

CLAY CROSS
COMPANY
CENTENARY

CLAY CROSS
CO. LTD.



*This volume has been prepared as a Souvenir and
Record on the occasion of the Centenary of the
Clay Cross Company Ltd.*

*Designed and produced by Bemrose & Sons Ltd.,
Derby and London.*

A HUNDRED YEARS OF ENTERPRISE

CENTENARY
of the
CLAY CROSS COMPANY LTD




1837 - 1937



GEORGE STEPHENSON
Founder of the Clay Cross Company, 1837

ORIGIN

 ON a beautiful autumn morning in 1835, it is said, a yellow post-chaise was seen leaving the New Inn, Derby, and being driven up the Duffield Road into the country. In the post-chaise were George Stephenson and his secretary, Charles Binns. The name of George Stephenson and the date at once suggest railways, and on this occasion they were intent on finding the best route for a new line from Derby to Leeds. Two years later, after much local opposition and Parliamentary battles, this project began to take shape under the name of the North Midland Railway.

So it came to pass that in 1837 gangs of workmen were to be seen at Clay Cross constructing a tunnel for the North Midland Railway. Superintending these operations was George Stephenson, who, as soon as he saw the vast mineral wealth revealed by the excavations of the workmen, conceived the idea of forming a company to exploit these valuable natural resources. From his fertile brain sprang the beginning of the Clay Cross Company, and within a few years a great hive of industry had grown up in a neighbourhood where a small and scattered village community had once led a placid and uneventful existence.

George Stephenson not only realized the possibilities of coal, iron and other minerals as a means of building up wealth and prosperity, but he also saw how vital a factor in the success of such a commercial enterprise was the new means of transport of which he was the pioneer and with which his name will always be associated.

Founded in 1837, with George Stephenson himself as Chairman, the Clay Cross Company quickly made a name for itself and its products became known in almost every country in the world. The business continued to expand all through the Victorian era, and, by continually studying and adopting the latest developments, has won for itself an impregnable position as a leader in the many industries in which it is engaged. It is, therefore, a source of pride and gratification that the Company which first came into existence in the year that Queen Victoria came to the throne should celebrate its centenary in the Coronation year of Her Majesty's great-grandson.

On the pay-roll of the Clay Cross Company there are more than 4,000 names—a fact which in itself gives some idea of the magnitude of this great undertaking with its many ramifications.

After a hundred eventful years—perhaps the most eventful in the history of this country—it is of more than ordinary interest to place on record a brief history of the Company culled from its own archives, which are still preserved from its earliest days. It will be found that much interesting material is brought to light and that many notable persons have been associated with the fortunes of the Company.

In order to understand what this Company has achieved during the past century, it is necessary, perhaps, to attempt to picture Clay Cross as it was one hundred years ago. The casual visitor to Clay Cross would then have seen open country with a few scattered farm-houses and a toll-bar spanning the turnpike road. In those days the parish of North Wingfield, of which Clay Cross formed part, was even larger than Chesterfield. There were neither railways nor omnibuses. The fastest rate of travelling by coach along the high road was nine miles an hour. The Penny Post had not been introduced. There were no Trade Unions, and freedom of speech was restricted. These truly were the “good old days”—if such ever really existed outside the imagination of those whose minds have ceased to attune themselves to modern progress!

VISION

To a Clay Cross such as this, sudden and unwonted activity came in 1837 when the North Midland Railway commenced to bring their line from Derby to Leeds via Rotherham. Writing only forty years afterwards, the author of “The Midland Railway: Its Rise and Progress” states: “A bird’s-eye view of the course of the North Midland line would have presented many a scene of interest. Thousands of men were at work; nearly all the contracts were proceeding with energy; at Clay Cross 400 yards of tunnel had been completed, and six 15-horse whinseys were at work at the six shafts, from the bottom of which men were tunnelling at twelve different faces, besides the ends. To bore through a hill full of wet coal-measures was, of course, in effect, to make a vast drain into which enormous volumes of water poured, which had to be pumped away; while at night the huge fires that blazed on the



ROBERT STEPHENSON, M.P.
Chairman 1848 to 1851



WM. JACKSON, M.P.
(afterwards Sir Wm.)
Chairman 1862 to 1876



ROBERT HUDSON
Known as "The Railway King"



GEORGE CARR GLYNN
(afterwards Lord Wolverton)

SAMUEL MORTON PETO, M.P.
(afterwards Sir)
Chairman 1851 to 1862



JOSHUA WALMSLEY, M.P.
(afterwards Sir)



WILLIAM CLAXTON



CHARLES BINNS
General Manager of the Company from 1838
to 1884

summit of the ridge lit up the rugged outline of the gangs of men, gave a strange and lurid colouring to the spectacle, and helped to make the spot the great wonder of that country side".

The genius directing these operations was the great Stephenson who, it may well be believed, was fascinated by the rich quality coal and ironstone revealed by the excavations and tunnelling. The line of the projected railway followed the valley of the Amber from Ambergate to a point opposite Ogston Hall where the Press brook joins the Amber, and from this point the line follows the tributary stream.

It is a matter of historical interest to recall that the value of coal as a fuel was not immediately recognized, and the prejudice against it was at one time so strong that the House of Commons petitioned the King to prohibit the use of the "noxious fuel", and a man who was caught burning it was hanged for the "crime". Strangely enough, prejudice against something new and better rendered the earlier years of the Clay Cross collieries unnecessarily difficult, especially in the local markets where the bright swift coal was strongly established in popular favour and the superior quality of the Clay Cross coal was not immediately recognized.

To return, however, to Stephenson, who had seen enough to satisfy himself of the wisdom of immediate action. In 1837 he founded the Clay Cross Company, bringing in his son, Robert Stephenson (who proved himself to be one of the world's greatest engineers); Mr. George Carr Glyn (afterwards Lord Wolverton), who was on the original directorate of the North Midland Railway; Mr. (afterwards Sir) William Jackson, M.P. (identified with great works in this country and with the Grand Trunk Railway of Canada and other lines in British North America, as also with the Italian (Sardinian) railways). Among other friends whom George Stephenson introduced as directors of his new company were Mr. (afterwards Sir) Joshua Walmsley, M.P. for Leicester, whose son-in-law, Mr. Charles Binns, managed the works and was Private Secretary to George Stephenson; Mr. George Hudson (whose meteoric career earned him the title of "The Railway King"); Mr. (afterwards Sir) S. Morton Peto, M.P. for Norwich; Mr. Joseph Sandars, and Mr. E. L. Betts. All these gentlemen were famous in their day as pioneers of railway construction and industrial development. Sir William Jackson and Sir Morton Peto were partners in the famous firm of Peto, Brassey, Betts and Jackson, contractors for and builders of the Canadian Grand Trunk Railway and many

other great railways. One of their outstanding triumphs of railway engineering was the Victoria Bridge which was thrown across the river St. Lawrence, connecting Canada with the United States. This was built for the Grand Trunk Railway of Canada in 1860.

The fortunes of the Clay Cross Collieries and the North Midland Railway were closely linked in these early days. In 1841, for example, the North Midland directors reported to their shareholders: "Very considerable additions to the traffic may be expected from the Clay Cross collieries and coke-works, which are on an extensive scale; the latter will, moreover, afford the Company the means of obtaining coke at a much lower cost than heretofore, and so be productive of a material saving in the annual expenditure. Mr. Stephenson's lime-kilns also, at Ambergate, are likely to supply to a great extent the Midland counties with an article of great value in agriculture. . . . The North Midland Railway will also be used for conveying the produce of these kilns as far north as Barnsley".

The connection between these two great undertakings still remains unbroken, as the present Chairman of the Clay Cross Company Ltd. is the great-grandson of Mr. Frederick Huth, one of the original directors of the North Midland Railway.

The Clay Cross Company originally traded under the style of "Geo. Stephenson and Co.", and its progress and development after a century would, it is safe to say, be regarded with amazement by its founders.

The Clay Cross Works are situate at an important junction of the Derby and Nottingham main lines at Clay Cross, four miles to the south of Chesterfield, and, therefore, occupy a strategic position in relation to their markets. That part of the line known as the Erewash Valley was opened in 1862. The Clay Cross Company ran its own locomotive on the new system between its various pits up till 1870.

Clay Cross now possessed, in addition to a turnpike road with a dilapidated finger-post directing the casual traveller to Chesterfield, the nearest town, a through railway which was opened in 1840 and a company whose destinies were in the hands of an able and far-seeing board of directors.

FIRST TO SEND COAL TO LONDON BY RAIL

In the very first year of its existence the Company sank the Clay Cross (No. 1) coal pit near to Clay Cross town, and such was the progress made

A HUNDRED YEARS OF ENTERPRISE

that in the following year (1838) coal was actually being wound from the aforesaid colliery.

In the same year the Company started to work the Crich Limestone Quarries and Limeworks at Ambergate, outside the famous L.M.S. junction.

An event of great historic interest took place in 1840. The Clay Cross Company sent coal to London, partly by rail and partly by canal. In those early days the rail went no farther than Rugby; from that point the coal had to be canal-borne.

The Company has in its possession in relation to this a number of interesting documents. One is a receipted account which reads:—

Mr. Stephenson.	<i>July 30th, 1842.</i>
to John Ward for	
towing boate to Winsor	
loded £1.10.0.	
Received by Mr. John Ward.	

The Company also had the distinction of being the first to send coal to London direct by rail. That was in 1844. It was not surprising that the demand for the Company's coal grew more and more, for there was none better than this superb Derbyshire coal, and large quantities of it were sent to London. The Company now has ten Depots in London. It also has ten Depots in Derbyshire and Kettering, and five Landsale Wharves, situate as follows:—

LONDON	LOCAL	LANDSALE
KILBURN	MATLOCK	CLAY CROSS TOWN
EALING	BELPER	CLAY CROSS STATION
ST. PANCRAS	ROWSLEY	MORTON COLLIERY
WEST KENSINGTON	BUXTON	PARKHOUSE COLLIERY
HARROW	STRETTON	BONDS MAIN COLLIERY
LEYTON	A. L. RAILWAY	
WIMBLEDON	BURTON LATIMER	
CATFORD	KETTERING	
TWICKENHAM	GRIN, BUXTON	
HAMMERSMITH	DERBY	

The Company started trading in 1840, being then engaged in coal mining, limestone quarrying and lime burning, ironstone mining and the manufacture of coke and brick making.

MINUTES SIGNED BY GEORGE STEPHENSON

The Company has in its possession minutes signed by George Stephenson himself of "Proceedings of the Proprietors of the Clay Cross Collieries, &c., at their meetings". Here reproduced are minutes signed by the great engineer, and are the earliest which the Company has:—

At a meeting of the Proprietors of the Clay Cross Colliery and Crich Limeworks, held at the Midland Hotel, Derby, on November 4th, 1846.

Present:

Messrs. George Stephenson,	Jos. Sandars,
Robt. Stephenson,	Sir J. Walmsley,
Geo. Hudson,	William Claxton.

It was Resolved:

FIRST.—*That* the proprietor of every sixth share shall pay forthwith to the Company's Bankers the sum of £3,500 and the proprietor of every 12th share, £1,750, to defray the present debt of the Company to their Bankers and others.

SECOND.—*That* at the termination of the present year the whole of the profits will be absorbed by outlay on Capital expenditure; but after that period, that no further Capital shall be expended without calling a meeting of the proprietors, and that such profits as may appear in the Balance-sheet shall be divided *pro rata*.

THIRD.—*That* Mr. Robert Stephenson do obtain Mr. Parker's Law account to the present period.

FOURTH.—*That* all Deeds be lodged with Mr. Drabble, of Chesterfield, and a schedule be forwarded to each proprietor.

FIFTH.—*That* the meetings of the Proprietors be held half-yearly, on the 20th of August and the 20th of February.

SIXTH.—*That* Mr. Robert Stephenson be authorised to make arrangements with Mr. Harrison as a Travelling Agent, subordinate to Mr. Binns, to ascertain the working of the trade, look after the wagons and scrutinize the conduct of the Agents employed.

SEVENTH.—*That* two Furnaces be erected at Clay Cross for the manufacture of iron, and that a capital of £24,000 be raised for that purpose in such sums as may be required during the progress of the works; and the amount necessary for stock and trading capital.

(Signed)

GEO. STEPHENSON.



THOMAS HUGHES JACKSON
Chairman of the Company from 1876 to 1930



BRIG.-GEN. G. M. JACKSON, D.L., T.D.
Present Chairman of the Company

SIR H. M.
MATHER-JACKSON, BART.
L.L., C.B.E., Director



R. O. JACKSON, M.B.E.
Director



COL. E. S. JACKSON, C.M.G., D.S.O.
Director



MAJOR H. H. JACKSON, M.C.
Director

CAPTAIN G. R. JACKSON, M.C.
Director



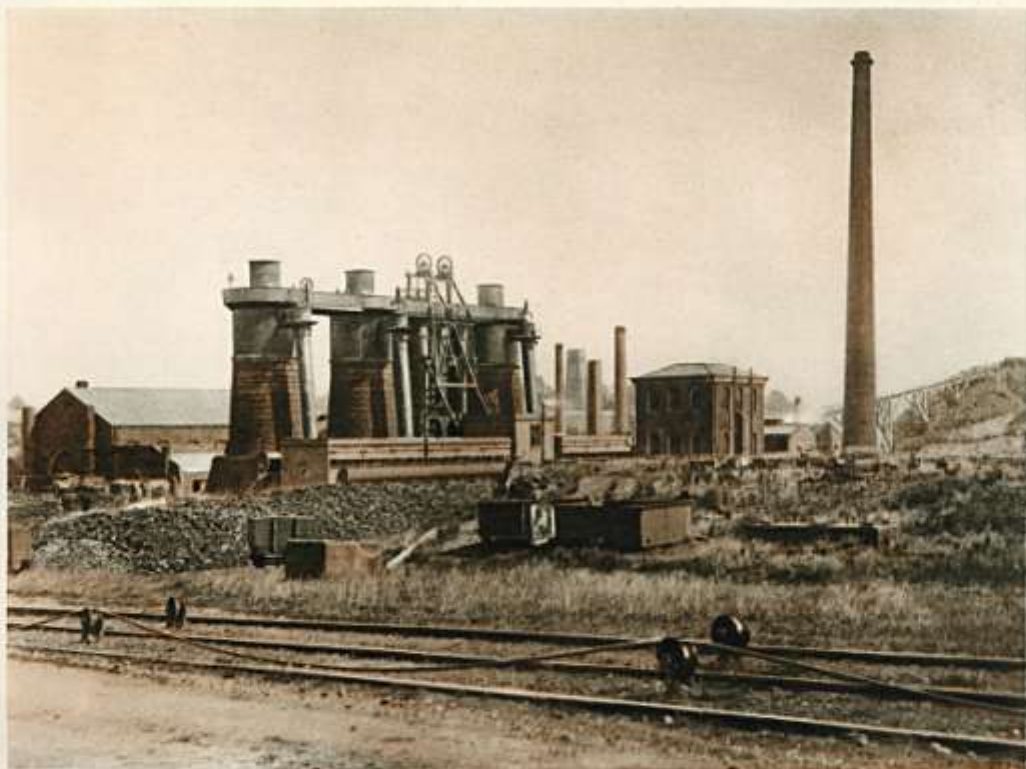
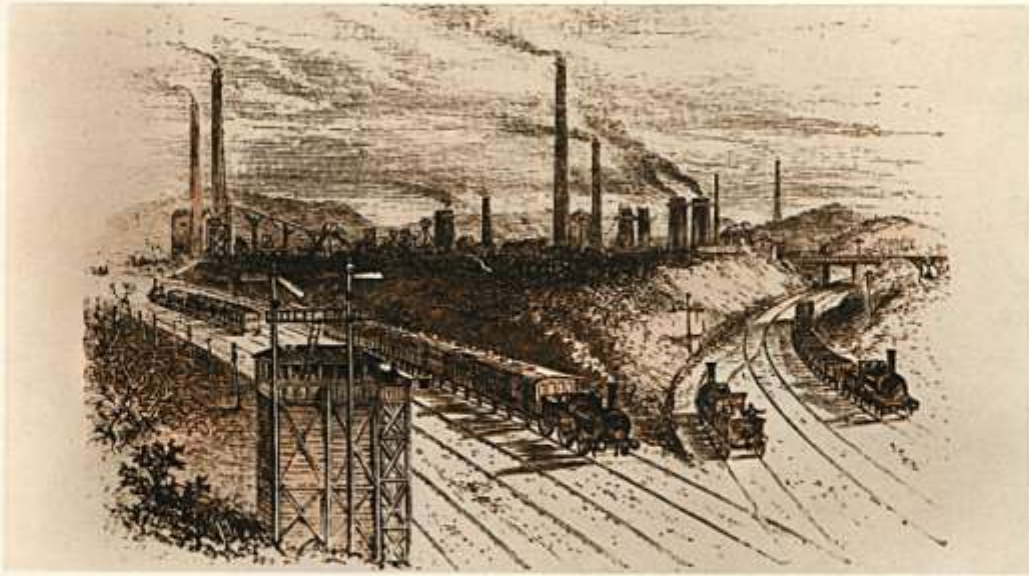
PARK N. STONE
Director



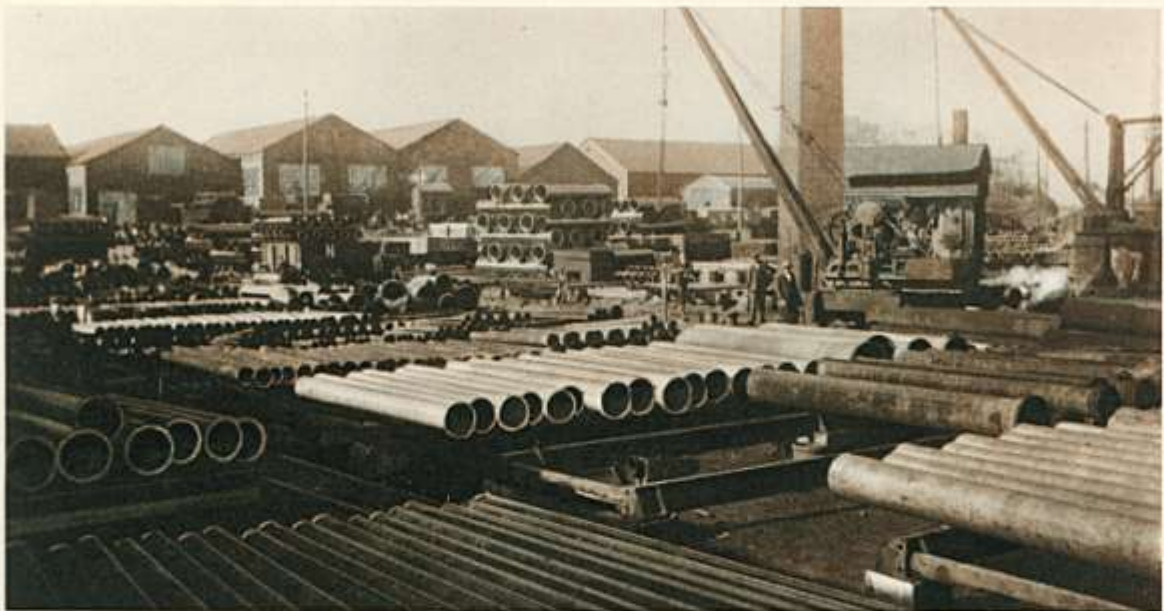
RT. HON. F. H. JACKSON, P.C.
Director from 1913 to 1921



JOHN STEEN
Secretary, who has completed sixty-seven years
service with the Company



(Above) View of Clay Cross Works about the year 1850 (Below) View of Blast Furnaces about the year 1860



(Above) Present-day view of Clay Cross Works

(Below) View of Cast-iron Pipe Bank, with Machine Shops and Pattern Shops in the background

THE PRODUCTION OF IRON

In 1846 the Company turned its attention to the production of iron. It possessed at least two seams of iron ore in the district, known as the Black Rake and the Brown Rake. The working of these was discontinued when the Railway Company, in making their line to London, found iron ore in Northamptonshire and sold it to the Clay Cross Company. Two blast-furnaces were erected, a third being added in 1854, and also an iron foundry.

EXPERIMENTS AT CLAY CROSS

At this time George Stephenson was living at Tapton House, Chesterfield, in order that he might be near to his work. He built a workshop at the Clay Cross Works so that he could carry out experiments, and he invented a miner's safety lamp. His engineer, Mr. William Howe, invented the famous "link motion" known to all engineers, and the engine to which this was fixed is still in use at the Works.

This epoch-making device was never patented, but the invention was acknowledged by the Institute of Civil Engineers, who made a presentation to Mr. Howe.

On August 12th, 1848, George Stephenson died at Tapton House, at the age of sixty-seven years, and thus was closed a career that will always be remembered with gratitude by those associated with the Clay Cross Company.

A fact which is little known is that a George Stephenson centenary medal was struck in 1881. The obverse bore a bust of the distinguished engineer with a description which read: "George Stephenson, Born 9 June, 1781, at Wylam, Newcastle-On-Tyne". On the reverse side was an illustration of "The Rocket" steam engine, which won the locomotive trial at Rainhill in 1829, and is now in the Patent Museum at South Kensington alongside "Puffing Billy".

The Stephenson Memorial Hall at Chesterfield (opposite the Parish Church famous for its crooked steeple) which was opened by the Duke of Devonshire, was erected to the memory of George Stephenson by public subscription, and, more recently, one of the first and finest of the new streets made by the Chesterfield Corporation under a series of improvement schemes was designated "Stephenson Place".

George Stephenson was an unassuming kind of man, and, as can well be imagined, he had many opportunities, in view of his national fame, to make the acquaintance of the important people of the day. But he does not seem to have been greatly impressed. On one occasion he said:—

"I have dined with princes, peers and commoners. I have eaten off a red herring when sitting in the hedge bottom. I have seen mankind in many phases! but if we were all stripped there is not much difference".

It is worthy of mention that one of the most treasured possessions of the Chesterfield Technical College is a real physics vacuum pump which belonged to the world-renowned engineer.

INTERESTING EXTRACTS

As has been mentioned before, the early days of the Clay Cross Collieries were very closely connected with the beginnings of the Midland Railway. The following two extracts are from standard works on that famous railway, and the third extract is taken from Smiles' *Life of George Stephenson*:—

"Stephenson bought and leased some small properties in the immediate neighbourhood of Clay Cross, sank a pit, built a number of coke-ovens at a cost of £3,000, and on the day of the opening of the North Midland line, not only supplied all the engines with coke, but sent a train of coal from Clay Cross to Derby".—Williams's *History of the Midland Railway*.

"Realising the vast value and utility of opening up these coalfields, he (George Stephenson) communicated with his friends, the 'Liverpool party', who, acting on his advice, joined him in a lease of land at Clay Cross, and Stephenson opened up the now famous Clay Cross Collieries".—Stretton's *History of the Midland Railway*.

"While George Stephenson was engaged in carrying on the works of the Midland Railway in the neighbourhood of Chesterfield, several seams of coal were cut through in the Clay Cross tunnel, and it occurred to him that if mines were opened out there, the railway would provide the means of a ready sale for the article in the Midland Counties, and as far south as even the Metropolis itself. . . . Having induced some of his Liverpool friends to join him in a coal-mining adventure at Chesterfield, a lease was taken of the Clay Cross Estate, then for sale, and operations were shortly after begun. . . . In 1841 he (George Stephenson) entered into a contract with owners of land in adjoining townships for the working of the coal thereunder; and pits were opened on the Tapton

Estate on an extensive scale. About the same time he erected the great limeworks close to Ambergate Station of the Midland Railway, from which, when in full operation he was able to turn out upwards of 200 tons a day. The limestone was brought on a tramway from the village of Crich, two or three miles distant, the coal being supplied from the adjoining Clay Cross Colliery. The works were on a scale such as had not before been attempted by any private individual engaged in a similar trade."—Dr. Smiles' *Life of George Stephenson*.

The lime kilns referred to above are actually still in existence. They are built entirely of stone sleepers discarded by the Railway Company when they decided to adopt wooden sleepers.

The next extract shows that Stephenson was ahead of his times not only as a mining engineer, but also in his endeavours to secure the best possible working conditions for his employees. It was made by Mr. Frank Lee, M.P. for North East Derbyshire, from the Report of the Royal Commission held in 1842, on Children's Employment (Mines) dealing with Subterranean Roadways (page 50, vol. 15), and runs as follows:—

"I found the ventilation plan followed by George Stephenson Esq., and Company at Clay Cross, fully answered that gentleman's expectations. It was by sinking two shafts within a few yards of each other, and placing a furnace at the bottom of one, which created a current of air through the whole works in a superior manner to any I had seen before".

J. M. Fellows Esq., Sub-Commissioner.

EDUCATIONAL AND SOCIAL SERVICES PROMOTED BY THE COMPANY

On the death of George Stephenson in 1848, his son, who was a man of great ability and high principles, was asked to succeed to his father's position, the following resolution being passed by the Company:—

"That Mr. Robert Stephenson, M.P., be requested to accept the same position in reference to the Clay Cross Collieries and Ironworks which his late lamented father occupied".

With the increasing prosperity and expansion of the Company it was found possible to institute educational and social services for the employees. A school—school-rooms, as they were called in those days—was urgently needed, and this need was met by the Company in a most munificent spirit. Handsome, commodious and substantial school buildings were erected and

equipped by the Company at a cost of about £4,000, the foundation stone being laid in 1854 by Mr. Peto, who took the keenest interest in all educational matters.

The Company also built a large number of houses for its workpeople in order that they might not be inconvenienced by long journeys to and from their work, and Clay Cross became quite a flourishing place with its 3,000 people, 600 houses, a church and three chapels, and a Mechanics' Institute. The last-named was only one of the features of the educational interests promoted by the Clay Cross Company. The fine block of buildings included a large central hall which formed the Infants' School, and was also available for public meetings, concerts, balls, lectures, etc. An annual event was the soiree, when the Company's officials and employees would, after a sumptuous tea, fraternise in a most free and homely manner.

At one end of the Hall was a Reading Room and Library containing some 2,000 volumes largely supplied by a fund raised by the public in memory of Sir Robert Peel, who died in 1850. This statesman is remembered to-day more especially as the originator of the modern Police Force, first nick-named "Peelers" and then (from his Christian name) "Roberts" or "Bobbies", as they are still known to this day. The Hall was largely patronized by the Company's workpeople and their families, and classes were held both for boys and girls.

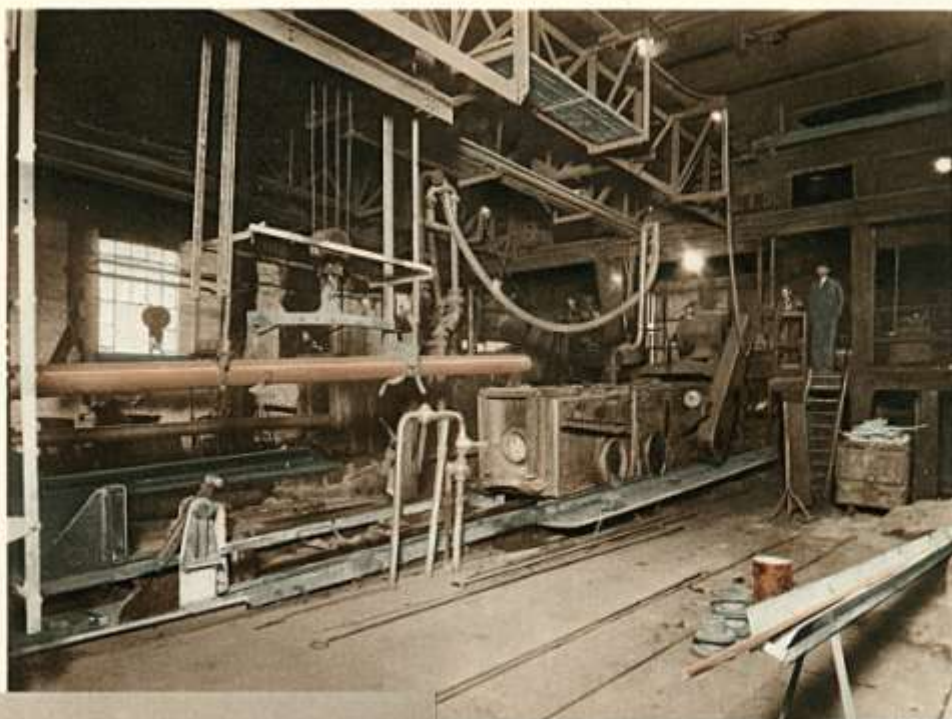
The Company also joined the scheme promoted by Coal and Iron Masters in the adjoining counties of Nottinghamshire and Leicestershire for continuing the cause of education among their respective workpeople and their children. Examinations were held each year at Derby, and students from Clay Cross, both boys and girls, did exceptionally well.

The Company gave the site whereon the Church was built, and generously contributed £600 to the Building Fund. Indeed, it has always subscribed liberally to the other places of worship in the town and to the respective Sunday Schools.

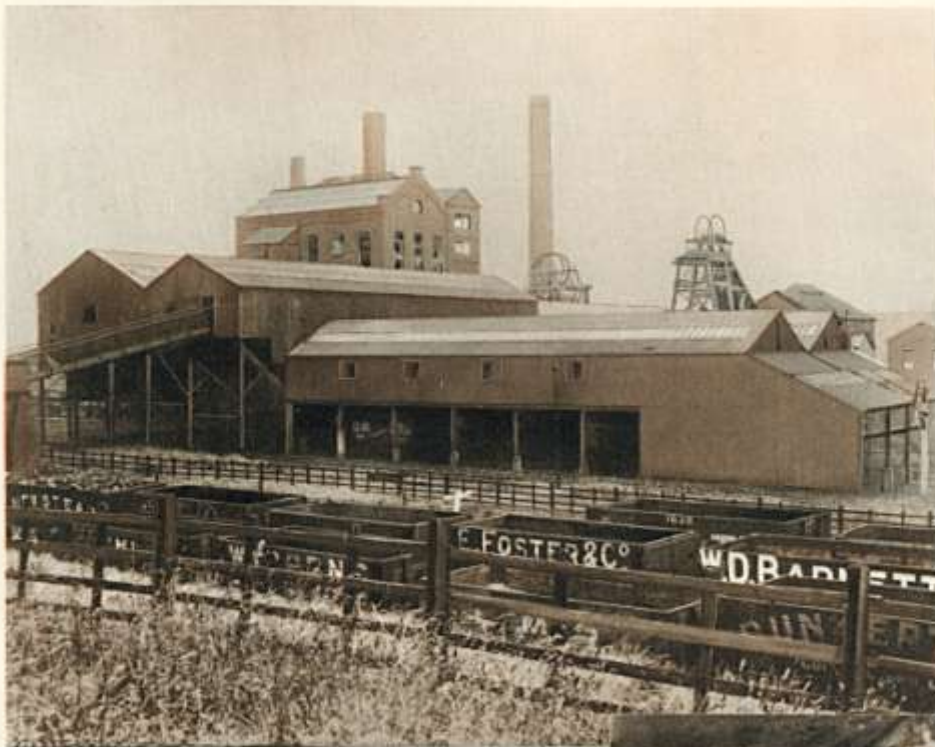
MR. ROBERT STEPHENSON SEVERS HIS CONNECTION WITH THE COMPANY

As has been previously stated, Robert Stephenson succeeded to his father's position in the Clay Cross Company, and was actually the largest share

Interior view of a section of the new Spun Pipe Plant, showing a 6-in. diam. pipe, 18 ft. in length, being lifted from the mould



New Blast Furnace in course of erection at Clay Cross Works



Bond's Main Colliery
showing Head-gear and
Screening Plant

1. Bond's Main Colliery—Underground
Conveyor Driving Unit



2. Bond's Main Colliery—Underground
Conveyor on 25 degrees gradient

Morton Colliery—
No. 5 Pit Headgear
and Screening Plant



1. Morton Colliery—Underground
Gate-end Conveyor

2. Morton Colliery—Troughed Loop Conveyor





3. Morton Colliery—Face-belt
Conveyor (empty)



4. Morton Colliery—Face-belt
Conveyor (loaded)



5. Morton Colliery—Troughed
Conveyor delivering coal
into tubs

proprietor in the Company. At a meeting of the Company, which he was unable to attend owing to absence in Egypt where he was examining the then proposed Suez Canal, a contract was made with the London and North-Western Railway to convey 60,000 tons of coal to London at a half-penny per ton per mile. This contract was subject to ratification by Robert Stephenson, who, on his return, refused his sanction on the ground that it was unremunerative to the railway company. He would not, he declared, sacrifice the interests of the railway company, to which he was consulting engineer, to his own private interest as a colliery proprietor. He regarded it as a point of honour, and nothing would shake his determination to act in what he regarded as an honourable manner. Accordingly he severed his connection with the Clay Cross Company, his shares being acquired by Mr. Peto, who, with Mr. Walmsley and Mr. Jackson, became the three proprietors.

THE HAPPIEST FAMILY TIES

In the course of time, 1871 to be exact, Sir William Jackson, M.P., acquired the whole of the Company's interests and thus became the sole proprietor.

Since that time the whole ownership and management of the Clay Cross Company's great concern has been practically vested in the Jackson family, whose careers offer a noble example of business enterprise and public service. The Clay Cross Company Ltd. is one of the few concerns that has continued to be a private one to the present day. It has been expertly conducted by succeeding generations of the family, and is one of the largest of its kind in the country.

When the Clay Cross Company was formed into a Limited Company in the year 1913, the first Directors were all members of the Jackson family, viz.:—

Mr. Thomas Hughes Jackson (Chairman).

The Right Hon. Frederick Huth Jackson, P.C., D.L.

Sir Henry Mather Jackson, Bart., C.B.E.

Colonel (afterwards Brigadier-General) G. M. Jackson, D.L., J.P., T.D.
(the present Chairman and Managing Director).

The concern continued to be built up by a family famous in Derbyshire's staple industries.

THE COLLIERIES

The Company continued to show foresight and enterprise in regard to its coal production. Sinking and equipment of the Collieries began in 1837. In 1838 coal was being wound from the Tupton pit, and from No. 1, Clay Cross.

The dates at which the various coal winding shafts were sunk are as follows:—

<i>Pit</i>	<i>Situation</i>	<i>Date of Sinking</i>
No. 1, Clay Cross - -	Near Clay Cross town - -	1837
No. 2, Clay Cross - -	Clay Cross Works - - -	1850
No. 3, Clay Cross - -	Clay Cross Works - - -	1852
No. 4, Clay Cross - -	Near Clay Cross L.M.S. Station	1850
No. 5, Morton - - -	Morton, near Alfreton - -	1865
No. 6, Morton - - -	Morton, near Alfreton - -	1874
No. 7, Parkhouse - -	Danesmoor - - - - -	1867
No. 9, Avenue - - -	Wingerworth - - - - -	1881
No. 11, Avenue - - -	Wingerworth - - - - -	1857

(Wingerworth Coal Company)

Bond's Main - - - Temple Normanton. (This pit was sunk by the Staveley Coal and Iron Company, and was taken over by the Clay Cross Company in the year 1924)

Wingfield Manor - - - Oakerthorpe, Alfreton - Purchased 1920

At the present time five of the above Collieries are in active operation, viz.:—

No. 5, Morton - - -	Blackshale and Tupton seams.
No. 6, Morton - - -	Deep Hard seam.
No. 7, Parkhouse - -	Tupton and Three-Quarter seams.
Bond's Main - - -	Blackshale and Three-Quarter seams.
Wingfield Manor - -	Kilburn seam.

These pits are producing approximately 3,300 tons per day of the celebrated "C X C" gold medal coal.

The Company was among the first to employ electric coal-cutting machines and electric haulage, and to-day such items of expenditure appearing in the old ledgers as "pit ponies and asses, £3 10 0" would be fantastic.

The transport of the Company's products necessitates a complete organization in itself, and as part of this it may be mentioned that the Company owns no less than 1,500 railway wagons.

FOUNDRIES AND MODERN SPUN PIPE PLANT

The main Foundry and Pipe Pits for the production of cast-iron pipes, etc., were commenced in 1864, and periodically since that time additions and improvements have been made until the present capacity is 550 tons per week.

Owing to the increased demand for cast-iron gas and water mains and the growing popularity of spun iron pipes, it was decided to instal a plant for the manufacture of these. This was done at considerable cost, and the plant, which has now been in operation over two years, is producing more than a mile of pipes per day.

IRONSTONE

Originally, ironstone was got from a number of pits near to Clay Cross No. 1 Colliery. These pits, numbering 14, ceased to be worked in 1871. Later, ironstone mines were acquired at Cranford (Northamptonshire), and considerable supplies were drawn from Lincolnshire.

The Company now owns ironstone mines at Brixworth (Northants) and Bloxham (Oxford).

NEW COKE OVENS AND BY-PRODUCTS

Between 1839 and 1903 some 280 Bee-Hive Coke Ovens were in operation near to the Blast Furnaces at the Clay Cross Works. The number varied from time to time as rebuilding and extensions took place. This type of oven was dispensed with in 1903, being replaced with 50 Simplex By-Product Coke Ovens of the most modern type. These were in operation until a few years ago, when they were replaced by 55 ovens of the regenerative type, and their capacity is more than double that of the former Simplex Ovens. They produce approximately 3,000 tons of coke a week.

Large sums of money have been expended by the Company in keeping the coke ovens and by-product plants right up to date.

THE BRICKWORKS

In 1915 an important development took place relative to the manufacture of bricks. Originally, the Brickworks were at the Clay Cross Works, but in

1915 the present Brickworks, near to Clay Cross (L.M.S.) Station were acquired. A modern continuous process kiln was installed, and the plant now has a capacity for turning out 5,000,000 bricks per annum.

THE LIMESTONE QUARRIES

The Limeworks at Ambergate, near the junction of the Manchester line with the Derby line, were erected by George Stephenson at a cost of £20,000 for the purpose of profitably disposing of the small coal produced from the Clay Cross pits. He also opened up the Crich Quarries. Between these two points he constructed, by means of what was then a wonderful engineering feat, a self-acting incline on a railway whereby the loaded trucks in their descent drew up the empty ones.

Incidentally, it is of interest to mention that the first bridge he built was the narrow one over the road to Derby just before reaching Ambergate and before taking the turn to Crich.

In addition to the properties mentioned at Crich and Ambergate, the Company own the Grin Limeworks and Quarries at Grin, Buxton, and the Milltown and Butts Limestone Quarries at Ashover.

The Crich Limeworks have been owned and worked by the Clay Cross Company since 1837. They are on the hillside below the prominent Derbyshire landmark known as Crich Stand. "Crich" lime is unsurpassed for agricultural, building, blast-furnace, gas-purifying and other purposes, being a very pure form of carbonate of lime.

Grin Limeworks were acquired on lease from the Duke of Devonshire in 1923.

More than 300,000 tons of limestone is the average output per year. Half of this is burned, and the Clay Cross Company are the second largest lime-burners in the country.

LIME ANALYSIS					Per Cent.
Lime (CaO)	-	-	-	-	96.28
Magnesia (MgO)	-	-	-	-	.36
Silica (SiO ₂)	-	-	-	-	1.44
Oxides of Iron and Manganese	-	-	-	-	.25
Sulphuric Acid (SO ₃)	-	-	-	-	.27
Phosphorus and Arsenic	-	-	-	-	Absent
Combined Water and Carbonic Acid	-	-	-	-	1.40
					<hr/> 100.0 <hr/>



Morton Colliery—Pit-head Baths (opened June, 1936)



Morton Colliery—Pit-head Baths showing
arrangement of bath cubicles

N^o1.

Bernard Lucas Esq^r & George Stephenson Esq^r

Extract from Conveyance of lands with covenants under same

25th February 1828. ~~Indenture~~ made between Bernard Lucas of Westland Esq^r of the one part and George Stephenson of Huby in Le. Yorks Esq^r of the other part whereby said Bernard Lucas in Consideration of £1500.00 to him paid by said George Stephenson Did Convey

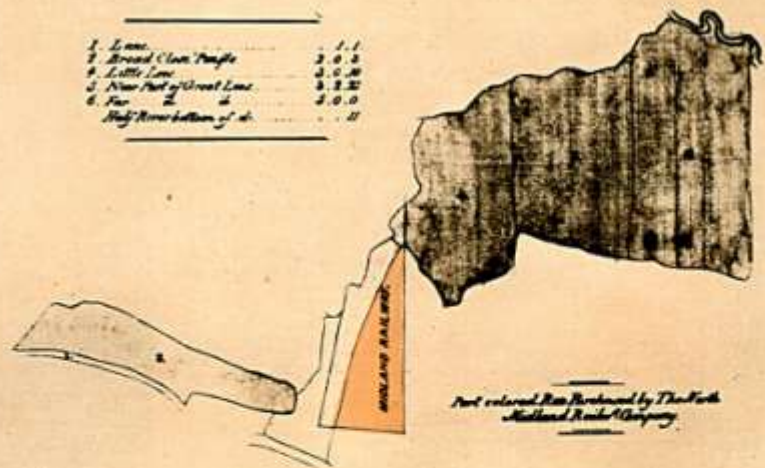
All then several Closes of Land situate in Eglwasth called The Great Lys as same was then divided into 3 Closes and called The Near Great Lys containing 3.2.5 and The An Great Lys containing 3.0.11 and also so much and such part of The Little Lys as had not been sold by said Bernard Lucas to The North Midland Railway Company containing about 3.0.5 The Broad Close Pingle and The Lane adjoining thereto containing 3.1.6 All which said premises were then in the occupation of Ellen Weston Together with all Ways Heres Issues to & said Closes and premises belonging Heres and to the use of said George Stephenson his Appointees Heirs and Assigns for ever.

The Usual Covenants by the said Bernard Lucas for the Title.

NB Nothing mentioned about the Rannals
on Land sold to Railway Company
1829

First conveyance of
land for a part of
the site of Clay Cross
Works

Plan of land for the
site of Clay Cross
Works

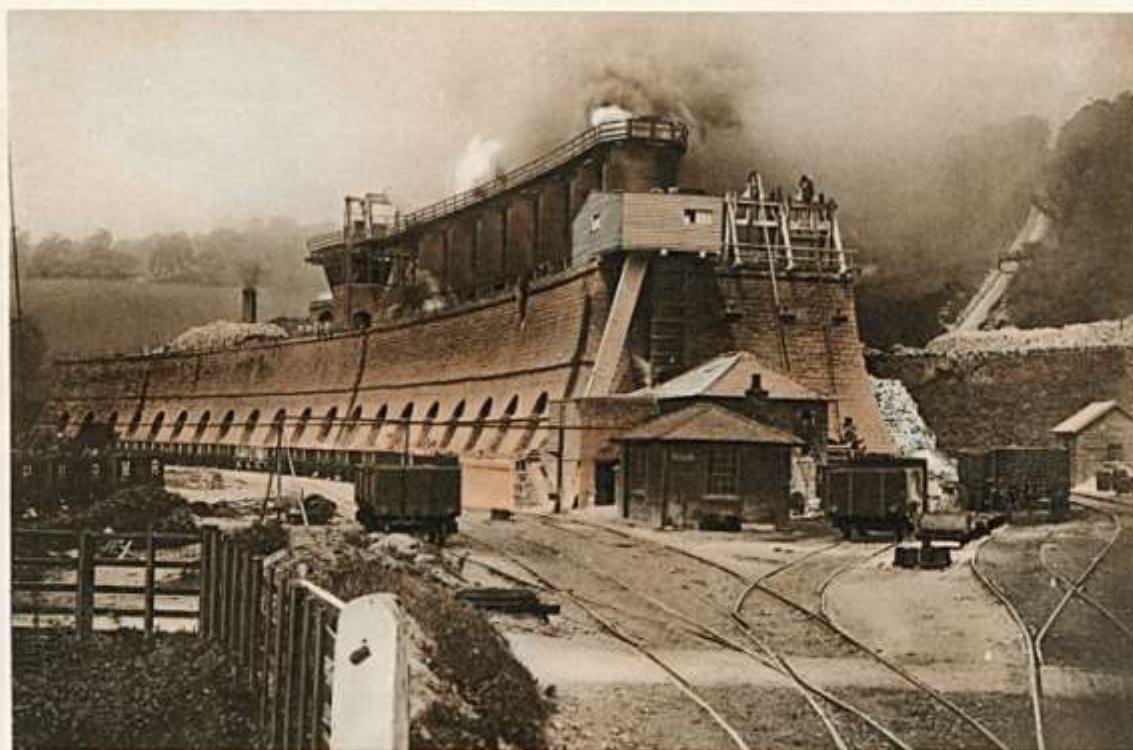


Minutes of Meetings of
Clay Cross Proprietors
dated February, 1848,
and November, 1848

<p><i>At a meeting of the proprietors of the Clay Cross Colliery, held at the residence of Mr. J. H. Harrison on the 25th day of February 1848.</i></p> <p><i>Present</i> <i>for J. H. Harrison Esq. Chairman</i> <i>for J. H. Harrison Esq. 100</i> <i>for J. H. Harrison Esq. 100</i> <i>for J. H. Harrison Esq. 100</i> <i>for J. H. Harrison Esq. 100</i> <i>for J. H. Harrison Esq. 100</i></p> <p><i>Resolved</i> <i>That the terms of the lease of the colliery should be altered so as to place it in the hands of a partnership in the proportion of the capital paid in by each of the proprietors.</i> <i>Resolved</i> <i>That the terms of the lease should be altered so as to place it in the hands of a partnership in the proportion of the capital paid in by each of the proprietors.</i> <i>Resolved</i> <i>That the terms of the lease should be altered so as to place it in the hands of a partnership in the proportion of the capital paid in by each of the proprietors.</i></p> <p><i>At a meeting of the proprietors of the Clay Cross Colliery, held at the residence of Mr. J. H. Harrison on the 25th day of November 1848.</i></p> <p><i>Present</i> <i>for J. H. Harrison Esq. Chairman</i> <i>for J. H. Harrison Esq. 100</i> <i>for J. H. Harrison Esq. 100</i> <i>for J. H. Harrison Esq. 100</i> <i>for J. H. Harrison Esq. 100</i> <i>for J. H. Harrison Esq. 100</i></p> <p><i>Resolved</i> <i>That the terms of the lease of the colliery should be altered so as to place it in the hands of a partnership in the proportion of the capital paid in by each of the proprietors.</i> <i>Resolved</i> <i>That the terms of the lease should be altered so as to place it in the hands of a partnership in the proportion of the capital paid in by each of the proprietors.</i> <i>Resolved</i> <i>That the terms of the lease should be altered so as to place it in the hands of a partnership in the proportion of the capital paid in by each of the proprietors.</i></p>	<p><i>At a meeting of the proprietors of the Clay Cross Colliery, held at the residence of Mr. J. H. Harrison on the 25th day of November 1848.</i></p> <p><i>Present</i> <i>for J. H. Harrison Esq. Chairman</i> <i>for J. H. Harrison Esq. 100</i> <i>for J. H. Harrison Esq. 100</i> <i>for J. H. Harrison Esq. 100</i> <i>for J. H. Harrison Esq. 100</i> <i>for J. H. Harrison Esq. 100</i></p> <p><i>Resolved</i> <i>That the terms of the lease of the colliery should be altered so as to place it in the hands of a partnership in the proportion of the capital paid in by each of the proprietors.</i> <i>Resolved</i> <i>That the terms of the lease should be altered so as to place it in the hands of a partnership in the proportion of the capital paid in by each of the proprietors.</i> <i>Resolved</i> <i>That the terms of the lease should be altered so as to place it in the hands of a partnership in the proportion of the capital paid in by each of the proprietors.</i></p>
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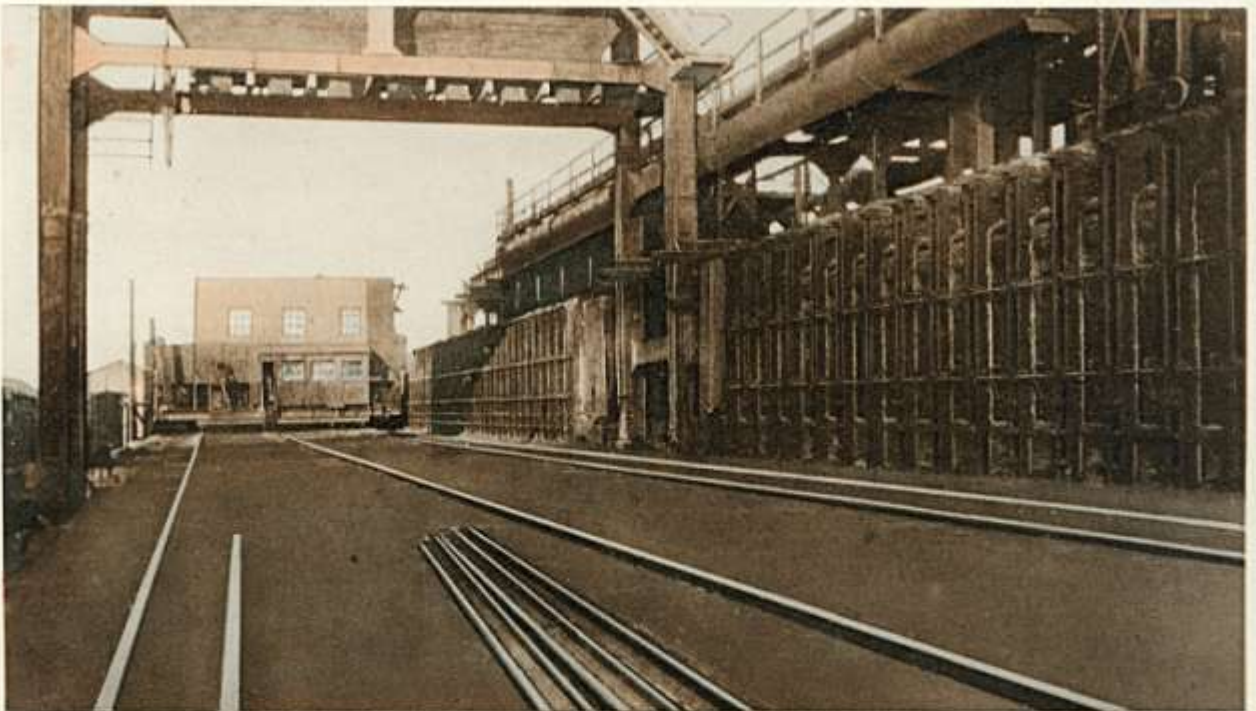
CLAY CROSS COLLIERY.				CLAY CROSS COLLIERY.			
BALANCE SHEET.				BALANCE SHEET.			
DEBIT.	CREDIT.	DEBIT.	CREDIT.	DEBIT.	CREDIT.	DEBIT.	CREDIT.
<p><i>Capital paid up</i> <i>for J. H. Harrison Esq. 100</i> <i>for J. H. Harrison Esq. 100</i> <i>for J. H. Harrison Esq. 100</i> <i>for J. H. Harrison Esq. 100</i> <i>for J. H. Harrison Esq. 100</i> <i>for J. H. Harrison Esq. 100</i></p> <p><i>Profit and Loss</i> <i>for J. H. Harrison Esq. 100</i> <i>for J. H. Harrison Esq. 100</i> <i>for J. H. Harrison Esq. 100</i> <i>for J. H. Harrison Esq. 100</i> <i>for J. H. Harrison Esq. 100</i> <i>for J. H. Harrison Esq. 100</i></p>				<p><i>Capital paid up</i> <i>for J. H. Harrison Esq. 100</i> <i>for J. H. Harrison Esq. 100</i> <i>for J. H. Harrison Esq. 100</i> <i>for J. H. Harrison Esq. 100</i> <i>for J. H. Harrison Esq. 100</i> <i>for J. H. Harrison Esq. 100</i></p> <p><i>Profit and Loss</i> <i>for J. H. Harrison Esq. 100</i> <i>for J. H. Harrison Esq. 100</i> <i>for J. H. Harrison Esq. 100</i> <i>for J. H. Harrison Esq. 100</i> <i>for J. H. Harrison Esq. 100</i> <i>for J. H. Harrison Esq. 100</i></p>			

Balance Sheet of "Clay Cross Colliery" at December, 1841, showing the signatures of the Proprietors



(Above) Brickworks near Clay Cross Station, L.M.S.

(Below) Crich Limeworks, Ambergate, built by George Stephenson in 1837, showing in the background the self-acting incline



(Above) Blast Furnaces, Clay Cross Works

(Below) By-product Coke Ovens, Clay Cross Works



PHOTOGRAPH OF GROUP OF OFFICIALS, TAKEN ABOUT SIXTY-FIVE YEARS AGO

Top row: CHAS. BLOOR

JOS. DICKINSON

GEORGE KEMP

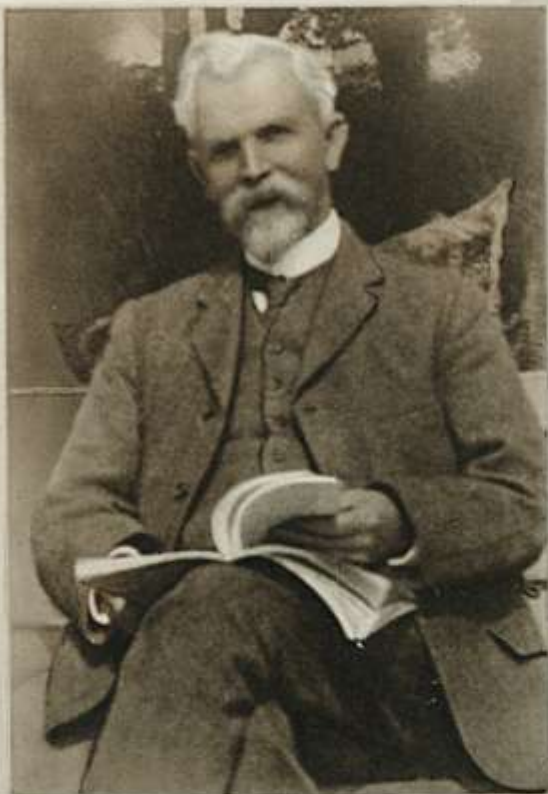
WILLIAM HEY

Bottom row: WILLIAM PARKER

THOS. WILKINSON

WILLIAM HOWE

GEORGE HOWE



GROUP OF FORMER DIRECTORS AND OFFICIALS

H. A. SANDERS
Director

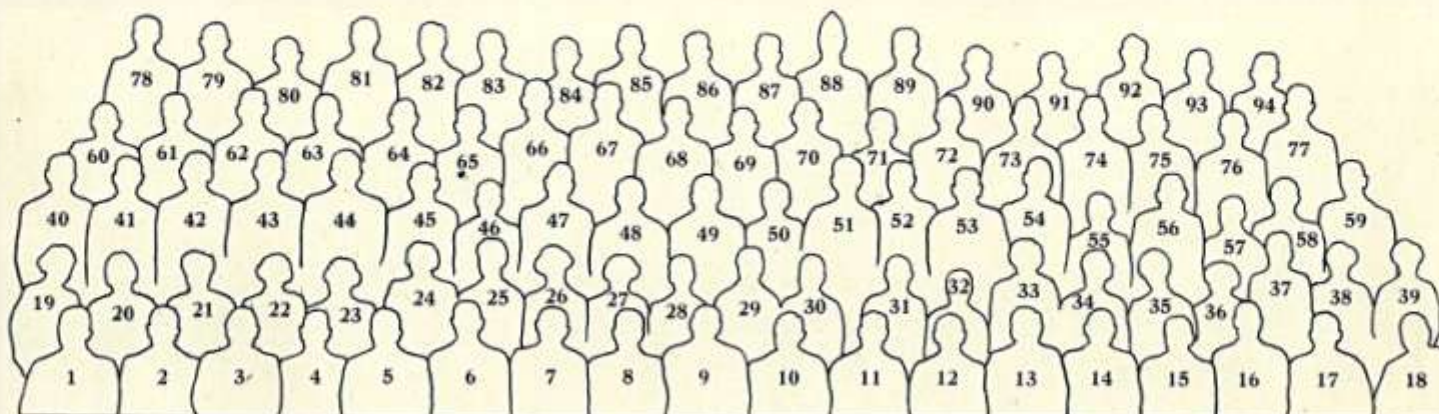
G. BRAMLEY
Engineer

R. HILLS
Electrical Engineer

G. J. WOOD
Manager of London Office



HEAD OFFICE OFFICIALS AND STAFF

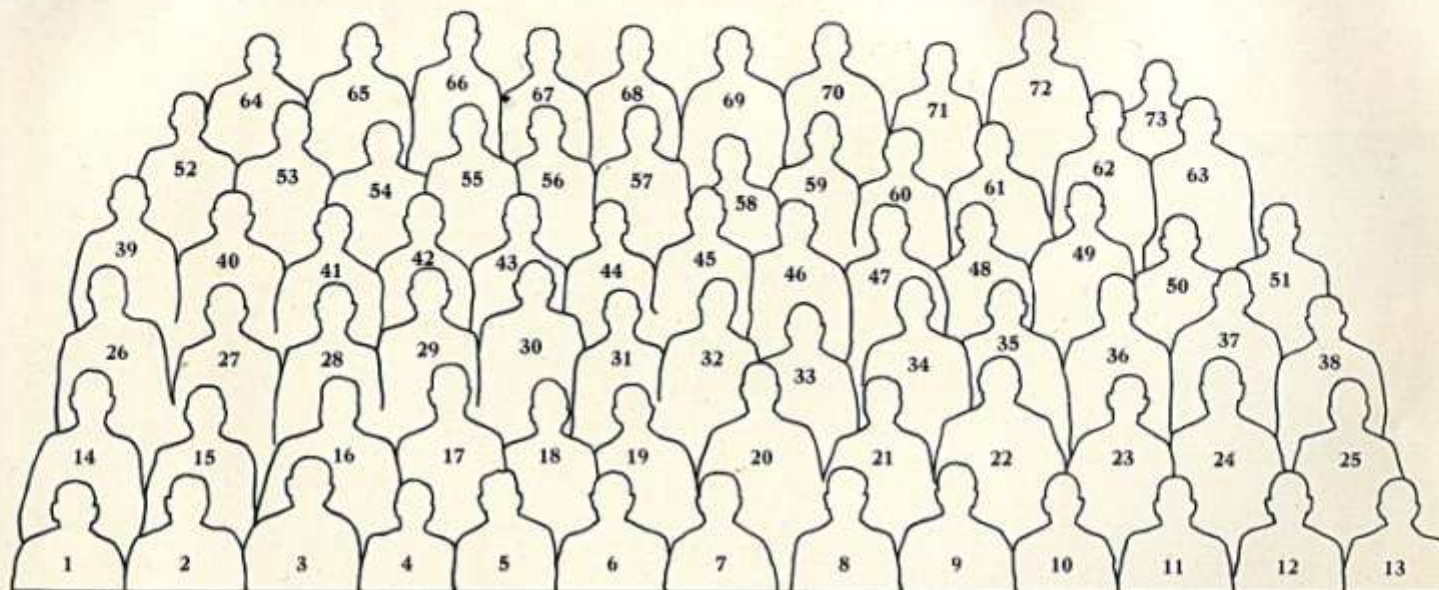


KEY PLAN TO GROUP ON PAGE 44

- | | | | |
|-------------------------------|-------------------------|--------------------------|-------------------------|
| 1. Mr. H. G. Whittington. | 25. Miss J. Baker. | 49. Mr. J. W. Titterton. | 72. Mr. A. Hancock. |
| 2. " G. W. Fox. | 26. " M. Langdale. | 50. " J. W. Saxton. | 73. " S. Brailsford. |
| 3. " E. G. Brown. | 27. " D. Vardy. | 51. " H. Buckland. | 74. " J. Dunn. |
| 4. " F. Lee. | 28. " M. Hancock. | 52. " C. G. Jones. | 75. " H. Wilcox. |
| 5. " D. C. Rushworth. | 29. " J. E. Claytor. | 53. " G. G. Griffin. | 76. " J. N. W. Roberts. |
| 6. " W. H. Lee. | 30. " E. Carlin. | 54. " T. A. Lievers. | 77. " L. V. Clarke. |
| 7. " S. Kirkham. | 31. " E. Foster. | 55. " R. Smith. | 78. " F. Shaw. |
| 8. Major H. H. Jackson. | 32. " P. Whilde. | 56. " J. Wood. | 79. " F. Price. |
| 9. Mr. J. Steen. | 33. " L. Hunter. | 57. " H. Flavell. | 80. " N. R. Leverett. |
| 10. Brig.-Gen. G. M. Jackson. | 34. " E. Tomlinson. | 58. " J. Houseley. | 81. " H. Davison, Junr. |
| 11. Captain G. R. Jackson. | 35. " E. Watson. | 59. " C. E. May. | 82. " J. Findley. |
| 12. Mr. R. Wilkinson. | 36. " A. Peach. | 60. " E. Walker. | 83. " H. W. Cusworth. |
| 13. " J. Parkins. | 37. " P. M. Smith. | 61. " W. Titterton. | 84. " F. J. Mace. |
| 14. " T. Garlick. | 38. " D. Fox. | 62. " C. Wilkin. | 85. " F. Ashmore. |
| 15. " A. R. Parsons. | 39. " O. Tarlton. | 63. " J. W. Bowler. | 86. " H. Marshall. |
| 16. " A. W. H. Bowler. | 40. Mr. M. H. Draycott. | 64. " E. Wright. | 87. " J. W. Bainbridge. |
| 17. " S. R. Rickman. | 41. " W. Price. | 65. " H. Sims. | 88. P.C. Starling. |
| 18. " H. Butterworth. | 42. " W. Curzon. | 66. " L. Jones. | 89. Mr. E. Bevan. |
| 19. Miss R. F. Weatherley. | 43. " M. Hall. | 67. " F. Barlow. | 90. " E. B. Peach. |
| 20. " G. Brimlow. | 44. " R. Hopkinson. | 68. " G. Frankum. | 91. " J. W. Peach. |
| 21. " D. Bramley. | 45. " J. Priestnall. | 69. " W. Wood. | 92. " W. Crofts. |
| 22. " E. L. Lynk. | 46. " J. W. Haslam. | 70. " G. W. Fox. | 93. " H. Towndrow. |
| 23. " P. Marshall. | 47. " E. Moseby. | 71. " J. L. Bunting. | 94. " H. Ashmore. |
| 24. " P. M. Robinson. | 48. " E. Pugh. | | |



MANAGERS AND FOREMEN OF THE COLLIERIES AND WORKS



KEY PLAN TO GROUP ON PAGE 46

- | | | | |
|------------------------------|-----------------------|----------------------|------------------------|
| 1. Mr. H. O. Baldwin. | 20. Mr. H. Davison. | 38. Mr. A. G. Wragg. | 56. Mr. G. H. Collier. |
| 2. " R. W. Barnes. | 21. " F. Jervis. | 39. " C. Hancock. | 57. " A. Wilbraham. |
| 3. " O. B. Wilson. | 22. " H. S. Gill. | 40. " C. Howitt. | 58. " J. Carlin. |
| 4. " J. Brunton. | 23. " G. Vardy. | 41. " J. Revill. | 59. " G. E. Robinson. |
| 5. " W. R. Ferguson. | 24. " F. Cartwright. | 42. " R. Ling. | 60. " T. V. Wood. |
| 6. " W. M. Mitton. | 25. " J. E. Barker. | 43. " F. Barker. | 61. " W. West. |
| 7. Brig.-Gen. G. M. Jackson. | 26. " G. Percival. | 44. " J. Walker. | 62. " W. H. Southern. |
| 8. Major H. H. Jackson. | 27. " J. Thompson. | 45. " W. Page. | 63. " A. Hind. |
| 9. Mr. C. McPherson. | 28. " T. Armstrong. | 46. " J. Lewis. | 64. " A. Wilde. |
| 10. " G. F. Gardner. | 29. " G. Shaw. | 47. " J. Roe. | 65. " J. Fletcher. |
| 11. " W. Marsh. | 30. " H. W. Langdale. | 48. " A. Wheatley. | 66. " G. Crampton. |
| 12. " C. B. Hopkin. | 31. " E. W. May. | 49. " H. Hancox. | 67. " B. Fletcher. |
| 13. " R. W. Laird. | 32. " T. Sharpe. | 50. " J. Ridgeway. | 68. " W. Taylor. |
| 14. " G. Nodder. | 33. " P. Smith. | 51. " G. Griffin. | 69. " W. Bladen. |
| 15. " G. Longdon. | 34. " H. Wilbraham. | 52. " H. Holmes. | 70. " W. Cheetham. |
| 16. " C. A. Jones. | 35. " W. Quemby. | 53. " H. Garner. | 71. " G. Jervis. |
| 17. " J. Southern. | 36. " G. Butcher. | 54. " W. Willows. | 72. " A. Adlington. |
| 18. " H. Stanley. | 37. " F. Broomhead. | 55. " E. Bingham. | 73. " S. Wilkinson. |



STAFF AT LONDON OFFICE

A. W. HUNT	H. M. THOMPSON	A. J. WYATT	R. J. TRUSSELL	R. J. R. SCRIVENER	J. R. BERRY	F. WILLIAMS
MISS H. LEWIN	MRS. R. A. BROWN	MISS M. E. STOREY	MISS C. E. SELFE	MISS D. NEWMAN	MISS V. STANLEY-JONES	
F. J. HUNT	J. D. SILK	J. FINLAY KEER	L. C. WOOD	W. NUNN		

Adjoining the Quarries at Ashover, the Company has laid down a modern plant for the manufacture of concrete products in great variety. The limestone is taken by railway to Clay Cross, where it is made into tarred macadam of all sizes.

The Slag and Tarred Slag Plant is situated adjacent to the Blast Furnaces at the Clay Cross Works. It has an output of 500 tons per week of dry furnace slag and 350 tons weekly of tarred slag. The tar is refined down to Ministry of Transport specification for road spraying and road material manufacture.

Tradition with the historic past is maintained by the Engineering Works. Here steam engines for haulage purposes are made, also single and double electric haulage drums. This Department also makes and erects cast-iron reservoirs and very large tanks to hold water supplies for housing estates and the like, also tubbing and curbs for pit shafts.

OPENING OF THE COMPANY'S LIGHT RAILWAY

On Monday, April 6th, 1925, a most interesting event in the Company's history was the opening of the Company's new Light Railway from Clay Cross Works to Ashover. The opening ceremony was performed by the late Mr. Thomas Hughes Jackson, the venerable chairman of the Company, who was then in his ninety-second year.

Mr. Jackson drove the engine over part of the route, and at the speech-making he told the guests of his visits to Canada, South Africa and South America before a single railway line was laid in those lands. His journeys were on mule or horseback, and in the saddle he actually rode from Valparaiso to Buenos Ayres. Subsequent adventures included fighting in China and gold-digging in Australia.

Alderman W. Hawksley Edmunds, J.P., Editor of *The Derbyshire Times*, who was among the guests at the inaugural ceremony, wrote the following appreciation in his journal:—

"The great reception which Mr. T. H. Jackson received was an indication of the affection in which he is held as the head of what is still one of our old industrial family concerns—a concern in which there are the most intimate relations between the proprietors and everyone connected with the great under-

A HUNDRED YEARS OF ENTERPRISE

taking down to the meanest workman employed. In these days of great combines, or companies with no soul and no consciences, one glories to see the existence still of companies . . . family and industrial . . . like the Clay Cross Company with the name of Jackson".

PURCHASE OF OVERTON HALL ESTATE

On this memorable occasion, the present Chairman, General Jackson, also made a most interesting speech. He referred particularly to the purchase by the Company, in 1918, of the Overton Hall Estate consisting of 1,000 acres. This land is rich in minerals which would add materially to the resources of the Company.

Overton Hall, portions of which were built in the time of Henry II, was once the residence of Sir Joseph Banks, the scientist and naturalist who accompanied Captain Cook on his first voyage round the world in *The Endeavour*, a journey which lasted three years from 1768 till 1771.

The Hall was subsequently the home of Dr. Bright, who discovered the disease which bears his name.

The Company purchased the estate from Mrs. W. de Burgh Jessop, and this made the construction of the Company's "Ashover Light Railway" possible.

General Jackson said the estate contained many minerals of considerable value, including limestone suitable for making roads, gritstone unique in quality for making pulp stones and fluor spar which was used for fluxing in steel manufacture. The Company has exported many thousands of tons of fluor spar to America and Canada.

Another mineral found on the estate was barytes, which was used as a dressing for linen goods. Some of the oldest lead mines in the country were to be found on the estate, and, on the best authority, oil was to be found there too.

The Hall itself is used as a Youth Hostel.

To the deep regret of everybody connected with the Clay Cross Company, Mr. T. H. Jackson died at Manor House, Claughton, Birkenhead, in January, 1930, in his ninety-sixth year. He was the third son of the late Sir William Jackson, Bart., of Birkenhead.

ELECTRICITY AND GAS

The Company generates the whole of the electricity required by the undertaking, and the cable in use extends over 20 miles. The plant is adjacent to the Blast Furnaces at Clay Cross Works, and the capacity is 3,500 kw. It consists of one 1,000 kw. generator, erected in 1917; one 1,000 kw. generator erected in 1918, and one 1,500 kw. generator erected in 1923.

The Company's gas undertaking originated in 1853, and now trades as the Clay Cross Gas Co. Ltd. It supplies an area of between 30 and 40 square miles, reaching as far as Heath and Pilsley on the east, Ashover on the west, New Tupton on the north, and Stonebroom on the south. It also controls the Shirland Gas Co. Ltd., and the Ambergate, Crich, Bull Bridge and Fritchley Gas, Light and Coke Co. Ltd. These concerns were taken over in the years 1916 and 1918 respectively.

FARMS AND DAIRY

Although the produce of farms and dairies may seem at first sight to be very far removed from mining, quarrying and kindred enterprises, the Clay Cross Company has never been lacking in foresight in planning and developing schemes likely to be of advantage to those who spend their lives working for the Company. As a further example of this may be mentioned the Estate Department of the Company upon which falls the responsibility of "running" a farm and dairy business on a larger scale than many undertakings which are devoted solely to this purpose.

The Company owns numerous farms comprising approximately 2,000 acres of land. It also farms some 600 acres. A model dairy has been installed, where Grade "A" milk is sterilized, put into bottles, and sold in Chesterfield and the surrounding district. Huge quantities of produce are grown, including sugar beet.

LONG AND HONOURABLE SERVICE

An examination of the Company's pay-roll would show that changes among the staff and workpeople are relatively few. This fact is very gratifying to the Directors because it means that they have the whole-hearted and loyal

A HUNDRED YEARS OF ENTERPRISE

support of their employees. Further proof of this is furnished by the many sons who follow their fathers in entering the service of the Company as soon as age permits. They are, so to speak, "educated" to the business, and promotions are made as and when merit warrants. In this lies one of the secrets of the fine record of long and faithful service among the Company's employees.

Finally, it may be said that the Clay Cross Company derives still greater inspiration for the future from the great traditions of its honoured past, and looks forward with every confidence to its second century under directors who are fully alive both to present-day needs and future developments.

FOUNDERS OF THE OLD CLAY CROSS COMPANY

Mr. George Stephenson (Chairman).
Mr. Robert Stephenson, M.P.
Mr. George Carr Glyn (afterwards Lord Wolverton).
Mr. (afterwards Sir) William Jackson, M.P.
Mr. (afterwards Sir) Joshua Walmsley, M.P.
Mr. George Hudson.
Mr. (afterwards Sir) S. Morton Peto, M.P.
Mr. Joseph Sandars.
Mr. E. L. Betts.
Mr. William Claxton.

THE PRESENT DIRECTORS

BRIGADIER-GENERAL G. M. JACKSON, D.L., J.P., T.D.
SIR HENRY MATHER MATHER-JACKSON, BART., C.B.E., L.L.
MR. R. O. JACKSON, M.B.E.
MAJOR H. H. JACKSON, M.C., T.D.
MR. PARK N. STONE.
CAPTAIN G. R. JACKSON, M.C.
LT.-COL. E. S. JACKSON, C.M.G., D.S.O.