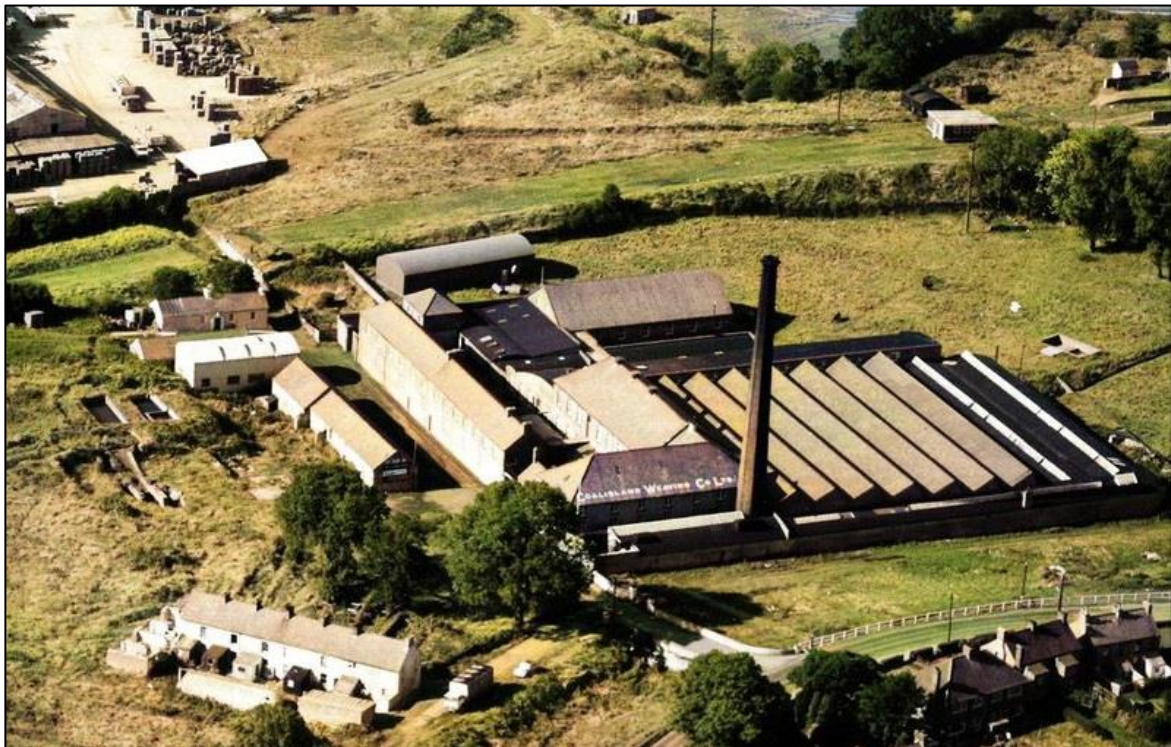




A HISTORY OF COALISLAND WEAVING COMPANY



COALISLAND & DISTRICT
DEVELOPMENT ASSOCIATION



Comhairle Ceantair
Lár Uladh
Mid Ulster
District Council

THE FOUNDERS OF THE WEAVING FACTORY

In 1865, two industrialists named John Stevenson and Ledlie Clark formed a business partnership and began making plans for a weaving factory in Coalisland. The factory was completed in 1867 and production began in early 1868.

John Stevenson (1819-1887)

John Stevenson was born at Ellis's Cut, near Lurgan, Co. Armagh. As a young man, he worked at a grocers and hardware business in Church Street, Dungannon owned by John Armstrong. When John Armstrong died in 1841, Stevenson married his widow, Eliza, and took over the business. He raised his five stepdaughters (Ann, Lucy, Phoebe, Mary and Elizabeth Armstrong) and later had three daughters of his own (Ellen, Kate and Jennifer).

In 1858, he sold the business in Dungannon and bought a steam sawmill and spade factory which had belonged to the recently deceased Stewart Lecky. Stevenson also bought the surrounding land and the weaving factory was built on the adjacent site.

Stevenson lived at Island House (now Western House) and his family had strong links to the textile industry. His stepdaughter, Anne Armstrong, married his future business partner, Ledlie Clark (at that time living in Manchester), at Dungannon Parish Church in 1857. His daughter, Jane, married Henry Wilson, owner of Roan Spinning Mill, near Newmills, in 1874.

Stevenson later spent his last days with his daughter, Jane, and her family in Roan House and he died there in December 1887.

Ledlie Clark (1833-1887)

Like his business partner, Ledlie Clark was also born in Lurgan. By the 1850s, he had moved with his family to Manchester where he became a successful linen merchant.

Clark made his fortune in the textile industry after taking advantage of the blockade of southern ports during the American Civil War (1861-1865). With the trade routes for cotton closed, the industry collapsed in the UK and thousands of families were left destitute. In addition, the market price for cotton in the southern American states dropped dramatically as they had nowhere to sell it. Clark took advantage of this and bought up as much cotton as he could in America at a cheap price. He stored it in warehouses at American ports and when the Civil War finished, in 1865, he was able to bring his cotton to Britain and Ireland and sell it for a substantial profit.

OPENING THE WEAVING FACTORY

"The linen manufacture is general, almost the entire population being weavers and spinners." *Ordnance Survey Memoirs*, Parish of Tullyniskan, 1834

By the 1860s, weavers still worked from home. All the small farmers and cottagers had looms. The yarn was delivered to the weavers by agents. The linen was then woven and the fabric collected by the agent who took it to the markets in Armagh.

In 1864, a government committee inquiring about industry in the Coalisland area heard that: "extraordinary as it may seem...hand looming in this neighbourhood is actually cheaper than by power loom". In fact, it was reported that hand looming in Ireland was more common than ever.

Everything changed four years later. The new Coalisland factory brought local weavers under one roof to work on a series of power looms, driven by a steam engine. Production began in early 1868 and, between 9-21 January, over 507 applicants applied for work at the new factory, of which over 219 were handloom weavers.

Around this time, it was found that six of the new looms needed to be adjusted as they were the wrong size to manufacture a specific kind of fabric. Rather than return the looms to Lancashire for the necessary alterations, the Chief Engineer, Bernard (or Barney) Canning, used his ingenuity to adapt the looms himself and his work was so skilful that they were still in use when production stopped in 1977.

The weaving factory contained around 200 mechanised looms which were driven by a large Lancashire Boiler steam engine in the Engine Room. The engine was fuelled by a coal fire and required a tall chimney*. The factory eventually included a weaving shed, winding shed and facilities for finishing and dyeing. This meant that the entire manufacturing process could be completed on site and the goods would be ready for shipment.

Is it a factory or a mill?

In Ulster, the mill is where the flax becomes thread and the factory is where it is woven into fabric.

Gas was first available in Coalisland in 1862 and used for street lighting, in factories and domestic households. In the early 1880s, a gasometer (a large cylindrical reservoir for the gas) was installed close to the weaving factory and the nearby spade mill. In 1886, an explosion ripped its roof off. The force of the blast set the building ablaze and caused serious injuries to four men (named Canavan, McComb, Cardwell and Jackson) who were blown into an adjacent field. They survived but suffered terrible burns. A greater disaster was narrowly averted when Barney Canning† was able to stem the flow of gas, just in time.

CHANGES IN FACTORY OWNERSHIP

John Stevenson and Ledlie Clark stayed in business together for over 20 years. Then, in the space of 18 months, between 1886-1887, the management of the company changed completely.

Firstly, the partnership of Stevenson & Clark was dissolved in March 1886 due to Stevenson's ill health. It is reported that, when Stevenson left, production in the factory was unexpectedly halted when the water was cut off. Stevenson owned the adjacent land and controlled the supply of water. Hurried negotiations took place to ensure there would be no further interruptions and an annual fee of £40 was quickly agreed.

With Stevenson retired, the company became known as Ledlie Clark & Sons Limited. Sadly, Ledlie Clark's term as company owner ended suddenly when he died in Stockport on 23 January 1887 at the age of 54 years old.‡ This left Clark's sons in charge of the business: John Stevenson Clark (1862-1907), Jackson Clark (1864-1904) and Charles Clark (1865-1922). They kept the company name Ledlie Clark and Sons.

* The chimney stood until 1987 and reached 125 feet tall.

† Bernard Canning worked his whole life at the factory and it was said that, shortly after his death, his ghost was seen haunting the building late at night.

‡ John Stevenson passed away the same year as Ledlie Clark, dying of a heart attack on 5 December 1887, aged 68.

POISONED HORSES

Messrs Ledlie Clark & Sons prospered during the 1890s, although it was not without tragedy. The brothers had become involved in horse racing and stabled five of their horses on land close to the factory. In September 1894, the horses were found dead and various rumours of malicious poisoning began to spread through the area and in the newspapers. It was later discovered that a stable lad looking after the animals had mistakenly added what he thought was harmless salt to the horses' mash. In fact, he had added a toxic dyeing agent which contained Aluminium Sulphate. The horses are buried in an ornate grave at the rear of yard of today's Enterprise Centre. In 1997, pupils from Aughamullan Primary School helped to restore the grave and added a plaque which reads:

"This stone surround was erected by the Clark family in 1894 to mark the grave of their five horses. The interior of the grave was designed by P7 pupils of Aughamullan P.S. 1997."

THE CHRISTMAS STORM OF 1894

A few months after the horses were poisoned, an even sadder incident brought grief to the Clark family. John Stevenson Clark (son of Ledlie Clark, the co-founder of the weaving factory), lived in Penrose Villa, Ormeau, Belfast with his wife, Emily, and two infant sons, Ledlie and Locksley. At 6am on the morning of 22 December 1894, nine month old Ledlie was killed with his 17 year old nurse, Selina Bunting, when they were crushed by a chimney stack that fell through the roof of the house during a severe storm. The falling masonry smashed into the upstairs bedroom, through the dining room below and into the basement, bringing with it the bodies of the unfortunate young victims.

At the same time, in an adjacent bedroom, both parents were asleep with their other infant son when another part of the falling chimney crashed into their room. John Stevenson Clark was injured on the arm and his wife's leg was crushed. Locksley's cot was beside his parent's bed and was buried in the masonry. While Clark went for help, his cook, Ellen Addis, raced into the half-demolished bedroom. Risking her life, she was able to clear the rubble and save the child. Miraculously, Locksley had been protected by a brass railing around his cot.

Ledlie Clark was buried on Christmas Eve 1894, in Belfast City Cemetery. Selina Bunting was buried in her home village of Magheralin.

In recognition of her bravery and for saving young Locksley, the Clark family later presented Ellen Addis with a gold watch.

COURAGE AND ANGUISH AT COALISLAND BASIN

On the evening of Friday 22 June 1894, a group of young boys were playing with a ball along Lineside, next to the Basin. At this time, the Basin was a large, man-made harbour filled with water in the centre of the town and it served as the docking area for the traffic on the canal. Thomas Hamilton, the 3½ year old son of the lock-keeper, fell into the water and quickly got into difficulties. According to the eye-witness accounts, the terrible scene began to attract a crowd and soon 50 people, including young Thomas' mother, had gathered along Lineside trying to save him. As Thomas began to sink below the surface, an unsuccessful attempt was made to rescue him by reaching out with a pole. As this was happening, a young man named James Hughes was playing handball nearby. He was completely unaware of the drama that was unfolding until he heard the screams and cries of the panicking crowd. Without a second thought, Hughes rushed to the Basin, jumped, fully clothed, into the water and brought the child to safety.

Five weeks later, on 1 August 1894, hundreds of people crammed into St. Patrick's Hall, Coalisland to honour James Hughes, the local hero. The 22 year old was presented with an Honorary Testimonial by the Royal Humane Society. The original vellum document is proudly displayed in the collection of the Coalisland Museum & Heritage Centre.

On 28 December 1895, a young girl left her house at 6.20am, walking along Lineside on her way to work at Ledlie Clark & Sons. She never arrived at the factory. The missing girl was Maggie Hughes, 22 year old sister of James Hughes who had rescued Thomas Hamilton the year before. Later that morning, her body was discovered in the Basin.

The night before the weather had been dreadful, with torrential rain and wind. With no streetlights or railings along the narrow Lineside, it is believed that Maggie lost her footing in the darkness and was unable to save herself from falling into the freezing water which filled the overflowing harbour. Maggie was the fourth person in a year to be drowned in the Basin. In Frank Quinn's memoir, he recalls:

"Quite often somebody would fall into the Basin, specially on a Saturday night. It was very easy to miss the edge in the dark, particularly on that side near Osborne House. It was level with the water there. I remember hearing them talking about Margaret Hughes. She was drowned there – just walked straight into the water out of the door going to her work in the factory in the morning in the dark."

From "*Frank Quinn (1893-1985): Blacksmith & Weaver*"
as told to Sammy McKay, 1983.

Maggie Hughes' death came just weeks after the Congo coal mining disaster on 10 December which killed six men. It would be a bleak Christmas for many families in Coalisland.

Maggie was buried in the graveyard of St. Mary's and St. Joseph's Roman Catholic Church, Brackaville. Her headstone inscription includes the words: "Erected by Ella John, Edinburgh". Ella John was the granddaughter of the former factory owner, John Stevenson. Her mother had married Thomas John and moved to Edinburgh with him. It is thought that Ella had visited Coalisland as a child during holidays with her mother and the two young girls had become friends. On hearing of Maggie's death, Ella arranged for the headstone to be erected on her last resting place.

FACTORY MANAGERS

The first manager of the weaving factory was John Orme. He held the position from 1868 until he retired in 1897, aged 69, due to ill health. Orme seems to have been genuinely liked by his staff. When he retired, they presented him with a purse of gold sovereigns telling him:

"We cannot express to you in words our sorrow at the loss of such a friend as you have been to us all, without distinction of creed or class, and though always most zealous for the best interests and prosperity of your employers, you were to us considerate, courteous, and kind, evincing at all times a keen interest in our welfare and our material advancement in life"

Orme was briefly replaced by W.E. Isherwood before the factory manager position was undertaken by Christopher Beatty in 1901. Beatty was just 27 years old. He had started in the linen trade at W. Ewart & Sons, Belfast in 1889 as an apprentice and before becoming manager at the Blackstaff mill in the same city.

In 1898, Christopher Beatty had married Annie Rooston – by coincidence, Annie's father, William, was responsible for the introduction of a revolutionary new bleaching process which had been incorporated into the Coalisland weaving factory when it opened in 1868.

Christopher Beatty and his family moved to Coalisland and lived in a house called Ledlie Villa which owned by the weaving company.

In 1904, Jackson Clark died of kidney failure. He had lived for several years with a condition called Bright's Disease and he died aged just 40 years old. All the staff were expected to attend his funeral and the procession extended for a mile, the women employees in front, with the men following the hearse. His coffin was made from lead, encased in oak, and had large brass mountings; a report from the time also says that the grave was lined with ticking fabric from the factory.

The two remaining brothers continued to run the business. Sadly, a few years later in January 1907, John Stevenson Clark died from kidney failure, just like his brother. The surviving brother, Charles, was the last of the family associated with the company. He had business interests in Manchester and a predisposition for seasickness made him reluctant to travel very often across the Irish Sea. Instead, he left the running of the factory in the capable hands of Christopher Beatty.

ANNUAL EXCURSIONS

Like many large companies, Ledlie Clark & Sons organised excursions for their workforce, family and friends. Usually it was an annual summer day trip but, in 1895, the Clark family also celebrated the marriage of Anne Louise (sister of Jackson, John and Charles) by taking 400 of the staff to Bangor, Co. Down. They arrived at 11am after a three hour journey on their own special train. The arrangements were made by Mr. Sharkey, the cashier, and Mr. Greer, the assistant manager. The bride's mother paid for lunch for all the ladies, which accounted for over 300 of the party! They arrived home again at 8pm "without incident".

Another typical example of a work day trip was to Newcastle, Co. Down in August 1910. The party of approximately 500 left Coalisland on the 8am train and arrived at their destination over two hours later. The showery weather had been anticipated and a large hall belonging to the Great Northern Railways Company had been hired for the group to be entertained with a programme of music and cabaret. When the sun appeared, the visitors were able to enjoy the various attractions of the seaside town including the beach, the "Pierrots" performing on the promenade, hill walking or a charabanc drive to Bryansford or Castlewellsan. For those who wanted more music, there was an afternoon dance before boarding the train and arriving back at Coalisland at 9.15pm.

THE COMBE BARBOUR ENGINE

In August 1910, a new, more efficient engine was installed at the factory. It was made by Combe Barbour Limited, Belfast, and was the most modern of its kind. Replacing the old boilers and engines meant that production had to be stopped for six days. A special ceremony was held and Mrs. Annie Beatty, the manager's wife, was given the honour of starting the engine. A reception followed and the employees were generously entertained at the expense of Charles Clark. Combe Barbour presented Mrs. Beatty with a silver cup engraved with a Celtic design to mark the occasion.

In later years, the engine was converted for electricity and was in almost continual use until it was switched off in 1976.

WORLD WAR ONE

During World War One, the looms were adapted to weave clothing and canvas for war service. The engineering department was also engaged in the war effort, manufacturing parts for shells. Many of the staff volunteered and joined local regiments, with the encouragement and support of the factory owners.

NEW OWNERS

In June 1922, Charles Clark was declared bankrupt as the global textile market went into a decline. Unfortunately, Ledlie Clark & Sons was listed as one of his assets and the future of the company was at risk. To make matters worse, Charles sadly died in August 1922.

However, all was not lost. Christopher Beatty had become a well respected and prominent individual in the local community. He had been appointed a Justice of the Peace in 1921 and was friendly with Sir Samuel Kelly, a wealthy industrialist who, at that time, was preparing to open what was believed to be the largest coal mine in Ireland at Annagher. Kelly and Beatty went into business together and the factory was saved, now registered in company house with the new name "Coalisland Weaving Factory Limited". Kelly was investing heavily in Coalisland and had taken over the troubled Roan Spinning Mill in January 1923. Despite his optimistic forecasts, Kelly was soon in financial difficulties. The Roan Spinning Mill proved unprofitable and it ceased production within 18 months, closing for good in 1926. To make matters worse, the following year Kelly's Annagher mine was forced to close and, facing ruin, he sold his share in the factory to Christopher Beatty.

THE BEATTY FAMILY

The factory remained in the Beatty family until it closed in 1978, eventually passing from Christopher to his sons George and Charles.

George was born in 1902. He had joined the business as a young man and showed great promise in his work. In 1922, he achieved the highest grade in the UK for the City & Guilds of London examinations for linen weaving and was awarded a scholarship of £170. He later went on to gain a BSc (Hons) in Textiles from Queen's University, Belfast. Despite this gift for the textile industry, he decided to try a new career in 1929 due to the global recession and went back to university to study medicine. Within a year he had returned and re-joined the company.

Charles was born in 1918. After finishing school, he took his apprenticeship at the weaving factory. This served him well as he studied for his City & Guilds and he joined the family business as soon as he qualified.

LONG SERVICE

Retaining skilled factory workers was valuable to the success of the business. It was also often the case that people had limited financial support and people were obliged to work beyond our modern day retirement age.

Belfast News Letter, December 1926

LONG SERVICE RECORDS

Mr. Edward Trimble, Masonic Hall, Thomas Street, Portadown, has completed 60 years' service in the employment of the Coalisland Weaving Company. He commenced to serve his apprenticeship in 1866, shortly after the factory was built. He is now 76 years of age.

Mr. W J McFadden, Coalisland House, aged 73 years, has been employed by the same firm as fireman for the past 44 Years.

Mr. William Baxter, formerly of Parkmount, Portadown, and now of Cregagh Road, Belfast, was a yarn dresser in the same firm for 50 years, retiring some years ago.

ULSTER INDUSTRIES EXHIBITION, 1928

The Coalisland Weaving Factory exhibited at the first Ulster Industries Exhibition in 1928 and received a glowing recommendation in the promotional pamphlets:

“[The company] has shown a shrewd grasp of present day conditions by the way in which it has adapted itself to the market requirements for linen, cotton, jute and artificial silks. It manufactures fabrics for the Admiralty and the War Office, railway companies and public institutions and one of its specialities is the manufacture of fine satin tickings for mattresses. The fact that the firm's goods are produced in Northern Ireland and keep 350 workers steadily employed is an important consideration in these days of unemployment....A noteworthy fact in connection with the firm is that the various processes of weaving, dyeing, bleaching and finishing are carried through by a staff of experts under one directorate.”

FRESH CHALLENGES

The textile industry faced long periods of depression during the 1920s and 1930s and the factory stayed in business by adapting to new markets and producing fabrics for the low end and high end markets.

During World War Two, the factory continued to support the war effort and produce clothing, tent canvas, towelling etc. Members of the staff volunteered, while those who were ineligible enlisted in the Home Guard – Charles Beatty commanded the Ballynakelly Company, with Tommy McKay, Warping Master, and Jimmy Elliott, Head Engineer, as his fellow officers.

While the war restrictions were in place, linen and cotton manufacturing was strictly controlled. Rolls of fabric would be stamped as either E.H.S. (Essential Home Service) or M.S. (Ministry of Supply).

Christopher Beatty used his influence to gain favours with the Great Northern Railway Company. He had a set of steps cut into the embankment that led down to the local line which ran immediately behind the factory. On days when he was expected in Belfast on business, Beatty would arrange for the train to stop at the foot of the steps, giving enough time for his secretary, Miss Doris McKay (later Mrs. Doris Butler), to race down the steps and get his signature on letters and documents that needed urgent attention.

In August 1946, Christopher Beatty died aged 72 years old. He was survived by his wife, Anne, and his two sons. George and Charles continued to manage the factory, as Managing Director and Production Director respectively.

On 7 September 1951, a trip to Bray, Co. Wicklow, was organised to celebrate the 50th anniversary of the Beatty family's association with the weaving factory. This time there were 300 staff on the train, accompanied by friends, family, former staff and special guests and a four course lunch was served on the outward journey. After a day at the seaside, it was back on the train and a “sumptuous supper” on the return trip. Customs was negotiated without any difficulty, “which was regarded by all and sundry as a credit to the honesty of the party”!

In the post war years, foreign competition and new technology resulted in the factory being downsized. The Beatty family managed to keep the business open and during the 1960s the factory was still producing over 300 webs of cloth per week, the equivalent of over 18,000 metres. However, cheap imports had led to the decline of the textile industry in Ireland.

On 26 October 1976, the factory engine was switched off for the last time and the factory operated with just 30 looms driven by a 3kW electric motor. A year later, on the night of 26-27 December 1977, a large part of the factory was destroyed by arson. The company attempted to keep going by buying unfinished cloth and preparing it for the market. Unfortunately, a second fire in December 1978 brought production to an end and the factory never re-opened.

In 1981, a group of local businessmen and community leaders formed the Coalisland and District Development Association and enough money was raised to purchase the site from the Beatty family and build offices and workshops. An important part of the transaction was the retention and preservation of what remained of the Coalisland Weaving Factory which was later developed as a museum.

REMINISCENCES

Sammy McKay, former Production Manager

The Factory Horn

"Steam horns were invented around 1832 by George Stephenson (who built the 'Rocket') when his train hit a cart on the line because the carter failed to hear the quieter horn that was in use then.

The horns were usually dual-note, ours we think had the notes 'C' and 'E' together and could be heard around four miles away depending on air conditions. It was sounded at 7.15am and again at 7.45am for the 8am start and again at 1.15pm for the 1.30pm start. We have to remember that in the 1860s and in some cases long after, working people could not have the luxury of owning a clock, hence the need for factory horns and bells. People working in the fields could rely also on train whistles to know the time."

Personal correspondence with author, June 2020

Export to Australia

"[Before the railway] after finishing and packing in bales of around 2cwt (100kgs) the goods would have been loaded onto a four wheeled wagon drawn by a huge shire horse and taken to the Basin for loading onto a lighter down the canal, across Lough Neagh by tug and thence by the Lagan or Bann/Newry Canals to the docks at Belfast or Newry.

The railway did not reach Coalisland until 1879. After that, the wagon would go to the station for the first stage to Belfast docks. I seem to remember mention of a boat leaving Tilbury docks in London once a month for Australia so there may have been ferry to England and rail to London in between."

Personal correspondence with author, June 2020

Customs

"My father, Tommy McKay (Winding Master until his death in 1958), told how my grandmother, Annie McKay, was one of the first weavers to be taken on in 1867. She was told by the management that they had so many applicants from skilled workers that they 'could have started two factories'. He also told me that a room in her cottage in

Ballynakelly used to be known as the 'shop' having once contained an 'heir-loom' (i.e. one handed down through the generations). Linen weaves best in a moist climate and even he remembered that in such weather people would still remark on meeting 'That's a good weaving day', so deeply was the linen industry ingrained in local tradition...Another Victorian custom retained until the 1970s was that of referring to heads of departments by the titles of 'Spinning Master', 'Winding Master', 'Warping Master', 'Sewing Mistress' and so on."

From "When the shuttle ceased to fly – a history of the people, products, machines and materials of Coalisland Weaving Factory 1868-1978", by Sammy McKay, 2013.

Memories of Frank Quinn

"I started working in the weaving factory in my bare feet – that would be 1904. I went in when I was eleven years old. You would work 'half time' then – one day in school, one day in the factory. One week you'd go two days to school and the next you'd go three. One shilling and eleven pence was the rate then for the days you worked. It should have been two shillings but there was a penny out of it for the doctor..."

"I went on from that and I learned the weaving. I got a wee pair of narrow looms down near the Mechanic Shop door....You daren't get a spot on the cloth. If you had oil stains you'd have to go up to the loft and get benzene oil. James Kerr would put benzene oil on his hand and when it caught fire he would put it out. This time he was trying it and he put on more benzene oil than would have flooded the place out and when it caught fire it burned my looms to the ground. You should have seen all the weavers running, grabbing their shawls – they thought the place was going up in smoke..."

"I remember going to Jackson Clark's funeral[§]. We went out the road to meet the funeral. In those days it was horse hearses. It wasn't a very good day, for I remember when you got tired you couldn't sit on the ditch because the ditch was wet. In those days very few had shoes except on Sundays – you went barefoot all the time. The grave at the front of the Coalisland Parish Church was lined with ticking from the factory..."

From "Frank Quinn (1893-1985): Blacksmith & Weaver", an interview with Sammy McKay, recorded 14 January 1983.

Brackaville Parish Church

An ornamental wooden reredos (a screen behind a church altar) is dedicated to Ledlie Clark in Brackaville Parish Church and members of the Clark family are also buried in the adjoining graveyard. In the same church, a stained glass window celebrating the Ascension of Christ was dedicated to Christopher Beatty in January 1949 and, on either side, windows were added in memory of his wife, Ann, in October 1965.

[§] Jackson Clark was buried on Monday, 17 October 1904.

COALISLAND WEAVING FACTORY TIMELINE

YEAR	EVENT
1868	Production started at the weaving factory owned by John Stevenson and Ledlie Clark..
1886	In March, John Stevenson retired. Ledlie Clarke took over with his sons John, Jackson and Charles. In November, the gasometer at the factory exploded, seriously injuring four men.
1887	In January, Ledlie Clark died. His three sons continued in business together and the company kept the name Ledlie Clark and Sons Limited.
1894	Five horses belonging to the Clark family were accidentally poisoned. They were buried in a special grave behind the factory.
1895	In late December, a factory worker called Maggie Hughes drowned on her way to work after falling in the Basin.
1901	Christopher Beatty began working as Manager at the factory.
1904	Jackson Clark died of kidney failure, aged 40 years old.
1907	John Stevenson Clark died of the similar condition, aged 44, leaving Charles to run the company.
1910	A new 200 horse-power engine was installed, made by Messrs Combe Barbour Limited of Belfast.
1922	Charles Clark was declared bankrupt in June and died two months later. He was the last member of the Clark family involved with the business and the company was saved by Christopher Beatty and Sir Samuel Kelly.
1927	Christopher Beatty became the Managing Director and took over Coalisland Weaving Company. He was later joined by his sons, George and Charles.
1939	The factory aided the war effort. Textile production was strictly controlled by the government and fabric would be marked E.H.S. (Essential Home Service) or M.S. (Ministry of Supply).
1946	Christopher Beatty died, leaving the factory in the control of his sons.
1951	In September, marking 50 years of the Beatty family's association with the factory, all the workers were taken on a free day excursion to Bray, Co. Wicklow.
1976	The textile industry was in decline and the factory was forced to reduce production. In October, the Combe Barbour engine was switched off for the last time.
1977	A large part of the factory was destroyed by arson. The factory continued production, buying unfinished cloth and preparing it for the market.
1978	In December, a second case of arson caused more damage and production ceased.
1981	The Coalisland & District Development Association purchased the site and agreed to preserve what remained of the old factory.

Where was the Coalisland Weaving Factory?

This is a detailed black and white map of Coalisland, Co. Wick, Ireland, from the 1905 Ordnance Survey. The map shows the town of Coalisland, including the railway station, various industrial sites like the Weaving Factory and Gas Works, and surrounding agricultural land. A red circle highlights the central industrial area. The map includes numerous labels for buildings, roads, and geographical features.

Key features and labels on the map include:

- Top Left:** Derrypark Cottages, Ch. (Church).
- Top Center:** GORTNASKEA, Station, Goods Shed, Hall, Crane, BASIN, Lock, Quay.
- Top Right:** Ulster Fireclay Works, A N N 277.
- Center:** Gas Works, Gasometer, The Retreat, Weaving Factory (Linen, Cotton & Jute), Ledlie Villa, Coalisland, Lock, B.M. 98.6, Mill Pond.
- Bottom Left:** Spade Mills, Mill Pond, 265, 200, 2, 10 F.P., 29 water.
- Bottom Center:** Grave Yard, Holy Trinity Ch., Gortgonis School.
- Bottom Right:** 95, 122.

The map also shows various roads, fields, and other smaller buildings and structures. A red circle is drawn around the central industrial area, highlighting the Weaving Factory, Gas Works, and Ledlie Villa.

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APPENDIX TWO

MANUFACTURING CLOTH



Ticking



Cotton drill

When the weaving factory opened it made two types of cotton: TICKING (above left) which was generally used for mattresses and pillows and striped DRILLS a durable fabric with a diagonal weave.

Yarn or thread?

Thread is a tightly twisted strand of two or more pieces of yarn. Thread is used for sewing, whereas yarn is woven into fabric.

The raw material for cotton or linen is yarn. For linen, the fibres of the flax plant are processed to make the yarn. It is then bleached to remove any natural coloration, boiled to make it supple and remove unwanted fibres and finally dyed to the colour of choice.

Winding and weaving

The yarn would be sent to the winding shed and wound onto spools or cones before being taken to the looms and woven into a specific length and kind of fabric.

Different weave patterns were used to make different fabrics. In addition to a plain weave, there were also various kinds of drill weaves, for example 3,4 or 5 leaf twill and diaper.

Cloth passer

The woven length of fabric, called a web, would be checked by a cloth passer who would examine it for faults which would be repaired by pickers.

Tenters

Looms could be adjusted to weave different types of fabric. The tenters were the engineers who calibrated the loom to the correct setting.

Cropper

The fabric was passed through a cropping machine which removed any loose threads, fluff or other stray fibres by shaving them off the surface of the cloth.

Calendering

The cloth would then be measured, weighed and stamped before being 'calendered' (note spelling). This process involved passing the fabric through a machine which resembled a

huge mangle. The process would reduce the tension in the weave and flatten it with large, wooden rollers.

Starching

At the starching machine, the fabric was passed through the starch box where it was immersed in a solution containing starch and other active agents. This helped to protect the cloth against, for example, mildew.

The fabric would then be fed through a mangle before drawing it over the steam heated rollers, known as 'cans', to be dried out.

After this treatment it was allowed to settle for a day before being passed through the calender a final time where a 'glazing roller' would give it either a matt or glaze finish.

Lapping

Finally, the newly made fabric would be neatly folded into set lengths at the lapping machines according to the specifications of the order. They would then be ready for packing for delivery.

Bleaching

When the weaving factory opened, it used a revolutionary technique for the bleaching of cloth. In the early nineteenth century, factories began experimenting with a chemical, called Calcium Hypochlorite, which reduced the bleaching process by months. The new treatment had been developed by a Scottish chemist called Charles Tennant. In Ulster, William Rooston was responsible for introducing the improved bleaching process to weaving factories during the 1850s. Up until this time, textiles, such as linen, were bleached by boiling them in lime and then laying them out in a field (often called the Bleach Green), exposed to the elements for up to six months.

APPENDIX THREE

COALISLAND WEAVING FACTORY MUSEUM

Address: 51 Dungannon Road, *Coalisland*, County Tyrone, BT71 4HP.

Web: Facebook "Friends of Coalisland Museum and Heritage Centre"

When the former weaving factory was sold by the Beatty family to the Coalisland & District Development Association, it was strictly stipulated that the Engine Room and all the former machinery should remain intact and be retained in its original condition.



Engine Room

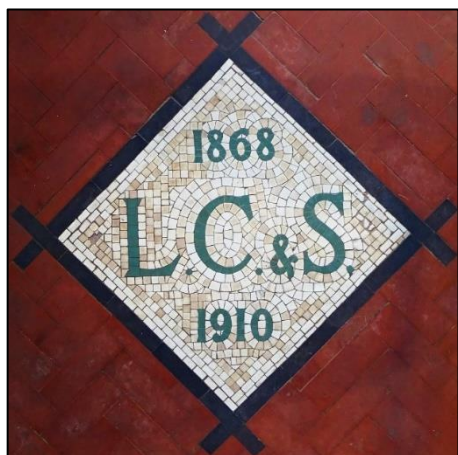
This engine was known as the 'Prime Mover'. It was built in 1910 by the company Fairburn Lawson Combe Barbour and could generate 150bhp (brake horse-power). It provided the power for 264 looms, in addition to winding, warping and beaming machines. Production in the factory had to be halted for six days while it was being fitted.

Access to the engine room was strictly controlled and only authorised personnel were permitted to enter.

The 'Prime Mover' was a tandem pistoned, reciprocating condenser engine. Steam was provided by two Lancashire Boilers which were approximately nine feet in diameter and 39 feet long.

The engine was fitted with Corliss valves operated by push rods. It worked on a double expansion system. Steam first entered the high-pressure cylinder, while the exhaust passed into a larger, lower pressure cylinder. The exhaust was withdrawn from the low-pressure cylinder by the condenser vacuum pump and the condensed steam was used to preheat the water going into the boilers.

The engine powered the looms and other machines by line shafting, linked by a crown wheel and pinions which drove the belts. Transmission was by a three-bar linkage to a nine feet diameter fly wheel which was connected by cotton driving ropes. As with all textile machinery, a steady drive was imperative. In order to maintain this, a governor, of the type invented by the pioneer engineer James Watt, was mounted.



Mosaic **1868**

The year in which the first engine was installed and production began.

L.C. & S.

Ledlie Clark & Sons

1910

The year in which this engine was installed.



Calender Machine

The calender consisted of five rollers. The upper four were used to release tensions in the newly woven fabric. The lower roller was used to add a sheen to the cloth and activated by engaging an intermediate gear wheel.

Tension was adjusted by a Rack & Pinion type leverage operated by a helm style wheel.

The calender was powered by a twin piston 45° steam engine which provided the level drive required for fabric finishing. This was before the invention of helical gears. The machine could be reversed by operating a lever attached to cam-operated push rods on a slide adjustment. It was powered by a non-condensing engine and the exhaust steam was used to heat some areas of the factory.

The calender machine was built by James Broughton, of Manchester, and installed in the 1930s. It replaced the earlier beetling system which had been used to finish the fresh fabric and gave it a tight weave and smooth feel.



Starching Machine

For many years, this starching machine was the responsibility of Peter McGrath. It became known as 'Peter's machine' and he operated it until he was over 80 years old.

This machine was constructed by James Broughton & Company, of Manchester, in the late nineteenth century. It was driven by an engine which used twin steam pistons set at right angles. This prevented a 'dwell' or pause at the end of a stroke and the risk of a mark on the cloth.

This type of engine was invented by the father of the great Victorian engineer, Isambard Kingdom Brunel. The mechanism has an interesting transmission system which uses two discs to vary the speed of the cans. The 'driving disc' is 4 foot in diameter and transmits the power to the smaller 'driven' disc, which is set at right angles to the driving disc.

The speed is varied by levering the smaller disc between the slower moving centre and the faster moving perimeter of the driving disc. The movement is then transmitted from the driven disc to the cans by means of shafting, crown wheel and pinion.



Atherton Loom

The looms at the Coalisland Weaving Factory made four kinds of fabric: plain, twill, huck and Damask.

This is a small Atherton loom designed for use mainly in the weaving of plain cloths. Hall looms were the most common looms in the factory and they could make all four kinds of fabric.

Punched Cards

Damask looms relied on a special system which used punched cards. The series of cards would give a list of instructions to create the pattern on the fabric. The cards were pressed against spring-loaded needles which, in turn, were connected to the threads in the loom. As the needles were raised and lowered, the complicated patterns could be rapidly and accurately woven.

The punched card weaving technique was invented by a Frenchman, Joseph Marie Jacquard, in 1804. It is regarded as an important early stage in the development of modern computing.



Lapping Machines

For further details, see page 12.



Cropping Machine

For further details, see page 11.

Date stones



Boiler house

S C
(Stevenson & Clark)
1867

Dye house

LC & S
(Ledlie Clark & Sons)
1912



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FURTHER READING.

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