

13.A Addendum to Walk No 13

Framework Knitting in Nottinghamshire – from invention to disension

Much of this history is taken from the Ruddington Framework Knitters Museum website (www.frameworkknittersmuseum.org.uk), with some significant additions from other sources.

The industrialisation of knitting was made possible through the invention of the stocking frame by William Lee in 1589.

When fully developed his machine made it possible for workers to produce knitted goods around 100 times faster than by hand. This was the first step in the mechanisation of the textile industry and led to framework knitting playing a key role in the early days of the Industrial Revolution.



The Heritage of the East Midlands Knitting Industry www.knittingtogether.org.uk warns that there are a number of stories regarding William Lee's life, but uncertainty remains as to how many of them are fiction rather than fact.

Lee (1563-1614) was born in Calverton (although apparently Woodborough also claims the honour). After gaining a Master of Arts degree at Cambridge he returned to Calverton as a curate. He is sometimes referred to as 'the Reverend Lee' but it is uncertain whether he actually held this position.

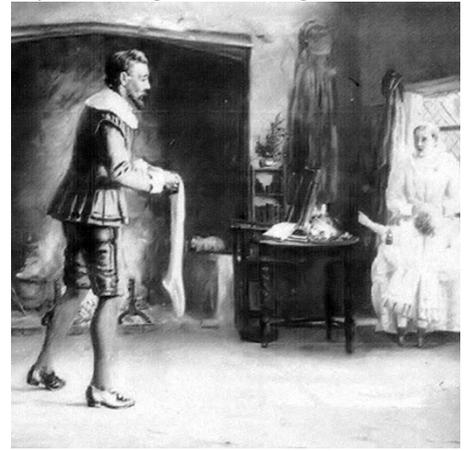


Engraving by William James Linton (1812 –1897)

There are also at least two descriptions given as to why he wanted to devise a knitting machine. One is that he was in love with a woman who didn't give him enough attention as she was always knitting so he invented a machine to, possibly unsuccessfully, impress and woo her. The other reason, preferred by an article on Calverton Village Online, is that Lee's wife spent many hours hand knitting and wishing to spare his wife the monotony of this daily task, he "thought out" the machine.

Whatever the reason, Lee devised a machine which produced a coarse wool, for stockings. It was used within the local villages and then he went to London to seek a patent. This was refused by Queen Elizabeth I, apparently because the cloth was too rough. He built an improved machine that increased the number of needles per inch from 8 to 20 and produced a silk of finer texture, but the queen again denied him a patent because (according to The Encyclopaedia Britannica and other sources quoted in Wikipedia) of her concern for the employment security of the kingdom's many hand knitters whose livelihood might be threatened by such mechanization. The queen is quoted as saying to Lee:

Lee presenting his stocking to the Queen



"Thou aimest high, Master Lee. Consider thou what the invention could do to my poor subjects. It would assuredly bring to them ruin by depriving them of employment, thus making them beggars."

Perhaps more likely, the Queen's concern was a manifestation of the hosiers' guilds' fear that the invention would make the skills of its artisan members obsolete.

Eventually, Lee moved to France with his brother James, taking 9 workmen and 9 frames. He found better support from the Huguenot Henry IV of France, who granted him a patent. He began stocking manufacture in Rouen, France, and prospered, with a contract to provide knitting machines for the manufacture of silk and wool stockings. But the climate changed abruptly on Henry's assassination in 1610 and subsequently Lee's claims were ignored and he died in 1614 before the full potential of his invention had been realised.

After Lee's death, his brother James returned to England moving to Thoroton, where Lee's apprentice Aston (or Ashton), a miller, had continued to work on the frame and produced a number of improvements.

The widespread use of the frame was a slow process but, by the early 1800s, framework knitting was the largest type of manufacturing in the East Midlands, where there were around 20,000 frames in use (nearly 90% of the UK total), with almost half in Nottinghamshire. The industry was predominantly rural with more than 82% of frames in Nottinghamshire, Leicestershire and Derbyshire being scattered among 253 villages.

In time, the frameworkers discovered how to adapt their machines to knit cotton and lace as well as wool – and the Nottingham lace industry was born and eventually gave the Lace Market its name.

In 1768, Richard Arkwright moved to Nottingham and established a small cotton mill spinning in Hockley. The machines in this first mill were horse-powered, but later in his career Arkwright was the first to utilize the steam engine as motive power in a

Nottingham factory. The move to mills led to the development of back to back housing for mill workers.

Lace was manufactured on a frame adapted from that of William Lee and was further improved by John Heathcote and John Levers in the early 19th century. By the 1840s lace making was changing from a domestic industry into an international export. However, this growth and success did not come without hardship.

The Ruddington Museum looks at what it was like to be a Framework Knitter. It was tough; the hours were long and working conditions cramped, uncomfortable and dangerous. The industry was controlled by Master Hosiers, who also owned the knitters' houses, but the framework knitters had to pay to use their knitting frames, even if no work was available, and buy all their own materials. Low wages and high overheads meant the whole family would have to work, with children taking on tasks such as wool-winding, just to make ends meet. Poor health and malnutrition were rife.

The 1833 Royal Commission on Children in Factories found that:

'...They are, many of them, unhealthy and dyspeptic; ...from the long period of labour endured in a close and confined atmosphere....I can tell a stockinger well by his appearance; there is a paleness and certain degree of emaciation and thinness about them... hopeless poverty is producing fearful demoralisation....'

A common insult in Victorian Britain was to call someone 'as poor as a stockinger' – by which they meant a framework knitter.

In the early 1800s, framework knitting wages were falling. Workers were living in extreme poverty and, all too often, being exploited by unscrupulous Master Hosiers. The knitters sent a petition to parliament, but didn't get the help they needed – unrest increased. There had been occurrences of frame breaking for many years, often as a protest against manufacturers who used machines in what protesters called "a fraudulent and deceitful manner" to get around standard labour practices.

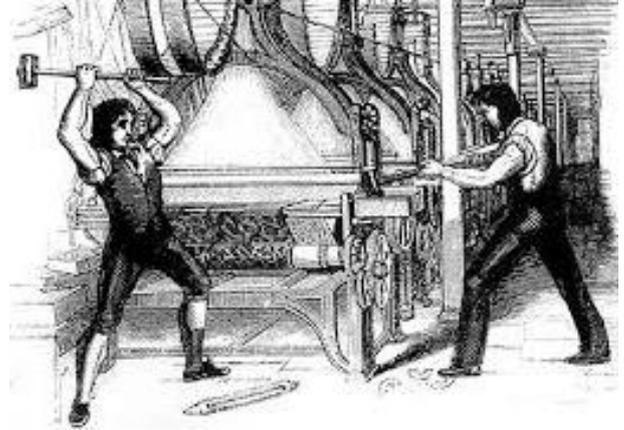
This was also a time of national difficulty. England was at loggerheads with France and the USA. The Napoleonic Wars (1803–1815) were ongoing and trade relations with the USA had been going through difficult times with embargoes and, ultimately, the War of 1812, (June 18, 1812–February 17, 1815 – a conflict fought between the United States and Great Britain over British violations of U.S. maritime rights).

The situation in the knitting industry was brought to a head through the harsh economic climate resulting from these conflicts, together with manufacturers and others who had the most to lose fearing that what had happened recently in France (the French Revolution) might happen here. Indeed, there was a far-fetched but widely prevalent suggestion at the time that any dispute from frameworkers was part of a large conspiracy, allegedly supported by Napoleonic France, whose ultimate goal was the overthrow of the British monarchy. The overall effect was a rise of difficult working conditions in the new textile factories and a desire for greater control over workers.

Years of hardship ended in frustration –and the Luddite rebellion erupted in 1811. In Nottingham the hosiery workers took action, the authorities, local and national, feared the worst – open revolution; and every measure was taken against this group of people.

The movement began in Arnold on 11 March 1811 and spread rapidly throughout England over the following two years.

In a paper titled 'Luddites', available on the Nottinghamshire Heritage Gateway (www.nottsheritagegateway.org.uk), Professor John Beckett writes that the *'first disturbances associated with Luddism occurred on 11 March 1811 when a group of Nottingham framework knitters assembled in Arnold, beyond the town boundaries, and destroyed 63 frames "belonging to those [Master Hosiers] who had rendered themselves the most obnoxious to the workmen". No other damage was done and no violence was reported'*.



Today the word 'Luddite' is often incorrectly used to describe someone who is against progress. It is a term associated with the destruction of machinery, but this is only part of the story.

The original Luddites weren't against new technology, but they believed that the new, wider frames had resulted in unfair working practices and reduced income. There is a consensus among most historians that Luddism was a bargaining strategy employed by workers to secure concessions from employers. At one end of the spectrum of opinion is the view of Hobsbawm ('The Machine Breakers', 1952) who used the term *'collective bargaining by riot...a simple technique of trade unionism'*. This view was supported by other writers who cited The Combination Acts of 1799 and 1800 – to prevent Unlawful Combinations of Workmen – which prohibited trade unions and collective bargaining by British workers. The legislation drove labour organisations underground, turning from strikes to violence, but, it is argued, the Acts were not widely enforced. (Sympathy for the plight of the workers brought repeal of the Acts in 1824).

Others (e.g. Cole, 'A Short History of the British Working-Class Movement, 1960) considered it as opposition to the competition of machines with labour.

Beckett says *'the key points were that the [wide frames]..... on which inferior quality [material was made]; and were worked by people who had not served the traditional seven year apprenticeship, known as "colts". The framework knitters were not fundamentally opposed to the wide frames or the colts, but they were when employers continued to rely on them during a trade depression'* Beckett explains. *'In these conditions*

the knitters wanted the employers to lay off the colts working wide frames, in order to protect the skilled workers operating the old narrow frames, until times improved. For their part, the employers were suffering as much in the trade depression as the knitters, and they wanted to maximise output in order to keep up their sales income’.

John Blackner, in his ‘History of Nottingham’ (1816) referred to the events as a form of direct action to take *‘vengeance upon some of the hosiers, for reducing the established prices for making stockings, at a time too, when every principle of humanity dictated their advancement’.*

At the other end of the spectrum of historians’ opinion is a hypothesis presented by Anderson & Tollison (Luddism as Cartel Enforcement, Journal of Institutional and Theoretical Economics, 1986). They write that, by the early 1800s, the ownership of frames was being concentrated in the hands of a few hosier firms; for example, in 1812 a Mr Hayne of Nottingham owned around 2,000 frames (Felkin, ‘History of Machine Wrought Hosiery and Lace Manufactures’, 1968). This was common across the industry and there was some price fixing and other *‘cartel activities in the industry’* including trying to restrict entry into the industry and the undercutting prices *‘by these lesser, irresponsible, unscrupulous hosiers..[which meant that the larger hosier] had to lower his own standards and deal hardly and unfairly with his stockingers, or go under, such was the pressure of competition’* (Darvall, ‘Popular Disturbances and Public Disorder in Regency England’, 1969]. Labour costs were also lowered by the lack of restrictions on the number of apprentices or unskilled labour – *‘an unreasonable influx of new recruits’* (Darvall) – allowed into the industry.

As to the workers, it has been argued (e.g. Hammond and Hammond, ‘The Skilled Labourer 1760-1832’, 1967) that Luddism in the Midlands was *‘a well-planned and organised policy’* with some system of command and considerable discipline in actions taken; a view strongly put by Anderson & Tollison who also claim that *‘the attacks were obviously systematic. Specific houses containing particular frames were carefully selected’* – those of unpopular hosiers, paying low wages or producing inferior material, thereby undercutting market prices. It is argued that in the later stages of the rebellion the *‘core of Midland framebreaking was clearly the work of a small number of permanent, organised gangs...making an income out of it’* (Durvall).

Anderson & Tollison’s article argues that, as the lead hosiers (the ‘cartel’) were unable to control the entry of undercutting competitors, they enlisted the support of stockingers to do this for them. This is supported by a long statement in the Nottingham Journal, January 23, 1811, signed by Nottingham’s then leading firm, Brocksopp and Parker, as well as other hosiers, which makes their position plain. They urge the framework knitters as a body not to accept work from those hosiers who were paying low prices. Felkin notes that alongside this public appeal, Brocksopp and Parker agreed with their stockingers to maintain wages provided that the workers *‘could get other hosiers to pay the same price and to discontinue the manufacture of (cheap, inferior) articles’.*

Anderson & Tollison use these factors to *'propose that Luddism essentially represented cartel enforcement activity in which an organised group of workers were used by a group of the industry's larger firms to control cheating hosiers'*. Thus, they argue, *'Luddism functioned in such a way as to establish an effective cartel by restricting output and competitive entry'*. They even talk in terms of the Luddites effectively acting as *'cartel policemen'*. An intriguing view – it certainly shows the breadth of interpretation of history.

Whatever the truth of the different arguments, the rebellion continued and quickly spread to other parts of Nottinghamshire and the authorities took action. A handbill of 26 March 1811 produced by Nottingham corporation, offered a reward of £50 to anyone supplying information about frame breakers, referring to them simply as *'evil minded persons'* who had *'assembled together in a riotous manner'*.

At this early stage, even if the frame-breakers were later better organised and possibly acting with the support of an industry cartel, the movement was amorphous and leaderless, and even the word *'movement'* possibly suggests a level of organisation which simply did not exist.

The breakers were called Luddites after the name of their mythical leader, Ned Ludd; it is not clear if the name came from a real person or a fictional character like Robin Hood!

One website (www.visitoruk.com/Leicester/anstey) states *'A half-witted Anstey lad, Ned Ludlam or Ned Ludd, gave his name to the Luddites, who in the 1800s followed his earlier example by smashing machinery in protest against the Industrial Revolution'*. This character was an apprentice who allegedly smashed two stocking frames in 1779.

Blackner recorded in 1816 that he was *'an ignorant youth, in Leicestershire, of the name of Ludlam who, when ordered by his father, a framework-knitter, to square his needles, took a hammer and beat them into a heap'*.

William Nunn, a Nottingham lace manufacturer, reported to the Home Office in London on 6 December 1811 that *'many hundreds of letters have been sent signed "Ludd", threatening lives and to burn and destroy the houses, frames and property of most of the principal manufacturers'*.



Ludd was never a single real person. The term referred to a leader, and could be assumed by anyone leading a group of frame breakers. Contemporaries often used fictitious names like this to ensure that they retained anonymity. So letters in the name of Ludd were

circulated to indicate to recipients where they had come from without giving away any particular people.

On 10 November 1811 the movement took a sinister turn when John Westley of Arnold was shot dead during a disturbance in Bulwell. This resulted in an increase in the ferocity of the breakers and troops were summoned, together with the militia and yeomanry cavalry to try to establish order, without a great deal of success.

At the same time, there were more formal attempts by the frame knitters to bring change. An 'Address from the Framework Knitters to the Gentlemen Hosiers of the Town of Nottingham', was published in the Nottingham Review on 29 November 1811 pointing to the economic conditions under which the knitters laboured, and the need for better regulation of the trade, but it did not stop the frame breaking. This was followed by negotiations commenced between delegates representing the knitters and the hosiers. These continued through December and the intensity of the incidents declined.

On 15 December 1811 the Prince Regent issued a proclamation offering a reward of £50 to any party instrumental in the conviction of a frame breaker, and notices to this effect were quickly distributed through the country.

On 28 December an agreement was signed between the hosiers and the knitters designed to ensure that average wages would rise. The Duke of Newcastle, the lord lieutenant of the county, hoped this would be the end of the unrest.

Unfortunately some Nottingham knitters remained dissatisfied and some hosiers refused to be bound by the terms of the agreement.

The supposed leader of the knitters was promoted to 'General' and even "King".



A declaration was sent to Parliament, setting out the protesters concerns. It was signed
"By order of King Ludd, Nottingham
Given under my hand this first day of January in one thousand Eight Hundred an Twelve
Ned Ludd's Office Sherwood Forrest"

The unrest spread, through Derbyshire, Leicestershire, Lancashire, Cheshire and Yorkshire. It has been estimated (Durvall) that the Luddites destroyed between 1300 and 1400 frames, which amounted to some 4% of the total in the UK. In Nottinghamshire and Derbyshire, where most frame breaking occurred, the destruction amounted to 12% of the two counties' frames.

The government responded by sending troops to protect the factories and, on 14 February 1812, the Frame Work Bill was introduced to Parliament by the Home Secretary Richard Ryder, acting in concert with Spencer Perceval (who was at that time both Chancellor of the Exchequer and Prime Minister), and three Nottinghamshire MPs concerned about the Luddite Movement taking hold in their constituencies. The Bill proposed a law to make frame-breaking punishable by death.

On February 27th 1812, Lord Byron (of Newstead Abbey) delivered his maiden speech in the House of Lords at the age of 24. It was a stirring defence of the Luddites. Byron was opposing the Frame Work Bill and his case was that the men who did this had no alternative but starvation. He said *"But whilst these outrages must be admitted to exist to an alarming extent, it cannot be denied that they have arisen from circumstances of the most unparalleled distress."* and that *"nothing but absolute want could have driven a large, and once honest and industrious, body of the people, into the commission of excesses so hazardous to themselves, their families, and the community."* Byron claimed that the machines destroyed the livelihood of the poor, simply in order to make the mill owners more wealthy.

His appeal and those of other Luddite sympathisers were unsuccessful; the proposed law was rushed through as an "emergency measure". The Destruction of Stocking Frames, etc. Act, 1812 was passed with an overwhelming majority and received royal assent on 20 March: frame-breaking became a capital felony (a crime punishable by death). All measures included in the Act were only to be applied temporarily, and were duly set to expire on 1 March 1814.

In practice, although approximately 60 to 70 Luddites were hanged in the period that the statute was in force, apparently no death sentences seem to have been justified on its grounds, with judges preferring to use existing legislation. The Act was officially repealed in 1814 with the passage of the Destruction of Stocking Frames, etc. Act 1813, which instituted a new maximum penalty for the destruction of stocking frames of life transportation; in 1817, that Act would itself be repealed and the death penalty once again reinstated in the Destroying Stocking Frames, etc. Act 1817.

An example of the legal impact is given in John Becket's paper which tells that on 18 March 1817 Daniel Diggle, 21, was brought before Mr Baron Richards, on High Pavement, Nottingham, charged with attempting to shoot Mr George Kerrey of Radford. On 22 December 1816, Diggle, with three other men, had gone on a framebreaking expedition to the house of Mr Kerrey who resisted. Diggle fired a pistol at him. Kerrey was not seriously injured, but Diggle thought he had killed him. Diggle was subsequently arrested and was convicted of shooting Kerrey. Diggle was executed outside the county gaol on 2 April 1817. His dramatic *'authentic confession'* was printed and distributed at the time of his hanging.

As the result of this incident, and a number of other successful prosecutions, Luddism gradually faded away.

Nottingham's industrialists went on to build bigger and better machines to produce lace, and the old frameshops fell into disuse. In addition to lace factories, the foundries and workshops of the lace machine builders, bobbin and carriage makers, bar makers, and all the other auxiliary trades so necessary to the working of lace machines, were located in the industrial suburbs of Nottingham, as well as along the Erewash Valley. More than 90% of warp and twist lace machines working in the world were made in the Nottingham area. The Nottingham lace machine builders contributed significantly both to the world-wide fame of Nottingham and to the prosperity of the local economy.

The lace industry continued to expand into the 1920s. However the depression that followed World War I had a devastating effect on the export-orientated lace trade. Export figures declined sharply from the peak of 1923 and the number of firms in the lace industry declined all over the United Kingdom. This contraction continued through competition from abroad and, by the end of 2012, there were only four makers in the East Midlands and 2 or 3 elsewhere in the country. Lace is no longer processed through or made in Nottingham; in the twenty first century the Lace Market is a place for living and entertainment, not lace manufacture.