

Sinton's Mills, Tandragee

By LORNA QUIN

BEFORE exploring Sinton's Mill, Tandragee, it would be a pity not to look at the development and growth of the linen industry itself. Irish linen is famous throughout the world and Ulster is synonymous with this industry. Northern Ireland's growth, industrial and economic, is inextricably entwined with the linen industry. It could be said that linen weaves its thread through the very fabric of our Ulster heritage.

As everyone knows, linen comes from the flax plant. The botanical name of this plant is *Linum Usitatissimum*. This annual plant is cultivated in many parts of the world, growing wild in Egypt and some parts of Asia. It possesses laxative and diuretic properties and in ancient times was gathered and administered as a domestic medicine.

The flax plant grows to a height of 3—4 feet under cultivation and the stem branches grow more or less according to the degree it is crowded by other plants. The blue flowers, arranged in a loose pinnacle are about 1" in diameter. The seed "boll" contains ten seeds. These seeds are smooth and polished and when crushed produce an oil used in the paint industry.

It is, however, the fibre of the plant which is of greatest value. The stem of the plant, when cut across, has a centre of pith. Outside this is a woody core, then the inner bark which contains long and very tough fibres. All is surrounded by a skin.

It was a common practice for flax to be hand pulled. Nowadays it is machine pulled. The flax is rotted in heat controlled tanks to remove the fibre from the plant. From the tanks the flax is dried and removed for scutching. Here blades, revolving at speed, beat on the plant to remove the wood and leave the fibre only.

From the scutch mill, the scutched flax is despatched to the spinning mill. The spinning of flax dates back to early Old Testament times when women spun flax into yarn with a spindle and distaff. When Pharaoh wanted to honour Joseph "he took his ring from off his hand, and put it upon Joseph's hand, and arrayed him in fine linen". The spindle and distaff spread over most of the world but some tribes never made the discovery, continuing to twist fibres between their palms and thighs. At discoveries of lake dwellings in Switzerland, spindles were found at least 3,000 years old.

THE DEVELOPMENT OF THE IRISH LINEN INDUSTRY

Linen was made in Ireland early in the 13th century. In the reign of Charles I, his Lieutenant in Ireland, the Earl of Strafford, decided to estab-

lish a linen industry. One reason for this was to protect the woollen industry in England, preventing the export of woollen cloth from Ireland to England. Imported spinning wheels and looms were bought as well as Dutch flax seed but with regard to unifying and organising the production of linen into an industry, the project failed and Strafford lost £30,000.

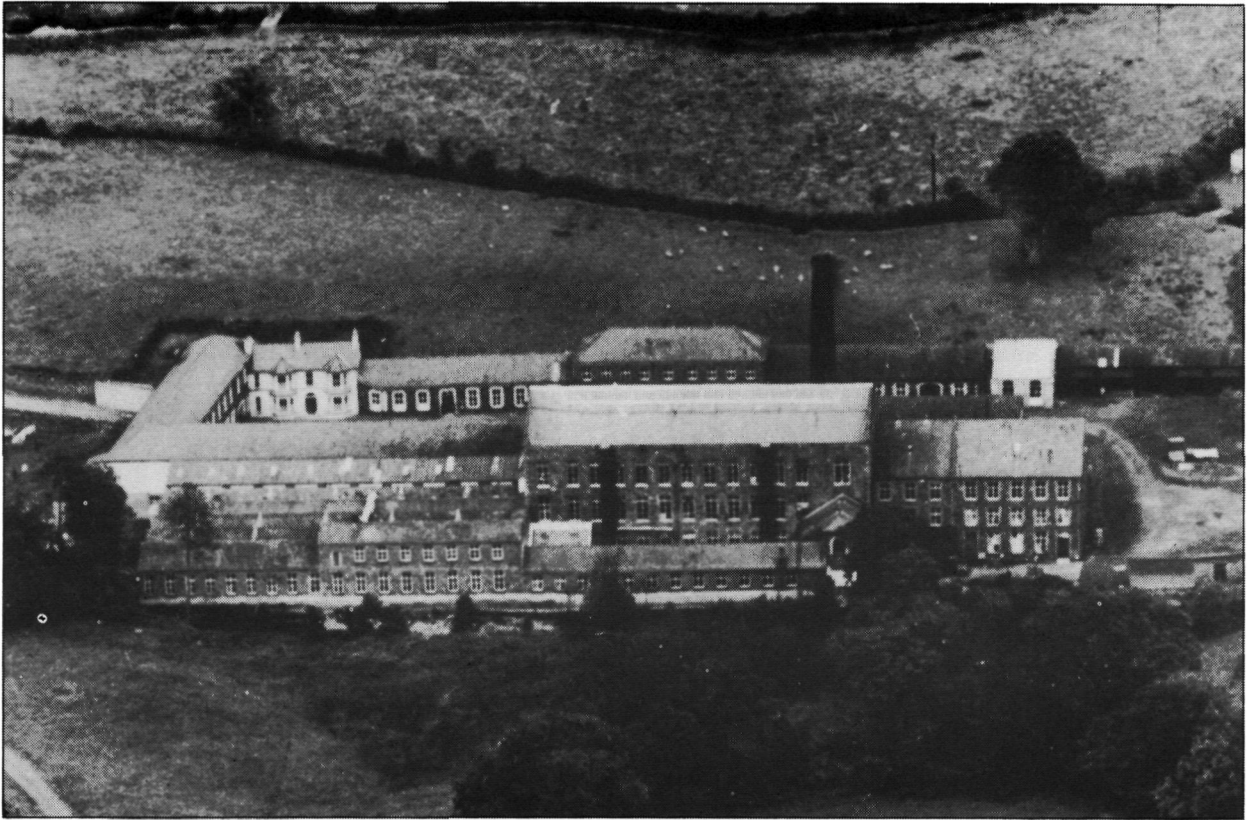
Another English statesman, Ormonde, and his friend, Sir William Temple, brought workers from the Netherlands and formed colonies near Dublin. In 1662 an Act was passed giving special privileges to Protestant immigrants and in 1666 there were special laws to protect the linen trade and prizes were offered for good flax cultivation and weaving. Again though, uniformity was hard to enforce and it remained a haphazard domestic industry, a spin-off from agriculture.

However, a number of factors and coincidences in the early years of the 18th century gelled to provide great scope for the growth of the Irish linen industry.

The climate in Ireland was very suitable, mild and wet. The small enclosed holdings in Ireland also facilitated the growing of flax. At the same time cotton and wool manufacture was more attractive in England from a financial point of view so there was no competition from England—only demand. In the early 1700s, France and Belgium were cut off by wars and this also favoured the Irish linen industry. There was a steady stream of Dutch merchants who travelled to Ireland for cloth which they brought back to Holland to bleach. This intercourse with the Dutch merchants brought Dutch wheels and updated knowledge which the Irish picked up. There was also a good river system in Ireland which allowed bleach greens to flourish. It suited the Irish farmer well to augment his living with some spinning and weaving.

During the 1600s and 1700s Scottish settlers came especially to Antrim and Down. These were hardworking people with some capital and handicraft knowledge and they "entered into the linen trade with a spirit and manufactured cloth themselves". The nickname for these Scottish settlers was Blackmouths.

Just before 1700 and for about 20 years after, some Huguenots arrived in Ireland, their total being about 500 families. The leader of the first contingent was Louis Crommelin, a man skilled in linen manufacture. The King invited him to form a Society in 1698 for carrying out the linen trade. He was given £10,000 for machinery and raw material, along with £300 per year as a salary and was given money also for his three chosen assistants and a minister to serve the Huguenots. This



An aerial view of Sinton's Mill, Tandragee.

contract was made by William III in 1700 and renewed by Queen Anne. The Hugenots had the most efficient looms, could teach fine spinning and the best methods of flax culture. The vast majority of the Hugenots settled in Ulster where they were at home in puritanical surroundings and there is no doubt that under their influence both the volume and quality of cloth produced increased. A London merchant of the time, Huey, said: "Irish linen is much better quality than it has been". However, the Hugenots were not unreservedly generous with their knowledge! They said that an Irish man must serve 5 years as an apprentice and two years as a journeyman before being able to "set up" as a weaver. Foreign Protestants were to be exempt from this!

WHY WAS THE LINEN INDUSTRY CONFINED TO ULSTER?

Like all good Irish problems it has its roots in religion!

Obviously the Hugenots and Scots who influenced the industry settled in Ulster.

The industry operated in the rest of Ireland in fits and starts but was never successful. The Land Tenure in the rest of Ireland forbade Catholics to hold land for any considerable time and many leases were for just a year. The tenant had no security and managed his land in such a way that

an immediate existence was of prime necessity. It was not worthwhile for the tenant to improve his land. There was a better tenant system in Ulster with leases of 30—50 years being common. Also, the landlords in the North were much better and were often interested in the linen trade. Men, like Conway (Lisburn), Brownlow (Lurgan) and Lord Hillsborough "liberally patronised the linen trade". So, Ulster became the home of Irish linen.

It was still at the domestic stage, the industrialisation of the industry did not take place until the 19th century and the dawning of the industrial revolution.

The earliest application of water power to flax spinning in N. Ireland took place in 1805. Samuel Crookshanks, near Crossgar was granted £78 by the Linen Board to purchase 103 spindles and a waterwheel.

In 1806 the Nicholsons of Bessbrook used the Bessbrook river in the same way. However, hand spinning was very cheap labour and industrialised spinning was not successful until in 1825, a James Kay of Preston invented the process of **Wet Spinning**. This allowed the spinning of much finer yarns and the whole nature of the local industry was altered.

The adhesive in the fibre was loosened by 5—6 hours in the water so short fibres could be drawn out and a much finer yarn produced. The next development was that it was discovered that if the

water was hot, the whole process would be further enhanced—the short fibres would be loosened and the gummy solution would not reharden. This was a success and the monopoly of the hand spinner had come to an end. However, the Irish Linen Board were too late to take advantage of this and it was left to independent industrialists to use this new technique.

From 1825 the building of small water-powered wet spinning mills in country districts was soon followed by the construction of large city mills using steam engine technology. Hand spinning was swept away and also the hopes of an infant cotton industry in Ireland was dashed.

From 1830 sixty-five flax spinning mills came to dominate the linen industry to an increasing extent.

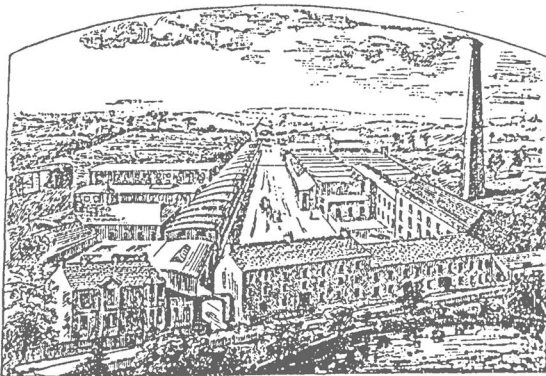
Year	Number of Spinning Mills in Ulster
1836	26
1839	34
1850	61

The number of employees in 1868 was 44,000.

It is at this time of boom and expansion that we can take a close look at Sinton's Mill.

Records show that in 1865 Sinton's Mill in Tandragee was a Corn-mill. It was leased by James Rowlie and Robert Davis who equipped it as a flax spinning mill—Tandragee Flax Spinning Company. Surprisingly the enterprise failed. In 1871 the business went into liquidation. The premises, complete with machinery, were then purchased by Thomas Sinton, a linen merchant from Laurelvale (which was named by him).

Mr. Sinton had been in the linen trade since 1840. In Bassett's Directory 1887 nearly 700 were employed at the weaving factory which Mr. Sinton owned in Laurelvale. 600 were employed at Tandragee which spun yarns for the heavy end of the trade. He also had a mill at Killyleagh, Co. Down. Their Belfast office was at 3 Linen Hall Street.



LAURELVALE.

In 1905 it was made a Limited Company and the name was changed to Thomas Sinton Ltd. In 1920 it received its present title of Thomas Sinton & Co, Ltd. The Sinton family are still running the mill to-day with Mr. Maynard and Mr. Jim Sinton the present owners. It is very much a family firm.

HACKLING

The spinning process is a complicated one. The scutched flax has first to be 'hackled'.

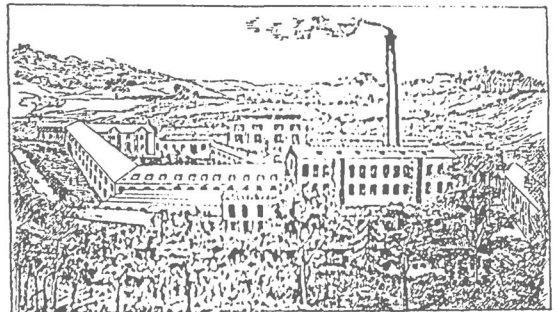
In hackling the flax is combed by rotating leather sheets which have pins, starting off coarse and ending up fine—up to 50 pins per inch. This combing straightens the fibre and removes broken fibre etc., which drop into boxes below the revolving leather sheets.

FLAX PREPARING

The next process after leaving Hackling is Preparing. The first machine in this department is known as a Spreader. The worker takes the hackled flax and hand spreads it on revolving leather sheets which feed the material into revolving pins. These pins move forward and carry the flax and draw or draft it out. Rollers grip the fibres and carry them forward into a can. The combed and drafted fibres are now a continuous ribbon, called "sliver".

The cans of sliver are placed behind another machine which further draws out the fibre. At the same time a further combing takes place. Two further machines maintain the process until the slivers are much narrower and finer.

The sliver is now ready to be placed on bobbins or spools. The drawn out sliver is now further drafted on a "roving" machine and is drawn forward and slightly twisted by fast revolving spindles unto bobbins.



TANDRAGEE.

THOMAS SINTON,
Linen Manufacturer and Flax Spinner,
LAURELVALE,
TANDRAGEE.

Thomas Sinton's Mills, Tandragee and Laurelvale,
from Bassett's Armagh Directory, 1888.



Sinton's Mill, Laurelvale.

CARDING

Fibres which drop from the flax when being hackled are most useful and are Carded. These fibres tend to be coarse and are not used for fine spinning. The Card is a round steel cylinder of approximately 6 feet in diameter which is covered in pins and revolves at a high speed. Loose fibre is fed on to a leather sheet which moves forward and the fibres are picked up by the revolving cylinder. "Shows" and very short fibres drop underneath and are of no use. On leaving the Card the cleaned fibres are picked up by rollers and channelled into upright cans. These cans containing slivers are now placed behind drawing machines which draw out and parallelize the fibres until they finally end up on a roving machine. This rove is rather coarse and is not spun into fine yarn.

WET SPINNING

As we have seen before, it was the invention of Wet Spinning, a simple yet effective process which allowed spinning to become a successful manufacturing process. In the mill the rove passes through a trough of near boiling water. This is to soften the pectin or gum which holds the fibres and to enable the fibres to be further drawn out. After the hot trough, the rove is gripped by fluted rollers revolving slowly. Faster running rollers take the fibre and further drawing out occurs.

Spun fibre or yarn is now twisted and wound on to bobbins. These bobbins are removed when full and brought to the Winding department as soon as possible.

WINDING

Wet yarn is now wound onto cones which are then placed in an oven where hot air is blown through the centre of the cones and is then drawn off through vents.

It is very important that the wet yarn is dried as soon as possible as mildew or wet rot will occur. This is because the yarn is vegetable matter.

PACKING DEPARTMENT

Dried cones are moved to the Packing Department, stored and then dispatched to the Weaving factory to be woven into fabric.

WORKING IN THE MILL

In the early years of this century a horn sounded over Tandragee for the workers to begin work at 6.00 a.m. (I'm told this horn could be heard in Acton, four miles away). The people worked for two hours until 8.00 a.m. when they had a half-hour break for breakfast. If you were a minute late, the gate was closed for five minutes before re-opening. This happened even if the gateman saw you coming. Consequently your wages were docked accordingly.

The workers had this rhyme:

"If you are a minute late,
Sam McCluskey will close the gate".

Work resumed at 8.30 a.m. until 12.45 p.m. when three-quarters of an hour were taken for lunch. At 5.30 p.m., work finished for the day.

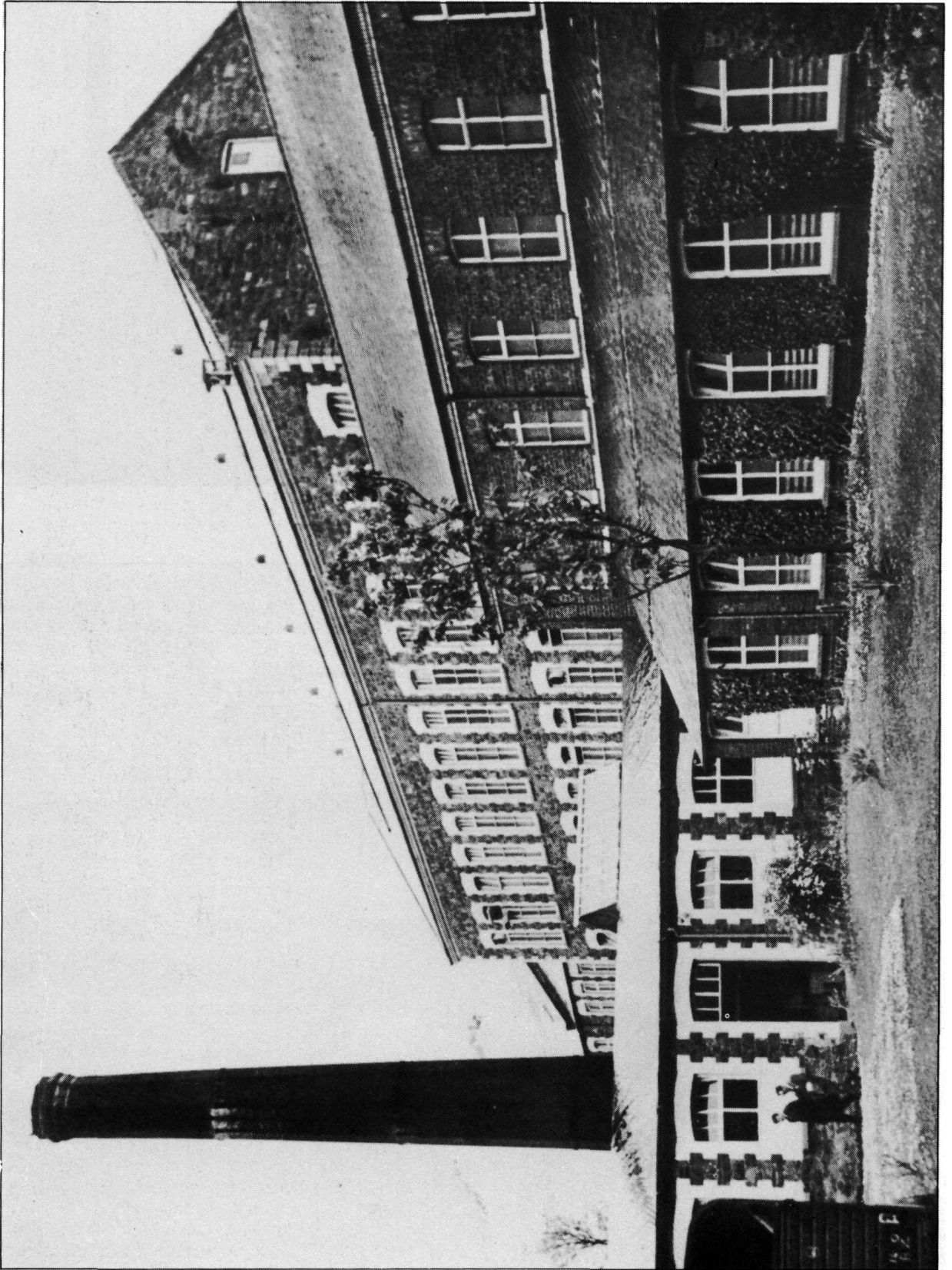
You could start work in the mill at 12 years of age, providing the doctor, who had to examine all



Mill Row "Sintonville", Tandragee.



Mill Row houses—now demolished.



Sinton's Mill, Tandragee (early 1950's).

the children, said you were fit. Twelve-year-olds went to school a day and worked in the mill the next day — these children were known as half-timers. Children would put the full bobbins into cages. Then as she progressed a girl would get a frame of her own to mind.

The thread came through wheels, you caught the thread and joined it unto the bobbin. You had to watch when the rove ended and had to be rejoined with a twist of your fingers. (Nowadays a very modern Italian machine automatically does this rejoining).

The girls wore a leather apron because there was water everywhere. Of course you worked in your bare feet because of this. The Overseers would hardly give you time to get your shoes and stockings off. It was all work and no play—no fun at all. If you were cheeky, you were given bad work—which meant you were extra busy. If you were a good, sensible hardworking girl you became a Doffing mistress. You wore a white apron and blew a whistle when the frame was full. It was then put on a buggy and taken to the lift and up to the Reeling Loft.

Life was hard then. Going into service or working in the mill were the only options open to girls before marriage and many continued to work in the mill even after they got married. Some girls in Tandragee got married early in the morning, went for a honeymoon walk along the Canal and then were back in work for the 8.30 a.m. start. Also, they wouldn't lose a day's wages!

There was a row of houses called "The Mill Row". These were built specially for the workers and had low rents. These houses were knocked down about 20 years ago. Sinton's Mill was one of the first factories to have a canteen and this was subsidised by the Management.

The vast majority of workers were female but there were many jobs for the men too. In the machine room there would have been 40—50 men. There were Hackle Setters who put in pins when they broke. There were Support men who collected the Tow. There were Carpenters, Mechanics, Plumbers, Electricians, Oilers and Set Boys who weighed the Cans. In the Packing Department there were mostly men.

Although Sinton's Mill is situated near the River Cushier, it never used water power. There was often flooding in the winter and a retaining wall has been built. A steam engine was used to drive the machinery. Coal for this was brought from Fishers in Newry via the Canal. Local small farmers were contracted by Sinton's Mill to go down to The Madden and collect this coal. They started drawing at Six in the morning and did this during the winter months from October to Spring when they weren't so busy on their own farms.

Stocks of coal built up over the winter months for use during the summer when the farmers were at the hay etc. You were on to a bonus if you had



At work in Sinton's, Tandragee (1965).

two horses because you tied the reins of the second horse unto the first cart and walked beside both. When Fishers got lorries this movement of coal by canal ceased. The engine used was a Horizontal Marine Engine 300 h.p. with a single cylinder.

What of Sinton's Mill to-day? It is still a very big employer in the Tandragee area. The advance of man-made fibres has certainly affected the popularity of linen which requires considerable care when washing and ironing. However, linen is enjoying something of a revival at the moment in the current fashion market as it can be mixed with man-made fibres to make more easily laundered fabrics. Paul Costello, an internation-

ally respected fashion designer has certainly helped to bring linen to the forefront again. Today approximately 175—200 people are employed in this lovely old mill. 135 of these would be female. There is a seasonal element to the work but it is still very much labour intensive. There are four mini-buses on the road bringing in workers from outlying areas.

Sinton's have to import the raw flax from Belgium as locally grown flax is not of the quality required. From the flax is taken into the mill, until

it leaves as spun yarn, the whole process takes two weeks. The spun yarn is sent to :

Spence Bryson, Blacker's Mill, Moygashel, Ulster Weaves, where it is woven into fabric.

The beautiful old Sinton's Mill nestles comfortably at the bottom of the Glebe Hills. Where many of the other mills in the Ulster landscape have crumbled into disuse, Sinton's have weathered many storms and continue to be an important part of Tandragee's economy, just as it was over a century ago.

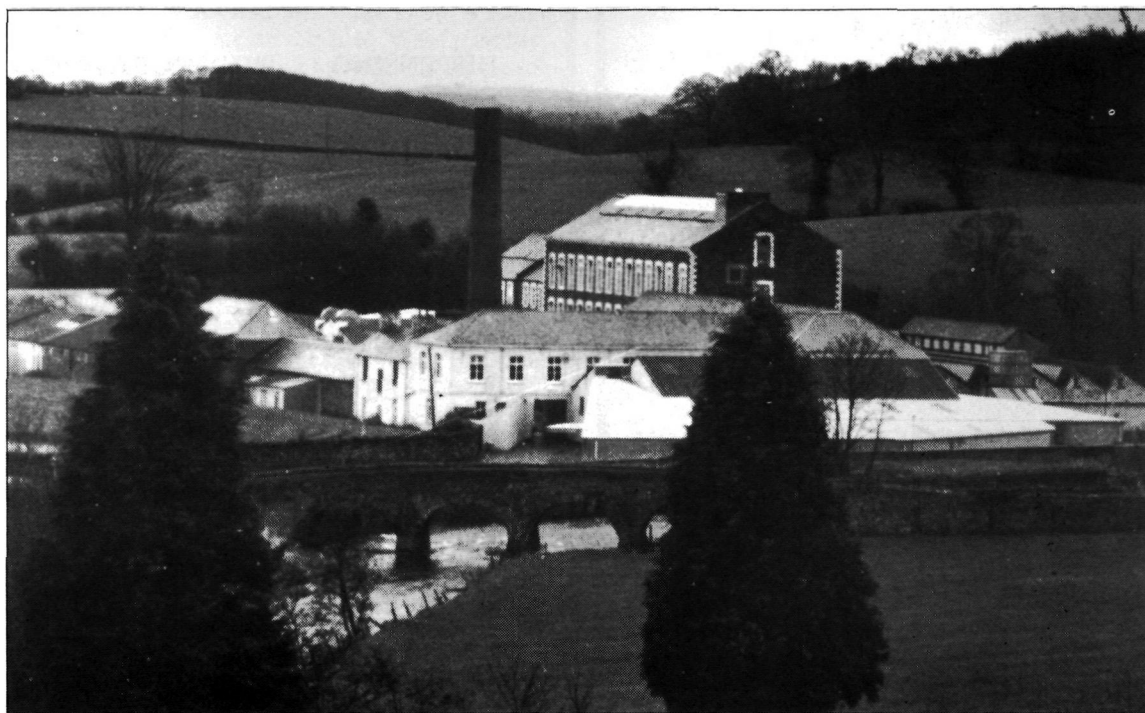
With special thanks to Mr. Sinton for taking time to show me around the Mill and for providing me with much information.



Workers at Laurelvale Mill.



Aerial view of Sinton's Banford Bleach Works, Tullylish (1920's).



Sinton's Mill, to-day.