherton and was reckoned to have got the worst of the bargain," said James Fletcher, former manager of Howe Bridge Colliery, in an interview in 1872. Nevertheless, Atherton was in the end the much more profitable operation. Ladyshore colliery closed in 1949, but Chanters, the last working pit in Atherton, went on until 1966.

Lovers Lane Disaster: March 28, 1872

Atherton's pits had a reasonable reputation for safety, and it had been a particularly dismal year in 1859 when three men had died. Even so, Joseph Dickinson, the Inspector of Mines, remarked in his annual report for that year that the accidents were 'high for the colliery, although not above average in proportion to the coal got.'

It is against this background, and Herbert Fletcher's reputation as an innovative engineer, that the events leading up to the Lovers Lane disaster can be seen. In 1872, Lovers Lane colliery in Howe Bridge, was primed for an explosion because of doubtful mining practices in which new and untested ventilation techniques failed disastrously. The initial explosion came when a charge of gunpowder was fired about 200 yards from the pit bottom. The charge blew out the stemming without bringing down any coal and immediately the workings were ignited and torn apart by the following explosion. Twenty-seven men and boys were killed.

At an inquest into the deaths, Dickinson criticised the method of ventilation where long drifts had been ventilated by air pipes. Not enough room had been left, however, for an adequate

supply of air to get through to the workings and there had been an almost general fouling of the atmosphere. It would have taken only a small decrease in the amount of air circulated to bring the mine to the point of exploding. That change had occurred earlier on the day of the explosion with reduced ventilation in the down brow workings which freely gave off firedamp. When the shot was fired the pit exploded.

Dickinson said it was unwise to have had the ventilation as contracted as it had been by the use of air pipes. The managers, who would include Herbert Fletcher, had shown much ingenuity in arranging the pipes to give fresh air to several places; but so much should not have been attempted. "They seem to have gone on, step by step, throttling the air, sending it through longer distances... and have gone on in this way until the occurrence of the explosion," commented Dickinson. The inspector said the owners should have driven double roadways and cut-throughs instead of using single drifts and long piping. He also said the company should stop miners using gunpowder in favour of safer explosives, and that charges should only be fired by firemen.

Herbert Fletcher, together with his cousin, Ralph Junior, were amongst the first rescuers to go down the pit after the explosion. Herbert's diary records the accident without comment but for a man with such progressive views the accident and criticism at the inquest would have weighed heavily on his shoulders.

Herbert Fletcher's Diary 1869 -72

Not a great deal of Fletcher's own writings have so far come to light and most information has come from notes made by those who were close to him, official records and newspapers. There is though one particularly interesting source, his diary for the years 1869-72, which was found in a collection of miscellaneous mining documents at Lancashire Record Office in

Preston. During those years Fletcher shared his time between his interests at Ladyshore and the family's other pits at Atherton.

As early as 1869 Herbert Fletcher had turned his inventive mind to the problems of moving coal from the face to the surface at the Atherton pits, where he was engineering consultant until 1874. High output on the coal face was of little use if the underground haulage, cage-lifting capacity and surface haulage were inadequate. During the four years covered by this diary Herbert discussed several methods of improving the haulage systems.

On one particularly busy day, July 6, 1869, Fletcher called in the colliery engineer, Edward Ormerod, who later invented a life-saving detaching hook which prevented cages being wound over the pithead gear. On that summer's day, Fletcher and Ormerod discussed a new conveyor system together with the possibility of fitting the safety cages with springs. Fletcher also notes that they talked about fitting the winding cages "with self-acting tips" - a possible forerunner of skip winding which became common only after the Second World War.

The conveyor, or endless band as Fletcher preferred to call it, occupied a good deal of his time from 1869 onwards. He first explained it to the partners of John Fletcher and Others in March of that year and then made detailed notes of his idea in his diary. "March 29. Considering the adoption of an endless band formed by boards of iron plates carried by two chains and forming a moving bottom to an iron trough to be laid along the face of the coal, into which the coal is to be shovelled by the men working all along the face, to be conveyed in it on the endless band to the bottom of the working place and discharged into the tubs, which are to pass in a continuous string beneath the end of the trough, as wagons do under a screen. The large and small [coal] to be separated on the screens, the diary states.

"By this means all waggoning and moving and twisting of tubs is avoided and then labour saved. The tubs so filled to be conveyed to the pit eye [pit bottom] without requiring more attendance or labour than that of one boy at the junction of the endless chain road with the

endless chain brow leading to the pit, whose duty will be merely to see that the tubs pass properly from one chain to another. Thus only two attendants, besides the hooker-on and his boy, will be required in the underground conveyance of 100,000 tons a year for 14 years.

“The trough may be abandoned at any time and waggoning along the face substituted, and intermediate narrow work driven if found necessary. The endless chains will still convey the tubs to the working places by branches on the jig brow ends, or may be only performed in the old way by boys. An investigation is being made into the value of waggoning, which would be saved to the men, which is thought to amount for a quarter of the total labour called 'getting',” ends the note for that day.

Fletcher's description of his idea bears a resemblance to the plate conveyors first introduced into German pits decades later but only in common use in British pits after the Second World War. During the following weeks and months Fletcher spent a great deal of time working on drawings for his conveyor and organising the manufacture of various parts. Fletcher also had his critics, and on the 27th October, 1869, he noted that he had written “a fair copy of answers to objections to the endless band”, and a history and estimates of its cost. By this time, too, he appears to have dropped plans to have the machine running across the coal face, and after “contriving and planning with Ormerod,” he remarks that “it first appeared that the band might be used for the levels and brows, and tubs for the working places and ends to the brow, where they would be emptied into the band.”

Fletcher's fertile mind was also considering other mining matters including hydraulic coal jacks, a Howatts coal-getting machine, and later he put forward an idea for using a surface coal tippler to empty three tubs of coal at a time. A number of references to estimates for the endless band might suggest that Fletcher's brainchild was competing for funds with other colliery development.

By January, 1870, the chain for the conveyor was being forged and on May 30th an experimental machine was in place. By August, 1871, there was a “sample” of the endless band working in the Crombouke day-eye, and towards the end of the month he and his cousin, Ralph Fletcher Junior, took a Mr. Greenwall and his son down the Crombouke to inspect the machine. Greenwall Senior was not too impressed and said although the idea was mechanically correct, he would be against introducing it on such a large scale.

Herbert Fletcher was not averse to considering ideas used in other collieries for the benefit of the Atherton pits, and on July 29, 1871, he and Ralph Fletcher Junior, visited Platt Lane pit in Wigan to examine a coal cutter. From the notes in his diary, Herbert appears to have been quite impressed and remarked “the machine does very well and holed 3' long by 2" under in 52 seconds.” The face was 140 yards long with the machine passing over it four to five times a fortnight and kept eight fillers and their waggoners sending about 300 five-hundredweight tubs to the surface each day. The machine was powered by compressed air at a pressure of 75 lbs. It had two cutting wheels, one with five teeth and the other with 20 teeth.

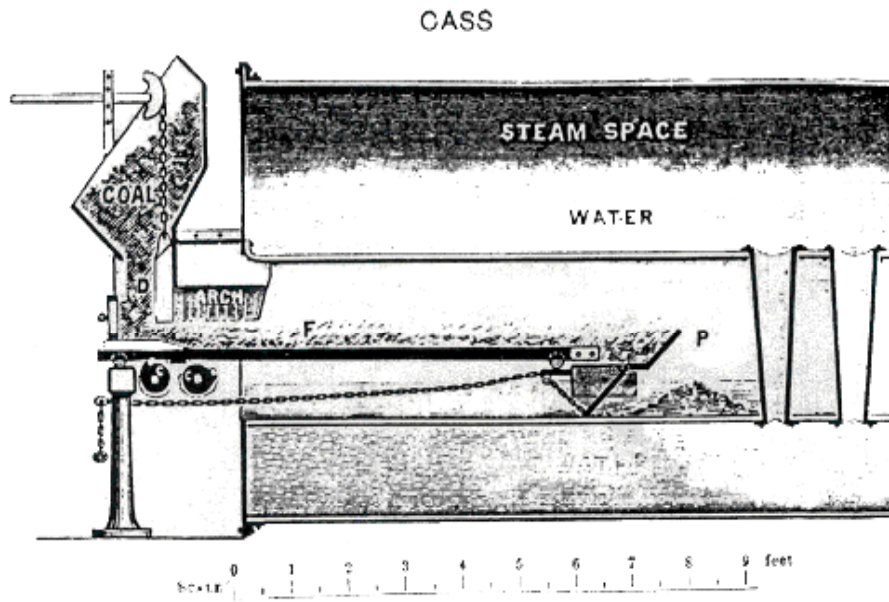
Crusader against air pollution

For 15 years or so Herbert Fletcher waged a personal crusade against air pollution. His all-embracing campaign included not only technical guidance to factory owners but also advice to ordinary townsfolk on how to use legislation to exert pressure on the authorities. A reminder of just how bad smoke pollution was in Bolton during mid-Victorian times comes in a note made by Herbert Fletcher's cousin, the lawyer. James Watkins. " Owing to various causes, chiefly smoke and chemicals, the large trees died rapidly, not only in the Hollins land and garden, but also in the road and valley, and round Crompton Fold and Darcy Lever Hall. None are now left," he wrote just after the turn of the 20th Century.

In 1887-88 when Fletcher gave a comprehensive address to the Manchester and Salford Noxious Vapours Abatement Association, Bolton was notorious for its smoke problem and the town had become known by a variety of names including Black Bolton and Bolton-in-the-Smoke. Not without a sense of humour even in matters which he considered of the most vital importance, Fletcher said he approached the association as a repentant sinner, as a prisoner turned Queen's evidence.

"I used to invade my neighbours' rights, though it was in a very fashionable way, and I am now brought before you to make a clean breast of it, to explain the tricks of the trade, in which to a certain extent my hand was against everyones, and to show how I found honesty or at least honest obedience to the law, to be the best policy", he said. Praised by the chairman of the meeting for his stand against smoke, Fletcher said that those engaged in manufacturing industries were not compelled to submit the country to being spoiled by dirt. The only credit he could take was for installing a set of mechanical stokers to make nine steam boilers smokeless and using them for 12 years or so.

Industrialists had been encouraged to invest in stoking machines in the hope of saving large amounts of money, but had been let down because of breakdowns, but Fletcher did not think these reasons sufficient to abandon the battle against pollution. Employers who claimed to put out a “trifle of honest smoke” suffered nothing worse than the occasional abatement notice from a nuisance inspector but steps were rarely taken to enforce the notices and even when they were the fines were small.



A Cass furnace

Fletcher had experimented with various ideas for making his manually-operated boilers consume their own smoke but without success and he became convinced that only mechanical firing would stop smoke from being poured into the atmosphere. In the mid-1870s only four works in Bolton had truly smokeless chimneys, two at spinning mills and two at bleach works. Three of these works used a device known as the Jukes furnace under externally fired boilers and the fourth used a furnace made by a Mr. Cass, of Palmerston Street, Bolton, which was applied to the internal flues of ordinary Lancashire boilers. It was the Cass method which Fletcher adopted but later he added some of his own

ideas to improve efficiency and reduce wear on moving parts. His paper to the Noxious Vapours Abatement Association was quite detailed and investigated the theory of combustion in boilers, and discussed the merits of two rival systems, cokers and sprinklers.

Every Sunday afternoon for eight weeks during the previous summer, Fletcher had shown off the workings of the Cass furnaces to visitors at the colliery at Farnworth Bridge. On each occasion several hundred men and women were shown the smokeless boilers, the water-winding and pumping engines before being taken below ground for a tour of the workings. The visitors were mainly firemen and engineers who could not visit the pit during the working week.

Concern about Bolton's polluted skies had been voiced as early as 1869 when 49 citizens sent a petition to the Home Secretary drawing attention to the neglect of the local authority to enforce the smoke clauses of the 1866 Sanitary Act and also in allowing the River Croal to become offensive as a common sewer. At that time there were 111 factories, mills and foundries in Bolton and Fletcher thought none of them had made any attempt to reduce the smoke menace. A commissioner was appointed to look into the complaints and was given bland assurances by the local authority. In his report the commissioner concluded that the "nuisance would be removed without a resort to compulsory action."

This action came to nothing but it did lead Fletcher, some 20 years later, to explain how action could be taken under existing law, so that ratepayers could effect "their own deliverance from the plague of dirt. "It is a reflection on the inability or unwillingness of the local authority to implement existing legislation that some 15 years or more after the 1868 petition, only four factories in Bolton borough had smokeless chimneys."

The Hollins, the Fletcher family home

Life at The Hollins in the time of Herbert Fletcher was all that befitted a wealthy and intelligent man of property. The house in the Haulgh, Bolton, had been the home of the Fletcher family for generations, and stood in extensive grounds, with sweeping lawns and flower beds. Herbert had restored and partly rebuilt The Hollins, and in the 1880s it was thought worthy of a major feature in the Bolton Journal, The fulsome praise of the paper's correspondent far from detracts from the dignity of the small estate first leased to Herbert's great-great grandfather, Jacob Fletcher, in 1756.

In that lease, granted by Sir Orlando Bridgeman, the annual rent was £4 a year with the provisos that Jacob spend £60 on building a house for a servant, that he repair all the buildings and that he should grind all Sir Orlando's corn and grain. Sir Orlando also insisted that Jacob should keep one hound at The Hollins for the knight's own use. Jacob's son, John, followed as owner of the Hollins, and in turn his son, Colonel Ralph Fletcher, took over the property. On Colonel Ralph's death the house was lived in by Herbert's father, John Fletcher.

In restoring The Hollins, Herbert turned the black and white timbered house into the home of a gentleman, and although it was splendidly furnished and decorated, he could not be accused of being pretentious; large folding doors led from the dining room into what most people would call a ballroom, but Herbert insisted that the Journal reporter should call it only a playroom.



The Hollins, Herbert Fletcher's home

In 1902, Herbert Fletcher's 75-year-old cousin, James Watkins, wrote an account of life at The Hollins from the years 1830 to 1842. A copy of this document is held at Bolton Library and it gives a charming insight into life in Bolton in the early years of late Georgian and early Victorian times. Watkins was the son of James Kyrke Watkins, a town clerk of Bolton, and he founded a firm of solicitors. In keeping with tradition as a relative of the Fletchers, he joined the Militia and rose to the rank of major.

Memories of the Hollins in 1830, by James Watkins

“My earliest recollection of The Hollins was in 1830 when I was three years old. I was taken by my grandmother and, I think, my aunts, to Bolton to view the procession on the occasion of the celebration of the Coronation of King William IV. We viewed it from a window in Market (now Victoria) Square. I was much struck by a workable pump carried in the Plumbers' procession.

“Subsequently I recollect being taken in a pony gig between my grandparents to the Hackin about a couple of miles away, where my grandfather had a coal pit, and being much interested with the 'gin' which was used to carry the rope which let down and pulled up the coal tubs, and was worked by a horse walking round in a circle. The next event which impressed itself on my memory was being taken to The Hollins to see my grandfather (Col Ralph Fletcher) the day before he died.

“... The Hollins was an old building which has been added to at various times ... A large barn with haylofts adjoined the house and outbuildings with a shed beneath part of the hay loft containing various farming tools and a winnowing machine, in the cog wheels of which I once got three fingers caught and crushed. In the carriage yard were three large rain tubs all connected, into which ran the rain water from various roofs. A favourite amusement of mine was boring a hole with a gimlet through the lowest part of one tub, and watch the water spurt out. I frequently emptied the tubs. This, in dry weather, was regrettable. Between the poultry house and the end of the yard was a saw pit and carpenter's and cartwright's shop with smithy. “ ... a pump and deep well supplied the house with water. There was no town water in those days, nor any drains; the drainage from The Hollins found its way down the brow anyhow, wrote Watkins.

The Manchester-Bolton-Bury canal played an important role in both industrial and social life in the 1830s and 1840s. Mr. Watkins describes a three-hour journey to Ordsall by canal through the then beautiful valley of the Irwell, considered as one of the “most picturesque scenes in England.” John Fletcher, Watkins' uncle, was running Ladyshore Colliery at this time and at times commuted from The Hollins in The Beagle, a light rowing boat with two sets of oars. Watkins clearly remembered Herbert Fletcher being born in April, 1842, and how his young life almost ended before he was five when he fell ten feet from a parapet on to a flagged walk while trying to scrump pears. “I found him unconscious and bleeding

profusely from a wound on his forehead ... he bore the mark all his life . “wrote Herbert's cousin. Mr. Watkins also gives more details of the Hollins Leases and the Fletcher family and its many lines.

Sources

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Herbert Fletcher's involvement in the coal industry in Atherton, and more detail of the explosion at Lovers Lane, was recorded in **The Coal Pits of Chowbent**, by Kenneth Wood, published in 1985. There is a copy at Wigan Archives Service at the Town Hall, Leigh.

The focus on Herbert Fletcher in that book was his contribution to the coal industry in Atherton, but there is additional interesting material concerning his time at Ladyshore Colliery in the Bolton Local History Archive.

The drawing of Herbert Fletcher is from the Bolton Chronicle of September, 1895.