

MEMBERSHIP CHANGES

New Members

I.M. Carnochan, 38 Newtown Road, Hove, BN1 6AB (Brighton 729094)
Lt.Cdr.C.D.Hollis, 7 Eastgate Court, The Hornet, Chichester, PO19 4JX
(Chichester 760865)
J.R. Minnis, 14 York Villas, Brighton, BN1 3TS (Brighton 726732)

Change of Address

T.C. Churcher, "Silverden Cast", Church Lane, Northiam, Rye, TN31 6NW
Mrs. C.M. Fogden, 27 Eyres Drive, Alderbury, Salisbury, Wilts. SP5 3TD
N.N. Harrocastle, 17 Winchester Road, Worthing, BN11 4DJ
E.T.C. Harris, 6 The Welkin, Lindfield, Haywards Heath, RH16 2PH (Lindfield 3904)

Change of Name and Address

Miss E. Steer is now Mrs. E. Bean, 62 Sussex Road, Haywards Heath, RH16 4EE

Corrections

M.F. Gardiner, "Chippings", Cote Street, Worthing, BN13 2EX
C.M.J. Wilson, 1 Oakenfield, Burgess Hill, RH15 6SJ (04446 47963)

Resignation

Brighton & Hove Archaeological Society, R. Hartridge, 32, Franklin Road,
Shoreham-by-Sea, BN4 6YD

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 & Membership Secretary	J.M.H. Bevan, 12 Charmandean Road, Worthing. BN14 9LB (0903 35421)
Editor	E.J. Upton, Rowan Cottage, North Trade Road, Battle. (0424 6 2319) TN33 0HU
Programme Secretary	D.H. Cox, 3 Middle Road, Partridge Green, Horsham, (Office: 0293 27777 ext. 3340) RH13 8JA (Home: 0403 711137)
E. Sussex Secretary	A.J. Haselfoot, Albion House, Coburg Place, Hastings. (0424 436260)
W. Sussex Secretary	R.M. Palmer, 11 Arlington Close, Goring-by-Sea, Worthing (0903 505626) BN12 4ST
Central Sussex Sec.	J.S.F. Blackwell, 21 Hythe Road, Brighton. BN1 6JR (0273 557674)
North Sussex Sec.	E.W. Henbery, 10 Mole Close, Langley Green, Crawley. (0293 23481)

COMMITTEE MEMBERS

A.J. Allnutt	B. Austen	D.H. Cox	F.W. Gregory	A.J. Haselfoot
E.W. Henbery	P.J. Holtham	E.W. O'Shea	F.M. Palmer	G.C. Thomerson



SUSSEX INDUSTRIAL ARCHAEOLOGY SOCIETY

Registered Charity No. 267159

ISSN 0263 516 X

NEWSLETTER NO. 44

OCTOBER 1984

CHIEF CONTENTS

A.I.A. Conference
World's First Circular Air Terminal
The Windmills of Clayton Hill
Museums in Sussex with some I.A. Interest

R. Martin
F. Sowrey
M. Brunnarius
A. J. Haselfoot

FORTHCOMING MEETINGS

Saturday, 21st October. 2.30 p.m. Southover Grange, Lewes.
Following the A.G.M. of this Society, a film will be shown entitled "Stocks and Sweeps". This film shows the restoration work which has been carried out on Jill Mill at Clayton, and will be shown by Danny Jarmann of the Jack and Jill Preservation Society. Tea will be served during the afternoon.

The "Brick Study Group" of this Society will hold a meeting on Saturday, 21st October at Southover Grange, Lewes, commencing at 11 a.m. All members are invited to attend.

THE BATTLE ESTATE BRICKWORKS 1853 - 1901

In an article under this title in Newsletter No. 42 April 1984, mention was made of brick and tile machines. The following letter from Mr. T. E. Evans adds further information.

"The British Library off Chancery Lane has records of several Patents under the name Robert Beart (not Bearl) and No. 6738 of 23.12.1834 appears to be the one concerned with the hand brick making machine.

There are also several Patents listed for Henry Clayton including 10132 of 30.3.1844 - Manufacture of tiles, drain pipes, tubes and bricks, which Mrs. Beswick believes to be relevant to Battle Abbey brickworks. It is possible that the name Beart could have been misread from the ESRO records as the two names are otherwise similar."

"THE ARCHAEOLOGY OF THE WEALD"

The 14th annual whole day Archaeology Conference of the Sussex Archaeological Society will be held on SATURDAY, 13th October 1984, commencing at 11.00 a.m. at PRIORY (MIDDLE) SCHOOL, Mountfield Road, Lewes. Admission by ticket which will be sent on receipt of £1.50 per person, accompanied by a stamped and addressed envelope, to Mr. K. W. Suckling (Conference Secretary), 272 Willingdon Road, Eastbourne, East Sussex, BN20 9JR (Tel: Eastbourne 51060).

Programme:

1. Some archaeological implications of the floodplain and vegetational history of the High Weald.
2. The Middle Stone Age of the Weald - the view from Uckfield.
3. Prehistoric and Romano-British settlement at Garden Hill, Hartfield
4. Recent Archaeological Research into the Wealden Iron Industry.
5. Moated sites in East Sussex.

CENTRAL SUSSEX SECRETARY'S REPORT

Jack and Jill Windmills

The tail of Jill has now been reframed and weather-boarded thus completing the restoration of the body. A new fantackle based on Cross-in-Hand windmill has been made and is now operational and very impressive too. Weighing two tons with a 10' 9" diameter fan of which one revolution moves the wheels 1" and 3000 revolutions are needed to turn the mill full circle on a 78 ft diameter track.

Resignalling the Brighton Line

The final stage of this work is now getting under way between Brighton and Preston Park stations which means items of interest will be swept away including the signal boxes at Upper Goods (on the right hand side travelling towards Preston Park and situated approximately midway between that station and Brighton) and Preston Park (on the opposite side just before entering the station). Both are examples of the 1880's Saxby & Farmer type and can best be viewed from the train. In March the line will be closed for the rebuilding of the New England Road bridge part of which is the original 1841 structure. I expect, judging by B.R.'s track record, that the attractive cast-iron bridge which also spans the road will disappear. This bridge is interesting as it was strengthened with steel girders, as were all cast-iron bridges on the L.B.S.C.R. following a bridge collapse at the end of the last century.

J.S.F. Blackwell

WEST SUSSEX SECRETARY'S REPORT

Coultershaw Pump

In spite of the dry summer there has been just enough river flow to keep the pump working. Performance would be improved by balancing the water-wheel; this is one of the tasks to be carried out in the coming months.

Two new sluice gates have been made and will be fitted for next season.

Visitors have averaged about 40 on each open day, with a large party from GLIAS in July.

Dorothea Award

This award is made annually for a project involving work of restoration. It is gratifying to learn that the Society's restoration of Coultershaw Pump gained the second prize this year, a cheque for £100, which was presented to our delegate following the dinner at the AIA Conference at Aberystwyth in September.

The first prize was won by Mrs. D. M. Shrimpton, a member of this Society, for her restoration work at the Ruddington Frame Knitting Museum at Nottingham.

Poyntz Bridge (Chichester Canal)

The whole structure has been grit-blasted and given a protective paint coating. The two inner of the four longitudinal cast-iron beams are badly fractured. After due consideration it has been decided that these cannot be satisfactorily repaired but will have to be replaced by steel I-beams; fortunately the external appearance will not be impaired.

R. M. Palmer

REPAINTING 'BOW BELLS' MILEPOSTS

Members of the East Grinstead Society have completed their 1984 project, refurbishing the 18th century cast-iron 'Bow Bells' mileposts in the town.

Corrosion was treated where necessary and the posts repainted in their traditional black and white.

The mileposts, erected by the turnpike trust responsible for the main road through East Grinstead (now the A22), were an ideal subject for a project by the Society which likes every year to undertake some such small practical task as a demonstration of its concern for the town's heritage and amenities.

The posts, whose exact date and place of manufacture are unknown, take their name from their design of five bells diminishing in size suspended from a bow under the number of miles from London. They are widely believed to make punning reference to the famous bells of Bow church but there is no evidence that this was the intention.

Those in East Grinstead are numbers: 29 (Halsford Park), 30 (town centre), (Lewes Road) and 32 (Ashurst Wood).

A full survey appeared in Sussex Industrial History, Vol.5 (Winter 1972/3)

M. J. Leppard

JAMES BOND VISITS AMBERLEY CHALK PITS MUSEUM

At the beginning of September the Museum was the location for EON Productions, the James Bond 007 film company. Some two hundred very friendly people with their equipment and props moved in to make some of the exciting closing sequences of "A View to Kill".

The eastern end of the site including the tunnel, the 2' gauge railway and workshops were transformed into an abandoned California silver mine, this included American caps, trucks, the lower half of an airship slung from a huge crane, bright green rail skips and diesel loco's, wooden crates bearing the sinister name ZORIN.

The film sequences included shots of the railway, the blowing up of a bomb and a dangerous lady on a flat car. James Bond and his lovely girl friend were captured by Zorin from the gondola of the 'captive' airship. The most heart-stopping part of the filming was the flying of the real Airship Industries G-BIHN 500 Airship. We were able to witness superb airmanship by the captain of this craft as he positioned it down to tree tops inside the cliffs of the Museum.

For those of us lucky enough to be there it was a most interesting experience, for the Museum a remarkable piece of publicity.

J. Land

MEDIAeval TOWNS IN SUSSEX

Sussex Archaeological Society Joint Historical/Archaeological Conference, 1985.

Since 1981 the Society has held two annual conferences, a historical one in the spring and an archaeological one in the autumn. In 1985, instead, a joint conference is to be held as an experiment, on a theme which is of interest to both historians and archaeologists, and one which requires the complementary approaches of both kinds of specialist. The theme chosen is Medieval Towns in Sussex, and speakers will include Helen Clarke, David Rudling (on current archaeological research on Sussex towns), David Martin (on urban architecture), Pat Stevens, and Juliar Munby (on medieval Chichester). The conference will be held on Saturday, 30th March at Chichester College of Technology from 11 a.m. to 4.30 p.m.. Enquiries to the organizers, Tim Hudson, West Sussex Record Office, County Hall, Chichester, and David Rudling, 30 Albion Hill, Brighton.

About a dozen members of the Society attended the Annual Conference of the Association for Industrial Archaeology at Aberystwyth from 14th to 19th September and a very rewarding occasion it proved to be. It is impossible to condense 5 days of activities comprising 3 hours of Association business, 14½ hours of lectures on 10 different subjects and 34 hours of visits and excursions to 14 different locations into a few paragraphs, so I will only attempt to give an impression.

The area around Aberystwyth is mainly agricultural with moorland and upland farms. The chief industrial activity in the past was mining, which had been developed from Roman times to exploit the metal-bearing ores - gold, silver, lead and copper. We visited many derelict mine sites some in truly magnificent settings and saw enough adits, stopes, leats, wheelpits and buddles to last a lifetime. It was interesting that, due to the high cost of transporting coal, virtually all power for operating machinery in the mines was by water with extensive systems of leats to convey water to the wheels and flat rods to transmit the power to the machines. The highlight of these mine visits was to the Roman gold mine at Dolaucothi which was worked by massive opencast pits excavated by 'ushing', (that is flushing water down the hill from a reservoir) and firesetting. The Romans also cut beautifully engineered adits. We spent about an hour underground exploring the 1905 workings, shown around by members from the University of Wales at Cardiff, who are opening up the mine for research and tourist purposes.

This area is also the cradle of railway preservation societies, the Talyllyn Society being formed in 1950. We had an opportunity to ride on this fascinating line and also on the Vale of Rheidol Railway, still operated by British Rail between Aberystwyth and Devil's Bridge.

We also had talks and a visit to the Centre for Alternative Technology where various 'Bizarre' schemes are developed and tested. A talk on the Plant Breeding Station was well received and one on Welsh Water went a long way to explain why the reservoirs in Wales owned by Manchester and Birmingham would be no use to the large populations of South Wales as they are separated from them by high mountains.

The Rolt Memorial lecture was given this year by Professor John Harris on French Industrial Espionage in the 18th century. This is a subject of which I was totally unaware and it is quite remarkable the extent to which this espionage occurred. It was carried on by all countries but as Britain was the most advanced country technologically, we suffered most, particularly at the hands of the French.

We had little time to explore the town of Aberystwyth, although there was an organised walkabout for some delegates. It is an attractive town with a small harbour, a ruinous Edwardian Castle, a pier by Eugenious Birch, now alas sadly truncated, a cliff railway and the old College buildings of the University of Wales which were originally built as a hotel to the grandiose plans of Thomas Savin with a unique three-sided 'porte-cochere'. The new University buildings where we stayed are on a hill overlooking the town, the site being extremely steep. There were 11 storey heights of staircases between the halls of residence and the dining areas with a further drop of about 60 feet and another 5 flights of stairs down to the Lecture Theatre, quite a climb which we had to do several times each day.

All in all the Conference was a great success and we have to thank the organisers and in particular to Douglas Hague. I will remember for a long time the picture of Douglas stomping across the hillside wearing climbing boots, shorts, a tee-shirt and silk scarf, a red woolly bobble hat and carrying a six foot ranging rod! The venue for the Conference next year is Glasgow on 13th to 15th September, with other events continuing on into the following week. Details will be available next year but I would sincerely advise all members to make a note of this date in their diaries and come along.

R. G. Martin.

Boundary changes cut both ways - although Sussex lost Tunbridge Wells West station to Kent (J.S.F.Blackwell, Newsletter No.42), it gained the first circular airport passenger terminal from Surrey in 1947.

The building at Gatwick airport, nicknamed "The Beehive" was completed in 1936 under the direction of a great visionary, Morris Jackaman, when the grass airfield was developed as an alternative to Croydon as "London South (Gatwick) Airport". Extensive drainage to keep the River Mole in check, together with concrete taxiways provided the rationale for a terminal building. It seems that late one night when Jackaman was struggling to plan the necessary facilities within a tight budget, his father said something like "For Heavens sake, go to bed, you're just thinking in circles". The Beehive is just that - a series of decreasing concentric circles rising in height.

The facilities were remarkably modern by any standards, particularly the 130 yard subway connecting the terminal building to the newly built Gatwick station the Southern Railway which lay to the south of the present airport complex. Six telescopic canopies could be run-out from the terminal to the door of passenger carrying aircraft, and a circular concourse on the ground floor provided shops, post-office, airline, immigration and customs offices to augment the central concourse and customs hall. On the first floor was a restaurant with seating for 80 and a viewing terrace seated 100. Surmounting the whole was a 30ft. diameter glass-walled control room. The terminal decorations in pastel shades of light pink, green and white, reflected the popular taste of fifty years ago and the woodwork was natural oak or painted eggshell with the table tops and carpets in blue. Other far-sighted aspects were air-conditioning in the subway and built-in showcases along the walls where it was hoped that West-end firms would display their wares.

As was to be expected, the opening ceremony for an industrial building showing so much promise and the example for others world-wide was an impressive affair undertaken by Viscount Swinton, then Secretary of State for Air, in June 1936 before a large audience. In fact, Gatwick never realised its potential. Its proximity to the already well established Croydon Airport did not offer any great incentive for airlines to transfer their operations in spite of Gatwick's better weather factor. Air travel was not increasing fast enough to fully absorb the extra capacity that Gatwick provided and the first summer was not particularly busy. Worse was to follow. Financial difficulties in the parent company forced Morris Jackaman to resign as Managing Director and the following winter, in spite of the extensive drainage, the aerodrome surface became water-logged and unserviceable. The expansion of the Royal Air Force in the few years before September 1939 saved the day for Gatwick by the formation of a Reserve training school and the opening there of firms involved in aircraft maintenance.

During the war Gatwick was requisitioned by the Services and the "Beehive" became the Headquarters building for the Squadrons there. Painted in camouflaged green it looked fairly inconspicuous when I used to "fly" the laid-down hours in the "Link" instrument flying trainers installed in the central concourse. Post-war civil aviation gravitated towards Northolt (with its Tarmac runways) in the transition to Heathrow, and it was not until the opening of the new airfield runway, railway station, and present terminal in 1958 that Gatwick established itself without doubt as a major international centre.

The "Beehive" is now separated from the airport by the re-routed Brighton Road and can be easily viewed from the public highway by taking the road marked "Cremetorium [Tinsley Green]" which leaves the A23 about one mile going south of the present airport complex. Currently the old terminal is used by the British Airports Authority as offices and although its historical importance is recognised it is not yet a listed building although there are moves in this direction. There is the possibility of a visit by the Society in next year's programme.

[Gatwick's Beehive: A forgotten development. John King. Thirties Society Journal No. 2 (1952)].

Frederick Sowrey

THE WINDMILLS OF CLAYTON HILL

Work continues on researching into the mills and millers of the Clayton windmills and the following notes (from my articles for Emolun, the newsletter of the Jack and Jill Windmill Society) tell the story up to the commencement of restoration.

Dunston Mill

Today, next to Jack's tower is the remaining roundhouse of the first windmill to stand on the hill above Clayton village. Known variously as Dunston Gate, Dungeate or Dunston Mill, she was built in 1765 and leased for 99 years by Viscount Montague to Mr. Edward Oram of Clayton, together with "an area of ground enclosed by a radius of 5 rods from the centre of the mill".

Contemporary notices of sale show an early succession of miller. In 1787 Mr. Oram put his interest up for sale as did Mr. John Geere in 1809, Mr. Thomas Hicks of North Street, Brighton in 1810 and Mr. John Hamlin in 1816, when the mill was described as a "substantial post mill carrying two pairs of stones". She undoubtedly started life as a hand winded mill, that is, the task of keeping the sweeps facing into the wind was achieved by manually heaving the body round the post by means of a tailpole. The sweeps themselves would have been commons or canvas rigged and similar to those fitted to Nutley Post Mill today.

Mr. James Mitchell took the mill some time later and was shown on a tithe map of 1838. William John Campion was the owner at the time. Mr. Mitchell worked here with his son, also James, initially as "Farmer and Miller". His account book for 1849 shows that business was very good bringing in over £2500. This was no doubt what encouraged him to bring up a more modern post mill from Brighton, later to be known as Jill.

Jill Post Mill

Jill represents the Sussex post mill in its final form. She was re-erected on the Down above Clayton in 1852 as a large white mill with patent sweeps which could be set to work automatically with winds up to around 40 miles an hour and, unlike the older Dunston post mill, which was still standing close by, she was kept into the wind by a fine Sussex tailpole mounted fan stage. The power developed by such a mill under favourable wind conditions was in the region of 25 horse power.

The internal machinery included two pairs of stones and a flour dresser. A pair of peaks in the head were used for producing meal from such as barley, oats, peas and beans. In the tail remain a pair of french burrs. These in conjunction with the dresser, were mainly used for flour production.

James Mitchell purchased the mill from John Young Lashmar of Brighton who had been working her at a site above the Shoreham Line tunnel on the eastern side of Dyke Road just 250 yards north of Seven Dials. New buildings were gradually taking away Mr. Lashmar's wind. The mill had stood for 30 years or so by this time and was most southerly of the three Dyke Road post mills. The mill was brought up to Clayton on a large trolley/sledge, dragged at first by horses and then by oxen. An old shepherd could still just recall the event in 1915. The Mitchells worked both post mills until 1866 when it was decided to build a new tower mill to replace the 101 year old Dunston Post Mill. It seems likely that the 'new' post mill was named 'Jill' at the time as a compliment to the obviously more masculine 'Jack'.

Jack Tower Mill

So it was that Jack was built. It is said that the brakewheel from Dunston was used in the new mill and that it creaked mournfully under load. The new tower was built against the old roundhouse, after the old post mill had been taken down. A doorway between the two allowed Mr. Mitchell to use the extra space for dry storage and machinery. The brick tower was erected next to the roundhouse, a height of 44 feet: 22ft 8ins. diameter inside the base, tapering to 13ft. at the curb.

William Cooper is understood to have been the millwright and fitted the mill out with three pairs of stones plus dressing tackle. Above this a fine white bee-

hive cap was kept facing the wind by a five-blade fan and carried the large patent sweeps. Sadly in 1867 Mr. Mitchell died and a little later the brothers C. E. and J. Hammond took on both mills. Jack was soon fitted out with modern milling equipment costing over £1500. Charles Edwin found that the running speed of this machinery was rather critical. With this in mind he applied a centrifugal governor to the shutter gear of the sweeps. Feeling that this was a worthwhile improvement he patented the mechanism in 1873. Whilst only a witness on one of the cap timbers is left of this, a second example fitted in the huge post mill at Hurstmonceux survives today. Jack was mainly used for flour production as noted on the 6" O.S. Map of 1873/4.

The Hammond partnership was dissolved in the early 1880's leaving Charles to continue as "C. HAMMOND MILLER (WIND) CORN AND MANURE MERCHANT, CLAYTON MILLS AND HASSOCKS STATION". Many Sussex Millers' sons worked for Mr. Hammond as the mills were an ideal apprentice ground. After his death in 1903 the business, such as it remained, competing with more economic steam milling in the Brighton area, was taken on by Wood & Son, who were local water millers, followed by Levetts of Brighton.

Serious milling at Clayton ceased in 1907 and in the following three years A. Martin, a keen archaeologist, rented Jack as a summer residence. His diary records the various difficulties encountered when furnishing the two lower floors of the round tower, the infestation by numerous downland creatures and his fear that a falling sweep would cleave the fragile roundhouse roof. When at the end of 1909, a storm blew the fan off and shattered two of the sweeps, they fell to one side.

In 1911 Captain and Mrs. W. V. Anson came to live there. Jack was cleared of all his machinery and a home established in the granary buildings. Mr. Frank Gregory has been kind enough to donate a collection of Mrs. Minna Anson's letters, from which the following note is drawn:

June 1910. After an enquiry by Minna, Mr. Ellis of Northlands, Haywards Heath informs her that the two mills are on land owned by W. R. Campion of Darny Estate, and are not at present being used for milling. He has put her in touch with Mr. Blencowe, of Darny, who, not unnaturally, expressed interest in the purpose to which this lady would put the property.

Minna, being the daughter of a distinguished naval architect, and the wife of a serving naval officer, wished to make an unusual home in an environment within sight of the English Channel, thus having the elemental requirements to make a seafarer at home on dry land. Anyone who knows the South Downs will testify to the violence of the winds and rain here but yet still be moved by the outstanding beauty prevailing in fine spring and summer weather. Rather than appear eccentric Minna stated that she wished to grow lavender!

Within a few days (the post being more reliable than now) Mr. Blencowe had confirmed that Mrs Anson could see the mills on 7 July and that the whole property, two mills, two cottages and outbuildings, was let plus an acre of land at £25 leasehold.

Complications then arose regarding the tenancy. Apparently the lease had passed to Mr. William Wood, corn merchant of Hassocks, on the death of Charles Hammond in 1903 and he had sub-let Jack to E. A. Martin, the archaeologist, in 1908. Mr. Martin was using the mill as a holiday home, a shepherd was using one cottage, and a carter, (Mr. Wooller) the other. Minna could only be offered the big mill (Jack) at £10 per annum if Mr. Martin agreed. Fortunately he did, and gave up the mill. The shepherd then vacated his cottage, leaving the way clear for Minna to get things moving. She took on the lease in September 1910 and set about establishing herself in what became her home in 1911 and which remained so until her death at the age of 85 in 1948.

Initially Mrs. Anson leased from Mr. Wood at the rate of £26.12s.0d. per annum, for two cottages at 3s. each per week, the upper mill £10 per annum and outhouses £1 per annum. She then approached Mr. Holman who was at Clayton Court Farm and Mr. Paul of Pangdean for some land for her lavender garden.

Jack's old millstones were laid out and a stove put into the ground floor. The site was then fenced in with hurdles bought from Mr. Robert Hammond, of Lodge Farm, Keymer, at 12s.6d. a dozen, delivered.

After Lady Day 1912 both mills and all the buildings were leased by Danny direct to Minna and the arrangement so pleased them both that the Anson family were able to purchase the entire property for £580 in 1917.

Minna Anson had the stone floor furnished as a chapel in later years as a memorial to her menfolk. Her father was Commander Cowper Coles, an innovative Victorian Naval Architect.

Captain Cowper Coles was a Naval Officer who distinguished himself in the Crimean War by building a raft which carried a heavy gun capable of being rotated and which was protected by an armoured shield - the fore-runner of the modern Turret. The 'Lady Nancy' as she was called, successfully destroyed Russian equipment when anchored off-shore and after the war Cowper Coles, with some technical assistance from Brunel, developed his design further. Meanwhile though small Turret ships were being built for various navies they were not really ocean going and Cowper Coles was anxious to progress the design further. He orchestrated a considerable press campaign, in which he gained the support of Prince Albert, no less. He was apparently highly critical of then current Royal Navy designs, which did not endear him to the Navy's designers and in particular Edward Reed, the Chief Constructor. However, he eventually persuaded the Admiralty to finance the building of a ship of his own design incorporating his fundamental principles of easy all-round fire power. Reed somewhat naturally did not have anything to do with the design but Cowper Coles pressed on himself.

Although a steam ship the 'Captain', which was launched in 1869 was also a fully rigged sailing ship carrying 26 000 sq.ft. of sail on three masts. All the rigging was carried from decks quite high above the waterline but the deck level of the two massive turrets was only drawn as 8ft. above waterline and, because the ship weighed more than had been allowed for, they were in practice only 6ft. above the water. She joined the Fleet in January 1870 apparently successfully but on the night of 6th September she heeled over in a gale and sank with the loss of her captain, Captain Cowper Coles, and all her company of 473 men.

The relics in the "Chapel" in Jack, some of which are contemporary and even pre-date the disaster, indicate a relationship with Cowper Coles (does anyone know what it was?) and are evidence of a private grief in a national tragedy. The relationship between the centre of gravity of the ship and its centre of buoyancy were much more carefully studied thereafter but the accident did not prevent the further development of the concept of the Turret design. Indeed if you care to go aboard a modern destroyer you would see that the guided missile systems are housed in rotating turrets whose ancestry can be traced back to those involved in the tragedy of 110 years ago which is commemorated in Jack Mill today.

Between the Wars - Jim Lloyd's days at the Mill

In 1926 Jim Lloyd was faced with three choices: (1) emigrate to Canada, (2) become a Naval apprentice, (3) go into service as a house and garden boy. He had been suited to these by schooling at St. Lukes Home for Boys in Burgess Hill and at 14 was a self reliant hardworking lad. The lady from the mills at Clayton was quick to see this and so it was that Jim started work on the hill for Mrs. Minna Anson, living in one of the buildings that dated from the earlier days of millers and shepherds.

Minna loved the mills and the Downs. She had turned a cluster of rather primitive cottage dwellings into a most unusual home. A garden was established: Minna planted lavender and privet, laid out flower beds and grew vegetables that were exhibited at local village shows. Jim fell to his tasks in the shadow of Jack's tower and overlooking Jill. In those days it was still possible to stray into the mill ground, the hill was not clothed as today, the pine, beech and ash trees were infants and the sou'-wester's full force still felt.

During the summer months particularly, many well known people visited here, (Minna Anson, nee Spencer Cowper Coles was related by marriage to Archbishop Temple of York and the family was well connected). Today, at his cottage within sight of the mills, Jim remembers with great affection, these and the family friends who came regularly. Nancy Price, who many will recall, wrote and broadcast on all matters

country stayed here and was inspired to write of the mills in later years in 'Jack by the Hedge'.

Apart from gardening, Jim's daily duties included pumping water from underground soak tanks into the 100 gallon header in the main cottage, and then a trip down the hill to the village post office. This, known as 'Mrs. Keys', was part of the original Matsfield Arms. Other more unusual tasks fell to him, notably clearing Mill Lane of snow in 1929 when 12ft. drifts isolated the mills, and helping to dig out frustrated fox hounds during a meet of the hunt which often started at the mills.

Of the mills themselves, Minna cared for them and but for her Jill would not be standing today. She saw to it that both mills were painted regularly. Jack was sheathed with galvanised iron on the south-western side to keep damp at bay. Jill had her roundhouse weatherproofed and cladding repaired. Later when a side girt broke Minna saw to it that the mill could not fall further by employing Ganders, from Hurstpierpoint, to fit a holding beam and whilst a new side girt has been fitted, the beam has been retained in its original position as our Society's tribute to Minna who in Jim's words was a "unique lady the like of whom the hill will not see again". Nancy Price said of her, "This Lady who spreads kindness and goodwill as the wind carries the fragrance that is all about her unique home".

It wasn't until 1953, five years after Minna's death, that the mills had new owners - Mr. and Mrs. Henry Longhurst came to the mill and ten years later had a new home built to replace the old buildings.

Jack had stood empty and without sweeps for over 60 years when, in 1973, Universal Pictures agreed to pay for a new set to be put up so that the two mills could be used for the dramatic ending of a film "The Black Windmill".

NOTE. The note on Captain Cowper Coles was provided by A.D. Chamberlain, Esq. I would be delighted to hear from any member who can further add to their history.

M. Brunnarius

EARLY ELECTRICAL APPLIANCES

A new Shire Album, No. 124, on Early Electrical Appliances has just been issued. This has been written by Bob Gordon, AMIEE., who created SEEBoard's Milne Museum at Tonbridge and was its first curator; the Museum has an exceptionally fine collection of early electrical appliances, many of which are illustrated here. The frontispiece shows an all-electric kitchen with boiling-rings, oven, grill, tea-urn, kettle and iron, dated - 1908! Different sections of the booklet deal with Heating and Refrigeration, Cooking and Water-heating, Cleaning and Washing, Health and Beauty and Miscellaneous Appliances, including an electrical mouse-trap. How many of us realised that, except for electric shavers and dishwashers which first appeared in the 1920's, all the appliances which we take for granted nowadays were available before World War I - a few even at the end of the last century, e.g. radiators, ovens and irons. This booklet, with its excellent illustrations, makes fascinating reading both for its history of the birth and development of early appliances and for the view of social conditions in the first quarter of this century. The author must be congratulated on his detailed research work that forms the basis of this most interesting booklet, of particular interest to all industrial archaeologists.

A.J. Haselfoot

EAST GRINSTEAD'S RAILWAY 1884 - 1984. D. Gould

Opened in 1884 as a more direct line to London and replacing an earlier (1855) route, this line is still in use today. Mr. Gould has written in the Spring 1984 issue of the Bulletin of the East Grinstead Society a very full account of the building of this line together with the trials and tribulations encountered during its one hundred years in operation.

Copies of the Bulletin may be obtained from the Hon. Editor, 20 St. Georges Court, East Grinstead (40p. post free).

Museums in Sussex with some Industrial Archaeological Interest.

These are arranged in alphabetical order and give, briefly, the location, particular items of interest and the opening hours.

- AMBERLEY:** Chalk Pits Museum
Entrance from Railway Station.
Tel: Bury 373
Industrial Museum. NG industrial railways
Working blacksmith, potter, boat builder.
Wed.-Sun. & E.Hols: 11.00-6.00 Apl.-Oct.
- ARUNDEL:** Museum & Heritage Centre
61 High Street.
Tel: Arundel 882726
History of port & canal & river shipping.
Tue.-Sat. 10.30-12.30: 2.00-5.00 Easter
Sun. 2.00-5.00) - Oct.
- BATTLE:** Battle & Dist. Hist. Society
Museum, Langton House, opp.
Abbey Green
Relics of Wealden Iron Industry & of local Gunpowder
Works, leather working. Mon.-Sat. 10.00-1.00,
2.00-5.00: Sun. 2.30-5.30. Easter - Oct.
- CHICHESTER:** Chichester & Dist. Museum
29 Little London.
Tel: Chichester 784683
Mobile city stocks. Reconstructed Sussex Fireplace
Tue.-Sat. 10.00-5.30
- Mechanical Music Museum
Church Road, Portfield.
Tel: Chichester 785-21 & Emsworth 2546
Fully restored and working mechanical music devi
Daily 10.00-6.00 Easter-Sept.
Sat. & Sun. 10.00-5.00 Oct.-Easter.
- EAST GRINSTEAD:** Town Museum
East Court, College Lane
Bygone crafts & history of East Grinstead.
Wed. 2.00-5.00 All year.
Sat. 2.00-5.00 Apl.-Oct. 2.00-4.00 Nov.-Mar.
- HASTINGS:** Fisherman's Museum
Rock-a-Nore.
Tel: Hastings 424787
Old fishing lugger, horse capstan, ship models, net
shops. Sat.-Thur. 10.00-12.00: 2.00-5.00
Easter - Sept.
- Museum and Art Gallery
John's Place, Cambridge Road.
Tel: Hastings 435952
Wealden Iron Industry, artifacts, fire-backs
Mon.-Sat. 10.00-1.00: 2.00-5.00
Sun. 3.00-5.00
- HENFIELD:** Henfield Museum
New Parish Hall, High Street
Farming details, 19th century plough, etc.
Tue. Thur. Sat. 10.00-12.00 Wed. 2.30-4.30
- Woods Mill
On A2087, 1 mile S of Henfield
Tel: Henfield 492630
Restored water wheel and machinery.
Tue.-Thur. & Sat. 2.00-6.00 Sun. & E.Hol. 11.00-6.00
Easter-Sept.
- HORAM:** Valelands School Farm & Museum
Marie Green.
Horse-drawn farm machinery and hand tools.
Sat. Sun, 10.00-6.00 East - Sept.
- HORSHAM:** Horsham Museum
9 The Causeway
Tel: Horsham 54959
Wheelwright, blacksmith, saddler workshops, old
bicycles, 18th century barn.
Tue.- Fri. 1.00-5.00 Sat. 10.00-5.00
- HOVE:** The Engineerium
Off Nevill Road
Tel: Brighton 559583
Two 19th Bear Engines, horizontal steam engines,
many models.
Daily 10.00-5.00
- LEWES:** Anne of Cleves House
Southover High Street
Tel: Lewes 4610
Wealden Iron Industry, domestic equipment
Mon.-Sat. 10.00-5.00 Feb.-Nov.
Sun. 2.00-5.00 Apl.-Oct.
- LIPHOOK:** Hollycombe Steam Collection
Hollycombe House, W. side of Midhurst-
Liphook Road.
Tel: Liphook 783233
Standard & NG railways in steam; farm machinery
driven by portable steam engine.
Sun. & E.Hols. 12.00-6.00 Easter-Sept.
Wed. Thur. Sat. 12.00-6.00 August.
- NEWHAVEN:** Local & Maritime Museum
West Foreshore under cliff
Tel: Newhaven: 4872
Local history incl. old swing bridge.
Sat. Sun. E.Hols. 2.30-early evening, Easter-Oct.

NORTHAM: Perigoe Workshop Museum
Tel: Northiam 2119
Old builder's workshop preserved as museum. Fine
moulding planes. Wed. 10.00-6.00 Mar.-Oct.

PETWORTH: Water wheel driving water
pump. By Coultershaw Bridge, 1 1/2 m S.
of Petworth on A285
18th cent. water wheel & pump restored to working
order. Water supply details. 1st & 3rd Sun. of
month 11.00-4.00 April-Sept.

POLEGATE: Windmill & Milling Museum
W. side of A22, 1 mile S. of traffic
lights.
Working tower mill with milling museum alongside.
Machinery, tools, models, photos. Sun. 2.30-5.30 May-
Sept. Wed. 2.30-5.30 Aug. East Sun, Mon. May & Aug
E. Hols. 2.30-5.30

RYE: Folk Museum
Cherries, Playden
Tel: Rye 3224
Farming details, blacksmith, wheelwright & saddler
workshops. Daily by appointment:
Dr. & Mrs. Townsend

SEDLSCOMBE: Nortons Farm Museum
W. side A21, S. of Sedlescombe
Sedlescombe 471
Farm tools, ploughs, carts, wagons, etc.
Daily 9.00-5.00 May-Sept.

SHIPLEY:
In Shipley Village
Tel: Coolham 310
Working smock mill, milling details, etc. Sat. Sun.
2.30-5.30 First full w/end May-Oct.
Easter Mon. Aug. E.Hol. 2.30-5.30

SHARPThorNE: Tanning Museum
Private house on E. side Sharpthorne-
Horsted Keynes rd, 1 m S. Sharpthorne
Tanning and leather preparation.
Daily 2.00-5.00 May - Sept.

SHOREHAM: Marlipins Museum
High Street
Tel: Shoreham 63994
History Port of Shoreham, models, pictures, etc.
Mon.-Sat. 10.00-1.00 & 2.00-5.00 May -
Sun. 2.00-5.00) Sept.

SINGLETON: Weald & Downland Open Air
Museum: Just off A286 S. Singleton
Tel: Singleton 348
Blacksmith, wheelwright w/shop. Working water mill,
farming exhibits. Daily 11.00-5.00 Apl.-Oct.
Sun. Wed. E.Hols. 11.00-4.00 Nov.-Mar.

STAMMER: Rural Museum
In Stammer Park, N of A27, half-way
between Brighton & Lewes
Farm implements, wheelwrights tools, donkey wheel,
horse-gin. Sun. 10.00-12.30 & 2.00-5.00
Thur. 2.30-5.30 Easter - Oct.

WEST DEAN GARDENS:
In village S. side A286
Tel: Singleton 301
Old lawn mowers dating from 1850 onwards.
Daily 11.00-6.00 Apl.-Sept.

WILMINGTON PRIORY: Agricultural Museum
In village S. of A27
Tel: Alfriston 870537
Many agricultural implements incl. portable horse-
gin. Mon. Wed. Sat. 10.00-6.00) Apl. -
Sun. 2.00-5.00) Sept.

WORTHING: Museum & Art Gallery
Pel Road.
Tel: Worthing 204226
Some railway engine & ship models, fire engine of
1890, Victorian pillar box. Mon.-Sat. 10.00-7.00 Apl.-
Oct. 10.00-5.00 Oct.-Mar.

Parsonage Row Cottages
High Street, Tarring
Tel: Worthing 36385
Timber-framed cottages, small folk museum.
Tue.-Sat. 2.15-5.00 Apl.-Oct.

Although just over the border in Kent, the following is well worth seeing:

TONBRIDGE: SEEboard Milne Museum
The Slade, Castle Street.
Early electrical domestic appliances & distribution
equipment. By arrangement with SEEBARD.
Tel: Tonbridge 364726