Water Supply In Branston

The village of Branston has been a small centre of habitation since early Saxon times remaining as that until the beginning of the twentieth century. The population grew from 446 in 1800 to 1200 in 1900.

The small beck which runs through the ~~village~~ was, from early times, the chief source of water for domestic use, there are also several springs which would have been used for this purpose.

Many wells were sunk between 1700 and 1800, some of which were used communally, quite a few were later equipped with hand pumps to facilitate easier access to the supply. A village pump was erected in the High Street in 1891 for public use and was paid for by public subscription, this has been recently restored.

In 1870 Alexander Leslie Melville, banker, resident at Branston Hall, decided to have a water supply for the Hall and also to supply his partner, Eustace Abel Smith, resident at Longhills on the Sleaford road. Both premises were at this time using water from their own wells and these were now proving inadequate for their expanding households.

Architects, Scorer and Gamble of Bank Street, Lincoln were given the task of planning and surveying a feasible solution to the problem, and they in turn called upon the expertise of Mr. C. L. Hett of the Ancholme foundry in Brigg as he had been building up a reputation nationally for designing water pumps actuated by water power.

There is mention of this in 'The Engineer' of September 1880, together with an illustration of the machinery and mention is made of the recent installation "near Lincoln" of a ten foot wheel, undoubtably the 'Branston Waterwheel'.

The waterwheel and pumping apparatus was installed beside the beck near two small cottages about one hundred yards south of Hall Lane on the opposite side of the beck to Hall Farm (now demolished) .

A sluice was built upstream on the beck to form a good head of water which was gravity fed through clay pipes to turn the 10 foot diameter wheel. Fresh spring water was drawn by the pump from a nearby spring. A supply line of water was laid direct to Branston Hall with a stopcock at Hall Farm which Arthur Pears was given permission to use for the farm's domestic supply. The supply line to Longhills ran through land owned by Henry Grimes at

Springfields then across to the windmill owned by Charles Samson Dickenson of Ashfield House, crossing the Sleaford road to Abel Smith's residence at Longhills.

A complex agreement was drawn up between the four participants, Melville, Grimes, Dickenson and Abel Smith which gave permission for water to be taken by Grimes and Dickenson for use at their residences and to ensure the good maintenance and care of the pipelines.

The water supply was successfully in use by 1879 and ran continuously until 1897. By this time the households being supplied had grown considerably and the supply was inadequate so it was decided to install a more powerful pump to replace the water driven wheel.

The pump installed was to be gas powered so a steel pipeline was laid from the pump to the gasworks in Rectory Lane in what is now called The Barn.

The Gasworks had been established in the 1870's by Alexander Leslie Melville to supply the Hall and other premises in the village and was in use until the 1930's. The Barn had also been used as a cornmill, unfortunately the old milling machinery was scrapped when The Barn was converted into a dwelling house in the 1980's, as was the gas works and chimney. The milling stones had been driven by a steam engine in a lean-to attached to The Barn. There was also a source of water at the barn drawn by a Ram Pump from a spring in the park. This water was available to villagers for domestic use with the stipulation that it was taken by bucket only !

In November 1928 it was reported that many of the village wells were contaminated and the water unfit for human consumption. It was requested that a projected water scheme for Washingborough, Heighington and Branston be brought forward as a matter of urgency.

A village meeting was held to discuss the proposition but there were differences of opinion as to the actual state of the 30 wells in use in the village. There had been small epidemics of sickness and diahorreah amongst the children and school attendances had suffered as a result. There were also several cases of goitre in the village attributable to impure water. The general opinion was that it was wrong for women to have to carry water for considerable distances on wash days. A questionnaire was sent to all households, querying the state of the water supply and distances from a water source, asking for opinions as to what action should be taken.

When the cost of the work was given by Lincoln City Council the scheme was rejected unanimously.

In 1929 there was a water shortage caused by lack of rain and a water cart was made available for people to help themselves. Eighteen council houses at this time had only one well to supply them and many of the village wells were failing and on testing proving unfit for drinking. New bores were sunk but they all failed.

A further Parish meeting was held in 1930 and a new water scheme was outlined. The local doctor explained the dangers of the poor water now being used. When the cost of the scheme was given it was voted down by 200 against 27 for.

In 1932 Kesteven district council submitted a new proposed scheme to supply water to Branston at a cost of £44,797. The Branston parish council agreed to accept this scheme, provided that the excavation and laying of the mains was done using the unemployed labour in the village. Mains were laid and water fountains installed throughout the village in 1933. Most of these fountains are still in existance but no longer in use.

Pic fountains

As new houses were erected in the now fast-expanding village they were plumbed into the mains supply and eventually all households were connected to the mains.

PUMPING MACHINERY FOR RURAL WATERWORKS.

MR. C. L. HETT, BRIGG, ENGINEER.

FIG. 1

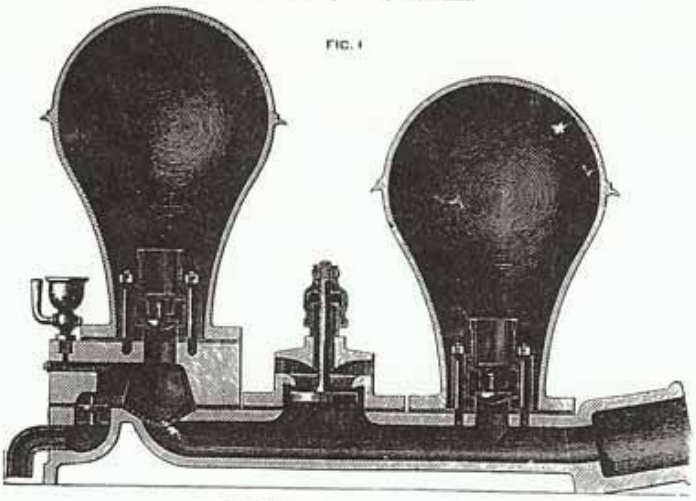


FIG. 2

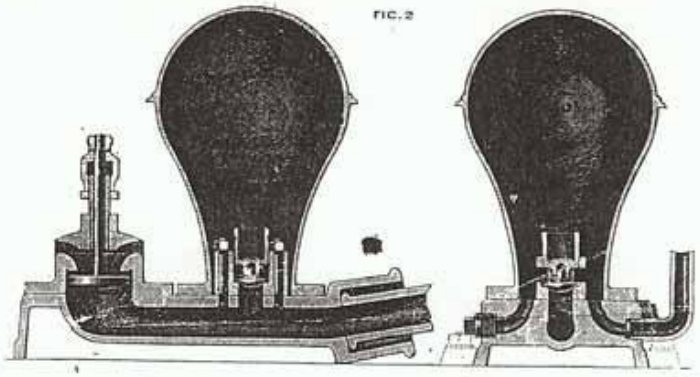
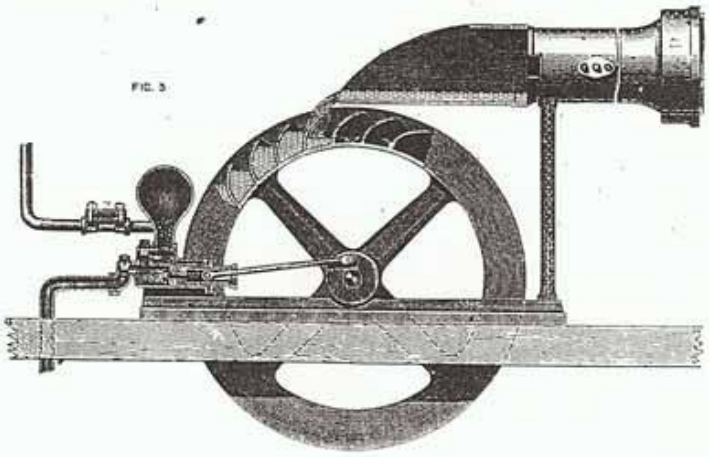


FIG. 3



In many places where the water supply is insufficient or the quality not so pure as might be desired, there is frequently a supply of good water at a lower level, and ample water power for raising it to where it may be required. When this is the case it is not uncommon for engineers to advocate the use of a ram, wheel pump, or turbine, often regardless of the circumstances of the particular case. Every instance should be seriously considered by itself before the motor is decided on.

As a general rule a ram is employed for a fair fall in proportion to the lift, while the quantity of water at command may be limited. These are common conditions when a spring or rill on a hillside furnishes the motive power; when, on the other hand, a stream in the valley furnishes the power, a wheel pump is generally to be preferred. In such cases the wheel pump has the advantage in drawing its supply from a well into which the stream water filters through the subsoil, or, if that is unsuitable, through a bed of gravel introduced to form a filter, and is thus cleared of matters in suspension. The pumping ram and turbine and pumps are not so universally applicable as the ordinary ram and pumping water wheel. The pumping ram is useful where there is not sufficient water to work a wheel pump, and yet it is desired to raise a different quality of water to that which furnishes the motive power. The turbine has marked advantages when the source of supply is a large stream subject to floods. We illustrate this week good examples of the ordinary and pumping rams and the Standard pumping water wheel exhibited by Mr. Hett, of the Ancholme Foundry, Brigg, at the Royal Agricultural Society's Show at Carlisle.

Fig. 1 represents the double-acting or pumping ram, the right-hand portion of which is identical with the simple ram. The portion delineated on the left is the pumping portion. The action of the ram causes the flexible diaphragm to vibrate with each beat of the escape valve, and the remaining action is simply that of a pump. This diaphragm is the weak point of every pumping ram, and should be readily accessible. In Mr. Hett's arrangement, by removing four nuts, the air vessel and chamber may be lifted off, the whole operation only occupying some few minutes. Fig. 2 represents the high-lift type of ram, which Mr. Hett introduced three or four years since. The arrangement is neat, and it will be observed that the valves can be exactly adjusted by means of screws. In this ram the whole of the interior is accessible without disconnecting a single pipe.

Fig. 3 shows a wheel pump, of which Mr. Hett has fixed a number in various parts of the country. It is only 3ft. diameter and 1ft. broad, and yet is sufficient to lift 1500 gallons 16ft. high in twenty-four hours. With a lower lift the delivery is, of course, proportionately greater. The wheel is cast in a single piece and afterwards galvanised. It works one or two gun metal piston and plunger pumps, fastened with cup leathers, which cannot be screwed up too tight by an inexperienced attendant, but still will not leak. A wheel of similar design, 10ft. diameter by 16ft. wide, has recently been made in the Ancholme Foundry, cast in three parts only, and is now jointly supplying two large reservoirs in the neighbourhood of Lincoln.

The cornmilling equipment consisted of two pairs of stones, one pair Peak stones on a fairly conventional hurst frame (Plate VI), the other pair, French stones, at a higher level and on an unusual long cast iron shaft with a decorative cast iron column containing the tentering adjustment. It is possible that this second pair of stones was re-used from a watermill and installed later than the first pair. Both pairs were under-driven by a steam engine in a lean-to on the end of the barn. The surviving chimney seems to relate to this engine, rather than to the gas works.

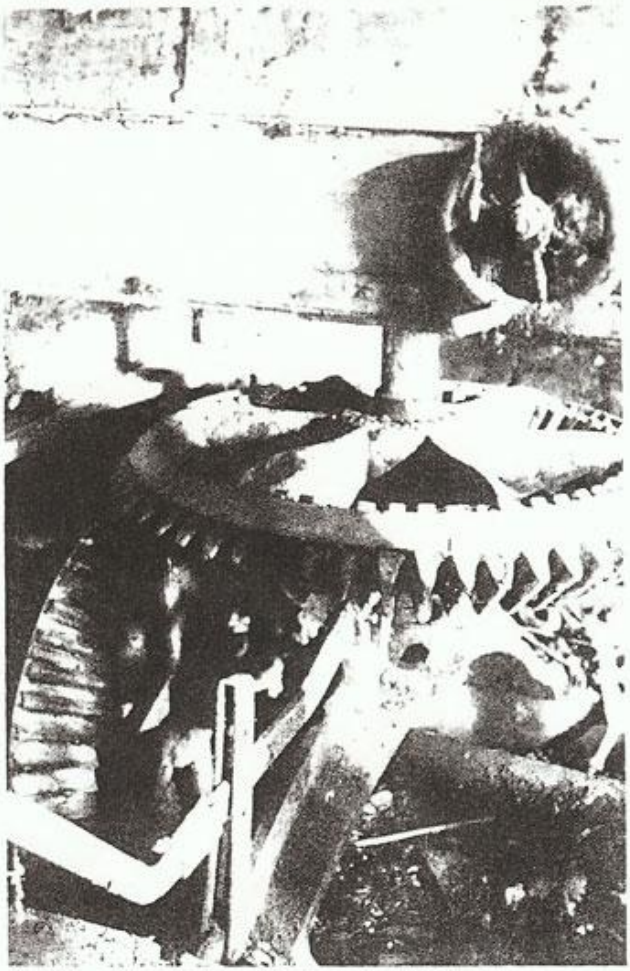


Plate VI Branston barn. The drive gear to the Peak stones. *Catherine M. Wilson.*

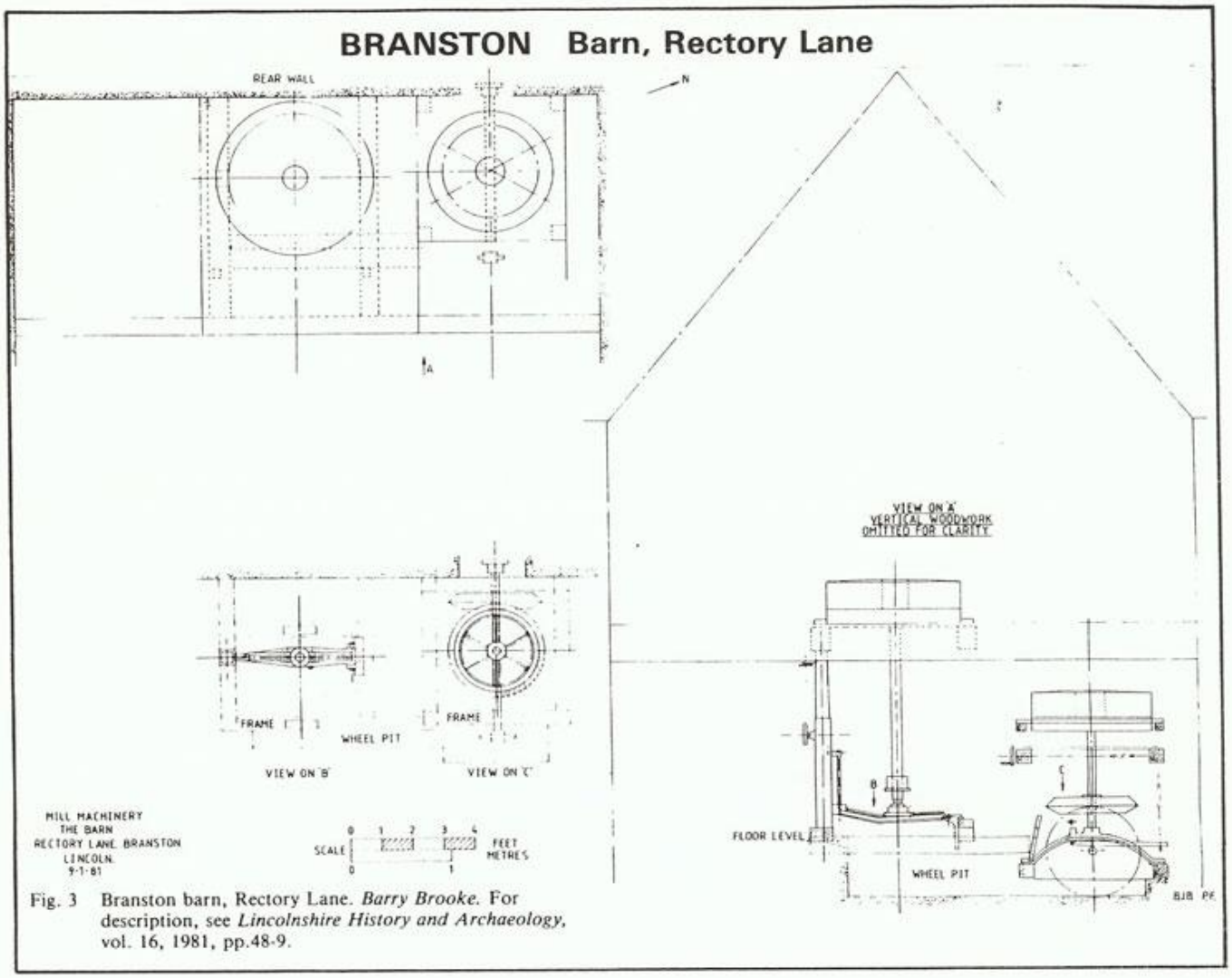


Fig. 3 Branston barn, Rectory Lane. *Barry Brooke.* For description, see *Lincolnshire History and Archaeology*, vol. 16, 1981, pp.48-9.

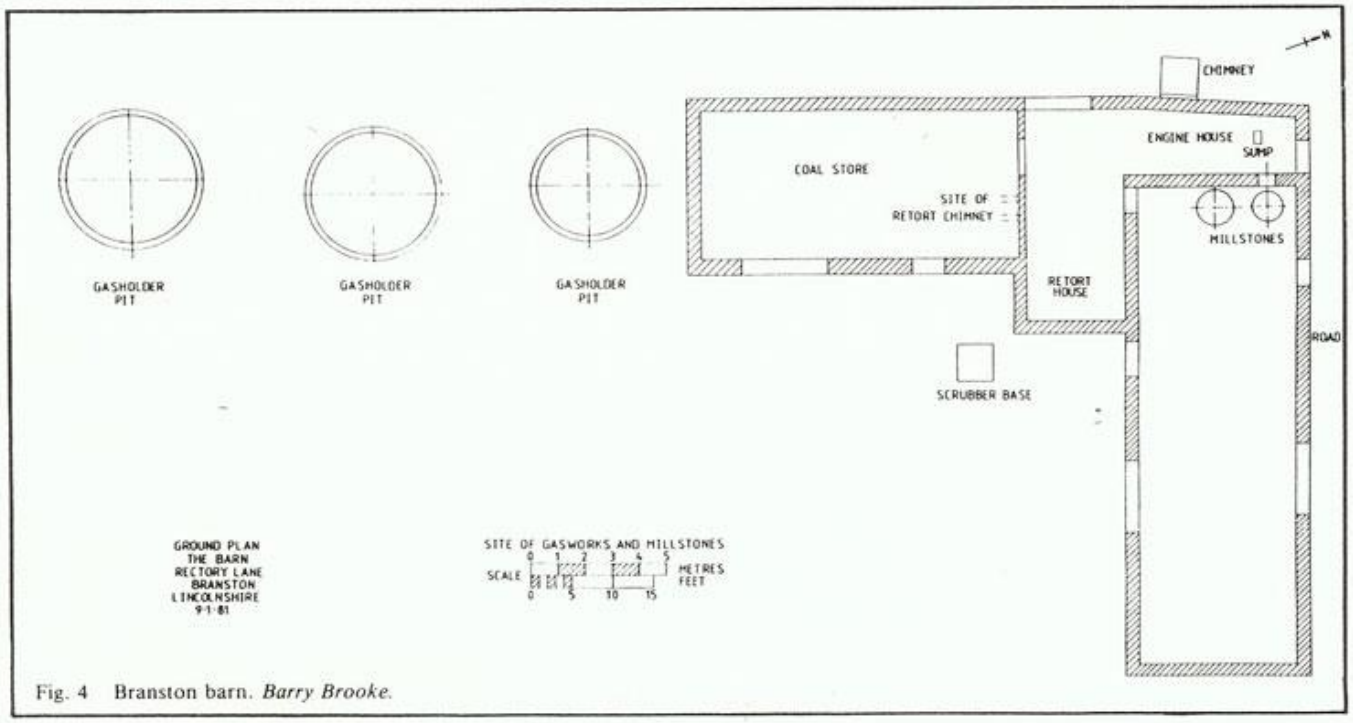


Fig. 4 Branston barn. *Barry Brooke.*

LINCOLNSHIRE HISTORY & ARCHAEOLOGY, VOL 16, 1981

BRANSTON Barn, Rectory Lane
(Grid reference TF 019673)

Catherine M. Wilson

A substantial stone-built barn just off Rectory Lane in Branston was purchased during 1980 for conversion to a house. The barn was of considerable interest since, as well as its original agricultural use, it had also been used as a gas works and a cornmill.

The owner kindly allowed the Industrial Archaeology Sub-Committee to survey the remains before their removal.

The barn itself was probably built in the 18th century but its industrial activities belong to the end of the 19th century. White's Directory for 1892 records for Branston that 'the village has much improved during the last 20 years and private gas works were erected by the late Hon. Alexander Leslie-Melville from which gas is supplied to many of the houses'. There were few remains of the gas works, all retorts, purifying equipment etc., having been removed sometime ago. The pits for the gas holders were, however, clearly visible as was the concrete base for the scrubber. We were fortunate in being able to copy a photograph (Plate IV) taken in the 1920s showing the equipment *in situ*. The owner of the photograph, Mr Foottit, thought that the gas works went out of use about 1930.

~~Plate IV~~ Branston barn. The gas works with equipment *in situ*, 1920s. ~~*Catherine M. Wilson.*~~

~~Plate V.~~ Branston barn. A similar view today. ~~*Catherine M. Wilson.*~~