

*Lincolnshire Worthies — No. 6*

# THE TWO JOHN GRUNDYS

by J. H. HOPPER

THE DEVELOPMENT and consequent prosperity of a large part of Lincolnshire owed much to two men—the John Grundys, father and son, whose lives spanned the 18th century and who lived at Spalding for nearly all their working lives. They were both born near Market Bosworth in Leicestershire, the father in 1698. At an early stage of his career he was a teacher of mathematics, but it was as civil engineers that they both earned more than local fame. John Grundy senior began by carrying out a number of engineering schemes in Leicestershire including a plan for a water supply to Gopsall Park, a very grand mansion built by Mr Jennings, a wealthy Birmingham iron-master, nicknamed Solymán the Magnificent.

In 1731 he moved to Spalding, when he was asked by Francis, Duke of Buccleuch to make a survey of his estates in Holland Elloe, a big district or 'wapentake', largely consisting of Deeping Great Fen and situated between the Rivers Welland and Nene. Much of this land became flooded in the winter, hence the name Deeping. In the same year he was elected a member of the Gentlemen's Society of Spalding. This famous Society still exists and numbered such people as Sir Isaac Newton, Sir Hans Sloane, Addison and Steele among its members. John Grundy found his membership of great value, as he discovered from various members what schemes had been carried out in their wapentakes. A year after his election he presented to the Society a large map of Spalding, which is still in their possession and a copy hangs in the Committee Room of the Society. In 1735 he completed his treatise 'The Art of Drainage' illustrated by himself.

He made an agreement to carry out a plan for the



River Welland with the Honourable Company of Adventurers belonging to Deeping Great Fen at their Annual and Grand Meeting held at the White Hart in Spalding in 1734, having applied the same methods of drainage at Moulton, east of Spalding, the year previously with great success. At the same time he was appointed their agent at a salary of £100 a year, plus fees for any special work.

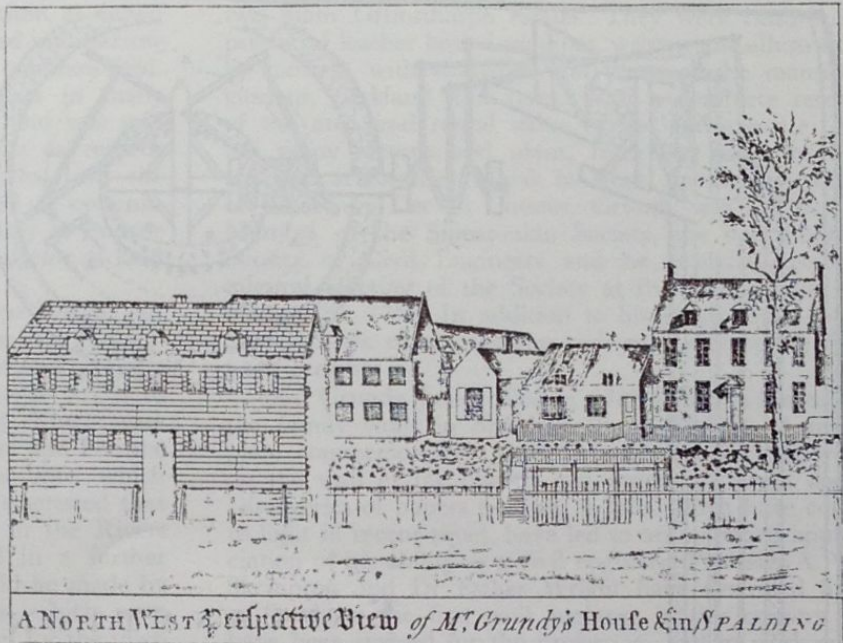
In 1762, 14 years after his death, his son catalogued all his manuscripts and printed works, including a history of his own life, various textbooks on mathematics, his Art of Drainage, and 140 surveys and drainage schemes in the counties of Lincolnshire, Lancashire and Cheshire.

He died aged 52 and is buried at Congerstone in Leicestershire. His eldest son John erected an altar tomb, which still stands near the doorway of the medieval church and bears an inscription "In memory of John Grundy late of Spalding in Lincolnshire, who without the advantage of a liberal education had gained by his industry a competent knowledge in several of the learned sciences and lived by all ingenious honest men deservedly beloved and died by all such truly regretted".

John Grundy junior was born in 1719 but the family moved to Spalding, when he was 14 years old. His earliest work, when he was only 20 was a sluice near the outfall of the Blue Goat Drain, which joined the Rivers Glen and Welland. He was employed by the Duke of Ancaster at Grimsthorpe Castle on numerous occasions from 1745 until near the end of his life. He first removed some high ground to the west of the Castle, thereby improving the view and making a pleasing regular slope. In 1746, he increased in size the lake known as the Great Water, principally by constructing the Great Water dam. These alterations to the lakes remain largely unchanged to this day. His next service was to bring running water to the Castle. This he did by pumping water up from the Bishop's Well to a cistern, from which water flowed down by two pipes, the first to the kitchens and the new water closet and the second to a place thought proper for a bath to be installed and thence to the bakehouse, dairy, gardens and stables.

He has left an interesting drawing by himself of the pumping mechanism, a triple crank engine. It shows the horsewalk, around which a horse walked four hours a week to supply the power to raise 40 hogsheads of water. He also enlarged the Vaudee ponds, the stew or fish ponds of the long vanished Vaudey Abbey, which once stood near the site of the Great Water Dam. He assisted Lord Brownlow Bertie, who later became the fifth and last Duke of Ancaster, when he stood as a Whig candidate for the County of Lincolnshire by

Right:  
The house, warehouses  
and other buildings  
which John Grundy junior  
built in 1766  
on the bank of the  
River Welland  
in Spalding.



Opposite below:  
John Grundy junior  
of Spalding.

calling on all the supporters in the Spalding district, with the usual presents of beef and money.

In 1742 John Grundy married Lydia, the daughter of the Revd and Mrs Knipe, in Wykeham Chapel, the 14th century chapel of the country residence of Spalding Priory. Now a roofless ruin, it is situated a few miles from Spalding near the River Welland and among the bulb fields.

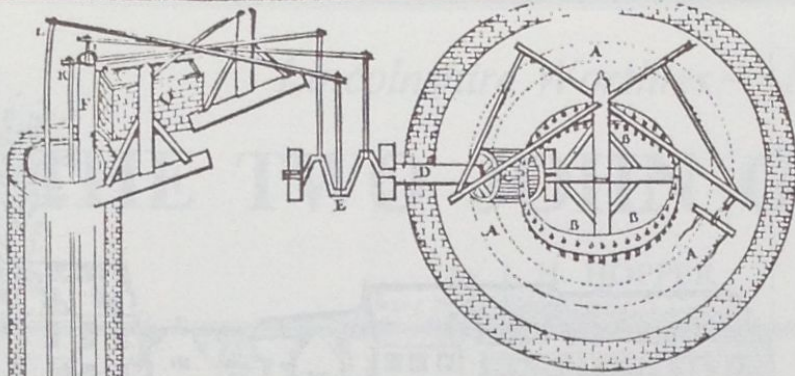
In 1748 he succeeded his father as Agent of the Honourable Adventurers of Deeping Great Fen. They were responsible for the drainage of most of the fens for some distance around Spalding. His leather account book, which bears his bookplate with his heraldic arms, makes interesting reading. It contains a meticulous record of all the work he carried out, with the cost, and is entirely written in his own copperplate handwriting. It is full of the quaint terms used by fen drainers—cradging, that is strengthening dykes and sea walls with wooden stakes, hedgehogging, that is dragging the waters with a spiked cylinder to clear weeds and other impediments, and stanchs, which were dams with openings through which craft could be flushed. Thus he built a stanch across the River Welland for the Stamford Navigation, "so that they may pass with their boats, with such loads as are usually carried on the river".

In 1756 he was asked to project a navigation from the sea to the town of Louth. The road from the sea across the marshy plain was so bad that in the winter, for months at a time, it was under water and impassable. John Grundy suggested using the waters of the River Lud at Louth for the navigation. John Smeaton, the eminent engineer was asked to consider the plan, which he approved. Grundy was asked to carry out the scheme, having first attended the Commons and Lords, to enlist the aid of the Members and landowners, in forwarding the Bill for the necessary Act of Parliament. The Louth Canal ceased for navigation in 1924, but for many years was very prosperous. The little dock at the Humber entrance was the first to be constructed on the Humber. The Canal is now used for drainage of the surrounding land and as a water supply for various factories on the Humber.

The two John Grundys were concerned with the

River Witham navigation for most of their working lives. The river had become progressively worse since about 1660, and had reached a stage when only ships of less than 40 tons could navigate the four miles from the sea to Boston. The river between Boston and Lincoln was very winding and 43 miles in length, but so much water had been drawn off by adjacent landowners that in places it had almost ceased to exist. They were repeatedly asked to submit schemes to improve the river. These were mainly plans for straightening the river, thus shortening the course by ten miles, and scouring and deepening the river and main drains. In 1757, in addition, John Grundy junior submitted a plan for a grand sluice across the River Witham by inserting doors in the arches of Boston Bridge. In 1761 John Grundy, John Smeaton and Langley Edwards were asked to submit a report. In this document, which was illustrated by maps and plans by John Grundy, they strongly recommended John Grundy's plan, except that the sluice should be independent of the bridge and slightly higher up the river. In 1762 the Commissioners for the Navigation asked Edwards to submit a detailed plan and estimate, which was to be submitted to Grundy and Smeaton for approval and any necessary alterations. Grundy was asked to attend the Bill through both Houses of Parliament. As usual there was much local opposition, but the sluice was finally opened in 1766 and, with the original schemes recommended by the Grundys, was to give great and lasting benefits both to the navigation of the river and to the improvement of agriculture in the surrounding land.

Grundy had many other commercial interests. In 1766 he built a new house on the bank of the River Welland in Spalding, facing in a north-westerly direction. He left a drawing and a plan of his premises, which included two warehouses, with a landing stage, two timber yards, an oil mill, a counting house, a sand-house, a brew house, a chaise house and stables and three acres of grazing land across the river. He owned a sloop 'The Good Intent' and a lighter called after his only two surviving children the 'Polly and Lydia', and he had a part interest in several other craft. The sloops voyaged as far as the Baltic, mainly for timber. The lighters carried corn, coal and rape, but their



*A Drawing*  
 of a  
 Treble Crank Engine  
 for raising the Water  
 at  
 GRIMSTHORPE  
 out of Bishop Hall Well  
 by J Grundy Jun<sup>r</sup> Eng<sup>r</sup>

### EXPLANATION

*AAA is the Horseway in passing round which turns the Horizontal Cog Wheel BBB which turns the bundle head C and the Waller shaft D and the Crank E which crank gives the stroke to the several Pumps FG and H by the Rods IK and L.*

*The first Pump H raises the Water into the Cistern N the second Pump into the Cistern N and the third or uppermost Pump F into the Cistern O which is 6 feet higher than the Top of the Well from whence the Water is to be conveyed thro' Piping to a Cistern at the House by a Natural fall*

*PP are Brass Barrels 4 Inch<sup>s</sup> bore about 2 feet in Length in which the Suckers move*

*The Pumps to be of Elm of 4<sup>th</sup> Inch<sup>s</sup> bore*

*This Engine will make a Revolution in 4 seconds and raise ten Hoop<sup>s</sup> in an Hour*

cargoes were usually transhipped to and from larger vessels at Fosdyke near the Wash. At this time, as shown in his maps, the land was frequently divided into narrow strips among the villagers, with one large common field. This system had become uneconomic and in many cases the land was being enclosed. The land was sold off by auction, with stringent regulations as regards space for wide roads and good footpaths, and the villagers were compensated. Grundy acted as commissioner in several of these enclosures, notably at Bourne East Fen and Ponton. He was also the Collector of land and window taxes for the Spalding district.

Much of his work in his later years was carried out in South Yorkshire—drainage schemes in the Holderness area and the construction of canals and projects for the navigation of rivers. In 1764 he was asked to report on the Hull Fortification ditches. These were the moats of the original walled city, but had become stagnant, malodorous stretches of water into which most of the city sewage was passed. He suggested that they could be flushed out by the tides in the Rivers Humber and Hull. In 1772 he advised in a further report that a commodious west dock could be made by widening and amalgamating the ditches, which were double. In 1774 he submitted a rough plan for the town and harbour of Hull, with designs for a wet dock, quays, sluices and reservoirs. John Smeaton was called in to consider the different proposals of Mylne, Robson, Grundy and Wooler, all leading civil engineers of their time. He met Grundy at Hull and discussed the matter with him. His final decision was in favour of Grundy's plan to use the city ditches as a dock, and Henry Berry of Liverpool Dock was called in to supervise the construction. It was begun in 1778 and was the first Hull Dock. It was an immediate success both financially and as a service to shipping. Grundy's suggested second dock opening directly into the Humber was not completed until much later.

A number of John Grundy's Book Maps for land

owners are in existence, including two fine ones of the two main Grimsthorpe estates. They were beautifully produced leather bound volumes, written and illustrated by himself, with drawings and plans of the mansion, gardens, parkland and farms with a complete record of the area and rental value of the entire estate. He left many records and plans, from the repair of the sea wall at Romney Marsh in Kent, to the navigation of the River Dee to Chester. Grundy was a Chartered Member of the Smeatonian Society, the first English Society of Civil Engineers and he attended the inaugural meeting of the Society at the King's Head in Holborn in 1771. In addition to his great friend John Smeaton, six of the leading civil engineers of the day were present.

John Grundy junior died in 1783 and was buried in the family vault in Spalding Parish Church. A brass plate commemorating John Grundy and his family is on the wall of the church just inside the north door. Discoveries of papers relating to him, which have come to light in recent times, have led to an increased appreciation of his ability as a civil engineer. Professor A. W. Skempton and Dr Esther Wright have described him as "perhaps the first civil engineer in this country to have been trained for the profession, and to work as a consultant, purely in civil engineering, throughout the greater part of his career. He was a personal friend of Smeaton, who had a high regard for his abilities". And Geoffrye Binnie F.R.S. states that "while he is best known as being one of the founder members of the Smeatonian Society and for his work in the fens, he also deserves to be known as the first engineer to design and build earth dams on relatively modern lines".

Next month:

FYNES MORYSON