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Members wishing to object must do so in writing stating their specific reasons, and should enclose a SAE for formal acknowledgement. However, it is hoped that all members will consent to their data being held.

Providing that due notice has been given and that the names and addresses of any objecting members are excluded from the computerised files, the Society will be exempted from having to register under the act.

MEMBERSHIP CHANGES

New Members

West Sussex Record Office, County Hall, West Street, Chichester, PO19 1RN
Surrey Archaeological Society, Castle Arch, Guildford, Surrey, GU1 3SX
Miss P. Frost, 15 Critchmere Road, Eastergate, Chichester, W. Sussex (Eastergate 2679)
Burgess Hill Local History Society, 33 Leylands Road, Burgess Hill W. Sussex, RH15 8AF
S.A. Ward, 14 Laurel Close, Furnace Green, Crawley, W. Sussex, RH10 6QE (Crawley 32421)

Change of address/Amendment of address

A.E. Baxter, 9 Madeira Avenue, Worthing. BN11 2AT (Worthing 201002)
J.K. Stephens, c/o BHC Singapore, Foreign & Commonwealth Office, King Charles Street,
London SW1A 2AH

A.R. Killick, 19A Hazelmere Gardens, Worcester Park, Surrey, KT4 8AH
D. Kingsley, Owl House, The Green Westerham, Kent, TN16 1AY
P.D. Budd, "Whitcroft", Quernmere, Lancaster, Lancs. LA2 0QB
J.J. Goring, 31 Houndean Rise, Lewes, East Sussex, BN7 1EQ (Lewes 477795)

Resignations

Mrs. E. Bean, 62 Sussex Road, Haywards Heath, West Sussex, RH16 4EE
I. McGrath, West Ashling Mill, West Ashling, Near Chichester.

OFFICERS

President A.J. Haselfoot
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)
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(Office 0273 28479, Home 0273 33805)
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Area Secretaries:

Eastern Area A.J. Haselfoot, Albion House, Coburg Place, Hastings (0424 436260)
Western Area R.M. Palmer, 11 Arlington Close, Goring-by-Sea, Worthing,
BN12 4ST (0903 505626)
Central Area J.S.F. Blackwell, 21 Hythe Road, Brighton BN1 6JR (0273 557674)
Northern Area E.W. Henbery, 10 Mile Close, Langley Green, Crawley (0293 23481)

COMMITTEE MEMBERS

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

PLEASE NOTE Latest acceptance date for copy for the January Newsletter is
16th DECEMBER



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FORTHCOMING EVENTS

The following lunch-time lectures will take place in the Outer Print Room of the Brighton Museum and Art Gallery at 1.05 p.m. lasting about 45 minutes. Admission is free:-

Thursday 16th October "Pre-war ceramic industry in Britain"
Lecturer: Stella Beddoe
Thursday 23rd October "The Brighton Line"
Lecturer: John Roles

Saturday 25th October A day school will be held at the University of Kent, Canterbury, at 9.30 a.m.

Subject: Wind and Water Mills.
Fee: £6.50. Free to unemployed.
Applications: The Tutorial Organiser, School of Continuing Education, Rutherford College, The University, Canterbury, CT2 7NX. Phone Canterbury 66822, ext. 7647/662.

Sunday 26th October Coach visit to the Shuttleworth Collection at Biggleswade, Bedfordshire. The Collection ranges from a 1909 Bleriot type IX to a Spitfire Mark VC. This is the last flying day of the 1986 season. There are other exhibits of general transport interest.
Organised by Amberley Chalk Pits Museum Association (to whom cheques should be made payable), Museum Office, Chalk Pits Museum, Amberley, Nr. Arundel, West Sussex, BN18 9LT. Cost £7 for members of the ACPMA, £8.50 for non-members. No reductions for OAPs or children.
The Surrey Industrial History Group is also arranging a visit to the Shuttleworth Collection on the same day, but starting from Guildford. Cost £7. Applications to R.S. Taylor, Orchard Cottage, Alfold Crossways, Alfold, Cranleigh, Surrey, GU6 6JE.

Saturday 15th November The Federation of Sussex Local History Societies (S.I.A.S. are members) will be holding a whole-day Conference at the E.D.B. Lecture Theatre, Sussex University. The afternoon will be devoted to S.I.A.S. John Blackwell will speak on I.A. in Sussex, Ted Henbery on the restoration of Ifield Mill, and Don Cox on recording I.A. sites in Sussex. With so much

I.A. interest we shall expect a very good turnout from members. Further particulars can be obtained from the Federation's Conference Organiser, Mrs. Joan Wilkins, 20 Fairfield Way, Haywards Heath, West Sussex, RH16 1UT. (Tel: Haywards Heath 412817)

Saturday 22nd November Southover Grange, Lewes

11 a.m. Meeting of Brick Study Group

2.30 p.m. Annual General Meeting, followed by an illustrated talk by Michael Tighe that he has called "From Geiranger to the Gold Fields". This is a chance to hear about industrial archaeology in another part of the world.

MEMBERS EVENING, Saturday 28th June

Anne of Cleves House and Museum was once again the venue for the annual members evening. This is an excellent choice with the attractive and interesting museum and use of a meeting room - a pity the gardens were not open as this was one of few pleasant evenings of the year.

After refreshments, for which our thanks to Mrs. Cox and her daughter Elizabeth, we settled down to a lecturette on Cooper, the Henfield millwright, by Don Cox. Don explained that an interest in Cooper's work started at a W.E.A. class he was holding at Henfield and the present research is being carried out by himself and a few members from the class.

William Cooper was born in Hertford and next appears in Hampshire at Droxford where he married Harriet. By the middle of the last century he was working in partnership with James Neale at Henfield and then on his own until his death in 1876. The business was then carried on by Harriet until 1882.

Old photographs of the site and the works were shown together with a record of mills, both wind and water, that he worked on; these included Horsham, Cobbs, Hammonds (now demolished) and Woods watermills and Henfield and West Chiltington windmills: a fascinating glimpse of the work of a millwright whom most have heard of by name, but know little of his life. I hope Don and friends will find more information for the article they plan for S.I.H.

Members then heard from Tom Evans about "Morous" the Tank Engine - a bedtime story for children of all ages. "Morous", as she was latterly known, emerged from the works of Manning Wardle at Leeds in 1866. She was named Crampton and owned by the sons of railway pioneer and engineer, Thomas Crampton of Broadstairs; Thomas Hellas Crampton and John G. who had a contracting business at Kineton, Warwickshire. She was used as a contractors locomotive on the East and West Junction Railway authorised in 1864 to connect Towcester with the G.W.R. at Stratford-on-Avon. She was purchased for the Shropshire and Montgomery Light Railway in 1910 and named "Morous" (another form of morose) being transferred in 1924 to the Hundred of Manhood and Seisey Railway when she survived the railway closure in 1936, being finally scrapped in 1937.

Thanks to both for once again providing an interesting and informative evening.

JOHN BLACKWELL

VISITS

Ice Houses - Saturday 19th July

About 25 members met at Bognor Ice House for an afternoon led by Ron Martin.

Bognor Ice House is situated in what is now a busy thoroughfare, but was originally on the Hotham Estate serving Hotham House. The house dates from the 1790s and presumably the ice house was a contemporary addition. There was originally a door at each end of the short entrance tunnel which assisted insulation, although security is now ensured by a modern wrought iron gate at the outer (northern) end. Inside, the rectangular (about 10' x 6') storage space is about 10' deep.

We then motored to Arundel Castle ice house which dates from the renovations and extensions made to the castle 1791-1815. Here Ron provided a small diversionary entertainment by dropping the lower portion of his two part ladder into the pit of the ice house. Fortunately he was able to retrieve it by lowering himself down his rope ladder. This ice house must be one of the largest in Sussex - small wonder considering the amount of entertaining done at the Castle in those days.

Our next visit was to Parham where the ice house was probably built in the 1830s. This is a circular construction and about 18' deep which necessitated the use of the rope ladder. Some members left the party at Parham as time was getting on, but the hard core went on to West Dean near the Open Air Museum at Singleton.

At West Dean we were just in time for a cup of tea before the tea room closed. We also admired the construction of the house in knapped flint, particularly the window and angle quoins cut with a mould. After a longish trek over a track and fields, Ron led us directly to the ice house which is so overgrown that it was not visible further away than 5 yards. The entrance passage was down some steps, then a right turn to the apparently bottomless pit. This too was deep, but of rather interesting construction with the bottom 6 feet being built of clunch with brickwork above.

Many thanks to Ron for making this such an enjoyable afternoon. I think we should at least have subscribed for new batteries for his helmet light, or better still provided our own illumination.

GORDON THOMERSON

Tangmere Military Museum - Saturday 16th August

This museum on the edge of the now disappearing Tangmere Aerodrome does not appear very impressive from the outside. However the 25 members and friends who came on the conducted tour of the museum soon found that inside is a very interesting collection of items from the Battle of Britain. No effort has been made to restore any of the items but every effort has been made to tell the story behind the display and to group items together to form comprehensive collections: well worth a visit to anyone interested in the Battle of Britain.

Museum of Mechanical Music at Church Road, Chichester - Saturday 16th August

After Tangmere most of the party re-assembled at Chichester to visit this redundant church now turned into a museum to house a collection of mechanical musical instruments plus a large collection of dolls and other various items that interested the Victorians. The musical items are the main interest and a regular conducted tour ensures that every visitor has a chance to hear the sound of some of the collection of musical instruments. The museum covers 100 years of these instruments. Again well worth a visit and children are made especially welcome.

DON COX

AREA SECRETARIES' REPORTS

WESTERN AREA

Coultershaw Pump

Scaffolding has been erected to enable the new sluice-gates to be fitted.

The number of visitors this year has been encouraging - slightly up on 1985.

We are very grateful to those members who have come along to help on the Open Days.

Poyntz Bridge

A concrete platform is being prepared alongside the bridge site on the canal and the bridge framing will then be lifted on to it for final assembly.

Ways and means are being investigated of reconditioning the ball race on which the bridge pivots. It comprises 24 cast iron balls of around 4 inch diameter. The

construction date of 1820 means that this is an early example of a ball race and one speculates whether the design was based on the use of cannon balls, of which there must have been a surplus after the Napoleonic Wars!

Bignor Park Water Pump

A start has been made on digging out the lower half of the waterwheel - on the hottest day of the year! - and about 2 feet of mud, clay and rubble have been cleared. There are further problems of stability of the launder wall, but it is hoped to overcome these and proceed with the dig.

Frank Gregory's visit to this site, mentioned in the last Newsletter, was in fact made in 1971. He made a full photographic record, which is now invaluable as the whole installation was pillaged for scrap metal in the ensuing five years.

I.A. Survey of Worthing

The first phase of the street furniture survey, relating to letter boxes, is now complete and has been written up. The next phase, covering lamp-posts, is three-quarters completed - and only just in time, because of a programme of virtually total replacement by uniform anonymous concrete posts.

MICHAEL PALMER

CENTRAL AREA

After eight years hard work by the Jack & Jill Windmill Society, Jill Windmill is now grinding corn again. The dedication and skills of the team which, includes several of our members, have been rewarded by winning the Dorothea Award this year. The cheque for £500 and plaque were presented at the A.I.A. Conference at Loughborough to Donald Chamberlain who, as District Engineer for Mid Sussex District Council, initiated efforts to commence restoration. In declaring the result of the award, John Crompton (A.I.A. Endangered Sites Officer), who was chairman of the judges, said the judges felt that Jill windmill achieved the highest standard of all the winners in the three years of the award's existence. They were particularly impressed by the recording, documentation and photographs telling the complete story of the restoration, and hoped that future competitors would follow this lead.

In declaring the result of the A.I.A. award for recording, John Hughes, (A.I.A. Recording Officer) spoke of the need to record properly and drew attention to the excellent diagrams displayed on the Sussex I.A. Society's stand. These were of the Offham Tramway prepared by Ron Martin. Well done, Ron!

Editor's Note: Readers are reminded that in the first year (1984) of the Dorothea Award, Coultershaw Pump was placed second.

JOHN BLACKWELL

A.I.A. Conference - Loughborough

About half a dozen of our members attended the conference at Loughborough from 8-14th September. As is customary the conference takes place over the weekend and is preceded by a series of visits to places of I.A. interest.

This year the visits included the Ruddington Frameshops Preservation Trust whose exhibition of Framework knitting machines won the first Dorothea Award two years ago. The complex includes a framework knitter's cottage of the nineteenth century. A walk through the Nottingham Lace Market took us to the Canal Museum. Later we saw the Bestwood Winding Engine which has been preserved as part of the Leen Valley Country Park and is a vertical twin cylinder engine of 1873. Close by are the terraced houses provided by the Bestwood Coal and Iron Company, each bearing the company crest and the date 1876. We followed this call by a visit to the magnificently preserved Papplewick Pumping Station whose capacity was greater than the availability of water the underground workings could produce daily for the city of Nottingham.

The foregoing chronicle of visits was packed into one day and there were four such days plus a choice of visits on the Saturday afternoon. To do justice to the full programme would occupy a complete Newsletter, which is not the purpose of a newsletter

Suffice it to say that each day was interest-packed and in the evenings we were entertained to slides and lectures.

This year's Dorothea Award was won by Jill windmill and the presentation was made to Donald Chamberlain of the Jack & Jill Windmill Society. A full report appears under Central Area Secretary's report.

The annual Rolt Memorial Lecture was given by Dr. Neil Cossons, the Director of the Science Museum. His subject was "Industrial Archaeology - A Manifesto for the Future".

GORDON THOMERSON

OBITUARY - MR. E.W. O'SHEA

It is with sincere regret that we have to report the death of Ted O'Shea on 3rd September. He was a member of our committee for 5 years before ill health forced him to resign last year. His associated activities included membership of the Sussex Archaeological Society for 20 years on whose committee he also served, and the Lewes Archaeological Group of which he was a founder member and its first honorary secretary, becoming chairman 1974-81. He was also president of the Brighton & Hove Archaeological Society 1983-5.

By profession Ted was a quantity surveyor who worked on a number of War Office contracts during the war, including pontoons for the famous Mulberry Harbour (although for security reasons he was not aware of the whole project at the time). He became the first non-family director of Llewellyns, the Eastbourne builders who have recently rebuilt the Grand Hotel at Brighton.

Ted's specific interest was in buildings and building materials, particularly mathematical tiles. As a result of his wide knowledge in this field he was an adviser to the late Alec Clifton-Taylor on buildings in Lewes when this town was featured in the BBC series "Six More English Towns". He was consulted by the Department of the Environment regarding the replacement of mathematical tiles on St. James's Palace.

That he enjoyed his work was demonstrated by his eagerness to pass on his skills to others. Accordingly, he arranged surveying courses and projects for members of our society jointly with members of the other local societies in which he was involved. He led a team in the survey of the Bishopstone Tide Mills in 1983, and was project director for the restoration of the dovecote at Hangleton Manor, Hove from which he had to withdraw due to his illness. Happily this project is still going ahead and should be completed in about six months. However he will probably be best remembered for his direction of the excellent restoration of the Piddinghoe brick kiln.

Ted will be sadly missed, and we offer our sympathy to his wife Ruth, and their sons.

GORDON THOMERSON

THE EAGLE HAS FLOWN - notes on a Brighton iron foundry

A recent issue of S.I.H. contained a reference to the Eagle Foundry in North Laine, Brighton:(1) I was taken with this entry as I had recently noted this advertisement from an early 18th century newspaper:- (2)

"To horticulturalists and others to be sold by private contract, a choice and valuable collection of fruit trees, consisting of peach, nectarine, plum, pears, cherries apples etc. selected with great attention by the late Mr. J. Furner. Two prizes were last summer obtained from the Sussex Horticultural Society, by fruit, the produce of these trees viz: plums and cherries. This being the first bearing year of these trees they may with perfect safety, be removed at this season.

To be viewed at the garden opposite the Eagle Foundry, North-Laine and to treat for the whole or any part of the above trees.

Apply to T. Hemmings, gardener, seedsman etc. No.3 Grand Parade, Brighton."

This juxtaposition of fruit and foundry was typical of the North Laine area where land uses as diverse as those above, jostled for position on the gently sloping, fertile Coombe Rock slopes, north of the Old Town Foundries and other 'noxious trades', pushed on to greenfield sites by the rapid urban expansion of Brighton, disrupted the belt of market gardens, orchards, grazing and stabling that surrounded the town.(3)

This early reference is the only one to locate the foundry in North Lane (now North Road) and it has to be taken that this is a correct spelling and not an incorrectly spelt North Laine. By 1828 the Eagle Foundry run by Bowen, Williams and Co. is located at Spring Gardens, a turning off of North Lane built on the paupiers running south to Church Street (formerly Spring Walks). The name Spring Gardens is indicative of the former land use of the area, but by the 1820s the agricultural nature was submerged by this foundry, one other, the famed Regent Foundry, and various other heavy trades including a soap and tallow works. The latter foundry had been pushed successively west and north from its original location in Regent Street - near the Dome - to this site and eventually further north on to the Second Furlong on the present Postal Sorting Office site.(4)

The owners of the Regent, Barker and Co. are listed at Gloucester Lane (now Gloucester Road) in 1824, one furlong north of its previous location, showing the rapidity that industry had to relocate during Brighton's boom years. In an 1839 directory, the Eagle reappeared in this road, now run by Williams and Yearsleys and stayed under their control until 1850 at least; 1856 saw Langworthy and Reid as owners, changing by 1865 to C. & J. Reed. By this date the whole area of the North Laine was a densely packed area of industry and housing, and operating conditions must have been increasingly difficult and consequently costly.(5)

A directory of 1869 has Gloucester Lane renamed Road and the address of the Eagle, 114 Gloucester Road, the site of the Canteen public house and the drill hall of the 1st Sussex Volunteer Artillery. This changed sometime after WWII to the distribution depot for newspapers of Messrs. Surridge and Dawson, who still operate here. However the Eagle name is not lost, and from 1856 at least the adjacent ale house run by the gloriously named Mr. Haybittle has been named The Eagle, a location unchanged to the present day.(6)

Although the Eagle Foundry has gone, this area at the eastern end of Gloucester Road is still one of metal based trades, toolmakers, printers, refrigeration engineers, car repairers reflecting a continuity from its manufacturing heyday 150 years ago.(7)

GEOFFREY MEAD

References:

1. P. & J. Holtham, "The North Laine of Brighton" S.I.H. No.15 1985/6
2. Brighton Gazette Jan. 5th 1826 p.1.
3. G. Mead, "The retail trade is considerable" S.A.S.N. No.45 1985
4. Pigot's Sussex Directory 1828 (and following county directories); Baxter 1822
5. Baxter 1824; Leppard 1839; Folthorp 1850, 1856; Page 1865
6. Page 1869; Kelly 1947; Folthorp 1856; Brighton Evening argus 12th June 1985
7. S. Farrant, "Development of the N. Laine conservation area 1770-1820" Brighton Poly Geographical Society Magazine No.8 1980

CHALK PITS MUSEUM - AMBERLEY

A West Sussex "landmark" has been moved to the Amberley Chalk Pits Museum. A 5-ton steam crane which had served the sawmills at Charlton, near Chichester, has been presented to the Museum by its owner, John Green. The crane is rail mounted and weighs 26½ tons, with a 30 foot jib, and was built by Smith's of Rodley, Leeds, in the late 1930s. It was acquired by the Charlton sawmills in the 1960s, having been reconditioned, but saw little use after the closure of the major part of the works. Although the boiler is needing professional attention, the gears and motion are in first class condition, and it is hoped to have the crane operational by the time the Museum re-opens on April 1st 1987.

The crane was rescued from Charlton with the aid of Messrs. Gamble & Sadler who supplied their 70 ton rough terrain crane and a team of three operators free of charge for the day. In the confined space available at the sawmills it was difficult to place the crane close enough to the steam crane, and to place the heavy-duty low loader lorry alongside too. The schedule estimated that with arrival on site at 0900 the lift should be made at 1030, leading completed by 1130, and the convoy back at

the Museum by 1330! In practice the lift did not happen until two hours later than planned, and the journey back to Amberley was made much slower due to the height of the steam crane on the low-loader causing the safety valve to foul telephone wires and branches.

Being the only person to volunteer for the task the Museum Director was perched on the roof of the cab of the steam crane for the 30 mile journey to Amberley (via Worthing and Storrington to avoid the low bridge on the B2139). A piece of stick was wielded to push the 'phone wires out of the way, and low hanging branches were ducked, or if they broke off, removed. On two occasions the jib fouled the wires, and a clamber up to the top was the only way to clear them.

The crane was safely off-loaded at Amberley into the timberyard area on to a length of specially prepared standard gauge bullhead railway track previously recovered from Charlton.

The move was completed at 1900 hours, with a very tired team retiring for hot baths to soothe aching backs. The aim had been achieved, to recover the crane in one unit, avoiding the complications of removing the jib and cab, and the associated re-assembly at the Museum.

Over the winter period the boiler will be removed for attention to the wasted top tube plate and tubes, the jib and carriage will be repainted, new metal sheet work fitted to the cab, and the mechanisms thoroughly checked over.

IAN DEAN - DIRECTOR

SUSSEX RURAL LIFE IN PHOTOGRAPHS

THE GARLAND PROJECT

The following extract is taken from an article in West Sussex History (the journal and newsletter of the West Sussex Archives Society) and was written by Mrs. Alison McCann. It is reproduced by kind permission of the author and the Society.

In May 1984 a Manpower Services Commission Community Project was set up to clean, index, print, and store a collection of about 70,000 glass negatives which had been taken by George Garland between c.1920, and the 1970s.

This collection is of particular importance because it records Sussex during a period of immense change. Mr. Garland realised that a whole way of life was disappearing for ever, and deliberately set out to record all he could.

In the first year about 20,000 negatives were processed, i.e. from the start up to the 1930s. In 1986 it was hoped to deal with a further 30,000, which will take the collection up to the 1950s. Those of a later date will be dealt with later and of course, are not in such a poor condition anyway.

The original index was poor and incomplete. The new index will be on master cards typed out as a running list, not only in numerical order, but also persons, places, and subjects. Copies will be made and sent to local bodies such as the County Library, Chichester District Museum, and so on. However, further copies can always be made for other bodies on request.

This Collection will obviously form a rich source of material for Industrial Archaeologists! It is not quite clear if the photographs are of West Sussex only or the whole County. Also the bulk will be of agriculture practices probably, but among the rural crafts must surely include local industries.

In the first instance it might be as well to send any enquiries to the West Sussex Record Office at John Edes House, West Street, Chichester, West Sussex, PO19 1RN. (The County Archivist is Mrs. P. Gill, B.A.)

JOHN URPEETH RASTRICK (1780-1856)

In the last newsletter (51) John Urpeth Rastrick is mentioned as the Engineer with Sir John Rennie of the London & Brighton Railway from 1838. This was discussed with our member H.T. Dawes, in a conversation about the Albion Steam Mills in Brighton (see newsletter 50). He indicated that Rastrick had also been in business in Stourbridge

manufacturing mill machinery. During our conversation, Mr. Dawes revealed that in a Brighton cemetery there was a large monument to a railway engineer and on investigation the monument was discovered to be that to J.U. Rastrick and later members of the Rastrick family.

The stone monument is truly enormous, the base being circular in plan, some 6 metres in diameter and to the writer, resembling possibly by design, the cap or perhaps the piston of a steam cylinder. The size of the monument is in striking contrast to the grave at Dartford, Kent of Rastrick's erstwhile associate Richard Trevithick, more famous than Rastrick, but buried without any memorial at Dartford churchyard in 1833, (his funeral expenses paid by the men at J. Hall's works where Trevithick was working at the time).

The careers of Rastrick and Trevithick, although ending with such ironic contrast, overlap for a period of some 30 years. Although Rastrick's contribution to the achievements of Trevithick is not usually mentioned specifically by the writers of railway history, it is apparent that from 1804 after Trevithick's success with the Pen-y-darren locomotive, until 1816 at the start of his (Trevithick's) Peruvian adventure, the firm of Hazeldine and Rastrick at Bridgnorth (Salop) built the various locomotives and mining engines that had such a profound impact on the future of the steam engine, principally due to the use of high pressure steam. Dendy Marshall(1) mentions the locomotive "Catch me who can", demonstrated by Trevithick on a circular track in London in 1808, as one of the products of the Bridgnorth works. An early Trevithick engine (1804) is recorded as installed at a colliery near Cilfig (Llanelli) in S. Wales for that Sussex/Surrey Ironmaster Alexander Raby - perhaps one of the first engines from the Bridgnorth works.(2) Bowen & Rastrick are also mentioned as operating the Wern Tramroad near Llanelli in 1805,(3) but there is probably confusion here with Bowen & Roderick reported in another source.(2)

According to the Dictionary of National Biography, Rastrick became the managing partner in the firm of Bradley Foster Rastrick of Stourbridge in 1817, but before leaving Bridgnorth he built, c.1815, a notable cast iron bridge across the River Wye at Chepstow with a main span of 112 ft (total length of bridge 320 feet), designed by Rennie and which is still in use.(4)

A small stationary steam engine of the Bridgnorth period is on display at the Science Museum South Kensington and of several locomotives built later at Stourbridge, including exports to America, is "Agenoria" of 1829 reported as the oldest locomotive in the collection of the Railway Museum at York.

Rastrick's association with Trevithick led to other developments. In 1812 when Sir John Rennie was constructing the Plymouth breakwater, we learn from James Hodge(5) that with his "friend" Rastrick, Trevithick visited Plymouth and noted the problem of drilling holes in the limestone which was quarried nearby. Later Trevithick adapted an engine to drill holes in the stone using a type of twist bit, although details of this are not recorded. Trevithick also proposed a steam engine to move the larger blocks for the breakwater and no doubt Rastrick assisted with the facilities of the Bridgnorth works.

Here we can suggest a possible link with Rastrick's later work on the London and Brighton Railway. By 1838, Trevithick's engine operated drill was likely to have been in regular use and it is apparent from a number of the stone sleeper blocks (see Newsletter 51) now by extraordinary coincidence (??) removed by B.R. from one of the Burgess Hill Station platforms, that Rastrick could have been assisted by the types of engines mentioned at Plymouth. The sleeper blocks already described as large, are approximately 60cm x 60cm x 28cm and each must weigh in the region of 5 cwt. (250 kg). Some are drilled with three holes for cast iron chairs. Many however, are undrilled and it seems likely that it was intended to drill most of the blocks "in situ", perhaps with the chairs and rails in position. Presumably the blocks remaining undrilled were never used as sleepers, being surplus to requirements. Were these Trevithick engines used in laying the London & Brighton Railway permanent way? For this we must seek more evidence and there are many of Rastrick's original progress reports in the archives of the Public Record Office at Kew. From these records it is clear that it was intended to use both wooden sleepers and stone blocks of the size discovered at Burgess Hill,

but an account of the construction of the L & B.R. with detailed records from the P.R.O. must await a future article.

Suffice it to say that in 1838, the Committee of the L & B.R. accompanied by Rastrick, visited most of the important railway projects of the time, examined permanent way materials, engines and rolling stock and a recommendation for a 75 lb/yd rail on stone block sleepers was made at this time. It was also discovered by the Committee that contractors' locomotives were difficult to obtain due to the considerable number of railway projects under way in 1838 and Rastrick had to begin the important Shoreham and Merstham sections of the L & B.R. with only two locomotives. These were ordered for delivery in six weeks from a foundry at Newton-le-Willows on the route of the Liverpool & Manchester Railway. Rastrick was, of course, well acquainted with the L & M.R. having been one of the judges at the Rainhill Trials some eight years previously and earlier having rather unfortunately advised the use of stationary steam engines with cable haulage, in preference to locomotives.

To revert to Rastrick's career as a locomotive designer, there is no doubt that his success, particularly with "Agenoria", was due in part to his association with Trevithick. However when later he was manager of the Stourbridge works he must have been deterred by the intense competition in locomotive design and concentrated the Stourbridge concern on other types of heavy machinery including rolling mills.

It would be interesting to discover that while in Brighton, Rastrick advised or even equipped the Albion Steam Mills with machinery. Certainly the experience with heavy rolling mills lends strength to the argument that the Stourbridge works was a source of the rolled "Birkinshaw" rail and later types such as Joseph Locke's 1835 "bullhead" pattern. (Was the rolling mill also at an early date the means of providing curved rail lengths by differentially adjusting the speed of the rolls?)

As a railway surveyor, Rastrick was employed on several of the main routes projected before the L & B.R., notably the first "trunk" route "The Grand Junction" between Birmingham and Warrington (1837) and a route from Manchester to Crewe. His reputation as an adviser to Parliament on railway matters was unsurpassed and it was largely this reputation which secured for Rennie the direct route to Brighton against several other competing routes, despite some formidable civil works, such as the Balcombe Viaduct and the Merstham, Balcombe and Clayton tunnels.

Among Rastrick's earlier achievements was the design of the iron works at Shutt End near Stourbridge and at Chillington (Wolverhampton) where "John Barker" later quoted for supplying rails after the visit of the L & B.R. Committee mentioned previously. The engine "Agenoria" was designed for the Shutt End Colliery railway - also due to Rastrick and was an outstandingly successful locomotive, with an advanced boiler design having also the unusual feature of balanced driving wheels. The Stratford-on-Avon to Moreton-in-the-Marsh tramroad has already been mentioned in Newsletter 51 and Rastrick is described as Engineer of the Manchester & Cheshire Junction Railway in 1835 (DNB).

The L & B.R. can perhaps be described as Rastrick's "Pièce de Resistance" as well as his last substantial work and he retired in 1847. He died at his residence, Sayes Court, Chertsey, Surrey in 1856 and although born at Morpeth, Northumberland, he chose to be buried in Brighton in sight of the railway. His success in business in contrast to Trevithick is perhaps exemplified by the splendid monument - unless it was the contribution of a grateful Brighton - and is the resemblance of the monument to part of a steam cylinder just a coincidence?

One final question occurs to the writer. Why did Rastrick not enter a locomotive for the Rainhill Trials in 1830, if "Agenoria" was such a success? He had the technology - but he had after all, recommended stationary engines for the L & M.R. even though it was partly at his own suggestion that locomotives were to be tried out at Rainhill, - a generous concession surely under the circumstances!

References:

1. C.F. Dendy Marshall, A History of the Southern Railway (1963), pp 200, 201
2. M.V. Symons, Coal Mining in the Llanelli Area Vol.1 (Llanelli 1979) pp 213, 317, 345, 218, 219.

3. B. Baxter, Stone Blocks & Iron Rails (Newton Abbot 1966) pp 223, 224.
4. Construction details of this iron bridge (320 ft. in 5 spans) have been confirmed by Alan Allnutt and the County Archivist Gwent C.C., Cwmbran. A second bridge is proposed to relieve present day traffic and the original has debatably served for a longer period than any iron bridge still in regular use. The Chepstow bridge appears to share the same date as Rennie's larger iron construction over the Thames at Southwark. (see Newsletter 50 p.9) but since rebuilt.
5. James Hodge, Richard Trevithick (Aylesbury) p 32. T.E. EVANS

Editor's Note: Six of the stone blocks from Burgess Hill station mentioned in para.7 have now been deposited at the Chalk Pits Museum, Amberley through the vigilance of the author and the generosity of Hales Containers Ltd. They will form part of the railway exhibits in due course.

THE JESSOPS' ACTIVITIES IN THE SOUTH

In recent issues of S.I.H. and the Newsletter there has been a little confusion over the Jessop family of civil engineers and their activities in the south. It doubtless arises because there were two generations with the same Christian name.

William Jessop senior 1745-1814, trained by John Smeaton, started his practice in 1772.

He was involved with the following projects in the south:-

- 1783 Report on the Western Rother.
- 1786 Report and improvements to Rye Harbour.
- 1787 Report and subsequent construction of Lower Ouse Navigation, drainage of the Lewes & Loughton Levels and improvements to Newhaven Harbour.
- 1788 Report and subsequent construction of the Upper Ouse Navigation.
- 1790 Report and subsequent construction of the Western Rother Navigation to Midhurst.
- 1799 Report and construction of Surrey Iron Railway.
- 1800 Report on Shoreham Harbour entrance.
- 1802 Report and construction of Croydon, Merstham & Godstone Railway.
- 1806 Report on Littlehampton Harbour.
- 1807 Offham inclined plane.

From 1785 to 1810, between Smeaton and Telford, William Jessop Senior was the most eminent Civil Engineer in the country. Telford is frequently given sole credit for the Pontcysyllte aqueduct 1795-1805 and the Caledonian Canal 1804-1822, but for both projects he was responsible to William Jessop.

William's second son Josias 1781-1826 became a consulting engineer after training by his father. His work included the following in the south -

- 1802 With his father he was engaged on the Croydon, Merstham & Godstone Iron Railway.
- 1813 Consulting Engineer for Wey & Arun Canal.
- 1820 Report on Newhaven Harbour improvements

His third son, William, 1783-1852, joined the Butterly Iron Works and at the age of 22 succeeded Benjamin Outram as manager on his death in 1805. William Jessop senior had financial interests in the Company and acted as its consulting engineer when required. In 1807 William Junior referred the Offham Incline scheme to his father when he was involved with the supply of rails; one of the chief products of the Butterly Iron Works for many years.

ALAN ALLNUTT

BOOK REVIEWS

Vic Mitchell and Keith Smith, Branch Lines to Tunbridge Wells, Middleton Press (1986) ISBN 0906520 32 0 pp 96 £6.95

Vic Mitchell and Keith Smith, Crawley to Littlehampton, Middleton Press (1986) ISBN 0906520 34 7 pp 106 £6.95

The railway enthusiast and the industrial archaeologist have much common ground, but also differ in their approach and emphasis. The mountain of railway literature which has grown rapidly since the 1960s far out-distances the literature on

industrial archaeology published over the same period. It is inconceivable that the industrial archaeologist, with his much wider field of study would possess more than a fraction of the railway books published. He needs to be selective, very selective.

In many ways the Middleton Press series on Southern branch and main lines, of which these two volumes are typical examples, are much more closely attuned to the spirit of industrial archaeology than much railway literature. The emphasis on stations, not only early and more recent photographs of the buildings, but also reproductions of sections of the 25" OS maps of the late nineteenth century to the 1930s, is one reason for this. Other structures such as road and railway bridges, water tanks, goods sheds and signal boxes are all featured. Many of these have now been demolished as their usefulness has passed, and the station buildings themselves have not been spared as British Rail, pressed to reduce maintenance costs, have replaced them with simpler utilitarian and often sparse structures.

Although largely a pictorial record, the books do contain brief details of the opening and closure of the lines and stations and the frequency of the service offered. The notes that accompany the illustrations are also substantial. For some related topics more extensive notes are provided, for instance the history of the Heathfield natural gas supply is covered in the first of the two titles reviewed, while in the second there is considerable information on the firm of Pepper & Son and the Chalk Pits Museum and its railway system. The Crawley to Littlehampton volume is so up to date that an artist's impression of the new Littlehampton station building, now under construction, is included. I must say that the drawing gives the impression of a generous and spacious structure, much greater in its dimensions than the reality now being unfolded on the ground.

Both series of books of which these titles are examples can be thoroughly recommended to the industrial archaeologist with an interest in railway structures and operations, or those who merely want to cherish a pictorial record and concise history of their local line, in some cases still functioning and in others a memory of the past. They also represent good value for money by the publishing standards of today.

BRIAN AUSTEN

SUCCESS ALL ALONG THE LINE

In July 1981 I remember going with John Blackwell to Chichester to sample a day of delight. It was the 100th anniversary of the opening of the Chichester to Midhurst line and there was the change to travel in a British Rail dmu. to Lavant (the only part of the line still open), to walk the trackbed, to travel in a vintage Southdown bus and even to fly the line in an aircraft. The organiser of this comprehensive day of activities was our member Vic Mitchell. His aim was to publicise a book which he had just composed in collaboration with Keith Smith entitled Branch Lines to Midhurst. This was envisaged as a one and only publication and optimistically Vic ordered a run of 3,000 copies.

Not only has this volume had to be re-printed four times with total sales of over 8,000 but this was also the birth of a new publishing house, The Middleton Press. The series of branch line histories now runs to 11 titles and added to this are series covering the lines along the south coast and now a new series on the main lines of the Southern Railway. Further railway titles and books of local topographical interest have brought the number of titles in print to 33. The titles have been very favourably received by the booksellers as a glance on the shelves will show and Vic is so committed to the expansion of his existing series that for the moment he is unable to consider other titles. I am sure that members would wish to congratulate Vic on the fifth anniversary of his enterprise which has made available to those interested in I.A. a wide range of new source material.

BRIAN AUSTEN

DATA PROTECTION ACT 1984

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