

CHALK PITS MUSEUM - AMBERLEY

Everybody is so busy around opening day (26th March) that there is no time to prepare a report for the Newsletter. However two items must be noted. Firstly a warm welcome to Mike Wall our newly appointed Museum Manager who was working here for a year before he left in April 1985 to become Manager of the Eling Tide Mill near Southampton. Secondly the membership organisation has now been formed into the Amberley Chalk Pits Association. It will be self-managing and supportive to the Museum in practical ways and in fund-raising.

MEMBERSHIP CHANGES

New Members

N. Kelly, 74 Buci Crescent, Shoreham-by-Sea, West Sussex (Brighton 597390)
Ms M.M. Baker, P.O. Box 3248, M.P.O., Vancouver, British Columbia, Canada, V6B 3X8
Miss C.A. Page, 16A Highdown Road, Lewes, East Sussex, BN7 1QD (Lewes 478384)

Change of address

N.N. Hardcastle, "Andes", Beaufort Road, Waltham Chase, Southampton, SO3 2LZ
R.N. Crook, Meads Lodge, 23 Meads Road, Eastbourne, East Sussex, BN20 7EA
(Eastbourne 29059)

Deceased

C.F. Tebbutt, The Pheasantry, Wych Cross, Forest Row

Resignations

C.D. Allistone, 4 Schooner Court, North Beaumont Park, Littlehampton
R.S. Burley, Apple Tree Cottage, Haywards Heath Road, North Chailey, Lewes
J. de Havilland, 33 Danvers Road, Tonbridge, Kent
Mrs. C.M. Fogden, 27 Eyres Drive, Alderbury, Salisbury, Wilts.
N.V. Martin, 84 Annweir Avenue, Lancing
A.J. Stanley, 4 Helston Drive, Emsworth, Hants.

OFFICERS

Chairman	Air Marshal Sir Frederick Sowrey, Home Farm, Herons Ghyll, Uckfield
Vice Chairman	J.S.F. Blackwell, 21 Hythe Road, Brighton, BN1 6JR (0273 557674)
General Secretary	R.G. Martin, 42 Falmer Avenue, Saltdean, Brighton, BN2 8FG (Office 0273 28479, Home 0273 33805)
Treasurer & Member- ship Secretary	J.M.H. Bevan, 12 Charmandean Road, Worthing, BN14 9LB (0903 35421)
Editor	B. Austen, 1 Mercedes Cottages, St. John's Road, Haywards Heath, RH16 4EH (H.H. 413845)
Programme Secretary	D.H. Cox, 3 Middle Road, Partridge Green, Horsham, RH13 8JA (Office 0293 27777, Home 0403 711137)
East Sussex Secretary	A.J. Haselfoot, Albion House, Coburg Place, Hastings (0424 436260)
West Sussex Secretary	R.M. Palmer, 11 Arlington Close, Goring-0by-Sea, Worthing, BN12 4ST (0903 505626)
Central Sussex Secretary	J.S.F. Blackwell, 21 Hythe Road, Brighton, BN1 6JR (0273 557674)
North Sussex Secretary	E.W. Henbery, 10 Mole Close, Langley Green, Crawley (0293 23481)

COMMITTEE MEMBERS

B. Austen	Brig. A.E. Baxter	D.H. Cox	F.W. Gregory	E.W. Henbery
P.J. Holtham	R.M. Palmer	G.G. Thomerson	M.F. Tighe	

PLEASE NOTE Latest acceptance date for copy for the July Newsletter is 16th JUNE



SUSSEX INDUSTRIAL ARCHAEOLOGY SOCIETY

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FIFTY ISSUES ON

In January 1974 appeared the first Newsletter of the Sussex Industrial Archaeology Society. Prior to this there had been five issues of the Newsletter of the Sussex Industrial Archaeology Study Group but the last of these had been in April 1970. It was therefore probably with some trepidation that the editor of Newsletter No. 1 in January 1974 informed his readers that "we hope that this will be a regular quarterly feature in future, both interesting and informative". Changes there have been since in format and content but the editor's hope of quarterly publication has been achieved and here we are in 1986 celebrating fifty issues.

The news in that first issue reflects well the changes and advances in Sussex industrial archaeology in these twelve years. The A.G.M. of November 1973 was followed by a talk by Jonathan Minns "who had negotiated a lease of the Goldstone Pumping Station" and "told members something of his plans for the future of Goldstone" (now the Engineerium). A winter meeting had been held at Eastbourne with a talk on water-driven olive oil mills in the south of France ("only 7 members turned up"). I assume that the Lewes meeting on 17 January when John and Sue Farrant dealt with the industrial archaeology of Brighton was somewhat better attended. The Society had just applied for affiliation with the Local History Committee of the Sussex Rural Community Council and had decided to apply to the Charity Commissioners to be registered as a charity at law. The programme for the year included a visit to the Open Air Museum at Singleton (admission 30p, pensioners 15p). Subscriptions, which were being sought by the Treasurer, were £2, family members £1 and juniors 50p. I suppose on this basis our subscription rates have increased less over the past twelve years than most things including the rate of inflation generally. Short articles were included on "Excavated Windmill Sites in the Eastbourne Area" and on trade tokens. A number of new publications were reviewed including an article in *The Railway Magazine* on the Offham tramway, while amendments were published to the first *Field Guide* which appeared as S.I.H. No.4 in Summer 1972. As an article on the former appeared in S.I.H. No.15 and a new *Field Guide* has appeared only recently we can see that although much has changed since 1974 old themes keep re-emerging.

PROGRAMME OF VISITS FOR THE SUMMER

These are as the programme card sent out with the January newsletter but here is a reminder with some extra details.

Saturday 26 April Visit to Volks Railway, Brighton TQ 316038.
This is a morning only visit starting at 10.30 a.m. Meet at the Palace Pier for a conducted tour of the railway and the workshop. Why not read up the story of Mr. Volk before you come?

Saturday 17 May Nutley Windmill plus another mill. This is a shorter tour than usual by Frank Gregory. Meet at Nutley Mill at 2 pm TQ 450291. After the visits we have been invited to finish with a cup of tea at our Chairman's Home Farm.

- Saturday 28 June Members' Evening at Anne of Cleves House, Southover High Street, Lewes starting at 6.30 p.m. The usual programme allows time to look around the museum, have a cup of coffee and finish with a talk or two. That is if I can find a volunteer or two to give a few minutes talk on his/her particular interest in Sussex I.A.
- Saturday 19 July Tour of Ice Houses led by Ron Martin. Starting at the Ice House at London Road, Bognor (SZ 936996) at 2.00 p.m. Ron will lead us around the Arundel area.
- Saturday 16 August Two Museums. Start at Tangmere Military Aviation Museum at 10.30 a.m. (SU 905061) then on to the Museum of Mechanical Music at Chichester (at 2.00 p.m.) Both places that I keep driving past and saying I MUST go in there. I guess you are the same, so come along. A good pair of visits for all the family and all at group entrance rates.

DON COX

Events arranged by other organisations

- Sunday 30 March and every last Sunday in the month until the end of September, plus 19th October, NUTLEY WINDMILL will be open from 2.30-5.30 p.m. Admission 45p adults, 20p children. Also open Bank Holiday Mondays.
- Sunday 4 May Exhibition of Farming Implements from the Past at Nutley Windmill to support National Mills Day and Civic Trust's Environment Week. Produce and Gift Stalls.
- Saturday 10 May A.G.M. of Federation of Sussex Local History Societies at Mayfield followed by walk round village. Assemble 10.30-11.00 a.m. at Memorial Hall, Mayfield. Full details from Hon. Treas. FSLHS, Mrs. Moorhouse, Woodlawn, The Twitten, Upper Beeding, Steyning, West Sussex, BN4 3TP (Tel: Steyning 813719).
- Saturday 17 May Sponsored Walk in Ashdown Forest area, starting 2.30 p.m. at the Car Park, Danehill. Contact P.G. Lucas, Chairman, FSLHS, (Tel: Danehill 790578).
All members of SIAS are cordially invited to attend both Federation events.
- Saturday 7 June A Conference to be held by the Hampshire Mills Group at Southampton University at 10.00 a.m. This will be followed on visits to five Hampshire Mills subject to sufficient interest. Cost of the Conference will be £4 including tea and coffee and £5 for the Mills Tour including entrance fees and coach. An inclusive ticket may be obtained for £8 from Mrs. Pam Moore, 51 Porteous Crescent, Chandlers Ford, Hants. SO5 2DG. Phone 042-15-63447.
- Wednesday 11 June Fifty Years of Scheduled Services. Illustrated talk by Guy Bell, Director Gatwick, British Airports Authority. 7 pm Sussex Rooms, Gatwick Airport.
- Saturday 14 June Visit to Pre-war Passenger Terminal (the Beehive) at Gatwick. Meet outside Beehive 2.30 p.m.
We have been invited to join the Croydon Airport Society on two visits to Gatwick which in May celebrates fifty years of scheduled services. It will also be the 50th anniversary of the Beehive passenger terminal which in 1936 was very revolutionary. It is hoped that it will not be necessary to limit numbers but it will be essential to notify John King of the Croydon Airport Society at 44 Le May Avenue, London SE12 9SU of your intentions. (Please mark your envelope SIH). No acknowledgement will be sent but if you have any questions about transport access, parking etc, you should enclose SAE.
The Sussex Rooms are in the main terminal building and therefore easy to reach by train etc. The Beehive is nearly a mile to the south of the main terminal/station and lies just off the A23. Adequate parking is available at the Beehive.

- Friday 12 September AIA Annual Conference at Loughborough preceded by additional to programme of visits 9th-11th September. Conference programme
Sunday 14 September and application forms available from Gen. Hon. Sec. Ron Martin.
Sunday 5 October Millers Day at Nutley Windmill

BOOK REVIEWS

- H. Cleere and D. Crossley, The Iron Industry of the Weald, Leicester University Press (1985) pp 395, £47.50.
B.H. Herbert, Fieldwalkers' Guide to the Iron Industries of the Weald, the author, 1 Stirling Way, East Grinstead (1985) pp 66, £2.85 post free.

These two publications stand in their own right at opposite ends of the price scale. No book can yet be described as a definitive study of the Weald iron industry - more is continually being discovered and excavation throws more light on the workings themselves. Modern dating techniques and additional artifacts help to refine recent knowledge with greater accuracy. However, Henry Clevee and David Crossley have produced the most comprehensive and well illustrated survey to date which will stand as the main reference work for the future as Straker's book Wealden Iron has done for the past fifty years.

Apart from the all embracing how, why, and when, of the Kent, Surrey, and Sussex iron industry through the ages, there are gazetteers covering the whereabouts of all bloomery sites, Roman bloomeries, and water-powered sites. Extensive references, bibliography, and index complete this fine work. Badger the public library for a copy or indulge yourself.

The book's dedication to Fred Tebbutt as President of the Wealden Iron Research Group and "field archaeologist without peer" is an inspired touch. How fortunate that publication and launch occurred before the death last December of this renowned SIAS member.

B.K. Herbert's spiral-bound paper back is an excellent introduction to the rise and fall of the iron industry of the weald. Within 66 pages he has described the geology of the area; discovering and mining the ore; producing the charcoal; the bloomery and blast-furnace periods; the products of the industry; and field walks to date sites. There are some revealing calculations - for example the number of barrow-loads of mixed ore and charcoal needed by a blast furnace each day show that the furnace loader was certainly kept busy. Also the gallonage of water needed to operate the blast furnace for a full burn and cool-down is indicative of the size of furnace pond required. The few illustrations make iron working come alive and the book represents excellent value.

FREDERICK SOWERBY

Adrian Peasgood, The Horse Buses of Brighton and Hove, pp 54, A5. the University of Sussex Centre for Continuing Education, Falmer, Brighton BN1 9EG, £2.95.

Adrian Peasgood's booklet fills a gap in the transport history of the conurbation and for that reason alone must be welcomed. However it has been thoroughly researched from the minute books of the Brighton Watch, and Hove Police Committees, and also from local newspapers and is extremely clearly presented and produced.

Horse buses in the area started with the coming of the railway in 1840, providing a service for the well-to-do residents of Kemp and Brunswick Towns. The service was little altered for the next thirty years but during the seventies rapidly expanded to serve the better class housing being constructed along the London and Lewes valleys (horse buses could never serve the more hilly areas of Brighton) as well as serving developing Hove. By 1900 there were over 100 buses operating with, on the most frequented routes, a two minute headway. The end in Brighton came suddenly with the introduction of the municipal electric tramway system in 1901 but in anti-tramway Hove horse buses continued; being gradually replaced by motor traction. The last horse bus ran in 1916.

As an industrial archaeologist one would like to have known whether the vehicles were constructed locally or bought "off the shelf", and with at least five (more likely ten) horses required to each vehicle, extensive stabling must have been required in the towns. Similarly, the economics of operating a bus service are not covered in any

detail. I suspect this is not due to a lack of research but to a paucity of source documentation, indeed the company records of the Brighton, Hove and Preston United Omnibus Company were destroyed two years after the company's liquidation in 1922.

Complemented by a set of interesting and not too familiar prints and photographs, the booklet is highly recommended.

JOHN BLACKWELL

RECENT PUBLICATIONS

The following have been published recently by Middleton Press:

<u>East Grinstead - Then and Now</u>	Price	£5.95
<u>Branch Line to Tenterden</u>	"	£6.95
<u>Steaming Through East Sussex</u>	"	£6.95
<u>West Sussex Waterways</u>	"	£6.95
<u>Haywards Heath to Seaford</u>	"	£6.95
<u>Eastbourne to Hastings</u>	"	£6.95

Although not concerning Industrial Archaeology another recent publication may well be of interest to our members. The Military Defence of West Sussex by John Goodwin covers 500 years of fortification of the coast between Brighton and Selsey by man-made structures ranging from the substantial to the comical, together with their armaments and the soldiers who manned them (according to the press release). Price £7.95.

All above available from local booksellers or post free from Middleton Press, Easebourne Lane, Midhurst, West Sussex GU29 9AZ.

THE PEOPLE OF HIDDEN SUSSEX

I am sure Members have read - or at least dipped into - Hidden Sussex, by David Arscott and Warden Swinfen, (both well-known broadcasters on Radio Sussex) published by BBC Radio Sussex in 1984, price £3.50. It contains a good deal of interest for industrial archaeologists and is especially useful when dealing with the more obscure corners of the County, unknown to most members.

Now the authors have brought out a second book, The People of Hidden Sussex, again published by the BBC, at £3.95. John Whiting has again supplied the delightful line drawings. Brick enthusiasts may like to know that under 'Heathfield' there is a note on John Harmer (c. 1799) who made the terracotta bas-reliefs for tombstones. While under 'Laughton' there is a drawing of the famous tower and notes on the Pelham family in the Introduction. Two subjects that came up at our A.G.M. last autumn!

ANON,

AREA SECRETARIES' REPORTS

WEST SUSSEX

Coultershaw Pump

The combination of bad weather during February and lack of manpower has meant that the winter maintenance programme has fallen behind schedule. However, every effort is being made to be ready for the first public open day on 6 April.

New cup-leathers have been made and fitted to the pump, interior walls and metalwork are in process of being painted and more lighting is being installed.

Bignor Park

Late in March a working party of four members put in a day on the beam pump site, making a photographic record of the "as found" state and clearing away the rubble of the collapsed roof.

Evidence so far is that all accessible metalwork has been removed for scrap, apparently in the 1930s. However, it is hoped that from the remains of the structure and "mechanical" woodwork, e.g. pump beams and guides, it will be possible to deduce the layout of the installation.

Records research and work on the site will continue.

I.A. survey of Worthing

This is proceeding steadily and it is hoped that the first batch of record sheets, relating to street furniture, will be completed in a month's time.

MICHAEL PALMER

NORTH SUSSEX

Meetings have taken place regarding Lowfield Heath Windmill and a Charitable Trust Deed is being raised for its restoration and possible movement to a local site within the parish boundary. There are many 'bridges' to be crossed with regard to planning permission from Local Authorities, D. of E, S.P.A.B, local interested groups etc. Also of course funding is a major factor and positive action will only be undertaken when a major part of the costs are seen to be pledged. However, 1986 it is hoped, may see the project moving forward.

TED HENBERY

CENTRAL SUSSEX

Jack and Jill Windmills

The weatherboarding on the round house has now been replaced. Unfortunately little of the original was found to be usable. Work will shortly commence on the round house roof.

Internally both grain bins have been repaired; the sack hoist, gears and jockey wheel have all been refurbished and replaced and all that is now needed for a working sack hoist is the leather belt which is in hand.

Jill Mill is open most Sundays from Easter.

B.R. vandals at work!!

The attractive ex Finlay's tobacco kiosk which was originally the continental booking office at Brighton station has gone, together with the attractive cast iron platform barriers and gates, thus missing, as usual with B.R, the opportunity of retaining the station as an entity rather than just the fine cast iron train shed. The destination indicator board will also shortly be off to York Railway Museum. It is apparently too labour intensive and will be replaced by an electronic 'scoreboard'. I feel sorry for anyone who relies on the vagaries of such a machine, particularly if it is anything like the one at Victoria.

JOHN BLACKWELL

OBITUARY

Our late member, C.F. Tebbutt, who died on 6 December 1985, had been resident in the Ashdown Forest area for only 20 years, but during that time he had become an authority on the archaeology and history of that district, having retired there from St. Neots, Huntingdonshire, where he had lived and worked for more than 60 years. As an amateur he was respected in the archaeological world, especially for his researches into the Saxon and Medieval periods in Hunts. and Cambridgeshire, but his interests included the post-medieval industrial period, one of his many publications being on the windmills of Huntingdonshire. In that part of the country he was considered to be an authority, not only on local history, but natural history, ornithology and folk-lore, as his many books and learned papers bear witness.

His contributions to Sussex archaeology embrace all periods from the Palaeolithic to the 20th century, but he will be remembered especially as the natural leader in his part of the county of the Wealden Iron Research Group, with which he was involved from its beginnings. The authors of the recent book about that industry¹ dedicated it to C.F. Tebbutt as 'Field archaeologist without peer' - a statement seconded by all his friends. Fred, or 'Teb', as he was known, was the most modest and gentle of men, and in him was much wisdom which he was always willing to share with others. He will be missed by all who were privileged to know him.

ERIC HOLDEN

1. H. Cleere and D. Crossley, The Iron Industry of the Weald, (Leicester 1985)

OBITUARY - JOHN GIBSON-HILL

Sadly we have to report the sudden passing of John Gibson-Hill on Sunday, 2nd February 1986.

John, although not a member of the S.I.A.S. was an active member of the Sussex Archaeology Society and together with Ted Henbery was responsible for setting up, in 1974, the FIELD MILL PROJECT. He moved into the Mill Cottage with his family and his personal contacts with the Crawley Borough Council and local organisations, together with his presence on site as caretaker and overseer, proved invaluable. In recent years his continued efforts in organising display materials and arranging visits by schools and interested groups has greatly assisted both the Crawley Museum Society and our S.I.A.S. in making the Project a success.

Our sympathy goes to his wife and family at this time.

TED HENBERY

A SUSSEX BRICK MISCELLANY

In the course of research carried out for a recent historical project I have accumulated a few related articles which may be of interest to members, one of which, on Plumpton, I have been able to expand as a result of the original research.

A Brighton almanack of 1861 contains a table of information similar in style to the well remembered 'Red Exercise Books' which gave amongst other facts, these facts on bricks:-

"a load of bricks = 500
a load of pantiles = 1000
a solid yard of well wrought clay will make 460 bricks
32 common bricks will cover a square yard
a common brick must not be more than 9" x 4½" x 2"
plain tiles should be 10½" x 6½" x ¾" (1)

A little recorded part of the brick industry is the mortar that binds the finished bricks together: a 1948 guide to Rottingdean contains this geological gem:-

"Fifty years ago old Sussex bricklayers would only use what is known as Combe Rock instead of sand for making mortar. Combe Rock was dug out of the Downs Valley. It is of a sand nature and is mixed with flints, this is sifted or 'shried' as the downsmen say, and the Combe Rock mixed with cement. Combe Rock mortar gives it an old appearance and a rough surface." (2)

The final item was the report in a local paper of a case heard at Lewes County Court in 1871, before 'J. Furner, Judge':-

"Alfred Courtney Eliot-v-John Ancombe, claim for £24.2.3d for goods sold. Mr. Holtham appeared for plaintiff who resides at Burgess Hill and Mr. Penfold for defendant who lives at Plumpton. The claim was for 20,200 bricks alleged to be supplied to the defendant, but it appearing that the bricks were for another party. His Honour held that the defendant was not liable for the amount." (3)

It is interesting to compare prices here, if this amount is for bricks alone then their price works out at 838 per £1 or 42 per 1/-. This should be compared with the price paid the maker of the bricks. The Late Harold ('Darky') Simmonds, a brickmaker of Plumpton Green remembers receiving 10/6d per 1000 during the 1930s, this 1000 was for fired bricks, any shattered in firing were not paid for! (4) Prior to the closure of the Southwater brickfields near Horsham in 1978 the cheapest soft bricks were £42 per 1000.(5)

The case is of interest for a variety of reasons, one being that Ancombe was buying in bricks, although he lived in the brick producing area of Plumpton Green. Information obtained from Census and Directory entries shows brickmakers in the parish from the 1850s but large scale production not being apparent until the 1870s. The 6" O.S. map of 1874 shows only one brickfield, that behind Ancombe's shop, near the present Sun pub, the other makers in the parish were probably of too small a scale to show their workings at this scale.

Ancombe, one of the two Plumpton Green shopkeepers was referred to as a chandler, then a grocer, throughout the period 1858-1890, but in keeping with many rural retail outlets at this time, he traded both in retail commodities and as a wholesale middleman. In this instance he was obviously taking advantage of the burgeoning Plumpton building sector that saw the area around the station steadily develop, a process that was part of a wider Victorian colonisation of the Weald.(6)

References:-

- (1) Pearce's Brighton Almanack 1861
 - (2) H.E. Jolyan, Rottingdean and the East Sussex Downs and Villages (1948)
 - (3) Sussex Advertiser 27 September 1871
 - (4) BBC Radio Brighton interview January 1981 (tape with writer)
 - (5) A. Chapman, The Memories and Local History of a Southwater Farmer (1981)
 - (6) B.M. Short (ed) Scarpfoot Parish: Plumpton 1830-1880 (1981) (E. Sussex Record Office) (see also for longer discussion on parish brickmaking)
- GEOFFREY MEAD

RUMMAGING FURTHER

Mr. Evans's article 'Rummaging in the Records' (Newsletter 49, pp. 7-9) starts with the reference to Joseph Taylor of East Grinstead 'Weaver & Flatman' in the Universal British Directory of 1794(1) and suggests that he flattened cloth in a large press. Unfortunately, however, I have never seen the word 'flatman' elsewhere and it is unknown to the Shorter Oxford English Dictionary; moreover this same Joseph Taylor is listed in the 1811 draft census return for East Grinstead(2) as 'flaxdresser'. It seems to me far more probable that 'flatman' is a misprint for 'flaxman', a probability strengthened by the fact that the other East Grinstead weaver in the directory, Mrs. Morphew, is also described as 'flaxdresser'. The two terms 'flaxman' and 'flaxdresser' are found frequently in East Grinstead sources from 1657(3) to 1811(2), probably with identical meanings.

(Further details of this local industry will be found in an article 'Cloth Working in East Grinstead' which I contributed to the East Grinstead Society's Bulletin 22 [Sept. 1977].)

John Goldsmith the patten wood maker of East Grinstead, also cited by Mr. Evans from the same directory, is the only one so far noted in the town's history. He appears again in 1799, still town crier and now also clogmaker, in Palmer's East Grinstead directory. He is our only recorded clogmaker and may well be descended from Thomas Goldsmith, our only known heelmaker, who appears in 1714 and 1717(4).

Mr. Evans's final East Grinstead character, Samuel Stephens, continues in other records up to 1839(5), last in a line of braziers starting with John Cole in 1635(6) but our only known tinman. In 1856, however, George Cooper describes himself as whitesmith(7), a term of similar meaning.

These notes are no more than fragmentary supplementary details, but similar fragments from the records of other parishes for these and other occupations would together help build up useful indications of the duration and distribution of a whole range of craft industries in the county.

References:-

S.R.S. = Sussex Record Society's publications.

- (1) The date for the volume containing East Grinstead (rather than 1798 as given in the article); see J.H. Farrant, Sussex Directories, 1734-1940 (3rd ed., 1980), p.5.
- (2) West Sussex County Record Office, PAR 348/26/2/6
- (3) S.R.S., vol.68, p.16
- (4) S.R.S., vol.28, p.79
- (5) Robson's and Pigot's Sussex directories
- (6) S.R.S., vol.24, p.182
- (7) ex inf. Mrs D.F. Neville

LIMEBURNING

An article 'Lime Kilns in East Grinstead' by M.J. Leppard was published in the East Grinstead Society's Bulletin 28 (Spring 1980).

Copies of this and most of the Society's other Bulletins can be obtained for 25p each, postage extra, from Mr. M.J. Leppard, 20 St. George's Court, London Road, East Grinstead, Sussex, RH19 1QP.

THE THOMAS PAINE CONNECTION

Back numbers of the A.I.A. Review, available on request from the Secretary of S.I.A.S., contain some very absorbing material and the writer has found in VOL.I No.1 an article about an iron bridge at Sunderland which should surely be of interest to all members because of its local (Sussex) connection.

Those of us like myself who are only casually acquainted with Thos. Paine are probably unaware, unless they have read the biographies, that as well as tobacconist, exciseman and revolutionary, Paine had some claim to be a pioneer in the design of iron bridges. Like his politics however, Paine's ideas on bridge design did not initially gain favour at home, but had to wait till after his departure for America in 1774 where he claimed some years later that a single span of 400 ft. would successfully bridge the Schuylkill river and he constructed models to try to prove his point. The A.I.A. article mentioned, seeks to deny that the iron bridge at Sunderland was a Thos. Paine design and supposedly built with Paine's hardware; as indeed Paine seems to have believed himself in 1800. However that bridge is now generally attributed to Rowland Burden MP, if perhaps owing something to Paine's earlier design.

There is much interesting reading in the Review which leads to the conclusion that although a somewhat fanciful designer, (he believed in the structural properties of the spider's web!) Paine was well ahead of his time and seems to have anticipated the modern girder type bridge. The President of the American Society of Civil Engineers in fact in 1905 said that Paine's experimental bridge became the prototype of the modern steel bridge. (Perhaps a rather over generous assessment.)

Although Paine lost his job as exciseman in Lewes and departed for America in 1774 it seems possible that at about this time he had the benefit of instruction from that eminent schoolmaster, lecturer and engineer - Cater Rand who was then apparently dispensing technical knowledge to all and sundry in Lewes and whose achievements have been reported in issues of S.I.H. That Paine was at least an acquaintance of Cater Rand is almost certain. The Bull House Westgate, Paine's residence, is almost opposite No.160 High Street where the school founded by Cater Rand's grandfather was located (next to St. Michael's Church).

Moreover Paine was not only a regular customer of the White Hart Hotel in Lewes but a friend of the Verrall family who leased the Hotel and Lucy Verrall the daughter of the landlord was Cater Rand's mother. (Cater Rand it is believed took over the school from his mother in 1773.) John Farrant in S.I.H. (6) 1973/4 tells us that Cater Rand's public lecture course, which included mechanics did not begin until 1775 so it would seem that Paine's departure for America was premature, if he had hoped to attend this new course. Samuel Smiles in Lives of the Engineers (1897) refers to a school where Paine was usher before serving as exciseman in Lewes. This could, it seems, have referred to the Rand establishment and, according to Smiles, Paine did in fact study mechanics and mathematics at this school. However Paine's academic career also involved teaching English in London, according to his other biographers, so Smiles' version may be disputed unless Paine's "ushering" occurred while he was also employed as exciseman.

Since Paine spent at least six years in Lewes, he most probably developed the latent technical ability that was later to emerge and be appreciated in America, whilst resident in this Sussex seat of learning(?). Moreover, there is further evidence that Paine's interest in the use of iron could have taken a practical turn at an early date by the opportunity to obtain materials quite near at hand. From W.I.R.G. Bulletin 1 (New Series) 1981 it is learned that newspaper advertisements of 1772 and 1775 refer to Bar, Rod, Hoop and Sheet iron and also "Brazier and Tinware" obtainable from Ann.Moligneaux

& Co. "at their shop near the White Hart Inn Lewes" - hardly to be missed by a regular visitor to the White Hart! There is more information on Paine as "Entrepreneur" in the various biographies and the Newcomen Transactions. With his active participation, a prototype bridge with a single span of 110 ft. was made and assembled by the Walkers of Rotherham (Yorks) in 1789 and reassembled near Paddington in London for exhibition in 1790 (also incidentally, to engage the interest of Sir Joseph Banks, President of the Royal Society). Unfortunately however, Paine's partner in the venture, Peter Whiteside an American, was bankrupted and both partners served a term in a debtors' prison. The Walkers who then became the owners of the bridge had it returned to Rotherham where there is some evidence that parts were incorporated in the Burden bridge at Wearmouth (Sunderland).

An original design conceived by Paine was for a single span of 400 ft. (as already mentioned) for the Schuylkill River crossing in America, but the Americans were not prepared to risk the venture and directed Paine towards the Academy of Sciences in Paris, whereupon he duly embarked for France. Soon he was to begin, as it turned out, the most dramatic phase of his political career, but without realising the ambitions for his bridge. In 1800 after surviving the Reign of Terror in Paris and preparing to return to America, Paine wrote to President Jefferson mentioning the Sunderland bridge and mistakenly claiming that his design had been pirated. His return to America was accompanied by models of bridges and other hardware, but none of these has survived apparently - and Paine's last attempt to interest authority in his plans failed, and he died in obscurity in 1809 in America.

Argument has now continued for nearly two centuries about the merits of Paine's bridge and to what extent it influenced further development. Certainly the Walkers gained much experience and constructed, in addition to the Wearmouth bridge, the next notable iron bridge - that over the Thames at Southwark in 1815 (under Rennie) - the largest cast iron construction up to that time.

Acknowledgements

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*R.W. Morrell F.L.S. F.G.S., Secretary Thomas Paine Society, Nottingham
*Robert Vogel, Curator, Division of Engineering & Industry, Nat. Museum of American History, Smithsonian Institution Washington DC.
* Communications have been received from these.

T.E. EVANS

Editor's Note: The Director of the Chalk Pits Museum is considering incorporating this subject into the "Roads and Road Engineering" Exhibition at the Museum.

DEMOLITION OF CATT'S MILL, BRIGHTON

In January of this year work started on demolishing a large number of old industrial premises in Eastern Road between Freshfield Road and Sutherland Road so that the Freshfield Industrial Estate in Brighton can be extended southwards. Parts of the buildings (Numbers 75 and 77) were used by John Catt & Co., a firm of flour millers who operated here up to 1923. Whether William Catt was the first owner is uncertain, but Leppard's Directory of 1839 lists the occupiers as Catt & Son, Albion Steam Mills, millers. They opened the business here as an addition to their existing Tide Mills at Bishopstone.

An article in the Brighton & Hove Herald dated 6th March 1926 gave these details. The wheat was ground by 24 pairs of stones until 1885 when the Albion Mills were converted into rolling mills. The following year a chimney was built at a cost of £970. It was 133 feet high with an internal diameter at the top of six feet. In 1890 the large silo granary, which had a holding capacity of 32,000 bushels, was built at a cost of £2,000. The mill was driven by eight cotton ropes from the sixteen feet fly-

wheel by a steam engine of 120 horse power. There was a well on the premises 230 feet deep, the water being forced up by compressed air. On average the mill employed thirty men. The buildings were finally closed down in 1923. In March 1926 steeplejacks demolished the tall chimney by detaching and dropping every brick. In the early days of the mill foreign wheat was brought from London to Brighton by teams of horses making three journeys a week from the London Docks. The flour from the Bishopstone Mills was hauled into Brighton by six-horse teams making one journey a day.

An item in the Brighton & Hove Leader dated 27th July 1985 stated that in July 1885 the mills, together with 22 bakers' shops and bakehouses were sold for £23,000. I asked a person demolishing Number 75 Eastern Road if he had found anything of interest, but nothing seemed connected with milling. My father in the 1920s was a baker who used Catt's flour, and I can still remember what tasty bread it made.

H.T. DAWES

INDUSTRY YEAR '86

The following letter has been received by the Society from the Association for Industrial Archaeology:-

"Did you know that 1986 has been designated as Industry Year and that national and regional committees have been formed to commemorate the year and to put young people in closer contact with industrial activity?

"In connection with this, it is hoped that IA societies can do something to excite people and interest them in industry and not just the historical or dead aspects of it; there are the current modern activities too. Many museums will be having special exhibitions, gallery tours or joint visits for schoolchildren from the museum to the industry where the object has been made. There is enormous potential for IA to be involved in this year and it is hoped that the AIA itself and the affiliated societies will play their part.

"BP, together with the Ironbridge Gorge Museum, have devised a scheme entitled 'Youth into Industry'. This will be launched to all BP's customers and will take the form of asking their customers whether they have any historic relic which they would like a local school to restore. The same information will be going out to schools throughout the country and the result will be that BP, assisted by the Ironbridge Gorge Museum, will put schools in contact with an appropriate firm. The project will be discussed and the school will be asked to contact their local museum and IA Society for advice before starting a project. The school will also be asked to ensure that the eventual location of the restored object is determined before the start of the competition, and this could be a way in which museums and IA groups could acquire new objects.

"The wholehearted support of IA groups, and the AIA, is required if this scheme is to succeed. We urge you to give it serious consideration, and to contact your local museums and schools to see what opportunities there are for your Society to participate."

J Spavold

Affiliated Societies' Liaison Officer - Association for Industrial Archaeology

TAPE RECORDING PROJECT

The East Grinstead Museum Society is tape-recording the memories of older local residents for the Museum's archives.

The scheme's co-ordinator, committee member Mr. D.J. Skinner of 53 Durkins Road, East Grinstead (23031), will be glad to hear from anyone who might be interested in taking part.

Memories are important, for they can easily die with those who hold them, and so the Museum is interested in collecting them as much as it is in objects, documents and pictures.

Further information about the Museum Society may be obtained by calling at the

Museum (open Wednesdays and Saturdays, 2-4 p.m., admission free) or by telephoning East Grinstead 28802.

M.J. LEPPARD, Hon. Curator, 20 St. George's Court, East Grinstead (22511); if no reply 'phone 23636 (East Court) and ask if Mr. Leppard is in the Museum.

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