



SUSSEX INDUSTRIAL ARCHAEOLOGY SOCIETY

NEWSLETTER No. 27

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GENERAL NOTES AND NEWS

Annual Subscriptions. Membership cards for 1980/81 are enclosed with this Newsletter if not previously sent.

The Treasurer would be pleased if any Member who has overlooked his subscription payment, due on 1st April, would let him have it as soon as possible in order to avoid the trouble and expense of sending a reminder. (Member £3.00. Family Member £1.50).

S.I.H. 10. Dr. Hudson has pointed out a misprint in his article on Burton Mill. On page 2, final paragraph, line 1, the date should be 1635, not 1653 as printed.

Burton Mill. Mrs. Ann Mills has contributed a valuable additional item relating to the restoration of the mill. She suggests that Members would be interested to know that:- "It was Mr Charles Muddle of Ashington who planned and installed all the machinery (with the help of friends) as well as carrying out many repairs and making the car park. Mr Muddle comes from an old Sussex milling family, his father having taken over Ashington Mill with its four pairs of millstones and a waterwheel at the turn of this century. Ashington Mill is now a modern provender mill, the old mill having been burnt down some years ago. Much of the skill learned from the old mill have gone into the restoration of Burton Mill which was, gutted, except for the turbine and shafting when I took over."

Prior to the installation of the milling machinery the restoration of the turbine and shafting necessary to drive the mill and considerable construction repairs on the building had, as reported in earlier Newsletters, been carried out under the supervision of Mr Allnutt and with help provided by naval parties from H.M.S. Daedalus.

Battle Festival. As part of this year's Festival one of our Members, Mr. John Upton, is leading parties around Battle's Gunpowder Mills on Sunday 20th July and Saturday 26th July. The walks start at the Battle Memorial Hall at 2.30 p.m. and includes a short preliminary talk on the mills. Tickets, 60p, are available from the Festival Box Office, Battle Memorial Hall, Langton Green, Battle.

Ditchling Fair. A lease has been completed on Oldlands Mill, Keymer, between the Hassocks Amenity Society and the owners of the mill, the Sussex Archaeological Society. Funds are needed to enable the supporting steelwork frame, designed by members of our society, to be constructed. For this purpose a fair of village life will be held on Ditchling Village Green from the 16th - 20th August; of particular interest will be the exhibition of "Ditchling and the Mill 1713-1918". Frank Gregory is a member of the Restoration Committee. Opening 2.00p.m. Aug.16th.

Newsletters of Affiliated Societies. The exchange of information is one of the reasons for belonging to a Society such as ours and the interchange of news with Affiliated Societies can be worthwhile.

Both the Sussex Archaeological Society and the Federation of Sussex Local History Societies publish quarterly Newsletters which are available to our members. There would be a small charge for the S.A.S. Newsletter.

If members would like to receive a copy of either of these publications would you please let the Hon. Secretary know.

Exceat Storage. Over the past few years little use has, unfortunately, been made of the storage and workshop facilities at Exceat, and as the E.S.C.C. has now asked us to put in a separate electricity supply cable at an estimated cost of £300, the Committee has considered it best to give up the lease, which fell due for renewal at the end of June. The small amount of equipment which was stored there has been disposed of to other charitable concerns.

Piddinghoe Kiln. The necessary repairs to the kiln, which were detailed in the last Newsletter, have now been put in hand, under the general supervision of our member, Ted O'Shea, and Brian Dawson of the Architect's Dept. Lewes District Council. The cost of the work is being covered by grants from the Sussex County Council, Lewes District Council and the Sussex Heritage Trust, and by a contribution from the owners of the kiln. A full photographic record of the restoration work is being made by our member, John Upton, and measured drawings of the kiln will be produced.

Boxgrove Hillfort. Mr E.W. Holden, one of our Members and an Honorary Correspondent to the Ancient Monuments Branch of the Department of the Environment, has drawn attention to the recent scheduling of this industrial monument comprising the Hillfort and Windmill on Hainaker Hill, just east of Chichester.

The Hillfort is a small single bank and ditch, possibly of Iron Age origin. The windmill stands inside the enclosure and has been included in the scheduling. This means that it cannot be altered or destroyed without the consent of the D.o.E. and it is an offence for anyone to deface or damage it.

Bognor Regis Motor Gala. Sunday 17th August at West Park. 11.00 a.m. to 6.00 p.m. The central theme of the Gala is a Rally and Concours for Veteran and Vintage Vehicles as well as for stationary engines and other relevant Collectors Items. Entries for the programme close on 21st July and should be sent to Clive Sayer, 6 Wren Crescent, Bognor Regis, West Sussex, PO22 9BZ (Tel: Bognor Regis 820949) from whom further details can be obtained. Proceeds go to the Rotary Club Lung Diagnostic Analysis Appeal.

FORTHCOMING VISITS

Milwards Farm, Laughton (TQ 516124) Saturday 9th August 2.30 p.m. The farm is on the South side of A273, the Ringmer-Hailsham Road, about a mile East of Laughton. Mr. David Baker has a fine collection of restored engines including the steam engine from the Glynde chalk pits, built about 1880 for driving the crushing mills. There are also a number of models and a splendid flat-bed printing press of 1830 which has been restored to full working order and can be used for printing again, there being blocks available for this. As we wish to let Mr. Baker know the number of people who will be coming please return the the enclosed Visit Slip to Mr. A.J. Haselfoot, or let him know by telephone (Hastings 436260) not later than Monday August 4th.

Sussex Industrial History Centre, Amberley. Saturday September 20th. Assemble at Amberley Station Car Park TQ 118027, at 10.30 a.m. A conducted tour of the centre by Trustee Mr. A.G. Allnutt in the morning will be followed by a visit to various sites on the Wey and Arun canal to see the work of the Canal Trust. (Entry to the History Centre is 40p).

Coultershaw Water Pump and Burton Mill. Saturday October 11th. Assemble at Coultershaw Water Pump (SU 973194) at 10.30 a.m. It is hoped to include visits to other Industrial Archaeology sites in the Petworth area.

RECENT VISIT

West Sussex Wind and Watermill Mystery Tour on June 14th 1980.

Some thirty members attended this visit which started at the interesting old water-pumping station near Swanbourne Lake on the Duke of Norfolks Estate at Arundel, TQ 181774. This comprises a vertical-shaft reaction-type water turbine driving, through a double-reduction gear, two three-throw force pumps which originally pumped water up to a reservoir about 200 yards away on the adjacent hill to supply water to the town of Arundel and the surrounding villages. The date 1844 was carved on part of the reservoir wall which could be the date of the pump house built in the Victorian Gothic style. The makers name plate of Stothert and Pitt was discovered on the machinery and as I believe they have just celebrated their centenary the machinery would appear to be later than the building. Although the building has been roofless for more than fifteen years the machinery is in a remarkably good state of preservation. Altogether a very interesting site which deserves at least being housed under cover (any volunteers?) and is certainly worth more research.

Next to be visited was Earnley Windmill¹ SZ 817983, a smock mill built between 1799-1803 with an octagonal tarred and weatherboarded body on a brick base with an ogee cap. It was the last working mill in the county and finally ceased work in 1942. After being bought by a competitor, Bartholomews of Chichester, it was allowed to decay and by the early 70's was in a poor state; it is now being rebuilt by Peter Darby, the son of the owner and Gus Pollard who, as we saw, are at present rebuilding the smock tower and the cap.

After lunch West Ashling Mill¹ was visited (SU 808075). Built on the site of a paper mill it was returned to corn milling being driven by a breast wheel, and latterly by an Armfield Turbine. At low water this turbine found difficulty in coping with 3 pairs of stones and various auxiliary gear so a hollow post windmill was constructed on the roof of the east end; this had ceased working by the 1930's.

We then proceeded to Terwick Mills, near Trotton (SU 830222), the second-last working water mill in Sussex, closing in September 1966. There are two mills built end-to-end with adjoining breast-shot wheels; Old mill is weather-boarded with one pair of stones and New mill, brick built in 1740, had two pairs of stones. This is now a private house but retains the basic machinery.

The tour ended at Shipley Windmill¹ (TQ 144218) the largest smock mill in the county. Built in 1879 it ceased working in 1926 and was restored to full working order in 1958. Wind conditions being suitable the sweeps were soon turning and a small amount of grain was run through the stones.

Our thanks are due to Frank Gregory for organising and conducting the tour and we hope to complete the county next year by visiting the Central Sussex area.

1 See Martin Brunnarius' excellent book "The Windmills of Sussex" Phillimore, £8.95. J.S.F.B.

PUBLICATION

Bricks and Tiles. A Village Industry by Mrs. M. Beswick.

Obtainable from the Author at Turners House, Turners Green, Heathfield, Sussex. Price 50p + 12p postage and packing.

This illustrated booklet of 13pp is the fourth publication of the Warbleton and District History Group. Although bricks were produced in Sussex in Roman times, about 1000 years were to elapse before they reappeared in the County and a further century before they were made in Warbleton. After reviewing the history, styles and craft of brickmaking with particular reference to Sussex, Mrs Beswick devotes the second half of the booklet to the five brickyards that existed in Warbleton during the 18th and 19th centuries, the last one being owned by Messrs Bros. and closed in 1940. To anyone interested in local history or in the brickmaking craft the booklet provides extremely fascinating and very instructive reading. E.O.T.

EAST GRINSTEAD 'PUBS'

A recent exhibition at East Grinstead featured some of the old licensed premises in the town and brief details of such premises have been sent by Mr. M.J. Leppard. Although hardly ranking as industrial monuments they would certainly have been well patronised by many industrial workers of the town.

Twelve licensed premises are known to have existed at different dates in the historic centre of East Grinstead. Towards the end of the 18th century as many as eleven of these houses were operating simultaneously, catering for travellers from London to the nearest south coast ports, a journey which usually took the best part of two days. By the end of the century however, they were rapidly closing, for the rise of Brighton took traffic from the East Grinstead road to the direct route through Crawley.

Of the twelve, only the Dorset Arms, Ship, Crown and Rose and Crown remain in use but the buildings of six others are still standing: the Star (Old Welcome), Red Lion (Broadleys), Bull (Peter Dolphin and Herbert Sports), George (Old Stone House), Green Dragon (Grays), and another George (Sutton's furnishings). The Swan has been replaced by shops (Gas Board etc.) in our lifetime and the Dorset Head by offices (Turner, Rudge & Turner, etc.) in the late 18th century.

There were nine other houses which at various times existed elsewhere in the town, to say nothing of those also in the parish of East Grinstead at Ashurst Wood, Forest Row and Wych Cross or on its borders as at Felbridge.

THE RISE OF MODERN WORTHING

by Mrs. M. Morris

As a spot on a map, a Roman estate, a Saxon's name for home, part of Eari Godwin's possessions, or a gift from the Conqueror to one Robert Savage, Worthing has its place in the history of the realm from earliest time; but as a Town and Borough, its evolution in historical terms has been short and sharp - conceived by the whim of High Society and abandoned as an infant to make its own way in the world.

Towns come into being for many reasons, not the least of which is a belief that their waters have medicinal properties. For centuries, spa towns usually were found inland, but when 18th century doctors added sea-water to their list of health-giving waters, Society moved to the sea coasts. Royal invalids resorted to Brighton for convenience, and after George III had visited the place, it was adopted by his son for his summer pavilion.

In 1798, George III's daughter, the Princess Amelia became ill, and the King thought the south coast air would do her good. However, he was not too keen on the idea of her being in the same town as his rather loose-living son, so a place further west was found for her in the small hamlet of Worthing. A place that was good enough for a princess, was good enough for the rest of Society, and houses and hotels were quickly re-erected to cater for the ever increasing numbers of visitors. By 1803 the tiny hamlet in the parish of Broadwater had grown large enough for the King to grant it a charter by giving it the status of a town. Commissioners were appointed to run it, and with statutory powers to levy rates, they set to work to provide the amenities Society expected in a Spa. Very soon, the hotels were joined by Assembly Rooms, a Circulating Library, a Parade for a military band, and a Theatre. Licenses were issued for hackney carriages, bathing huts placed upon the beach and a fine Chapel-at-ease provided for Sunday worship.

For about twenty years the town grew and prospered, and then quite suddenly, it was over. The old King died, the Court returned to London, and slowly the hotel guest list fell away; the band played less often, and the Assembly rooms echoed less and less to the sound of careless laughter. As the sounds of High Society died away, they were replaced by the angry shouting and the rioting of the agricultural labourers. The depression that followed the Napoleonic war, and the Corn Laws, were making themselves felt all along the coastal plain. Left without the means of a livelihood, Worthing itself became a depressed town in the middle of a wide area of agricultural discontent, and for the next twenty years the inhabitants had a very thin time indeed.

However, although it had lost the artificial prosperity of servicing High Society, Worthing had four natural attributes in its favour - an equable climate, long hours of sunshine, a fertile soil, and a high water table. People grew their own food, first to survive, and then to sell, and gradually a lucrative market garden and horticultural industry began to develop. The tomato, brought over by French refugees, flourished under glass, along with early vegetables and flowers. There was plenty of fish in the Channel and fishing boats on the shore. The coming of the railway helped a great deal in mid-century, making it possible to reach the London markets. Small industries had arisen in the back yards - the discerning industrial archaeologist still can find much to interest him - and building began again.

The town began to pick up financially. By the last quarter of the century the founders of the Industrial Revolution of the 1820's were reaching retirement age and seeking clean and attractive towns to retire to. Eventually Worthing, which had continued to expand in spite of its difficulties, became a Borough in 1891, adopting as its coat of arms the device of a shield bearing three mackerel, and a cornucopia of fruit, vegetables and flowers, with the motto in Latin 'Abundance from the Earth and Health from the Sea'. Finally, the famous 'Sunny Worthing' emblem of sunrays was devised and an all-out effort made in the last decade before 1900 to capture some of the new middle-class holiday business.

In this way, by the end of the century - and it actually took a century to do it - the town had re-established itself in its own right, as a holiday resort for the middle-class family, backed up by a thriving glass house industry.

In many ways, the Borough is neglected by the industrial archaeologist, although its growth has corresponded almost exactly with that of the Industrial Revolution. From High Salvington mill to the end of the pier; from Brooklands Lake to Goring level crossing, there are artefacts to be found, and small histories to be written. Plans for the redevelopment of the oldest part of the town are constantly being shuffled about and one of these days it will be too late.

AVIATION AT AMBERLEY

by A.G. Allnutt

Jose Weiss, pioneer of Soaring flight (1859-1919) was a Frenchman born in Paris in 1859, who, at the age of 25, became a naturalised British subject, making his living by painting English landscapes. In 1897 he settled at Houghton and began to think about the problems of flight, starting with a study of the shape and soaring performance of birds of prey. Meanwhile painting continued and there was a ready sale for his work, especially in America. Altogether he sold over 2,500 pictures.

In 1902 he started making model gliders launching them from the top of Amberley Mount. By 1907 he had made some 200 and began work on his first man carrier. This was unsuccessful but in 1909 things went right.

The new glider (called Olive after one of his daughters, a practice he subsequently continued) was tailless and had swept back wings thick at the root but tapering off - an attempt to copy birds wing shape. Lateral control was by warping the wing tips but Weiss considered that the craft was stable longitudinally and did not need a tail. The pilot could trim the fore and aft attitude by slightly altering his position. On 27th June 1909 E.C. Gordon England made a flight in Olive that lasted 54 seconds and rose 40ft above the launching point. As early as 1903 Wilbur Wright in U.S.A. had flown a glider for 1 min. 11 seconds but did not rise 40ft above his launching point so Gordon England had made an unofficial record. Weiss then began to experiment with powered flight, Olive was fitted with an engine and called Elsie, but was not successful and was reconverted to a glider and presented to the Amberley Gliding Society, taking part in their 1912 Easter meeting. Olive had a wing span of 26 ft and weighed 99lb. Weiss's aeroplanes Elsie, Madge and Sylvia were not outstanding although Sylvia with its 40 hp engine flew successfully at Littlehampton in 1910 piloted by Gordon England, It had a wing span of 34ft and weighed 750lbs.

Weiss appears to have been a man of forceful personality with very definite ideas and in 1907 and 1908 he lectured to the (Royal) Aeronautical Society. Frederick Handley Page was impressed and used his wing shapes on several mono-planes that flew extremely well. One was the first to fly over London in 1911. They agreed that aircraft should be designed to be inherently stable but others did not regard this as important, considering that the pilot should provide the stability by controls. Weiss clearly understood that a glider must descend relative to the air currents in which it is flying but if its rate of descent is less than the upward velocity of an air current it will rise. He also realised that birds with their nearly perfect shape had very small gliding angles and this led him to think that if practically perfect shape could be achieved the gliding angle would approach zero. Thus he did not seem to appreciate the existence of drag which would intervene and prevent what would amount to perpetual motion in the ultimate of a zero gliding angle.

He died in 1919 and was buried in the churchyard of the Roman Catholic Church in Houghton Village. Somewhat belatedly in 1929 his widow was given a State Pension of £50 p.a. for his services to Aviation - backdated to April 1928.

In two ways he was well ahead of his time. Thick wing sections were not used by others, despite the obvious advantage of strength, until the 1920's when they began to become standard. Swept back wings also were not favoured apart from an experimental aeroplane called the Pterodactyl in 1928 until they were introduced as delta wings in high speed military aircraft in the 1950's and are now exemplified by Concord.

If anyone has more information about Jose Weiss, Mr. Allnutt, the West Sussex Secretary, would very much like to know, so that it can be used at Amberley. A model of his glider, Olive, will be put on display there in due course.

LATE NOTE

History of Technology Group - Institution of Electrical Engineers.

The Group held its Annual Week-end Meeting in London in July. The proceedings commenced with the formal opening on the Friday evening at the Science Museum of an Exhibition of some of the valuable Archives of the Institution. The Exhibition will be open until November and is very well worth a visit.

Other activities during the weekend included a visit to the museum at Muirhead's factory at Beckenham where many instruments and other devices relating to early Atlantic and other telegraph cables are preserved. Among the lectures presented were several covering technical developments during the decade 1945-1955 and also on an Early Experiment in Automation, the Early Electricity Supply in the City of London, the Chatsworth House private hydro-electric scheme, Sir Charles Tilstone Bright, telegraph engineer and finally, on clandestine radio in World War II.

E.O.T.