# <u>SUSSEX</u> INDUSTRIAL HISTORY



Pullinger's Mouse Trap Manufactory – Ice Houses Forest Row Mills – A Lewes Bank – Lumley Mill Estate Industry at the Hyde – Bread Oven at Slindon

**ISSUE 24** 

**PRICE £2.50** 





Journal of the Sussex Industrial Archaeology Society		
TWENTY FOUR		1994
		Page
COLIN PULLINGER AND HIS	PERPETUAL MOUSE TRAP David Drummond	2
ICE HOUSES IN SUSSEX	Ron Martin	10
THE MILLS OF FOREST ROW:	ADDITIONAL NOTES M.J. Leppard	23
A LEWES BANKING HOUSE	Alan F. Hill	25
LUMLEY MILL	Tony Yoward	30
ESTATE INDUSTRY AT THE H	YDE, HANDCROSS Ron Martin	37
BREAD OVEN AT SLINDON O	LD BAKERY Ron Martin	39
PUBLICATIONS		rear cover

Edited by Dr. Brian Austen, 1 Mercedes Cottages, St. John's Road, Haywards Heath, West Sussex RH16 4EH (Tel. 0444 413845). The Editor would be interested to hear from prospective contributors of articles of any length. Shorter notices can be included in the Society's *Newsletter* which is issued four times a year.

The annual subscription to the Sussex Industrial Archaeology Society is £5 payable on 1st April. Life membership is available at fifteen times the annual subscription. Members are entitled to copies of the *Sussex Industrial History* and the *Newsletters* without further charge.

Membership enquiries to the Hon. Secretary, R.G. Martin, 42 Falmer Avenue, Saltdean, Brighton BN2 8FG (Tel. 0273 303805).

© SIAS on behalf of the contributors

# COLIN PULLINGER AND HIS PERPETUAL MOUSE TRAP

# David Drummond

Men and mice have been associated for thousands of years<sup>1</sup> and throughout this period numerous people have invested a great deal of time and energy in trying to protect food, household goods and even the structure of the house itself from the depredations of small troublesome rodents. An important part of such protection has been the invention and production of traps. Indeed so troublesome have been mice and so incredibly innovative have been men in designing new types of traps, that the mousetrap itself has become a symbol of human inventiveness.

Clearly the ideal mouse trap would be one that caught the maximum number of mice, while requiring the minimum amount of attention from the user. Many inventors have sought to achieve this ideal by devising traps that remained permanently or perpetually set and able to hold many more than a single captive. Probably the earliest perpetual traps were simply holes in the ground, later replaced by earthenware pots sunk to ground level, with or without some means of attracting mice to the pot and some device for helping them to fall in. Such simple pit-fall traps probably became much less common for indoor use as solid floors replaced those of earth.

The earliest recorded pit-fall apparently specially designed for indoor use seems to be that described by Leonard Mascall in the sixteenth century. <sup>2</sup> Mascall's 'Mill to take Mice' consisted of four wooden vanes revolving freely round a central rod, that was placed so that it projected horizontally from the edge of a table or shelf. The sides of each vane were baited with oatmeal and honey and a bucket of water was placed beneath to catch any unbalanced mice.

The next substantial advance in perpetual mouse trap design occurred in the seventeenth or eighteenth century, when the lobster-pot type of trap made of wire was introduced. To reach the bait mice had to push their way down through a hole in the top, but were unable to retrace their steps because of the downwardly and inwardly projecting sharp wires which surrounded the entrance. Such simple cage traps are still made and used in France and Germany.

We do not know who invented and first made these early perpetual traps. In fact it was not until the nineteenth century that there emerged the first identifiable inventor and maker of a commercially successful perpetual mousetrap. His name was Colin Pullinger. Colin was a native of Selsey and remains the most famous son of this isolated village on the most southerly point of the coast of West Sussex.

#### COLIN PULLINGER AND HIS FAMILY

Colin was born in 1814 at Ivy Lodge (nowadays generally referred to as Ivy Cottage), High Street, Selsey. Both his father, William (1766-1847), and his grandfather, Richard, worked in Selsey as carpenters. Colin was eventually to follow in their footsteps, but early in his career his fortunes lay elsewhere.

He started work as an apprentice to a law stationer in Brighton and, when this business failed, moved on to become for some years a copying clerk in a lawyer's office. Evidently unexcited by such activities he then went to sea and sailed throughout the world in various capacities; seaman, cook, steward, mate and navigator. During his sea-faring days he experienced many dangers, including a ship wreck off the coast of Australia. At the time of the ship wreck he vowed that, if he escaped with his life, he would, 'strive to do what a good man can'. <sup>3</sup>

On his return to England Colin lived for a time in Brighton, where he worked as a carpenter. Here on 6 May 1846 in St. Nicholas's church, he married Mary Ann Clayton, a farmer's daughter. The following year was marked by the death of his father whose will revealed that he had become a man of considerable substance, calling himself a builder rather than a carpenter. Thus William Pullinger was able to leave to Colin's mother Amy and Colin's several brothers and sisters various properties in Selsey, Church Norton, Chichester and Brighton. Colin himself inherited Ivy Lodge and associated workshops and timber-yard, as well as some six acres of adjoining arable land.

History does not reveal exactly how Colin spent the next ten or so years, except that he fathered three sons and three daughters and at the time of the baptisms of the last five of his children, he recorded his occupation as Farmer (1849, 50 and 54 ), Fisherman (1852) and Carpenter & Builder (1856). Thus it seems that he did not really fully settle down into his father's carpentry and building business until after his fortieth birthday, and even then he continued to farm his six acres of land.

It was probably at this time too that Colin began to invent and make items that stemmed largely from his experiences as a seaman and farmer. In particular his improved agricultural implements (horse hoe, scarifier, couch grass rake) and vermin traps for moles, rats and mice were clearly stimulated by the need to



Fig. 1 Colin Pullinger's Trade Card

solve his own practical farming problems. Moreover his carpentry skills and facilities would have allowed him to make, test out and further develop his own inventions. Judging from his trade card, produced some time later, he was very proud of his inventions, as well as the incredible number of functions he apparently performed, or at least had performed, at some stage during his career (Fig. 1).

Unfortunately we have no knowledge about the success of his inventions, except for that of his perpetual mouse trap, but before dealing with Colin's development and production of mouse traps we should mention his son Charles, who was to take over the mouse trap business following his father's death in 1894.

Charles Pullinger was born in 1850 and already at the age of 11 had evidently been singled out as the heir apparent. In the National Census of 1861 he was described as a a 'Mouse Trap Maker', while his older and younger brothers as well as two of his sisters were entered as 'Scholars'. Charles married Susanna Jemima Latham in 1888, but the couple remained childless and Charles continued to make mouse traps to his father's design until at least about 1920.

#### THE PULLINGER MOUSE TRAP DESIGN

As carpenters the Pullinger family would have been familiar with the various traditional wooden mouse trap designs of their age and were no doubt involved in their manufacture. It is even possible that they tended to specialise in round wooden dead-falls. Dead-fall traps consisted of heavy suspended blocks of wood that fell upon any animal that moved the baited trigger directly beneath them. Such traps were generally square or oblong in shape, but Edward Pinto refers to a round one in his possession as the 'the traditional Selsey, Sussex, circular mouse trap, made of beech and 5 in. in diameter; it may be eighteenth or nineteenth century'.4 However, the manufacture of round dead-falls may not have been confined to Selsey, as James Hornell refers to them as Surrey traps. 5

It was not until July 1860 that Colin Pullinger, already in his late forties, was revealed as the inventor of a new type of mouse trap<sup>6</sup>. His wholesaler (S.& E. Ransome & Co., 31 Essex Street, Strand, London, WC.) advertised it as 'Pullinger's Registered Automaton Mouse-trap and specially drew attention to its agricultural potential; 'One farmer caught nearly 1,000 Mice in one trap, in nine months. Can be placed in a stack, by removing one sheaf of corn'.

Pullinger's Automaton trap was of an ingenious but quite complex construction (Fig. 2). A mouse entering the open end of the trap, stepped on one end of a lower see-saw, the other end of which rose and released a catch which allowed an upper see-saw to lower the front door of the trap and prevent the escape of the mouse. The mouse now had little choice but to climb onto the upper see-saw and run along it, an action which led it through a one-way internal door into a holding compartment and at the same time reopened the front door to allow entry for the next mouse. No example of this early trap seems to have survived and we are left only with drawings and understand its structure descriptions to and mechanism.

Colin was clearly not content with his Automaton trap for he replaced it the following year with another trap, that was not only exceptionally ingenious but also had the classic hallmark of elegant simplicity. This trap was advertised first in June 1861 and was called Colin Pullinger's Registered Perpetual Mouse Trap. It was this second trap that led to his world-wide acclaim as mouse trap inventor and manufacturer.

A point should be made at this stage about the use of the word 'Registered'. There is no evidence that Colin Pullinger registered either of his mouse traps, or for



Table 1. Surviving exa manufacture.	mples	of C	olin Pulli	nger's Perpe	etual Mouse	Trap placed in	probable order of date of
Owner/Location	Dim	ensio	ns (mm)	Position a of entra	and shape inces	Width of Internal Gates	Notes
	L	W	н	Side view	Top view		
1. Chichester Museum Accession 2250	310	80	71	0	0	Wide	Stamped metal internal gate indicates date after c.1880.
2. Chichester Museum No. I 801	310	82	68	0	I	Narrow	As above.
3. David Drummond	320	90	72	<u>८</u>	JC	Narrow	Side labels intact. Name Charles Pullinger as Manager so probably made shortly before his father's death – say c.1890.
4. Chichester Museum Accession 2251	325	84	66	<u>ک</u>	JC	Narrow	Side labels intact. Name Charles Pullinger as Proprietor and mention that Business Name was registered on 28 April 1917, so must have been made after that date.

that matter any of his other inventions, as patents or designs. It seems likely that his wholesaler inserted the word in his advertisements as a ploy to deter potential competitors from copying the design. In this as we shall see later, he seems to have been largely unsuccessful.

In his perpetual mouse trap (Fig. 3) Colin neatly solved the problem of closing the door behind the incoming mouse and opening it again for the next one, by providing holding compartments at each end of the trap and a single see-saw between them. The door itself was simply a projection above the centre of the see-saw, that closed off one end of the trap and left the other end open. Thus as a mouse entered the trap from the centre it stepped on and lowered one end of the see-saw and entered that end of the trap. This action closed the door behind it and simultaneously allowed the next mouse to enter the other end of the trap, which in turn re-opened the other end of the trap, and so on.

This simple combined single see-saw and entry door was the central new idea of Colin's design and remained much the same throughout the sixty odd years of the life of the trap. In the meantime however Colin made a number of modifications to the structure of the trap that enclosed this central mechanism. Such changes included particularly the size and shape of the central entrances that led to the see-saw, the construction of the containers that held the bait that attracted the mice into the trap, the design of the oneway internal doors that led to the two holding chambers, and the means of extracting the mice once they had been caught. The evidence for these trap changes comes from detailed drawings of the traps in advertisements of 1861, 1862 and 1868<sup>8</sup>, for which period no examples of traps seem to have survived, and from four later examples of surviving traps (Table 1).

#### **Entrances:**

In 1861 and 1862, there was one wedge-shaped entrance to the see-saw in the centre of each side of the trap, and above the centre of the see-saw was a single bait container. Later on the two side entrances were simply round holes and the single bait container had been divided into two separate ones, allowing an extra access to the see-saw between them, either in the form of a central round hole or a wide slit across the whole width of the top of the trap. Finally the top and side entrances to trap were joined together, no doubt maximising the ease with which mice could enter the trap and at the same time making it easier to manufacture.

#### Bait containers:

Throughout the life of the trap all main bait containers

were sited at the top of the trap and, in all but the first design, had glass covers held down by wires across the top. The parts of the bait containers inside the traps were formed of perforated zinc. Thus the mice could evidently only see the bait from outside the trap and were also tempted in by the smell of the bait that emanated from inside the trap. The partition of a central container into two has already been mentioned. This container held grain, but at least until 1868, it was flanked on each side by a small cylindrical compartment for holding lard. These lard containers were eventually dispensed with, probably partly because they tended to make the trap rather smelly.

#### Inner one-way doors:

Initially the two one-way doors were constructed of lengths of wood, through which nails or wires were inserted so that their ends rested at an angle against the floor of the trap. They provided a structure which could be lifted in one direction by incoming mice, but not from the reverse direction once a mouse had entered one of the holding compartments placed at each end of the trap. The length of wood was later replaced by a metal strip folded over and hammered together to hold the wires, but eventually the door came to be made of a single sheet of metal with several vertical slits stamped out of it. In each case it was hinged from the top by a wire going across the trap.

These one-way doors that went all the way across the trap were later replaced by much smaller doors and the remainder of the width of the trap was closed off with horizontal wires or a single immovable sheet of metal made of the same type of stamped-out metal as the doors. The purpose of these smaller doors was apparently to ensure that only one mouse could get into the holding compartment at a time, and while it was doing so no other mice could move out in the opposite direction.

#### Removal of captive mice:

The early drawings are not sufficiently clear to be sure, but it rather looks as if in the first model (June-October 1861), the ends of the traps, made of vertical wires set in a wooden frame, were completely removable, while in the second model (November 1861 - November 1862) the trap ends made of perforated zinc could be slid upwards.

There is a strong indication that at some stage a model was also made with a metal slide that could open the floor of the trap<sup>9</sup>, but the current whereabouts of the trap from which this mechanism was described is unknown. In any event it is clear from the four known extant traps that the way of releasing the mice eventually preferred was to form the central two vertical wires at each end of the trap from a single wire hoop. The top of each hoop was bent at right angles and lay on top of the trap while each leg went through a hole in the top of the trap and at the level of the trap floor was looped round the adjacent wire towards the side of the trap. This simple arrangement meant that the hoop could be grasped at the top and slid upwards to expose a sizeable hole through which the imprisoned mice could be released.

It will be clear from the extensive changes that Colin Pullinger made to the peripheral parts of his trap design, that he was continually striving to improve them and stay ahead of his competitors. In writing of his Perpetual Mouse Trap in his 1885 catalogue he wrote 'After trying for upwards of twenty years, I have now made it a perfect trap. It cannot get out of order. From four to eight mice often, and even as many as twenty-eight, have been caught in one trap in one night'. The final design is illustrated in Figure 4.

#### Table 2.

COLIN PULLINGER AND MOUSETRAP MAKING EMPLOYEES

#### National Census, Selsey, April 1861

Colin Pullinger, Head, Married, 46, Inventor and maker of Automaton Mouse Trap. Builder and Farmer of 6 acres. Employing 3 men and 15 boys.

#### Mouse Trap Makers

Name	Age	Name, age and employment of parents
Butler, James	16	Edward, 37, Boatman
Constant, James	13	William, Fisherman
George, John Stephen	13	Stephen, 41, Coastguard
Ginmann, William	14	George, 46, Fisherman
Hart, William	12	John, 37, Agricultural Labourer
James, Robert	49	Maker of Automaton Mouse Trap
Lawrence, Charles	15	James, 49, Pilot
Morris, William E.	11	James Sotcher, 76 (Gfather) Carpenter
Prior, Samuel	12	Charles, 51, Blacksmith
Pullinger, Charles	11	Colin, 46, see above
Tadd, John	10	Edwin, 40, Agricultural Labourer
Willshire, Hezekiah	14	William, 44, Fisherman
Willshire, Walter	14	Thomas, 60, Fisherman
Wittenstall, David	14	Joseph, Coastguard

National Census, Selsey, April 1871

Colin Pullinger, Head, Married, 56, Inventor of various articles, Manufacturer and Farmer, 5 men and 10 boys.

#### Mouse Trap makers

Name	Age	Name, age and employment of parents
Boyling, Charles	17	Jane, 61
Follet, Frederick	15	Ellen, 40, Laundress
James, Richard	14	Robert, Agricultural Labourer
Mould, Richard	13	Sarah, Wife of Coastguard
Mould William	18	Sarah, Wife of Coastguard
Pullinger, Charles	20	Colin, 56, see above
Saunders, George	26	
Stapleton, John	14	William, 61, Retired Coastguard
Tadd, John	20	Ū
Willis, George	18	Edward, 48, Farm Labourer



Fig. 5 Colin Pullinger with one of his Perpetual Mouse Traps in front of his Inventive Factory

#### MANUFACTURING AND SELLING

Early in 1861, at the time Colin Pullinger was still making his 'Automaton Mouse Trap', the National Census reveals that he was already employing three men and fifteen boys, many of whom were described as mouse trap makers. The boys varied in age from ten to sixteen and were mostly the sons of local workers connected with seafaring activities or agriculture (Table 2). Ten years later the work force was five men and ten boys, with only nine described as mouse trap makers. Probably such a young work force meant that labour was cheap, but at the expense of a rapid turnover; apart from his son Charles, only John Tadd had remained with Colin Pullinger for the whole period.

Later censuses do not reveal either how many people Colin employed or how many people in Selsey were making mouse traps. At a time (c.1920) when Charles Pullinger remained as the only trap maker in Selsey, he recalled that at one time his father had employed as many as forty men and boys.<sup>10</sup>

This same figure of forty is also given by H.W. Wolf, a contemporary observer to whom we are indebted for a

commentary on Selsey mouse trap production in about 1880<sup>11</sup> probably at a time when Colin had more or less finished modifying his Perpetual Mouse Trap and production had reached a peak. The mouse trap factory (Fig. 5) which was adjacent to Ivy Lodge then consisted of 'little more than an open yard, bounded by a half-open shed of the simplest possible construction. Part of the yard is occupied by a horsegear in which you can see a couple of horses making their regular rounds, thus supplying the motive power. The gable end of the shed is embellished with a few figure heads rescued from broken-up vessels, and a board over the entrance proclaims the establishment to be Mr. Colin Pullinger's Inventive Factory'.

The horses powered two circular saws and four drills. The wood for the traps came from nearby forests, belonging to the Duke of Richmond on the Goodwood Estate. All the necessary machinery had apparently been designed and made by Colin. What most impressed Wolf, however, was the organisation of the trap construction. 'In the work itself nothing is left to the workman's eye or sense of symmetry. The simple machinery is all so set as to make each piece of wood, each piece of wire, exactly one length, one width, one depth, one shape. The planes plane to a uniform thickness. Everything is done at the proper angle'. Interestingly enough he gives as an example of this excellent organisation, a detailed description of the way in which the internal one-way doors, of wires held together by metal strips, were made by a closely knit team of seven workers. As we know already this rather complex mode of construction was soon to be replaced by using a single sheet of metal that only needed to be cut to shape.

At this period it took four and a half minutes to construct a complete mouse trap and at full production the factory could turn out 960 a week. By 1885 Colin Pullinger estimated that upwards of two million had been sold. All this despite the fact that all the traps had had to be taken by wagon some nine miles to the nearest railway station at Chichester, a problem not to be overcome until the inauguration of the Selsey to Chichester Tramway in 1897.

When first made Colin Pullinger's Perpetual Mouse Trap retailed at 4/- each, but within the same year the price had been reduced to 2/6 and apparently remained so throughout its life, except that a squareended version priced at 2/- was advertised in 1868. Until at least 1868 Colin sold his traps through S. & E. Ransome, 13, Essex Street, London, E.C, his sole wholesalers. After this date we have no information, except that Charles Pullinger was advertising for wholesale agents in 1902.<sup>12</sup>

However apart from advertising his traps through S. & E. Ransome, Colin promoted his traps and other products by showing them at national and international exhibitions. He had honourable mentions at the International Exhibition 1862, and at an Exhibition of the Royal Society for the Prevention of Cruelty to Animals in 1864. In 1870 he won silver medals in classes 1 and 2 in the Workmen's International Exhibition and in 1876 won a medal at the International Exhibition in Philadelphia.

We know of his awards particularly because he proudly brought them to the attention of potential customers by including them on the large labels that covered each side of his traps. These labels also extolled the virtues of the traps. It is perhaps salutary to note, in the present climate of apparent increased awareness of the desirability of humaneness and safety to animals, that in the nineteenth century Colin Pullinger stressed on each label that his trap was 'The simplest, cleanest and most humane trap yet produced' and 'The only trap which can be used with safety where domestic animals, birds and other pets are kept'.

#### COPIERS AND COMPETITORS

In his 1885 Catalogue Colin Pullinger drew the attention of his customers to the fact that others had copied his inventions. But of course this is the price of virtuosity and fame, especially for an inventor who had failed to patent his ideas.

In 1865 Loring J. Baker of East Machias in the State of Maine took out US Patent No. 51,283 for an essentially similar design of mouse trap to that of Pullinger's Perpetual. In 1867 Bennett & Co. advertised another, which they pointed out had, unlike those of other manufacturers, a smaller internal door that allowed only one mouse to pass at a time, and a metal slide underneath for the easy release of the trapped mice. Other similar traps continued to appear. In 1875 Samuel Nye & Co. advertised a self acting perpetual mouse trap and in 1878 W.B. Fordham & Sons promoted the English Perpetual. Another one in 1887 was termed the 'Plevna' and apparently a later edition of the same trap in 1898 was named the 'Improved Plevna' or London Perpetual'.

The name 'Plevna' for a multicatch mouse trap deserves some comment. Plevna is a large town in Northern Bulgaria, in which during 1877 the occupying Turkish army suffered particularly severe losses from the besieging Russians. Presumably during the campaign British newspapers referred to the besieged Turks as being caught like mice in a trap. Apparently by the same token we have during the same era the Bismark and the Cronje mouse traps, commemorating respectively the besiegers of Paris and Ladysmith. Happily the number of further noteworthy sieges were far too few to perpetuate a tradition of associating the names of mousetraps with them.

Perhaps the last copy of a Pullinger trap was that made by Duke, Waring, Crisp & Co. in their Soho Wire Works, for which the last advertisement seems to have been in the Price List for 1925-26 of the Army & Navy Stores, but at least in this case the inventor was given full credit, the trap being called 'The Colin Pullinger Mouse and Vole Trap'.

Apart from the very few known surviving examples of copies of Pullinger's Perpetual Mouse Trap<sup>13</sup>, virtually all the information we have, comes from the advertisements already mentioned. There is no evidence that any of these copies lasted very long and offered any real challenge to Pullinger's supremacy in the manufacture of his own design. Perhaps more important as competitors were one or two other designs of multi-catch live mouse traps that began to appear in the 1870s.

Nevertheless, Charles Pullinger was almost certainly right in blaming the coming and the popularity of the Penny Trap as the cause of his business falling away from a large and flourishing organisation to a one man concern<sup>10</sup>. Were he alive today Charles would also recognise that since the demise of his business very many other ingenious mousetrap designs have come and gone. Furthermore the late nineteenth century design that he called the penny trap, that we now call a break-back or snap trap and which usually costs us no more than fifty pence, still reigns supreme, at any rate in the western world.

#### POST SCRIPT

The death of Charles Pullinger in Ivy Lodge on 27 January 1932, some four years after that of his wife Susanna, signalled the end of four generations of Selsey Pullinger carpenters and the demise of a once flourishing mouse trap business. It also seems to have been the end of a Pullinger presence in Selsey.

Charles died intestate and without children and his estate passed to his niece Amy Flora, the only child of his younger brother Colin who died in Selsey in 1910. At the time of Charles' death Amy Flora, who had married Edwin Charles Albert Hammond in 1920, was living with her husband in East Dulwich. Efforts to trace the descendants of Amy Flora and other relatives of Colin Pullinger have not so far shed any further light on the Perpetual Mouse Trap.

Copies of most of the documents that have provided the basis for the present account of Colin Pullinger and his perpetual mouse trap have been lodged with the West Sussex Record Office.

#### ACKNOWLEDGEMENTS

I am indebted to Anne Bone (Curator of Chichester Museum), Roy Brigden (Curator of the Museum of English Rural Life) and Reinhard Hellwig for permitting me to examine the mouse traps in their care. My thanks are also due to the staff of the West Sussex County Record Office and to Peter Ogden (Chairman of the Selsey History Society) for their help in tracking down and making available to me many relevant documents. I am also deeply grateful to the members of the Selsey Women's Institute for allowing me to reproduce unique items from their scrap book (Figs. 1 and 5). Any improvement in detail and quality of these items is entirely due to the expertise of Arthur Hambleton and his use of modern computerised reprographic techniques.

#### REFERENCES

- 1. Brothwell, D. 'The Pleistocene and Holocene archaeology of the house mouse and related species.' *Symp. Zool. Soc. London* (1981) No.47, 1-13.
- Drummond, D.C 'Unmasking Mascall's mouse traps'. Proc. 15th Vertebrate Pest Conf., University of California, Davis, (1992), 229-235.
- 3. Pullinger, C. (1885) An illustrated Catalogue. No extant example of this catalogue is known, but information on Colin Pullinger's career is quoted from it in the *Promoter* (copy in Selsey WI scrap book) and also apparently in a manuscript of W.J. Bridger (c.1900) from where it was taken and published by Alison Ross in the West Sussex Gazette, 17 March, 1960.
- 4. Pinto, E.H. (1969) Treen and other Wooden Bygones. (1969)
- 5. Hornell, J. 'Old English dead-fall traps.' Antiquity 14 (56), (1940) 395-403.
- 6. The Ironmonger and Metal Trades' Advertiser 31 July, 1860, p.76.
- 7. The Ironmonger, 29 June, 1861, p. vii.
- Ibid., June, Sept, Dec, 1861, Jan, Feb, May, Nov 1862, July, Sept, - Dec 1868.
- Ross, A. 'More about Mr. Pullinger and his mousetraps.' West Sussex Gazette, 17 March 1960.
- Bristow-Noble, J.C. The mouse-trap maker of Selsey. The Sussex County Magazine 6, (1932) 498-499.
- Wolf, H.W. 'Selsey Mousetraps', Sussex Advertiser; reprinted in Quaint Industries and Interesting Places in Sussex, (1882) 22-34.
- 12.The Ironmonger, 18 Jan, 1902.
- 13. Apart from several examples of traps made to Loring Baker's design, I know of only two surviving Pullingertype mouse traps. One is No 54/266 in the Museum of English Rural Life, Reading, and the other is No. 850 in Reinhard Hellwig's Trap Collection in Germany. Both are thought not to have been made by Pullinger because of their larger sizes and their modes of construction do not fit in with the likely progression of design changes described for known Pullinger-made traps.

# ICE HOUSES IN SUSSEX

# **Ron Martin**

This article concerns the domestic ice houses in East and West Sussex, as distinct from the commercial ones which were described in the article by the author in *Sussex Industrial History*, Issue 14.

Ice has been used for many centuries in parts of the world where there was a convenient juxtaposition of a warm climate and access to sources of ice, such as India, the Middle East and Italy, the first recorded used being in Mesopotamia nearly 4,000 years ago.<sup>1</sup> The practice of building ice houses came to England in the 17th century via France following the Restoration, one of the first ones being located in Upper St. James' Park, now known as Green Park, in 1660.2 By the eighteenth century it became increasingly common for major houses to have their own ice house. It probably became a case of "keeping up with the Joneses". A spell of several hard winters towards the end of the century also encouraged their use. It should be emphasised that the use of ice in a domestic situation was not normally for the storage of food. One only has to consider the quantity of food consumed by a large household to realise the impracticality of this as ice houses were normally not big enough for this purpose. Also in no ice house that I have seen have there been any means of storing food. The ice was used in cooling drinks and for making cold confections in the kitchens. In the kitchen of the Royal Pavilion in Brighton there is a menu on display for a dinner dated 1817 and of the 22 sweets no less than 7 were made using ice.

There are three basic types of ice houses to be found. Type 1 comprises a pit, normally circular, sunk into the ground below the level of an entrance passage which is provided with two or more doors. An example of this type is Framfield Place (Fig. 1). Type 2 comprises a chamber normally rectangular and situated at the same level as or very slightly below the level of the entrance with often only a single door. An example of this type is Holmbush [Colgate] (Fig. 2). Type 3 comprised a shaft sunk into the ground, usually circular with access only through the top. This type is sometimes referred to as an ice well, but for convenience I have used the more normal term of ice house throughout. An example at Stanmer House, Brighton is shown as Fig. 3.

The way ice houses were used is interesting. Clearly with Types 1 and 3 the ice would have been collected from the nearest convenient lake or pond and dropped into the pit of the ice house, possibly layered with straw to make removal easier. It would have been possible to use very thin ice collected as a crop. With Type 2 it would have been less practical to use small ice and the ice would have been better used in thick slabs supported on some form of racking. It is possible that many of this type of ice house were not used primarily for storing ice, although several have been clearly accepted as such by owners and map compilers. It was considered that the ice should be capable of being stored for more than a year, and an experiment was carried out at Levens Hall in Cumbria in 1980 when ice was kept in the ice house for 13 months under conditions similar to those prevailing in earlier times. As dating is virtually impossible in most cases, some ice houses might have been built in the late nineteenth century using imported ice and transported in bulk or even manufactured. The Kent & Sussex Pure Ice Company advertised delivery of ice daily in 1879. Where there is further doubt about the authenticity of a structure as an ice house I have noted this in the gazetteer section.

The location of ice houses in relation to the house served seems quite arbitrary. In most cases they seem to be neither close to the source of the ice nor to the kitchens. A distance of several hundred metres is not uncommon. At Coombe Place in Offham it is 1500 m, but ice is known to have been transported several miles, an example reported at Mostyn was as far as 21 miles.<sup>3</sup> There are also cases of specially prepared areas being flooded to provide ice. Thus it would be equally convenient to locate it by the back door of the kitchen e.g. as at Firle Place. Some are adjacent to the water e.g. at Knepp Castle. However as one of the prerequisites of an ice house is for it to be kept dry this was not a good idea as this one is below the water table and the pit is now flooded.

Where the ground is level the entrance to the pit is often arranged to be some distance below ground approached by a flight of steps to avoid the structure being too high above ground level. Quite often the structure is built into a bank so that the entrance passage can be horizontal. The entrance passage is normally provided with two or three doors in order to keep in the cold. In use these were frequently stacked with straw to provide additional insulation. The one at Framfield Place appears to have been provided with five doors which does seem a bit excessive.

In Type 1 and 3 ice houses the pit is normally circular as this form is structurally strongest. However there are several that are square or rectangular, e.g. Arundel Castle and Firle Place, and the one to the Royal Pavilion at Brighton was oval. Type 2 ice houses are normally rectangular.

Sometimes the walls are vertical or battered but it is





not unusual to find the bottom is sub-domed as at Newick Place. It is quite common to find the size of the pit diminished with depth, the theory being that the increased pressure on the ice causes temporary melting and refreezing, thus consolidating it and eliminating voids. However in the ice house at Drovers in Singleton the pit gets larger with increased depth. The sides of the pit are most commonly of brick and are normally only one brick (225 mm) thick although local stone is sometimes found, as at West Dean and Uppark. However occasionally the sides have cavity walls e.g. at Lancing Manor, at the Royal Pavilion ice house in Dyke Road, Brighton. The probable reason for this is to try to keep the ice house dry. In the Brighton example the cavity was filled with broken flint.

The bottom of the pits and chambers are sometimes bare ground and sometimes paved with brick or stone. In order to keep an ice house dry it is necessary for there to be a melt water drain. Without this, as the ice melted, the pit would steadily be filled with water. These drains were often just a simple sump but occasionally there were elaborate double bottoms as at Uppark and Lancing Manor. Occasionally there was an arrangement of sleeper walls with timber staging to keep the ice off the bottom as at Petworth and at Findon Place but in most cases if this did exist it would have rotted away. The roofs of the ice houses and of the entrance passages were normally vaulted in brick, domed over the circular pits, and barrel vaulted over the rectangular areas. The standard of workmanship displayed in these buildings is quite surprising when one considers that no one apart from domestic servants would see them, and they would probably have been built by the estate bricklayer. Occasionally ice houses were covered with a thatched roof, as at Buxted Park, and in some cases there was a secondary roof to protect the vault over the pit, as at Firle Place and Folkington Place. Some ice houses are provided with ventilators, a practice which was used during the latter part of the nineteenth century.

When in use ice houses would often have been covered with a layer of earth some 450 mm thick. It is probable that in addition trees were sometimes planted to provide additional shade. It often happens that when one sees ice houses today they have become denuded so that the outside of the roof is now exposed.

The entrance passages are normally some 3 m in length, usually straight, occasionally dog-legged as at West Dean and sometimes curved around the pit as at Uppark and Petworth. Some ice houses have separate means of filling and emptying. This normally consists of a hatch in the top of the roof over the pit down which ice can be tipped. Sometimes there is a side entrance to the pit or one partly along the entrance passage. At Firle Place there is a most sophisticated chute system built over the roof of the pit so that ice could be transported by cart and tipped in from an upper level.

The size of ice house varies enormously ranging from a total volume of 5 to 218 cubic metres (at Petworth House with three pits). The actual quantity of ice that could be stored would obviously be considerably less. The efficiency of ice houses probably depended on various factors. Size is probably desirable provided that the pit can be fully charged with ice. It is interesting to note that at Coombe Place where the small source is 1500 m distant, the pit has been altered at some time to make it considerably smaller, and at the same time the entrance passage was lengthened to incorporate an additional door. The quality of ice and the care and frequency with which the store was used were also relevant factors. It is possible that some of the very small ice houses relied on imported ice which could be replenished every few weeks from commercial sources.

The use of ice houses declined towards the end of the nineteenth century. Imported and manufactured ice was available in Sussex from the 1870s and mechanical refrigerators were coming into use from 1900 onwards. I was told by Lord Brentford that he could remember the ice house at Newick Park being used in the 1920s but that is probably a late example. Many of them are now abandoned and unfortunately, as the doors are usually missing, and they are a danger to children and animals, many of them have been filled in or used as rubbish tips.

In the following gazetteer I have distinguished between the three types. They have been listed under the current civil parish and the house to which they were attached has been named where possible. Unless described as demolished or filled, all are extant at the time of writing to a greater or lesser extent, and all these have been visited by the author unless noted to the contrary. The size and shape of the pit has been noted and the total volume of the structure. The sketches beside each entry have been reproduced to a common scale. The section is normally shown along the length of the entrance passage, but where the transverse section differs this has been shown with a line of dots. Information which is assumed has been shown with a broken line.

Please note that, with the exception of Hotham House, all are on private ground and are not normally available for inspection. Please respect this. If you wish to view an ice house there is Hotham House in Bognor Regis, Battle Abbey, and Scotney Castle just over the border in Kent, the latter being a Type 1 ice house with a thatched roof.

**REFERENCES** (including following gazetteer)

- 1. Beamon, S. & Roaf, S. Ice Houses in Britain (1990)
- 2. Beamon, S. & Roaf, Ibid., 18
- 3. Beamon, S. & Roaf, Ibid., 119
- 4. Nairn, Ian and Pevsner, Nikolaus, 404
- 5. 6" OS Map Sheet XLIII, 1928 Edition
- 6. in Brighton Reference Library, Rate Book, 1814
- 7. SAS DEEDS BRI 115
- 8. PRO RA 33499, 33523, 33829, 34044 and 34091
- 9. Nash, John, Plan of Royal Pavilion and Grounds, (1822)
- 10. Musgrave, C., The Royal Pavilion (1959), 19
- 11. Williams, Owen, personal recollections to writer in 1984
- 12. Fayle, Andrew, personal recollections, January 1981
- 13. 6" OS Map Sheet XL, 1898 and 1914 Editions
- 14. ESRO/22/13/16
- 15. 6" OS Map Sheet LVIII, 1930 Edition
- 16. ESRO Ashburnham Manuscript
- 17. ESRO Scale estate map
- Howe, William, personal comment to writer in December 1993
- Woodhams, J.W., personal comment to writer in October 1993
- 20. ESRO Shiffner MS 1348
- 21. 6" OS Map Sheet XXX, 1910 Edition
- Mr. Kirby of Nutley, personal comment (his father was gamekeeper on the estate)
- 23. 1:2500 OS Map 1874 Edition
- 24. Nairn and Pevsner, op.cit., 617
- 25. 6" OS Map 1874 Sheet VI 1929 Edition
- 26. Peckham, Rev. H.J., unpublished reminiscences made available by Mrs. S.J. Flower
- 27. 1:2500 OS Map Sheet XV, 1874 Edition
- 28. Nairn, Ian and Pevsner, Nikolaus, op.cit., 123
- 29. Ibid., 109
- 30. Ibid., 242
- 31. 6" OS Map Sheet XXXV NE, 1914 Edition
- 32. Nairn and Pevsner, op.cit., 223
- 33. Ibid.
- 34. 6" OS Map Sheet X, 1914 Edition
- 35. 6" OS Map Sheet XII, 1914 Edition
- 36. Information from Mr. P.D. Waters
- 37. 6" OS Map Sheet II, 1899 Edition
- Martin, R.G., Sussex Industrial History Issue 13, 1982 "Petworth Ice House"
- 39. Nairn and Pevsner, op.cit., 321
- 40. Sussex Notes and Queries, No.13, 13
- 41. 6" OS Map Sheet II, 1899 Edition
- Sir Walter Burrell personal comment to writer, in March 1985
- 43. 1:2500 OS Map Sheet
- 44. 6" OS Map Sheet XXI, 1912 Edition
- 45: 6" OS Map Sheet XLVII, 1914 Edition
- 46. Nairn and Pevsner, op.cit., 364
- 47. Ibid., 369
- 48. 6" OS Map Sheet XLVIII, 1914 Edition
- 49. West Sussex Gazette, 24.03.1984

#### GAZETTEER OF ICE HOUSES

#### EAST SUSSEX

#### **BATTLE Battle Abbey**

Type 1 ice house on a flat site in good condition TQ 749165 NGR:

- Circular, 3.66 m diameter; 28 m<sup>3</sup> with Pit: battered brick walls and sump in bottom covered with wrought iron grating
- Straight, 3.7 m long with 2 doors, 7 steps Passage: down with brick walls
- Location: 200 m from ice source; 150 m from house
- Probably built in 1857 when the house Notes: was built in the Abbey grounds.4

#### **BEXHILL Linkwell**

Type 2 ice house on a flat site in fair condition

- NGR: TO 745079 Rectangular, 3.63 m x 2.41 m; 16 m<sup>3</sup> with Pit: brick walls rendered.
- Entrance: Straight, 2.5 m long with one door, 6 steps down, uncovered.
- Location: Ice source not known; 10m from house There is a window in the end wall and Notes: a large hole has been cut through the roof. It was subsequently used as a dairy.

#### **BODIAM Bodiam Rectory**

Type 1 ice house built into a slope in good condition. Not visited NGR: TQ 781257

- Circular, 1.64 m diameter; c. 10 m<sup>3</sup>, with Pit: brick walls.
- Passage: Straight and level, 1.6 m long with 2 doors and brick walls Location: 400 m from moat of Bodiam Castle;
- 10 m from house.
- The pit has been floored over at ground Notes: level. It is not known to which house the ice house belonged or whether ice from the moat could have been used.

#### **BRIGHTLING Brightling Park**

Documentary evidence only, shown on OS map as "Icehouse Wood".5 NGR: TQ 680213

#### **BRIGHTON Islingword Road**

A possible Type 1 ice house of huge size on a level site, the entrance now demolished.



NGR:

TO 322049 Circular, 7.92 m diameter, 253 m<sup>3</sup>, with Pit: brick walls with projecting pilasters and gravel bottom and remains of timber staging

Passage: Dog-legged, 11.3 m long with 2 doors and c.35 steps down with the brick walls.

Location: Location of source and house not known. Notes: This structure is so large that it seems improbable that it is only a domestic ice house and maybe it was also used for the storage of perishable food

#### **BRIGHTON Moulsecoomb Place**

A possible ice house, the top ring of brickwork visible at ground level

NGR: TO 326069

Ш

Section

Plan

Location: Ice source not known; ice house was adjacent to house.

#### **BRIGHTON Royal Pavilion** (in King Street)

Documentary evidence only.6

- NGR: TQ 310045
- Location: Source of ice not known. Ice house was 250 m from house
- Notes: Noted as leased to H.R.H. Prince Regent in 1814.7

#### **BRIGHTON Royal Pavilion** (at 96A North Road now 17-19 Dyke Road)

Type 3 ice house on a flat site, documentary evidence only

NGR: TO 307044

Pit: Oval, 6.71 x 5.11 m diameters; 200 m3, hollow battered brick walls with double bottom, sump and access through crown of vault

Location: Ice source not known; 700 m from house

There was a "Tea House" over the top. It Notes: was built in 1789 for H.R.H. the Prince of Wales and repaired in 1823.8

#### **BRIGHTON Royal Pavilion** (in Pavilion Gardens)

Documentary evidence only

TQ 311042 NGR:

- Location: Ice source not known; ice house was 140 m from house.
- Shown on Nash's Plan of Royal Pavilion9 Notes: and rediscovered in 1956 during excavation for an electricity substation.10

#### **BRIGHTON Stanmer House (1)**

An underground structure of unknown original use but subsequently used as an ice house on a flat site in good condition.

- NGR: TQ 334094
- Pit: Rectangular, 3.15 x 3.15 m; 21 m<sup>3</sup> with brick walls previously lined with sheet lead.
- Location: 150 m from ice house; 30 m from house
- Notes: Access is down a narrow shaft 3 m high. There is also a high level duct and evidence of a bricked up side opening. Hearsay evidence tells of it being used before WWI to store ice for use in the town.11





#### **BRIGHTON Stanmer House (2)**

Type 3 ice house on level site in good condition

- TQ 334094 NGR:
- Circular, 3.1 m diameter; 40 m<sup>3</sup> with Pit: rendered brick walls

Location: 250 m from ice source; 80 m from house

Hearsay evidence of it being used before Notes: WWI to store ice for use in the town.12

#### **BUXTED Buxted Park**

Documentary evidence; Type 1 ice house, level site TO481229 NGR:

- Square, 3.9 m x 3.9 m with brick walls Pit:
- and a thatched roof.
- Passage: Straight, 3 m long with brick walls.
- Location: 300 m from ice source, 350 m from house Demolished 1950s. Information derived Notes: from plan and sketches in "Views and Plans of Buildings on Divers Estates in the County of Sussex belonging to Sir George Shudburgh Evelyn, Bart" 1798 in library of Sussex Archaeological Society.

#### **CHAILEY Ades**

Verbal evidence only. Reported as being in basement of main house.29 TO 401192 NGR: Location: 250 m from ice source

Notes: There is no knowledge of this on site.

#### **CHAILEY** The Hooke

Documentary evidence only; shown on OS Map.13 TO 387186 NGR:

- Location: 100m from ice source; 400m from house
- A letter dated 1776 to the owner<sup>14</sup> Notes: describes an ice house with circular pit and egg-shaped section with hollow walls. It is not known if the ice house was built to this design.

#### **CROWHURST** Crowhurst Park

Documentary evidence only, shown on OS Map<sup>15</sup> as "Icehouse" and "Icehouse Pit" TQ 772134 NGR: Location: 100 m from ice source; 100 m from house No evidence of the ice house on site. Notes:

#### **DALLINGTON Herrings Farm**

Documentary evidence only, shown in sale

particulars. 16

NGR: TQ 661180

Notes: There is no evidence of the ice house on site.

#### **DANEHILL Chelworth**

An underground tank-like structure, reported as an ice house but this is unlikely.

NGR: TQ 413297

- Chamber: Rectangular with curved ends, c. 8 m x 5 m; c.200 m<sup>3</sup> with rendered walls and concrete roof with access through manhole
- Location: Ice source not known; 10 m from house

The house was built in 1908. The size Notes:





and date make it unlikely that this is an ice house.

#### **DANEHILL North Northland Farm**

Verbal evidence only, which suggests it might have been a Type 2 ice house NGR: TQ 402273 Location: Ice source not known; 10 m from house Notes: May have been used by the farmer for meat storage.

#### **FIRLE Firle Place**

A fine large Type 1 ice house in a sloping bank in fair condition.

NGR: TQ 475070

- Pit: Rectangular, 4.8 x 4.2 m, with curved corner buttresses; 80 m<sup>3</sup> with brick walls, a top loading access with brick chute and separate corrugated iron roof.
- Passage: Straight and level, 3.5 m long with 3 doors and brick walls

Location: 200 m from ice source; 200 m from house

#### **FLETCHING Searles**

An interesting Type 2 ice house built entirely above ground on a flat site in good condition, with decorative features.

NGR: TQ 433259

- Chamber: Octagonal, 3.9 m diagonal; 45 m<sup>3</sup> with hollow walls, squared sandstone rubble externally and brick internally, brick paving and radiating channels.
- Location: 150 m from ice source; 300 m from house This is the only ice house in Sussex seen Notes: by the writer built totally above ground.

#### **FLETCHING Sheffield Park**

Documentary and verbal evidence only on level

- site, now demolished.
- TO 411243 NGR:
- Location: 350 m from ice source; 200 m from house

Shown on 1771 estate map as Notes: "Icehouse".17 Local hearsay is that it was used as an air raid shelter during WWIL<sup>18</sup>

#### FOREST ROW Hammerwood Lodge

Type 3 ice house on level site in good condition but filled with rubbish

NGR: TO 446384

c.3 m diameter; c.13 m<sup>3</sup> with brick walls Pit

- Location: 75 m from ice source; 850 m from house
- The house was built by Benjamin Notes: Latrobe in 1792 and the ice house is probably contemporary

#### FOREST ROW Kidbrooke Park

A probable Type 3 ice house on a level site in good condition but of such small size as to be more likely to be a water tank

NGR: 418344

Circular, 1.83 m diameter, 5 m<sup>3</sup> with top Pit: access

Location: 250 m from ice source; 40 m from house





ctio





#### FOREST ROW Pixton Hill

Type 1 ic condition	e house built into a slope in good 1	
NGR:	TQ 437354	
Pit:	Square, 1.85 x 1.85 m; 10.4 m <sup>3</sup> with rendered brick walls	Section
Passage:	Straight and level, 1 m long with 2 doors and brick walls	
ED A MET	FID Framfield Place	

#### FRAMFIELD Framfield Place

Type 1 ico condition	e house built into a slope in good	
NGR:	TQ 491204	
Pit:	Circular, 3.05 m diameter; 21 m <sup>3</sup> with battered brick walls	$\bigvee$
Passage:	Straight and level, 4.6 m long with 5 doors and brick walls	Section
Location:	10 m from ice source; 250 m from house	
Notes:	The existence of 5 doors seems excessive	Plan

#### FRAMFIELD High Cross



#### FRANT Eridge Castle

A sandstone cave with enlarged chamber and vertical shaft to upper ground level partly lined with brickwork. Known locally as an ice house but this seems unlikely NGR: TQ 568342

#### **GLYNDE** Glynde Place

Type 1	ice house built into slope in good condition
NGR:	TQ 458093
Dit.	Circular 366 m diameter and erro

- shaped; 12 m<sup>3</sup> with brick walls and access through top with loading platform
- Passage: Probably straight and level but now bricked up
- Location: 200 m from ice source; 300 m from house

#### **HAMSEY** Coombe Place

Type 1	ice house built	into slope	in good	condition
NGR:	TO391122			

Pit:	Circular, 3.9 m diameter; 36 m <sup>3</sup> with
	battered brick walls and sleeper wall in
	bottom
Passage:	Straight and sloping upwards, 6.7 m

- long, with 3 doors and walls of brick and flint
- Location: 100 from nearest and 1500 m from major ice source; 150 m from house
- Notes: This ice house has almost certainly been reduced in size – it was originally 4.6 m diameter with the passage 3.7 m long

and 2 doors. It is possible that due to the distance from the major ice source there was difficulty filling the pit. There is a recorded description of the filling of the ice house.<sup>20</sup>

#### HARTFIELD Bolebrooke Castle

An ice house has been reported here but its

location makes its unlikely NGR: TQ 475378

Notes: The location is at the confluence of two streams and although there is an earth mound on site there is no evidence of any masonry

#### **HASTINGS Bohemia House**

Type 1 ice house in good condition but access now denied

- NGR: TO 806098
- Pit: Square, 3.71 x 3.71 m; 43 m<sup>3</sup> with battered sandstone rubble walls and a filled in lower entrance
- Passage: Straight and level, 1.68 m long with sandstone rubble walls and 2 doors
- Location: 200 m from ice source; 20 m from house Notes: Surveyed in 1972 and 1984 by Hastings Borough Council Planners Department

#### **HURST GREEN Iridge Place**

Documentary evidence only, shown on OS map as "Icehouse"<sup>21</sup>

NGR: TQ738268

Location: 10 m from ice source; 140 m from house

#### LITTLE HORSTED Horsted Place

An underground structure which is unlikely to be an ice house

NGR: TQ 469193

Notes: Evidence on site is a brick-lined underground passage dug into a sandstone cliff 4.3 m long but apparently without a pit

#### LONG MAN Folkington Place, Polegate

Type 2 ice house built into a slope in the farm outbuildings in good condition

NGR: TQ 560037

Chamber: Rectangular, 3.56 x 2.5 m, 24 m<sup>3</sup> with clunch walls

Passage: Straight and level, 1.94 m with two doors

Location: 20 m from ice house; 40 m from house

Notes: There is an external access chute from a higher level. There is a tiled roof over the clunch vault

#### MARESFIELD Maresfield Park (1), The Old Orchard

Type 1 ice house on a level site in good condition NGR: TQ 462248

- Pit: Rectangular, 4.25 m x 2.7 m with battered brick walls
- Passage: Straight, 2.2 m long with 3 doors, 3 steps down and brick walls.

Location: 400 m from ice source; 700 m from house



Section









Plan





A later floor had been inserted but is no Notes: longer extant

#### **MARESFIELD Maresfield Park (2)**

Reported and now demolished.22 TQ 457251 NGR: Location: 150 m from ice source; 900 m from house

#### **MARESFIELD** Oldlands

Type 1 ice house in good condition formed in a sandstone cliff

NGR: TQ 477270

- Roughly circular, c.3.1 m diameter hewn Pit: from the solid rock; 43 m<sup>3</sup>
- Straight, 3.5 m hewn from solid rock, Passage: with 2 doors and 2 steps down

Location: 150 m from ice source; 600 m from house Apart from the stone facing to the outer Notes: door, this structure is entirely formed from the solid rock. It is partly flooded

#### MARESFIELD Twyford Lodge

A possible ice house hewn out of the solid rock NGR: TO 394311 Pit: Roughly oval, 2 x 1.7 m; 5 m<sup>3</sup>

This seems too small and ill-formed to be Notes: an ice house

#### **NEWICK Newick Park**

Type 1 ice house in restored condition on a level site

- TQ 423195 NGR:
- Circular, 3.05 m diameter with rounded Pit: bottom; 37 m3 with brick walls, an access trap through top and melt water drain in bottom
- Passage: Straight, 2.54 m long with 5 steps down and brick walls
- Location: 500 m from ice source; 250 m from house
- There is no earth cover to the top of the Notes: structure which there probably was originally

#### **RINGMER Norlington Farm**

Type 2 ice house on level site in good condition NGR: TQ 446131

- Chamber: Rectangular, 6.1 m x 2.84 m; 47 m<sup>3</sup> with brick walls
- Location: 100 m from ice source; 20 m from house There are 2 steps down from ground Notes: level

#### **RODMELL Rodmell Manor**

- Type 2 ice house on level site in good condition NGR: TO 420062
- Chamber: Rectangular, 6.83 x 2.82 m; 35 m<sup>3</sup>; clunch coursed rubble walls with three access holes through vault, one probably original
- Passage: Straight and unroofed, 3.67 m long with -12 steps down
- Location: 250 m from ice source; 75 m from house
- Noted on OS map as "Icehouse".23 Notes:





#### **RYE FOREIGN Springfield Court**

Type 1 ice house built into a sandstone cliff in good condition

NGR: TQ 917217

- Circular, 2.74 m diameter with battered Pit: brick lining to solid sandstone
- Passage: Straight and level, 2.74 m long with brick walls and 2 doors. Access to the outer door is by a flight of 12 steps up to the face of the stone cliff
- Location: 500 m from ice source; 30 m from house This ice house is unique having its Notes: entrance 1.83 m above ground level. It was probably built by excavating down from the top of the cliff

#### UCKFIELD Buckswood Grange (formerly The Rocks)

Type 1 ice house built into a sandstone cliff, in good condition

NGR: TQ 466216

- Circular, 4.8 m diameter with rounded Pit: bottom, with battered brick lining to lower part of solid sandstone, the vault being exposed and neatly trimmed rock Passage: Straight and level, 2.2 m long cut from
- solid sandstone Location: 300 m from ice source; 100 from house Notes: The new house was built in 183824 and it
- is presumed that the ice house was built at this time

#### WADHURST Wadhurst Park

This ice house was demolished about 1970

TO 632288 NGR:

Location: 100 m from ice source; 100 m from house

#### WITHYHAM Buckhurst Park (1)

Type 1 ice house built on a level site in poor condition

NGR: TQ 501352

- Rectangular, 4.38 x 2.45 m with brick Pit: walls, the long sides battered
- Passage: Straight, c.2.7 m long with brick walls, probably 2 doors and approximately 6 steps down

Location: 200 m from ice source; 550 m from house (by track)

Part of the vault over the pit and the roof Notes: over the passage have fallen. The pit is partly filled with rubbish











Section

Plan



Plan





Plan





#### WITHYHAM Buckhurst Park (2)

Documentary evidence only, shown on OS map<sup>25</sup> TQ 499353 NGR: Location: 70 m from ice source; 200 m from house No evidence on site Notes:

#### WITHYHAM Dorset Arms Public House

A large Type 2 probable ice house in excellent condition, now being used as the location for a cold store

TO496356 NGR:

- Chamber: Rectangular, 7.5 x 5.26 m, 7 steps down from ground level; 160 m<sup>3</sup> with uncoursed sandstone rubble walls
- Location: 400 m from ice source; ice house adjacent to house



If this is an ice house it is uncertain to Notes: what house it was attached as the nearby Buckhurst Park had two of its own and it also seems odd that a country public house should have required a large one

#### WITHYHAM "Hawkins", formerly the Rectory

Type 2 ice house now demolished

TO 493356 NGR:

Chamber: Rectangular, c. 6 x 3 m with stone walls Location: c.250 m from ice source; 100 m from

house Information obtained by the writer from Notes: Mrs. Burfoot, the present owner, in February 1993

#### WEST SUSSEX

#### **ALDINGBOURNE Nyton House**

Documentary evidence only

- NGR SU 933056
- Location: 50 m from ice source; 20 m from house
- Demolished before 1880. Was previously Notes: used as a smuggler's store

#### **ARUNDEL Arundel Castle**

e house on flat site in good condition	
TQ 014075	
Square 5.03 x 5.03 m, 150 m <sup>3</sup>	
with brick walls	
Straight, 2.49 m long with 2 doors	
and brick walls	
600 m from ice source,	
700 m from house	
Used as a petrol stores in 1920s	
	e house on flat site in good condition TQ 014075 Square 5.03 x 5.03 m, 150 m <sup>3</sup> with brick walls Straight, 2.49 m long with 2 doors and brick walls 600 m from ice source, 700 m from house Used as a petrol stores in 1920s

#### **BALCOMBE Brantridge Park**

Documen	tary evidence only
NGR:	TQ 291299
Location:	Close to ice source, 400 m from house
Notes:	Shown on 1:2500 OS map as "Ice House Hovel". <sup>27</sup>

#### **BARLAVINGTON Burton Park**

Type 1 ice house on flat site in poor condition, the dome and passage roof collapsed SU 975172 NGR:

- Circular, 3.81 m diameter; c.30 m<sup>3</sup> with Pit: brick walls
- Straight, 2.92 m long with about 7 steps Passage: down, 2 doors and brick walls

Location: 200 m from ice source, 700 m from house Probably built in 1831 when the house Date: was built.28

#### BOGNOR REGIS Holtham House (London Rd)

Type 1 ice house on flat site in excellent condition

- NGR: SU 936995 Pit: Circular, 3.61 m diameter, 49 m<sup>3</sup> with brick walls
- Passage: Straight 3.15 m long with 2 doors and brick walls
- Location: 350 m from ice house, 450 m from house Probably built in 1790s when the house Date:
- was built29 Owned by Arun District Council and Notes: available for viewing

#### **CHICHESTER Kingsham House**

Type 2 ice house on flat site now demolished

- SU 861037 NGR:
- Chamber: Rectangular, c. 3 x 2 m, 18 m<sup>3</sup> with brickwalls
- Passage: Straight, c.3 m long with c.8 steps down Location: Ice source not known; ice house 100 m from house
- Notes: Site now occupied by Chichester High

Type 2 ice house built under forecourt in good

NGR: TQ 225338

- Chamber: Barrel shaped, 4.42 m x 2.82 m; 20 m<sup>3</sup> with stone walls
- Location: 250 m from ice source; 20 m from house Built into the retaining walls surround-Notes: ing the forecourt and contemporary with the house (1823)30

#### **DUNCTON Burton Park**

Documentary evidence only

SU 967179 NGR:

Location: 250 m from ice source; 400 m from house Shown on OS map as "Icehouse Notes: Grove"31

#### **FINDON Findon Place**

Type 1 ice house built into a slope in good condition

NGR: TQ 114084

- Pit: Circular, 3.11 m diameter; 38 m3 with brick walls
- Passage: Straight and level, 2.9 m long with 2 doors and flint walls
- Location: 600 m from ice source; 250 m from house
- There are sleeper walls in the bottom of Notes: the pit. It was possibly built after 1876 when the house was enlarged.32













# Plan

Sectio

Plan

- - School for Boys

**COLGATE Holmbush** 

condition

#### **FINDON Muntham Court**

Type 1 ice house built into a slope in poor condition TQ 109095 NGR:

- Circular, 2.49 m diameter; 21 m3 with Pit: brick walls
- Straight, c.3 m long with probably 2 Passage: doors, 2 steps down and flint walls
- Location: 450 m from ice source; 100 m from house Probably built after 1850 when the house Notes: was built.33

#### FUNTINGTON Bowhill (formerly Woodend)

Type 1 ice house on a level site in good condition NGR: SU 817089

- Circular, 3.08 m diameter; 27 m<sup>3</sup> with Pit: brick walls
- Passage: Straight, 3.6 m long with 2 doors, 3 steps down and brick walls

Location: Ice source not known; 100 m from house

Notes: There is a passage from the side of the pit leading to another chamber with separate entrance. This was possibly constructed during WWII as an air raid shelter.

HARTING Uppark (Lower Ice House) Type 1 ice house built into a slope in good

condition

- NGR: SU 783176
- Circular, 2.5 m diameter with rounded Pit: bottom; 21 m3, with part clunch and part brick walls with vaulted sump in bottom Passage: Level, part straight, part curved, 8.4 m
- total length with brick walls
- Location: 300 m from ice source probably "Dog Kennel Pond"; 300 m from house

#### HARTING Uppark (Upper Ice House)

Type 1 ice house on a level site in poor condition, much silted up

- SU 783177 NGR:
- Circular, 3.15 m diameter; 39 m<sup>3</sup>, with Pit: flint rubble walls
- Passage: Straight, 4.15 m long with 2 doors, c.13 steps down and flint rubble walls

#### HURSTPIERPOINT Danny House

Type 1 ice house on a level site in restored condition

NGR: TO 285146

Pit: Rectangular with one curved end, 4.12 m x 1.98 m; 27 m<sup>3</sup>, with brick walls

Location: 700 m from ice source; 200 m from house There is no entrance passage but there Notes: may have been one originally. The pit is now flooded

#### HURSTPIERPOINT Latchetts (in College Lane) Type 1 ice house on a level site in restored and

converted condition

NGR: TQ 291169

Pit: Circular, c.4 m diameter, with conical tiled roof





#### **KEYMER** (Hassocks), Crown Point House, (Woodsland Road)

Type 1 ice house on a level site in restored and converted condition

NGR: TO 305156

Circular 3.5 m diameter; c. 37 m<sup>3</sup> Pit:

The dome over the pit appears to be Notes: concrete and may be a replacement. Now being used as a garden store with a floor at ground level. There is no evidence of an entrance passage

#### LANCING Lancing Manor

Type 1 ice house on a level house in good condition but with entrance now sealed

NGR: TQ 186057

- Pit: Circular, 3.1 m diameter; 29 m<sup>3</sup> with hollow brick walls and a double bottom with a domed sump
- Passage: Dog-legged, 6 m total length with 3 doors, c.14 steps down and flint rubble walls
- Location: Ice source not known; ice house is 110 m from house

#### LINCH Hollycombe

An alleged ice house on the site of a reservoir SU 853294 NGR:

This structure is a small chamber 2 x Notes: 1.19 m in front of a 3 bay brick built reservoir. It is not shown on OS map dated 1875 but is noted as "Icehouse" on the 1914 Edition<sup>34</sup> when it was probably wrongly identified by the OS surveyors.

#### **LOWER BEEDING Leonardslee**

No information available

#### LOXWOOD Loxwood House

Documentary evidence only although there is a mound to be seen in site. NGR: TQ 035331 Shown on 6" OS Map.35 Notes:

#### MIDHURST Cowdray

Type 1 ice house built into the slope of St. Ann's Hill, in good condition

SU 888215 NGR:

- Pit: Circular 3.25 m diameter, 42 m<sup>3</sup> with stone rubble walls. There is a drainage sump in the bottom 1.47 m diameter and 1.01 m deep
- Passage: Straight and level, 2.9 m long with 3 doors and stone rubble walls
- Location: 300 m from ice source; 180 m from house Local knowledge refers to ice being Notes: collected from flooded meadows.36



































#### NORTH HORSHAM Holbrook Park

#### Documentary evidence only

NGR:	TQ 180343
Notes:	Shown on 1:2500 OS Map as
	"Icehouse".37

#### **PARHAM Parham House**

Type 1 ice house built into a slope in excellent condition

- NGR: TQ 064144
- Pit: Circular 2.82 m diameter, 34 m<sup>3</sup> with brick walls
- Passage: Straight and level, 3.12 m long with 2 doors and brick walls
- Location: 800 m from ice source; 500 m from house

#### **PATCHING Michelgrove**

Possible Type 2 ice house on level site in fair condition

- NGR: TQ 081083
- Chamber: Rectangular 3.5 x 2.85 m; c.28 m<sup>3</sup> with brick walls
- Passage: Straight and level, 1.7 m long with 2 doors and brick walls
- Location: 100 m from ice source; 50 m from house Notes: A structure built into an earlier retaining wall probably between 1801 and 1829 and subsequently altered to incorporate the entrance passage. There is a roof trap



#### **PATCHING Dulany House**

Type 2 ice house on level site in restored condition NGR: TO 088063

Pit:	Circular, 3.06 m diameter; c.21 m3 with
	brick walls.

- Passage: Dog-legged, 4.6 m long with 3 doors, 8 steps down and brick walls
- Location: 500 m from ice source at Patching Pond; c.200 m from house
- Notes: The pit has been floored over and it is used as a store

#### **PETWORTH Petworth House**

Type 1 ice house in excellent condition on level site



NGR: TQ 976219

Pit:	Circular pit 8 m diameter with inverted
	dome bottom and divided into 3
	separate chambers; 218 m <sup>3</sup> with brick
	walls
100 C	

- Passage: Curved around two thirds of the pit 15 m girth with six doors and with a straight flight of 9 steps down Location: 500 m from ice source; 50 m from house
- Notes: Probably the most spectacular ice house in Sussex. Built in 1784. Originally had

timber staging in the bottom and loading chutes. Full report and drawings by the writer.<sup>38</sup>

#### PLAISTOW Shillinglee Park

Type 1 ice house built into a slope in poor condition

- NGR: SU 970325
- Pit: Circular, 3.5 m diameter; c.27 m<sup>3</sup> with battered brick walls
- Passage: Straight, 3.1 m long with probably 3 doors and brick walls
- Location: 50 m from ice source; 200 m from house Notes: The walls of the passage and the dome over the pit are partly fallen, the roof of the passage is mising and the bottom of the pit and passage are filled with rubble. Probably built in 1776-8 when the house was rebuilt.<sup>39</sup> It was also noted in a sale notice of furniture in 1788.<sup>40</sup> The site is now part of Shillinglee Golf Course.

#### RUDGWICK Hedgecocks (formerly Oakwood Grange)

Type 1 ice house on level site in good condition NGR: TQ 123358

- Pit: Circular 3.43 m diameter; c.49 m<sup>3</sup>, bottom part filled
- Passage: Straight 3.8 m long with 2 doors, 5 steps down and brick walls
- Location: 350 m from ice source; 200 m from house Notes: The house now occupied known as Honeywood House

#### **RUDGWICK Hermongers**

Documentary evidence only

NGR: TQ 099343

Notes: Shown on OS map<sup>41</sup> as "Icehouse" but no evidence on site.

#### **RUSPER** Ewhurst Place

A possible Type 3 ice house, the only evidence on site is a circular ring of brickwork 1.5 m diameter adjacent to the moat NGR: TQ 248374

#### **RUSPER** Ifield Court

An ice house has been reported here but there is no evidence on site NGR: TQ 2438

#### SHIPLEY Knepp Castle

Type 1 ice house on a level site in good condition NGR: TQ 153211

- Pit: Circular 4.57 m diameter; 87 m<sup>3</sup> with battered brick walls
- Passage: Straight and level 1.84 m long with two doors and brick walls
- Location: 50 m from ice source; 500 m from house
- Notes: There is evidence of another entrance, possibly for loading. The lower part of the pit is flooded. Personal recollection<sup>42</sup> states it was being used just prior to WW I





Section

Plan



Section Plan

Section

Pian

#### SINGLETON Drovers

Type 1 ice house on a sloping site (but with the entrance on the uphill side) in fair condition SU 879144

NGR:

Circular 3.8 m diameter: c.49 m<sup>3</sup> with Pit: battered brick walls to enlarge the pit towards the bottom

Passage: Straight 4.5 m long with 2 (or 3) doors and 6 steps down. The outer part may have been vaulted over the steps

Location: Ice source not known; 400 m from house The bottom of the pit is filled with Notes: rubbish and the side walls of the steps are ruinous so the existence of a vault over this is unknown

#### **SLAUGHAM Ashfold**

Type 1 ice house on level site in poor condition TQ 249286 NGR:

- Circular 2.97 m diameter; c.28m3 with Pit: brick walls
- Passage: Straight, 1.52 m long with several steps down
- Location: 100 m from ice source; 300 m from house The passage roof and most of the dome Notes: over the pit have fallen and rubble fills them

#### **SLINDON Slindon House**

Type 1 ice house built into a slope in good condition

- SU 958084 NGR:
- Circular 3.15 m diameter; c.38 m<sup>3</sup> Pit:
- Straight, 2.4 m long with 2 doors, 2 steps Passage: down and brick walls
- Location: 300 m from ice source; 200 m from house
- Bottom part of pit is filled with rubble Notes:

#### SLINFOLD Townhouse Farm House

Type 2 ice house in the basement of farm buildings NGR: TQ 123326

Chamber: Rectangular 5.79 x 3.06 m; 32 m<sup>3</sup>, with sandstone rubble walls

Passage: An open flight of steps

Location: Ice source not known. Ice house is adjacent to house

#### SOMPTING Sompting Peverel (formerly Church House)

An alleged Type 3 ice house more probably a garden water reservoir

TQ 161054 NGR:

- Chamber: Rectangular 1.4 x 1.5 m; 5 m<sup>3</sup> with walls rendered internally
- Location: 450 m from possible ice source; adjacent to house
- There are various pipes through the Notes: walls and a top access cover

#### SOUTHBORNE In village of Nutbourne

Reported but no documentary or other evidence NGR: SU 7705







TQ 171293 NGR: Location: 60 m from ice source; 400 m from house Notes: Shown as "Ice House" on OS map.43

#### STEDHAM WITH IPING Rotherhill House

Documentary evidence only.44 SU 853227 NGR: Location: Ice source not known; 300 m from house Notes: Ice house has been filled in

STORRINGTON Byne House (On Manley's Hill) Probably a Type 1 ice house on level site with access to pit bricked up and entrance passage filled with earth

NGR: TQ 090142

Passage: Straight with flight of steps down Location: Ice source not known; 10 m from house

#### **STOUGHTON Stansted House**

A probable Type 1 ice house now demolished SU 760104 NGR:

Location: 700 m from ice source; 300 m from house A sunken area is visible at the site. It is Notes: marked on the OS map17 as "Icehouse"

#### **STOUGHTON Watergate House**

Documer	tary evidence only. <sup>45</sup>				
NGR:	SU 785118				
Location:	Ice source not known; probably 100 m				
	from house				
Notes:	The house was burnt down shortly				
	before WWII				

#### **TILLINGTON Pitshill House**



#### WARNHAM COURT Warnham Court

Type 1 ice house on level site in poor condition

TQ 158330 NGR:



The vault over the passage has been Notes: demolished and rubble fills the passage and pit. Probably built in 1828 when the house was built.46





# Sectio







ection

#### WEST DEAN West Dean

built.47

Type 1	ice house on	level ground,	recently	restored
NGR:	SU 862119			

- Pit: Circular, 3.6 m diameter; 48 m<sup>3</sup>, with battered clunch walls and drainage sump in bottom with wrought iron grillle
- Passage: Dog-legged, 5.10 m long with 3 doors, 8 steps down and brick walls Location: Ice source not known; ice house 600 m
- from house Notes: Probably built in 1804 when house was

#### WESTHAMPNETT Goodwood House (1)

Docum	entary	evidence only, shown on OS map.4	18
NCP.	SUI	884088	

Location: Ice source not known; ice house is 250 m from house

#### WESTHAMPNETT Goodwood House (2)

- Type 1 ice house on level site in good condition NGR: SU 889087
- Pit: Circular, 3.53 m diameter; 56 m<sup>3</sup> with brick and clunch walls
- Passage: Straight, 5.9 m long with 2 doors and 12 steps down
- Location: Ice source not known; ice house is 300 m from house
- Notes: There is a loading access trap through top of pit. A garden shelter has been built over the top of the ice house. There is no normal access to this structure as the entrance steps have been slabbed over

#### INDEX BY HOUSE NAME

House Ades Arundel Castle Ashfold **Battle Abbey** Bodiam - Rectory Cottage **Bohemia House Bolebrooke** Castle Bowhill (Woodend) **Brantridge** Park **Brightling Park Marine Pavilion Buckhurst Park** Buckswood Grange (The Rocks) **Burton Park** ditto **Buxted Park Byne House Chant Farm** Chelworth **Coombe** Place Cowdray Castle **Crowhurst Park Crown Point House** Danny House **Denne** Park Dorset Arms P.H.

Parish Chailey (E) Arundel (W) Slaugham (W) Battle (E) Bodiam (E) Hastings (E) Hartfield (E) Funtington (W) Balcombe (W) Brightling (E) Brighton (E) Withyham (E) Uckfield (E) Barlavington (W) Duncton (W) Buxted (E) Storrington (W) Rotherfield (E) Danehill (E) Offham (E) Midhurst (W) Crowhurst (E) Keymer (W) Hurstpierpoint (W) Southwater (W) Withyham (E)



#### WISTON Wiston House

Type 1 ice house built into a slope in good condition

NGR: TQ 156124

- Pit: Circular 3.4 m diameter with rounded bottom; 43 m<sup>3</sup>, with rendered brick walls and rough natural stone bottom
- Passage: Straight and level; 3.1 m with 2 doors and brick walls
- Location: 100 m from ice source; 150 m from house Notes: There is a loading shaft through the dome over the pit

#### WORTH The Hall



- NGR: TQ 320361
- Location: 200 m from ice source; 30 m from house

Notes: The only visible part is a circle of brickwork in a raised garden

#### **WORTH Rowfant**

Type 1 ice house on level site in good condition but partly filled

NGR: TQ 325373

- Pit: Circular, 3.07 m diameter; c.30 m<sup>3</sup> with brick walls
- Passage: Straight and level, 2.3 m long with 2 doors and brick walls

Location: 250 m from ice source; 200 m from house Notes: There is an access trap through the top of the dome

#### WORTHING Church House, West Tarring

Reported as an ice house but probably a water reservoir.<sup>49</sup>

House

Drovers **Dulany House** Eridge Castle **Ewhurst Place Findon Place Firle Place** Folkington Manor Framfield Place **Glynde** Place Goodwood House Hammerwood Park Hedgecocks Hermongers Herring's Farm Hewkins **High Cross** Holbrook Park Hollycombe Holmbush The Hooke Horsted Place Hotham Park **Ifield Court Iridge** Place **Kidbrooke** Park **Kingsham Farm** 



Singleton (W) Patching (W) Frant (E) Rusper (W) Findon (W) Firle (E) Long Man (E) Framfield (E) Glynde (E) Westhampnett (W) Forest Row (W) Rudgwick (W) Rudgwick (W) Dallington (E) Withyham (E) Framfield (E) North Horsham (W) Limch (W) Colgate (W) Chailey (E) Little Horsted (E) Bognor Regis (W) Rusper (W) Hurst Green (E) Forest Row (W) Chichester (W)



Sectio





House Knepp Castle Lancing Manor Latchetts Leonardslee Linkwell Loxwood House Maresfield Park Michelgrove Moulsecoomb Place Muntham Court Newick Park Norlington Farm North Northland Farm Nutbourne Nyton House Oakwood Grange (Hedgecocks) Oldlands Petworth House Peverel House Parham House Pitshill Pixton Hill

Parish Shipley (W) Lancing (W) Hurstpierpoint (W) Lower Beeding (W) Bexhill (E) Loxwood (W) Maresfield (E) Patching (W) Brighton (E) Findon (W) Newick (E) Ringmer (E) Danehill (E) Southbourne (W) Aldingbourne (W) Rudgwick (W) Maresfield (E) Petworth (W) Sompting (W) Parham (W) Tillington (W) Forest Row (W)

#### House

The Rocks Rodmell Manor **Rotherfield House** Rowfant Searles Sheffield Park Shillinglee Park Slindon House Springfield Court Stanmer House Stansted House **Townhouse Farm Twyford House** Uppark Wadhurst Park Warnham Court Watergate Park West Tarring Church House West Dean Wiston House Woodend Worth Hall

#### Parish Uckfield (E) Rodmell (E) Stedham with Iping (W) Worth (W) Fletching (E) Fletching (E) Plaistow (W) Slindon (W) Rye Foreign (E) Brighton (E) Stoughton (W) Slinfold (W) Maresfield (E) Harting (W) Wadhurst (E) Warnham (W) Stoughton (W) Worthing (W) West Dean (W) Wiston (W) Funtington (W) Worth (W)

# THE MILLS OF FOREST ROW: ADDITIONAL NOTES

# M.J. Leppard

A number of East Grinstead parish records in the West Sussex County Record Office and some published material permit some additions and a few corrections to Mr. Tighe's article 'The Mills of Forest Row' in *Sussex Industrial History* No. 23 (1993).

#### 1 POCK HILL

Ernest Straker<sup>1</sup> notes that this mill is marked on Figg's and Greenwood's maps of 1823 and that the artificial mound on which it stood had 30-40 year old trees on it. It appears on the skyline in one of Bourne's 1826 pictures but not in the 1851 census, where John Huggett, farmer, is at Pock Hill and two families of agricultural labourers at No's. 1 and 2 Windmill Field adjoining. It may be that it was this mill that was occupied by W. Sherlock, miller, listed in the 1811 draft census return immediately after Edward Heaver, miller, though possibly he worked Tablehurst for or with Heaver.

Frame post, which puzzled Mr. Tighe at this point, can be shown from other records to be an alternative name for Dunnings Mill.

# 2 CUTTONS HILL (Unfortunately printed as 'Cluttons')

The earliest reference so far traced is in 1809<sup>2</sup> when Ashurst Wood Mill on the summit of Cuttons Hill is noted as a landmark. John Edgington, miller, is in the right position in the 1811 draft census listing to be there. In 1823 Pigot's Directory records John Royst at Cutton's Hill, the 1824 church rate book has Samuel Gilham late Rice. Gilham is there in the 1825 parish valuation (Windmill Land etc., £16/10/-) and the 1828 Pigot. John Turner appears in the 1831 draft census return, the 1832 Pigot and in 1838 in the parish church rebuilding order book. William Heasman is listed in the 1839 Pigot and the 1843 church rate book and William Walker Heasman in the 1855 Kelly's Directory. Straker (loc. cit.) gives a photograph of the mill shortly before it was pulled down in 1882 and says the last miller, Mr. Edwards, was still alive and grieving in 1939.

Two other names may belong to one or other of these mills. John Bishop, miller, apparently at Ashurst Wood in the 1821 draft census return, was probably at Cuttons Hill, possibly at Pock Hill. William Kelsey, miller at Ashurst Wood in the 1832 *Pigot* (earlier of Brambletye), probably belongs to Pock Hill. In addition William Heasman, miller, appears in the fragmentary 1831 draft census return, perhaps the same as found later at Cuttons Hill.

#### **3 BRAMBLETYE**

William Durrant was already here in 1794<sup>3</sup> and is in the right place in the list in the 1785 land tax.<sup>4</sup> He died 27 March 1812, aged 58. William Durrant II died 6 February 1824, aged 32.5 It seems as if his widow Elizabeth and William Kelsey then shared responsibility. She is listed in the 1824 church rate book and 1828 Pigot, he in the 1825 parish valuation and 1826 church rate book. The land and mill were valued at £58. In 1825 the select vestry resolved that Messrs. Sisley and Durrant were to supply the workhouse with flour at 15d. per gallon for three months. It is not clear what mill Sisley had in 1825 but from the 1832 Pigot to the 1843 church rate book he was at Brambletve. In 1835, however, Mr. E.C. Byford records John Collings at the mill and farm.<sup>6</sup> Robert and Alfred Grove, mentioned by Mr. Tighe, are listed immediately before Brambletye in the 1851 census so must belong to the mill there. The 1855 Kelly's Directory has James Mellish already at Brambletye. In 1866 he got the railway company to provide for a keeper at Brambletye crossing on the newly opened line because of the potential danger to five-horse teams going to and from the mill.7 By 1910 C. Holmden & Sons was the millers' designation in Dixon's East Grinstead Almanack. In the next year's edition their premises at 202-206 London Road, East Grinstead, were also mentioned. Straker says Dickson and church took over in 1929 and the machinery was being sold in 1939.8

#### **5 TABLEHURST**

Edward Heaver, too, was already instated by 1794 and in the right place in the 1785 land tax. His name occurs in a variety of sources until the 1839 *Pigot*. Robert Turner is the miller in the 1855 and 1887 *Kelly's Directories* and G. and H.C. Turner in *Dixon's Almanacks* for 1910, 1911 and 1912. Straker says it ended in c.1927, having been worked by the Turners for 90 years. Mr. Tighe implies that Straker claims the mill was moved bodily but I think he means it was rebuilt on a different site.

One other name which probably belongs to Tablehurst, possibly to Brambletye, is Snelling, a miller of Forest Row in the third quarter of the eighteenth century.<sup>9</sup> Over a score of other millers' names are known for the ancient parish of East Grinstead from 1597 onwards, often with surnames met at the mills considered here, and it is probable that several of them belong to the Ashurst Wood and Forest Row mills.

#### The 1851 Census.

In Mr. Tighe's list of extracts Rowfant belongs in the parish of Worth. Old Mill had long before ceased to function and Mill Place had been an iron furnace. A good deal is known about the other mills listed, perhaps enough to justify another article.

#### REFERENCES

- 1. Ernest Straker, 'Lost Mills Around East Grinstead',
- Sussex County Magazine, Vol. 13 (1939) 387.
- 2. H.R. Attree, Topography of Brighton (1809) 53
- 3. Universal British Directory (1794)
- 4. Sussex Record Society Vol. 77 (1991) 92
- 5. M.I., East Grinstead churchyard.
- 6. Forest Row, Vol. 4, pt.4 (Nov.1990) 4.
- 7. Information from Mr. D. Gould.
- 8. Straker loc. cit.
- 9. Sussex Archaelogical Collections, Vol. 114 (1976) 77.



Tablehurst Mill, Forest Row, Frith postcard of 1907

# A LEWES BANKING HOUSE:

An outline of the development of the private bankers, Messrs. Whitfeld, Molineux and Co. who traded as the Lewes Old Bank from 1789-1896.

# Alan F. Hill

The Lewes Old Bank enjoyed the longest independent life of any of the early private banks in Sussex, having commenced trading on 1 July 1789 and finally merging with 18 other private banks to form Barclays Bank Ltd. in 1896.

The first private bankers were wealthy, respectable solvent folk, being well respected in the community for their integrity and honesty and were usually drawn from trade or industry. Early banking activities were usually combined with other business pursuits and this greatly coloured the thinking, judgement, and policies of the first bankers and subsequently the traditions of English Banking.

- 1789 It was on the 8 June 1789, that the four partners signed the preliminary agreement (Fig. 1) to form the Lewes New Bank. They were Francis Whitfeld a grocer and provision dealer, Joseph Molineux, an ironmonger, Richard King, a tallow chandler and soap maker and Benjamin Comber, described as a gentleman. The main partnership deed was signed on 1 July 1789, with each partner subscribing an initial sum of £5000 capital. On the first day of business 10 accounts were opened and by the end of July 1789 this had risen to 46 accounts. Business continued to prosper and by the end of June 1792 the bank operated 430 accounts, with money lodged totalling £110,857. There were 34 loan accounts with a figure of £36,600 being advanced. These figures included a sum of £14,500 lent to a downland farmer and a bankrupt account of £7000.
- 1793 During 1793 business confidence was shaken in Lewes when the Lewes Old Bank (formed in 1782 by Thomas Harben and the brothers Flight) ceased trading. Whitfeld Molineux & Co. took over the business and assumed the title of Lewes Old Bank. At the same time another bank in the town wound up its operations after meeting all its liabilities. Its proprietor, Richard P. Rickman then opened an office in Brighton (Brighthelmstone Bank) and traded very successfully there from 1793 to 1814, when the Rickman family withdrew from the firm to concentrate on

their other family businesses in Lewes of Corn Broking and Brewing. The banking firm continued to trade in Brighton until 1842 when it failed. Thomas Dicker, the elder, formerly manager of the Harben banking venture, was appointed manager of the re-constituted Lewes Old Bank.

- 1803 Partner Richard King died aged 54 years with no heir of age to take his place in the partnership. The King family still retained its banking connections nationally over the years with Richard King's third son Daniel becoming agent to the District and Provident Association of Brighton. This was a charitable deposit taking institution operating under the patronage of both HRH George IV and William IV. His second son formed H.S. King & Co. in 1867 who traded as banking agents in the UK and Indian sub continent to the Indian Civil Service. Samuel King was succeeded by his son, who continued the business. He was also a director of Lloyds Bank and MP for Hull. After WWI H.S. King & Co. merged with Cox & Co. (the military bankers) to form Cox & Kings the private banking firm. After a short period of independence they merged with Lloyds bank in 1923.
- 1805 A new banking firm opened in Lewes. Known as the Lewes Bank and traded from premises at 58, High Street, the partners being Messrs. Wood, Hall, Godlee, and Flint. The main partner in this venture was Nathaniel Hall, who was involved with the Brighton Union Bank, which had opened for business earlier in 1805.
- 1806-1807 The partnership was revised with Benjamin Comber leaving the firm. Francis Whitfeld died and was succeeded by his son Thomas Whitfeld. Harry Hurly and Thomas Dicker joined the partnership.
- 1815-1816 A banking and financial crisis occurred in England, caused by a poor harvest and overcommitted private banks. The East Grinstead Bank failed and the Lewes Old Bank acted as trustee in bankruptcy. In 1818 the partnership took over the failed bank's business and opened an agency in the town, which was retained until 1887 when upon the death of the agent a full branch was opened.
- 1816 The Lewes Savings Bank was formed. The partners of the Old Bank were involved as local bankers, Treasurers, Trustees and managers of the institution for the whole of its 102 year

Denjamun Comber of Lucion the founty of Sufre Gentling Francis Whitficht of the same place Weil Staples Soseph. Molineus of the same place Soore. Monger and Richard Hing of the same places Suplactor De hereby maturaly and recipiorally Promise and Age and with wach other to become bepartness logether in the Jourdes o of Bunkow to be Chathisticd wind carried on bat steward for the them. Server yours to commence grow the levenly fourth day of Sume instant with a Capital of twenty thousand pounds to to funnished by en equal Bignations that is to vary Fice thereand pounds aticas a b, Ficent for the vuen ouch person is deficing hin And we definition ag ere to execute. Asticles of Agreemonts for carrying on the seid a Bartnewhip Stade with the concord (thean & band (our Inocited on such others as the onegoiling where the as voon as the vame can to profined AMA as and seconsaily agreed that of either of the said Railiershall og carry hia. Sycament into Goculienon to cocule such Steliches Partnewhip he whall forfeitund pay beacher the other of the haused of wayful money of lain.a luo hundred wal A Mas AVITACKS out hands the after wuch De to day of Juno in the year of our Loid the Themand Sur hund. hli mana s

Fig. 1 Preliminary Partnership Agreement dated 8 June 1789

existence. Apart from their involvement with the Lewes Savings Bank the partnership was associated with other savings institutions. At Uckfield and Battle (after 1857) they were employed as Treasurers and local bankers, whilst at East Grinstead and Tunbridge Wells the

partnership agent in both towns performed a dual role of Actuary and local banker.

1822 A branch was opened at Tunbridge Wells. Partner Thomas Dicker the elder died.

- 1823 Thomas Dicker the younger became a partner. It was usual to see sons following fathers into business, in fact partnership agreements of this time made this provision as long as the male heir was of age.
- 1825-1826 Another banking crisis took place with the whole of the private banking system under pressure. Doubts were expressed locally about the ability of the Old Bank to meet payments against its notes. A run on the bank was averted by a group of 42 local persons of rank and substance publishing a declaration and guarantee for the Old Bank's note issue to the extent of £202,000 (Fig. 2). The panic was to prove short lived for the Old Bank. The outcome of this national crisis was a reform that allowed the formation of Joint Stock Banking Companies.

The partners only competitor in the town, the Lewes Bank, ceased trading after meeting all its liabilities, but Nathaniel Hall continued his association with the Brighton Union Bank.

- 1837 Another partner Harry Hurly died. The firm's London Agent Messrs. Esdaile, Grenfell, Thomas & Co. failed and the new agents appointed were Messrs. Williams, Deacon & Co. of Birchin Lane, London.
- 1839 A branch of the recently formed Joint Stock Bank, London and County Bank was opened in the town. By takeover and merger over the years this company became National Westminster Bank, who are still represented in Lewes.
- **1853** Partner Thomas Dicker the younger retired, ending a family connection with the firm that had spanned 60 years.
- 1854 The partners opened a branch at Eastbourne.
- 1856 The bank was involved in a libel action against the South Eastern Railway, which had alleged the banks failure. The case was won with £2000 damages awarded, though costs of the case totalled £2400.
- 1857 The Hastings Old Bank failed. The Lewes Old Bank partnership took over firm's agency and business in Battle and upon the retirement of the local agent in 1866 converted his premises to a full branch.
- 1870 A branch opened at Uckfield. Before this date the business of the bank was carried on by Mr. Avis at his shop on an agency arrangement.

We, the Undersigned, having full Confidence in the Integrity and Responsibility of Messra. Hurly, Molineux, Whitfeld, and Dicker, of the Lewes Old Bank, and wishing to prevent the public and private Evils consequent on the Prevalence of any unfounded Alarm respecting the Safety of their Bank-Notes, do hereby undertake to indemnify the Holders, during the next Six Months, of such Notes, to the Amount of the several Sums set against our respective Natnes. Witness our Hands the 19th Day of December, 1825.

	Gage, £	0,000
	J. Shelley,	5,000
	George Shiffner, -	5,000
	Thos. Partington, -	5,000
	H. Campion,	5,000
	Thos. Tourle,	5,000
1	Wm. Courthops Mabbott,	5,000
1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	J. Hoper,	5,000
	George and John Hoper,	5,000
	Nathaniel Kemp	5,000
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	James Ingram -	5,000
	W. F. Hick,	5,000
	Thos. Beard,	5,000
1	John Ellman,	5,000
	Wm. Verrall,	5,000
	John Ellman, jun	1,000
	P. G. Crofts	5,000
	Wm. Ridge, sen	5,000
	John King,	5,000
	Thos. King	5,000
	Edrod. Raynes, -	5,000
	Thomas Woodward, -	5,000
	Thos. Read Kemp,	5,000
	Elizabeth Dealtry, -	5,000
	Henry Trevor,	5,000
	Frederick Marlen -	2,000
	James Henry Stater, .	5,000
	L'. Elepburn,	5,000
	Admi. Sir John Wells,	5,000
	Chas. Harison, -	5,000
	Thos. C. Faulconer, -	5,000
	A hos. Comber, -	5,000
	John Martin Cripps, -	5,000
	Mrm. Harison,	5,000
	Diald King S	5,000
	Too Smith	5,000
	Vos. Smill,	5,000
	Banda Verral,	2,000
	E I Contais	0,000
	Ed Emishy Flowing	0,000
	John Holmond	5,000
		0,000
	Total £20	92,000
	LEWIS I PRINTED BY W. LER.	

- Fig. 2 Declaration of Confidence in Lewes Old Bank and undertaking to indemnify holders of their notes. c.1825
- 1874 The firm suffered a large bad debt and some government stocks were sold to raise cash. Many years passed before the loss to reserves was made good.
- 1881 New local government legislation was introduced. Members of both the Whitfeld and Molineux families were appointed Borough Treasurers of Lewes and Eastbourne, with family members holding office until the late 1920s. The Lewes Old Bank was also designated as Treasurer to the recently formed East Sussex County Council from the 1890s to the mid 1930s.



Fig. 3 Lewes Old Bank premises in the 1890s

- 1890s 96 new branches were opened at Newhaven in 1890, Brighton in 1893, Hailsham in 1894 (since 1867 clerks had attended Hailsham on market days only), Seaford in 1895 and Heathfield in 1896. At the date of the merger in 1896 the Old Bank had a network of 10 branches. The balance sheet of 1891 reveals deposits of nearly one million pounds, advances and bills discounted of over £400,000, while partners' capital had been increased to £100,000.
- 1896 In 1896 the Lewes Old Bank was one of 18 banks that joined with Messrs. Barclay Bevan Tritton & Co. of London and Brighton to form Barclay & Co., later to become Barclays Bank. The Old Bank did not entirely disappear, for within the organisation a Local Head Office was established at Lewes in addition to its branch banking role. Francis Whitfeld continued as resident local director, with Major Harold Molineux taking over the same role at Eastbourne.
- 1909 The London and Provincial Bank Ltd. opened a branch at 64, High Street (premises now occupied by Messrs. Rowland Gorringe & Co.). This bank merged with Barclays in 1918. The local office continued to operate until it was closed in 1935 with its business transferred to the Old Bank.

In May 1946 the branch control was rationalised with the Lewes Local Head Office being closed and its work transferred to an enlarged Brighton Local Head Office. Further rationalisation took place in 1987 with the Old Bank being designated a Business Centre.

The role of the Georgian and Victorian private country banker is under appreciated by Industrial Archaeologists for the part they played in supporting industry and commerce. Unfortunately confidentiality restricts what can be said about the Old Bank's client base, but many customers are of very long standing and have prospered with the firm's support.

For more than 130 years five generations of the Whitfeld and Molineux families were partners in the Old Bank and subsequently Local Directors of Barclays Bank, providing guidance and support for a large portion of the business and farming communities of central East Sussex.

#### SOURCES

- 1. P.W. Matthews and A.W. Tuke, History of Barclays Bank Ltd
- 2. A.W. Tuke and R.J.H. Gillman, Barclays Bank Ltd 1926-1969
- 3. Memorial of the Life and Times of a Late Country Banker - A biography of Thomas Dicker.
- Barclays Bank Central Archive Store, Wythenshawe, Manchester.
- 5. County Directories held at Brighton Reference Library.

# THE LEWES OLD BANK,

#### Established 1789.

#### LEWES, TUNBRIDGE WELLS, EASTBOURNE AND EAST GRINSTEAD.

Sab-Branches: BATTLE, UCKFIELD, NEWHAVEN AND SEAFORD.

----

# BALANCE SHEET, OCTOBER 31, 1891.

ðr.	LIAB	ILITIE	S.							ASSETS	C	r.
A						4	5					
DEPOSIT AND CURRENT ACCOUNT	<b>ns</b>			 •••		942,1	235	8	6	BY CASH ON HAND, AT LOXUON ACENTS, AND WITH OTHER	•	·
DEAFTS ON LONDON BANKERS A	ND SUXDRY	LIABLITI	ES .	 		25,0	974	6 1	•	BANKS	5	3
PARTNERS' CANTAL				 •••		100,0		•	•	. INVESTMENTS :		
										Cunsols (£240,103 175. 5d., including £15,000		
										deposited as cover for County, &c., Accounts) 227,397 6 2		
										Securities guaranteed by the Indian and Colonial		
										Governments 129,361 0 0		
										English Railway Debenture and Preference Stocks,		
									104	and other Securities 60,563 8 0		
										Montgages and Life Assurance Policies		
										456,94	6	,
										. FREEHOLD PROPERTILS AND OTHER ASSETS 44.42	13	J
										" BILLS DISCOUNTED AND ADVANCES TO CUSTOMERS 415.51	2	8
									-	" BANK PREMISES 9.74	3	t
					-			-	· .			-
					£1	,007.3	09 1	5 4		£1,067,30	15	4
					-							_

PRICE, WATERHOUSE & CO.

14. GRESHAM STREET, LONDON, E.C., 1918 Norember, 1391.

N.B .- The publication of an Annual Balance Sheet in no way alters the private character of the Bank or the responsibility of the Pottners to the full extent of their property.

Fig. 4 Balance Sheet as at 31 October 1891

# LUMLEY MILL

# **Tony Yoward**

Lumley mill was on the Sussex bank of the River Ems near Emsworth, but all that remains is the miller's house of 1802 (Fig. 4), the partly silted up mill pond and the foundations of the mill and associated buildings (Figs. 2 and 3), an iron launder, the pit wheel and some of the gear wheels (NGR SU 753064). The water course, probably the original Bourne, now called the Ems, runs down the valley from Stoughton to Aldsworth pond, where it is joined by a stream from the brick ponds in the west. It then flows to the village of Westbourne where it forms the mill pond, and so down the western boundary of the parish. Here most of the water was diverted, probably in the eighteenth century when Lumley mill was built, from beside Westbourne church to feed a watercress bed on its way to the Mill. This leat still exists although it is now piped under the new dual carriageway. The county boundary follows the original course of the Ems at the bottom of the meadows. One can hardly imagine how this stream could have driven a mill and fed the

watercress beds with the poor little trickle which now flows in the Summer, but water extraction at Walderton has taken its toll. It does seem that water shortage is not restricted to the twentieth century as the *V.C.H.* states that 'In 1327 there were three mills in the manor, valued at only 100/- "because they sometimes stand idle for want of water", and in 1663 part of the rent of a water corn mill was remitted because it stood idle for a month and 20 days.

Lumley Mill was built in 1760 when the Stansted Estates, of which it was a part, was owned by James Lumley MP. The Lumley family owned Stansted from 1579 to 1766 and had in addition extensive properties in the North of England including Lumley Castle Co. Durham. Richard, 2nd Viscount Lumley had been created first Earl of Scarborough in 1690. In 1778 Richard Barwell (b.1741 - d.1804) bought the Stansted Estate, which included Lumley Mill. He was a Indian nabob who made his fortune in India with the East India Co. His crest was a rampant dragon on a green striped shield and he employed Capability Brown to re-design Stansted Park and Gardens. A 1785 Survey & Plans of Barwell Estates in the West Sussex Record



Fig. 1 Lumley Mill at the time of the 1840 Tithe Apportionment



Fig. 2 Lumley Mill Storehouse (1802) and Mill Pond from the East

Office, show that the parishes of Westbourne, Racton, Stoughton, Compton, Upmarden, East Marden, Strayford, Bosham, Chidham and Appledram were included and his property extended to the Hampshire border and included the Slipper Mill at Emsworth.<sup>4</sup>

Edward Tollervey bought Lumley Mill from Barwell on 26 Jan 1802. He then built the castellated mill house which still stands today (Fig. 4), with its delightful feature of a spyhole in one of the decorative recesses above the front door which enabled him to see the lane and watch the entrance to the mill and store house, without being seen himself. According to an article by F.H. Brownridge, Tollervey was a war profiteer of no mean acumen, and had earlier bought or leased a number of mills in the Emsworth area. He was a baker at Half Way Houses in Portsmouth and had decided to make Lumley Mill his headquarters. He built a range of ovens and a number of pigsties. Corn was ground and biscuits made to supply the Army, there being almost 14,000 troops in the Portsmouth area at this time and Naval contracts to fulfill. The grist and broken biscuits fed the pigs which were also sold to the military. Nelson is said to have stayed at the house in Tollervey's time.

C.C. Longcroft in his pamphlet *The Valley of the Ems* written in the 1870s refers to Tollervey as carrying on a

large business as a merchant; who bought Lumley Mill and the surrounding lands in 1802. He added stores and piggeries; built bakehouses for bread and biscuits, then in great demand in Portsmouth. Next to the mill door was the bakehouse with two large ovens, and the building which later became the malthouse was a huge bakery containing three ovens. He also provided beef to the Navy, and his slaughterhouse was later used as the rickyard.

An idea of Tollervey's activities during the Napoleonic War period can be gauged from advertisements which appeared in the local papers:-

"For Public Sale at the Royal Oak, Portsea, on Thursday, 12th July 1810, at 11 o'clock in the forenoon precisely, about 1500 sacks of FRENCH FLOUR, ex the Jonge Louisa, Captain Brom, from Havre, just landed, a small part in Mr. Gallaway's Store, Crown Street, Portsmouth; the remainder in Mr. March's Store, Gosport. Also 208 Burr Stones (ex the Barbara, Capt. Berg, from Havre) Also 150 Brown Corn Bags, ex ditto, just landed by Messrs. Tollervey & Hyde, Halfway Houses, Portsea. The whole may be seen from Thursday 5th inst. in the stores as above; also samples of the flour at the Royal Oak and at Messrs. Tollervey & Hyde, where catalogues may be had and all further particulars



Fig. 3 Lumley Mill (1760) with the Store of 1802 beyond from the South



Fig. 4 Lumley Mill and 'gothick' mill house of 1802 viewed from the East

known; or of John Croft, Sworn Broker, No.3 Savage Gardens, London<sup>2</sup>."

"FOR SALE, 500 sacks of Rye, Pollard & Bran - the good & heavy qualities of which, render it superior to wheaten. For particulars apply to E. Tollervey, Lumley Mill, Nr Emsworth or Tollervey & Hyde, Providence Place, Portsea."

"FOR SALE, a large supply of Pollard and Bran, of a very superior quality, manufactured at the Kings Mill; may be had reasonably on reasonable terms by applying to Edward Tollervey, Providence Place, Portsea ... It is deemed scarcely necessary to observe this Offal is manufactured in a particular manner, that renders it very heavy and will be found well worth the attention of those that may be in want of that article.

A steady active man as Warehouseman, who has been accustomed to the Grocery & Provision trade, and can bring a satisfactory character, may hear of a situation by applying as above."<sup>3</sup>

"MILLERS WANTED. Two grinders and a flour dresser. Men that have a knowledge of their business and can bring good characters from their last masters may hear of constant employment & good wage by applying to Edward Tollervey, Lumley Mills, Nr Emsworth, Hants."<sup>4</sup>

Tollervey had been a person of some substance in Portsmouth and is mentioned in several newspaper articles over the years including one interesting case against him of selling bread underweight. He is said to have lived extravagantly, the demand for bread and flour fell and in 1808 he was compelled to encumber his property. By 1815, the war with France was ended, the Admiralty had cut out civil contractors by constructing its own mills and bakeries in Gosport, troops and naval personnel were discharged and as result the reports in the newspapers changed dramatically. In September 1815 a Commission of Bankruptcy was awarded against William Henry Tollervey of Portsea, Brewer, Dealer and Chapman, and he was declared bankrupt. His bankruptcy examination continued until 1820 when dividends were issued to the creditors, and further dividends in 1822. Lumley mill was for sale by 1821 and land and property at Southsea Common and Portsmouth were to be sold. [see Appendix One].

The Reverend J.H. Mee in his history book *Bourne in* the Past says "Tollervey was seen as a road crossing sweeper in Fleet Street some years later" and is said to have died a pauper in London. So ended another period of Lumley Mill's history. William Shean is listed as the miller of Lumley Mill in a directory of 1830, and as the occupier in the 1840 Tithe Apportionment document where Admiral Edward Harker is the mill owner. Shean had two children, George and Rebecca; his wife died in 1851 and tragedy struck again in 1858 when his son was drowned with three others in Emsworth Harbour. A memorial in St. James Church, Emsworth, records the event:

#### "GEORGE SHEAN

died 21st Aug 1858, aged 34 years. He was drowned with his friends Rev. Herbert Morse, aged 31 years, curate of St. James Emsworth, Joseph Smith of Emsworth, aged 27 years, Alexander Moorhead aged 17 years by the sudden upsetting of a boat in Emsworth Harbour."

When William Shean died in 1860, James Terry purchased the mill. He had been working there for some time as he is mentioned in the 1851 census lists as residing at the mill. James married Eunice Blundell at Westbourne in 1847, and she died 13 years later without children, so in 1888 J. Alfred Terry (17yrs) left Hampshire Farm where he was born, to work at Lumley Mill with his uncle James Terry. When James died in February 1906, in his will he left Lumley Mill to his nephew J. Alfred Terry, who then left 3 High Street Emsworth where he lived, to reside at the mill. An interesting resident at the mill house from 1848 until he died in January 1884 aged 70 years, was William Buckler an entomologist and artist who painted portraits but photography replaced his skills. He first lodged there and later became a guest of Mr. Terry. Buckler's collection of moths and butterflies may be seen at the Natural History Museum, South Kensington. J. Alfred had seven children, all girls, six of whom are shown with their parents in the family photograph. The importance of a miller at the start of this century can be envisaged by the fact that about 20 people were employed, including a racehorse trainer. [see Appendix Two], Mr. Terry established a successful racehorse stud and many notable equine idols and favourites were bred on the Lumley greensward. His daughter remembers that one won the Farmers Cup and one the Derby, but cannot remember their names. Water for drinking was obtained from a spring which rose in the stream just above the mill, while water for washing came from the stream below the mill.

Opposite the mill pond on the eastern side of the lane are two flint galleted cottages, said to have been built by French prisoners of war. The farm hand lived in the one where the horses were stabled, and the waggon was kept at the second with the gardener living behind. Beyond was the kitchen garden which is now the garden of the cottage; the two wells in the garden and the paths shown on the Tithe map of 1842 can still be traced.

Miss Terry tells an amusing story about 'Berky' Miller who usually drove the wagon to Portsmouth once a week with vegetables and fruit. On one occasion about 1912 her father did the journey and the horse insisted on stopping at each public house on way back. He was very late home and not pleased! In 1913 milling of stone ground flour stopped, and the mill was then used as a store for the Town Mill in Queen Street, Emsworth. In 1915 J. Alfred Terry sold the mill to Mr. A.E. Everall of Westbourne and on 1 March 1915 the Terry family moved out. According to his daughter, the reason he sold the mill was to enable him to join the Army, feeling that it was the patriotic thing to do. The end came on the night of Monday 24 May 1915, when Lumley Mill and grain store was burnt to the ground.

#### "FIRE AT EMSWORTH

#### - LUMLEY MILL DESTROYED

The fire started between eleven and midnight on Monday the 24th May, when the flames were seen rising from the mill and attempts were made to phone the brigade from a local residence. At 11.45 the flames were observed from the railway station by Mr. Clayton, a former Fire Brigade member, who informed Supt. Griffin and assisted in harnessing the horses to the steamer while the brigade members were being called. -- four jets were used on the fire and water was obtained from the nearby mill stream, but the fire had a strong hold, and the roof of the grain store fell in soon after the Brigade arrived. (the grain in the store belonged to Mr. Bartholomew of Chichester).

The Brigade was assisted by outsiders, and they got the fire under control in little over an hour, preventing it spreading to the malthouse and the unoccupied residence.

The Brigade attending; Supt. Griffin, 2nd Officer A. Smith, Engineer Mills and Firemen E. Phillips, W. Marsh, A. Wells, & A. Louch.

Helpers included; Clayton, L. Mant, E. Pearson, C. Voar and Sherman, all former brigade members.

The mill belonged to Mr. Everall. The cause of the outbreak is unknown. Damage estimated at over  $\pounds 1,000.^{"5}$ 

# "1929 THE MALTHOUSE and

### OLD MILL HOUSE DEMOLISHED

One of the oldest and most historic buildings on the borders of Hampshire and Sussex is nearing complete demolition, for very little is now left of the remains of Lumley Mill and Malthouse which were one of the chief sources from which the Fleet was victualled, cattle being slaughtered and flour and bread made on the most extensive scale at that period.

The owner of the buildings at that time was a Mr. Tollerfree [Tollervey!] who had business establishments in Portsmouth. Following the Napoleonic Wars, he became very poor and is believed to have ended his days as a crossing sweeper and to have died in poverty. Ownership of the premises passed into the hands of Mr. Sheen, from whom they were bought by Mr. James Terry. The last named gentleman established a successful racehorse stud and many notable equine idols and favourites were bred on the Lumley greensward.

The mill was burnt down about 1915 and only the malthouse which is said to have been built by prisoners of war during the Napoleonic campaigns remains. It was solidly constructed and the demolition has revealed the exceptional skill which was found among the conscripted labour of those days. The malthouse was sold a few years ago to Mr. A.E. Everall, the well known Westbourne farmer."<sup>6</sup>

Mr. & Mrs. Baker lived in the 1802 Millhouse from the mid 1940s. He was a pharmacist with a business in Cosham High Street until he retired about 1960. Mrs. Baker was a first cousin of Mr. J. Alfred Terry.

In 1967 F.H. Brownridge reported that the house with banqueting hall and numerous bedrooms above, is in poor shape, but is being renovated by a small band of men in the employ of an antique dealer. Brownridge concludes by saying that this interesting and historic site is now, however, greatly menaced by the proposed main Emsworth by-pass which according to present plans, is shown running through the garden behind the house! [West Sussex had drawn a line from the boundary towards Chichester without reference to the property it passed through – this was later amended when the road was planned in detail. T.Y.]

In 1971 the 1802 mill house built by Edward Tollervey, became the home of Mr. & Mrs. Lafosse who still reside in the attractive building with its castellations and slate roof.

Visiting the site in 1977, it was observed that the mill pond was silted up, but water still flowed through a channel. The base of Malthouse, store and the loading ramp could still be seen. The brick lined by-pass channel remained, as did the cast iron launder, about six foot wide, which provided a 14 foot head of water. The iron spokes of the 12 foot wooden overshot waterwheel were still there, with pit wheel and other wheel and a shaft on the opposite side of the wheel pit.<sup>7</sup>

Chaos was caused for a while in 1987, when a new main sewer was constructed across the mill pond and along the lane.

The new A27 has been built on an embankment at the bottom of the meadow close to the mill, so the tranquillity of the site has gone for ever, but it is still well worth a visit if only to see the excellent mill house built by Mr. Tollervey in 1802.

#### SOURCES

My grateful thanks to Miss Terry for much of the family details and photographs. West Sussex Record Office Portsmouth Reference Library Simmons collection at the Science Museum Library *Bourne in the Past* A brief history of the parish of Westbourne. Rev. J.H. Mee, Pub: Combridge, Church Road, Hove, 1913 *Lumley Mill* F.H. Brownbridge (Portsmouth Poly) I.A. Journal No.2 1969)

The Valley of the Ems a pamphlet by C.J. Longcroft c.1870

#### REFERENCES

1. West Sussex R.O. add ms. 2159

<sup>2</sup> Portsmouth Telegraph 9 July 1810

<sup>3</sup> Hampshire Telegraph 10 Feb 1805

<sup>4</sup> Hampshire Telegraph & Sussex Chronicle 14 Feb 1814

<sup>5</sup> Hampshire Telegraph & Post 28 May 1915

<sup>6</sup> Evening News 24 May 1929

<sup>7</sup> Visit made by the author 27 June 1977

#### APPENDIX ONE

1815 Commission of Bankruptcy – WILLIAM HENRY TOLLERVEY.

Awarded and issued forth against William Henry Tollervey of Portsea, county of Soton, Brewer Dealer and Chapman and he being declared bankrupt ... surrender on 5 and 6th of October next and 4th November following at 11 of the clock before noon on each day at the Fountain Inn Portsmouth ... give notice to Messrs. Sowton and Fuller, solicitors, Chichester, or Messrs. Palmer and France solicitors, Bedford Row, London. (*London Gazette*, 8 September 1815)

1820 Bankruptcies: Tollervey E. (*The Times* 23 Aug. 1820)

1820 Commission of Bankruptcy ... TOLLERVEY bankrupt.

Whereas a Commission of Bankrupt is awarded and issued forth against EDWARD TOLLERVEY of

Westbourne, in the county of Sussex, Miller, Dealer and Chapman, and he being declared a Bankrupt, is hereby required to surrender himself to the Commissioners in the said Commission named, or the major part of them, on the 2nd and 12th of September next and on the 7th October following at 10 of the clock in the forenoon on each of the said days, at the Guildhall London and make a full discovery and disclosure of his estate and effects; when and where the creditors are to come prepared to prove their debts and at the second sitting to choose assignees and at the last sitting the said bankrupt is required to finish his examination and the creditors are to assent to or dissent from the allowance of his certificate. All persons indebted to the said bankrupt or that have any of his effects are not to pay or deliver the same but to whom the Commissioners shall appoint, but give notice to Mr. Kirkman solicitor, Cloak Lane, London. (London Gazette, 26 August 1820)

(Chapman = pedlar or dealer in small wares; merchant)

#### 1820 Meeting of Creditors ... Edward Tollervey.

Creditors who have proved their debts under commission of bankrupt against Edward Tollervey, late of Westbourne, Sussex, Miller, Dealer and Chapman are to meet assignees on Monday 30th October 1820 at 1pm at the office of Mr. Kirkman, clerk to the said commission, 21 Cannon Street, London. Execution levied on his property in Sussex and Hants. Valuation of estate over amounts owed may have to be arbitration. (*London Gazette*, 1820 page 1986)

#### 1820 Certificate ... Edward Tollervey.

Commission of Bankruptcy against Edward Tollervey all correct and he has conformed himself according to several Acts regarding bankruptcy so his certificate will be allowed unless cause to the contrary is shown on or before the 20th January next. (London Gazette Vol.2 1820 page 2473)

1821 For sale: Lumley Mill, in parish of Westbourne. A trade of considerable magnitude has been conducted on this site for nearly a century. It is a stream mill of uncommon and almost unceasing power. Late the property of Mr. Edward Tollervey. (Sussex Weekly Advertiser 8 Jan 1821)

1821 To be sold by auction by direction of assignees and with the consent of the mortgagees of Mr. EDWARD TOLLERVEY, on 21 May 1821, at the George Inn, Portsmouth. A most truly desirable property, called Lumley Mill, close to the quay at Emsworth, ... it is a stream mill, of uncommon and almost unceasing power, capacious stores that will contain 500 loads of grain and flour, and very extensive malthouse, threshing machine, biscuit manufactury, ovens and stores, to which is attached a capital residence. (Sussex Weekly Advertiser 7 May 1821)

#### 1822 Dividend

The Commissioners in a Commission of Bankruptcy bearing the date 8th day of September 1815 awarded and issued forth against William Henry Tollervey, late of Portsea, in the county of Soton, Brewer Dealer and Chapman, intend to meet at 12 o'clock at noon, at the Fountain Inn, High Street Portsmouth, in order to make a second dividend of the estate and effects of the said bankrupt. When and where the creditors who

#### APPENDIX TWO

#### EMPLOYEES AT LUMLEY MILL 1906-1914

have not already proved their debts are to come prepared to prove the same or they will be excluded the benefit of the said dividend. And all claims not then proved will be disallowed. (London Gazette 19 Jan. 1822)

#### 1822 Dividend

A further dividend to be made ... 9th day of August at 11d in the forenoon at the Fountains Inn, High Street Portsmouth, etc.

(London Gazette 13 July 1822)

At The MILL			Mr. Miller	'Berky'	Drove wagon to
Mr. Davies	Mill hand				Portsmouth weekly with vegetables and fruit
GARDEN					(c. 1912-14)
Mr. Miles	Head gardener	Lived in cottage farthest from mill; wagon shed at	Extra hands	Taken on for hay m	aking and harvest
		front & house behind.	RACEHORSES		
Mr. Biles	Under gardener	a:	Mr. Turner	Trainer	Lived in North Street near the Station
FARM			Mr. Cale	Groom	Lived in 'Brooms
Mr. Twine	Farm hand	Lived in the nearer of the			Cottage' in farm yard
		two cottages (both cottages are flint galleted)	name unknown	Extra hand	
Mr. Gregory Snr	Old employee	Lived in 'Rose Cottage'	DOMESTIC		
0,	. ,	owned by Mr. Terry	names unrememb	ered Maid	Various maids lived in
Mr. Gregory 'Bert'	Farm hand	Lived in 'Rose Cottage'	Edith Gregory	Maid	Sister of Bert. lived in
		Lumley Lane		1.1.2	'Rose Cottage'
Mr. Pet	Farm hand	Lived in the cottage next	Francis Allen	Maid	
		to 'Rose Cottage'	Mrs. Savage	Washer woman	Came on Mondays
Mr. Voice	Farm hand, poultry		Mrs. Miles	Charlady	Came on Tuesdays
			Mrs. Troak	Household duties	Came when required
George and Albert	Odd jobs farm/hous	e Lived in same row of			sister of Mrs. Miles
Richardson		cottages as Pet and			
(teenage brothers)		Gregory)			

# ESTATE INDUSTRY AT THE HYDE, HANDCROSS

## **Ron Martin**

#### 1. CIRCULAR SAW BENCH (TQ 260304)

As a result of road widening works to the A23, the saw mill on the Hyde estate at Handcross has been demolished. The building was a standard steel framed corrugated sheet steel building with a curved roof erected in the 1930s. It contained a circular saw of a similar date manufactured by Messrs. Dening & Co. Ltd. of Chard and this has now been dismantled and will be re-erected at the Amberley Chalk Pits Museum.

The saw had a foundation of brickwork 11 m long and 1.06 m wide, one and a half bricks thick (340 mm) along the two long sides and half brick thick (115 mm) for the cross walls. Beneath the saw was a 2 m deep pit and the walls at each side of the pit are also half brick thick. The main framework is of hardwood all framed together, the two side members 100 x 250 mm with 75 mm x 200 mm transverse beams at approximately 0.70 m centres supporting a 75 x 100 mm longitudinal bearer. At both ends of the saw pit there is a 100 x 225 mm plate carrying the 100 x 225 mm beam supporting the bearing of the main shaft. The transverse beams are tied together with pairs of 12 mm diameter steel rods. There is a separate sleeper wall carrying a 100 x 225 mm plate supporting the outer bearing of the saw shaft and this is connected to the side frame by two heavy cast iron brackets.

The saw blade is 60" diameter (1.52 m) and is mounted on a 63 mm shaft with two bearings. When originally installed the saw blade was 6 feet diameter, and was replaced by the present one at a cost of approximately £700 in the 1970s. The drive pullies are 450 mm diameter and 150 mm wide with six spokes. The outer pulley is an idler and the 125 mm drive belt is connected to the power unit. The saw was originally powered by a stationary steam engine but this ceased operation in 1959/60 and was sold to scrap for £15. It was replaced initially by a Fordson Major tractor using the power take-off, but this proved underpowered and in 1982/83 was replaced by a fixed 90 h.p. B.M.C. diesel engine removed from a lorry. There is a linkage to shift the belt from the idler to the drive pulley, although this has not been used since the diesel engine was installed.

The saw table is of 10 mm sheet steel 5.49 m long, in two widths 355 and 685 mm wide with 50 x 12 mm strips fastened to the upper surface at 450 mm centres. The table is supported on 110 mm rollers at approximately 450 mm centres with 5 rollers to each 30 mm shaft. These have plain bearings at each end the intermediate bearing being directly onto the 75 x 100 mm timber bearer. The rollers over the saw pit are removable and are supported adjacent to the saw blade on cast iron bearers. These bearers also carry four pairs of adjustable blade stabilisers with hard-wood insets. The feed mechanism is a manual rack and pinion system. Under each part of the table is a continuous rack. The pinions are mounted on a 30 mm shaft which is operated by a removable handle. A 1:2 reduction gear is available.

Logs for sawing were brought in through the side of the shed and handled on three sleeper walls with removable beams into position on the table. They are then stabilised used wooden wedges. There is an adjustable guide fixed to the main side frames and operated by a rack and pinion. It is possible to convert logs up to 16 feet long with an accuracy of ¼". To handle the worked timber a series of four additional rollers have been added, mounted on rough timber bearers along the side of the table. These rollers are mounted on a cast iron base with three bearings to each set and were manufactured by Messrs. Stenner & Gunn, engineers of Tiverton.

According to Pete Cooper who operated the saw for many years, the secret of using it is to gauge the feeding rate by the sound of the saw in the wood, maintaining a speed of 540 r.p.m. The saw was used for estate work until the war when it was taken over by Charles Agate, timber Merchants of Horsham and Faygate who operated the saw on war work, but mainly using estate labour. During this period the side walls of the shed were filled in with timber boarding to comply with blackout regulations. Since the war it reverted to its former estate use. When the saw is reerected at Amberley it is hoped to be able to use it for work at the Museum operated using a steam stationary engine.

#### 2. CREOSOTE TREATMENT PLANT AT THE HYDE, HANDCROSS (TQ 260303)

The creosote treatment plant on the Hyde Estate has also been demolished due to the A23 roadworks. The plant was used for treating timber for use on the estate and was erected in the 1930s.

It comprised a sheet steel tank sunk below ground level,  $3.5 \ge 1.7 \ge 1.2$  m with angle iron edging, steel tube bracing stays and a concrete surround. Underneath the full length of the tank was a firing chamber 450 mm wide and 350 mm high with cast iron sectional soffit. At the front end of this at the firing end



there was built in a cast iron manhole cover acting as a lintel. This somewhat inadequate arrangement had not proved completely successful as it had broken. From the far end of the firing chamber two flues ran sideways and upwards to return along each side of the tank where access was obtained through two soot doors. The flues united and ran upwards some 4 m in a 450 x 450 mm stack. Access to the firing chamber was by way of a cast iron door and frame with an ash box and door under. To obtain access to the firing chamber for fuelling a pit was created 5.1 x 2.5 m and some 2 m below ground level with access by an open tread timber staircase. The pit was built in Fletton brickwork with a concrete floor. The retaining walls appeared to be only half brick thick (115 mm) with a single attached pier 340 x 115 mm to each side on the outside of the wall. All the brickwork was in stretcher bond which would confirm the wall thickness. These walls were showing signs of distress and it is surprising that they were so inadequate and even the attached piers were on the wrong side of the wall to be of any use, as the rest of the construction appeared to be reasonably well carried out. To avoid complete collapse of the walls a temporary timber structure of old railway sleepers had been used.

The whole area of tank and pit was covered by a corrugated steel roof on softwood framework comprising 50 x 100 mm purlins at 0.60 m centres on trusses at approximately 1.5 m centres with 50 x 100 mm ties and rafters and 50 x 100 mm braces and hangers. The trusses were supported by 100 x 150 mm longitudinal beams on  $150 \times 150$  mm posts. The north gable end was infilled with boarding. The tank was covered with 50 x 180 mm boards laid loose.

The tank was heated with wood. There were several long handled rakes to enable the firing chamber and flues to be kept clear of cinders and ash. To get the fire drawing it is necessary to apply burning material in the base of the vertical flue to create an updraught but when going the system worked well. The wood to be treated is stacked vertically in the tank and the creosote filled up to the top. It took some 3-4 hours to get the creosote to boiling point and this was maintained for 3 hours. The tank was then left to cool before removing the timber. During the October 1987 storm a tree fell onto the roof which in turn displaced the stack, since which the plant has not been used.

This method of treating timber with creosote was considered to be highly efficient at the time and there are other examples to be found. One at Brook House, Ardingly had a smaller tank entirely above ground  $5.79 \times 0.60 \times 0.60$  m built on brick sleepers with the fire under the centre connected to an end flue.

# BREAD OVEN AT SLINDON OLD BAKERY

#### (SU 961084)

## **Ron Martin**

The original ovens at the Slindon Old Bakery were replaced in the 1930s by what was then modern technology in the form of a two deck hot air peel oven. Prior to that many of the small country bakeries were equipped with side flue ovens such as the one at Ore Hastings, described in the Society's *Newsletter* No.77.

The new oven still used solid fuel to heat the oven but the flue gases were kept separate from the bread. There are two decks, 2 x 1.6 m, with steel walls and roof and tiled floor, each fitted with a cast iron door with access from the bakery. At the opposite end is the firing hole at low level with flues from this carried around and between the ovens and then combining into a flue which is carried up to fresh air. The fuel could be anything convenient and judging by the amount of ash lying around the property would have been coke. The whole of the structure is built in brickwork and is contained within a light steel angle framework lined with steel sheet with glass fibre filling around and between the steel sheeting and the brickwork. The front facing to the bakery is built in white glazed brickwork. There are the usual thermometers, one to each deck, and a damper to control the rate of burning. There are numerous soot doors in both the bakery side and the firing side to enable the airways to be kept clear.

The oven is a "Retainer" Model manufactured by Gilbert Ovens Ltd. of Audenshaw, Lancashire and it was used from the date of its installation in the 1930s until 1946, when it ceased production. The present owner Mr. Andy Turner-Cross used it for several years from 1984 and was well satisfied with bread produced, with wood as a fuel but it suffered damage during the October 1987 storm since when it has been idle. Gilbert Ovens Ltd. appeared in Kelly's Directory between 1935 and 1940 as "Frederick Geo. Gilbert, bakery engineers, 23 Thornton Avenue, Audenshaw" but there is an entry in the Yellow Pages for 1940 for "Gilbert, F.G., bakers and oven builders, Providence Street, Audenshaw". A manufacturer's catalogue in the writer's possession for Gilbert Ovens, undated but giving the Providence Street address, states "Amongst the earliest of our products, the Retainer Hot Air Type Oven, has been developed and perfected over the last 25 years." This implies that Gilbert was making these ovens from about 1915 but the business was in fact started by Frederick Gilbert in the 1930s and went into liquidation in the 1950s according to Mr. Peter G. Summers, his grandson. Up to 1939 the firm was doing considerable export business, but it was always a small concern.



# PUBLICATIONS

Previous numbers of Sussex Industrial History still available:

No. 2 (1971)	Dolphin Motors of Shoreham; Lime Kilns in Central Sussex
No. 3 (1971/2)	Lewes Population 1660-1800; Kingston Malthouse
No. 5 (1972/3)	East Sussex Milestones; West Brighton Estate; A Bridge for Littlehampton 1821-2
No. 12 (1982)	Piddinghoe Tile Kiln; Barkers, Brickmakers of Piddinghoe; Littlehampton Swing Bridge; Hillman's Brickyard, Partridge Green; Hastings Trams; Iron Working in Westfield
No. 13 (1983)	Brick and Tile Making on the Dicker; Round House Ashcombe; Estate Water Supply, Worth; Petworth Ice House; Brewery Well, Hastings; Worthing Gas; St. Pancras Engineering, Chichester
No. 14 (1984/5)	Palace Pier, Brighton; White & Thompson Ltd., Shoreham Airport; Charcoal Burner's Hut, Fittleworth; Ice Houses and Trade in Brighton; Mining and Subterranean Quarrying in Sussex
No. 15 (1985/6)	Sussex Harbours; Offham Chalkpit Tramway; Ashburnham Limeworks; North Laine, Brighton; Uppark Water Supply; Iron Ore Trade
No. 17 (1987)	Bognor Gas, Light & Coke Company; Glynde Aerial Railway; Bricks for the Martello Towers; Jesse Pumphery, Millwright
No. 18 (1988)	The Windmills and Millers of Brighton
No. 19 (1989)	Leather Industry; Bignor Park Pump; Lowfield Heath Mill; B.M.R. Gearless Car; Wadhurst Forge
No. 20 (1990)	William Cooper, Millwright. Foredown Isolation Hospital; The Ford Trimotor and Ford Aerodrome
No. 21 (1991)	Quick's Garage, Handcross; Punnett's Town Wind Saw Mills; Hollingbury Industrial Estate.
No. 22 (1992)	Swiss Gardens, Shoreham; Brighton Brewers; Mill Bibliography; Beddingham Kiln.
No. 23 (1993)	Sussex Limeworks, Mills of Forest Row, Machine Tool Manufactu Brook House Estate, Mill Authors

Issues 2, 3, 5, 9, 12 and 13 £1 each, issues 14, 15 and 17 £1.50 each, issue 18 £2.50, issues 19, 20, 21 and 22 £2.25 each, 23 £2.50. Post and packing extra, 45p for one issue plus 25p for each subsequent issue.

re,

#### Also available:-

Sussex Industrial Archaeology: A Field Guide (1985) £5.95 post free M. Beswick, Brickmaking in Sussex (1993) £11.95 plus £1 towards post and packing

# Orders with remittance to:-

R.G. Martin, 42 Falmer Avenue, Saltdean, Brighton BN2 8FG