

Sussex Industrial Archaeology Society

Newsletter



Number 137

January 2008



Forming a Walking Stick

Newsletter 137

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Forthcoming Events

Malcolm Dawes

Saturday 26th January at 3.00 pm. SIAS members are invited to the Brighton Circle Meeting when the talk will be *William Stroudley and his locomotives* by Laurie Marshall. West Blatchington Mill Barn, Holmes Avenue, Hove.

Saturday 26th January at 7.30 pm. *The Railways of the Devil's Dyke.* Talk by Trevor Povey. West Blatchington Mill Barn, Holmes Avenue, Hove.

Saturday 16th February at 7.30 pm. *More than just manhole covers - Halsted & Sons of Chichester.* Talk on the history of a long established firm of ironfounders by Alan Green. West Blatchington Mill Barn, Holmes Avenue, Hove.

Saturday 15th March at 7.30 pm. *Woolwich Dockyard.* Talk by David Carpenter. West Blatchington Mill Barn, Holmes Avenue, Hove.

Saturday 19th April. *SERIAC. The South East Region IA Conference will be hosted by the Greater London IA Society. (Application form enclosed)*

Sunday 1st June. *Visit to Sir William McAlpine's Private Railway and Museum, Fawley Hill near Henley-on-Thames. Advanced booking essential.*

This visit will be limited to 40 members. If there is sufficient interest we are hoping to run a vintage coach which will depart from the Withdean Stadium, Brighton at approximately 9.00 am., the fare being about £20 per person, depending on numbers.

If you are interested in either making your own way there, or by the coach, please submit the enclosed slip by 14th February 2008.

Events from Other Societies

Malcolm Dawes

Detailed below are events organised by other societies, which may be of interest to our members. If you have details for future events please send these to: Malcolm Dawes, 52 Rugby Road, Brighton, BN1 6EB or e-mail to malcolm.dawes@btinternet.com

Saturday 19th January 2.30 pm. *Excavations of Medieval Ironworking on the ASDA site in Crawley.* Wealden Iron Research Group talk by Simon Stevens. www.wealdeniron.org.uk

Saturday 26th January 2.30 pm. *Brighton's Georgian Landscape.* Brighton and Hove Archaeological Society Local History talk by Sue Berry. Unitarian Church, New Road, Brighton. www.brightonarch.org.uk

Wednesday 30th January 7.30 pm. *Brighton's West Pier and the soon to be built 1360 tower.* Volk's Electric Railway Association talk by Jackie Marsh-Hobbs. £2. West Blatchington Mill Barn, Holmes Av, Hove. 01273 306838.

Friday 8th February 8.00 pm. *Medieval Burgess Hill – did it exist?* Burgess Hill Local History Society talk by Heather Warne. £2 visitors. Cyprus Hall, Cyprus Road, Burgess Hill. 01444 241134.

Wednesday 13th February 7.40 pm. *Cine films and slides from the collection of David R Howard.* Tramway and Light Railway Society presentation by John Bishop. £1.50. Deall Room, Southwick Community Centre, Southwick Street, a short walk north of Southwick Railway Station. 01273 512839.

Tuesday 19th February 6.30 pm. *Brunel's Block Making Machinery.* Newcomen Society talk by Ray Riley. Room 0.27 in the Portland Building of the University of Portsmouth, St. James Street off Queen Street, Portsea. Free parking in adjacent University car parks from 4.30 pm.
www.newcomen.com/brmeetings

Saturday 23rd February 2.30 pm. *LBSCR and the re-housing schemes in Brighton.* Brighton and Hove Archaeological Society Local History talk by David Roberts. United Reformed Church Hall, Blatchington Road, Hove.
www.brightonarch.org.uk

23rd - 24th February *Branch Line weekend.* Bluebell Railway. 01825 720800. Bluebell Railway will be running a visiting Great Western loco. and auto trailer coach during February.

Thursday 28th February 8.00 pm. *GPO vehicles.* Eastbourne Historic Vehicle Club talk by Paul Wood. Red Lion Public House, Stone Cross near Pevensey. 01323 843202.

Thursday 28th February 7.30 pm. *40 years of the Bluebell Railway.* Railway Correspondence and Travel Society talk by Roger Price. £1.50. Brighthelm Community Centre, North Road, Brighton. 01444 253657.

Tuesday 11th March 6.30 pm. *Thomas Brassey, Nineteenth Century Railway Contractor.* Newcomen Society talk by Roger Cragg. Room 0.27 in the Portland Building of the University of Portsmouth, St. James Street off Queen Street, Portsea. Free parking in adjacent University car parks from 4.30 pm.
www.newcomen.com/brmeetings

Wednesday 12th March 7.30 pm. *Plaques and personalities. Four short talks from the medical history of Chichester.* Chichester Local History Society talk by Prof. John Richardson. £2. New Park Centre, New Park Road, Chichester. 01243 787592.

Friday 14th March 8.00 pm. *Bishopstone Tide Mills.*

Burgess Hill Local History Society talk by Joanna Wilkins. £2 visitors.

Cyprus Hall, Cyprus Road, Burgess Hill. 01444 241134.

Tuesday 18th March 7.30 pm. *Lewes to Eastbourne Turnpikes.*

Eastbourne Local History Society illustrated talk by Peter Longstaff-Tyrrell.

Underground Theatre, Central Library, Eastbourne. 01323 487170.

Wednesday 19th March 7.45 pm. *The development of the railway around the port of Newhaven.* Sussex Transport Interest Group presentation by SIAS Chairman John Blackwell. £2. London Road Station, Brighton. 01273 512839.

Wednesday 26th March 7.30 pm. *Brighton then and now.*

Volk's Electric Railway Association talk by Peter Williams. £2.

West Blatchington Mill Barn, Holmes Avenue, Hove. 01273 306838.

Friday 28th March 7.00 pm. *Lewes to Eastbourne Turnpikes.* Polegate and Willingdon Local History Society illustrated talk by Peter Longstaff-Tyrrell.

St.John's Church Hall, High Street, Polegate. 01323 485971.

29th – 30th March *Goods Train weekend.* Bluebell Railway. 01825 720800.

Sunday 6th April *Vintage car show.* Amberley Working Museum. 01798 831370.

Sunday 13th April *Industrial Trains day.* Amberley Working Museum. 01798 831370.

Tuesday 15th April 6.30 pm. *The Titchfield Canal? A Problem of Interpretation.* Newcomen Society talk by John Mitchell. Room 0.27 in the Portland Building of the University of Portsmouth, St James Street off Queen Street, Portsea.

Free parking in adjacent University car parks from 4.30 pm.

www.newcomen.com/brmeetings

Sunday 20th April *Toy and Collectors Fair.* Bluebell Railway. 01825 720800.

Sunday 20th April *Post Office Vehicles rally.* Amberley Working Museum. 01798 831370.

Sunday 27th April *Veteran cycle day.* Amberley Working Museum. 01798 831370.

Sunday 27th April *Vintage Bus running day around East Grinstead.* freespace.virgin.net/ian.smith/buses/CBR/CBR01

Do please check details before travelling.

The details of these meetings and events organised by other groups are only included as a guide and as a service to members: inclusion here is not intended to be seen as an endorsement.

Winter Lecture Report - Steam in the Air

John Blackwell

The first lecture of the winter season took place on Saturday 20th October and was given by Maurice Kelly. Maurice apologised that the slides to illustrate his talk had not arrived at the processors but he had bought along the two DVDs which formed part of the talk.

John Stringfellow, a Victorian bobbin and carriage maker for the lace industry, was the first man to get a steam powered aircraft to fly. In 1848 he built a model with a 10-foot wingspan. The wings and fuselage were made from spruce spars and covered with silk. The tiny steam engine had a two inch cylinder with a stroke of about 2 inches and a paper thin copper boiler to provide the steam; driving twin pusher airscrews. It did not have a fin, for lateral stability, but a tail like a bird. He launched the model down a sloping wire inside a lace mill, so that it would gather speed and when released from the end of the wire this would be at the flying speed of 15 mph. There is no conclusive proof that the model was capable of sustained flight as the only description of the flight was written by his son many years later and was as follows.

'In the first experiment the tail was set at too high an angle and the machine rose too rapidly after leaving the wire. After going a few yards it slid back as if going down an inclined plane at such an angle that the point of the tail struck the ground and was broken. The steam was again got up, the machine started down the wire and upon reaching the point of self-detachment, gradually rose until it reached the further end of the room, striking a hole in the canvas placed to stop it.'

For the BBC Television series 'What the Victorians Did for Us' Rolls-Royce apprentices built a replica and repeated the original experiment but as viewers saw, it would not quite fly under its own power. Maurice had obtained a DVD of the experiments which had continued and with some fine tuning the model eventually flew some 35 feet. This approximated to Stringfellow's alleged result, although to this observer the model glided down rather than took off.

The second DVD was absolutely fascinating showing William Besler's steam car, aeroplane, and railcar.

The Besler brothers, William and George, had bought the Doble brothers' patents primarily to develop a steam railcar, their father being chairman of the Central Railroad of New Jersey. The Dobles' innovations had been in 1912 to devise a steam condenser which enabled the water supply to last for 1,500 miles, instead of the normal 20-50 miles, with a full 24-gallon tank. They then developed a carburettor to mix the fuel and air together, which burned in a firebox. Ignition was effected by

an electric spark plug. This form of burner made starting instantaneous, instead of the previous long heating up period before steam could be raised - a remarkable achievement in 1916. During the 1920s the Dobles produced a series of steam cars capable of 120 mph and acceleration from 0-75 mph in 10 seconds. These were hand-built luxury cars on a par with Rolls Royces but by 1931 they were out of business.

On April 12th 1933 William took off from Oakland airport California in a Travel-Air 2000 biplane fitted with a two-cylinder 150 hp reciprocating engine powered by steam, that they had developed (and patented) using and improving the Doble patents. The aircraft sped down the runway and climbed into the air without a sound except the low whine of the propeller and the hum of wind through the wires. Swinging back over the field at 200 feet, the pilot shouted 'Hello!' and heard the answering calls from spectators below. Three times, the plane blazed a steam trail into the air, taking off, landing, circling about, remaining aloft for 5 minutes at a time. It flew the next day but thereafter never flew again. The Besler brothers had no intention of marketing the aircraft but built it as a demonstrator and as a publicity machine for their steam railcar. The railcar entered service on the New York, New Haven and Hartford Railroad (1872-1969) in 1936 and ran until 1941.

The following technical details are taken from *The Scientific American of September 1933*.

"The Besler brothers' steam engine is a two-cylinder double-acting, compound 90-degree V engine, with a cut off at about 50 percent of the stroke. The high pressure cylinder has a bore of 4¼ inches and a stroke of 3 inches. The low pressure cylinder has the same stroke, but a 5 inch bore. The ordinary working pressure is 950 p.s.i. and the temperature of the steam is 750° F. The engine not only drives the propeller but also drives a blower through an over-running clutch. The blower (an electric motor used when starting) supplies air to a venturi in which the fuel lines terminate. The venturi leads the mixture to a fire box, where an ignition plug sets the mixture aflame. Once ignition has been started, the process of combustion is continuous.

The steam generator is of a modified flash type. The tubing is continuous in length, about 500 feet in total length; the coils are covered with metallic wool insulation and sheet aluminum. A pop valve is set to give relief at 1500 p.s.i. A thermostatic normalizer device injects water into the superheater whenever the temperature goes over 750° F. From the boiler the steam passes through a throttle to the engine proper, and then to two condensers, one mounted at the top of the fuselage and one

below. From the two radiators or condensers, the steam passes into the water tank, which is provided with a steam dome. From the water tank, a pump passes the water through a primary heater and then to a secondary heater. By preheating the water, some of the energy of the exhaust steam is put back into the system, and thus the overall efficiency is improved. After passing through the heaters the water again goes back to the boiler, and the process is repeated over and over again.

In the tests, the rapidity with which the boiler got up steam was remarkable. In five minutes the plane was ready to take the air. In the air, the absence of noise was remarkable. On landing a very interesting possibility of the steam engine was in evidence. As soon as the pilot landed he reversed the engine (reversing the engine is a simple matter on a reciprocating steam engine). With the propeller driven in the opposite direction, a powerful braking effect was obtained. Perfect control and smoothness of operation was noted throughout the test flights.”

Those who are registered with YouTube on the internet can view the video under ‘steam powered car and airplane’. For those who would like to know more on this fascinating subject Maurice’s book entitled *Steam in the Air* is required reading. Following the DVDs Maurice gave an encyclopaedic account of the development of the American traction engine.

Along These Lines

Meridan TV have made a series on closed railway lines in the south, screening of which starts on Thursday 7th February 2008 at 7.30 pm. on ITV1. Sadly none are in Sussex. The lines to be featured are as follows:

- The Meon Valley Railway
- The Somerset & Dorset Railway (within Dorset)
- Paddock Wood to Hawkhurst
- The Longmoor Military Railway
- The Test Valley Line (Romsey to Andover)
- The East Kent Railway
- Castleman’s Corkscrew (Brockenhurst-Ringwood-Hamworthy)
- The Isle of Wight

Two Walking Stick Manufacturers
An Exhibition by the Chiddingfold Archive
John Blackwell

My interest was aroused by an article in the *West Sussex Gazette* concerning the commercial making of walking sticks and an exhibition which was being put on by the Chiddingfold Archive. Although just over the border in Surrey, wood from both the Leconfield Estate at nearby Petworth and from the Cowdray Estate at Midhurst was used.

In the nineteenth and early twentieth century every gentlemen and aspiring gentleman would have been the owner of at least one stick and most people probably had five. Entirely independent of each other, two factories were set up in the 1850s Lintott's at Chiddingfold and Cooper's at nearby Wormley. Leonard Lintott and Henry Cooper were both stick cutters, cutting sticks mostly from ash plantations. Initially the sticks were sent to London's East End for processing and then exported worldwide. In the 1880s both firms began manufacturing their own sticks. The demand was enormous, Cooper's were making 300,000 sticks a year, all by hand, and Lintott's a similar quantity (although this is disputed by Cooper's). Before his death in 1907 Leonard Lintott had installed steam driven equipment but Lintott's went into decline from World War One when many of their men went to fight, never to return, and through the loss of their biggest export market, Imperial Russia, following the Bolshevik Revolution. Cooper's however went from strength to strength and in 1968 bought out Lintott's, closing their factory. Around 1993 Cooper's new owners sold the stick production to East Germany and concentrated on metal medical aids, - crutches, zimmers etc. and in 1997 moved to Stourbridge where they still trade as Sunrise Medical. However in 1997 former employee Bob Wheeler set up 'BW Sticks' and continues making sticks on a site that has seen this industry for 150 years.

The sticks were made from English woods, ash or hazel with chestnut being the favoured material; malacca and ebony being imported for the most fashionable sticks. After cutting, the chestnut sticks were boiled in copper lined vats to remove the bark, (the ash bark was left on and the stick soaked in a special preservative). The sticks were then "cooked" in hot sand to make them pliable; damp sand was spread on the top of a hot range similar to those, found in Victorian kitchens and the sticks were immersed in the sand. Later, sawdust was used instead of sand and in the latter years the sticks were placed in a steam chest. The hot sticks were straightened on a large notched piece of beech wood known as a horse, an operation which required great skill, an example of which, loaned by the Weald and Downland Open Air Museum at Singleton is on display at the exhibition. The handle was then fashioned by bending round a former, which looked like a pulley wheel, and then

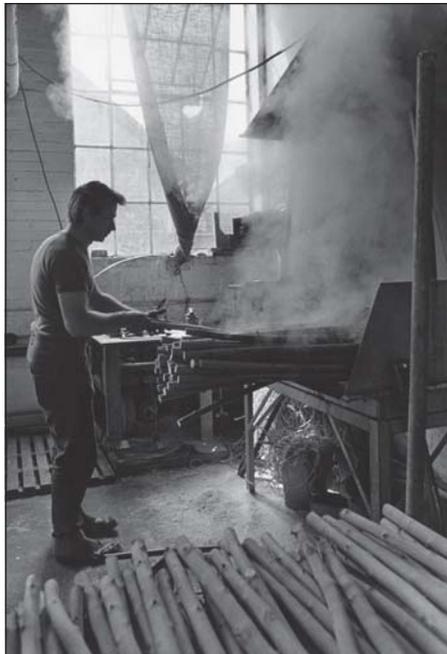
tied to hold the shape whilst drying overnight. Any knots, where branches had sprouted, were removed by a machine with a sharp rotating disc after which the sticks were washed in sand and water. Some were left plain and others were stained, scorched, blackened or polished according to the order. Lastly they were trimmed and fitted with a metal ferrule.

On arriving at the exhibition we were warmly welcomed and shown three short films, two Pathé Newsreels of 1934 and 1949 and a video by the aforementioned Bob Wheeler from 1989. These show the manufacturing processes described above. Upstairs in the exhibition gallery are various documents relating to the two firms, examples of their work including a fine example of a hollowed cane with a glass insert and silver tot glass to “keep the cold out” (known as a tippie stick!) and a slide show of historic photographs, two of which are reproduced here by kind permission of the Chiddingfold Archive.

The exhibition is well worth a visit and can be found at The Banking House on The Green at Chiddingfold. It is open from 2 pm. to 4 pm. on Tuesday's until the 19th February and on Saturday 2nd February 2008 from 10 am. to 2 pm.

Acknowledgements.

Nicholas Tyrrell-Evans and the Chiddingfold Archive, Bob Wheeler and Phil Hewitt WSG



The brick built house of Standen, near East Grinstead

Robin Jones

Standen is one of the last and least altered buildings of the architect Philip Webb, a lifelong friend of William Morris. It was built for a successful London solicitor, James Samuel Beale and his wife Margaret, as their weekend home which could become their principal residence once the solicitor retired from commercial practice: his clients included the Midland Railway. James Beale was the man who handled the parliamentary and commercial side of the construction of St. Pancras, both the Station and the Hotel. The Beales had married in 1870 and over the next fifteen years produced seven children, all of whom lived to adulthood. Two daughters were unmarried, the younger of whom, Helen Beale bequeathed the house to the National Trust in 1972, which together with the accompanying grounds are open to the public.

Standen is a modest house built in 1891 - 1894, with only three principal reception rooms, a small business room, two rooms for recreation, a billiard room and a conservatory on the ground floor. As the Beales had many children, the first floor had twelve bedrooms, four with dressing rooms. On the ground floor, some servants' rooms and the splendid kitchen are also shown to the public. Standen has a wide palette of external materials. Philip Webb was a man true to materials and in the Sussex Weald he had many from which to choose. A good local stone, more than one yard for both bricks and tiles and even a small quarry within the house's own grounds all provided possibilities for the architect and his client to exploit.



Brick is used to its maximum on the exterior. The tall chimney stacks are brick, but the water tower on the right is rendered. The ground floor is of local stone; the first floor is hung with red tiles, with a row of five overhanging gables faced with oak boarding above, designed to provide south-facing bedrooms with shade. (Photograph by David Jones)

The bricks were hand-made red Keymer and stock bricks from Horsham in pinks and greys. The architect preferred the latter, the client possibly the former, considering the Horsham bricks as undistinguished. The principal area of brickwork is on the south-east corner and the great stacks both use Keymer bricks for dressings, but are largely Horsham stocks.

The other principal wall to use brick is the north, or entrance, front. The porch with the stair window above and the bay to the hall, inserted by Webb in 1898 to give space for a grand piano, are in local stone. Beside these are substantial areas of Horsham bricks with red Keymer bricks round the windows.

Other materials are more commonly associated with Standen. The familiar image of the house is that captured in the 1896 watercolour by Arthur Melville of the south front. The ground floor is of local stone; the first floor is hung with red tiles, with a row of five overhanging gables faced with oak boarding above. Brick is used in the recessed arches of the five-bay arcade of the conservatory. A similar recessed red brick arch greets one above the principal entrance. Where other materials, both tile hanging and stone are prominent, red Keymer bricks were used as window surrounds.

The central tower, although with a belvedere, is essentially a tank tower; it punctures the skyline of the house and at ground level accentuates the right angle between the family wing and the ground floor service rooms. It is off-white roughcast, another local tradition.

This article is based on a report of a visit which took place on 14th May 2005 and was first printed in the Newsletter of the British Brick Society



Part of the five-bay arcade of the conservatory. Brick is used in the recessed arches with the brick lozenge, designed by Webb, seen in the spandrels. The lozenge design is also featured in other parts of the house. (Photograph by Robin Jones)

Sandpits and Cemeteries

A look at Hudson's, Stonepound, Hassocks

Eric Hewton

As I write this I look out over a rather beautiful pasture which, at present, is designated an 'area of outstanding natural beauty'. It lies behind the junction of Hurst Road and Brighton Road, to the south of Stonepound traffic lights. To the north of the field is Russell's Nursery. Some years ago this area was largely occupied by a sandpit owned by Hudson's from which many Roman and Saxon remains were recovered. Full details of the cemetery and the discoveries are described by Lyne in *Sussex Archaeological Collections 132* (1994). Little research, however, seems to have been done into Hudson's itself and although I have been able to trace the origins of the Company fairly well there is, it seems, a scarcity of information regarding its later years. This is what I have found:

Hudson's

A headed letter from *Hudson's Furniture, Packing and Removal Department, Terminus Gates, Brighton* reveals that this part of the business, at least, was established before 1876. Another letter dated April 19th 1885 indicates that the firm's Contracting Department, also at Terminus Gates, dealt with Building Materials including sea sand, sharp sand and pit sand. At a later date Hudson's entered the brick making business and its fortunes and misfortunes in this particular area of activity, until it was sold in 1974, are described by Molly Beswick in *Brickmaking in Sussex* (Middleton Press 1993).



Tunnel under Brighton Road

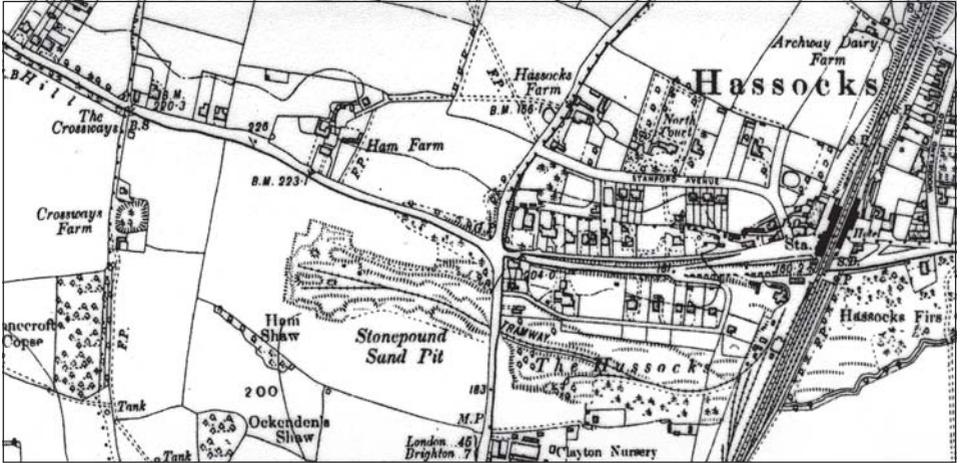
Correspondence and documents in The Danny Archives indicate that the initial lease, granting permission to extract sand from this part of the Campion estate was drawn up in 1879. An extension of the lease was granted in June 1886. Henry Campion and his heirs had some control over the conduct of the business and the lease has clauses allowing inspection of the books by the landowners, limits on the amount of sand that could be extracted, details of how sand could be carried away and the methods to be used for infilling used pits.

The business thrived for many years but had ceased when Russell's took over the land as a nursery in 1929. The year it actually closed and how and when the pits were filled in, I have not been able to ascertain. Between 1886 and the 1920s, however, there were major developments on site, not least the construction of a commercial tramway which ran from Hassocks Station for over a mile to the south of and parallel with Hurst Road. Parts of the track can still be seen to south of the Weald Tennis Club, leading to a tunnel under the Brighton Road (see photograph), then alongside the drive into Russell's Nursery and on about a quarter of a mile or so along Hurst Road. Dudeney and Hallett *From Pyecombe to Cuckfield* Mid-Sussex Books (1999) provide some information on this spur line and quote Charman's reflections in *Hassocks and Keymer Talk About*.

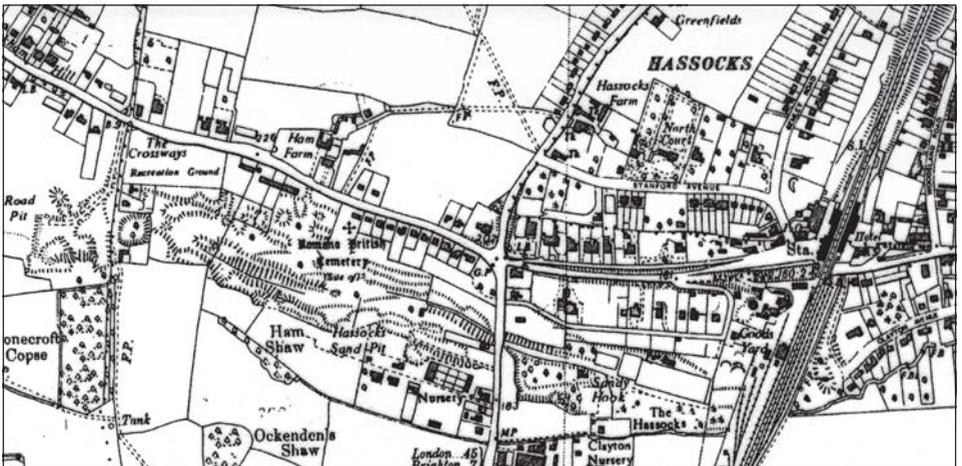
"The motive power was supplied by the engine (usually one of the small tank variety) which came up from Brighton to shunt a number of open wagons to the point where the red sand was being excavated, then bring back the full ones that were put there previously. The number varied but was usually six or nine, each wagon carrying a nine-ton load. The bulk of the sand was dug out before 1914, but after that, the remains went to Hampden Park, Eastbourne, which had started to develop, the Hassocks sand being highly thought of by the building trade"

The 1909 map below shows the extent of the site when the firm was probably in its prime supplying sand to builders merchants across Sussex. The position of the tramway is also clearly indicated. The 1949 map, printed after Hudson's had left the site, shows that the pits had been extended since 1909 and had by then moved onto the land that was previously the Romano-British Cemetery.

Now, apart from some artefacts in the Barbican Museum in Lewes, there is virtually nothing to suggest the intense activity that once took place here. Since the 1930s it has been used mainly for livestock and horticulture. If anyone has any further information, photographs or memories I would be most grateful if you would contact me at: e-mail je43ric@tiscali.co.uk or telephone 01273 842291.



1909



1949

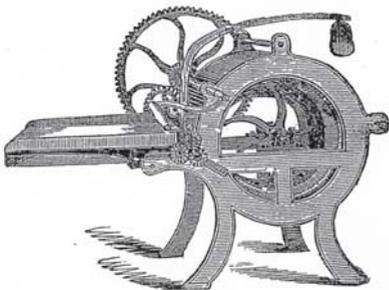
Reduced from 6" Ordnance Survey Maps

Flock Machine **Lawrence Stevens**

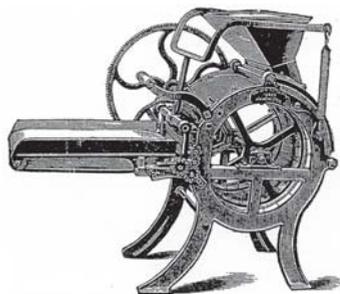
During a business visit to Spencer's Farm, Laughton, East Sussex in March 2004, I noticed what I thought was a flock machine standing in an open barn. In conversation with the farmer, Mr. David Gosling, he told me he was moving and that the machine was probably going for scrap. I felt it should be kept and agreed to take it away, thinking that Amberley Working Museum would be interested in having it. However, in the event they rejected it. Although such machines were known to me, I had never seen one before and felt it was worthy of preservation. It is satisfying to be able to say that it has now been found a home at the Chailey Windmill Museum. Similarly, a chaff cutter facing the same fate was salvaged and that can now be seen at Stone Cross Windmill.

The word flock is derived from the Latin *floccus* which literally means a lock of wool or hair. Dictionaries variously describe it as varying from finely powdered wool or cloth for making flock paper, to the refuse of wool or the shreds of woollen goods. More specifically, flock is short fibres of wool rather than the long ones of new wool and this is precisely the meaning I was brought up with. During my apprenticeship the understanding was that flock was reused wool that had been teased out and was inferior to new long-fibred white wool. I was told that traditionally, harness makers used flock on heavy horse harness for the lining of cart pads that take the weight of the shafts and also the padding of horse collars. Strictly speaking, no self-respecting saddler would stuff a riding saddle with flock, but use only pure long fibred white wool. Flock is a combination of between 50% to 70% of wool derived from old woollen garments, such as knitted or felted products mixed with cotton waste or rags, hence the short fibrous nature of flock. There is still some old flock in my workshop that is more than 70 years old, pinkish in colour, short fibred, very dusty and unpleasant to handle.

Flock machines were used by harness makers and saddlers to tease out the used and compacted old saddle stuffing so that it could be reused as flock. This machine had



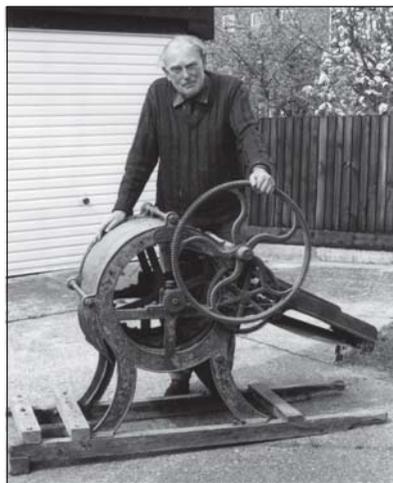
Ruben Sutcliffe's No. 1H Flock Machine
advertised by Hampson & Scott, Walsall in 1900



Ruben Sutcliffe's No. 1 Flock Machine
advertised by Hampson & Scott, Walsall in 1900

been used at the old established saddlers and harness makers of Curtis Lloyd of Station Street, Lewes where Mr. David Gosling's father had taken over the business long ago. The machine found at Spencer's Farm is constructed on a cast-iron circular frame that supported a 27" wide revolving drum, 21" in diameter. Overall, the machine stood 44" high and 31" wide and was fixed to a wooden frame 5'6" long and 18½" wide that could be used as a barrow to transport it within a workshop. An oval cast-iron plate, fixed to the right side of the circular frame bears the following: "RUBEN SUTCLIFFE/MAKER/MANCHESTER". A second plate on the opposite side reads "AGENT/JAMES WILIAMS/46, CURTAIN ROAD, LONDON".

The Sutcliffe family had various businesses and premises in Thomas Street, Manchester, over a long period and were in japanning, grocers cannister manufacturing, scale beam and weighing machine making. In a Manchester Directory of 1873, Ruben Sutcliffe of 57, Thomas Street, Slude Hill, describes himself as a "scale beam and flock dressing and carding machine manufacturer". He sold some of his various machines through agents and as we can see, our example was sold by James Williams, formerly, in 1860 at least, of Sun Street, Bishopsgate, London, and who by 1880 had moved to Curtain Road, where he was still trading in 1900. In the same year, a catalogue of another agent, Hampson and Scott Ltd., a saddlery and harness maker's wholesaler of Walsall, advertised three



Lawrence Stevens with the Ruben Sutcliffe Flock Machine

of Sutcliffe's machines two of which are illustrated here. These were offered for between £5 and £14 and teased out not only old wool, but also horsehair and were used extensively in the upholstery trade. The makers claimed "old flocks and hair made nearly equal to new". These machines could be turned by mechanical power, but more often it befell the lot of the apprentice, amid choking dust, to turn it by hand. The compacted wool was fed into the hopper and as the handle was turned, a rotating spiked drum would tease out the fibres which were then delivered on to a revolving canvas belt and put into sacks.

Thanks to the generosity of David Gosling the machine may now be viewed at Chailey Windmill Museum during normal opening hours.

I acknowledge the help provided in the preparation of this note by the Museum of Science and Industry in Manchester, the City of London Guildhall Library, the Bradford Industrial Museum, Imperial College and the Science Museum, London.

Annual General Meeting 2007

Ron Martin

The 40th AGM of the Society was held on 24th November, 2007 at West Blatchington Mill Barn, Hove. The Chairman, John Blackwell reported that we now have over 400 members, most of whom are "armchair" ones, whose only contact with the Society is through our publications. The Newsletter is now being edited by Martin Snow and now includes many photographs. Sussex Industrial History is now being laid out by Alan Durden with a coloured cover. As always, more articles for both publications are required. Four winter lectures and three outside visits took place during the year, mostly well attended but with one exception, where the numbers were minimal.

Robin Wilson reported that at the Coultershaw Heritage Site the Conservation Management Plan had been received with separate reports on the proposed Plan and on the Industrial Archaeology by Ron Martin. The estimated cost of the scheme is £872,500 and HLF funding is now awaited. Visitor numbers were about the same as the previous year but takings and donations were down. The pump has run well this year although there were two occasions when flooding prevented the operation of the wheel.

Ted Henbery reported that at Ifield Mill a HLF grant for the rebuilding of the wheel has been received. There are now three stairlifts in operation giving disabled access to all four floors, probably unique for a mill in the UK. Attendance has been about the same as last year but the problem of silt in the leat has yet to be resolved.

Chris Bryan reported that a lot of work has been carried out on the Portsmouth and Arundel Canal: viz. to the Selsey Tram Crossing, St. Giles Bridge at Merstham, the swing bridge site at Tile Barn Farm and the Hollinsworth Bridge at Barnham Court Farm. Several walks have been organised as well as talks to interested organisations.

Peter Hill, Chairman of the Mills Group reported on the activities of mills throughout the year. The highlight was the fitting of the sweeps to Oldland - the first time in 80 years for them to be in place. Regular open days took place throughout the year at most mills and were well attended. Generally, we are desperate for new blood to take over from the present band of stalwarts.

The Treasurer Peter Holtham submitted the accounts for the year which showed a very healthy financial position for the Society and no increase in membership subscriptions is proposed.

Ron Martin reported that a survey has been carried out of Duncton Mill and a report prepared.

The election of Officers and Committee took place and these are listed at the end of this Newsletter.

The New East Grinstead Museum

M.J. Leppard (Trustee)

On 1st September 2006 the new East Grinstead Museum opened in purpose-built town centre premises with a professional curator, funded largely by the Heritage Lottery Fund plus grants from the Town and District Councils and other bodies, donations and fund-raising activities.

It is a museum of local history, not just East Grinstead's but also that of the surrounding Sussex, Surrey and Kent villages and parishes within a radius of about six or seven miles, the town's traditional market catchment area.

In addition to permanent displays, regular temporary exhibitions and a small shop, there is a research room dedicated to the history of the area, which is regularly receiving fresh donations. The material ranges from local ephemera and periodicals such as parish magazines, through standard works on the history of the area and local history disciplines, to extensive (but not yet complete) runs of *Sussex Archaeological Collections*, *Sussex Notes & Queries*, *Archaeologia Cantiana* and other journals for all three counties. The museum also has a small collection of local maps and over 7,000 photographic images, which can be consulted by arrangement. The publications, however, can be consulted by any visitor during normal opening hours.

The museum, which is fully accessible, is in Cantelupe Road, just off the High Street, which is served by all buses, and within a short walk of car parks and the railway station.

It is open Wednesdays to Saturdays 10.00 am. - 4.00 pm., Sundays 2.00 pm. - 5.00 pm., admission free, with activities as announced.

For further information contact 01342 302233, info@eastgrinsteadmuseum.org.uk or www.eastgrinsteadmuseum.org.uk

Stollage

M.J. Leppard

In *S.I.A.S. Newsletter 135* (July 2007, p.13) Ron Martin asked if ‘stollage’, the term he used throughout his working life for a support for a barrel or tank but could not find in any dictionaries, is a Sussex dialect word.

Joseph Wright’s standard work, *The English Dialect Dictionary* of 1898, gives it as ‘stallage’, the frame on which casks are placed in a cellar, used in Sussex but possibly obsolete.

The word is found thus spelt in a 1713 inventory of Gravetye in West Hoathly and spelt ‘stollidge’ in a 1715 inventory of the *Crown* at East Grinstead. It was still in use in Lingfield, just over the county border in Surrey, immediately before the First World War, as recalled by Gordon Jenner in his recollections of boyhood there in his *The Lingfield I Knew* (1980, p.13). He spells it ‘stolage’ and defines it as “a strong stool especially made with a concave top which prevents the barrel from rolling off. To raise the barrel up onto the ‘stolage’ it was necessary to roll it up a short plank.”

Mr A.C. Blunt of West Hoathly, a retired land agent, has informed me that within living memory the word has also been used by farmers in the East Grinstead area for the roadside stands for milk-churns.

I suspect the term is still in use locally in both senses.

Norman and Burt - Builders of Burgess Hill

Ron Martin

The firm of Norman and Burt were one of the foremost church builders in Sussex. The family had connections with the brick and tile industry in Burgess Hill and Chailey but the building firm was established in 1862 by Simeon Norman and two years later he invited his brother-in-law Henry Burt to join him. The firm flourished and carried out extensive work of a high quality - probably the most important being the rebuilding of St. Bride’s Church, Fleet Street, London in the 1950s. Due to the changes in building types in the 1950s and 1960s the firm was unable to compete in the changing world and finally closed in 1974.

This Occasional Paper has been written by Fred Avery, one of our members and published by the Burgess Hill Local History Society (BHLHS). It covers the whole history of the families and the firm in a very readable manner with copious illustrations and references. It is essential reading for anyone with an interest in building contractors in the Burgess Hill area.

The paper is available from

Shirley Penny of BHLHS at 25 Ockley Way, Keymer, Hassocks, BN6 8N6
price £8. (plus £1.50 p&p)

The Westgate Brewery, Chichester

Alan H. J. Green

Fig 1
Westgate House in
2006. Its alarming
asymmetry will be
noticed.



Those approaching Chichester from the west, along what was once the turnpike road, pass a large, well-set-back Georgian house on the north side of Westgate, behind which looms what at first sight appears to be a range of malt houses. Known as Westgate House it is now used as offices, but has had a much-more interesting past. In its pediment is a modern stone bearing the date 'J75J' replacing, with due classical allusion, the original that had weathered away, but unfortunately the house carries no record of its long association with brewing. Only the fake malthouses behind give a clue, but more about those later.

In the late 18th century the house, and its extensive grounds, became Chichester's largest brewery and its early history is to be found at West Sussex Record Office in the famous Raper Uncatalogued Archive.* In this is an 85-page abstract of the title of Robert Henty to a moiety of the brewery and its tied houses¹ which not only gives a history of the ownerships down to 1855, but also describes the brewery and lists the 50 Sussex inns and alehouses owned by the Henty family. No fewer than 16 of these inns were in Chichester.

The date of the founding of the brewery is not given in the abstract but John Dearling is recited as being the earliest owner. John Dearling was running another brewery at *The Unicorn* in Eastgate Square in 1784² and he leased the Westgate premises to William and Edward Humphry, two brothers who owned several inns in Chichester as well as another brewhouse at 22 West Street.³ It was doubtless they who expanded the scale of the operation. George Loader's 1812 Chichester survey shows that, by then, the brewery had already reached the size indicated on the detailed 1846 plan given as Fig 2 below.

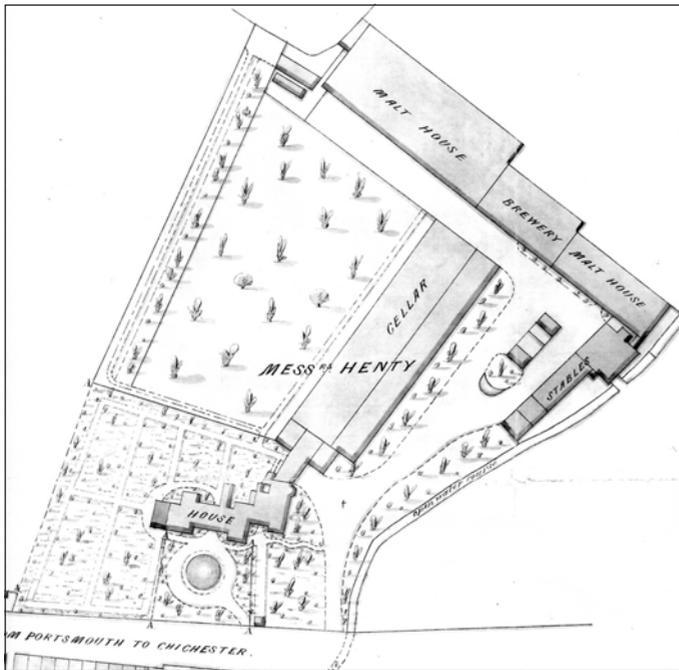


Fig 2
A plan of the
Westgate Brewery
drawn up in 1846
(WSRO AddMS
10842))

When John Dearling died in 1804 he left all his worldly goods, including the brewing empire, to his son William. William was a colourful character and something of a Georgian *Arthur Daley* character who rose swiftly from brewer's son to property tycoon. In 1811, to reflect his status, he had a large country house designed and built for himself at Funtington by James Elmes.⁶ The building of this house was the beginning of his financial ruin for he had overstretched himself and was running up monumental debts. This fiscal difficulty was doubtless instrumental in his selling of the lease of the Westgate Brewery to the Humphrys in 1814. In 1818 William Dearling fled the country to live in France, leaving his affairs in the hands of a trust charged with selling his estate in order to pay off the creditors. His debts amounted to some £88,000⁴ which would be a not-inconsiderable sum today, as it is the equivalent of £5.4M at current price levels!

One of the Chichester hostelries owned by the Humphry brothers was *The Swan*, a large coaching in East Street not far from the Cross, which was destroyed by fire in 1819. It was quickly rebuilt and what was described as a "rearing feast" was held at Westgate Brewery to celebrate *The Swan's* rise from the ashes. At the feast 600 guests were entertained in what a contemporary account described as "the Guest Shed adjoining the Cellar and accompting [sic] house"⁵ This shed can be clearly identified on the plan in Fig 2.

In 1827 the Humphry brothers sold their brewing estate to George Henty for the sum of £82,500 of which £17,514 represented the value of the brewery and its stock-in-trade, and the remainder the 50 inns and alehouses.⁶ The nature of the Westgate site and the brewery at that time is given in Schedule 1 of the abstract as follows:

All that and those Messuages, Tenements and Dwelling House, Brewhouse, Malthouses, Malt Kilns, Warehouse, Stockhouses, Granaries, Stalls, Coach-houses, Woodhouses Orchards and Gardens..... commonly known by the name of Westgate House and Brewery.

It also recites that the “utensils” included a steam engine.

George Henty ran the brewery with his sons George and Robert, and when he died on 19th August 1829 he left the business to the two sons who in 1855, the date of the abstract, were running it as a partnership.

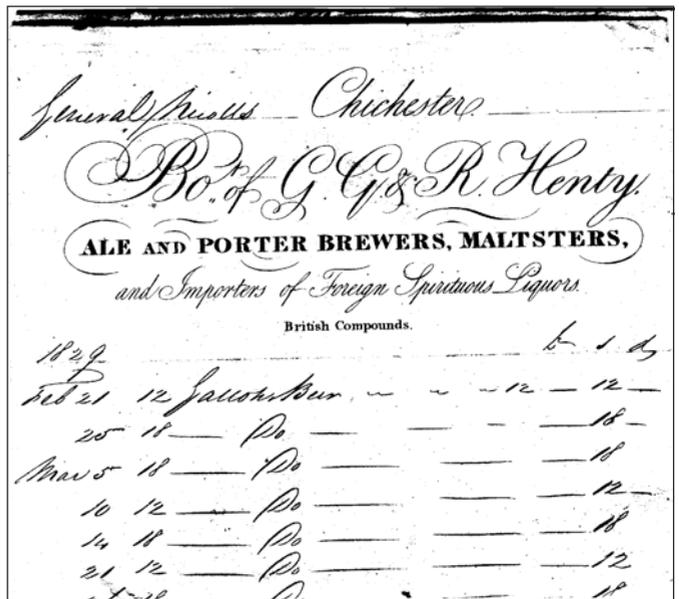


Fig 3.
A bill head for G. G. & R. Henty dated 1829, the year that George Snr. (the first 'G.') died and left the business to the two sons. (Author's collection)

The brewery suffered a serious fire in 1865 but was rebuilt and the business became known as *George Henty and Son* in 1874. In 1921 it was amalgamated with the Arundel business of George Constable to become *Henty and Constable*⁷ and it is by this name that Cicestrians remember the Westgate Brewery. Many of their stoneware bottles have survived and your author is in the possession of one such.

Westgate House was sold around this time to Chichester Theological College who extended it on its west side in 1927.⁸ It remained in ecclesiastical use until 1945 when it was sold and from then on all operations were concentrated at 3 Westgate until the college closed in 1994.

In 1955, brewing ceased at Westgate but the site was used by Friary Meux (who had acquired Henty and Constable) as a distribution depot, with some of the former buildings being let to other businesses. In December 1979, the brewery buildings were again destroyed by fire – a particularly spectacular one this time – but fortunately Westgate House itself was saved. The tottering remains of the brewery buildings were demolished and the site redeveloped; behind Westgate House offices were built in the form of the fake - and rather out-of-scale - malthouses we see today, whilst to the east a small housing estate was created.

The roads in the housing development are known as *The Maltings* and *Henty Gardens* which appellations at least serve as tokens of past activities, but how wistfully one longs for the heady aroma of roasting malt to waft along Westgate!

References

Footnotes

* See *Sussex Industrial History* 37, page 19, for a description of this abundant archive.

@ Called Oakwood it is still there but now occupied by Oakwood School.

Endnotes

¹ WSRO Raper Uncatalogued Box 121 (Olim Box ²) Abstract of Title of Robert Henty to a moiety of a Brewery and Hereditaments at Chichester and elsewhere in the County of Sussex 1855.

² Steer, Francis The Corporation of St Pancras, Chichester. Chichester Paper 42, Chichester City Council 1964.

³ WSRO MP1394 A digest of the deeds of 23 West Street from 1812 recites the adjacent properties. The brewhouse was demolished in 1812 to create the present 22 West Street.

⁴ WSRO Raper Uncatalogued Box 20 contains an indenture listing all Dearling's assets, debts and creditors.

⁵ Willis, TG, Records of Chichester- Some glimpses of its past (Chichester 1928) quotes the account of the feast.

⁶ WSRO Raper Uncatalogued Box 121 op cit

⁷ Saunders, Pat, Henty and Constable Ltd published in *Brewery History No 102* Winter 2000

⁸ WSRO EpIX/10/4/1 Archive of Chichester Theological College.

Book Review

Robin Jones

A Description of the remains of the Ford to Hunston Section of the Portsmouth and Arundel Canal

by Roger Reed

This handy size A5 portrait 36 page book provides an introduction and describes the remaining features of the Portsmouth and Arundel Canal through the parishes it passes, namely Ford, Yapton, Barnham, Aldingbourne, Oving, North Mundham and Hunston. The inclusion of a map in the centre of the book helps the reader to follow the route from the River Arun in the east to the Chichester branch, which joins the canal at Hunston, in the west, with letters at different points on the map for cross reference to the text. There were 25 bridges on the canal and they are numbered in the book from west to east, with Tack Lee Bridge (19) at Yapton being the best preserved. At various points along the line of the canal sites have been excavated by dedicated members of SIAS and this is gratefully acknowledged by the author as he describes the relevant remains. This emphasises how some members of the Society are helping to uncover our industrial past.

A Summary of the Remains is included at the end of the book, where details of earthworks, locks, brick arched bridges, swing bridges and culverts that still exist are described. This is followed by a comprehensive list of Source References. Assistance is also provided to readers who wish to walk the route with details of features which can be seen, Ordnance Survey Maps which walkers can refer to, and the location of car parks near the route. Colour photographs on the inside and outside of the covers provide pictorial evidence of the more important remains to be seen along the canal.

This is a very good book for those who wish to search out the physical remains of the Portsmouth and Arundel Canal and also to help understand them.

Volk's Dynamo

Magnus Volk's dynamo and lathe, which featured in the October Newsletter, can now be viewed in the new Sussex Heritage Centre at the South Downs Garden Centre at Hassocks.

Firle Place - Former Dairy **Ron Martin**

When the Society visited Firle Place in 2005 one of the buildings we saw was the former Dairy. This had been moved early in the 19th. century at the instigation of the then duchess to the garden behind the house. Its previous location is unknown but it is assumed that it was somewhere near the farm. It is built in *cottage orné* style and is single storey 24'2" x 14'10", with the front and rear sides having a curved projection 13' 0" x 1'8". There is a door opening in the centre of each long side and four casement windows in the front elevation. All the openings have Gothic head with brick arches. The walls are of coursed field flint rubble with red brick quoins and dressings. The roof is covered with Norfolk reed thatch and is supported by close-coupled rafters with collars. A strange feature is that there is a king post roof truss located across the centre of the roof. Trusses are normally used in roofs where the span of the rafters is too great and need intermediate supports in the form of purlins. At Firle there are no purlins so the truss is irrelevant and was probably used to give an impression of strength. There are benches around the walls and a stone floor but the internal walls are bare flint. If there was any internal tiling originally, this was probably not refixed when the building was rebuilt.

See back page for illustrations.

Ron Martin

Please note that Ron Martin has a new e-mail address for Society business.
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Front Elevation



Interior - King Post
Firle Place - Former Dairy