



# SUSSEX INDUSTRIAL ARCHAEOLOGY SOCIETY

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NEWSLETTER No. 28

October 1980

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## CHIEF CONTENTS

Inauguration of Coultershaw Water Pump

Punnetts Town Windmill

M. Brunnarius

Hastings Trolleybus

K.S. Donaldson

Earnley Smock Mill

M. Brunnarius

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## ANNUAL GENERAL MEETING

Members are reminded of the Annual General Meeting which will take place on Saturday November 29th at Ditchling Village Hall, at 2.30 p.m. Details are enclosed.

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## GENERAL NOTES AND NEWS

Brick Study Group. There will be a meeting of the Group at 11.30 a.m. on Saturday 29th November 1980 in Ditchling Village Hall, prior to the Society A.G.M. in the afternoon. The meeting will take place in the lower room, not in the main hall as last year. There is ample parking adjacent.

All interested members of the Society will be welcome, whether they have taken an active part in the brickmaking survey already or not. The Chairman, Mr. E.W. O'Shea, will give an account of the restoration of the Piddinghoe kiln and other members will report on field work and research in various parts of East and West Sussex.

No other notices of this meeting are being sent out, so please make a note of the time and place and bring along any exhibits of interest. M. Beswick.

International Guide and Scout Rally. For the Rally of 2000 Scouts and Guides held at Ardingly during July two out-of-camp sessions on Industrial Archaeology, each for about 20 people, were organised by Messrs Beswick, Gregory and Evans. Group lectures were given at Sheffield Mill and Blast Furnace, where we were welcomed by the owner Mr. H.H.C. Ingram, and also at Nutley Windmill.

Chalk Pits Museum, Amberley. The Museum is intended to be a museum covering the whole of South-East England and not just West Sussex and one of the future projects is a 'Hall of Fame' relating to the whole area. This will comprise two sections: (i) Nationally well-known individuals from the South and (ii) Nationally well-known Southern firms or businesses.

Each exhibit will comprise historical descriptive matter accompanied by photographs and one or more relevant artefacts. Typical individuals are Jose Weiss, Conrad Volk and William Stroudley and typical firms are Shippams, Carter Bros., and James Longley.

Will any Members who are interested in the scheme and who could contribute to it in any way please get in touch with the West Sussex Secretary, Mr.A.G. Allnutt.

Pubs and Breweries. Further to a note on East Grinstead 'Pubs' in Newsletter No.27, the East Grinstead Society is writing up what is known about each of the Houses mentioned and would be pleased to know if any of our Members are working in the brewery field and, if so, would they get in touch with Mr. M.J.Leppard (one of our members) at 20 St Georges Court, London Road, East Grinstead, Sussex. BN19 1QP. (East Grinstead 22511).

Australian Contact. Arising from a copy of Sussex Industrial History No.4 (Field Guide 1972) on view in the Sydney University Library, contact was recently made between Mr John Upton (part author of the Field Guide) and Ernest and Sybil Ungar who were recent visitors to Britain from their adopted home in Australia.

Ernest Ungar is Vice President of the Australian Society for Historical Archaeology and Sybil is in the department of History at Sydney University. A recent A.S.H.A. Newsletter includes a survey of I.A. in Britain by Sybil, quoting much of the activities of the S.I.A.S., the history of Thorpe Watermill built in Hobart between 1822-5, together with other items of I.A. interest in various parts of Australia. Copies of our publications are now being exchanged and the A.S.H.A. Newsletters will be available for inspection at our forthcoming A.G.M. J.U.

Jack and Jill Windmills. The millwright contractor, E. Hole and Son, has completed work. - the decayed south-east corner post and east-side girt have been replaced. Examination of the breast beam and lower breast beam revealed extensive decay and these two beams have been replaced. Work is now proceeding on the replacing of the framing on the east side prior to weatherboarding; it is hoped to complete this by volunteer labour during the autumn.

Christmas Cards are now available depicting the Mill from an original watercolour by S.I.A.S. Member, Mr. W. Strickland and can be obtained from the Central Sussex Secretary, John Blackwell. Price is 10p each, but please include 15p in the pound for post and packing; make cheques and postal orders payable to 'Jack and Jill Windmill Preservation Society'. J.S.F.B.

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#### RECENT VISIT

Millwards Farm, Laughton. On Saturday, 9th August, 14 members and friends were guests of Mr David Baker at Milwards Farm, Laughton, TQ 516124, to view his fine collection of steam engines and models. For our Society, the pride of place must surely go to the engine rescued from Newington's Lime Works, Glynde. This is a horizontal single cylinder steam engine with a bore of 16 inches, stroke of just under 3 feet, developing some 50 h.p. and having a flywheel of 10 feet diameter. Used by Newingtons to drive chalk crushing and grinding machinery until the 1940's when it became redundant and remained in a partly dismantled condition until its removal in 1974. There is no maker's plate or any indication of the date or place of manufacture, though it is believed to date from c1880. This finely restored engine was seen running, being driven on this occasion by compressed air.

Another fine specimen for which Mr. Baker had built an extension to his museum was a Ruston Diesel of 60h.p. No.50852 and manufactured at Lincoln in 1915. Used to drive a stand-by generator at a London hospital, this engine was offered to Mr. Baker by the contractors responsible for the hospital demolition. Although now in pristine condition it has not yet been set running. A large accompanying photograph showed a similar engine and generator in its

original environment. A similar engine is also known to exist owned by the Ben Turner Preservation Society at Ripley, Derbyshire, but this is believed to be still in a dismantled state.

An exhibit which caused much interest was a Columbian Flat Bed Printing Press, No.435, manufactured by Clymer and Dixon at 10, Finsbury Street, London in 1830. This machine was used to print the "Cornubian" a Cornish newspaper of which copies of 1835 are in Truro Museum. Two of the members present inked up a printing plate of 1800 and produced a fine 'pull' of an illustration of a bridge designed to be built over the River Thames between London and Blackfriars Bridges, and having a centre arch of iron of 300 feet. This was the first press to replace the screw, being operated by a system of counterbalanced levers, also as an iron hand press, and became very popular with printers until the turn of the century.

Models on display included a scale traction engine, steam models and ship models, in addition to a well equipped workshop and other engines still requiring renovation.

The party was finally entertained to tea kindly provided by Mrs. Baker.

J.U.

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#### COURSE

Practical Industrial Archaeology 17th - 19th October at Peak National Study Centre, Losehill Hall, Castleton, Derbyshire, S 30 2WB. Fee £38. This promises to be a very valuable course with evening lectures and 1½ days of practical survey work. Applications should be made to the above address but the Editor has further details.

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#### INAUGURATION OF RESTORED COULTERSHAW WATER PUMP

The water pump was originally installed by the Egremont family of Petworth House in 1782 to pump water from the River Rother to augment the supply for Petworth. On Friday, 4th July 1980, the pump, after restoration by the Society, was ceremoniously restarted by the present Lord Egremont. Amongst the 40 or so Members and friends who were present were Mr Wilfrid Beswick, Past Chairman of the Society in whose period of office much of the work was carried out, Mr. A.G. Allnutt, West Sussex Secretary of the Society who had been largely responsible for carrying out the restoration and Mr. Philip Green, Chairman of the Coast and Countryside Committee who expressed his great appreciation of the work done on the project.

The pump is now available for work again and, on occasion, supplies a fountain on the roadside to be seen by the public near Coultershaw Bridge (SU 972193).

Although the pump itself is now fully restored, work and funds are still required for the erection of the 100-year-old barn kindly given by Lord March and which will provide additional shelter for the pump and ultimately become a Museum and Information Centre for the Rother Valley.

Details of the pump were given in an appendix to an article on the Petworth Water Supply in Sussex Industrial History, No.9, 1979.

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It was sad to hear that Mr. Archie Dalloway's Windmill at Punnetts Town (TQ 627209) was struck by lightning on 15th December 1979. This note will perhaps convey something of my impression of the destructive energy at work during a split second.

Approaching the mill from below, some of the damage was immediately apparent. During the storm a bolt of lightning struck the topmost sweep, shattering the framing and bursting the whip, the remainder crashing to the ground. Then with extraordinary selectivity the charge ignored the metal cap, the iron windshaft and the seemingly obvious route to earth through the machinery within, passing down over the smock tower. This mysterious behaviour undoubtedly saved the mill from disastrous damage and certain fire.

The mill was brought from Kent 120 years ago and put up by Stephen Neve almost exactly as he took it down. The weatherboarding had been sawn down at the cant posts from top to bottom. This was carefully rematched at Punnetts Town and the joins made over with tinplate. The whole smock was then completely reclad with an additional covering of weatherboards to give new strength to the structure.

It may be that the lightning was seeking the tinplate strips but confined its destruction to the wet outer boarding, great pieces of which were hurled into the air, falling to the ground up to 250 yards away from the mill. Each of the eight sides was affected and 6 of the corners' metal weather strips were ripped away and either similarly dispersed or left hanging as tormented shreds. Curiously, almost no evidence of scorching was found except where the charge left the smock at one of the corners. Much of the boarding had been forced away from the mill as the dampness in the cavity between the layers of boarding was violently expanded. This would account for the 'bursting' effect and the fact that many of the securing nails were left standing out an inch or more.

Mr. Dalloway's repairs will not be confined to the mill as the somewhat diluted charge passed on down through his unique workshop and the old power mill buildings blowing two holes in brickwork, melting areas of pitch caulking, destroying two cast iron down pipes, fusing all the electrical wiring and blowing light fittings and switches off walls and beams. Yet although a connected battery charger had its plug blown out of the socket and smashed, the charger remained intact. He has now removed the three remaining sweeps to lighten the structure and then undertaken repairs to the smock and outbuildings. The whole of the property is a tribute to his singleminded effort to keep this piece of the county's industrial history alive and it is to be hoped that his determination (even at 71) will win through once again.

For anyone wishing to visit the mill and prepared to make it an afternoon's walk with an I.A. bias, I offer the following, but add that this should only be undertaken in fine dry weather as it follows a bridle path which is narrow in places and can be rather muddy, especially in 1980.

Using the 1" O.S. Map No.183 or 1:50,000, No. 199, at Brightling Needle (TU 670212) and facing west, Punnetts Town smock mill is seen  $2\frac{1}{4}$  miles away across Dallington Forest.

The Needle was erected by Jack Fuller on the site of a Napoleonic warning beacon in the late 1820's and marks the high point of the East Sussex Wealden Ridge. From here the path takes the walker into the forest and down to a tributary of the Dudwell 450 feet below, up the other side of the valley to Watkins Down, then on to Blackdown on which the mill stands.

The walk starts on a farm road leading off on the other side of the road to the needle. This passes several isolated cottages and ends at the derelict 'Little Worge' farm. From this point a narrow bridle path dips downward into the forest and the extensive views are soon lost. A little further down, a wide rocky clearing is met which serves to orientate with the sight of Burwash Common on a ridge to the north. Re-entering the forest on the other side, the way is wider and drops steeply towards the stream below which is soon heard. At this point Glaziers Forge unexpectedly appears through the twilight of the trees. It is very difficult to imagine the clamour that echoed through the valley when this isolated hamlet was part of the Sussex Wealden Iron industry. (TU 651214).

Known variously as Brightling<sup>①⑤</sup> or Glaziers Forge<sup>②⑥</sup> after John Glazier who was paid for timber and the use of water until 1652,<sup>③</sup> this was primarily a water driven forge. The Pelham family owned this, Bibleham forge and Wealden Furnace.<sup>④</sup> They sent 'sows' cast at Waldron to the two forges to be hammered into bars which were transported, for use elsewhere, to Maidstone and Pevensey. Thomas Stollyan was at the forge in 1574 and worked for Sir John Pelham. Out-put was at a maximum during the years 1639-45 and averaged 119 tons per annum.<sup>⑤</sup> This declined steadily and by 1717, when the Fuller family were masters, was down to 40 tons.<sup>⑥</sup> Ashburnham was producing 350 tons at this time, no doubt more economically. The Glaziers forge site was apparently out of serious production by the end of the 18th century. Evidence of two hammer ponds and forge working is still to be seen. A large forge masters house, beautifully kept, stands below the walled causeway that crosses the water. Several similarly well kept houses stand close by and being contemporary or older were no doubt buildings associated with the workings here.

The stream which has the dark look of an iron river, goes on to feed the Dudwell and thus Bateman's watermill 2½ miles downstream from Glaziers Forge. This spot is deep in Dallington Forest and today served only by a long woodland track heading south.

Passing the houses, our path continues by climbing steeply along the side of a field into the conifers on the sandstone above. From here the way is wide and easy, following the main firebreak with a slight deviation - clearly shown on the map - leading to the lane over Watkins Down. A little further on is a unique graveyard, for literally hundreds of retired G.P.O. vans form red, khaki and yellow lines in a field to the south. Then, after passing the curious cluster of strip smallholdings on each side, the smock mill is seen, standing a little ahead and to the right, above the village of Punnetts Town.<sup>⑦</sup>

The view is regained; the post mill at Mayfield 5 miles N.W.; the Pevensey marshes and the sea 10 miles south; Dallington Church and the smock mill remain to the S.E. and the return journey to Brightling Needle on the ridge to the East.

#### References:

1. Budgen's 1" map of Sussex, 1724.
2. Mudge 1" O.S. 1813.
3. Straker's Wealden Iron, p.301-309.
4. " " " p.183.
5. S.A.C. No.3 Mark Anthony Lower, p.241.
6. S.A.C. No.67, p.52.
7. See The Windmills of Sussex, M. Brunnarius, pp.60 & 141.

The Hastings Borough Council has recently purchased from the Maidstone & District Bus Company, one of the original open-topped double-decked trolley buses which operated in Hastings between 1928 and 1940 when a replacement fleet began to be phased in. The vehicle referred to is a 1928 Guy BTX 60, six-wheeled trolley bus, manufactured by Guy Motors Ltd, now part of British Leyland. Registration Mark is DY 4965 and it has a Dodson open top double deck body with outside staircase at the rear and seating for 26 passengers upstairs, 31 downstairs. It entered service in Hastings in 1928 and was withdrawn in 1940 following which it was used as a mobile workshop to carry out certain maintenance tasks to the overhead wiring system needed for trolley buses. In 1952 it was restored for seasonal passenger service and in 1953 it was decorated for the Coronation with coloured lights and an appropriate garland, carrying passengers between the Bathing Pool and the Fish Market along the full length of Hastings sea front. It was in fact used in this way during each summer season until the trolley bus system was abandoned in 1959.

Following closure of the trolley bus system DY 4965 was fitted out with a Commer TS3 two-stroke diesel at the Maidstone and District Central Works in Postley Road, Maidstone following removal of the electric traction motor and control gear.

It then re-entered special tourist service in Hastings until 1968 when it was finally withdrawn.

In 1974/75 enthusiasts from the Maidstone & District and East Kent Bus Club and the Maidstone & District Company jointly restored the vehicle to as near original condition as possible and removed the decorative lights and slogans. The diesel engine means, of course, that the vehicle can be driven without an overhead supply or towing vehicle and it has since appeared at a number of Vintage Vehicle Rallies and gatherings.

Hastings Borough Council's purpose in purchasing the vehicle was firstly to save it from either oblivion or being sold abroad and secondly to use it as a means of publicity for the town.

It is hoped to publish an article on the history of the Hastings Trolley-bus System in the forthcoming issue of Sussex Industrial History, No.11.

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EARNLEY SMOCK MILL & 'CLARKE & DUNHAM'S PATENT

by M. Brunnarius

Further to our visit to Earnley mill on the tour in June, the following notes may be of interest to members.

This mill contains a considerable quantity of latterday milling equipment. She worked right up until 1942 and was the last to work with wind in West Sussex (Cross-in-Hand post mill in the East holds the honour for the County as a whole, she was still grinding oats in 1969).

The machinery within, which was mostly fitted for Robert Stevens when he introduced steam working late in the last century, is in remarkably good order. A point of some interest was a wind driven burr runner stone made by Clarke & Dunham which was fitted with their patent balancing boxes and dated 1859. The balance of any runner millstone is of particular importance as the stone must rotate smoothly and grind with an even pressure all over without touching the bedstone.

The patent boxes enabled static and running balance to be achieved easily and accurately. The method is fully described by Fairbairn in his 'Treatise on Mills & Millwork, 1864', and operated as follows:



Each of the four boxes, approx. 3" diameter and 5" deep, equispaced around the back face of the stone contains a threaded spindle onto which a quantity of metal balance plates are fitted. These are retained in such a way as to be raised or lowered by a screw in the cover plate.

To obtain static balance the stone is raised by lifting the driving spindle and the gap between the runner and bed stones checked. The number of balance plates in each box is then varied until this gap is equal all round the circumference signifying correct standing balance. After this, running balance is checked by setting the stone in motion. Small variations in thickness and density will cause the stone to wobble gently up and down within the gap as centrifugal force comes into effect. In this case the pivoted plane of the rotating mass does not match the dressed face of the stone. The 'Clarke & Dunham' device allows this to be corrected by adjusting the vertical setting of each set of balance plates within respective boxes. The weights nearest a dipping portion must be lowered a little and the stone re-started. The process is repeated until, by further raising and lowering of the weights running balance is achieved.

Whilst the party was viewing the outside of the mill a number of date stones were found on the brick base. These, inscribed with the initials of various workmen and the year 1827, commemorate raising the mill one storey at that time to give her more wind.

As the smock and cap are being rebuilt it is worth remarking that whilst the mill is often taken as a black one, she was in fact painted white during part of her working life and tarred over this at some time which is particularly unusual. Hopefully the cap which was a West Sussex weatherboarded beehive crowned by a distinguishing ogee finial will be faithfully restored.

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